

SCOTTISH SUSTAINABLE CONSTRUCTION FORUM MEETING

Held on

FRIDAY 8 JUNE 2007

in

**THE PARISH HALLS LECTURE THEATRE,
266 GEORGE STREET, GLASGOW**

Present

As per attached List

Apologies

As per attached List

<u>ITEM</u>	<u>MINUTE</u>	<u>ACTION</u>
1.0	INTRODUCTION <p>Iain Macnab, Head of Environmental Services, Glasgow City Council, welcomed the members of the Forum to the meeting. He intimated that the theme of today's meeting is 'Setting the Scene for Urban Regeneration'. This includes new national financial services by the Clyde, the Clyde Waterfront, National Indoor Sports Arena and new neighbourhoods trying to attract more people to the City. Iain intimated that this is new for the Council as the previous Government did not want new Housing in the City. Huge projects for Schools are being looked at with 29 Secondary Schools, which is hoped will be either refurbished or renewed.</p> <p>Iain intimated the Council has been working very hard to try and take on board 'sustainability'. A Policy has been accepted by the Council and they are working hard to fit this into the projects. Glasgow are developing some innovative projects at the moment i.e., Water Plant, Clyde Gateway (which is part of the Water Plant) and soil hospitals etc.</p> <p>Iain hoped the delegates would be inspired by the presentations which are to be given this morning and that everyone would enjoy the morning.</p> <p>RP Thanked Iain for his welcome and thanked everyone for their attendance at the meeting.</p>	
2.0	PRESENTATIONS	
2.1	<u>Sandy Gillon - DRS Glasgow City Council Presentation - Integrated Water Management Plan</u> <p>Sandy is a Group Manager within Glasgow City Council's Development & Regeneration Services. In his role he has a wide remit, including the promotion of sustainable development within the Council, geotechnical engineering and land remediation flood prevention and strategic drainage solutions for the City. The teams he is responsible for have played a major role in developing the sustainability credentials of the City through areas such as the Council's Sustainable Construction and Energy Policies and, more recently, its Environment Strategy and Action Plan. Sandy is a Member of the Glasgow Strategic Drainage Plan Steering Group, he also chairs the multi-agency group responsible for the development and delivery of the Clyde Gateway Integrated Water Plan. In addition Sandy is the Project Manager for the £53 million White Cart Water Floor Prevention Scheme which will address major</p>	

flooding issues in the south side of the City.

Sandy intimated that a Scheme was set up on the 30 July 2002 after the catastrophic events that year when 85mm rain fell in one afternoon (equivalent of one month's rainfall). The drains, sewers and gullies all overflowed and manholes were surcharging with sewage spilling out. There were many questions as to how this occurred. A report was compiled by SEPA which contained 4 good points :

1. Water does not have any boundaries.
2. These incidents require to be monitored and flow costed, which is very difficult to carry out.
3. Protocols for communication should be reviewed.
4. How do you make the Public aware that there is a problem and that this could happen again.

The key lesson was a multi agency approach to flooding required to be adopted.

Glasgow City Council, Scottish Enterprise, Scottish Water and SEPA all came together to discuss this. This group took a long time to look at the problems and came up with an understanding as to how drainage works in Glasgow. They have now developed an integrated sewer system.

Objectives are as follows :-

- Water Quality - water is generally good and continues to improve but not necessarily for Glasgow which shows a poor water quality.
- Sewers operate well until it rains - have to try and get as much surface water out of the system as is possible.

Glasgow's strategic water plan has looked at the problems and it is estimated that approximately £1.5bn requires to be spent to deal with this problem. Sandy stated that development is severely constrained but they are looking at a different approach. The spills through the CSO's had become more and more frequent with more flooding and pollution taking place. The solution was to try and create more water courses and create regional suds at the water courses and to try and take surface water out of the sewers. This is much easier than building 75 holding tanks throughout the City.

GCC are trying to create a new water surface tank in Toryglen and the Council are investing £2½m. The Council are also considered developing overland flow modules.

A Water Course system has been developed with takes more water away from the sewers e.g., less flooding. This also takes excess water away from houses etc. Also looking at integrating water e.g., how can water provide an environmental amenity. There are great opportunities for doing this.

Planning is the main delivery vehicle.

Q1 **Question**

Installations in regards to water usage - are there any plans for creating lower flow source controls for roof drainage etc. Are you looking at lower flow showers, toilets etc.

A1 **Answer**

This is not part of the package but should be something we work towards. Big roofs, parking areas etc have to be dealt with and this has to be looked at right across the spectrum. The drainage plan is looking at a bigger picture. The City Plan is a key area.

Q2 **Question**

Is it the intention that all retention ponds would be isolated from surrounding areas.

A2 **Answer**

These ponds would be lined.

2.2 **Keith Pender and Raymond Hendry - Clyde Gateway
Presentation - Case Study - Clyde Gateway**

Keith is the Project Manager for Glasgow City Council, Clyde Gateway project. He is a Valuation Surveyor to trade with over 30 years experience in the wider property market. Keith started out as a management surveyor within the industrial portfolio of the Council and this led into the larger scale regeneration projects such as in Pollok (Silverburn); Easterhouse (GlasgowFort); Robroyston, and Toryglen where he was the coal face worker

Raymond Hendry is Principal Officer in Glasgow City Council's Clyde Gateway project. He is a Town Planner by profession, with over 30 years experience in physical and economic regeneration. Raymond has worked in both Govan and the East End of the City so no-one can accuse him of Old Firm bias. Most of his time has been spent with the City Council but he spent 10 years at Govan Initiative, a local economic development company where he helped oversee the growth of the organisation and develop its strategic direction.

Keith intimated that Clyde Gateway is a major regeneration project covering the East of the City and crossing the River Clyde to include parts of South Lanarkshire. It extends to approximately 830 hectares. There are 4 Partners involved in this project.

There is 30% of derelict land in Glasgow and South Lanarkshire. The East area has huge areas of derelict land and this is where the Sports Arena is to be developed. There are major problems in regards to drainage and contamination. Contamination issues are very significant.

In terms of the Gateway there are 3 main rules i.e.,

- to make a difference to the way this looks and works
- increase in economic opportunities
- communities that are there to be brought back in where possible

There are huge justifications for this project. The Gateway is in the East end of the City and moves South towards Fullerton and is essentially 2000 acres of ground. A significant reason why this area has been under developed is due to traffic issues.

Progress to date :

- Getting technical people together to produce a Master Plan.
- More recently trying to address the resolution of contamination etc.
- During 2006/07 4 major studies have been commissioned. These studies will determine the nature, type, density and capacity of development
- Scottish Executive have now made forward funding for LF positions within the area.
- An early Action Plan has been developed.
- The Business Plan identified by the Urban Regeneration Company showed that URC required £250M
- This is a huge project over 25 years. It is proposed there will be 10,000 new units within the area. Commercial/Retail - local markets only. Leisure & Sports - national/regional projects.
- Commonwealth Games facility - have to produce 1500 flat units.
- Looking at creating urban regeneration etc.

This requires a multi-agency approach. The aim is to transform the area and get people back into the area. The Gateway project has huge scope for sustainability.

Q1 **Question**

What you have described is one of the more exciting projects in Scotland and suggests a sustainable community. If you were to promote it more strongly as a sustainable community you may get more from your stakeholders. You have not badged it as a community project.

A1 **Answer**

We want to try and take this forward in a phased way. We have a Business Plan but perhaps we should be seeking to highlight the sustainable issues in this. We have to rely on the resources we have. We would want to maximise this input.

Q2 **Question**

Rather than have a sustainable community itself perhaps you should be looking at how this can form a sustainable footprint for the Glasgow area. This could be used as a catalyst for the regeneration of the cosmopolitan area.

A2 **Answer**

Yes, ultimately, but it is the stakeholders individual projects at present.

Q3 **Question**

You have an opportunity to highlight and present the means of enhancing the design in houses and retail. Highland Council have taken this forward. In the central belt we have a lot of houses to be developed, retail and industry. Have you looked at working with Highland Council.

A3 **Answer**

The Gateway has not brought forward its own specific developments. Ground water for heating etc., maximising the waste from site. These things have moved forward. Contamination and possible solutions with water etc., are being looked at. We have to tackle these issues head-on to satisfy SEPA and the investment market.

Glasgow City Council have a commitment to Eco Homes for in-house development within the City. They have minimum standards for across the City. We are addressing sustainability and this will come through in the Clyde Gateway and the Commonwealth Games projects.

We are looking to focus on the people who live there. The investment will only work if the people stay. We have to try and ensure that the community increases. We are trying to improve sites for the community population.

2.3 **Amie Fulton - Sustainable Scotland Network (SSN)**
Presentation: Low Footprints and High Quality Development

Amie has a BA in Human Ecology and an MSc in Rural Planning and International Development. Both degree dissertations focused on environment impacts and policy. She has experience working for local authorities and in partnership with local authorities (in both Scotland and Canada) to promote sustainable development. For the last 3 years Amie has been the Footprint Officer for North Lanarkshire Council. This was a partnership project working with WWF Scotland, Aberdeen City and Aberdeenshire Councils. On May 1st Amie began her current post with the Sustainable Scotland Network as the Local Footprints Officer, providing support and practical advice to Scottish local authorities interested in carbon and ecological footprinting.

Amie stated that Sustainable Scotland Network (SSN) is a Network of Scottish LA sustainable development advocates led by steering group and is supported by The Scottish Executive and based with KSB. It aims to assist local authorities in Scotland in putting policy into practice through Best Practice training and support. They are also looking at helping local authorities to produce Action Plans. In regards to footprinting they are looking at 3 Planet to 1 Planet living.

North Lanarkshire is a 3 year project (working with WWF, North Lanarkshire Partnership, Aberdeenshire Council, Aberdeen City Council and SSN). All 3 local authorities have committed to reducing their area's footprint; using footprint to inform policies and maintaining a footprint expert within the council

What is a Footprint ? A footprint is a measured amount of land e.g., **Real Land** (the land and sea area needed to provide us with the water and materials we use in our everyday lives. **Energy Land** (the forested land and sea area needed to absorb the waste we produce, particularly **carbon dioxide**. The ideal footprint is that we have one Planet so use one Planet.

Eco Footprint components are:- Buildings, Food, Water, Energy, Waste and Transport.

North Lanarkshire's footprints e.g., Food and Drink, Energy and Transport, make up about 50% of the footprint. They had a look at 3 areas in North Lanarkshire, one of these being Ravenscraig. This was chosen as it is a large brownfield development; the historic significance of site; Planning Tool and its Footprint reduction potential - Energy, Transport, Housing, Services

The Ravenscraig site is one of the largest brownfield developments in Europe. It has a lot of deprivation with economy changing in the area. There are about 600 houses being built, some are detached houses with, possibly, 2 schools. There will also be retail units, Education units etc.

Materials - Timber frame with mineral wool and fibreglass insulation, Masonry from reconstituted stone, High performance double glazed windows and door units. 50% of timber FSC or equivalent rating.

Energy - Utilise passive solar design, utilise energy efficiency techniques, 10% reduction in CO² emissions, utilise combined heat and power boilers (preferably fuelled by renewables).

Transport - All dwellings within 400m of a bus stop, multi use streets or 'shared surface' community areas, cycle storage provided for 50% of dwellings and home office provision provided in all dwellings. There will also be a Railway Station.

There is a 3% reduction in the Ravenscraig development opposed to the North Lanarkshire. SSN are working with house builders and developers in regards to sustainable design guidance, top 10 construction items, EF workshop for developers.

Case Study - BedZED Homes

- Carbon Neutral mixed use development e.g., flats etc
- Commercial home working units
- Community service within the units
- Built on brownfield site in the London Borough of Sutton

Looked at 4 house types, looked at New Build 2002 Regulations, Eco Homes, BedZED (eco-village development)

Energy Results - BedZED were able to reduce footprint from 0.06 to 0.01 through good design.

Q1 **Question**

Why is only 50% of the timber FSC or equivalent rating.

A1 **Answer**

They were using the Eco Homes assessment criteria and looked at what they could do with this. They were balancing between what they could supply and cost out.

Q2 **Question**

Is construction of houses more expensive and what are benefits for developments.

A2 **Answer**

Scottish wool will be used for insulation; looking at passive solar design instead of solar panels or use turbines; looking at what we can afford and the best design for the job; and looking to reduce CO² emissions.

Q3 **Question**

Are you taking into account the 2007 Regulations.

A3 **Answer**

We will in future.

2.4 **Bjorn Aaen**
Case Study: The Soil Hospital Project

Bjorn is a Civil Engineer with 35 years experience. He has worked with Glasgow City Council for the last 20 years, mainly in geotechnical engineering. Bjorn is currently employed as a Project Leader with responsibilities for geotechnical, watercourses and strategic drainage issues. As from now he is also responsible for progressing the Council's Part 11A Contaminate Land Strategy. He has an interest in finding sustainable solutions and is keen to promote soil treatment centres as a viable option for remediating contaminated sites in a sustainable manner.

Bjorn explained the concept of a Soil Treatment Centre (STC). An STC is 'fed' with contaminated soils from sites. The treated material, which is suitable for restoration work can then be, either returned to the same site (or another site) for reclamation purposes or it can be sold in the open market as fill material or aggregate. Treated materials could e.g., be used for landfill restoration. STC is usually a local and temporary facility. STC is not a new idea - established for a number of years on the Continent and in US and Canada.

Why have an STC :

- This is the result of the landfill directive which came into force on 4 July 2004. It ended poor disposal of contaminated waste or hazardous waste. It is also to meet the Government's recycling targets.
- There are now Land Allowable Training Schemes.
- There has been an increase in construction demolition waste in Scotland e.g.,
- 6.3M tonnes in 2000
- 7.3M tonnes in 2004
- 10.6M tonnes in 2005
- Dealing with land affected by contamination.
- Dig and treat acceptable solutions
- Treatment increasingly feasible
- It is a flexible option
- Rapid service allowing development to continue from our products and spin-offs
- Increases in Landfill Tax
- Aggregates Levy

- half of all construction waste to be recycled by 2012.

Sustainable Development

- convert waste into useable construction materials
- reduce demand for clean replacement materials
- reduce overall costs
- minimise disposal of materials to landfill
- reduce transport impacts

STC's and Glasgow

There are a number of large projects in Glasgow e.g., Clyde Gateway, M74, National Indoor Sports Arena, East End Regeneration Route. These will have a huge amount of waste which requires to be regenerated. There is a large amount of vacant and derelict land. The Council has adopted a policy on Sustainable Construction. they have agreed to undertake a feasibility study by consultants (Grontmij).

Grontmij's study indicated that :

- Project-specific temporary facility
- Local "hub-site" serving a number of development sites in a regeneration area
- Large-scale semi-permanent regional facility
- Several STC's of different types could successfully co-exist in the Glasgow area

How is a Soil Treatment Centre Established (Short Term)

- A temporary STC can be developed in the Eastern end of Glasgow
- Treatment can effectively be on site, reuse material on site following treatment or send to LF as restoration material.

(Longer Term)

- Joint venture approach for large-scale, semi-permanent, regional STC's e.g., on a LFS
- Private Sector - Capital,. Technical know-how and market awareness
- Council -Identification and/or provision of suitable site; Planning Framework and baseline through-put material of public sector works

How is a temporary STC Established

- Identify site to suit remediation strategy and local conditions
- Site of sufficient size for treatment process: 2-3 ha
- Preferably operate STC on an existing contaminate site
- Planning Permission
- Mobile Plant Licence from SEPA
- Site Specific "Working Plans"
- Operator must show that the STC is temporary for it not to require a "site licence"
- SEPA will determine whether output is still waste on a case-by-case basis

There is currently one STC operator in the process of setting up a facility in Glasgow to clean up a gas works site with private arrangements between operator and site owner. There is a Planning Application in process. The Mobile Plant licensing issues with SEPA have been resolved. A method for licensing of treated material is required.

EXAMPLES :

The temporary Ecomesh site at Portglenone, Northern Ireland is a neatly paved site compound with a stockpile of untreated material under cover. This is a modular soil treatment plant which can be tailored for specific sites. Throughput is 40 to 150 tonnes/hr. There is no excessive noise. A wet process is used with no dust.

There is a recently opened permanent STC facility in Teesside. This is a joint venture company between Augean and DEC>Terramundo. This was modelled on a facility in Belgium. It has stockpiles of clean products, e.g., 75mm aggregate, 25mm aggregate and 125um sand. It has the capacity for 1,000 tonnes/day (single shift). As with the site in Portglenone, a wet process is used with no dust.

There are still problems to overcome such as :-

- identification of suitable sites
- obtaining planning permission
- lack of awareness with decision makers
- fears that STC could frighten away the potential investors/backers/decision makers
- Regulations seem to be out of step with government's recycling aims
- STCs not yet accommodated within current regulatory regime

There is light at the end of the Tunnel e.g.,

- Environment Agency: "The Definition of Waste" outlines approach to when treated soil is no longer a waste
- SEPA expected to issue similar document this summer
- As landfill capacities diminish - markets for STC will increase
- Improved treatment technologies are emerging

Future work requires to be carried out i.e.,:

- Change in waste regulations required: appropriate treatment trigger for declassification
- Verify performance of STC against sustainability criteria e.g., transport generation, resource consumption, emissions to atmosphere, wastes arising from overall remediation process etc
- Establish accurate picture of scale of brownfield land that would benefit from the concept

Q1 Question

On the 2 case studies shown, are these applications just for granular material.

A1 Answer

No. There are applications for clay.

Q2 Question

Are there any contaminants that you could not wash.

A2 Answer

There probably will be but there are treatment applications out there. We are looking at chromium and trials are ongoing for different solutions.

Rob Pedersen intimated that Dundee have a Soil Hospital.

**2.5 Martin Waters - Glasgow 2014 Bid Team
Presentation - Glasgow 2014 Bid: Commonwealth Games Village**

Martin is the project manager for the Commonwealth Games athletes' village. His main background is in Housing where he has worked mainly on partnership projects with the private sector in areas such as Drumchapel, Ruchill, Springburn and Easterhouse. Martin was Divisional Housing Manager for the East Division which included Easterhouse and the East End in the late 90s. He was subsequently Chief Housing Officer Area Renewal until appointment to his present post.

Martin stated that he had received huge support from the SSD Team in Glasgow City Council in regards to the Athletes' Village project and hoped they would be successful in their bid to host the Commonwealth Games in 2014.

The presentation covers site characteristics and the village master plan. Martin stated that it is a river site setting of almost 38.5ha and is almost South of Celtic Park. It will include a new housing suburb of 1,000 plus residential units. There will be 170 athletes per ha. The site is within 2 arterial routes of the City Centre and is adjacent to the new East end regeneration route. It has a railway line running past the site and is on the Clyde.

The Residential Zone will have provision for 6,000 competitors and officials. This will consist of housing, athletes' services area etc. The new housing will be in a range of styles and sizes and will be a permanent development with no temporary housing.

There will be a maximum of 4 athletes for shower/WC; a maximum of 2 athletes per bedroom; beds will be stackable; shared wardrobe and personal bedside cabinet. Wheelchair facilities will be available.

The International Zone will consist of main reception, retail services, recreation services, entertainment services, meeting facilities and security centre.

The greenspace zone will be for village use.

This will be a new city suburb with low rise, 4 storey maximum types of houses. Energy will be solar and passive and there will be sustainable urban drainage. Waste minimisation and recycling are all guiding lights in our thoughts in building the village.

Athletes' services :

- Services and facilities for athletes to be provided within this zone
- Temporary tented accommodation.
- Tented refectory area
- Plaza space for gathering
- Locked international zone
- Locked central to residential zone

There will be a polyclinic, tents, gymnasium/recovery centre, accommodation services etc.

During the Games, the village itself will be car free, except for the shuttle bus for the competitors.

Security is a major issue for the games and there will be 24/7 security.

There will be a transport hub and this could be a legacy which would benefit the community in years to come. There will also be post games social housing for sale.

Q1 Question

Given that a lot of planning has gone into this, what would happen if the Games do not come to Glasgow in 2014. Would the development still proceed.

A1 Answer

This is a no OC cost. The Chief Executive's view is that this will go ahead if the Games do not come to Glasgow. The site will be developed but it may not be developed in that shape or form.

Q2 Question

Is there only one presentation opportunity to the Assessment Panel ?

A2 Answer

Just like the Olympics, the evaluation team are very similar to the team which went to London. You are allowed one change to the document. The evaluation team will prepare a report and if the proposals for the village are criticised one change will be

allowed for prior to a final presentation in November.

Q3 Question

Where is the funding coming from.

A3 Answer

The village is a non OC cost. It is not associated with the Games and is basically a housing development. The village itself will be a private sector funded project. Costs are just under £400M and this will be a split of 80% Private and 20% by Glasgow City Council. The largest investment is the increase to Tollcross Pool.

RP thanked the Speakers for their interesting and enlightening Presentations.

3.0 MINUTES OF MEETING HELD ON 9 FEBRUARY 2007

The minute of the previous meeting held on 9 February 2007 was accepted as a true record.

4.0 MATTERS ARISING

4.1 Membership Update

It was noted there are now 226 members representing 103 organisations. This has risen by 5 since February 2007.

4.2 Funding

Scottish Executive Funding is available for the next 2-3 years. It is suggested that a membership fee may have to be charged e.g., individual member - £20; Organisation with 1-10 employees - £50 and Organisation with 10 or more employees - £75. This would allow us to cover the costs we have year on year. RP to prepare a paper to all members seeking their views in regards to same. This will be attached to the annual Questionnaire.

RP

4.3 Targets 2005-06 - Questionnaire

RP intimated that the Questionnaire is one of the obligations we have to demonstrate to the Scottish Executive to prove that we do what we do. Regrettably, last year, only 30 Questionnaires were completed and returned. RP asked that, when the Questionnaire is distributed this year, members make every effort to complete and return same. A further report will require to be made to the Scottish Executive.

4.4 Website Update

Anyone who wishes information placed on the Website should contact Yvonne at yvonne.mchugh@dundeecity.gov.uk

ALL

4.5 New Initiatives

RP reported that the Scottish Executive have published SEG. They are looking at a 15% reduction in carbon reductions in buildings. RP intimated that Stephen Page, Planning Officer with Dundee City Council, would very much like to make contact with other Councils and discuss how these new targets are to be achieved in practice. Steve can be contacted by Tel: (01382) 433408 or E-mail: stephen.page@dundeecity.gov.uk

5.0 ANY OTHER BUSINESS

None.

6.0 FUTURE PRESENTATIONS/SPEAKERS

RP stated the next meeting will be held in Perth on 7 September 2007 and that several speakers had been suggested. This may have a Transport/Biomass theme to it. Suggested Speakers :-

- Representative from Perth & Kinross - Biomass Boilers
- Prof. George Fleming (re Resource Efficiency in Construction & Development - Case Study for Glasgow Harbour Project)
- Esmond Tresidder, Earthship Visitor Centre Officer (re the 'Earthship Visitor Centre')
- Peter Copeland - Dundee University (re 'Transportation')

7.0 DATE OF NEXT MEETING

The next meeting will be held on **FRIDAY 7 SEPTEMBER 2007** in Perth City Council.

The February 2008 Meeting will be held in West Lothian. **A venue is still required for the June 2008 meeting.** Anyone wishing to offer a venue for this meeting should contact Rob Pedersen, e-mail rob.pedersen@dundeecity.gov.uk

Please Note : Copies of the presentations will be available shortly on the SSCF Website. - www.sscforum.org.uk

Where it is not possible to place a Presentation on the website, due to the size, this can be made available on disc and anyone wishing a copy should contact Yvonne in the first instance at yvonne.mchugh@dundeecity.gov.uk

It was requested that, if anyone wishes to use the presentations, they credit the source.

UPDATE : Unfortunately the Presentations for this meeting were too large to be placed on the Website and are therefore only available on disc.

RP thanked the Speakers once again for giving up their time to present their interesting and enlightening Presentations

He also wished to thank the following:

Yvonne for taking the Minutes.

Amanda Waugh for organising the Speakers and catering for today's event.

Iain Macnab for his opening remarks.

Glasgow City Council for the venue facilities and lunch.

Rob Pedersen thanked everyone for attending.

Distribution

All Forum Members
Director of Support Services
Chief Executive
A Anderson, ECPD
Fergus Wilson
Mike Galloway
Anne Wilson

cc Councillor George Regan
Councillor Fraser McPherson

**N.B. PLEASE FORWARD ANY AGENDA
ITEMS FOR NEXT MEETING**

RP/YM
14 June 2007

SCOTTISH SUSTAINABLE CONSTRUCTION FORUM

MEETING ON 8 JUNE 2007 in

THE PARISH HALLS LECTURE THEATRE, 266 GEORGE STREET, GLASGOW

LIST OF ATTENDEES

	NAME (PLEASE PRINT)	<u>LOCAL AUTHORITY/ ORGANISATION</u>	DESIGNATION
1	Andy Marnie	South Ayrshire Council	Energy Manager
2	Bill Browning	North Lanarkshire Council	Group Project Manager
3	David Sionilcoush	PRGW Poland	Specialist Geologist
4	John Anderson	Dundee City Council	Building Services Eng Manager
5	Stuart Brown	do.	Principal QS
6	Mark Holmes	do.	Trainee QS
7	Bob Anderson	do.	Senior Architect
8	Craig Muir	do.	QS
9	David Banks	NHS Tayside	Tech/Development Manager
10	Sandy Gillon	Glasgow City Council	Group Manager
11	Sharon Thomson	Dundee Sun City	Co-ordinator
12	Kevin Jamieson	Dundee City Council	Project Officer
13	Linda Sheridan	Scottish Building Standards Agency	Dir of Research/Sust Dev Policy
14	Amanda Waugh	Glasgow City Council	Sust Dev. Officer
15	Gill Morgan	Glasgow City Council	Principal Sust. Dev.
16	Martin Squibbs	CIRIA	Associate Director
17	Vicky Mackenzie	East Dunbartonshire Council	Senior Architect
18	Eiska Vaneckova	do.	Archit4ectural Technician
19	Raymond Hendry	Glasgow City Council	Principal, Clyde Gateway Proj
20	Ivan Rowe	Ecomesh Ltd	Managing Director
21	Matevsz Kus	PRGW Poland	Foreign Contacts Directors
22	Derek G Nelson	Forestry Commission Scotland	Timber Development
23	Ian Walker	Communities Scotland	Quality & Sustainability Co-Ord
24	Douglas Langdon	Wm Tracey Ltd	Sales Manager
25	Melvin Rowan	Fife Council, Facilities	Lead Officer
26	Stephen Page	Dundee City Council	Planning Officer
27	Mohamed El-Haram	University of Dundee	Research Fellow
28	Kristine Leitch	Scottish Water Waste Services	Project Manager
29	Bjorn Aaen	Glasgow City Council	Project Leader
30	Robert Quigley	Ecomesh	Consultant
31	Phil McGoldrick	Geo Solutions (Ireland)	Managing Director
32	Derek Taylor	North Lanarkshire Council	Planning Officer

	NAME	<u>LOCAL AUTHORITY/ ORGANISATION</u>	DESIGNATION
33	Gordon Carswell	Glasgow City Council	Project Manager
34	George Campbell	Glasgow City Council	Principal Planner
35	Keith Pender	Glasgow City Council	Clyde Gateway Project Mgr
36	Des Travers	Shanks Soil Solutions	Business Development Mgr
37	Prof. Bob Kalin	Royal Academy Eng Research Chair	Eng. for Sustainability/Remediation
38	Ian Cameron	Perth & Kinross Council	Construction Manager
39	Sandy Dawson	Clackmannanshire Council	Team Leader, Design
40	Craig Doogan	Renfrewshire Council	Energy Manager
41	William Marshall	Falkirk Council	
42	James Law	Eco Timber Frame Ltd	Director
43	Mandy Wilkinson	Excel Industries	Sales Engineer
44	Rob Pedersen	Dundee City Council	City Arch Services Officer
45	John Fleming	Envirocentre	
46	Yvonne McHugh	Dundee City Council	Secretary
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