

## GENERAL INFORMATION

PETUS description of tool in use						
<b>Name of the case</b>		<b>North Hoyle Offshore Wind Farm</b>				
<b>Name of the tool</b>		<ul style="list-style-type: none"> <li>• Environmental Impact Assessment (EIA);</li> <li>• Socio-economic Impact Assessment (SEIA);</li> <li>• Public participation including visual assessment (photo montage);</li> <li>• Countryside Council for Wales (CCW) Seascape Assessment;</li> </ul>				
<b>Country</b>		North Wales, UK				
<b>City / region</b>		Supply 50,000 homes per year.				
Total area (km <sup>2</sup> )		Can be seen by 30,000 households from the coast from the counties of Conwy, Denbighshire and Flintshire.				
Population						
Density (people/km <sup>2</sup> )						
<b>Tool user's profile</b>		<p>a. North Hoyle is a National Wind Power development.</p> <p>b. National Wind Power, a UK company, was established in August 1991 to generate and supply energy. In May 2004, National Wind Power combined with Innogy Hydro and other businesses, to form npower renewables, a UK renewable energy generator, committed to developing and operating wind farms, biomass and hydro plants producing sustainable and environmentally friendly electricity.</p> <p>c. Neil Birch, Head of Offshore Development, National Wind Power, 3rd Floor, Reading Bridge House, Reading Bridge, Reading, Berkshire, RG1 8LS. Tel: 0118 959 2440. Fax: 0118 959 2526.            e-mail: <a href="mailto:Neil.Birch@npower-renewables.com">Neil.Birch@npower-renewables.com</a>            website: <a href="http://www.natwindpower.co.uk/northhoyle/">http://www.natwindpower.co.uk/northhoyle/</a></p>				
a. Organization name (municipality, NGO, national or regional department, company, etc.)						
b. Field of activity						
c. Detailed contact/feedback (project website, e-mail, address, tel., fax)						
<b>Reviewer, date</b>		AL/JP visit date: 4 <sup>th</sup> December 2003.				
<b>Short description of the case</b>						
<p>The North Hoyle Offshore wind farm, located off the North Wales coast, is the UK's first major offshore wind farm. Constructed between April and November 2003, the 30 turbine wind farm produces electricity for up to 50,000 homes each year, and prevents the release of about 160,000 tonnes of carbon dioxide per year. The turbines are approximately 7.5 km (4 nautical miles) from the North Wales coast, and a maximum height of 130 m above Mean Sea Level.</p> <p>The main driver for this development is to reduce the use of fossil fuels such as carbon dioxide when used to generate energy. One of the major causes of global warming and climate change is the emission of large volumes of the gas carbon dioxide (CO<sub>2</sub>). Every unit of electricity generated from the wind, replaces a unit that would otherwise have been generated by a fossil fuel power station, thus helping to reduce CO<sub>2</sub> emissions and combat climate change.</p> <p>A number of tools were used by National Wind Power during the development stages of the project. The statutory Environmental Impact Assessment (EIA) was applied, along with a Socio-economic Impact Assessment. From the early stages of the project National Wind Power were eager to keep the public informed and involved, and their participation methods have involved the use of visual assessment through photo montages to assist residents to visualise what the development would look like. The Countryside Council for Wales's (CCW) National Seascape Strategy was also used to investigate the impact on the existing coast line and structure.</p> <p>This case study is related to two PETUS energy key issues: The visual impact of energy supply systems and the ownership of renewable energy sources to gain public support.</p>						
<b>Sector</b>	Waste	Energy	Water	Transport	Green/blue	Building & Land Use
		<b>X</b>				
<b>Scale of project</b>	Component	Building	Neighbourhood	City	Region	
					<b>X</b>	
<b>Status of project</b>	Starting up	Ongoing	Finished	Start date	End date (exp.)	
			<b>X</b>	April 2003	Nov. 2003	
<b>Key words</b>						

<i>Wind farm; offshore; participation; visual assessment; photo montage; seascape assessment; renewable energy; Environmental Impact Assessment (EIA); Socio-economic impact assessment;</i>	
<p><b>Project</b></p> <p>a. Object (building, city park, wind farm, etc.)</p> <p>b. Type of activity (regeneration, renovation, new development, etc.)</p> <p>c. Type of product (plan, scheme, design project, etc.)</p>	<p>a. The development of an offshore wind farm.</p> <p>b. A new development.</p> <p>c. Project</p>
<p><b>Tool</b></p> <p>a. Character (according to WP3final0704.doc)</p> <p>b. Benchmarks (qualitative or quantitative)</p> <p>c. Availability (paid/ free)</p>	<p><i>Environmental Impact Assessment (EIA);</i></p> <p>a. An EIA, a generic assessment tool, has been used for North Hoyle as required by Directive 85/337/EEC and amendment 97/11/EC, and under the Town and Country Planning Act in the UK.</p> <p>b. No benchmarks/goals were defined as such.</p> <p>c. This generic tool is a statutory process in Europe that is the result of Directive 85/337/EEC introduced in 1985, and amended by Directive 97/11/EC and as applied by the Town and Country Planning Act 1990. Directive 85/337/EEC can be obtained from the European Union website <a href="http://europa.eu.int/comm/environment/eia/full-legal-text/85337.htm">http://europa.eu.int/comm/environment/eia/full-legal-text/85337.htm</a> for free, but most EIAs are completed by consultants at a cost.</p> <p><i>Socio-economic Impact Assessment (SEIA);</i></p> <p>a. An assessment method. This tool uses indicators to identify the present socio-economic situation and potential impact of the project.</p> <p>b. The impacts predicted within the SEIA can be considered goals for the project.</p> <p>c. This is a paper based assessment.</p> <p><i>Public participation including visual assessment (photo montage);</i></p> <p>a. A guideline, but also a monitoring tool, public participation in the development of North Hoyle Offshore Wind farm has been considered extremely important by National Wind Power, who were aware that public support can affect the level of progress of a project such as a wind farm.</p> <p>b. The aim of this tool was to inform the local community of the project, and keep them up to date as the project progressed, as well as receive feedback on the development.</p> <p>c. . This is a paper based assessment based on UK 'HM Treasury's Green book', which provides guidance on the assessment of major infrastructure projects, details of which can be found at <a href="http://greenbook.treasury.gov.uk/">http://greenbook.treasury.gov.uk/</a>.</p> <p><i>Countryside Council for Wales (CCW) Seascape Assessment;</i></p> <p>a. The Seascape Assessment developed by the Countryside Commission for Wales was implemented in North Hoyle.</p> <p>b. No benchmarks are defined for this tool.</p> <p>c. A report detailing the Seascape Assessment: Guide to best practice in seascape assessment can be located on the Countryside Council for Wales's website at: <a href="http://tinyurl.com/etql">http://tinyurl.com/etql</a> and downloaded free of charge.</p>
<p><b>Decision-making process</b></p> <p>a. Stage of the tool implementation (preliminary, midterm, etc.)</p> <p>b. Level (political,</p>	<p>a. The <i>Environmental Impact Assessment (EIA)</i> was as required by law, carried out prior to development. The <i>Socio-economic Impact Assessment</i> was completed around the same time as the EIA. This was at the early stages of the project, prior to consent being sought from the Government Departments and Planning consent being applied for. Public participation including visual assessment (photo montage) have been undertaken. Public consultation began at the very outset of the project, two years before</p>

<p>technical, etc.) c. Public participation</p>	<p>the EIA was undertaken. <i>Countryside Council for Wales (CCW) Seascape Assessment</i>; This project has required decisions to be made at the political and technical level, since it is a high profile development and a first for the UK. The public were consulted and informed on the project from the initial stages, with consultation beginning two years before the environmental impact assessment.</p>
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## DETAILED INFORMATION

<b>A. Detailed description of project and tool</b>	
<p><b>1. Description of context</b> (existing strategies, laws, policy, action plans, etc.): EU, national, regional, municipal</p>	<ul style="list-style-type: none"> <li>• The National Assembly for Wales has a legal duty to pursue sustainable development in all it does. This is built into its constitution through section 121 of the Government of Wales Act.</li> <li>• Denbighshire Unitary Development Plan 1996-2011 includes the statement “<i>To support, where practicable and appropriate, energy regeneration from renewable sources</i>”. (<a href="http://www.denbighshire.gov.uk/planningudp/english/chap2.htm">http://www.denbighshire.gov.uk/planningudp/english/chap2.htm</a>)</li> <li>• Denbighshire County Council is working to produce Supplementary (Planning) Guidance notes on Renewable Energy.</li> <li>• The Denbighshire Objective One Partnerships Local Action Plan (LAP) European Local Action Plan (version 2003) provides a strategic framework and vision for an Objective 1 Programme to deliver economic regeneration and community development within the county. STO 5 of the LAP, deals with Protection and enhancement of the natural and built environment and states as one of its key drivers: “<i>Sustainable development of the rural economy through support for rural tourism, access, conversion and renewable energy initiatives</i>” and lists as its targets: “<i>Clean energy initiatives supported (and) clean energy plants supported</i>”.</li> <li>• Additional supporting documents for wind energy are: policy documents from the National Assembly for Wales Technical Advice Note 8 (1996) <i>Renewable Energy</i> National Assembly for Wales and British Wind Energy Association (2002) <i>Best Practice Guidelines: Consultation for Offshore Wind Energy Developments</i> British Wind Energy Association (<a href="http://www.offshorewindfarms.co.uk">www.offshorewindfarms.co.uk</a>).</li> </ul>
<p><b>2. Description of project</b></p> <p>a. Background (What caused the initiation of the project?; What was the problem? Who initiated the project?);</p> <p>b. Objectives/aims (sustainability statement – what issues of sustainability were attacked);</p> <p>c. Time interval and stages of project realization;</p> <p>d. Financing – amount, sources, institutions involved, partnerships, levels.</p> <p>e. Other sectors involved in the particular project/problem (conflicts and/or links)</p>	<p>a. The North Hoyle Offshore Wind Farm development, located off the north Wales coast, will consist of 30 turbines that can generate 60 MW of electricity. This is equivalent to the demand of approximately 50,000 homes, or one third of all the homes in the 3 counties nearest to the wind farm (1.5% of electricity demand in Wales, UK).</p> <p>National Wind Power, who is funding the development, are a UK company who generate and supply energy. National Wind Power is part of RWE Innogy that invest in all types of renewable sources of energy including wind power, hydro and biomass. National Windpower Ltd has developed 17 wind farms worldwide, including 13 in the UK with a capacity of 159 MW and 3 in the US with a capacity of 123 MW.</p>



*Figure 1 – Installation of a wind turbine at North Hoyle off the coast of North Wales.*

An in depth investigation was carried out to identify the most suitable location for the wind farm. The main factor for this is the availability of fuel resource, wind, which was monitored at the site for 2 years prior to development. Other reasons for the selection of North Hoyle as a suitable location are:

- Relatively low exposure to large waves from a predominant wind direction (SW/W);
- Relatively low water depth for the corresponding distance from shore;
- Good seabed properties for foundations and sub-sea cables;
- Strong electrical infrastructure near to the coast;
- Nearby port facilities suitable for construction and operations (Liverpool, Mostyn and Rhyl);
- No known environmental sensitivities.

The turbines at North Hoyle are positioned in a 6x5 layout, which has been assessed for visual appearance from the coast.



*Figure 2– Overhead photograph of North Hoyle illustrating the layout of the turbines*

Identifying a site to locate a wind farm includes:

1. identify site:

- From July 2004, the government was legally required by an EU directive to evaluate areas to identify where facilities can be located.

The Wash, Thames Estuary and North West Coast were selected by the Government for Strategic Environmental Assessment (SEA).

- Investigative studies are required to look at wind resources as well as other characteristics of a site including biological, water depth, environmental sensitivities, bird populations, ground conditions, navigation, wiring and potential human impacts. Information is compiled on a map to identify where fewest constraints are.
2. An Environmental Impact Assessment (EIA) is required by EU legislation if the site generates more than 50 MW in order to investigate biological and physical parameters.
  3. Under the Town and Country Planning Act and the Electricity Act, application must be made for planning permission
  4. Undertake community consultations with all potential stakeholders.



Figure 3 – Wind turbines in operation at North Hoyle

A consortium of a Danish company Vestas Wind Systems (who supplied the turbines) and a British company Mayflower Energy, known as the North Hoyle Consortium (NHC), constructed the wind farm. NHC was contracted to install the wind turbines for North Hoyle including foundations, electrical infrastructure, remote monitoring system and servicing for 5 years. National Wind Power internally test and assess new turbine products for longevity, operation and physical aspects.

b. National Wind Power develops and operates wind farms and is therefore concerned with both capital and operational costs. Sustainability considerations are made for the projects lifetime including investment in waste management incorporating reuse and recycling wherever possible, avoiding the use of harmful chemicals and investigating life costs. The organisation also involves the local community to ensure minimum social impact.

c. The following table illustrates key dates throughout the development of the wind farm.

Date	Process
1999	Monitoring mast installed.
July 2001	Project briefing for municipality councillors.
July 2001	2 public exhibitions were held in Rhyl and Prestatyn (local towns), the local public were invited to view plans for the project and discuss plans with representatives of National Wind power.
2002	EIA completed for North Hoyle Offshore Wind Farm.
January 2002	Socio-economic impact assessment of North Hoyle Offshore Wind Farm, Final Report produced by Arup Economics and Planning.
February 2002	Under section 36 of the Electricity Act 1989, application

	<table border="1"> <tr> <td data-bbox="528 159 767 230"></td> <td data-bbox="767 159 1546 230">submitted for consent to the Department of Trade and Industry for North Hoyle Offshore Wind Farm.</td> </tr> <tr> <td data-bbox="528 230 767 264"></td> <td data-bbox="767 230 1546 264">Planning Application to Denbighshire County Council.</td> </tr> <tr> <td data-bbox="528 264 767 479"></td> <td data-bbox="767 264 1546 479">Applications for marine consents and onshore cabling works were submitted to DEFRA, Department for Transport (Under section 34 of the Coast Protection Act 1949 consent required from the Department for Transport for works under or over the seashore lying below the level of mean high water spring), Local Government and the Regions, and the Environment Agency.</td> </tr> <tr> <td data-bbox="528 479 767 602">July 2002</td> <td data-bbox="767 479 1546 602">License granted from National Assembly for Wales (administered on behalf of DEFRA) under the Food and Environment Protection Act 1985 for the deposit of articles/materials in the sea/tidal waters.</td> </tr> <tr> <td data-bbox="528 602 767 663">July 2002</td> <td data-bbox="767 602 1546 663">Consent granted for North Hoyle Offshore Wind Farm from Brian Wilson, Minister for Energy.</td> </tr> <tr> <td data-bbox="528 663 767 786">2 October 2002</td> <td data-bbox="767 663 1546 786">Minister for Energy gave a £10 million share of funds available under the Capital Grant scheme available for offshore wind energy projects, to North Hoyle Offshore Wind Farm as it's a pioneering project.</td> </tr> <tr> <td data-bbox="528 786 767 819">April 2003</td> <td data-bbox="767 786 1546 819">Installation of monopiles.</td> </tr> <tr> <td data-bbox="528 819 767 853">July 2003</td> <td data-bbox="767 819 1546 853">Completion of installation of piles.</td> </tr> </table> <p>d. The project was funded by National Wind Power.</p>		submitted for consent to the Department of Trade and Industry for North Hoyle Offshore Wind Farm.		Planning Application to Denbighshire County Council.		Applications for marine consents and onshore cabling works were submitted to DEFRA, Department for Transport (Under section 34 of the Coast Protection Act 1949 consent required from the Department for Transport for works under or over the seashore lying below the level of mean high water spring), Local Government and the Regions, and the Environment Agency.	July 2002	License granted from National Assembly for Wales (administered on behalf of DEFRA) under the Food and Environment Protection Act 1985 for the deposit of articles/materials in the sea/tidal waters.	July 2002	Consent granted for North Hoyle Offshore Wind Farm from Brian Wilson, Minister for Energy.	2 October 2002	Minister for Energy gave a £10 million share of funds available under the Capital Grant scheme available for offshore wind energy projects, to North Hoyle Offshore Wind Farm as it's a pioneering project.	April 2003	Installation of monopiles.	July 2003	Completion of installation of piles.
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<p><b>3. Description of tool</b></p> <p>a. Character (according to WP3final0704.doc) - calculation tools, process tools, assessment methods, generic tools, simulation tools, guidelines, framework tools, schemes, indicators and monitoring, checklists, case-specific tools;</p> <p>b. Availability of the tool (web-based / paper, paid / free, etc.)</p> <p>c. Based on existing tool or newly elaborated;</p> <p>d. Adaptation of the tool to the local context (are there local experts involved in tool's development?)</p> <p>e. Other tools implemented to support the project development</p>	<p>For this development the following tools were used:</p> <p><i>Environmental Impact Assessment (EIA);</i></p> <p>a. An EIA, a generic assessment tool, has been used for North Hoyle as required by Directive 85/337/EEC and amendment 97/11/EC, and under the Town and Country Planning Act in the UK. The use of an EIA ensures consultation with a number of other organisations, such as conservation bodies to minimise the impact of the infrastructure. This is undertaken before the development is carried out. The EIA was used to incorporate sustainable considerations such as lifetime costs and waste minimisation.</p> <p>The key elements of an EIA are: Scoping (identifying key issues and concerns of interested parties); screening (decide whether an EIA is required based on information collected); Identifying and evaluating alternatives (list alternative sites and techniques and the impacts of each); Mitigating measures dealing with uncertainty (review proposed action to prevent or minimise the potential adverse effects of the project) and issuing environmental statements (report the findings of the EIA).</p> <p>b. This generic tool is a statutory process in Europe that is the result of Directive 85/337/EEC introduced in 1985, and amended by Directive 97/11/EC and as applied by the Town and Country Planning Act 1990. Directive 85/337/EEC can be obtained from the European Union website <a href="http://europa.eu.int/comm/environment/eia/full-legal-text/85337.htm">http://europa.eu.int/comm/environment/eia/full-legal-text/85337.htm</a> for free, but most EIA are completed by consultants at a cost.</p> <p>c. This is an original tool.</p> <p>d. The EIA tool is not a rigid format, in each case it is adapted to the local context and to the particular focus of a project.</p> <p><i>Socio-economic Impact Assessment;</i></p> <p>In addition to an EIA, a number of technical reports have been produced for North Hoyle looking at socio-economic changes.</p> <p>a. This assessment method tool uses indicators to identify the present socio-economic situation and potential impact of the project. The Socio-</p>																



Economic Impact Assessment (SEIA) for North Hoyle was undertaken by external consultants Arup Economics + Planning. The tool is used to assess population and population change, economic activity and wealth creation, employment characteristics and change, unemployment and deprivation and social exclusion.

The SEIA approach involved

1. Information collection and analysis of:

- the position of the north Wales economy and its future prospects,
- nature and performance of north Wales tourism sector,
- a review of potential for a tourism attraction focussing on environmental and sustainable energy in north east Wales,
- A review of wind farms established in the UK (majority onshore).

2. Consultation - views of policy makers, partners, agencies, business leaders and other wind farm operators. These involved face to face and semi-structured telephone based discussion.

3. Business surveys - collection of views and opinions of business communities. 150 businesses were interviewed by telephone of which 75 were related to the tourism sector, with 75 across the service and production sectors of varying sizes. These were conducted with the most senior manager available.

4. Review of Tourism and educational opportunities –a desk based review of opportunities to promote tourism in relation to the wind farm.

5. Formulation of potential impacts – the key economic impact that can be measured is the creation and support of employment. Other aspects measured are wider impacts including image, catalytic and knowledge benefits. There is also the potential for negative impacts to occur.

b. This is a paper based assessment.

c. The tool was based on ‘HM Treasury’s Green book’, which provides guidance on the assessment of major infrastructure projects, details of which can be found at <http://greenbook.treasury.gov.uk/>.

d. As this is a general concept rather than a strict assessment method, the tool is easily adaptable to the local context.

*Public participation including visual assessment (photo montage);*

a A guideline, but also a monitoring tool, public participation in the development of North Hoyle Offshore Wind farm has been considered extremely important by National Wind Power, who were aware that public support can affect the level of progress of a project such as a wind farm. Consultation strategies for stakeholder involvement were used to identify who to speak to and at what stage of development. Consultation with stakeholders began two years before the EIA was undertaken and involved:

- Roadshows held in local towns to communicate proposals to the public,
- Newsletters sent out to 30,000 households in local communities within view of North Hoyle,
- The provision of a website to provide information,
- Public perception studies were undertaken supported by the use of photo montages of the development, to assist people in visualising the proposed development,
- Councillors were informed and taken on boat trips to the site,
- Information was presented to Community groups such as the Women’s Institute, old age pensioner groups and other local organisations such as Royal National Lifeboat Institution and Royal Society for the Protection of Birds.

	<p><i>Countryside Council for Wales (CCW) Seascape Assessment;</i></p> <p>a. The Seascape Assessment developed by the Countryside Commission for Wales has been used for the North Hoyle wind farm. This tool is used to promote decision making and design that is related to the contextual situation. The tool was developed to assist policy formation, decision making and project inception along the coast and in the sea.</p> <p>The method shows how particular areas of sea, coastline and land can be related visually and defined as a single unit on a plan, and then characterised as a single seascape. Characterisation can provide a rigorous and transparent baseline of information and analysis on which to develop spatial planning policies, scenic designations, design guidelines, impact assessments, and to inform decision makers in development control situations.</p> <p>This tool has been used to investigate views that exist from different onshore locations using photo montages which were compiled to provide a general idea of what the wind farm would look like. Geographical Information System was used to map the results.</p> <p>b. A report detailing the Seascape Assessment: Guide to best practice in seascape assessment can be located on the Countryside Council for Wales’s website at: <a href="http://tinyurl.com/etql">http://tinyurl.com/etql</a>.</p> <p>c. Seascape Assessment is similar to landscape (character) assessment. The potential development of offshore wind farms encouraged a joint Irish-Welsh collaborative project to “develop a method by which to consider their effect on the setting of coastal landscapes, and to develop a way to define how one “seascape” can be distinguished from another. ..the project was intentionally wider ranging [than considering purely the visual impact consideration when looking from land, and issues of location, layout and design] so it has a variety of applications for various development types or changes in the coastal zone”. (Briggs, J (Summer 2003) <i>Seascape Assessment Work in Wales</i>, CCN News Issue 11, page 4).</p> <p>d. The strategy has to be applied to the local context in order to function.</p> <p>NWP also utilised internal procedures to evaluate the effects of the wind farm development. This process involves:</p> <ul style="list-style-type: none"> <li>• investigating the existing situation,</li> <li>• identifying what is going to be installed,</li> <li>• preliminarily assessment of biological and physical modifications that may occur as a result of the development.</li> </ul> <p>Investigations have been made on the potential human impact of a development including the effect on jobs and local travel patterns. Measurements of how people feel or of indirect effects such as a change in tourism patterns is very difficult due to other confounding factors such as weather conditions.</p>
<b>B. Tool implementation</b>	
<p><b>1. Argumentation for choosing the tool</b></p> <p>a. What were the reasons for the implementation of the tool? (voluntary or requested by what local,</p>	<p><i>Environmental Impact Assessment (EIA);</i> The implementation of an EIA is a statutory requirement for projects of a certain type and size to which this project is included.</p> <p><i>Socio-economic Impact Assessment;</i> The tool was implemented to provide a thorough overview of the socio-</p>



<p>national, etc regulation)</p> <p>b. Who took the initiative for choosing /elaboration the tool?</p> <p>c. What were the criteria for choosing the tool?</p> <p>d. Was there knowledge of other tools and were they considered?</p>	<p>economic situation before development and the potential impact that the development could have.</p> <p><i>Countryside Council for Wales (CCW) Seascape Assessment;</i> This tool has been used to investigate views that exist from different onshore locations using photo montages which were compiled to provide a general idea of what the wind farm would look like. Geographical Information System was used to map the results.</p>
<p><b>2. Barriers for the tool implementation</b> What were the main problems in the tool implementation? (Regulation, information available, public awareness, lack of clear SD definitions and benchmarks, communication etc.)</p>	<p>Well developed procedures are available for the assessment of onshore wind developments, however new procedures are required for offshore wind developments which are a relatively new concept. Potential impacts are very different from those experienced by onshore developments and so a lack of tools were identified to be relevant to the nature of the development.</p> <p>The approach used is a bottom up rather than top down through involvement and consultation with the public. Tools required to assess sustainability will vary with site size. For example a site with 30 turbines will have very different physical implications than a site with 150 turbines such as impact on waves.</p>
<p><b>C. Influence of the tool on the decision-making process</b></p>	
<p><b>1. Description of the decision-making process/ procedures</b></p> <p>a. Stages</p> <p>b. Levels (political, technical, etc.)</p> <p>c. Sources of information used during the dmp;</p> <p>d. Who are the decision-makers?</p> <p>e. Who made the final decision for the project implementation? Was it political or technical decision?</p>	<p>A number of decisions relating to the wind farm were made at the political level, these were due to consent being required by different Government bodies for different parts of the development. Consent was applied for/received from:</p> <ul style="list-style-type: none"> <li>• Under section 36 of the Electricity Act 1989, application submitted for consent to the Department of Trade and Industry for North Hoyle Offshore Wind Farm.</li> <li>• Planning Application to Denbighshire County Council.</li> <li>• Applications for marine consents and onshore cabling works were submitted to DEFRA, Department for Transport (Under section 34 of the Coast Protection Act 1949 consent required from the Department for Transport for works under or over the seashore lying below the level of mean high water spring), Local Government and the Regions, and the Environment Agency.</li> <li>• License granted from NAW (administered on behalf of DEFRA) under the Food and Environment Protection Act 1985 for the deposit of articles/materials in the sea/tidal waters.</li> <li>• Consent granted for North Hoyle Offshore Wind Farm from Brian Wilson, Minister for Energy.</li> <li>• Minister for Energy gave a £10 million share of funds available under the Capital Grant scheme available for offshore wind energy projects, to North Hoyle Offshore Wind Farm as it's a pioneering project.</li> </ul>
<p><b>2. Tool in decision-making process</b></p> <p>a. At what stage was the tool implemented? By whom? (experts, politicians, etc.)</p> <p>b. How did the tool output influence the process (added or skipped levels/stages in the existing decision-making process, etc.)?</p>	<p><i>Environmental Impact Assessment (EIA);</i> The EIA was, as required by law, carried out prior to starting the project.</p> <p>The EIA found that with regard to the physical environment, (seascape and visual environment, and the human environment) there would be no significant adverse effects as a result of the development of North Hoyle Offshore Wind Farm. This therefore provided support for the development of the Wind Farm. None defined. The findings of the tool provided support for the development of the wind farm.</p>

<p>c. Quantitative goals or benchmarks defined? (If YES, which – and what were they compared to?)</p> <p>d. Was the tool used to support argumentations?</p>	<p><i>Socio-economic impact assessment</i></p> <p>a. The assessment was completed around the same time as the EIA – in the beginning stages of the project, prior to consent being sought from the Government Departments and Planning consent being applied for.</p> <p>b. The SEIA concluded that the offshore wind farm development would provide a boost to the surrounding economy. The SEIA predicted that 53 full time jobs would be created for the development of the turbines and that operating the wind farm would require 5 full time staff from the local labour market.</p> <p>Wider socio-economic impacts predicted include:</p> <ul style="list-style-type: none"> <li>• Stimulating the development of a cohesive cluster of renewable energy businesses in Wales with other proposed wind farms.</li> <li>• Improvements to local infrastructure and facilities such as a jetty and harbour area for commercial and leisure craft.</li> <li>• The wind farm will draw visitors who will be provided with information about renewable energy and wind farms through a series of interpretation and information boards.</li> <li>• 70% of businesses surveyed believe that on balance the wind farm would have a positive effect on the local economy, with only 6% feeling that the effect would be negative.</li> </ul> <p>c. These predicted impacts can be considered goals for the project.</p> <p>d. The findings of the tool provide support for the development of the wind farm.</p> <p><i>Public participation including visual assessment (photo montage);</i></p> <p>Public consultation began at the very outset of the project, two years before the EIA was undertaken.</p> <p>Studies have not been undertaken to assess the impact of the community consultation, but it is believed that by involving the public support of the project was increased.</p> <p>The aim of this tool was to inform the local community of the project, and keep them up to date as the project progressed, as well as receive feedback on the development.</p> <p><i>CCW Seascape Assessment</i></p> <p>As a result of the application of tools at North Hoyle, a major modification to future National Wind Power offshore wind farms is that they will be located 10 km from shore as opposed to 7 km at North Hoyle.</p>
<p><b>3. Transparency of decision-making process</b></p> <p>a. How was the information of the dmp disseminated? - directly (decision makers – public) or indirectly (decision makers - NGO, PR company, etc. - public); sources of dissemination used (mass media, internet, brochure, etc.)</p> <p>b. How was the public involved?</p> <p>c. Was there a public discussion over the project and at what</p>	<p>a. The comprehensive public consultation and participation process ensured that information on the decision making process was disseminated on a regular basis. This occurred through road shows, newsletters and a website, <a href="http://www.natwindpower.co.uk/northhoyle/northhoyle.htm">http://www.natwindpower.co.uk/northhoyle/northhoyle.htm</a>, which was updated with information concerning the development of the project.</p> <p>b/c. The public were consulted and informed two years prior to the environmental impact assessment. Public participation involved:</p> <ul style="list-style-type: none"> <li>• Roadshows held in local towns to communicate proposals to the public;</li> <li>• Newsletters sent out to 30,000 households in local communities within view of North Hoyle,</li> <li>• The provision of a website to provide information,</li> <li>• Public perception studies were undertaken supported by the use of photo montages of the development, to assist people in envisaging the proposed development;</li> <li>• Councillors were informed and provided with boat trips to the site;</li> <li>• Information was presented to Community groups such as the Women’s</li> </ul>

stage of the project development?	Institute, old age pensioner groups and other local organisations such as Royal National Lifeboat Institution and Royal Society for the Protection of Birds.
<b>D. Expert assessment/analysis/comment of the tool effectiveness</b>	
<b>1. Assessment by tool users</b> a. Were there measurable improvements as a result of the tool implementation? If YES, what? If no: why not? b. Were there any spin-off's or unintended consequences? c. General view on the tool? Lessons learned? d. Potentials for further use of the tool? e. Will the actors recommend it or use it in other cases - why / why not?	No Response.
<b>2. Reviewer's assessment</b> of the tool (usefulness, sustainability relevance, who are the actors excluded? etc.) Suggestions and needs for further development of the tool	<p><i>Environmental Impact Assessment (EIA);</i>  The EIA covers only environmental issues, and does not consider the other pillars of sustainability (social and economic impacts), this requires further impact assessments to be completed. However in this case, the implementation of a socio-economic impact assessment investigates the other two pillars of sustainability – the economic and social aspects.</p> <p>An additional criticism of EIA and SEIA, is that the information output is fairly subjective, since the lack of prescriptive guidelines for the implementation of a tool means that the information investigated will be different for each project, meaning that EIAs cannot be compared equally.</p> <p><i>Public participation including visual assessment (photo montage);</i>  The use of the photo montage tool in order to inform the public of the likely impact on the views was extremely important and helpful. For many members of the public, the photo montage made the proposal more “real” than the use of a map, this allowed the proposal to be discussed with all involved having a wider understanding and appreciation of the proposed development. This tool is not so useful for long distance visualisation as images can be misleading.</p> <p><i>Countryside Council for Wales (CCW) Seascape Assessment;</i>  This 18 month assessment is the first type of tool assessing seascape, something that is increasingly needed when appreciating existing situations prior to the development of offshore wind farms. However, as a result of this being a new tool, limited feedback is available on the implementation of the tool.</p>
<b>E. Additional information on the case study available</b>	
Websites	<a href="http://www.natwindpower.co.uk/northhoyle/">http://www.natwindpower.co.uk/northhoyle/</a>  <a href="http://www.offshorewindfarms.co.uk/sites/north-hoyle.html">http://www.offshorewindfarms.co.uk/sites/north-hoyle.html</a>  Information about public participation <a href="http://greenbook.treasury.gov.uk/">http://greenbook.treasury.gov.uk/</a>  CCW seascape assessment information <a href="http://tinyurl.com/etql">http://tinyurl.com/etql</a> .

	<a href="http://europa.eu.int/comm/environment/eia/full-legal-text/85337.htm">http://europa.eu.int/comm/environment/eia/full-legal-text/85337.htm</a>
References concerning the case but also the key words or problem (papers, articles, reports, laws, etc.)	<p>Arup economics+planning (2002) Socio-Economic Impact Assessment of North Hoyle Offshore Wind Farm – Final Report, NWP Offshore Ltd.</p> <p>Briggs, J (Summer 2003) <i>Seascape Assessment Work in Wales</i>, CCN News Issue 11, page 4</p> <p>Hill et al. (2001) <i>Guide to Best Practice in Seascape Assessment</i>, Maritime Ireland/Wales INTERREG Report number 5, The Marine Institute, Dublin, Ireland.</p> <p>Innogy plc (2002), <i>North Hoyle Offshore Wind Farm Environmental Statement</i>, Innogy Holdings Plc.</p> <p>Innogy plc (2002), <i>North Hoyle Offshore Wind Farm Environmental Statement – Non technical summary</i>, Innogy Holdings Plc.</p>
Other sources (Interviews, conferences, discussions, etc.)	Meeting with Joanne Patterson and Anna Lermon, Welsh School of Architecture and Neil Birch, Head of Offshore Development, National Wind Power, Thursday 4 <sup>th</sup> December 2003.