

Cromarty Firth Data Project

Final Report

March 2004

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The Cromarty Firth Data Project Final Report

1 Introduction

The Cromarty Firth Data Project was a one year, partnership managed and funded project, which built on earlier coastal management work undertaken by the Cromarty Firth Liaison Group (CFLG) and the Moray Firth Partnership (MFP). This report seeks to summarise the origins and outputs of the project, as well as making recommendations for their future maintenance and further development.

The project was a practical response to identified demand for improved access to information about the Cromarty Firth and for a more positive and proactive approach to development in this area of significant environmental importance.

The results have been welcomed as useful tools to increase awareness and understanding of the local coastal environment and its potential to enhance the local economy in a sustainable manner. IT has been effectively harnessed to maximise the effective presentation, co-ordination and communication of data previously distributed over a considerable number of organisations, which had no means of connecting it all together to provide the bigger picture.

This report will briefly describe the background to the project, its planned aims and objectives, project delivery, final outputs and recommendations for the future.

2 Background

Throughout history, the Cromarty Firth has been both an economic driver and an outstanding environmental asset. The traditional economic base of agriculture, fishing, timber and distilling, has now diversified to encompass oil related activities, business and industrial parks, shipping, transportation, tourism and leisure. Unusually, all this activity takes place in an outstanding environment which boasts a wide range of conservation designations, from Sites of Special Scientific Interest, RSPB reserves, National Nature Reserves, a Ramsar Site, a Special Protection Area and a Special Area of Conservation.

In 1992, this combination of increasing industrial activity and environmental importance stimulated the formation of the Cromarty Firth Liaison Group, the first Scottish voluntary coastal partnership which brought together environmental, statutory, business and community interests. Over a ten year period, the Group delivered a strategy and action plan for the Firth, together with a major European Union funded project, prior to merging with the Moray Firth Partnership in January 2002. The Data Project, which ran from March 2003 to March 2004, was therefore firmly based on a well established foundation of coastal zone management activity and awareness.

The impetus for the Data Project came from a number of sources. First of all, the independent evaluation of the work of the Cromarty Firth Liaison Group made recommendations regarding the need to establish a baseline and to improve the

monitoring of the resource base of the Firth. Secondly, the feedback from businesses attending the Industrialised Estuaries Best Practise Seminar at the end of 2001, clearly identified a need to make environmental and monitoring data more easily accessible and better co-ordinated. Finally, local, national and international policy initiatives, highlighted the need for well presented, co-ordinated and accurate information to inform decision making on future development.

3 Aims and Objectives

The project was developed through the interest and active involvement of local agencies and Firth based industries, with the aim of improving the quality and accessibility of key environmental information to developers and other interested stakeholders, in order to better inform decision making and to improve the management of the Cromarty Firth.

Within this overarching aim, it was intended that the outputs should contribute to improving awareness and understanding of the estuarine environment, to improving the knowledge base of the Firth and to assisting developers and decision makers by providing a single easy access point for all necessary information.

It was widely agreed that a great deal of information was available, but it was presented in diverse ways and spread over many different organisations. It was apparent that agencies and organisations collecting data were unable to make linkages with data held by other agencies, with the result that none had a clear view of the 'bigger picture'.

The planned outputs were as follows;

- produce and maintain a project page on the MFP web site for the presentation of project information
- identify and collate existing Cromarty Firth environmental data and information sources
- produce a 'Cromarty Firth Developers Pack'
- identify gaps in key information and make recommendations as to how these may be filled
- make recommendations towards a long term impact monitoring programme in the Firth
- make simple observations of broad trends in key aspects of the Firths natural resource base over time that result from development activity
- produce a final report and list of recommendations

Because the project was time bound and not intended to be an ongoing, individually resourced activity, sustainability was identified as a crucial consideration from the start. Issues relating to future maintenance and development of the data collected influenced decisions at all stages of the project.

4 Project Delivery

The project benefited from the strong local relationships and networks established through the work of the Cromarty Firth Liaison Group and the Moray Firth Partnership. The project co-ordinator was line managed by Moray Firth Partnership staff and the work plan was overseen and managed by a Management Group representing the main funding partners, Cromarty Firth Port Authority, Scottish Natural Heritage, Ross and Cromarty Enterprise and Highland Council, which also provided office accommodation and equipment support. A contribution from Talisman Energy Ltd. completed the funding package.

This partnership approach, first established in the earlier work of the CFLG and MFP, proved invaluable. Each partner was able to reflect the views and needs of key groups of stakeholders, resulting in a holistic approach which focused on the practical, rather than the theoretical. The Management Group were able to reach consensus decisions during the course of the project, based on knowledge and experience gained from quite different backgrounds. This consensus approach meant that the final outputs were beneficial to the broadest range of potential users.

Consultation and communication were the other main strengths of the project delivery. Consultation started pre-project and strongly influenced the design of the project and its planned outputs. However, consultation alone would not have ensured success. Ongoing communication to update progress and gain feedback was essential. The project officer undertook scoping work to establish the parameters for the project and also spent a great deal of time liaising with technical experts and the data managers from all the contributing organisations. There can be no doubt that the effort put in to consultation and communication, resulted in increased commitment from contributors and a very effective web based data presentation mechanism.

More than 70 individuals and 40 organisations have participated in the project, either as data contributors, or as consultees during seminars, workshops and scoping meetings, or through the website. The Cromarty Firth Group gratefully acknowledges the contribution of all these organisations and individuals, without whom this project would not have been possible. A comprehensive list is included at Appendix A

5 Final Outputs

5.1 Project page on the MFP web site

One of the initial planned outputs was to use the internet to present information on the progress of the project, through a page on the Moray Firth Partnership site. However, at an early stage, it became clear that it might be possible to use the web to achieve a much broader range of objectives. The original plan of simply having a static information web 'page' was developed into something much more comprehensive and effective.

What evolved is a sophisticated web based system, which is easily searchable and accessible, even to people with limited IT expertise, or limited access to expensive software packages. The site enables anyone with an interest in the Cromarty Firth, including agencies, businesses, community groups, organisations and students, to have full access to all the collated data. It also allows the information to be easily maintained or updated and encourages interaction and feedback from users.

Both the Inventory and Developers pack are ‘virtual’ and exist on the website, rather than in printed versions which are expensive to produce and quickly go out of date.

5.2 Inventory of Cromarty Firth Environmental Data and Information Sources

The integrated environmental information Inventory has successfully brought together a mass of existing data which had been held by many different organisations, into a ‘one stop’ information point for the Cromarty Firth. The project officer, partner organisations and other interested parties, identified Cromarty Firth related information from statutory monitoring data, through to individual research papers. In all, over 200 metadata entries of data sets and information resources were featured on the Inventory when it went live in February 2004.

One of the key challenges of the project was to establish a system for storing and managing the data which was identified and collated. There was a need for the system to create links between information maintained by a variety of organisations and then to present it in a way which was accessible to the widest possible audience, while at the same time meeting the standards required by the users. Feedback during the scoping phase, established that the system selected should not be too ‘technical’ and that too much reliance on geographical information systems (GIS) for example, would exclude a large number of potential users due to lack of expertise and access to software.

The creation of a web based searchable database provided the solution. A great deal of work went in to developing the technical specification to ensure that it would be practical and user friendly. Consideration had also to be given to issues such as intellectual property and reaching mandatory National Geospatial Data Framework standards.

Getting the supporting technology and comprehensive content right means that users can now make the most of existing data which had previously been compartmentalised and difficult to track down. The benefits of this online, searchable resource are as valuable to individuals and developers seeking information, as they are to public sector staff involved in giving advice, guidance and decision making.

5.3 Cromarty Firth Developers Pack

The need for support for existing and potential developers was voiced frequently in the scoping phase of the Data Project. Consultees felt there was confusion about the various designations, where to find appropriate information and who to talk to on

different topics. They also felt that the lack of co-ordinated access to information, combined with the complexity of designations, might be acting as a barrier to economic development.

The project set out to create a Developers Pack to provide a pre-development stage tool to address some of the difficulties facing developers, before they arise, or at an early stage in the process. It was also felt that the Developers Pack would be an aid to economic development and decision making.

The Ross and Cromarty East local plan identifies the lowland coastal strip next to the Firth as one of the prime development areas, where most people can get to employment and services in the least time and at least cost. This development corridor is the main focus of economic activity and includes all the major settlements, communication routes and large scale industrial sites. The deep water of the Firth means it is both a local and a regional asset, in terms of development opportunity. However, the high level of environmental quality and complex layers of designation may deter some developers. The Pack will help to simplify the process, by bringing together all the information and contacts which developers themselves identified as useful.

Like the Inventory to which it is also linked, the Developers Pack is web based. It includes a map showing land and marine uses and designations, local economic, social and environmental information through links to other websites and a Who's Who Directory for the Cromarty Firth. The Who's Who Directory is the key to assisting developers to find the data and people they need, in order to take their plans further. The Directory clarifies the roles, responsibilities and activities of the organisations with an interest in development in the Firth. It also identifies who holds up to date information on any particular aspect of the Firth and guides developers to the managers, planners and users of the Firth who might have an interest in any development proposals. Each entry details contact names, the nature of the work carried out by the organisation, their area of operation, guiding legislation, size, key partners, funding sources available, publications and information sources.

Combined with the Inventory, the Developers Pack provides a powerful, practical resource to facilitate a more positive approach to development in an area of great environmental importance.

5.4 Data Gaps

The process of collecting and collating available information meant that the project went some way towards identifying key data gaps. However it became apparent that contributors and users do not really become aware of the gaps, until a need arises for specific information.

Prior to the project, it would have taken an information seeker a considerable amount of time and effort before they finally reached the conclusion that the data they sought, did not in fact exist. The presence of the Inventory and Developers Pack means that now there will only be one place to look and it will be immediately obvious whether the data is available or not.

In addition, if the data is not currently available, the Who's Who Directory will give the user enough information to help them choose the most suitable place to go to investigate further. The agency contacted, may then attempt to fill the information gap which has been identified. A good example of this arose during the course of the project, when there was a request for information on the shellfish resources in the Firth and investigation demonstrated the lack of information or data relating to the mussel banks. No one had been aware of this 'gap' previously.

If the need for a particular piece of data was sufficiently critical, potentially the interested parties could get together with an appropriate agency or research body to initiate the necessary work to meet the information requirement. In turn, the resulting research would then be added to the inventory for future use.

Specific gaps and possible ways of filling them are included in the recommendations section.

5.5 Impact Monitoring and Trends

It was not within the scope of a one year, tightly defined project to tackle a long term strategic subject such as impact monitoring, but some issues have been highlighted during project delivery and progress has been made in raising awareness of the subject. The project has succeeded in opening up a debate amongst businesses, groups and organisations with interests in the Firth, about the availability of data, what monitoring is taking place, what is lacking, how it is co-ordinated to produce the big picture and realistically, what resources are available to address all these issues.

As a result of the project, an overview of all the organisations undertaking monitoring work and the nature of their work has been established for the first time. A list of the main monitoring activities and responsible agencies and organisations is included in Appendix B.

The project has demonstrated the difficulty of achieving integrated monitoring of the Firth due to the number, scope and complexity of parameters involved. Monitoring is undertaken at many levels, within different boundaries, for a multitude of reasons and to varying standards, depending on the purpose.

The project highlighted a willingness on the part of public sector staff and individual businesses to participate in monitoring activities, but costs, lack of expertise and limited staff resources were significant deterrents. The recommendations section explores how this interest and willingness might be converted into action.

Another monitoring related issue which came to the fore during the course of the project is the patchy nature of compliance with monitoring activities included as mitigating solutions in Environmental Impact Assessments undertaken as part of the planning process. Not all agencies involved have the resources to follow-up with compliance monitoring and there is limited support available to help businesses deliver what they originally intended.

Finally, the project has drawn attention to the fact that non industrial impacts and disturbances also exist in the Cromarty Firth and require ongoing monitoring. It has been shown that in some cases, recreational impact on wildlife is greater than that caused by industry. The Royal Society for the Protection of Birds (RSPB) is currently considering a programme for summer 2004 to monitor the impact of recreational walkers at various points around the Firth.

As far as trends are concerned, the project had little opportunity to explore the topic in any great detail, other than through anecdotal comments from participants during scoping and consultation. The recommendations identify the need for an assessment of trends and the project has helped to facilitate this future work, by identifying a wide range of baseline data.

Since the Cromarty Firth Review was undertaken in 1995, there has been a period of relative stability and nothing was raised during the project which gave major cause for concern. There has been some redevelopment at Queens Dock and the construction of a new dry dock facility at Nigg, but it has not been operating at a level which has had any significant effect. More recently there have been plans for development at Deephaven, but to date, the issues relating to it have been focussed on the inland impact, rather than on the coast or in the Firth.

6 Future Maintenance

From the start, the project Management Group was determined that this project would not be a 'one off', 'gathering dust on a shelf' exercise. Great efforts have been made to ensure that any decisions taken about technology, content or management would not compromise the future maintenance and usefulness of the outputs.

The Management Group has allocated funding to be used for the future upkeep of the project web pages and for updating the Inventory and Developers Pack for at least the next 2 years. In addition, the design of the web based system means that each element can be extracted to stand alone, should it become necessary to ask one or more of the partner organisations to take over maintenance in the longer term. Partners have already stated a willingness to take over this responsibility if necessary.

7 Recommendations

The Cromarty Firth Data Project has been a great success and has provided new and useful tools for a broad array of businesses, organisations, communities and individuals. However, it has also raised a number of issues, concerns and potential solutions which need to be addressed beyond its lifetime.

The project itself was conceived and delivered with the need to be realistic and practical being of prime importance. With that in mind, it is appropriate that the same principle is applied to any recommendations which result from it.

It would be easy to list the issues, concerns and potential solutions, or even to produce them in the form of an action plan. However, the reality is that this would merely be a

wish list, with little commitment or chance of fulfilment. The recommendations are therefore presented in a way which it is hoped will stimulate further discussion, development and action, rather than something which will be read and forgotten, because it is perceived as unrealistic.

Areas for future attention and development are as follows;

7.1 Information Gaps

The data project has been well received and it would be useful to capitalise on the goodwill generated, by getting participants together to take stock and agree future priorities and joint projects. This does not need to be a major 'event', it might take the form of a half day meeting, hosted by one of the partners and highly focussed on defining and agreeing a joint monitoring or research project.

As it is difficult to predict what possible development proposals may be put forward in the future, or what additional research might be useful, it would be better to deal with any gaps in a reactive manner, rather than wasting scarce resources on research to fill 'theoretical' gaps.

It is recommended that when an information gap is identified, interested organisations businesses and individuals should meet to discuss the extent to which the information is needed and useful, the best mechanism for obtaining the required information, the costs of gathering and analysing it and the possibilities for creating a partnership to share the costs and responsibilities. Previous work in the Cromarty Firth, including the Data Project itself, has demonstrated the value and effectiveness of this type of collaborative approach.

Possible research/joint project topics with relevance to several organisations, already identified during the Data project are;

- Creation of a land ownership database
- Research into shellfish stocks and the Cromarty Firth mussel beds
- A regional state of the environment report
- Jointly commissioned aerial photo portfolio
- Recreational impact survey, either by species or location.

7.2 Monitoring

Many agencies are improving their data management, for example the work being done by the Scottish Natural Heritage Data Unit. There is also a move towards improving accessibility through the internet, for example the Scottish Environment Protection Agency (SEPA) have made great strides recently in making national and regional information available through their website. When the Inventory is being updated, particular attention should be paid to identifying and exploring such improvements, to ensure that the Inventory is able to benefit from them.

In Scotland, the Executive is working actively to rationalise data and to set a framework to ensure that data collectors and providers are all operating the same systems. MFP and partner organisation staff should bear the Cromarty Firth data in mind as these standards are developed and feedback on any relevant changes so that they can be taken into account during the updating process.

At a UK level, DEFRA's Marine Environmental Data Action Group (MEDAG) is very supportive of initiatives to address local data provision and efforts should be made to disseminate the results of the Cromarty Firth Data Project to a UK wide audience, through traditional distribution methods and also through a link to the national database of MEDAG.

The statutory planning process has the potential to encourage further monitoring, through carefully applied additional planning consents. There is scope for more involvement by industry and developers and for establishing mutually beneficial partnerships between them and existing monitoring bodies. The benefits of this approach are that additional monitoring work is carried out, but costs and support responsibilities are shared.

During a workshop at the MFP Annual General Meeting and Conference, it was suggested that additional information from a tidal study may be available through SEPA and that there was a hydrographic study conducted in the 1950s which might provide useful comparative data for future research. This additional information should be obtained and recorded during the Inventory updating process.

7.3 Trends

As stated previously, participants in the project were concerned about the need to monitor and analyse changes in the environment and habitats of the Firth in an integrated way, over time. Ideally, key environmental variables should be selected and tracked, but there is no single organisation with the resources to do this at present.

Significant baseline data has been identified through the project and a considerable amount of monitoring is ongoing (see Appendix B). However, some important areas remain unclear and an integrated trend analysis has not taken place.

One issue which was consistently raised as a concern and a topic of interest was sea level change, possibly linked to climate change. This is a subject which would really benefit from a partnership approach, as it has been shown that most organisations have an interest in it and would be willing to make some sort of contribution towards gaining a better understanding of the implications for the Cromarty Firth area. The MFP or an academic institution would probably be the most appropriate lead or coordinating body, providing they could rely on the financial and practical support of all the other partners.

A research project could be devised which selected and linked existing monitoring information and also supplemented it with new data on topics such as, average sea level and tides, storm events, tidal surges, changes to habitats like salt marshes and coastal erosion. Undertaken on a partnership basis, costs would be shared amongst

many partners and responsibility for undertaking new pieces of research could also be shared amongst appropriate partners, who may wish to use that as their input to the overall project. For example, the RSPB's managed retreat project which is an innovative approach to coastal realignment would provide a unique contribution to long term sea level monitoring.

The Cromarty Firth is an ideal, clearly defined location for such a strategic project which might also attract regional and national support as a pilot/demonstration area. The Cromarty Firth Data Project has provided a sound starting point for the desk based research and it makes a major trends analysis project a much more manageable and achievable prospect.

8 Conclusion

The Cromarty Firth Data Project has resulted in the production of a single, accessible source of information which integrates monitoring data and research from the full range of organisations with an interest in the Firth's protection and development. For the first time, public sector staff, commercial businesses and communities will be able to easily navigate their way through the mass of data which exists and will be able to readily identify organisations and individuals who can provide the answers they need.

This significant achievement also provides a foundation and baseline for further work to identify long term trends, to stimulate additional research which increases the knowledge base and to support development which is well informed and sensitive to the area's environmental assets. The partnership approach, through which the project was delivered, has already resulted in better communication between environmental bodies and developers, which can be used as a model for tackling issues of common concern in the future.

The project was developed as a result of similar concerns which had been expressed by different interest groups in the Firth and it was designed with a view to providing practical solutions which would give real benefits. Participants could see an end result which would be of direct use to them and so the project managed generated a high degree of commitment and co-operation.

The ultimate beneficiary of the project will be the Cromarty Firth itself, as its future development and protection will be better informed and its users will have a better understanding of each other and their roles and responsibilities in the stewardship of this superb environmental and economic asset.

APPENDIX A

Name	Job Title	Company or Organisation
Dr J.D. Stewart Campbell	Committee Member	Alness Initiative
Mr Alan Richards	Committee Member	Alness Wild and Green
Mr Jonathan McCue	Project Manager	Atkins Consulting
Mr Frank Fortune	Projects Manager	BMT Cordah Ltd
Mr Simon McKelvey	Superintendent	Conon & District Salmon Fisheries Board
Mr Alex Davidson	Member	Cromarty Community Council
Mr David Alston	Curator	Cromarty Courthouse
Capt George Dobbie	Harbour Master	Cromarty Firth Port Authority
Mr Richard Fea	Finance Manager	Cromarty Firth Port Authority
Mr Sinclair Young	Trustee/Management Group	Cromarty Harbour Trust / MFP
Mr Bill Turrell	Marine Ecosystems Programme Director	Fisheries Research Services/Marine Laboratory
Mr Jim Mckie	Senior Environmental Advisor	Fisheries Research/Marine Laboratory
Mr Ian Lambart	Environment Manager	Guinness UDV Ltd
Mr Mike Wallace	Technical Services Engineer	Highland Council / Fujitsu
Mr Malcolm McArthur	Area Manager	Highland Council, Chief Executive's Office
Mr Bob Shannon	Head of European & Strategic Planning	Highland Council, Planning & Development Service
Mr George Hamilton	Fisheries Manager	Highland Council, Planning & Development Service
Mr Jon Shepherd	GIS Manager	Highland Council, Planning & Development Service
Mr Andy McCann	Area Development Manager	Highland Council, Planning & Development Service
Mr Martin Hind	Easter Ross Countryside Ranger	Highland Council, Planning & Development Service
Mr Bill Robins	Area Roads & Transport Manager (Retired)	Highland Council, Roads and Transport
Mr Anthony Carson	Principal Environmental Health Officer - Contaminated Land	Highland Council, TEC Services
Mrs June Ross	Principal Waste Management Officer - Strategy	Highland Council, TEC Services

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Mr Ian Hay	Community Works Manager	Highland Council, TEC Services
Mr Robert Kilpatrick	Managing Director	Highland Deephaven
Mr John Lavender	IT Consultant	Highlandecom
Mr Keith Bryers	Growing Businesses	Highlands and Islands Enterprise
Mr Neil Downie	Environment Business Manager (former)	Highlands and Islands Enterprise
Prof Mike Cowling	Marine Environmental Data Action Group	Inter Agency Committee on Marine Science and Technology
Capt Murdo Macleod	Harbour Master	Inverness Harbour Trust
Mr Dave Oliver		Isleburn Mackay and Macleod Ltd
Mr Fraser Forbes		J.P. Knight Caledonian Ltd
Mr David N Offin		J.P. Knight Caledonian Ltd
Mr Eddie Campbell		KBR Caledonia Ltd
Mr James McKie	Senior Environmental Advisor	Fisheries Research Services, Marine Lab
Mr David Bryan	Lecturer (former)	Moray College UHI
	Principal; Environmental / Ecological	
Mr Neil Redgate	Consultant	NDR (Environmental Services) Ltd
Mr Rene Ter Schiphorst	Environmental Consultant	NDR (Environmental Services) Ltd
Mr Robert Bain	Managing Director	Need to Know Ltd
	Development and Marketing Manager	
	(former)	
Mr Rod Johnstone		North of Scotland Industries Group
Mr Les Clark	Managing Director	Port Services (Invergordon) Ltd
Mr Gordon Cox	Chief Executive	Ross & Cromarty Enterprise
Mrs Jackie McGuinness	Head of Strengthening Communities (former)	Ross & Cromarty Enterprise
Mr Roy Munro	Development Manager Infrastructure	Ross & Cromarty Enterprise
	Property and Environmental Renewal	
	Manager (former)	
Mr Shaun Murphy		Ross & Cromarty Enterprise
Ms Kenna Chisholm	Ross-shire & Moray Firth Officer	Royal Society for the Protection of Birds
Mr Graham Todd	Committee Member	Sandhaven & Pitullie Harbour Trust
Mr Stephen Midgely	Project Officer	Scottish Coastal Forum

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Mr Martyn Cox	Project Officer (Former)	Scottish Coastal Forum
Mr Colin Craig	Environmental Protection Officer	Scottish Environment Protection Agency
Mr Ewan Gillespie	Environmental Protection Officer	Scottish Environment Protection Agency
Mr Richard Fyfe	Environmental Protection Officer	Scottish Environment Protection Agency
Mr Tom Inglis	Env't Regulation & Improvement Manager	Scottish Environment Protection Agency
Mr Peter Wortham	Area Officer	Scottish Natural Heritage
Mr Peter Beattie	Area Officer	Scottish Natural Heritage
Mr Ben Leyshon	Area Officer / MF SAC	Scottish Natural Heritage
Ms Caroline Matheson	Natural Heritage Data Officer (former)	Scottish Natural Heritage
Mr Steve North	Operations Manager	Scottish Natural Heritage
Mr Alan Kellock	Scientific Services	Scottish Water
Mr Ian Larkman	Scientific Services	Scottish Water
Mr Stephan Walker	Scientific Services	Scottish Water
Mr Simon Bowes	Scientific Services	Scottish Water
Mr David Sim	IT Consultant	Strategic Integration
Mr Jan Rusin	Head of Environment	Talisman Energy (UK) Ltd
Mr John RR Mitchell	Terminal Manager	Talisman Energy (UK) Ltd
Mr Ian Leaver	Marine Estates Manager (former)	The Crown Estate
Mr Brian Patience		Trouw Aquaculture
Mr Paul Thompson	Reader	University of Aberdeen Lighthouse
		University of Dundee, Environmental Systems Research Group
Mr Derek McGlashan	Lecturer / Research Fellow	WS Atkins
Mr Howard Brindley	Consultant to Highland Deephaven	

APPENDIX B

Current Monitoring Programmes in the Cromarty Firth (March 2004)

Scottish Environmental Protection Agency (SEPA)

Undertakes both statutory and non-statutory monitoring. The statutory compliance and discharge consent monitoring, relates to a number of different Directives and initiatives.

1. Dangerous Substances Directive (DSD) – control and reduction of List 1 substances and to a lesser extent, List 2. List 1 includes copper which is of particular relevance to the Cromarty Firth due to distilling activities. SEPA monitor the distillery outfalls four times per year.
2. Water Framework Directive – data gathered is also supplied to other organisations
3. Estuarine Classification Scheme – water quality
4. Digitised River Network – data on Alness and Conon rivers

Previous non statutory research has included nutrient and bacteriological surveys 1980-2002 which looked at coliforms, salinity, dissolved oxygen and nutrient levels. An annual benthic survey of the main channel was also undertaken in the past.

In addition, commercial operators are encouraged to undertake self monitoring.

National Marine Monitoring Programme

This is a programme of monitoring funded by DEFRA. The Cromarty Firth is the site of one of the network of monitoring stations where long term sampling, analysis and monitoring takes place. The first samples from the Cromarty Firth were taken in 2002. An annual report is produced for all the sites. Fisheries Research Services are the agency responsible for the Cromarty Firth site.

Scottish Natural Heritage

SNH undertakes site condition monitoring for the Cromarty Firth Sites of Special Scientific Interest, the Special Protection Area and the Ramsar designation, on a 6 year cycle. SNH also undertakes site condition monitoring for the Moray Firth Special Area of Conservation.

Aberdeen University

Ongoing biological monitoring of contaminants in the food chain and the general marine environment, in relation to marine mammals. The monitoring of top predators gives a good indication of the environmental quality of the marine environment.

Royal Society for the Protection of Birds

RSPB monitor the Nigg and Udale Bay reserves as part of a 5 year management plan.

Further monitoring information will be available from the Nigg Bay Coastal Realignment Project which is the first managed retreat project in Scotland.

APPENDIX B

Moray Firth Wetland Bird Survey – Wildfowl and Wader Counts

The Wetland Bird Survey monitors numbers of non-breeding waterfowl and provides the principal data for the conservation of their populations and wetland habitats. The scheme is co-ordinated in the Moray Firth by the RSPB with financial support from Talisman Energy Ltd. Winter wetland and wildfowl bird numbers at high and low tide are counted in the Cromarty Firth as part of this long term ornithological monitoring programme.

Conon and District Salmon Fisheries Board

The Conon District Salmon Fishery Board (CDSFB) is a statutory body responsible for the protection and enhancement of migratory fish stocks within the Board's jurisdiction. The CDSFB is responsible for the rivers Conon, Bran, Blackwater, Meig, Orrin, Peffery and a number of smaller rivers running into the Cromarty Firth.

CDSFB undertakes monitoring and research, which involves co-operation on projects with FRS Freshwater Laboratory and a number of Universities. The research and monitoring programme has included; habitat surveys, radio-tracking of adult salmon, PIT tagging of parr and smolts, micro-tagging of smolts, juvenile electro-fishing surveys, ova trial basket experiments, pH and temperature monitoring.