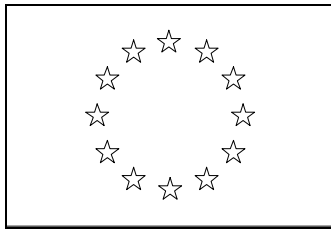
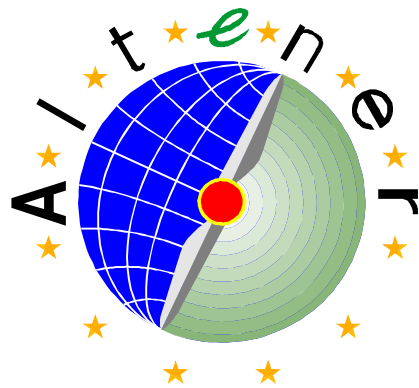

ALTENER II PROGRAMME

2000



Bio-climatic Architecture and Urban Planning

Contrat N° 4.1030/C/00-010

RENEASE

AL/2000/262

Final Report

June 16th, 2003

CONTENTS

1. Background Information	Page 3
2. Summary Results	Page 4
3. Outputs	Page 9
4. Project Management	Page 10
5. Technical Aspects	Page 16
6. Conclusions	Page 24
7. Medium and Long Term Impact	Page 25
8. Work Programme Outturns	Page 27
9. Sites Investigated	Page 28

1. BACKGROUND INFORMATION

1.1 Data Project

Project location	County Cork, Ireland
Project start date (for Carbery H.A.)	1 st May 2002.
Project end date	31 th March 2003
Total Project duration	12 months
Total Budget	111,000 Euro
EC contribution	55,000 Euro
(%) of total costs	49.5%

1.2. Data Principal Contractors

Name	Carbery Housing Association	Cork County Energy Agency	Northern Ireland Housing Executive	Blackwater Development Group	REVES aisbl
Contact Person	Jose Ospina	Pat Walshe	Mary McKewon	Niamh Kenny	Luigi Martignetti
Postal address	37 North Street, Skibbereen, Co. Cork, Ireland	Spa House, Mallow, Co. Cork, Ireland	The Housing Centre, 2 Adelaide Street, Belfast BT2 8Pb Northern Ireland	68 Patrick Street, Fermoy, Co. Cork, Ireland.	Rue Guillaume Tell 59b, 1060- Brussels, Belgium
Telephone	(+353) 28 21890	(+353) 22 43610	(+44) 28 90 240 588	(+353) 25 33411	(+322) 543 1033
Fax	(+353) 28 21897	(+353) 22 43678	(+44) 28 90 318 345	(+353) 25 33422	(+353) 543 1035
e-mail	Carberyha@iol.ie	Mallowre@indigo.ie	Mary.mckewon@nihe.gov.uk	Blackw@iol.ie	l.martignetti@revesnetwork.net
Website	www.carberyha.utvinternet.com	www.corkcoco.ie	Www.nihe.gov.uk/	http://www.blackwater-resources.com/	www.revesnetwork.net

1.3. Key Words

Bio-climatic, sustainable, social housing, ecological, housing need, best practise, outline design, detailed design, participative design, partnership.

1.4. Abbreviations

Abbreviation	Full name
CHA	Carbery Housing Association Ltd
CCCEA	Cork County Council Energy Agency
BRD	Blackwater Resource Development Ltd.
NIHE	Northern Ireland Housing Executive
REVES	Network of Cities and Regions of the Social Economy
DoE&LG	Department of Environment and Local Government
DoR&GA	Department of Rural and Gaeltach Affairs
CCC	Cork County Council
Novas	Novas Ouvertures Group Ltd.
RESPOND!	RESPOND! voluntary housing association
SOLEARTH	SOLEARTH Ecological Architecture
Akiboye Connolly	Akiboye Connolly Architects
Cluster 10	Cluster of ALTENER II Projects (Bio-climatic Architecture and Urban Planning)
RES	Renewable Energy Sources
RUE	Rational Use of Energy

2. SUMMARY RESULTS

2.1 Overview.

The Novas-Ouvertures Group, a UK-based Housing Association Group, presented the RENEASE Project to DG TREN's ALTENER II Programme in 2000. Novas had set up an Ireland-based Housing Association, Tir an Droichead Teo, that was to be the Pilot Project for the proposal. However, in May 2001 (for strategic reasons) Novas decided to relocate Tir an Droichead Teo firstly Cork City, and then Limerick City (where it is now based). Another Partners proposed by Novas for this Project was RESPOND!, a major Irish housing association. The role of RESPOND! was to fulfil the design commissioning and physical project development role in RENEASE. However, RESPOND! also decided to withdraw from the Project. In April 2002 Novas (and Tir an Droichead) withdrew formally from the Project, followed by RESPOND!.

In attempting to find a substitute for Novas and RESPOND! to allow the continuation of the Project, the Cork-based Novas Development Officer approached Carbery Housing Association (CHA) a recently registered Housing Association approved by the Irish Department of Environment and Local Government for social housing development. CHA agreed to substitute for both Novas (as Project Manager) and RESPOND! (as social housing developer) in the RENEASE Project. In taking on this role, CHA was able to draw on the experience and methodology originally proposed by Novas, as the former Development Manager of Novas in West Cork was also the Secretary of the new CHA, and was able to act as Project Manager for the RENEASE Project.

CHA became Lead Partner of RENEASE in May 2002, and agreed with the Cluster 10 Co-ordinator a revised work programme that would achieve most of the outputs and targets proposed by Novas for RENEASE in the eleven months remaining of the Project.

The new RENEASE Partnership was made up as follows:

- 1) Carbery Housing Association Ltd - CHA (Lead Partner).

CHA was registered in September 2001 as a non-profit company with charitable status, and granted Approved Voluntary Housing Body status by the DoE&LG, for social and affordable housing development. Also funded by the DoE&LG and the DoR&GA

- 2) Cork County Energy Agency – CCEA.

An Agency of the County Council set up to promote and advice on energy efficiency, renewable energy use and energy-efficient construction. CCEA was originally set up as a SAVE Project. It operates a Public Information Office in Mallow and has led or participated in over 30 Energy Projects funded by the European Commission to date.

- 3) Northern Ireland Housing Executive – NIHE.

This is the Strategic Housing Authority for Northern Ireland committed to the promotion of best practice in all tenures. NIHE owns and manages over 110,000 social rented homes and has extensive development experience. It is currently also the Home Energy Conservation Authority for Northern Ireland, and supports energy efficiency and renewable energy installations in the private sector and in housing association homes.

- 4) Blackwater Resource Development – BRD.

Is a local Partnership of community organisations and social economy enterprises based in the Blackwater Valley of North County Cork. BRD received funding from Government and Structural Fund sources, and has promoted many economic development and environmental projects in the area, as well as organising training and dissemination events for local communities.

5) Cities and Regions of the Social Economy – REVES.

Is a network of 30 local authorities throughout Europe, which work strategically with the social economy in the promotion of regional development and the combating of social exclusion. REVES also has experience of a large number of European partnerships, including several aimed at developing environmental solutions, sustainable communities and social housing.

2.2 Project Management.

During the Project life CHA has held 12 internal management meetings related to RENEASE. In addition 8 minuted meetings of the RENEASE Partners' Steering Group were held. CHA organised a public Launch of the Project, in Clonakilty, West Cork in May 2002, which was widely publicised and well attended. CHA, BRD and CCEA organised a further Good Practise Conference in Cork City on November 2002, widely publicised and attended by around 100 representatives of local authorities, NGO's, the private sector and interested individuals.

2.3 Good Practise.

RESEARCH.

Good Practise Research for RENEASE was carried out by CCEA, NIHE, REVES and Solearth, who looked at a range of case studies, eventually documenting 18 case studies as the basis for good practice for the pilot project. Examples were drawn from Ireland, UK, Sweden, Holland, Germany, Italy and the Netherlands.

CCEA and NIHE also collaborated in the compiling of a manual of good practise "Design Issues for Sustainable Housing", which was printed together with 4 case studies and distributed at the Good Practise Conference, as well as being posted on the CHA Web Page (www.carberyha.utvinternet.com)

Solearth wrote and printed a further Report entitled "Proposal for Carbery Housing Association" (December 2002) that established the design criteria and provided preliminary designs based on Good Practise identified, as well as documenting further Case Studies. 200 copies of this Report were circulated to Local Authority officials, council representatives, Committee Members and members of Partner organisations, local residents and other interested parties.

STUDY VISITS

Three Study Visits were carried out as part of RENEASE. The first involved fourteen representatives from Partner agencies, which included committee members, councillors and council officials. They visited Gwalia Housing Association in Swansea, a regional housing association that has developed and managed around 5,500 homes and works to a bio-climatic and sustainable development brief. Many social housing projects involving bio-climatic design, RES and RUE were visited. Staff of Gwalia Housing Association (this is enclosed in the RENEASE Appendix CD-ROM) gave a presentation to representatives

The visit was immensely productive, and a long-term partnership with Gwalia Housing Association is proposed.

A second Study Visit was carried out to the Torii Superiore Ecological Village in Liguria (Italy) which involved one representative from each Partner. Torii Superiore have renovated a medieval tower, and have applied renewable energy and energy efficiency in this renovation. The Village has also developed permaculture in the surrounding grounds. Torii Superiore is the Secretariat of the Global Eco-Village Network, which is dedicated to the development of sustainable settlements. The visit was particularly useful for BRD who are planning Ireland's first Ecological Village.

A final Study Visit to the Passivehouse-Gebaudergruppe Project in Dresden took place, as part of the Cluster 10 Final Conference, where the RENEASE Project was presented. The Passivehouse Project was interesting in that it is a social housing development incorporating bio-climatic design and renewable energy use (geo-thermal) and as such bears many similarities to the proposed RENEASE Pilot Project.

2.4 Social Housing Design & Development

SITE PROCUREMENT

The site originally identified by Novas for the RENEASE Project was not available for the Pilot Project, as no agreement could be reached with the owner on purchase price. In order to identify a suitable site, CHA inspected and negotiated 14 other potential sites during the Project period, eventually identifying three sites (two in Bantry and one in Sherkin Island) for the development of Pilot Project.

CHA secured the services of Solicitors O'Mahoney Farrelly in Bantry to secure a binding option to purchase for the two Bantry sites. Securing this option was a requirement of drawing up outline plans and submitting the Pilot for Outline Planning. A binding purchase contract was drawn up, which gives CHA the option of purchasing the site at a cost affordable within DoE&LG land purchase cost limits. This option will continue open until the Outline Planning and the Project Funding is approved. It will also remain valid until any Planning Appeal is resolved by the State planning arbitration board, An Bord Plennala.

PROJECT FEASIBILITY AND DESIGN

CHA was not able to proceed with the architects originally selected by Novas for this Project, as no agreement could be reached on fees. As a result, CHA tendered for alternative architectural services. Solearth Ecological Architects (Dublin) were selected to develop the criteria and design two of the three pilot projects. Sherkin Island Housing Association, working in partnership with CHA, selected Anthony Cohu (architect) to design the third). J.J. O'Sullivan and Associates (Surveyors and Planning Consultants) surveyed the sites. Detailed costing of the design proposals were carried out by Andrew Nugent and Associates (Quantity Surveyors). All three plans have now been submitted for Planning Approval to Cork County Council.

RESIDENT PARTICIPATION

In preparation for the Project, CHA held half a dozen public meetings in Bantry, Clonakilty, Baltimore and Skibbereen, and distributed questionnaires. By the close of the Project 106 applications for housing and completed questionnaires had been received for the Project. As the Pilot Project sites were identified in the Bantry area, the 38 applicants who had applied for housing in this Town were invited to participate in the design consultation and training organised under RENEASE.

2.5 Training and Dissemination.

TRAINING FOR RESIDENTS AND PROFESSIONALS

A Training Programme for prospective residents was carried out in March 2003, organised by CHA and aimed at applicants in the Bantry area. The training was prepared by Solearth Architects, BRD and CCEA, who delivered the training to prospective tenants through a Saturday morning workshop, followed by four evening sessions.

A half-day training session aimed at architects and other professionals working with Partners, in the use of Energy Efficiency Assessment for Houses, was prepared and delivered by the NIHE in Mallow, also in March.

WEB PAGE

A Web Page (www.carberyha.utinternet.com) has been set up containing all key RENEASE information, as well as information on housing demand and sustainable social housing policies. This page is linked to Partners' sites and the Good Practise Guide and the Outline Proposal for CHA (Pilot Project Design) can be downloaded from this site. A CD-ROM containing various Project Reports and Presentations has been produced, and a 15-minute videotape of the Gwalia Study Tour produced for the Project is also available from CHA.

PRESENTATIONS

A presentation on the RENEASE Project was made at the Launch (May 2002) and at the Good Practise Conference (October 2002). RENEASE was also presented to Cork County Council Councillors and Officers in March 2003. A further Presentation was carried out at the International Congress on Sustainable Urban Development and Renewable Energy organised by Cluster 10 in Dresden, in March 2003 and again at the REVES Local Authority Conference "Socially Responsible Territories, a New Approach to Local Socially Sustainable Development" in Orebro in April 2003.

2.6 Aims.

The stated aim of the Project was "to create a convergence between aims concerning social exclusion and the promotion of renewable energy". It is our view that this has been achieved. The Pilot Project designed and the information disseminated has clearly demonstrated to a large catchment area the benefits of incorporating sustainable energy considerations into social housing development strategies.

2.7 Innovation.

The Project has pioneered an innovative approach to social housing design in County Cork. This approach has already had significant impact on the approach to this activity in the area, and has been the subject of presentations at several events, newspaper and magazine articles. The design solutions proposed by the Project represent best practise in bio-climatic design and renewable energy use from Europe and the world, in a tailored application to Irish conditions, and are unique proposals as far as approaches to social housing in this region.

The cross-border and trans-national nature of the Partnership was also innovative. County Cork is not a Border County, so exchange with the North of Ireland on environmental issues has been limited. The involvement of the NIHE in this project has been an important step towards changing this. The European-level exchange, promoted by the participation of the

REVES Network, has likewise promoted exchange of ideas regarding sustainable design and construction, and a heightened awareness in Partners of the potential of trans-national exchange in the environmental field.

2.8 Targeted Action.

The Project has implemented research, pilot activities and dissemination, aimed primarily at the integration of RES in communities aiming at 100% RES supply. This has been achieved through research and development of

- Bio-climatic settlement planning
- Bio-climatic architecture
- Use of solar collectors
- Techniques for enhanced energy efficiency.

Initially, photovoltaic power and wind power was thought unlikely to form part of the Pilot Project. One major innovation has been the identification of geo-thermal energy as a primary source of renewable energy for the area. Geo-thermal energy, in combination with heat pumps and radiant wall technology, form one of the most innovative aspect of the proposals made.

2.9 Main Results.

The following results proposed in the revised RENEASE Project submitted by CHA have been achieved:

- Potential sites for new settlements have been identified, and have been submitted to Cork County Council for Planning Approval.
- Outline Planning Approval has been applied for a total of 37 homes and a community facility (17 homes more than in the revised proposal) based on bio-climatic design principles and renewable energy use.
- Detailed house design, in direct consultation with prospective residents and/or their representatives, has been undertaken for the 37 homes applied for.
- The viability of the design concept for social housing has been established on the basis of professional cost estimates that demonstrate that such construction is possible within the cost limits allowed by the DoE&LG for social housing.

The Project aimed at having secured a firm commitment from the Planning and Funding authorities for the implementation of the Pilot Projects. The timescale involved has not permitted this, as the proposals are still being considered and will have to be approved by the Cork County Council and the Department of Environment and Local Government before they can proceed. However, we expect this approval to be given by the end of the 2003 and the confirmation the Project implementation after this date.

3. OUTPUTS

3.1 Comparison of Proposed versus Actual Outputs:

PHASES	Description	Aim	Proposed Outputs	Actual Outputs
I	Research and Evaluation of Good Practise	To investigate RES technologies appropriate to social housing. To disseminate and consult these findings.	Report on RES Good Practise in Ireland and Europe Local Seminar (Cork) to publicise results and begin the consultation process.	Report on RES Good Practise in Ireland and Europe Launch of Project (31.05.02- Clonakilty) to begin the research and consultation process and Good Practise Seminar (22.11.02 - Cork) to publicise results and disseminate innovation.
II	User and Community Training, and Consultation	To train future users and community on RES design and construction principles. To consult identified RES options with residents and community	6 session training course on RES for users and community Study visits within Ireland to example of Good Practise.	5 session training course on RES for users and community (01.03.03, 10.03.03 24.03.03, 31.03.03) Training session for professionals in Energy Efficiency Measurement (31.03.03) 3 Study Visits, to Swansea, Wales (24-30.10.02- 14 people), Liguria, Italy (20-23.02.03- 5 people) and Dresden, Germany (13-14.03.03 – 1 person) to examples of Good Practise.
III	Pilot Project Design	Work with architects/consultants to incorporate RES options identified into viable design and specification document. Options selected to be acceptable to planners and commercially reasonable (e.g. affordable).	2-3 sites for new settlement defined. 6 design sessions with professionals, developers and users. 20 surgery-style consultation with users. @ 10 meetings with planners, building control officers, funders, etc. Outline Planning approval for 8 – 15 houses secured. Construction concept established (including self-help contribution of the residents) (using participative approach with potential residents/target group representatives) Detailed Planning Approval (and all required building permits) secured. Detailed plans produced and costed.	Three sites for new settlement defined. Design questionnaire circulated & returned (106) 6 design sessions held with prospective residents and other stakeholders, including individual consultations with future residents. 10+ meetings or telephone discussions held with relevant bodies (e.g. DoE&LG voluntary housing unit, CCC housing department, planning department, surveyors, quantity surveyors, etc.) Outline Planning approval for 37 houses applied for, outcome of applications to be known @ August 2003. Design and construction concept agreed. Proposal does not incorporate significant self-help input, as, due to curtailment of FAS funding, this does not seem viable. Some resident-input into finishes is expected. Detailed house plans and site infrastructure produced and costed by QS. Detailed Planning application will have to wait for resolution of Outline Planning.
IV	Dissemination and Capitalisation.	To disseminate the findings of the Project on a local, national and EU level. To secure resources for the implementation of the Pilot Project, and implement the proposals.	Final Report detailing conclusions and implementation strategy and funded and a timescale for implementation. Dissemination of findings and recommendations nationally and at an EU level. 3 Web Page postings of Final Report (Ireland, UK, Brussels) With Cluster 10 – European Conference on RES where findings of project are presented.	Final Design Report detailing conclusions and implementation strategy produced. Final Technical Report includes strategy for funding and timescale for implementation. Findings and recommendations disseminated nationally and internationally (2 local events, 2 EU conferences, several presentations and hard copy and CD-ROM information distributed) Web Page postings of Good Practise Guide and Final Design Report, with links to Partner Web Pages.

4. PROJECT MANAGEMENT

4.1 Project Activities and by whom organised:

Organiser	Event	Date
CHA	Tender for sent out to eight architectural practises for Pilot design	March 22 nd 2002
CHA	Partners Meeting, Shandon Court Hotel, Cork	April 18 th , 2002
CHA	Interviews for architects for Pilot Project, O'Donovan's Hotel, Clonakilty.	May 3 rd , 2002
CHA	Partners Meeting, Quality Hotel, Clonakilty, Co. Cork	May 31 st , 2002
CHA	Launch of Carbery Housing Association and RENEASE Project	May 31 st , 2002
CHA/CCEA	Partners Meeting, CCEA, Spa House, Mallow, Co. Cork	July 26 th , 2002
CHA/CCEA	Partners Meeting, CCEA, Spa House, Mallow, Co. Cork	August 20 th , 2002
CHA/CCEA	Partners Meeting, CCEA, Spa House, Mallow, Co. Cork	September 24 th , 2002
CHA	Study Tour to Gwalla Housing Association, Swansea, South Wales, United Kingdom	October 24 th to 27 th , 2002
CHA/CCEA	Partners Meeting, CCEA, Spa House, Mallow, Co. Cork	November 4 th , 2002
Regional Govt. Chemnitz	Cluster 10 Meeting, Hamburg University, Hamburg,	November 8 th , 2002
CHA/CCEA/BRD	RENEASE Seminar – Good Practice in Bio-Climatic Building.	November 29 th , 2002
CHA/CCEA	Partners Meeting, CCEA, Spa House, Mallow, Co. Cork	January 10 th , 2003
CHA	Meeting with DG TREN, REVES and CECODHAS, Youthbuild Europe.	January 13 th and 14 th , 2003.
CHA/CCEA	Partners Meeting, CCEA, Spa House, Mallow, Co. Cork	February 12 th , 2003
REVES	Study Visit to Torii Superiore Ecological Village in Luguria, Italy (1 representative from each Partner)	February 20 th – 23 rd 2003
BRD/CCEA/CHA	Residents Training Session 1 – Bio-Climatic Design & Social Housing, Bantry Boys Club,	March 1 st , 2003
CHA/CCEA	Meeting between Cork County Council Councillors and Officer and Partners, County Hall, Cork	March 7 th , 2003
CHA	Partners Meeting, County Hall, Cork	March 7 th , 2003.
BRD/CCEA/CHA	Residents Training Session 2 – Environmental Living, Global and Local Environmental Concerns, Air & water Pollution, Bantry Boys Club, Bantry, Co. Cork	March 10 th , 2003
Regional Govt. Chemnitz	International Congress in Sustainable Urban Development and Renewable Energy (Dresden, Germany)	13 th to 16 th March, 2003
NIHE	Professionals Training Session in the Measurement of Energy Efficiency in Houses, at Spa House, Mallow.	March 31 st , 2003
BRD/CCEA/CHA	Users Training Session 3 – Permaculture, Environmental House Design, Sustainable Waste Treatment, Bantry Boys Club, Bantry, Co. Cork	March 24 th , 2003
BRD/CCEA/CHA	Users Training Session 4 – Energy Efficiency in the Home and Domestic Use of Renewable	March 31 th , 2003

	Energy Sources , Bantry Boys Club, Bantry, Co. Cork	
REVES	Presentation at “Socially Responsible Territories” Conference, Orebro, Sweden.	April 3 rd to 5 th , 2003

4.2 Principal changes during the Project life:

Original proposal	Change	Implications
Novas-Ouvertures, principal contractor, to act as Project Manager	Novas Ouvertures closes Tir an Droichead office in West Cork, for strategic reasons in May 2001. RENEASE continues to operate from Cork office, but in April 2002 Novas withdraws completely from RENEASE. The Novas Development Officer then contacts Carbery Housing Association and suggests CHA take over the Project Management role from April 1 st , 2002.	Carbery Housing Association, a non-profit housing association approved by the DE&LG for social housing development takes over Project Management role from Novas Ouvertures Group on May 1 st , 2002.
RESPOND! Voluntary housing association to act as developing association.	RESPOND! Housing Association ceases to participate in RENEASE in May 2001 and withdraws officially from the RENEASE Project in May 2002.	CHA takes over RESPOND! role as DoE&LG approved voluntary housing body for the purposes of developing the Pilot Project from May 1 st 2002.
Original RENEASE Proposal envisages purchase of site in Barrack Road, Bantry for Pilot Project.	CHA takes over land purchase negotiations from Novas in May 2002. Barrack Road, Bantry site (proposed by Novas) inspected and negotiated with Planners, and offer made, but vendor is not prepared to accept price offered, which is based on ceiling of DoE&LG cost limits, being @ € 20,000 per house plot. (25.04.02)	CHA proceeds to find other possible sites for the Pilot Project. During the RENEASE Project life, CHA inspects and negotiates for 14 different sites as alternative RENEASE Pilot sites, eventually identifying 3 sites, 2 in Seafields (Bantry), and one on Sherkin Island (Baltimore), West Cork.
Original RENEASE Proposal envisaged architectural services carried out by Akiboye Connolly.	CHA takes over architectural appointment negotiations with Akiboye Connolly, from Novas in April 2002, but on 30.04.02 these negotiations brake down over terms of payment and fees levels.	On 22.03.02 CHA tenders out to 8 local and national architectural practises, for environmental architecture consultants for RENEASE. CHA selects SOLEARTH architects (www.solearth.com). On 03.05.02 Solearth were appointed to carry out architectural services for RENEASE.

4.3 Project documents produced.

Author	Subject	Date
Akiboye Connolly (for Novas)	Preliminary design proposals, Barrack Road, Bantry (for Novas)	November 3 rd , 2001
Akiboye Connolly (for CHA)	Preliminary Design Programme based on Barrack Road site	March 20 th , 2002
Novas-Ouvertures Group	Interim Report to Cluster 10 Co-ordinator	May 1, 2002
SOLEARTH (for CHA)	Submission to CHA regarding ecological architectural services	May 3 rd , 2002
SOLEARTH (for CHA)	Appointment and scope of services to CHA	May 3 rd , 2002

CHA	Launch Brochure produced and sent by post as well as e-mail notices circulated. Minutes of event widely circulated (500 person reached)	May 31 st , 2002
SOLEARTH	Preliminary design proposals for Fachtans Terrace, Skibbereen	June 7 th , 2002
SOLEARTH (for CHA)	Bio-regional and ecological case studies (best practise)	June 14 th , 2002 (as above)
BRD	Proposal for Environmental Training for residents group in West Cork	July 24 th , 2002 (enclosed in Appendix 4)
REVES aisib	REVES Good Practise at a European Level Report. 5 case studies from Europe	July 24 th , 2002 (enclosed in Appendix 4)
SOLEARTH (for CHA)	Site feasibility reports on sites in Clonakilty and Baltimore	July 24 th , 2002
BRD	Report – Study Visit to Gwalia Housing Association	November 21 st , 2002 (enclosed in Appendix 4, also Study Tour Guide produced by Gwalia)
NIHE/CCEA	Design issues for Sustainable Housing Design (100 hard copies) distributed at Good Practice Conference & posted on Web Page - Includes 4 case studies from Ireland, UK & USA.	November 29 th , 2002 (enclosed)
BRD	Brochure for Good Practise Conference (500 copies circulated)	November 29 th , 2002 (enclosed in Appendix 4)
CHA	Brochure on RENEASE Project (500 copies circulated). Minutes of Good Practise Conference (on Web Site)	November 29 th , 2002 (enclosed in Appendix 4)
CHA/CCEA/BRD/NIHE/REVES/John Gouling (UCD) Brian Norton (Belfast University) Phil Roberts (Gwalia HA) John McAleer (South West Regional Authority), Paula Desmond (Mayor CCC) Solearth Architects	Overhead Presentations for RENEASE Good Practice Conference (distributed by CCEA in CD-ROM Format to 100 contacts)	November 29 th , 2002 (included in RENEASE CD-ROM enclosed)
Solearth (for CHA)	Proposal for Carbery Housing Association (200 copies distributed)	December 12 th , 2002 (enclosed)
CHA	Web Page Report – The RENEASE Project	February 24 th , 2003 (on web page www.carberyha.utvintern.et.com)
NIHE	Presentation and Handouts – Low Energy Housing Design	March 31 st , 2003 (enclosed in Appendix 4)

John J. O'Sullivan and Associates (for CHA)	Comprehensive survey of Seafield Site in Bantry	March 15 th , 2003 (site plan enclosed)
Anthony Cohu (Arch) (for CHA and Sherkin Island Housing Association)	Outline Planning Application for site (6 homes) in Sherkin Island, Baltimore.	March 29 th , 2003 (enclosed in Appendix 4)
O'Mahoney, Farrelly Solicitors	Purchase Contract for Seafield Sites (2) Bantry, with Dr. P. MacCarthy (required for submission of Planning Application)	March 31 st 2003 (enclosed in Appendix 4)
CHA	Analysis of Housing Applications for Sustainable Housing in County Cork (for Web Page)	March 31 st , 2003 (Summary only enclosed in Appendix 4)
Andrew P. Nugent & Associates (for CHA)	Budget Estimate for Residential Development in Seafield, Bantry	April 12 th , 2003 (enclosed)
Solearth	Outline Planning Applications for 2 sites (31 homes and a community centre) at Seafield, Bantry	April 14 th , 2003 (enclosed in Appendix 4)

4.2 Main actions carried out:

Phase	Action	Progress
1. Good Practise	1.1 Research Good Practise (GP)	<ul style="list-style-type: none"> - 4 examples of GP from CCEA & NIHE (Ireland, UK and the USA) - 4 examples of GP from REVES (Sweden, Germany, Holland, Italy) - Study Visit to Gwalia Housing Association (Swansea, Wales) (14 partner representatives) - Study Visit to Torii Superiore, Italy (5 partner representatives) - Study Visit to Dresden, Germany (1 partner representative) - Production of Manual "Design Issues for Sustainable Social Housing" (100 copies and posting on Web Page) - Production of booklet "Design Proposal for Carbery Housing Association (100 copies)
	1.2 Organise seminar on Good Practise	Seminar of Good Practise in Bio-Climatic Design and Sustainable Building organised in Cork City on November 29 th . Presentations by Partners, Project Architects and guest speakers. Attended by around 100 people
2. User Training and Consultation	2.1 Identification and development of residents groups.	CHA circulated held public meetings in 4 West Cork towns, and distributed questionnaires, receiving details from 106 households interested in being housed in the Towns of Bantry (38), Baltimore (24), Clonakilty (18), Skibbereen (14) and other areas (12).
	2.2 Training of resident groups and professionals	RENEASE has organised a public Launch (May 2002) for the Project, followed by information meetings in all major towns. Having identified the Pilot sites, RENEASE carried out 4 Training Sessions for prospective residents of Bio-Climatic Housing (March 2003) and one training session on energy measurement for professionals (March 2003)

3. Pilot Project design	3.1 Site identification	CHA has inspected 14 sites for possible use as Pilot Project sites (a full list is attached Appendix 1). Out of these, only 2 sites in Seafield, Bantry, and one in Sherkin Island, Baltimore, have been found suitable and affordable for social housing. CHA appointed O'Mahoney Farrelly, solicitors, to secure site for planning and purchase.
	3.2 Commissioning and supervising design.	CHA tendered for architectural services and have appointed Solearth Ecological Architects to develop the pilot designs. Sherkin Island Housing Association, (that is developing the 3 rd Pilot Site in Association with CHA) has worked with Anthony Cohu (Arch) for their design. Solearth have worked with Andrew Nugent Associates as Cost Consultants and John J. O'Sullivan, Surveyors. CHA and SIHA supervised the design process, and regular reports were made to Partners. Several design consultation sessions with prospective residents were held.
	3.3 Project Approval	The three Pilot Projects (2 in Seafield and one in Sherkin Island) have been submitted to Cork County Council Planning Department for Outline Planning Approval.
	4.2 Web Page	The RENEASE Project is included within Carbery Housing Association's Web Page on www.carberyha.uTvinternet.com . It includes the Good Practise Guide, links to Partners web pages and other Project Information.
	4.3 EU Seminar	Two EU level seminars marked the final dissemination stage of the RENEASE Project: the Cluster 10 Conference in Dresden and the REVES Orebro Conference (Sweden). Power Point presentations were made at both these events.

4.5 Main problems encountered during the Project.

Problem	Effect	Consequences and solutions
Loss of project time as a result of Partner difficulties.	CHA takes over project in May 2002 with only 11 months in which to re-organise and achieve all proposed project objectives.	Reduced time scale for site identification, negotiation and establishing viability, means that Development Project cannot advance as much as originally foreseen. In particular detailed design approval and tendering of works is not possible within this timescale.
Difficulties in identifying and securing an appropriate site for the Pilot Project.	CHA is not able to secure purchase agreement for site identified by Novas in Bantry (Barrack Road).	CHA has identified and inspected over 14 sites, identifying 3 suitable sites for Pilot Projects (List of sites inspected under Appendix 1). There were two principal reasons why so few of these sites were adequate: <ul style="list-style-type: none"> - The cost of zoned land is 30% higher than the cost limits allowed by the DoE&LG for social housing land purchase. - Planners will rarely allow development of social housing on land not zoned for housing.

5. TECHNICAL ASPECTS.

5.1 Design Issues for Sustainable Social Housing.

This is a good practise Manual intended to guide social housing organisations, local authorities and individuals in the selection of tried-and-tested approaches to sustainability in house design and construction, and energy efficiency and renewable energy use. The Good Practise Guide was a joint effort between the Northern Ireland Housing Experience, and based on their long practical experience of construction and energy considerations, and that of the Cork County Energy Agency.

The Manual is written in accessible layman's language and covers the following topics:

- Fuel Poverty
- Sustainable Development
- Low Energy Design
- Building Materials
- Solar Energy
- Heating Systems
- Water Conservation
- Land Development
- Movement
- Site Planning for enhanced Microclimate.

The Manual has already proven very popular as a document that explains and gives practical examples of sustainability, energy efficiency and renewable energy in a way that can be understood and applied. Many hundreds of copies of the Manual have been given out, and it has also been circulated in CD-ROM format. It is also downloadable from the Project Web Page at www.carberyha.utvinternet.com

5.2 Case Studies of Good Practise.

Project	Description	Reference
East Lake, Commons Conservation, Atlanta, USA	Medium-sized (67 homes) residential development of affordable homes, built on 18 acres, with 10 acres planned for amenity, farmland and conservation. Residents involved in design and construction. Layout minimises car use and hard-surfaced roads. Water is collected for first flush, in-soak and gradual release into lake. Organic food production and various commercial and work opportunities.	Design Issues for Sustainable Housing (RENEASE Oct. 2003)
Hastoe Housing Association, Holcombe, Somerset, UK	Small social housing development (8 units) on edge of village. Bio-climatic design with terrace design to minimise heat loss, maximising south-facing glazing and concrete and thermal block walls for thermal mass. Minimal glazing to North. Avoidance of CFC and HCFC's and other ozone depleting and toxic materials. Renewable timber sources. High level of thermal insulation. Timber frame, double glazed windows. Draught lobbies. Heat metering controls, low-energy lighting, Lifetime Homes design.	Design Issues for Sustainable Housing (RENEASE Oct. 2003)
Black Country Housing Group, Bryce Road, Dudley, UK	Medium-sized (27 units) social housing development demonstrating four different construction approaches. 15 homes were built with conventional block and brick methods, but filling cavity with mineral wool to maximise insulation. 4 houses were built with hybrid system. Internal and south-facing walls built of highly insulated masonry, other walls of lightweight timber. 2 houses used the proprietary system Panablock, which greatly improved thermal efficiency. 6 more houses were built using a steel-frame system. CFC and HCFC are avoided. Only European softwoods used. Boardstock made of	Design Issues for Sustainable Housing (RENEASE Oct. 2003)

	post-consumer waste also used. High level of thermal efficiency achieved. All houses designed with draught lobbies. Humidity-sensitive Passive Stack Ventilation (PSV) and Mechanical Ventilation with Heat Recovery (MVHR) used. User-friendly Heat Controls. Low waste WC's and grey water recycling.	
New Generation Timber Frame Construction, Iris Close, Belfast, Northern Ireland	8 timber frame houses were built in Iris Close, using three different timber frame approaches- traditional stud walls, a proprietary timber-frame system and a third system based on a larger cavity space and insulation. The main objective was to test the effects of different forms of insulation. A MVHR System is installed each house to provide fresh air. A room thermostat is fitted on the ground floor of each house to even out performance. An intelligent heating control system is also installed to log room temperature and boiler activity. All houses achieve a 38% reduction in energy use over conventional building.	Design Issues for Sustainable Housing (RENEASE Oct. 2003)
BedZed, South London, UK	82 dwellings. Zero energy development with all buildings powered by renewable energy. Bio-climatic, solar design. 68% reduction in total energy, 90% reduction in thermal energy, PV installation. Bio-regionally sourced materials. Layout provides for solar powered car pool, workshops on site, shops on site, and links to public transport. Low volume baths and taps, dual flush WC's rainwater collection, water recycling through "living machine", porous surfaces for water soak-in. On site composting and separated rubbish for recycling.	Outline Proposal for Carbery Housing Association (SOLEARTH, March 2003)
Hanover Kronsberg, Northern Germany.	150 bio-climatic passive solar dwellings with heat exchanges. Very low energy use (60% of normal low-energy standard). 60% reduction in CO2 emissions through energy efficiency and renewable energy use. District heating CHP and fuel cell block. PV installation and wind turbines. Low embodied energy material. Layout includes car pool and shops on site. Links to public transport. Low volume baths and taps, dual flush WC's, rain water collection, grey water recycling, decentralised water retention and slow release. On site composting, rubbish separation for recycling and waste reduction.	Outline Proposal for Carbery Housing Association (SOLEARTH, March 2003)
Ekosadten. Augustenborg, Malmo, Sweden.	Refurbishment of 1950's housing scheme. Includes solar thermal RES, heat pumps and district heating system, high level of insulation and energy saving devices. Low volume baths and taps, dual flush WCs, grey water recycling, porous external surfaces, swales and ponds, green roofs. On site composting, rubbish separation for recycling, waste reduction. Electric car pool, shops and services on site, electric buses and cycleway.	Outline Proposal for Carbery Housing Association (SOLEARTH, March 2003)
Carrigeen Park, Clonmel, Ireland.	Development of 63 three-bedroom houses, 22 of standard design, 19 highly insulated, and 22 of passive solar design. A 20% solar contribution to the gross space heating is achieved in the passive solar houses.	Outline Proposal for Carbery Housing Association (SOLEARTH, March 2003)
Hocketon Housing Project, Nottinghamshire, UK	Terrace of 5 units (earth sheltered houses). Passive solar design. No CO2 emission from space heating. 70% heat recovery using heat pumps, pipe runs and exchanger units. On-site water collection and treatment, low-flush WCs and grey-water treatment. Separated waste recycling.	Outline Proposal for Carbery Housing Association (SOLEARTH, March 2003)
Dannebrogsgade and Hedebygade, Vestebro, Copenhagen, Denmark	Renovation project of existing housing. Passive solar energy and some active solar thermal, heat exchanger from air extraction. On-site rain water collection and treatment. Low flush WCs, water saving taps and grey water treatment. Waste separation for recycling and compost drums provided.	Outline Proposal for Carbery Housing Association (SOLEARTH, March 2003)
Ecolonia, Alphen aan den Rijn, Netherlands.	208 units on reclaimed polder. Goal of 25% reduction in energy consumption compared with standard dwelling. Passive solar, solar thermal and high insulation. Surface water treated through reed bed cleansing of surface run off in central collection pool. Waste is minimised and recycled. Cycling routes provided and on-site transport services with links to train. Traffic calming measures.	Outline Proposal for Carbery Housing Association (SOLEARTH, March 2003)

Courtyard Houses, Shenley Lodge, Milton Keynes, UK	8 single storey 3-4 bedroom bungalows. Low energy consumption index. Passive solar, useful gains of 18-27% of heating requirement. Air-tight envelope, high insulation and triple-glazing	Outline Proposal for Carbery Housing Association (SOLEARTH, March 2003)
Paxton Court (Phases 1 and 2) Sheffield, UK	5 single storey houses, 4 two-storey houses (self-build scheme) Low energy consumption index. Passive solar and underfloor heat store-useful gains of 14% of heating requirement. High insulation.	Outline Proposal for Carbery Housing Association (SOLEARTH, March 2003)
Gartenhofstadt Heinrich –Boll Siedlung, Berlin, Pankow	650 apartments on 8 hectares. Bio-climatic solar dwelling – low space heating requirements. PV installation. Radiant walls. Low embodied energy material selection. Bau-biological approach to material selection. Close links to public transport. Walking distance to shops. Cycleway. Low volume baths and taps. Dual flush WCs, surface run-off cleansed and collected on site. Waste reduction and separated rubbish for recycling.	Outline Proposal for Carbery Housing Association (SOLEARTH, March 2003)
BioMass CHP – Wood, Vaxjo, Sweden.	The City of Vaxjo has promoted the development of biomass use for energy production. The system is based on the use of wood rather than fossil fuels, which greatly lowers CO2 emissions and eliminates emissions of toxic gases. The City's aim is reduce CO2 emission by 50% by 2010 and to eliminate dependency on fossil fuels. At present 35% of energy for the City is produced from this source. Waste ash can is returned to the forest as fertiliser.	Good Practises at European Level (REVES June 2002)
Prefabricated Housing Complex, Hellersdorf, Berlin.	Hellersdorf is one of the many concrete slab estates in Easter Europe. At present 170 million people live in 70 million such flats. In Berlin 700,000 people live in 240,000 apartments. The Project has involved the thermal insulation the facades and cellars, the use of rainwater from roofs to water lawns and flush toilets, the use of solar energy to heat water, the use of PV technology for communal lighting and ventilation, the reduction of toxic materials and installations for treatment of waste. Tenant participation has also been integrated in the re-design of the estates, and the carrying out of local works that humanise the layout.	Good Practises at European Level (REVES June 2002)
Sustainable Incentive Card NU, Rotterdam, Netherlands.	This is a chip-card devised by the City of Rotterdam and aims to credit consumers with point for use of sustainable technologies and products. Specific objectives are to promote the use of public transport, to promote waste separation and re-use, to promote use of green financial products and to support other Community environmental policies. Credit can be redeemed by purchase of sustainable good and services. The card is supported by a Partnership of Government and social economy organisations.	Good Practises at European Level (REVES June 2002)
Thermal Solar Energy, Palermo, Italy.	The City of Palermo has been developing use of solar collectors at a municipal level since 1985. Initial work was funded under the ALTENER Programme. A series of workshops aimed at promoting the use of Solar Heating installations have been held. Much of the promotional work is spearheaded by MEDEA (Mediterranean Agency for Renewable Energy and Water)	Good Practises at European Level (REVES June 2002)

5.2 Study Visits.

5.2.1 Gwalia Housing Group, Wales, UK.

This visit was carried out over 4 days in October (23rd to 26th). GHG is a Group of 5 general needs and specialised housing associations based in Swansea, Wales. The largest member of the Group is Tai Cydogaeth that manages over 5,500 general needs homes, including supported housing, in 11 Local Authority areas in Wales. The Association is also involved in a number of training and community development initiatives. It lets properties, which it rents out to a variety of client groups, including families, young single people,

elderly persons, disabled persons and other special needs groups. Tai Cartefi is the development arm of the Group, and is responsible for design and construction of new homes and rehabilitation projects for the Group (as well as student accommodation and new business opportunities). Tai Cartefi is committed to continuing research to innovate and develop environmentally sound design and construction.

Representatives of 3 Partners attended this Study Tour, including a staff member of the County Architects Department, the Regional Manager and the Executive Housing Officer and the Energy Agency Project Manager. Local Councillors, Committee Members and Staff from Carbery Housing Association and Blackwater Resource Development also attended. The Group provided a well-organised and comprehensive tour of projects, that illustrated how bio-climatic design and renewable energy could be applied to main stream social housing projects within cost-limits and standards set by relevant Government Departments. The Visit was particularly important for persuading the Cork County officials that it was feasible and worthwhile to incorporate energy efficiency and renewable energy use into social housing. As a result of the Study Tour future collaboration between the Gwalia Housing Group and Carbery Housing Association was agreed.

In addition to this Cork County Council decided to develop and implement sustainable housing good practise as part of a large development in Michelstown, North County Cork. This development will be designed on bio-climatic principles, but 12 houses within it will be designed and built using a low-energy timber frame system. It is likely that the Gwalia Housing Group will be involved in this pilot development.

5.2.2 Torii Superiore, Liguria, Italy

This was a smaller Study Visit, involving one representative from each Partner. The Associazione Cultural Torii Superiore is a non-profit organisation, which initiated a project in 1889 to preserve a medieval village in Liguria, Italy, as an Eco-village. The Association owns half of the buildings involved, and members privately own the rest. The Association organises training and social activities and farming and craft production has been undertaken in the buildings and adjoining lands.

Both the Association and individual self-builders have restored the buildings using traditional building technologies, which are very appropriate and sustainable, such as the use of lime renders. In addition to this, they have installed Photovoltaic panels to create their own sources of energy. Torii Superiore is also the Secretariat of the Global Eco-villages Network (GEN) and were able to provide us with much information on other Project involved in GEN.

The Study Tour demonstrated how even without public funding support, ecological building and renewable energy use could be applied by self-organised groups of individuals, producing improved living conditions and savings, as well as skills and possible sources of employment. The Tour was particularly useful for Blackwater Resource Development, who are proposing to promote and develop an Eco-Village in the Mallow area,

5.2.3 Das Passivhaus-Wohnprojekt, “Nestwerk” in Dresden-Pillnitz.

This Project was visited by the Project Manager as part of the International Congress organised by Cluster 10. The project has been developed by a co-operative venture by a group of young families in Dresden. It comprises 9 flats, designed to bio-climatic principles. The construction is timber frame, with external timber cladding, and some metal structures. The project is heated by geo-thermal energy from underground pipes, including heat pumps

for every two houses. A passive stack ventilation system avoids build up of humidity, and the temperature of the rooms is thermostatically controlled.

Passivhaus Project demonstrates how bio-climatic design, sustainable construction and renewable energy use could be efficiently incorporated into a small co-operative development, resulting in a better living environment and more sustainable costs. The project was particularly relevant for Carbery Housing Association that was considering use of similar approaches to construction and renewable energy use, including underground pipes for geo-thermal heating.

5.3 Main Events.

5.3.1 Launch (31st May 2002).

This was held at the Quality Hotel in Clonakilty, West Cork. The purpose of this event was to let the relevant authorities and the public know that the Project was being launched, and to begin to develop support for it proposals. Over 200 invitations were sent and Press Releases to local papers, which resulted in at least two newspaper articles mentions in local radio.

Brian Crowley, MEP, the Chairman of Cork County Council and the local TD made presentations. The five RENEASE Partners then presented different aspects of the RENEASE Project.

5.3.2 Good Practise Conference (29th Nov. 2002)

This was held at the Shandon Hotel in Cork City. The aim of this event was to report on and disseminate the good practise identified to date. The Conference was chaired by Paula Desmond, Mayor of Cork County, and included speakers from the Department of the Environment and Local Government, as well as RENEASE Partners. Three Guest experts also made presentations, Phil Roberts, Director of Gwalia Housing Group, Brian Goulding from the University of Belfast and John Goulding from the Energy Research Group and the University College of Dublin.

Over 500 invitations were sent out (mainly by e-mail) and the event was very well attended, by around 100 Council officials, councillors, representatives from community organisations, the private sector and interested individuals. The presentations were collected by CCEA and circulated as a CD-ROM to those attending.

5.4 Participation, Consultation and Training.

5.4.1 Identification of Prospective Residents.

During the early stages of the Project CHA held public meetings in four of the principal towns in West Cork, Bantry, Clonakilty, Baltimore and Skibbereen. The purpose of these public meetings was to let prospective applicants for sustainable social housing know about the proposed development of a Pilot Project, and to request applications from those interested. These meetings were organised by CHA.

CHA distributed a questionnaire and application form at these meetings, asking people who were interested in applying for these homes to complete and return. During the life of the RENEASE Project, CHA received around 106 completed application forms, from persons wanting to apply for this housing. The questionnaires asked for information regarding the

location nature and condition of current dwelling, size of household, number of years on council housing list and employment status, and size, type and tenure of accommodation required. Views on energy and sustainability considerations, community facilities desired were requested, and any particular training needs were identified for prospective residents.

From this CHA found that the largest group applying were single people, followed by 2-person families (couples and single parents), and a number of 3 and 4 person families. A third of persons (mainly the single people) were not on the housing list, but most had been on it for less than three years, indicating they were younger households or persons new to the area (immigrants). A minority of persons were unemployed, the majority being either employed or supported under at “benefit to work programme”, or a special needs or disability programme.

Most persons applying lived in private rented housing, although a significant number lived with relatives. About half said their accommodation was temporary, and most complained about the bad state of repair of their current housing. Demand was split between 2 and 3 bedroom homes. Most people wanted social rented housing although about 1/3 wanted shared ownership of low-cost purchase. Everyone wanted a garden, and demand was split between those wanting workspace and those wanting childcare facilities. Most applicants wanted energy efficient housing and sustainable construction that was also low-maintenance. There was much interest in recycling facilities being available in the tProject, as well as some allotments and childcare facilities. Applicants were interested in receiving training in permaculture, sustainable construction and housing management.

5.4.2 Consultation and Training.

The original prospective resident training programme was planned for October 2002, but was deferred until a site for the Pilot Project had been at least in principle agreed. As a result, it actually took place in March 2003.

The following sessions were delivered:

- Design Workshop (Bantry, Saturday March 1st)

This was delivered by Mike Haslan for Solearth Architects. It involved a presentation of good practise examples from other countries, followed by a presentation of the preliminary design proposals and a discussion of the same. The workshop was attended by prospective residents and by members of the CHA Executive Committee, and provided a forum for discussion and consultation of the proposed design. All prospective residents present had the opportunity to clarify, question and suggest the various aspects of the proposed design.

- Introduction to the Principles of Environmental Living (Bantry March 10th)

An evening course delivered by Niamh Twomey of Blackwater Resource Development. The course explained the meaning of environmental living and sustainability, and its benefits. Global and local environmental concerns and challenges were explored, as well as the impact of modern lifestyle on the Environment and global and local ways to address these problems. Also, the problems and opportunities generated by waste management.

- Principles and Philosophy of Permaculture (Bantry March 26th)

This session was also delivered by Niamh Twomey and dealt with the Permaculture approach to sustainability. This covered ways of growing food organically, environmentally

friendly house design, and construction using green materials such as straw bale, clay, cob and wood. Design considerations for a green home, ecological methods for treatment of solid and liquid waste, and water treatment through constructed wetlands were all described.

- Energy Efficiency in the Home (Bantry, March 31st).

This session was delivered by Mr. Griffin, representative of Cork County Energy Agency and dealt with the principles of energy efficiency as explained in the Design Guide. Also, the main forms of renewable energy production. The session explained the different sources of geo-thermal energy and heat pumps, and looks at some of the problems encountered by CCEA in promoting renewable energy in the area.

- Training in Energy Assessment for Professionals (Mallow, March 31st)

Andy Frew, Architectural Consultant with the Northern Ireland Housing Executive, delivered this session. 5 architects from Cork County Council and 3 representatives of Carbery Housing Association attended the session. The session began with a run through the principles of Low Energy Housing, including environmental issues, construction methods, insulation principles, passive and active solar systems, renewable energy, insulation and U values, thermal resistance and cold bridging. The Irish House of Tomorrow Programme was explored and its requirements outlined. Software for Energy Rating Assessment was distributed and its use explained. The session was very useful to practitioners engaged in sustainable design and development.

5.4 Development of the Pilot Project.

5.4.1 Site Procurement.

On taking over the RENEASE Project, CHA found that the site identified by the Novas Ouvertures Group for the RENEASE Project was not available. The reason for this is that CHA, as an approved voluntary housing organisation, is able to secure grant funding from the DoE&LG for social housing development. However, site purchase is constrained by very definite “cost-limits” that are set out in the official document “Capital Funding Scheme for the Provision of Rental Accommodation by Approved Housing Bodies” (Memorandum VHU 2/02, May 2002).

“Assistance towards Site Costs” is set at € 31,800 per dwelling unit for most areas (or the costs of the site apportioned per dwelling). As the site being considered in Seafield, Bantry was a green field site, with no existing infrastructure, a calculation needed to be made to subtract the costs of necessary infrastructure, roads, waste, and services installations to the site. The advice of Alfred Nugent, QS, was secured on this point, and he suggested that a deduction of at least € 10,000 was required to cover these costs.

The attached Schedule of Sites shows that the owner of the Barrack Road site had second thoughts about the price initially agreed with Novas and the site was no longer affordable within DoE&LG cost limits. As a result, the Project was left without a Pilot Project site, and CHA had no option but to search the market for other sites which might be appropriate for the Pilot.

As well as trawling the commercial land market, CHA approached Cork County Council (Western Office), Skibbereen Town Council and Clonakilty Town Council, all of who own development land which might be suitable for social housing. None of these approaches

met with a positive response and negotiations for land from Cork County Council and Skibbereen Council land banks are still ongoing.

In addition to these approaches, 14 sites owned by private individuals, community groups, developers and companies were identified and inspected. The vast majority was unsuitable for various reasons, outlined in the schedule. (see Section 10. Sites Investigated) Mainly, CHA found that most of the suitable land available on the open market was considerably over the cost limits allowed for housing association purchase.

Eventually, three sites were identified – two privately owned sites in Bantry, adjacent (but outside) of the current housing boundary, and another privately owned site (not zoned for housing) on offer to a similar organisation, Sherkin Island Housing Association, based in Sherkin Island, near Baltimore.

As it was necessary for CHA to secure the owners consent to the design being drawn up and planning permission being sought for this development, CHA secured the service of O'Mahoney Farrelly Solicitors, based in Bantry, who proceeded to negotiate a binding purchase contract for selected areas of the site. The contract specified that two separate sites would be applied for, on two areas of the landholding. CHA would apply for outline planning on both these sites as soon as possible. Should planing permission be secured for either one or both sites, CHA would proceed to Application for Funding under the Capital Funding Scheme and/or the Loan Subsidy Funding Scheme run by the Department of Environment and Local Government. Should this approval be given, then CHA would proceed to purchase. The purchase contract required the paying of a deposit to secure the site.

5.4.1 Development of Design Strategy and Criteria.

One of the initial roles of Solearth Architecture in RENEASE was to develop a design strategy and criteria for Carbery Housing Association, which would incorporate the Good Practise identified and be the basis of the Pilot Project design proposed. This process began early on in the Project with a series of discussion documents that were circulated to and discussed by the Executive Committee of CHA, and the RENEASE Partnership. This Strategy and Criteria covered the following areas:

- Site selection
- Master Planning and Sustainability
- Performance criteria for housing design
- Outline design brief
- Best practise proposed goals
- Bio-regional and ecological housing case studies

This document was first formalised in December 2002 in the report “Proposal for Carbery Housing Association” that contained the basic consideration regarding the above, and some suggested solutions.

This document was circulated to the Executive Committee of CHA, to RENEASE Partners, to Cork County Council Planners and Housing Department and to other interested parties. In all, around 200 copies were distributed.

5.4.2 Design of Pilot Project.

Having consulted and agreed this initial proposal with CHA and RENEASE, Solearth proceeded to more detailed design of the proposed Pilot Projects at Seafield. A site boundary, elevation and contour survey was carried out by J.J. O'Sullivan and Associates. Following the design consultation with prospective users carried out in early March, Solearth designed the two Pilot Projects.

The final Project proposed (and which constitutes the substance of the Planning Applications) is contained in the Report "Outline Proposal for Carbery Housing Association" which was produced by Solearth in March 2003. This Report has been circulated to the Executive Committee of Carbery Housing Association, to RENEASE Partners and other interested parties. The Report will also be posted on the CHA Web Page.

It proposes 2 separate Projects for the Sites A and B in the landholding. Site A includes 12x1-2 bedroom houses, and 4x3-4 bedroom houses, and a Communal Hall, which will probably provide meeting and training space and childcare facilities. Site B is 9x 1-2-bedroom houses and 4 x 3-4 bedroom houses.

Both proposals are designed to bio-climatic principles. They include integrated site planning, being pedestrian bike friendly, and including space for domestic and garden waste management. Heating is provided by a group ground source heat exchanger that is then delivered to the homes through radiant wall technology. Homes are compact to minimise surface area for heat loss, and orientated for passive solar gain. Natural lighting is maximised and homes are designed for natural cooling and ventilation. Glazing is minimised to the North and maximised to the South.

Choice of materials is CFC and HCFC free and favours low toxicity and local materials from sustainable sources, with low embodied energy and recycled content. In terms of thermal insulation the design aims to reduce cold bridging, and to insulate external doors. Roof insulation aims at a U-value of $<0.13 \text{ W/m}^2\text{K}$, floor insulation at U-value $<0.2 \text{ W/m}^2\text{K}$ and wall insulation at U-value $<0.22 \text{ W/m}^2\text{K}$. Glazing will use Argon filled low emissive double glazing U-value $<1.5 \text{ W/m}^2\text{K}$.

Ventilation will be provided by draught lobbies, and controllable trickle ventilation. Air will be extracted mechanically from kitchen and bathrooms with humidity activation. All openings and joints will be draught sealed. Radon reduction will be applied where applicable.

Heating generation will be via an active solar space heating installation, and a heat pump installation, possibly powered by Photovoltaic power. Space heat distribution and emission will be achieved by insulation of all heating pipes and ducts in unheated locations and a radiant wall heating system,

Solar hot water heating will be installed, and water economy measures incorporated (such as mixer taps, economy flush toilets and grey water capture). Separate space and water heating circuits will be installed and zoned and timed temperature controls. Weather compensating temperature controls and user friendly heat meeting will be incorporated. Appliances and lighting will be low energy and provision will be made for natural clothes drying.

A Cost Report Summary of the Design Proposals was carried out by Andrew Nugent Associates, which showed that the proposals for the 2 bed houses were slightly over cost limits. This is a solvable problem, in that the room areas may be reduced or an "open plan" format used for the downstairs area.

The cost of infrastructure is also over the € 10,000 per dwelling assumed, but this may be supplemented by a 50% grant (€ 5,000 per dwelling) from the House of Tomorrow Programme.

In principle, the Cost Report Summary establishes that Proposals for sustainable housing designed to bio-climatic standards are feasible within Department of Environment and Local Government cost limits for social housing, given their being supplemented by additional funding from Programmes like the House of Tomorrow Programme (Sustainable Energy Ireland) or possibly EU sources like the LEADER II Programme or LIFE-Environment.

5.4.3 Outline Planning Application.

Solearth prepared the Outline Planning Application for submission at the end of March 2003. Unfortunately, it has not been possible to submit this Application to date, as issues have arisen with the Purchase Contract related to site access and legal title that have delayed the signature of the Purchase Contract. CHA is of course not able to submit the Planning Application until the final contract is agreed and signed, and this is expected at any time.

6. CONCLUSIONS.

The RENEASE Project provided many conclusions and lessons for Partners:

- Bio-climatic design, renewable energy use and ecologically sustainable construction can be feasibility applied to social housing in Ireland.
- A pilot Project of this type is unlikely to limit itself to energy efficiency and renewable energy use, but, driven by the need of prospective users and the Environment, will expand to include other areas of sustainability (water and waste management, recycling, etc.)
- These developments offer environmental benefits in addition to social ones, and can also create opportunities for training and employment.
- The main obstacle to the development of sustainable social housing in Ireland is the non-availability of adequate land available for sale at DoE&LG cost limits in areas like West Cork.
- In order for such initiatives to be replicated general more specific planning guidance in support of such initiatives should be issued by Councils or the DoE&LG, or possibly the zoning of land specifically for such developments.
- Given that such housing is at present pioneering by definition, the timescales involved in securing the necessary planning and funding approvals are longer than envisaged.
- A one-year (or 11 month) Project is too short to allow the complete development and implementation of a sustainable housing initiative.
- Trans-national experience, and the actual involvement of experienced partners from other countries, can greatly facilitate the promotion, dissemination and implementation of such projects.

- The target groups for social housing are in principle very receptive to proposals involving bio-climatic design and renewable energy use.
- The main value of Projects like RENEASE is probably that they seed ideas that are then developed by many different players and in a variety of ways.

7. MEDIUM AND LONG-TERM IMPACT.

The RENEASE Project has had a number of concrete and many less quantifiable benefits for Partners, prospective residents, local authority representatives and officials, and the public at large.

Some of the most evident are the following:

7.1 CHA

As a result of the Project, the Association has underpinned its role as region's (if the country's) first Housing Association to promote an ecological approach to social housing design, including bio-climatic design, renewable energy use, sustainable construction, and waste and water management. Since this initiative, other Housing Associations have begun to develop similar approaches, some with CHA involvement. Notably, the Waterford Sustainable Village Project, that has been short-listed by the European Commission's LIFE Programme (LIFE03/ENV/IRL/000310), and the Coiste Na-Larchimi Project for Sustainable Building that is currently applying for funding under the Peace II Programme. In collaboration with Coiste Na-Larchimi, CHA is proposing sustainable development to Kerry County Council.

CHA will pursue the implementation of the two Pilot Projects, and in addition will seek to promote and disseminate this approach to other organisations and projects. CHA has been asked to present new detailed proposals to Cork County Council for new housing projects based on lands held by the Council in its Land Bank.

7.2 Cork County Council.

A Presentation on the RENEASE Project was made to County Councillors and Staff at a meeting held in County Hall on the 7th of March 2003. The northern Region of Cork County Council has announced proposals for the development of pilot project of 12 timber-frame low-energy sustainable homes as part of a major development in Michelstown, North Cork. This is an important first step for Ireland's largest County Council to incorporate a sustainable energy approach into their council housing design.

7.2 Blackwater Resource Development.

As a result of RENEASE, BRD have acquired useful experience and information, which will be applied in the development of the proposed Blackwater Ecological Village. The Eco-village is a pilot project, which aims to demonstrate the highest standards of ecological building, waste management, water and energy management, and is currently being developed.

7.3 Northern Ireland Housing Executive.

The Design Issues for Sustainable Social Housing Guide is being used by NIHE to promote good practise in sustainable energy in the North. NIHE are intending to do an updated version of this Guide for more general distribution in the near future. NIHE are also involved in the INTEGER Project (www.integerproject.co.uk). This Project aims to promote and facilitate the development of Green and Intelligent design and building in the whole of Ireland and UK.

7.4 REVES.

The findings of RENEASE have been disseminated to the membership of this Network through the Orebro Conference. It is likely that others of the 30 Local Authority regions involved in REVES will be interested in pursuing bio-climatic design and renewable energy use.

7.5 Others.

In association with CHA, the Sherkin Island Housing Association, an approved voluntary housing body set up to provide social housing for the West Cork Islands, had also adopted the principle of bio-climatic design, and is developing its first Pilot Project on this basis, hopefully to be followed by many more. As both of these organisations are significant community-based housing associations, this development will impact on the design approach of the sector in the foreseeable future.

In conclusion, inspite of the difficulties involved in recovering this Project will only 11 months left to run, RENEASE has achieved most of its aims, and been a very rewarding experience for all involved.

9. SITES INVESTIGATED BY CARBERY HOUSING ASSOCIATION DURING RENEASE

Date	Owner/Agent	Location	Unit No's	Cost Limit	Infrastructure	Offers made by CHA	Asking Price	Accepted/ Rejected
27.03.02 25.04.02	SW Property Services Clonakilty	Barrack Road, Bantry	15	31,800 x 15 = 477,000	10,000 x 15 = 150,000	1) 300,000 2) 350,000	500,000	Rejected
28.02.02	Christy O'Sullivan	Rathmore, Baltimore	8	31,800 x 8 = 254,400	15,000 x 8 = 120,000	1) 120,000	120,000	Not zoned fro housing. Too far from town/village.
28.05.02 13.06.02	SW Property Services Skibbereen	Fachtion's Terrace , Skibbereen	23	31,800 x 23 = 731,400	23 x 10,000 = 230,000	1) 460,000 2) 501,000	600,000	Offers Rejected
02.08.02	Michael McCarthy, Clonakilty	Clogheen, Clonakilty	18	31,800 x 18 = 572,400	18 x 10,000 = 180,000	1) 360,000	€ 500,000 +	Offer rejected. Re-zoning rejected by CCC
06.09.02	Liam Hodnett Estate Agent, Skibbereen	Assolas Cross, Skibbereen,	8	31,800 x 8 = 254,000	10,000 x 8 = 80,000	175,000	"well below expectati ons"	Rejected. Owner to build houses.
07.09.02	Batty Hayes, Developer	Baurnahulla, Drimoleague	33	31,800 x 33 = 1,049,400	10,000 x 33 = 330,000	1) 600,000	800,000 +	Rejected
09.10.02	John Kerr, Estate Agent, Clonakilty	Churchtown, Mallow	34	31,800 x 34 = 1,081,200	10,000 x 34 = 340,000	No offer made		Outside of BRD catchment area.
10.10.02	Key Properties	Kealkil Village, Co. Cork	10	31,800 x 10 = 318,000	10,000 x 10 = 100,00	No offer made		No demand for housing in Kealkil
04.11.02	Dr. P. McCarthy, private owner	Seafields, Bantry, Site A	17	31,800 x 12 = 381,600	12 x 10,000 = 120,000	1) 200,000 2) 240,000	240,000	Accepted. Land not currently zoned for housing.
04.11.02	Tom Sheahan, Buttevant	Main Street, Buttevant	8	31,800 x 8 = 254,400	8 x 5,000 = 40,000	1) 160,000 2) 200,000	265,000	Offer Rejected.
06.12.02	Sherkin Island Housing Association	Site in Sherkin Island	6			SIHA will develop design in association with CHA.		Accepted. Land not currently zoned for housing

09.12.02	Castelyons Development Association	Site at St. Nicolas Church, Castelyons.	8	31,800 x 8 = 254,400	8 x 5,000 = 40,000	No offer made as CDA wish to develop site themselves.	Castelyons not interested in joint development.
08.02.03	Mr. P. Casey, Private Owner	Site at Dromleigh, Bantry	Possibly 12			Owner never reverted with details.	Not pursued as very near Seafields. Land not currently zoned for housing
12.02.03	Dr. P. Mc Carthy Private owner	Seafield, Bantry, Site B	12	31,800 x 12 = 381,600	12 x 10,000 = 120,000	3) 200,000 4) 240,000	Accepted. Land not currently zoned for housing.

(Note: In addition to investigating these sites, approaches were made to Cork County Council, Clonakilty Town Council and Skibbereen Town Council for land from Council Land Bank, without a response during project period. CCC has now indicated that they are willing to consider such a request).