

## Knowledge Transfer Partnerships

### KTP BENEFITS

Knowledge Transfer Partnerships are designed to benefit everyone involved

- 🔄 Businesses will acquire new knowledge and expertise
- 🔄 KTP Associates will gain business-based experience and personal and professional development opportunities
- 🔄 University, college or research organisation will bring their experience to enhance the business relevance of their research and teaching

A DTI Business Support Solution

## DIGIT SITE SERVICES LTD WASTE R&D PROVES NOT TO BE A WASTE OF TIME

### ABOUT THIS CASE STUDY

DIGIT SITE SERVICES LTD, BASED IN KILMARNOCK, IS A LAND RESTORATION COMPANY. WORKING WITH ACADEMIC PARTNER NAPIER UNIVERSITY, THE AIM OF THE KNOWLEDGE TRANSFER PARTNERSHIP (KTP) WAS TO RESEARCH, DEVELOP AND IMPLEMENT COST EFFECTIVE, SAFE WASTE DISPOSAL AND REMEDIATION METHODOLOGIES TO MEET SEPA, UK AND EU REGULATIONS FOR A RANGE OF WASTE MATERIALS.

### ABOUT THE SPONSORS

THE DEPARTMENT FOR TRADE AND INDUSTRY (DTI)

THE DTI DRIVES THE AMBITION OF 'PROSPERITY FOR ALL' BY WORKING TO CREATE THE BEST ENVIRONMENT FOR BUSINESS SUCCESS IN THE UK. THE DTI HELP PEOPLE AND COMPANIES BECOME MORE PRODUCTIVE BY PROMOTING ENTERPRISE, INNOVATION AND CREATIVITY.

THE SCOTTISH EXECUTIVE (SE)

THE SE IS THE DEVOLVED GOVERNMENT FOR SCOTLAND. IT IS RESPONSIBLE FOR MOST OF THE ISSUES OF DAY-TO-DAY CONCERN TO THE PEOPLE OF SCOTLAND, INCLUDING HEALTH, EDUCATION, JUSTICE, RURAL AFFAIRS, AND TRANSPORT (DEVOLVED AND RESERVED MATTERS)

### FAST FACTS

- 🔄 Expertise in stabilisation and solidification
- 🔄 Mobile planning licence for waste treatment
- 🔄 In-house chemical analysis capabilities and staff training
- 🔄 Biosolids handling and use in soil rehabilitation
- 🔄 Contact with R&D organisations and initiation of new projects, awareness and initiation of new technologies
- 🔄 Development of new website
- 🔄 Winner of SEPA waste processing award

## The Company



"Our involvement with KTP and Napier University has greatly assisted in establishing our company's credibility as a national contractor in our specialist field." **Tommy Hogg**, Managing Director, Digit Site Services

Digit Site Services is a land restoration company, based in Kilmarnock. The company specialises in the economic, sustainable waste outlet process to reclaim vacant or derelict land for the purpose of minimising or negating waste disposed to landfill.

### ABOUT THE PROJECT

Cement solidification/ stabilisation has, in the past, been dealt with in an arbitrary manner, which proved needing of a scientifically robust research project that could provide more credibility to the technology. The work represented a

programme for the Associate, and which would lead to a MPhil higher degree.

The project also required trials for soil rehabilitation utilising sludge cake and other sewage waste material at a site in central Scotland, as well as legislation review relating to soil remediation and waste disposal.

### BENEFITS

Over the period of the KTP project, the company has changed direction from traditional construction work to concentrate on organic waste disposal and restoration

projects. Since the KTP project was completed in 2003, the company has experienced an increase in turnover of 33% and the KTP has facilitated Digit Site's entrance to market in a niche, economically sustainable industry area.

Enhanced capabilities in remediation have enabled the company to extend its operations into England, where most of the work now takes place. New initiations are also underway in Ireland. The KTP has also made more research funding applications for remediation work a possibility, and includes external application for the EU Framework Programme 6 (FP6).

The knowledge and experience gained through the KTP has leveraged the company's technical and service offerings – enabling further divestment and business portfolio growth. This has strengthened relationships with future possible contractors and has increased business confidence overall.

The cost savings achieved in developing an in-house water testing capability has enabled the company to extend the level of testing, which has led to increased client and Regulatory Authorities control satisfaction, whilst enhancing its reputation as a field specialist.

#### RESULTS

- 🔄 The increased work in the remediation arena has permitted the purchase of new equipment, plus a laboratory refurbishment for chemical analysis
- 🔄 Employment of new members of staff, with seven other job opportunities planned
- 🔄 Substantial property investment (land for cultivation, restoration and resale)
- 🔄 Enhanced reputation and service offering credibility
- 🔄 Associate retention as Project Manager

## The Associate

The Associate attended a Microbiology Laboratory course at Napier University, which provided him with the necessary skill in microbial culture techniques and the role of microbes in the environment.

#### BENEFITS

During the course of the KTP, the Associate benefited from a number of key learnings and opportunities. These includes the strengthening of business acumen, such as communication, team-work and presentation skills, as well as negotiation, strategy and innovation development and business performance evaluation skills. Specific to the KTP role, the Associate learnt how to implement Environmental Management systems and environmental auditing, together with (Bio)-remediation techniques.

#### RESULT

The Associate was offered a permanent post with the Company as a result of the KTP. He also achieved NVQ4 Management and a MPhil degree. The project has since generated a follow up KTP with Digit's parent company, PORTCULLIS Developments, examining surface and groundwater modelling techniques for predicting environmental outcomes when improving soil conditions with biosolids. This is a joint venture between the School of Built Environment and the School of Life Sciences.

## The Academic Partner



**NAPIER UNIVERSITY**  
EDINBURGH

Digit Site Services Ltd KTP was facilitated by Napier University, in association with the School of Life Sciences Pollution Research Unit. The programme was supported by lead academic Professor Nick Christofi.

#### BENEFITS

The project with the Company has enabled the Pollution Unit staff within the School of Life Sciences, Napier University, to gain further knowledge on the handling, transportation and the full-scale treatment of contaminated materials. The project has enabled the development of remediation systems for a range of organic wastes, which are currently not allowed to be disposed to landfill.

Further contacts have also been made with key research organisations, some of which have aided the University to become involved in the EU FP6 Research Programme, alongside Digit Site Systems.

The School of Life Sciences has benefited by the generation of teaching material for the Environmental Biotechnology modules. The KTP project has also helped to enhance the reputation of CLARRC (Contaminated Land Assessment and Remediation Research Centre) – a consortium between Napier and Edinburgh Universities and SUERC (Scottish Universities Environmental Research Centre at East Kilbride), which aims to deliver cross-disciplinary expertise.

#### RESULTS

The benefits to the Knowledge Base Partner has resulted in growth in two key areas:

**Research:** Research Application to the European Commission (BIOCHEMINTERFACE project), as well as contact with Environmental consultants at other Universities to develop soil rehabilitation systems. Ongoing applications for funding with these organisations are planned.

**New Course Material:** Case studies on waste processing and development of new MSc in Environmental Biotechnology with the University of Aachen.