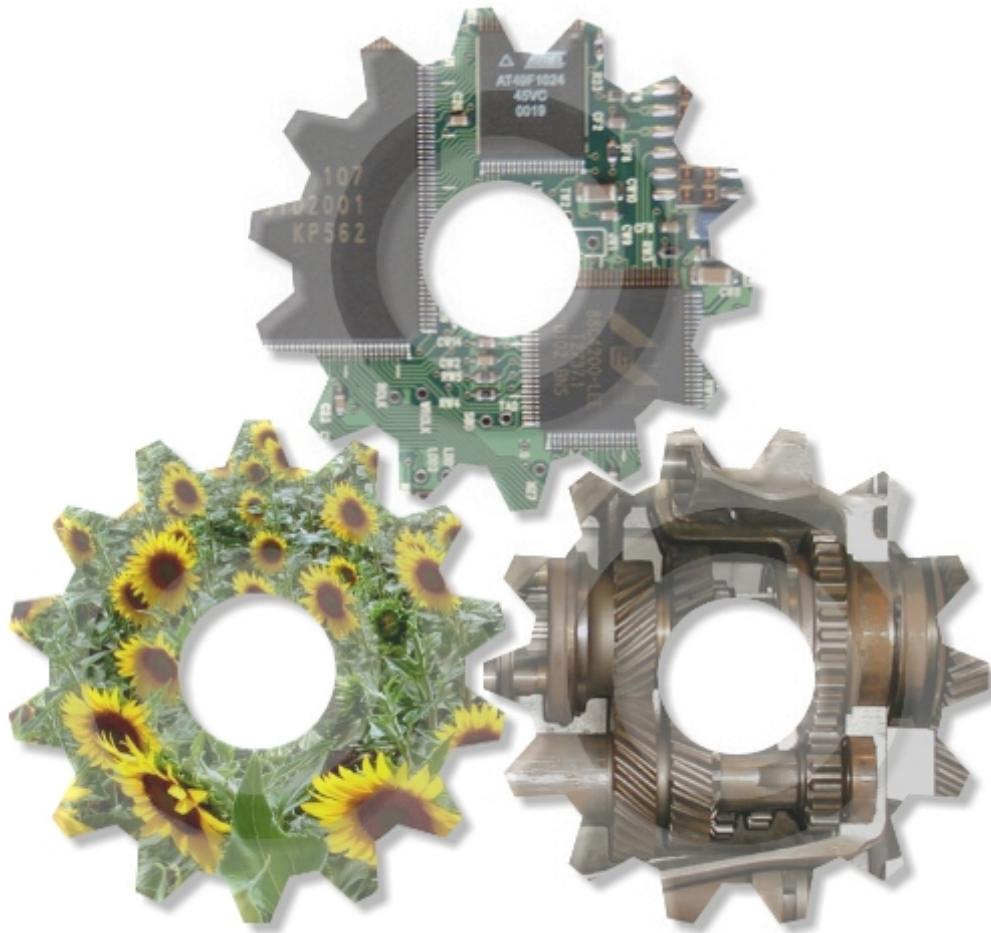


Integrated Skills

Specialists in Environmental Management



Capabilities and Services

June 2009



CONTENTS

<i>ABOUT INTEGRATED SKILLS</i>	1
<i>EXPERTISE AND SERVICES</i>	2
<i>SELECTED PROJECT EXPERIENCE</i>	3
<i>Economic, Financial and Commercial Analysis / Assessment</i>	3
<i>Planning / Strategy Development</i>	7
<i>Technical and Miscellaneous</i>	10
<i>Capacity Building, Legislative Development and Training</i>	14
<i>Information and Communication Technology</i>	16
<i>KEY STAFF</i>	18
<i>ASSOCIATES</i>	23
<i>CONTACT POINTS</i>	30





ABOUT INTEGRATED SKILLS

Established in 1993, **Integrated Skills** specialises in the provision of high quality environmental advisory and management services to government and industry, especially in the field of waste management. Drawing upon the diverse skills of a team of professional staff with extensive practical experience in the field, the Company is able to offer a wide range of expertise and services which:

- are objective and independent;
- have no vested interest in promoting any particular process, technology or solution;
- are based on an extensive international reputation and track record;
- place particular emphasis on the organisational, social, economic and practical realities in addressing a Client's specific needs or problem; and
- are delivered by a comprehensive team of highly committed and motivated professional personnel who have known each other and worked together over many years.

Integrated Skills combines flexibility of approach with a personal style of Client service and continuity. With its integrated but de-centralised structure, **Integrated Skills** is able to operate with low administrative and overhead costs, and so offer Clients competitively priced services without in any way compromising quality. Since formation, the Company has undertaken projects in over 60 countries on behalf of a variety of public and private sector organisations including:

- | | |
|---|---|
| ▪ Ascension Island Government | ▪ HM Treasury (UK) |
| ▪ Asian Development Bank | ▪ Japan International Co-operation Agency (JICA) |
| ▪ Government of Azerbaijan | ▪ Government of Malta |
| ▪ BC Berlin GmbH (Germany) | ▪ Government of Mauritius |
| ▪ BAE Systems plc | ▪ Latvian Ministry of Environmental Protection and Regional Development |
| ▪ Braintree District Council (UK) | ▪ Lithuanian ISPA Implementing Agency |
| ▪ British Earthquake Consortium for Turkey | ▪ London Borough of Bromley (UK) |
| ▪ Government of Botswana | ▪ Macedonian Ministry of Environment and Physical Planning |
| ▪ Colchester Borough Council (UK) | ▪ Malaysian Department of the Environment |
| ▪ Government of Cyprus | ▪ Malaysian Resources Corporation |
| ▪ Croatian Ministry of Environmental Protection, Physical Planning & Construction | ▪ National Environmental Preservation Company (Saudi Arabia) |
| ▪ Czech Ministry of Environment | ▪ Government of Oman |
| ▪ DANCED and DANIDA | ▪ City Council of Piotrków Trybunalski (Poland) |
| ▪ Department for Environment, Food and Rural Affairs (DEFRA) (UK) | ▪ Provisional Airport Authority of Hong Kong |
| ▪ Department for International Development (DfID) (UK) | ▪ City of Rostov-on-Don (Russian Federation) |
| ▪ Environment Agency (UK) | ▪ Romanian Ministry of Public Finance (CFCU) |
| ▪ Environmental Know-How Fund (UK) | ▪ Scientific Research Council of Jamaica |
| ▪ European Bank for Reconstruction and Development (EBRD) | ▪ Secretariat of the Basel Convention |
| ▪ European Commission | ▪ Slovak Ministry of Environment |
| ▪ European Investment Bank | ▪ Government of the Seychelles |
| ▪ Falkland Islands Government | ▪ States of Guernsey (UK) |
| ▪ German Agency for Technical Co-operation (GTZ) | ▪ States of Jersey (UK) |
| ▪ German Bank for Reconstruction and Development (KfW) | ▪ United Nations Development Programme |
| ▪ Gloucestershire County Council (UK) | ▪ Vale of Glamorgan Council (UK) |
| | ▪ Waste & Resources Action Programme (UK) |
| | ▪ West Wiltshire District Council (UK) |
| | ▪ World Bank |

Much of the Company's business takes the form of repeat commissions from satisfied Clients.



EXPERTISE AND SERVICES

Services to Local Authorities

- Procurement options, contract documentation and service level agreements
- Efficiency Savings
- Vehicle Route Optimisation: Waste collection, Street Sweeping, Winter Maintenance,
- Impact on carbon footprint
- Waste Management Performance Reviews (q.v.)
- Service and Best Value Reviews: Waste Management, Street Cleaning and LEQ, Winter Maintenance, Grounds Maintenance

Waste Management Facilities: Planning, Design, Permitting

- Planning applications and appeals
- Environmental permitting, including PPC
- SEAs, EIAs and Environmental Statements
- Refuse and recycle collection systems design and selection
- Phase I desk studies and preliminary risk assessment
- Management of geotechnical and site investigations
- Recycling, transfer, treatment and disposal facilities

Economic and Financial Assessment

- Financial / economic modelling
- Economic / Financial appraisal of environmental projects and programmes
- Business valuations
- Market research and surveys
- Preparation of tender proposals and pricing of tenders
- Development and operation of environmental funding institutions ("Ecofunds")

Information Technology

- RouteSmart™ high density route optimisation – Waste Collection, Street Sweeping, Winter Maintenance, Meter Reading, Housing (and other) inspections, Parcels delivery, Mail
- WinRoute™ low density route optimisation
- Trafficworx™ roadworks coordination and permitting system
- Performance Review™ – appraisal of environmental performance
- Geographic Information Systems
- Bespoke integrated and customised ICT systems
- Computer Aided Design

Strategic Planning and Management

- Strategy development
- Institutional analysis and strengthening
- Problem / objective analysis
- Training and communications
- Legislative analysis
- Development and implementation of waste management legislation

Policy and Technical Advice

- Asset Management
- Health & Safety Procedures and Systems
- ISO 9000 / 14000 / 18000 systems
- Environmental policy development
- Environmental auditing
- Waste surveys and composition analysis
- New technology assessment



SELECTED PROJECT EXPERIENCE

The staff and associates of **Integrated Skills** have played a **leading or key role** in a wide range of waste management and other environmental projects throughout the world. These are listed below under the following categories.

- Economic, Financial and Commercial Analysis / Assessment
- Planning / Strategy Development
- Technical and Miscellaneous
- Capacity Building, Legislative Development and Training
- Information and Communication Technology

Some of the projects listed span more than one category. ISL works internationally, but also undertakes projects in the UK and Channel Islands. The latter are highlighted in **blue**.

Economic, Financial and Commercial Analysis / Assessment

- **Renfrewshire Council** (2009). Supply of RouteSmart™ software and provision of training in its use.
- **European Investment Bank** (2008-9). Economic and financial review of the Montenegrin Solid Waste Management Master Plan and preparation of detailed proposals for its implementation and financing (in association with Egis BCEOM).
- **Bath and Northeast Somerset Council** (2008-9). Supply of RouteSmart™ software and provision of training in its use.
- **Rotherham Metropolitan Borough Council** (2008-9). Supply of RouteSmart™ software and provision of training in its use, including preparation of routes for gritting, street cleaning and waste collection.
- **Hull City Council** (2008-9). Preparation of routes for waste collection using RouteSmart™.
- **London Borough of Enfield** (2008-9). Preparation of routes for waste collection using RouteSmart™ (in association with White Young Green).
- **Hambleton District Council** (2008). Supply of RouteSmart™ software and provision of training in its use, including preparation of routes for residual waste collection.
- **Guildford District Council** (2008-9). Preparation of routes for waste collection using RouteSmart™ (in association with White Young Green).
- **Daventry District Council** (2008). Preparation of routes for street sweeping using RouteSmart™.
- **States of Guernsey, Public Services Department** (2008). Review, assessment and recommendation for a kerbside collection system for recyclables, including modelling of recycling rates and comparative costs.
- **Oman Environmental Services Holding Company SAOC** (2008-9). Provision of advisory services for the restructuring of the solid waste management sector in the Sultanate of Oman, including privatisation of existing solid and hazardous waste management activities and involvement of the private sector in future waste management projects. Identification and valuation of assets for the privatisation of solid waste management. In association with Ernst & Young.
- **Braintree District Council** (2008). Optimisation of all waste collection routes using RouteSmart™.
- **North Kesteven District Council** (2008). Preparation of routes for emptying of litter bins and incorporation of these into an in-cab satellite navigation system.
- **Leeds City Council** (2008). Preparation of routes for green waste collection and identification of locations in which to expand the service, based on garden size.



- **Newcastle City Council** (2008). Preparation of routes for street sweeping.
- **Newcastle City Council** (2007-08). Supply of RouteSmart™ software and provision of training in its use, including preparation of routes for residual waste collection.
- **Spelthorne District Council** (2008). Preparation of risk assessment schedules for each route in accordance with the requirements of the Health & Safety Executive.
- **Ministry of Municipalities and Agriculture of the Kingdom of Bahrain** (2007-8). Technical and financial evaluation of tenders received for the provision of waste collection and cleansing services for Manama and Muharraq municipalities.
- **A multinational company** (2007). A review of the waste management market in Poland.
- **Hambleton District Council** (2007). Routing of all waste collection vehicles using RouteSmart™ route optimisation software.
- **North Kesteven District Council** (2007). Routing of all waste collection vehicles using RouteSmart™ route optimisation software. In association with White Young Green.
- **Spelthorne District Council** (2007). Routing of all waste collection vehicles using RouteSmart™ route optimisation software to coincide with the introduction of alternate weekly collection using wheeled bins. In association with White Young Green.
- **Fenland District Council** (2007). Routing of all waste collection vehicles using RouteSmart™ route optimisation software. Demonstration project funded by WRAP.
- **European Bank for Reconstruction and Development (EBRD)** (2007). A special study to evaluate how effective the Bank has been in implementing its 2003 Environmental Policy.
- **European Bank for Reconstruction and Development (EBRD)** (2006-07). Project management of a Case Study on the Bank's contributions in the water and wastewater sectors in Romania.
- **Northamptonshire Waste Partnership** in association with White Young Green (2006-07). The County Council and all seven Districts, routing of all waste collection vehicles using RouteSmart™ route optimisation software and identification of the resource and cost savings which might be achieved by joint working between various combinations of districts. In association with White Young Green.
- **Waste & Resources Action Programme (WRAP)** (2006). Cost modelling of standardised recycling collection systems using ISL's proprietary cost model, as part of a benchmarking exercise to develop standard cost curves.
- **Evolve Environmental Body / FareShare** (2005-06), with funding from the Norlands Foundation. Research project to identify and assess the economic costs and benefits of potential policy options and practical measures for minimising wastes in the food sector in the UK.
- **UK Department for Environment, Food and Rural Affairs (DEFRA) Local Authority Support Unit (LASU)**. Partnering Adur and Worthing Services - joint collections (2005), a project to review the practical options for merging the collection systems of these two local authorities. In association with AEA Technology plc.
- **Waste & Resources Action Programme (WRAP)** (2005). Evaluation of future collection systems in Herefordshire & Worcestershire and preparation of an implementation plan.
- **Waste & Resources Action Programme (WRAP)** (2005). Route planning for collection of recyclables in the London Borough of Southwark and proposal for re-design of recyclables storage facility to increase its capacity.
- **UK Department for Environment, Food and Rural Affairs (DEFRA)** (2005). Review of targets for recycling and composting of household waste and their interaction with other targets. Responsibility for modelling of the impact of various targets and obligations. In association with AEA Technology plc.



- **Invest Northern Ireland (2004-05).** An assessment of different policy options and financial disbursement mechanisms for utilising part of the revenues from future increases in landfill tax in ways that will encourage improvements in business waste management practices and reduce the volume of waste sent to landfill in the Province of Northern Ireland.
 - **Czech Ministry of Environment / European Commission,** in association with Soil and Water Limited (2004-05). Provision of technical, economic and financial assistance to the Ministry on the planning and preparation of Cohesion Fund projects in the environment sector in the Czech Republic.
 - **Colchester Borough Council (2004).** Use of RouteSmart™ to develop optimised vehicle routes for the introduction of single pass waste collection vehicles.
 - **UK Department for Environment, Food and Rural Affairs (DEFRA) (2004).** Modelling of the impact of a range of options for simplification of data provision for SMEs in relation to compliance with the Packaging Regulations.
 - **UK Department for Environment, Food and Rural Affairs (DEFRA) (2004).** Peer review of the LAWRRD waste flow and cost model.
 - **UK Department for Environment, Food and Rural Affairs (DEFRA)** in association with AEA Technology (2003). Provision of advice on restructuring the Prime Minister's Strategy Unit waste flow and cost model.
 - **HM Treasury (2003).** A study of options for recycling revenue arising from planned increases in the UK landfill tax from 2005-06 back to business, in order to tackle market failures and reduce the volume of waste landfilled. The study assessed the potential costs and benefits of different policy options, and identified the most effective mechanisms for delivering each option taking account of existing institutional arrangements and delivery mechanisms.
 - **Croatian Ministry of Environmental Protection and Physical Planning (MEPPP) / German Agency for Technical Cooperation (GTZ),** in association with Æquilibrium Consulting GmbH (2003). Provision of detailed advice on the planning, organisation and operation of the recently established Croatian Environment and Energy Efficiency Fund (EEEEF).
 - **UK Department for Environment, Food and Rural Affairs (DEFRA)** in association with AEA Technology (2003). Cost/benefit assessment of options for implementing proposals to amend the recovery and recycling targets contained within the EC Directive on Packaging and Packaging Wastes. Development of a computer-based economic model for analysing and comparing different options for achieving compliance with the revised targets.
 - **States of Guernsey, Board of Administration (2003).** Review and analysis of policy options for the provision and operation of public waste management facilities and services in Guernsey, particularly with respect to institutional/organisational arrangements, private sector participation and contractual relationships, financing and cost recovery.
 - **German Agency for Technical Cooperation (GTZ),** in association with Æquilibrium Consulting GmbH (2002-03). Detailed review and evaluation of the existing policies, organisation, systems, procedures and financing operations of the Bulgarian National Trust Ecofund (NTEF).
 - **Palestine Authority (2002-03),** under sub-contract to Adam Smith International. Development of a financial model to evaluate the impact of economies of scale of waste management facilities and the corresponding transport costs for a range of different waste management scenarios.
 - **Colchester Borough Council, UK (2002).** Development and application of a financial model, and estimation and comparison of the costs of various collection methods for recyclable materials and residual waste for use in a "Best Value Review".
 - **Government of Malta, Ministry for Resources and Infrastructure (2002-05).** Preparation of tender/contract documentation and performance specifications, and evaluation of tenders received for the following contract packages:
 - Package 1* - Provision and operation of facilities for the reception, processing, recovery/final disposal of construction, demolition and similar inert wastes generated throughout the Maltese Islands.
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Package 2 - Provision and operation of facilities and systems for the reception, processing, recovery/final disposal of non-inert wastes (including hazardous wastes) generated throughout the Maltese Islands.

Package 3 - Site investigations and risk assessments, and the development of remediation/restoration plans for three existing waste dump sites.

- **Bahraini Contract Services Company** (2001). Preparation and pricing, using a detailed computer-based operational and financial model, of a tender proposal for municipal waste collection and street cleansing services covering approximately two-thirds of the Island of Bahrain.
 - **Government of Malta, Ministry for the Environment** (2001). Technical appraisal and financial evaluation of bids received in response to a “Call for Proposals” for the provision and operation of an integrated solid wastes management system for the Maltese Islands.
 - **Government of the Republic of Cyprus**, in association with International Capital Partnerships (2000). Provision of advice on the potential scope and requirements for using private finance to develop and operate new facilities for the recycling, processing and disposal of hazardous wastes and municipal solid wastes in Cyprus.
 - **European Commission (TACIS)** (2000). Detailed review and evaluation of the policies, organisation, systems, procedures and financing operations of the Kazakh State Environmental Protection Fund, and an analysis of existing sources of financing for environmental investments in **Kazakhstan**.
 - **European Bank for Reconstruction and Development (EBRD)**, (1999-2000) under sub-contract to Halcrow Group Limited. Pre-feasibility study for the financing of a solid waste management project for the City of Kharkiv, **Ukraine**. Project funded by DFID.
 - **European Commission (PHARE)**, as part of a team provided by Sir William Halcrow and Partners (1999). Detailed review and evaluation of the existing policies, organisation, systems, procedures and financing operations of the **Slovenian Environmental Development Fund**, and the formulation of recommendations and proposals for changing the status, mandate and financing policies of the Fund to enable it to play a greater role in mobilising the financial resources necessary for Slovenia to achieve compliance with EU environmental policies and legislation.
 - **Asian Development Bank / Shaanxi Provincial Government**, under sub-contract to AEA Technology (1998-99). Financial assessment and development of a financing strategy for a project to improve environmental management in Shaanxi Province, **People's Republic of China**.
 - **European Commission (PHARE & TACIS)**, under sub-contract to Sir William Halcrow and Partners (1998-99). A feasibility study to assess the options and make recommendations for establishing, financing and operating an Environmental Fund for the **Black Sea region**.
 - **Government of St. Vincent and the Grenadines**, in association with Scott Wilson Kirkpatrick (1998). Economic analysis of an integrated solid waste management strategy and master plan for St Vincent and the Grenadine Islands.
 - **European Commission (PHARE)**, in association with Sir William Halcrow and Partners (1997-98). Detailed review and evaluation of the existing policies, organisation, systems, procedures and financing operations of the **Hungarian Central Environmental Protection Fund (CEPF)**. Development and negotiation of a long-term programme of PHARE TA and financial support for the CEPF. Preparation of the related Project Fiche and outline Terms of Reference for the institutional strengthening of the CEPF, designed *inter alia* to enable the CEPF to become an independent Implementing Agency for PHARE investment support.
 - **States of Guernsey, Department of Engineering** (1997). A financial review and evaluation of cost recovery and operational management practices for solid waste management services, and the implications of future waste management options.
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- **European Commission (PHARE - Project Preparation Facility)** (1996-99). Integrated Skills was member of a consortium responsible for managing a major programme of technical and financial assistance to countries in Central and Eastern Europe. Specifically responsible for advising on requirements and methods of financing environmental projects, providing assistance to national environmental funding institutions ("**EcoFunds**"), and preparing tender dossiers / specifications and financing plans for projects in the water and waste sectors.
- **Vale of Glamorgan Council, UK** (1996). A study to identify and assess the options available to the Council for organising and financing a proposed facility for processing, recovering and transfer-loading municipal solid waste.
- **Morrison Construction Limited, UK** (1996). A technical review and economic assessment of a novel anaerobic digestion system for processing and recovering mixed municipal solid waste.
- **UK waste management contractor** (1996). Independent technical and financial review and assessment of a planned materials reclamation/composting facility. Undertaken in connection with the process of finalising project financing for a municipal waste recovery facility to be built under a long-term contract with Berkshire County Council.
- **National Environmental Preservation Company (BeeA'h), Saudi Arabia** (1996). Technical and economic feasibility study of a 450/tonnes per day municipal waste processing and recycling facility in the Eastern Province of Saudi Arabia. The study included an investigation of the nature and quantities of municipal solid wastes generated in the region, a survey of the local markets for recyclable materials and other by-products, the construction of a detailed financial model, and a full commercial assessment of different technical options for processing and recovering mixed municipal wastes, including composting, anaerobic digestion and a transfer-loading station incorporating materials sorting and recovery systems.
- **Government of Mauritius** (1996), funded by the EU and in association with Scott Wilson Kirkpatrick. An assessment of the costs of municipal waste collection, transport and disposal, and development of pricing recommendations for a newly established landfill site. The predicted costs were borne out by the results of a competitive tendering process.
- **Municipality of Katowice, Poland** under sub-contract to Consulting Engineers Salzgitter GmbH (1995-96). A management study for the Municipal Waste Management Company, undertaken as part of a major PHARE-funded pilot project, including proposals for reorganisation, identification of opportunities for cost savings, diversification and the preparation of business plans, together with proposals for a charging system and contractual arrangements.
- **North West Water-Morrison-Bechtel Consortium, UK** (1995). Provision of advice and assistance on the environmental, planning and commercial aspects of a tender for designing, constructing and operating sewerage and sewage treatment schemes for the towns of Inverness and Fort William, Scotland, under a 'build-own-operate' contract.
- **Kreditanstalt für Wiederaufbau (KfW)** (1994). A socio-economic, institutional and financial assessment of the feasibility and eligibility for funding of a project to upgrade or replace the Ongwediva sewerage system, **Namibia**, including assessments of charging and cost-recovery strategies and the ability to pay.

Planning / Strategy Development

- **European Investment Bank** (2008-9). Economic and financial review of the Montenegrin Solid Waste Management Master Plan and preparation of detailed proposals for its implementation and financing (in association with Egis BCEOM).
- **Egyptian Holding Company for Water and Wastewater**, in association with ARCADIS Euroconsult and AAW (2006). Preparation of the solid waste component of a feasibility study and preliminary design for the Integrated Sanitation and Sewerage Project (ISSIP).
- **Macedonian Ministry of Environment and Physical Planning (MOEPP) / European Agency for Reconstruction**, in association with PROWA Consulting GmbH (2005). Provision of specialist inputs to the preparation of a National Waste Management Plan and regional waste management feasibility studies, including a review of economic instruments and modelling of the capital and operating costs for the implementation of the regional feasibility studies.



- **Croatian Ministry of Environmental Protection, Physical Planning and Construction (MEPPPC) / European Commission (CARDS)**, under sub-contract to Project Management Limited (2004-06). Provision of assistance to the MEPPPC in developing an overall strategy and programme for transposing and implementing the EU environmental *acquis*, and preparing an integrated National Waste Management Strategy.
- **UK Environment Agency** (2004-5). Sustainable Communities - Construction Waste Scenarios, a project to forecast arisings of hazardous and non-hazardous construction wastes arising in south-east England and determine the challenges faced for the provision of treatment and disposal facilities. In association with Halcrow Group and Jacobs-Babtie.
- **Egyptian Public Authority for Drainage Projects / European Investment Bank**, in association with BCEOM (2004-05). Management of a project for Covering of Agricultural Drains in Rural Areas of Egypt. The project focuses principally on provision of affordable systems for solid and liquid waste management in order to protect the agricultural drains.
- **Ascension Island Government** (2003). Development of a waste management strategy for Ascension Island.
- **Government of the Seychelles** (2003), in association with Scott Wilson. Updating of the Solid Waste Master Plan for the Seychelles.
- **Lithuanian ISPA Implementing Agency** (2003), in association with Jacobs-GIBB and Vilnius Consult. Preparation of a waste management plan for the Panevezys region, together with an ISPA grant application. This project included a review of the options for cost recovery and the establishment of tariffs.
- **Lithuanian ISPA Implementing Agency** (2002-03), in association with Jacobs-GIBB and Vilnius Consult. Preparation of a waste management plan for the Telsiai region, together with an ISPA grant application. This project included a review of the options for cost recovery and the establishment of tariffs.
- **States of Guernsey, Board of Administration** (2002-03). Preparation of a waste management plan for the Island of Guernsey. In addition to the selection of waste management methodologies for each waste stream, based on detailed economic analysis, this project also reviewed and made recommendations for a tariff structure for cost recovery.
- **European Commission (PHARE)**, in association with AEA Technology (2000-01). Provision of assistance to the **Ministry of Environment, Czech Republic** for the development of implementation/investment strategies for achieving compliance with EC waste directives.
- **European Commission**, in association with Halcrow Group Limited (2000-01). Provision of assistance to the **Government of Malta** for the development of an integrated waste management strategy for the Maltese Islands.
- **British Earthquake Consortium for Turkey (BECT)**, (2000). Provision of a rapid response team for the development of an integrated solid wastes management strategy and outline implementation plan for the Province of Yalova, Turkey. This region was severely affected by the 1999 earthquake.
- **World Bank**, (2000-02). Development of a hazardous waste management system and the associated capacity building for **Azerbaijan**, including the preparation of an integrated strategy, together with the design and implementation of inventory, consignment notes, licensing regulations and standards, Basel Convention procedures, raising of public awareness, financing mechanisms, cost recovery and the provision of training. In association with GIBB Limited.
- **UK Department of Environment, Transport and the Regions (DETR)** in association with Hyder Consulting (2001). Preparation of Terms of Reference for the solid waste management component of an Urban Master Plan for the City of Diyarbakir, Turkey.
- **European Commission (DG ENV) / Government of Malta**, as part of a team provided by Environmental Development Consultants Limited (2000). Preliminary assessment of the current status and likely requirements to enable Malta to achieve compliance with EU policies and legislation in the waste management sector. The assessment considered legal, institutional, technical, environmental, social and financial requirements and constraints.



- **Colchester Borough Council, UK (1999).** A review and commentary on proposals for a high waste diversion strategy put forward by consultants to the Consortium of Essex Waste Collection Authorities.
 - **States of Guernsey, Department of Engineering (1999-2004).** Provision of assistance in implementing a strategy for managing solid wastes for the Island of Guernsey, a key feature of which is the development of a waste-to-energy plant.
 - **Colchester Borough Council, UK (1998-99).** An investigation of options for significantly increasing the recycling of municipal solid waste in the City of Colchester, and preparation of a statutory Recycling Plan.
 - **European Commission (PHARE),** in association with Sir William Halcrow and Partners (1998-99). Provision of advice to the Government of **Slovakia** on the legislative and financial implications of achieving compliance with European Union policies and legislation relating to wastes management.
 - **States of Guernsey, Public Thoroughfares Committee (1997-98).** Preparation of a strategic business and financing plan for the future provision and maintenance of road infrastructure, and wastewater/surface water management facilities and services throughout the Island of Guernsey.
 - **Japan International Co-operation Agency (JICA),** under sub-contract to London Economics Limited (1997-98). Provision of advice on the social and economic aspects of a project to develop a solid waste management strategy and master plan for the **City of Nairobi, Kenya.**
 - **Falkland Islands Government,** under sub-contract to Sir William Halcrow and Partners (1997-98). The preparation of an integrated wastes management strategy and plan for the Falkland Islands covering all existing and future waste streams.
 - **UK Environmental Know-How Fund (ODA, now DFID),** in association with Sir William Halcrow and Partners (1997-98). Preparation of an integrated waste management strategy for the city of **Rostov-on-Don, Russian Federation,** including the provision of training.
 - **States of Guernsey, Department of Engineering (1997).** Assistance in the formulation of an overall integrated strategy for solid wastes management and the related decision analysis process, including the organisation and moderation of a series of workshops for all relevant government departments.
 - **States of Guernsey, Department of Engineering (1997).** An investigation and detailed technical, environmental and economic assessment of options for managing, recovering, treating and disposing of all solid and hazardous wastes generated on the Island of Guernsey.
 - **States of Guernsey, Department of Engineering (1996).** A study of the strategic options for minimising the production of wastes, being undertaken as part of a major programme to develop a sustainable waste management strategy for the Island of Guernsey.
 - **Latvian Ministry of the Environment / European Commission (PHARE) (1996),** in association with Fenviron. Provision of technical assistance and advice for implementing the Latvian Hazardous Waste Management Strategy. Specifically responsible for economic and financial aspects, including the development of an operational/financial model, detailed financial analysis of the adopted strategy, and advising on tariff structures and commercial agreements for managing, treating and disposing of hazardous wastes.
 - **UK Environmental Know-How Fund (ODA, now DFID) (1996),** under sub-contract to Sir William Halcrow and Partners. Identification of specific needs and preparation of Terms of Reference for a project to prepare a Waste Management Plan for a major Russian city.
 - **Gloucestershire County Council, UK (1995).** Analysis and presentation of Strategic Options for Waste Management.
 - **City Council of Piotrków Trybunalski, Poland (1994-95).** Preparation of a wastes management strategy and master plan, including a detailed business plan for the development and operation of a new regional waste management facility.
 - **European Commission / Ministries of the Environment of the Czech and Slovak Republics (1992-94).** The development of a National Integrated Waste Management Strategy and Master
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Plan relating to municipal, industrial (hazardous and non-hazardous), mining and agricultural wastes. Provision of a computer-based, national Waste Information System (WIS), incorporating a Geographic Information System (GIS), to facilitate day-to-day administration and control as well as medium and long-term planning of waste management systems and facilities. The scope of this project also included institutional and organisational development and training, advice on the introduction of appropriate management systems and procedures, and the formulation of detailed proposals for long-term financing and cost recovery.

- **Provisional Airport Authority of Hong Kong** (1993-94), under sub-contract to Montgomery Watson (Hong Kong) Limited. The development of a detailed strategy for the management of all solid, liquid and hazardous wastes at the new airport. This project included the preparation of engineering designs and specifications for all facilities and equipment, and the development of proposals for organising and financing waste management services. The new airport is one of the largest in the world.
- **Strathclyde Regional Council, Scotland** (1993). The preparation of a comprehensive study and development of a regional strategy and plan for the management and disposal of sewage sludge for the region of Strathclyde, Scotland. This project included detailed EIAs of both the existing and proposed sludge disposal systems. The existing system of sludge disposal used tankering and disposal at a designated sea disposal site off the West coast of Scotland.
- **Government of Oman** (1993). A detailed study for the purpose of developing a national policy and strategy for waste recovery and recycling, for the Ministry of Commerce and Industry.
- **Merseyside Development Corporation, UK** (1992). The preparation of a regional waste management strategy and plan covering the North Liverpool area in North West England.
- **German Agency for Technical Co-operation (GTZ)** and the Economic Commission for Latin America (1992). Assistance in formulating and planning a major regional project for the improvement of waste management facilities and practices in major conurbations of **Latin America**.
- **Teesside Development Corporation, UK** (1990-91). The development of a detailed policy and strategy for hazardous waste management in the Teesside area of north-east England, and the technical, environmental and economic appraisal of a proposed hazardous waste treatment centre to be located on Teesside.
- **German Agency for Technical Co-operation (GTZ)** (1988). A detailed survey and investigation of existing environmental conditions and problems amongst the English-speaking islands of the **Caribbean** (covering air pollution, water/waste water, solid and hazardous wastes, hazardous chemicals, public health and hygiene), and preparation of a comprehensive long-term plan for establishing a Regional Centre for Environmental Health. This later became the Caribbean Environmental Health Institute (CEHI), based in St Lucia.

Technical and Miscellaneous

- **States of Guernsey, Public Services Department** (2008). Survey and analysis of household waste composition.
- **UK Department for Environment, Food and Rural Affairs (DEFRA)** (2006). Peer review of the M-BEAM mass balance model and subsequent modifications in order to preserve its functionality.
- **UK Department of Environment, Food and Rural Affairs (DEFRA)** (2006). A survey and review of the current status of procurement and contracting by English Waste Disposal Authorities for the diversion of waste from landfill.
- **UK Department for Environment, Food and Rural Affairs (DEFRA) WRT Waste Research Programme**, in association with AEA Technology PLC (2005-06). Research project into the impact of data deficiencies on local authority decision-making for waste management.
- **Dambovită County Council / European Commission**, in association with Jacobs UK Limited (2005-07). Technical Assistance for Procurement, Supervision and Publicity of ISPA Contracts in Dambovită County, Romania. Provision of specialist services relating to Public-Private Partnerships (PPPs) and the procurement of new waste management infrastructure and services in Dambovită County.



- **State Committee for Nature Protection of Uzbekistan / European Commission (TACIS)**, in association with Halcrow Group Ltd (2004-05). Development and testing of procedures for waste management self-assessment and audit by industry, and production of a Handbook to enable replication of the procedures.
 - **Thames Waste Management Limited** (now Viridor) (2004). Management of bid preparation for sewage sludge and bio-solids manufacture and recycling for Southern Water Services. The company was successful in winning the tender and the contract is worth in excess of £10 million pa.
 - **Coalition Provisional Authority (CPA South) in Iraq / UK Department for International Development** (2003-04). Secondment of a full-time Solid Waste Expert to work in the Sanitation Team of CPA South's Economic Reconstruction and Development Department.
 - **Pillar Property plc** (2003). Provision of advice on the technical options for developing a sorting, bulking and residual waste transfer facility as a replacement for an existing waste transfer station in North London.
 - **States of Guernsey, Public Thoroughfares Committee** (2002). Survey of Guernsey's surface water drainage network, using mobile computing devices (PDA) and ESRI ArcPad® software.
 - **States of Guernsey, Board of Administration** (2002). Development of a Waste Segregation Facility for commercial and industrial wastes. This involved the specification and project management of the complete facility.
 - **Hong Kong private sector client** (2002). Management and provision of technical inputs for the preparation of a comprehensive tender for the remediation of contaminated land by means of bio-piling, a proprietary thermal treatment process and solidification.
 - **States of Alderney** (2002). Review of all transfer of waste by sea options. This included a review of all containerisation and baling options, and the consideration of financial, legal, environmental and public perception implications.
 - **States of Guernsey, Guernsey Technical Services** (2001-02). Pumping Station Asset Review - an extensive review of the existing network of foul and surface water pumping stations, including on-site surveys, a review of relevant documents and drawings, flow analysis, preparation of emergency plans and the development of a pumping station management database.
 - **West Wiltshire District Council** (2001). Preparation of contract documentation and evaluation of tenders for the District's municipal waste collection contract.
 - **UK Environment Agency**, under sub-contract to Halcrow Group Limited (2001). Development of a new concept for a UK Waste Classification Scheme, together with production of a detailed draft mapped to the European Waste Catalogue.
 - **States of Guernsey, Board of Administration** (2001-02), in association with Rambøll. Development of a design concept, and preparation of technical specifications and tender/ contract documents for a new waste-to-energy facility in Guernsey.
 - **BAE Systems** (2000). Design and preparation of a Request for Quotation for an integrated regional waste management services contract. **The new contract was tendered and awarded, saving approximately £0.75 million from the previous waste management cost.**
 - **World Bank** (2000). Review of three locally-prepared feasibility studies for waste management projects in **Hubei Province, China**. Two of these involved the establishment of Materials Recovery Facilities (MRFs) and composting plants, while the third related to the utilisation of landfill gas. In association with Halcrow Group Limited.
 - **European Commission (PHARE)**, (2000) under sub-contract to Consulting Engineers Salzgitter. A review of the structure of the waste management sector in the UK with special reference to organisation, financing and the role of the private sector.
 - **Colchester Borough Council, UK** (2000). Preparation of a proposal for presentation to Essex County Council on a high waste diversion pilot project at West Mersea. **The proposal was successful and trials commenced in June 2000.**
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- **States of Guernsey, Public Thoroughfares Committee**, (2000). Production of tender and contract documents for road cleansing and other associated services.
 - **UK Environment Agency**, under sub-contract to Halcrow Group Limited (1999-2001). Implementation and review of pilot trials of the proposed new UK Waste Classification System, proposals for its improvement and determination of waste densities for different waste types. In addition, the project was extended to include a review of the Environment Agency's information systems for recording special waste consignment notes and trans-frontier waste shipments and their relevance to the use of waste classification systems.
 - **European Commission (PHARE)**, as part of a team provided by Soil and Water Limited, Finland (1999). Preparation of an assessment and report on the progress and experience of the Candidate Countries for membership of the European Union on planning for the approximation and implementation of EU environmental standards and legislation.
 - **States of Guernsey, Public Thoroughfares Committee** (1999). Provision of assistance in developing and implementing a Code of Practice for the reinstatement of road infrastructure by public utilities and other third parties.
 - **States of Guernsey, Public Thoroughfares Committee** (1999). Provision of assistance in developing and implementing a series of 'Service Level Agreements' establishing performance specifications, standards and contract conditions for the delivery of services falling under the statutory responsibility of the Committee (road construction and maintenance, street cleansing, and wastewater/surface water management), including the development of a computer database to aid the monitoring and supervision of service delivery.
 - **UK Department for International Development (DFID)**, in association with Intermediate Technology Consultants (1999-2001). Development and testing of a low-cost, small capacity, municipal waste incinerator suitable for use in developing countries. A pilot plant was constructed in the Gambia.
 - **German Agency for Technical Co-operation (GTZ)** (1998). A study and assessment of bird strike risks at Kathmandu Airport in relation to the development and operation of landfill sites in the Kathmandu Valley, Nepal.
 - **German Agency for Technical Co-operation (GTZ)** under sub-contract to Fresenius Consult GmbH (1995). Preparation of comprehensive guidelines for the design, development and operation of landfill sites for the Government of **Botswana**. The Government of Botswana has now adopted these, after consultation.
 - **BC Berlin GmbH** (1995). Provision of technical assistance for preparing tender submissions for the design, construction and operation of two large waste transfer stations in **Hong Kong**. Besides assisting with the preparation of detailed designs and operating proposals, Integrated Skills was responsible for preparing the preliminary environmental impact assessments, the Health & Safety Plans, and the Quality Management Plans to ISO 9000 series.
 - **German Agency for Technical Co-operation (GTZ)** (1995) under sub-contract to Fresenius Consult GmbH. Preparation of proposals for development of a national strategy and code of practice for managing hospital and other health-care wastes for the Government of **Botswana**.
 - **Malaysian Resources Corporation Berhad** (1994). The preparation of detailed technical, organisational and financial proposals for the upgrading of Municipal Solid Waste Management facilities and services throughout Malaysia. This project included the preparation of conceptual designs for all proposed facilities, the construction of detailed cost and financial models, and the development of organisational and implementation plans for all aspects of this massive privatisation project.
 - **Hong Kong Consulting Engineers** (1994). Assistance with the development and implementation of a Quality Management System to ISO 9000.
 - **A major UK land owner** (1994). Evaluation of a planning application for the development of a landfill site, together with advice on valuation of the land and minimisation of the landowner's environmental liability.
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- Assessment of health and environmental risks in relation to ground contamination at a site in **Humberside, UK** (1994).
 - **A major Maltese contracting company** (1993). Preparation of outline engineering designs and a detailed plan for the upgrading of an existing facility for the composting of Municipal Solid Waste in Sant Antnin, Malta. The proposed technical modifications to the plant included proposals for eliminating a serious existing problem of odour emissions.
 - **South West Water Services Ltd, UK** (1992-93). Environmental impact assessment of a major and politically sensitive scheme to increase the effective yield of the Wimbleball Reservoir. The EIA included a detailed environmental baseline study of the reservoir itself and the river system downstream of the reservoir, and an assessment of the likely environmental impacts of various options for abstracting, treating and transporting further quantities of water. An abstraction licence was granted by the National Rivers Authority on the first application.
 - **Municipality of Dubai, UAE** (1992-93). The planning and engineering design of a new industrial hazardous waste treatment and disposal facility, and development of proposals for remediation of an existing waste dump site.
 - **Devon County Council, UK** (1992). Development of a comprehensive environmental policy and strategy for the Council's Waste Management Division, covering a large part of the south west of England. The project included an environmental audit and review of the Council's existing solid waste management facilities (two transfer stations, six landfill sites and an incinerator).
 - **UK Foreign and Commonwealth Office** (1992). An audit and assessment of the environmental and resource aspects of the FCO's UK-based offices, facilities and operations, and development of a strategy for waste reduction and recycling and the procurement/use of products made from recycled materials.
 - **North West Water Ltd, UK** (1991-92). Environmental impact assessment of the Fylde Coastal Waters Improvement Scheme, a major scheme to collect and treat primarily domestic sewage from a large area of north-west England, and the subsequent preparation of a statutory Environmental Statement (ES) to accompany the planning application for the Fleetwood Marsh Treatment Works. This very large (£200 million) scheme was particularly sensitive due to concerns with respect to the potential impacts of the proposed outfall and discharge into relatively shallow waters off the Fylde coast.
 - **Donegal County Council, Republic of Ireland** (1991-92). Detailed environmental impact assessment, and preparation of a statutory Environmental Statement, for the Pollan Dam Water Supply Scheme, a major scheme involving the construction of a new water reservoir and the inundation of some 100 hectares of environmentally sensitive land in County Donegal, Ireland.
 - **Dynochem (UK) Ltd, (1992)**. Detailed environmental impact assessment, and preparation of a statutory Environmental Statement, for a proposed methyl methacrylate plant to be located on Teesside, UK.
 - **City of Westminster, UK** (1991-92). A year-long survey and investigation of the state of the environment within the City, including air pollution, noise pollution, solid and hazardous wastes management, water quality, wildlife and important eco-systems, energy use and conservation, transport impacts, and historic buildings and monuments.
 - **Highland Regional Council, Scotland** (1991). Detailed environmental impact assessment and preparation of a statutory Environmental Statement for the proposed Longman Sewage Pumping Station.
 - **Greenfield Paper Company, UK** (1991). Detailed environmental impact assessment and preparation of a statutory Environmental Statement for a proposed pulp and paper mill using 100% waste paper feedstock. The assessment focused in particular on options for treating and disposing of very large quantities of wastewater treatment sludge for which a highly cost-effective and environmentally friendly solution was eventually found.
 - **Western Riverside Waste Authority, London, UK** (1990-91). Planning and process design for the modernisation of an existing solid waste transfer station (800 tonnes per day).
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- **A Waste Management Contractor, UK** (1990). A hazard and risk assessment of an existing industrial waste treatment plant, and development of proposals for upgrading and improving treatment processes within the plant.
- **Highland Regional Council, UK** (1989-90). Detailed and comprehensive environmental impact assessment of a proposed scheme for the collection, treatment and discharge of sewage from the Town of Inverness. This was the very first Environmental Impact Assessment of a major wastewater scheme in the UK conducted in accordance with the requirements of the EC Environmental Assessment Directive. The scheme was also highly sensitive as the area proposed for final discharge, the Moray Firth, is a nature conservation area of international importance. The assessment included a survey of trade effluent sources and their contribution to the impacts of the final discharge on water quality and marine eco-systems in the Moray Firth.
- **Kuwait Industrial Investment Company** (1988). The preparation of outline designs and tender documents for a 700 tonnes/day municipal wastes Composting Plant.

Capacity Building, Legislative Development and Training

- **Croatian Ministry of Environmental Protection, Physical Planning and Construction (MEPPPC) / European Commission (CARDS)**, in partnership with Egis BCEOM (France), Mobilisation for the Environment and BGP Engineers (Netherlands) (2007-9). A two-year contract to provide support to the Croatian Government for the further approximation of Croatian legislation with the EU Environmental Acquis. The overall purpose of the project is to assist relevant line ministries and government agencies to integrate environmental protection into national economic development planning and to increase national capacity for the preparation of environmental investment projects and programmes.
- **Governorate of South Sinai / European Commission**, in association with ARCADIS BMB Management Consultants (2006). Provision of Technical Assistance to the South Sinai Regional Development Programme, particularly in the supervision, procurement, management of contracts and payments, reporting and preparation of work plans.
- **Slovak Ministry of Environment / European Commission (PHARE)**, (2005-06). Provision of Technical Assistance for strengthening of the administrative capacity of the Ministry of Environment in the preparation and implementation of Public-Private Partnership (PPP) projects.
- **European Bank for Reconstruction and Development (EBRD)**, (2005-06). A study to assess how effective the Bank has been in implementing its environmental mandate through its involvement in Financial Intermediaries.
- **Municipality of Sharjah**, United Arab Emirates, in association with Birkhahn & Nolte GmbH (2004). Review and assessment of the potential benefits and risks of different options for private sector participation in the provision of public waste management facilities and services.
- **European Commission** (2003). Technical Assistance to support the evaluation of a service tender - "Developing Capacity in Implementation and Enforcement of Environmental Legislation in Turkey through the Impel Network (EuropeAid/114824/D/SV/TR)".
- **States of Guernsey, Board of Administration** (2002). Health and safety review of all waste management operations. This included risk assessments and a review of existing procedures and documentation for the putrescible landfill site, land reclamation site (inert wastes), recycling depot and monitoring activities.
- **DANIDA** (2001). Provision of project design advice on the establishment of a Basel Convention Regional Training and Technology Transfer Centre for English-speaking Africa. Development of the majority of the technical content for (and delivery of) a four-day training course on Hazardous Waste Management for representatives from participating countries. This project, financed by DANIDA, has resulted directly from the feasibility study carried out by ISL in 1996 (q.v.). In association with Carl Bro International.
- **DANCED** (2000). Review of waste management issues for a team preparing an outline for the DANCED five-year environmental assistance programme for **Malaysia** on behalf of the Malaysian Economic Planning Unit. In association with PEMConsult.



- **Caspian Environmental Programme / UNDP**, (2000). Planning, preparation and delivery of an international seminar to consider the need and potential scope for the establishment of a Caspian Sea Environmental Fund.
 - **UK Department for International Development (DFID)**, (2000). Monitoring of the impact of a DFID-supported project on solid management in **two Bulgarian cities**.
 - **Malaysian Department of the Environment**, as part of a team provided by Carl Bro International (1998-9). Preparation of a training needs assessment, training courses and the development of operating manuals and guidelines for the regulation and control of hazardous waste management in Malaysia. Funded by DANCED.
 - **European Commission (TACIS)**, under sub-contract to Sir William Halcrow and Partners (1999). Provision of support and inputs to the development and delivery of a training course on 'The Financial and Economic Analysis of Environmental Investment Projects' - held in St. Petersburg from 29.03 - 03.04.99. The course was conducted for participants from the countries of the **former Soviet Union and Mongolia**.
 - **European Commission (PHARE)**, as part of a team provided by Sir William Halcrow and Partners (1998-99). Development of a **Handbook for Implementation of EU Environmental Legislation** to assist the candidate countries for EU accession to meet the requirements of EU environmental legislation. ISL was responsible for preparing the 'Waste Management Sector Implementation Planning Framework', as well as a series of guidance notes giving practical advice on meeting the requirements of all existing and impending EU Directives and Regulations relating to wastes management.
 - **German Agency for Technical Co-operation (GTZ)** (1998-99). Provision of advice and support to the Government of Botswana in drafting, implementing and enforcing waste management legislation, including the drafting of implementing regulations and the preparation of waste management plans. With PLANCO GmbH.
 - **European Commission (PHARE)**, in association with Sir William Halcrow and Partners (1998). Provision of advice to the Government of **Poland** on the institutional and organisational implications of achieving compliance with European Union policies and legislation relating to an Integrated Approach for Industrial Pollution Prevention and Control in Poland.
 - **European Commission (PHARE)**, under sub-contract to Sir William Halcrow and Partners (1998). Provision of advice and assistance to the **Latvian Ministry of Environmental Protection** and Regional Development for development of the Latvian Approximation Strategy and Action Programme.
 - **Secretariat for the Basel Convention / the German Agency for Technical Co-operation (GTZ)** (1996). Feasibility study for establishing a Regional Hazardous Waste Management Information and Training Centre to serve the **English-speaking African countries**, including an assessment of the information and training needs of the various countries in the region, and the development of detailed proposals for locating, organising, managing and financing the proposed Regional Centre.
 - **German Agency for Technical Co-operation (GTZ)** (1996). Fact-Finding and Appraisal Mission on Solid Waste Management in Nepal, including an investigation of the current status and problems relating to solid waste management in Nepal, and the preparation of detailed recommendations and proposals for a programme of Technical Assistance to be supported by the Federal Republic of Germany / GTZ and other potential donors.
 - **European Commission** under sub-contract to Oranjewoud International BV (1995-96). Provision of technical assistance and support to PHARE partner countries and the European Commission in the preparation and implementation of the 1994 Multi-Country Environment Cross-Border Programme with particular responsibility for appraising a wide range of environmental projects, establishing their viability, identifying additional projects and preparing projects for implementation.
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- **German Agency for Technical Co-operation (GTZ) (1995).** Preparation of a comprehensive review and analysis of domestic and industrial wastewater management in **Jamaica**, and recommendations for the planning and development of the second phase of a major Technical Assistance project designed to transfer know-how and practical experience on environmentally sound waste water management.
- **German Agency for Technical Co-operation (GTZ) (1994)** under sub-contract to Fresenius Consult GmbH. Preparation and drafting of national waste management legislation, and an accompanying organisational structure for implementation and enforcement, for the Government of **Botswana**. The **Botswana Waste Management Act became law in September 1998, incorporating the recommended features.**

Information and Communication Technology

- **Ministry of Municipalities and Agriculture of the Kingdom of Bahrain (2008-9).** Design, development and implementation of a bespoke computerised contract management system.
- **Private Bank (client confidential) (2008-9).** Specification, development and implementation of a bespoke computerised database system to manage the valuation and financial performance reporting for assets in excess of £4 billion.
- **States of Guernsey, Public Services Department (2006).** Preparation of a system specification and the tender documentation for a GIS-enabled sewage collection service management system
- **States of Guernsey, Education Department (2004-05).** Client side Project Management of an IT Contract for the Design, Procurement and Deployment of a local area network upgrade (40 Windows 2003 Servers, 1,600 XP workstations and 600 XP laptops).
- **States of Guernsey, Commerce and Employment Department (2004-05).** Acquisition of Technical Data from the building and civil engineering industries to maintain the integrity of the Client's Economic Model which measures and forecasts the impact of the proposed Capital Spending Programme on the industry and its economy.
- **States of Guernsey, Public Services Department (2002-04).** GIS study of Guernsey's surface water drainage network identifying location, capacity, and connectivity of surface water assets
- **Geotrant Ltd (2003-04).** Computer Aided Design (CAD) for Guernsey's foul water sewer extension strategy. This consisted of ground survey, calculation of drainage sewer dimension, CAD work, statistic calculation of the flow rates in the western part of Guernsey and budget estimation.
- **States of Guernsey, Public Thoroughfares Committee (2002).** GIS based study of cesspit emptying services. The study focused on the geographic distribution of emptying frequencies, the associated costs and the development of future scenarios.
- **States of Guernsey, States Traffic Committee (2002-03).** Specification, design, development and implementation of a computerised system for the management and co-ordination of road works and closures, using workflow, GIS and database software. A combined Intranet / Internet application package, the system provides a secure multi-user environment, but also a web-enabled system within the States of Guernsey E-government initiative.
- **States of Guernsey, Public Thoroughfares Committee (2002 ongoing).** Development of GIS layers. This was part of a project to assist the client in prioritising the extension of the local sewerage network and also to highlight areas most at risk of ground and surface water pollution.
- **States Housing Authority, Guernsey (2002).** Scoping study of business process requirements and specification of a bespoke application aimed at increasing efficiency, transparency and speed of the housing license application procedure, using Metastorm e-work® work flow software.
- **States Works Department, Guernsey (2000-01).** Development and implementation of a computer-aided service and asset management system for scheduling and monitoring of service provision. The client-server application provides an integrated tool for the efficient management of multiple service contracts and associated assets, from production of weekly worksheets to performance reporting.



- **UK Environment Agency (2000-01).** Provision of assistance in the development of a regional database system for managing trans-frontier shipments of hazardous waste. The system is designed to manage notifications and inspections and facilitate communication between the regions and the national management system for trans-frontier shipments.
- **States of Guernsey, Public Thoroughfares Committee (2001-02).** Cesspit Management Database. Specification and project management of the revision and upgrade of a multi-user database for the States of Guernsey Public Thoroughfares Committee to organise the day-to-day management of the island's cesspit emptying service.
- **UK Environment Agency (2000).** Development of a database system for recording and validating data collected as part of the UK Waste Classification System trials.
- **States of Guernsey, Public Thoroughfares Committee (2000 ongoing).** Development and support of a Service Monitoring Application. Development and implementation of a database application for the efficient management of a set of 'Service Level Agreements' (SLAs) establishing performance monitoring and standards and contract conditions for the delivery of public services falling under the statutory responsibility of the Guernsey Public Thoroughfares Committee. This included the development of a relational database linked to a Geographic Information System, as well as the installation of the application on workstations and a central file-server and training for staff.

Further details of these and other projects are available upon request.



KEY STAFF

Michael Betts, BSc, CEnv, MCIWM, MIOD - Director

Michael Betts has over 30 years' diverse experience in the field of environmental management and protection. An economist by training, his experience lies particularly in the planning, financial/economic appraisal, organisation and management of wastewater and waste management related projects. He has supervised a large number of environmental studies and projects around the world, especially in Central and Eastern Europe, the Middle and Far East. In addition, he has been responsible for planning and managing numerous major Environmental Impact Assessments and audits, and has extensive experience of developing and implementing Quality Management Systems to ISO 9000 series and Environmental Management Systems to ISO 14001.

Recent projects include:

- Provision of support to the Croatian Government to **develop the capacity of potential beneficiaries of EU funding to identify, prepare, tender and manage major investment projects in the waste management sector.**
- **Restructuring of the solid waste management sector in the Sultanate of Oman**, including privatisation of existing solid and hazardous waste management activities and involvement of the private sector in future waste management projects.
- Provision of training and advice to the Slovak Ministry of Environment in the **preparation and implementation of Public-Private Partnership (PPP) projects.**
- A review and analysis of **environmental funds in Central and Eastern Europe.**
- Study on the **economic benefits of waste minimisation in the UK food sector.**
- Technical Assistance for **procurement, supervision and publicity of ISPA contracts for waste management infrastructure and services** in Dambovita County, Romania.
- Study on the achievements of the **European Bank for Reconstruction and Development's environmental mandate through financial intermediaries.**
- Development of a **National Solid Waste Management Plan and Feasibility Studies**, for the Macedonian Ministry of Environment and Physical Planning.
- An assessment of **options for recycling revenue from landfill tax increases back to business**, for Invest Northern Ireland (UK).
- Provision of **advice and assistance** to the Croatian Ministry of Environmental Protection, Physical Planning and Construction in developing an overall strategy and programme for **transposing and implementing the EU environmental acquis**, and preparing an integrated National Waste Management Strategy.
- A **review of options for Private Sector Participation** in the provision of public waste management facilities and services, for the Municipality of Sharjah, United Arab Emirates.
- Preparation of **contract documentation and performance specifications** for two major **waste management services contracts**, and terms of reference for conducting **site investigations and risk assessments**, and developing remediation / restoration plans for three existing landfill sites, on behalf of the Government of Malta.

Nicholas Crick, MA, MBA, FCIWM, CEnv - Director

Nick Crick has dual qualifications as a chemist and economist, and has worked in the field of wastes management for over 30 years. For much of this period, he held a position as Senior Manager with a major international waste management services company. His particular expertise lies in the planning, organisation, financing and management of waste collection and disposal services for municipal and both hazardous and non-hazardous industrial wastes, together with institutional strengthening in all aspects of waste management. He has wide international experience of the financial analysis of waste management projects and the interpretation and practical application of



waste management legislation. Recently, he has been concentrating on promoting and operating the company's RouteSmart™ software.

Recent projects include:

- Identification and valuation of assets for the **Privatisation of solid waste management in Oman**.
- **Modelling of the costs of the collection of recyclables** for the Island of Guernsey.
- Use of RouteSmart for **waste collection route optimisation** in the seven districts of Northamptonshire, Spelthorne and Fenland.
- Research for the UK Department for Environment, Food and Rural Affairs on the **implications of data deficiencies on local authority decision making** in the field of waste management.
- Comparison of the **costs and recycling rates of different methods of collecting recyclables** – for several UK local authorities
- Development of **designs for the covering of Agricultural Drains** and systems for prevention of their contamination by solid and liquid wastes for the Egyptian Public Authority for Drainage Projects.
- A study for HM Treasury of options for **recycling revenue from planned increases in the UK landfill tax** from 2005-6 back to business, in order to tackle market failures and reduce the volume of business waste landfilled.
- Modelling and calculation of the **costs of implementing the new EU targets for the management of packaging wastes** for the UK Department for Environment, Food and Rural Affairs.
- Development of a **waste management plan for the Island of Guernsey**.
- Development of a **hazardous waste management system**, including an integrated strategy, together with design and implementation of inventory, consignment notes, licensing regulations and standards, Basel Convention procedures, raising of public awareness and the provision of training for the State Committee for Environment, Azerbaijan.
- Preparation of **tender documentation for a municipal waste collection contract** and evaluation of the tenders received for West Wiltshire District Council, UK.

Patrick Scott, BSc (Hons), MIMM, AMIQ, MCIWM - Director

Patrick Scott has over 25 years experience in the mineral extraction and waste management sector, the majority in environmental consultancy services and the last 8 at director level. His expertise includes planning and permitting of new waste facilities and their development from initial market research to construction and commissioning; and also the commercial assessment and valuation of sites and operations for business planning purposes.

He has prepared and presented evidence as an expert witness at Public Inquiries into the refusal of planning permission and applications for waste management licences, and in planning and waste licensing enforcement actions. He also has considerable experience of providing consultancy support to local authorities acting as Project Director on the review and procurement of waste management, street cleansing and grounds maintenance services on numerous projects.

Projects include:

- Project Director and **project management of design, planning and procurement of a household waste and recycle transfer facility** for a Waste Partnership in the north of England.
 - Project Director for the **planning and permitting of fridge de-manufacturing plant and associated treatment and storage facilities**; WEEE processing facility; and recycling storage and handling buildings on the south coast.
 - **Commercial negotiations and advice** in connection with landfill royalties and landfill gas power generation schemes for a landowner in the north-west of England.
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- **Planning application, EIA and need assessment for a hazardous waste landfill site** in Hampshire on behalf of a waste management contractor.
- Planning application for sand and gravel extraction and inert landfill, **preparation of evidence for Appeal and Public Inquiry, management of team of experts** for a site in south-west England.
- Sand and gravel and inert landfill **royalty negotiations and rent review** on behalf of a landowner in south-east England.
- **Environmental due diligence of waste transfer stations, recycling facilities and Civic Amenity sites** in connection with the acquisition of a major waste management contractor.

Matthew Polson, MEng, MSc, Dipl. Ing, MCIWM - Director

Matthew Polson has both civil and environmental engineering qualifications gained in France, the UK and USA. He also has project management qualifications and is a PRINCE2 Registered Practitioner. He is fluent in French.

He has developed a substantial business for ISL on the Island of Guernsey, as well as working in other countries, and has now established ISL's own Guernsey-based subsidiary company, of which he is the managing director. This company has not only provided general environmental advice but has developed services in structural engineering and the design and implementation of IT software for environmental management and traffic related applications.

Recent projects include:

- Specification, development and implementation of a **bespoke database system for a private bank** (client confidential). The system will manage the **valuation and financial performance reporting for assets in excess of £4 billion**.
- Comprehensive **review of household waste kerbside recycling options** for the States of Guernsey.
- Study on the **Economic Benefits of Waste Minimisation in the Food Sector**, for Evolve Environment Body with funding from the Norlands Foundation (UK).
- **Acquisition of Campbell & Bloese partnership** and formation and development of Campbell & Bloese Ltd, a structural and general civil engineering consultancy that provides services to both the public and private sectors.
- Deputy Team Leader for European Investment Bank (EIB) funded study "Covering of Agricultural Drains in Residential Areas in Egypt: study of the Effects, Design Improvements and Alternatives". The project focused on provision of **affordable systems for solid and liquid waste management** in order to protect the agricultural drains.
- Development of a **waste management strategy** for Ascension Island.
- **Updating of the Solid Waste Master Plan** for the Seychelles.
- The **specification, design, development and implementation of software** for co-ordination of all applications for road closures and/or excavations, using workflow, GIS and database software, for the States Traffic Committee, States of Guernsey.
- **Development of guidelines and standards for the management of hazardous waste** in Azerbaijan.

His **country working experience** includes: - Ascension Island, Azerbaijan, Bahrain, Egypt, France, Guernsey, Hong Kong, Malta, Seychelles, Turkey, UK, USA.

Stephen Baker, MIPA, MIPR, MloD - Communications Director

Stephen Baker joined ISL as Communications Director with a brief to expand and develop the Company's capabilities and services in environmental communications. With over 25 years' broad-ranging experience of commercial advertising and public relations, he has specialised in environmental communications during the past 10 years, acquiring extensive expertise in planning



and managing public relations and communications in the wastes management and water / wastewater sectors both in the UK and overseas.

During this period, he has been responsible for advising public and private sector clients on the communications aspects of a variety of complex and often contentious environmental issues and developments. Previous clients include Hereford and Worcester Council, the Borough of Colchester, Lombard Finance, Grampian Regional Council, Southern Water, South West Water, the Government of Malta and the European Commission.

He has recently advised on the public communications and awareness aspects of a project to develop a hazardous waste management system in Azerbaijan, and the preparation of a national communications plan and a public awareness programme to support the introduction of private sector participation within the overall restructuring of the Urban Water Sector for the Government of Ghana.

Peter Pauckner, Dipl Wirt, Dipl Ing - Technical Director, Integrated Skills (Guernsey)

An industrial and mechanical engineer by training, **Peter Pauckner** is a specialist in integrated organisational communications and information technology, particularly the design and development of database, internet and GIS applications. He has recently developed and implemented an asset and service management application, based on a relational database and GIS, for the Guernsey Public Thoroughfares Committee.

He has now further developed this product into a generalised system for managing the provision of municipal services, especially wastes management, and the achievement of "Best Value" in service performance. He is the leading specialist in the use of ISL's software packages - Performance Manager™ and RouteSmart™. He is currently Project Manager for the specification, design, development and implementation of *TrafficWorx™*, a computerised, Intranet/Internet application package for the management and co-ordination of road works and closures.

Stuart Henshaw, BA Dip LA MSc MCIWM - Project Director

Stuart Henshaw qualified as a Landscape Architect and has since developed a career within local government managing waste and environmental services. He is a Chartered Waste Manager and has 15 years day-to-day management experience of local authority waste management, streetscene, grounds maintenance, countryside management, public conveniences and contaminated land services. He has a good understanding of local authority working. After five years of managing these services at Selby District Council he moved into consultancy where he has specialised in public sector work. His work at Selby included:

- Developing the strategic direction for all services.
- Carrying out **Best Value reviews for services, and the development of strategies, business and action planning** for the development of services.
- Budgetary responsibility for £3.2M per annum.
- Brokering **partnership working arrangements** and represented seven collection authorities within the York & North Yorkshire Waste Partnership.
- Preparation of **tender documentation for refuse and street cleansing and grounds maintenance OJEU contracts**.

Alison Crooks, BSc (Hons), MCIWM - Project Director

Alison Crooks has been recently appointed to lead and develop ISL's EIA, waste planning and environmental permitting services to UK-based private and public sector clients. She has over 10 years experience in waste management consultancy covering not only planning and permitting, but also market research, environmental monitoring and contaminated land investigations. Recent projects include the management and coordination of an EIA in connection with the regularisation of planning consent for an existing waste treatment and recycling facility in Berkshire on behalf of the site owner and operator; a planning application for a waste transfer and recycling facility in Surrey; advising on landfill gas migration from the major closed household waste landfill site on the Isle of



Wight; and advising on an application to vary a permit under the new Environmental Permitting regulations.

Alison is an expert on waste facility permitting and has advised clients on a wide range of related issues including enforcement. Her past experience includes a +6 month secondment to a major national waste management contractor to manage a technical department responsible for environmental regulation, monitoring and compliance of landfill sites, transfer stations, composting facilities and MRFs. She also played a leading role in developing a supplementary planning document for East Sussex County Council on the High Quality Design of Waste Facilities as part of the Waste Local Development Plan process.

James Holt, MGeol, MSc - Manager, GIS

James Holt is a GIS specialist, having dual qualifications in geology and Geographic Information Systems (GIS). James has a thorough knowledge of the principal GIS software applications, in addition to other specialised remote sensing and data interoperability programs. He is responsible for the growth and development of GIS at Integrated Skills, and has 7 years experience in applying GIS as an analysis tool to a number of multi-disciplinary projects including waste facility site selection, gas pipeline routing, mineral exploration, wind farm design, environmental impact assessments, and waste collection route optimisation. Customisation of GIS is another of James's skills, ranging from the production of short scripts and utilities, to integration using a range of programming languages.

James is ISL's technical co-ordinator for RouteSmart™, a GIS-based route optimisation software that is used to design balanced and optimised routes for the collection of commercial and residential waste streams, street cleansing, and snow ploughing/gritting.

Andrew Clewes BSc (Hons) MCIWM - Senior Consultant

Andrew Clewes trained as a geographer and initially worked as a cartographer for DEFRA during the foot-and-mouth crisis, mapping the outbreaks using GIS.

He has worked as a consultant in the waste management sector for six years providing consultancy services relating to local authority waste and environmental services, planning and permitting of waste facilities, environmental monitoring and CQA.

Over the past three years Andy has developed a particular specialism in streetscene services. He has carried out audits of street cleansing and grounds maintenance services for local authorities and registered social landlords, and has undertaken Best Value reviews of refuse collection, commercial waste, recycling, street cleansing and grounds maintenance services, including assessment of procurement options, cost verification exercises and benchmarking of performance, quality and good practice. Andy has also been involved in waste analyses for local authorities and undertaken tender evaluation for waste-related environmental services.

Andy has GIS expertise and has taken a lead role in coordinating RouteSmart re-routing services for local authorities including Leeds City Council and North Kesteven, the UK's top recycling authority.

Darren Parsons, BTECH - Project Engineer

Darren Parsons joined Integrated Skills (Guernsey) Ltd. in March 2002. He is qualified as an electrical and electronic engineer, and has 14 years experience in all areas of the telecommunications industry. During this period he has installed, commissioned and maintained telephone exchange switching equipment, fibre optic transmission systems, data communications systems, GSM mobile phone exchanges and uninterruptible power supply units. He is also very familiar with signalling protocols and communications software. Darren now provides electrical/mechanical support and administration for Guernsey's foul and surface water pumping infrastructure, and creates and updates Geographical Information System (GIS) layers of the pumping and drainage network and assets. He is also responsible for the writing and updating of service level agreement contracts, finding international job opportunities for ISL, maintaining the ISL website and project support.



Anne Murphy - Administration Manager

Anne Murphy acts as Office Manager at Southampton with responsibility for administration of the UK business. With many years experience in the environmental consultancy sector, Anne also brings valuable experience in the production of complex environmental services and engineering contract documentation.

Juraj Farkaš, Dipl. Eng - Manager, Central and Eastern Europe

Juraj Farkaš is a chemical engineer qualified in wastewater treatment and environmental science. He has extensive experience of waste management in the Slovak Republic, having worked as a waste officer with the Ministry of Environment, where he was responsible for the introduction of waste management legislation and the implementation of the Basel Convention amongst other duties, before commencing a career as a consultant. He has since advised several international agencies on waste management projects in Slovakia, and acted as resident project manager for a World Bank financed project to develop a hazardous waste management system for Azerbaijan. His relationship with the company, however, goes back to 1992, when he was a counterpart within the Slovak Ministry of Environment during the development of an integrated waste management strategy. He speaks fluent Russian as well as English and German.

ASSOCIATES

Patrick Foss-Smith - Associate

Patrick Foss-Smith is a waste management consultant and engineer with a wide range of UK and international experience. Following service in the merchant marine and Royal Engineers, Patrick spent five years with a waste management contractor. He has spent the last 22 years in waste management and environmental consultancy.

Patrick's areas of particular engineering expertise include the assessment of new waste treatment technologies as well as the application of existing technologies to different waste streams. Examples are the treatment of hazardous and non-hazardous waste from ship-breaking using plasma arc technology and the aerobic composting of organic based explosives as part of the decommissioning of post-cold war munitions stocks. He has advised on the demolition and recycling of large concrete structures and carried out condition surveys of existing waste management facilities.

In other areas of waste management consultancy advice, Patrick has undertaken extensive market research to identify new sites for waste facilities and reported on the commercial market for a wide range of waste collection and disposal services. In the public sector, Patrick has procured refuse collection and recycling services and vehicles for local authority clients and assisted contractors tendering for local authority waste management contracts.

Patrick has extensive overseas experience spread over five continents.

Recent projects:

- Review of the practicality and economics of a Plasma Arc technology application in its role for the destruction of hazardous wastes and also municipal waste, on behalf of the Ministry of Defence.
- Preparation of tenders on behalf of a company with a proprietary MBT process for various UK authorities, including mass balance, method statement, risk assessment and process description. Four of these projects have been successful resulting in contract awards while the other two are being re-tendered.
- Preparation of procurement programme and contractual documents for the acquisition of refuse collection vehicles for Spelthorne BC.
- An initial review into the scope of likely residual hazardous wastes to be found in obsolete naval vessels including appropriate ship-breaking and waste pre-treatment techniques (WYG for UK Ministry of Defence).



- A review of the status of Plasma Conversion as a means of disposing of the above wastes. Review included a technology appraisal, the state of commercial readiness of the system, background information and a brief review of alternative/competing technologies (for UK Ministry of Defence).

Stephen Burnett, BA, MSc - Associate

Stephen Burnett is an economist with 20 years of wide-ranging practical experience as an environmental economist and financial analyst. His particular expertise lies in the economic / financial appraisal and financing of waste management and other environmental projects, and the development of business plans for new waste management facilities / services. He recently acted as Project Manager for the development of two integrated waste management facilities in the UK, and as finance director for a company developing a new thermal waste treatment technology. He also undertook an investigation into pricing mechanisms currently employed in waste management contracts financed under the "Private Finance Initiative" and assessed their ability to deliver value for money in comparison with more traditional pricing mechanisms. Stephen is an acknowledged expert on the economics of recovering energy from waste and, in 1993, was retained by the Royal Commission on Environmental Pollution to prepare an assessment of the comparative economics of energy from waste in relation to landfill. This appeared as an appendix to its 17th Report (The Incineration of Wastes - 1993).

Edward R R Casebourne, C Eng, MICE, MCIWM, MIME - Associate

Edward Casebourne is a civil engineer with extensive experience of highways maintenance, refuse collection and street cleansing, and of the municipal tendering and contracting process, both from a private (contractor) and public sector (client) viewpoint. He has prepared over 100 tenders for municipal service contracts. He has also advised a number of local authorities on different aspects of refuse collection and street cleansing, including the preparation of performance specifications and tender / contract documents, and on the requirements for benchmarking and achieving 'best value' in service provision. He was recently a key member of a team that prepared tender and contract documents for the provision of road cleansing and related services in Guernsey.

Margaret Casey, BSc, MSc, MCIWM - Associate

Margaret Casey is an environmental scientist with over eleven years experience of waste management, brownfield site assessment and environmental auditing gained with three large consultancy practices. She has substantial experience in the investigation, risk assessment and remediation design of contaminated land sites and has a wide knowledge of waste management licensing issues, having succeeded in arranging the surrender of three waste management licences in the past two years. More recently she has completed a number of large environmental audits within the public utilities, transport and power industries including an Environmental Due Diligence of a water company in South America.

Graham Cooper, MSc, CEng, MIMechE, MCIWM - Associate Director

Graham Cooper has over 30 years' experience in solid wastes management and engineering, fifteen of which were gained with one of the largest waste management contractors in the UK and the remainder as a waste management consultant. Prior to entering the waste management industry, he was a polymer engineer specialising in the design and manufacture of chemically resistant plant for specialist applications.

His experience encompasses the full spectrum of waste management, covering:

- The planning of waste management systems and their operations, associated infrastructure and institutional development, for countries, regions, towns, factories, airports and shopping centres in both developed and developing countries.
 - Waste types that range from municipal solid wastes to industrial, commercial, special and clinical.
 - The assessment of waste types and quantities, their collection, handling and transportation, using road, rail and marine transport systems and their disposal by techniques such as landfill, incineration, composting and anaerobic digestion.
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He has been responsible for or involved in the design of over 100 waste transfer stations or materials recovery facilities up to 4,500 tonnes/day, reception and landfill facilities ranging up to 7,000 tonnes/day and the upgrading or construction and operation of several major waste transfer schemes. He has been involved in or been granted over a dozen patents, the majority of which relate to practical waste management issues, and his approach has been always to deal with practical solutions which have been implemented in the majority of cases.

Graham Cooper also has extensive international experience and has made significant contributions to waste management in many countries where it is essential that solutions are appropriate to the culture and budget of the client nation. His role as a Consultant is based on many years of practical operational experience that is kept up to date through work undertaken for Contractors in the industry, an increasing involvement in materials reclamation and recycling, and as an Assessor for technical competence in the waste industry. Graham also lectures in waste management.

Paul Darley, BTech (Hons), CEng, FRSA, FIMechE, FEI, MASME - Associate

Paul Darley is an experienced engineer and manager in the field of thermal treatment of biomass and wastes. He has worked in several countries for major contractors and equipment suppliers and has a successful track record in plant / equipment development, technology appraisal, project development, and project management. He currently focuses on assisting organisations to develop biomass power plants and energy from waste facilities. He has taken projects from concept to construction, providing a major input into the power purchase agreements and project financing as well as the technology selection and contractor appointment. His achievements include:

- Developing biomass and energy from waste projects from conception to completion.
- Managing energy from waste contracts to completion on schedule and within budget.
- Overseeing the successful development of thermal treatment processes and equipment.
- Conducting reliable technical and commercial appraisals for energy from waste plants.

Paul Dax, BA, MA, PhD - Associate

Paul Dax is an economist with over 30 years diverse experience in economic and environmental policy analysis, and project design, appraisal, financing and management. Prior to becoming a consultant, he held senior positions with the World Bank Group, the European Bank for Reconstruction and Development (EBRD) and the Harvard Institute for International Development (HIID). Fluent in German and Hungarian as well as English, Paul has extensive experience of the needs and challenges of transition economies in Central and Eastern Europe. His particular expertise includes economic and sectoral policy analyses, investment appraisal and promotion (particularly with regard to public-private partnerships in solid waste management), preparation of business and financial plans, preparation of tender documents and bid evaluation, environmental policy formulation and the application of economic instruments to support environmental policy objectives.

Peter Faircloth, BSc, MSc - Associate

Peter Faircloth is an economist with extensive experience in the economic and financial assessment of environmental and resource development projects spanning more than twenty five years. For the past fifteen years he has focused on the international environment sector, including the municipal and hazardous waste, water and wastewater, air pollution control, industrial pollution control and related sectors. Areas of specific expertise include project management; strategy development; financial analysis; economic evaluation; pricing, tariff, cost-recovery policy and affordability analysis; and the application of economic instruments to environmental issues. He has qualifications in mathematics and economics, natural resources management and professional management.

His skills encompass detailed economic and financial computer modelling. He has wide experience working in the EU accession countries. His EU-accession regional and country experience covers Albania, Bosnia, Bulgaria, Croatia, Czech Republic, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Russia, Slovakia, Slovenia, Turkey and Ukraine.



He has worked widely in the area of waste management economics and financing. He was principal author of the economic and financial component of the World Bank Strategic Planning Guide for Municipal Waste Management. He has worked on waste management projects and strategies for a number of funding agencies (including the World Bank, EBRD, EIB, ADB, DfID, JICA and the EU) and in many countries, including Bosnia, Bulgaria, China, Croatia, the Czech and Slovak Republics, Egypt, Ethiopia, Hong Kong, India, Kenya, Lithuania, Malta, Poland, Romania, Russia, SVG, Tunisia, Turkey, Ukraine, Venezuela, Vietnam and Zambia. Example project experience includes:

- Team leader and principal economic expert to develop a Strategy for EU Environmental Law Approximation in Croatia.
- Financial and economic expert for the preparation of water and wastewater projects to be financed out of the Cohesion Fund in the Czech Republic.
- Financial and economic expert to evaluate the effectiveness of EIB funded solid waste management projects in the EU.
- Principal finance expert, EBRD loan financing of the Kharkiv solid waste management project, Ukraine.
- Financial specialist, World Bank Regional Solid Waste Management Project for the Maghreb-Mashreq countries.
- International economist, World Bank Private Sector Participation in Solid Waste Management Project in Zambia.

Andrzej Guła, MSc – Associate

Andrzej Guła is an environmental economist and financial analyst with a Master's Degree from the University of Cracow. His primary experience is in the preparation of feasibility studies and cost-benefit analyses for public infrastructure projects, and in investment planning and financing of municipal infrastructure investments – wastewater treatment, water supply, waste management and energy generation.

Between 2004 and 2006 he was a member of the Steering Committee for the EU Cohesion Fund – a body set up at the Polish Ministry of Environment to advise the Minister on project selection. Andrzej has practical knowledge in conducting financial and economic assessments of environmental infrastructure projects financed from IPA, Cohesion Fund and ERDF. He also has extensive experience of developing and delivering training programmes on investment project cycle management, environmental economics and financing. Besides his work in Poland, he has also worked on a number of projects outside Poland – in Croatia, Moldova, Serbia, Ukraine and Turkey. Andrzej speaks fluent English, Polish and Russian, as well as some Italian.

Robert Holmes, BSc, PhD, C Geol, MCIWM, MIEMA - Associate

Robert Holmes is a geologist/geochemist by background, with a variety of post-graduate qualifications in public health and environmental control, water resources engineering and management studies. He is also registered as a *Principal Environmental Auditor* with the Environmental Auditors Registration Association scheme of the Institute of Environmental Management and Assessment (IEMA).

For the first 10 years of his career, Robert worked for one of the UK's largest waste management contractors in a variety of technical roles eventually becoming Environmental Group Manager. In this role, he was responsible for leading a team of 5 staff charged with evaluating the environmental impact of the company's active and restored landfill sites, incineration and waste treatment facilities, and for managing the company's substantial research and development programme.

In 1985, he embarked on a career as a consultant, working for a number of international environmental consulting firms. Robert's expertise and experience encompasses a very wide range of skills, including environmental risk assessments, regulatory applications including IPC authorisations and waste management licences, the investigation, assessment and remediation of contaminated land, and the design and implementation of Environmental Management Systems.



Ian Mclver, ONC, HNC, Lead Assessor Quality Management Systems - Associate

Ian Mclver has extensive experience in the survey, assessment, design, costing, project management and supervision of major Quality Management projects, both for simple third-party assessment and registration to BS EN ISO 9000 series and Total Quality Management Systems. He was instrumental in setting up Quality Management Systems for a leading UK waste disposal company, leading to the first UK registrations to ISO 9000 series for waste management facilities. Since then, he has had a major involvement in setting up Management Systems for a large number of leading UK waste management and metal recycling companies.

Brian Makepeace, HNC, MCIWM, MCIEH - Associate

Brian Makepeace has an extensive range of professional qualifications in wastes management and environmental health, and holds Certificates of Professional Competence in Road Transport Operations and Certificates of Technical Competence in managing landfill sites, waste transfer stations and Civic Amenity (CA) sites. He has over 30 years senior-level experience in environmental protection and wastes management, gained in both the public and private sectors.

In recent years, Brian has been closely involved in a wide variety of consultancy projects in the UK and overseas related to contaminated land remediation, hazardous waste management and privatisation of waste management services. Prior to becoming a consultant, he held a succession of senior positions with local authorities where he was responsible for both managing and regulating a wide range of environmental infrastructure and services.

Projects recently undertaken include:

- Preparation of a national waste management strategy for the Government of Malaysia.
- Input to the development of a hazardous waste management strategy for Azerbaijan.
- A composting feasibility study for Mauritius.
- The rehabilitation of several former landfill sites in the UK.
- Provision of advice on the privatisation of waste management services in Malaysia.
- Development and implementation of a hazardous waste management strategy for the island of St Helena.
- Development and implementation of a waste management strategy for Ascension Island.
- Solid Waste Management Advisor to the Coalition Provisional Authority, based in Basra, Southern Iraq.

Bernard Rigg, CEnv, MCIWM, AIEMA - Associate

Bernard Rigg is an environmental manager with strong communication and analytical skills, plus extensive knowledge and experience of management systems, auditing, regulatory compliance, pollution prevention and waste management. His key skills are auditing environmental management systems, designing and implementing health, safety and environmental management systems, and developing and conducting presentations and training programmes.

Bernard previously worked as the Environmental Management Systems Lead Assessor for Lloyds Register Quality Assurance in the UK, where he carried out ISO14001 certification assessments for clients in a wide range of industries, and advised clients on potential options for improving their environmental performance and management systems.

Previous to that, he worked for MB Technology in Malaysia as the Regional Clinical Waste Manager, where he managed the implementation of a modern waste management service for 20 government hospitals in the state of Sabah. He also designed and implemented management systems in order to ensure safety, efficiency and compliance with environmental legislation, trained medical staff on the management of clinical waste and advised the Ministry of Health, Department of the Environment and contractors on best practice in safety and environmental management.

Bernard Rigg has also worked for the Environment Agency and London Waste Regulation Authority, where his work has included devising and implementing a risk assessment scheme and a quality



assurance scheme for site inspections, and licensing and inspecting waste management facilities and providing regulatory guidance to waste brokers, carriers and producers.

Maurice Sheridan, Barrister, LL.M, LL.B, Dip. FLC

Maurice Sheridan is an international and environmental lawyer with over 20 years' experience. For the past 15 years Maurice has been extensively involved in issues affecting countries of Central and Eastern Europe and the former Soviet Union concerned with preparing their legislation and legal system for the requirements of European Community law.

This work has been conducted through the subject areas increasingly of environmental law. Having been responsible for assessing administrative and legal capacity in these countries, he has looked at issues of land-use planning, water legislation, waste management and licensing / permitting issues, IPPC permitting process, liability for environmental pollution, in common law, as well as under statute, and with questions of civil as well as criminal liability, particularly at the suit of environmental regulatory authorities

In addition to this work in Central and Eastern Europe, he has also been working extensively on an advisory level and in litigation before the courts on environmental liability issues for local government bodies, central state environmental agency, for commercial companies, privatised utilities, non-governmental organisations and private individuals. This has often involved applying EC law, including policy and experience in European Policy.

Maurice has been and continues to be involved in various Environmental Accession projects for the approximation of EU environmental legislation and policy in Romania, Bulgaria, Estonia, Hungary, the Czech Republic and Ukraine.

A majority of the work he has been involved in domestically and internationally on a wide range of issues involved solid waste management solutions. He acts on a regular basis for a number of key companies operating in this area in the UK, advising and acting on their behalf before national regulators, local authorities, and courts and tribunals. In addition to acting for waste disposal and collection companies in domestic arbitrations, he has also been Legal Assessor to the Arbitration Tribunal.

He has recently completed a Project for the European Commission as Team Leader and Legal Expert on revising and upgrading the Handbook on Implementation of Community Environmental Legislation. The Project also involved the provision of detailed legal advice on harmonisation issues relating to Community Environmental Legislation.

Michael Skinner, BSc, CChem, - Associate

Michael Skinner is a chemist with 30 years experience as a water quality regulator with a UK water authority and also in the Oman. He became a consultant 12 years ago and during this time has been project manager or team member on a wide range of projects relating to solid waste management, environmental audit, EIA and water pollution control, in the UK, Europe, the Middle East and Mexico.

Major waste management projects on which he has been Team Leader or a key specialist are:

- Support for environmental assessment and management, Egypt 1994-5 (ODA).
 - Strategy for the treatment and disposal of solid wastes in Al Ain, Abu Dhabi, 1996-1998.
 - Sewage Sludge Reuse and Disposal, Ministry of Regional Municipalities and Environment, Sultanate of Oman (2001-2002).
 - Assistance to two municipalities in Bulgaria to enable them to comply with EU waste management standards (2000-2002).
 - Preparation of ISPA Application for the Telsiai Regional Waste Management System Development, Lithuania (2003).
 - Preparation of the Tender Dossier for implementation of the Duna-Tisza Regional Waste Management Programme, Hungary (2002-2003).
 - Implementation of the Solid Waste Management Programme in Kraków, Poland (2004-2005).
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Philip Smith, BSc, PhD, CChem, MRSC, MCIWEM - Associate

Phil Smith is a chemist and aquatic ecologist with extensive experience in the field of freshwater and marine pollution and the undertaking of Environmental Impact Assessments. He has specific experience of assessing the impacts of sewage and other wastewater discharges and the mitigation of their adverse effects. He has also undertaken ecological and environmental assessments for such projects as the Channel Tunnel Rail Link, oil exploration, housing developments, water supply and storage, and land reclamation. He has worked in India and Hong Kong as well as throughout the UK.

Roberto Vogel, BSc, MCIWM - Associate

Roberto Vogel is a mechanical engineer who worked for a major waste manufacturer of Waste-to-Energy plants before entering the field of consultancy nine years ago. He thus has not only technical but also extensive practical experience of Waste-to-Energy technologies. He has carried out work in the field of project management, commissioning and training on a large number of waste-to-energy projects across Europe. He has also acted as an expert witness on dioxin emissions from incineration and has undertaken projects on air emissions and sludge drying.

Prior to this, Von Roll of Switzerland employed him on the erection and commissioning of large waste incineration plants, incorporating advanced gas cleaning equipment, in several European countries. In addition he was involved in research and development work on dioxins, and the co-firing of car shredder waste with municipal refuse. Before joining Von Roll he undertook research work on vaccine conservation with the World Health Organisation in Geneva.

He recently acted as the key specialist on a team that developed and tested a 'low-cost' municipal solid waste incinerator for use in developing countries.

Robert Wheatley, MCIWM - Associate

Robert Wheatley has over 30 years diverse experience of developing, planning and managing major engineering projects, particularly in the waste management sector. His achievements include the development of the South East London Combined Heat and Power scheme (SELCHP) from concept through public consultation, planning, design, construction, commissioning and operational phases. He has also developed the Kirklees and Isle of Man integrated waste management schemes, and has successfully negotiated two waste management PFI schemes (Kirklees and South Gloucestershire) and played a leading role in the Surrey County Council PFI waste management partnership.

A seasoned and commercially orientated manager, he has been active in the merger and acquisition of waste management businesses, establishing a £150 million group from scratch between 1995 and 2000. He has also held a number of key positions in the industry, including Chief Executive Officer of the United Waste Group, Director and General Manager of SITA UK and non-executive directorships in various businesses such as London Waste Limited and Tractebel LNG Limited.

Stephen L Willetts, BSc, PhD, FCIWM, MCIWEM, MCIArb, MAE, CP - Associate

Stephen Willetts is a biochemist with a doctorate in chemistry and economics. Prior to entering into consulting, he was an Executive Director and Group Technical Director of Leigh Interests PLC, a major UK waste management and environmental services contracting company. His expertise and experience covers a very wide range of technologies and activities relating to the management of wastes, including the treatment and disposal of industrial hazardous wastes, the incineration of clinical wastes, environmental auditing of waste facilities, environmental management systems to ISO 14001, the development and operation of sanitary landfill sites, and the development and delivery of waste management training courses. He is visiting professor of waste management at University College, Northampton.



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