

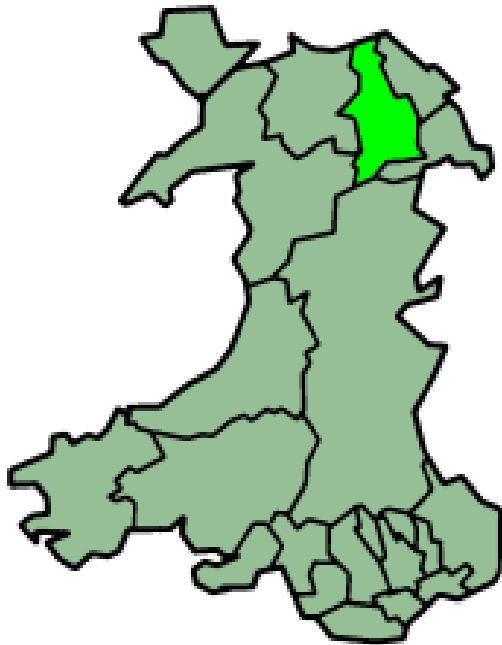
**Denbighshire County Council  
A.P.S.E. Service Team Award  
Highways. Winter Maintenance  
Street Lighting**

**Brian Evans – Group Manager  
Denbighshire County Council  
Environmental Services**

# Introduction

## Denbighshire

12,623 Lighting Units



- Population 93,065
- Mainly rural county in North Wales
- Urban areas along the coastal strip
- Main route (A55T) to Ireland

# Street Lighting Section

- **In-house service within the Environment Directorate**
- **Combined client / contractor service**
- **Provided by private contractor until 2004**
- **Integrated with Sign Manufacturing and Installation**

# Assets

- **12,623 Lighting units**
- **1,398 Illuminated signs**
- **279 Traffic bollards**

# The Way We Were

- The street lighting service previously been provided by outside contractor.
- During the early stages of the contract the performance and service delivery was average at best.
- Denbighshire was placed in the lower quartile.
- The service then went from bad to worse with the contractor going into administration.
- The client spent a great deal of time checking the contractors work leaving very little time for improvement initiatives in service delivery.

# Improvement Strategy

- The Council took the decision to place the Street Lighting contract out to tender.
- The in house tender was successful and the team developed a new business plan.
- The fundamental strategy was to provide a top quality one stop shop for the design, build and maintenance of all signing and lighting works.
- The plan included a major investment in training for all members of staff based on NVQ assessments.
- A complete overhaul of risk assessments and safe working procedures.

# Improvement Strategy

- Overheads would be reduced by changing the previous separate client and contractor roles to combine a more efficient streamlined operation
- This would be further aided with the introduction of new electronic systems to assist planning ,work scheduling system updates ,invoicing ,and budgetary financial control

# Staffing Street Lighting

- **Lighting Engineer**
- **Assistant Engineer**
- **Street Lighting/Sign Shop Supervisor**
- **3No. Electricians**
- **7No. Installation Multi Skilled Operatives  
(shared Sign Shop)**
- **Technician**
- **Modern Apprentice (Electrician)**



# Staffing - Sign Shop

- **Sign Shop Manager**
- **Workshop Supervisor**
- **Two Graphic Assistants**
- **Five Sign makers**
- **Fabricator Welder**

# Staffing

- **All outside staff trained to at least NVQ2 Sign Shop Staff NVQ3**
- **Installation works are carried out by four multi skilled teams of two men**
- **All site foremen trained to same level**
- **All installation operatives have same skills**
- **All staff have at least LGV2 via NVQ route**
- **All staff attend DNO course to allow safe working on equipment**

# Training Matrix

COURSE	Refresher Period	Elwyn	James	Bob	Lee	Gareth	Dominic	Daniel	Wayne	Mark	Kristian	James	Jamie
		NR	NR	NR	✓	✓	✓	✓	✓	✓	✓	NR	NR
Abrasive Wheels		✓	✗	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
First Aid (1 Day)	1 year	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Basic MEWPS		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Defensive Driving		✓	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗
Scaffold Training		✓	✗	✗	✓	✗	✓	✗	✓	✓	✗	✗	✗
Manual Handling		✗	✓	✓	✓	✓	✓	✗	✓	✓	✓	✗	✓
ERG39	3 years	✓	✓	✓	✓	✓	✓	✗	✓	✓	✓	✓	✓
Power Tools Inc Handtools	5 years	✓	✗	✗	✓	✗	✗	✗	✓	✗	✗	✗	✗
Use of Steps/Ladders	3 years	✓	✗	✓	✓	✓	✓	✗	✓	✓	✓	✓	✓
S & L Guarding & Use of Cat & Genny	5 years	✓	✗	✗	✓	✓	✓	✓	✓	✓	✓	NR	NR
Lorry Mounted Banksman/Slinger	5 years	NR	NR	NR	✓	✗	✓	✗	✓	✓	✗	NR	NR
Lorry Mounted Crane Operator (HIAB)	5 years	NR	NR	NR	✓	✗	✓	✗	✓	✓	✓	NR	NR
Sciccors Lift		✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗
Driver Training HGV (CITE) HGV 2	5 years	NR	✗	✓	✓	✗	✓	✗	✓	✓	✗	NR	NR
Driver Training HGV 1	5 years	NR	NR	NR	NR	✗	✓	✗	✓	NR	NR	NR	NR
Chain Saw	2 years	NR	NR	NR	✓	NR	✓	NR	✗	✗	NR	NR	NR

Training Complete ✓

Training Outstanding ✗

Training Not Required - NR

# Sector Scheme

## Accreditations

**SECTOR SCHEME 8, 9b & 10**

**SIGN SHOP 9a**

**Quality Management System ISO 9001**

# Financial

▪ Revenue budget	£620,000
▪ Concrete column replacement	£120,000
▪ Christmas decorations	£140,000
▪ Other capital works	£120,000
▪ Private works	£260,000
▪ Sign Shop Turnover	£750.000+

# Marketing

## Lighting Lighting Lighting Lighting Lighting

### Total street lighting solutions

#### Design and build

We are able to offer a standard street lighting 'design' service or a fully integrated 'design and build' solution.

Projects can be undertaken from inception through to completion. This can incorporate asset condition surveys, cable network calculations, street lighting design and organisation of utilities connections.

#### Installation and capital works

Denbighshire Environmental Services can provide a full in house service covering design, specification, installation, electrical testing and commissioning of street lighting installations.

Our highly trained staff are capable of delivering schemes to a superior standard of service in the following areas:

- Installation and removal of columns, signs, bollards and other street furniture.
- Excavation cabling and terminations.
- Electrical testing
- CCTV
- Bus shelters
- Car and retail parking lighting.
- Festive lighting

Our clients include most of the major civil engineering contractors within the North Wales region.

#### People, skills, quality and reliability

ISO 9001 Certified and accredited with investors in people, Denbighshire are committed to the continued development of its employees. As part of our commitment to training we have registered all our staff for the ILE/ASLEC NVQ qualification and will continue to use this as a method of ensuring competence.

We have a policy to recruit, train and develop staff internally and only using sub contractors for peaks in demand. This ensuring all clients and customers enjoy a consistent service and long enduring working relationship.



## Goleuadau Goleuadau Goleuadau

### Yr ateb cyfan i oleuadau stryd

#### Dylunio ac adeiladu

Rydym yn gallu cynnig gwasanaeth 'dylunio' goleuadau stryd safonol neu ateb 'dylunio ac adeiladu' wedi'i gyfluno'n llawn.

Gellir ymgymryd â phrosiectau o'u dechreuad drwydd i'w cwblhau. Gall hyn ymgorffori arolygon o gyflwr asedau, cyfrifiadau rhwydwaith ceblau, dyluniad goleuadau stryd a threfnu cysylltiadau â'r cyfleustodau.

#### Gwaith gosod a gwaith cyfalaf

Gall Gwasanaethau Amgylcheddol Sir Ddinbych ddarparu gwasanaeth mewnol llawn sy'n cynnwys dylunio, y fanyleb, gosod, profi trydanol a chomisiynu gosod goleuadau stryd.

Mae ein staff tra hyfforddedig yn alluog i gyflwyno cynlluniau gyda safon uwch o wasanaeth yn y meysydd canlynol:

- Gosod a thynnu colofnau, arwyddion, bolardiau a dodrefn stryd arall.
- Cloddio ceblau a therfyniadau.
- Profi trydanol
- Teledu Cylich Caeolig
- Llochesi bysus
- Goleuadau meysydd parcio a pharcio adwerthol.
- Goleuadau Gwyliau

Mae ein clientiaid yn cynnwys y rhan fwyaf o'r prif gonastrwywr peirianeg sifil yn rhanbarth Gogledd Cymru.

#### Pobl, sgiliau, ansawdd a sicrwydd

Gydag Ardytystiad ISO 9001 ac wedi'u hachredu â buddsoddwyr mewn pobl, mae Sir Ddinbych wedi ymrwngto i ddatblygiad parhau ei gweithwyr. Fel rhan o'n hymrwymiad i hyfforddiant rydym wedi colfretu ein holl staff ar gyfer y cymhwysr CGC (NVQ) ILE/ASLEC a byddwn yn parhau i ddefnyddio hyn fel dull o sicrhau cymhwysedd.

Mae gannym bolisi i recriwtio, hyfforddi a datblygu staff yn fewnol ac ond i ddefnyddio isgonastrwywr ar gyfer y galw brig, gan sicrhau felly fod yr holl gientiaid a chwsmeriaid yn mwynhau gwasanaeth cyswrt a pherthynas wertho hirbarhaus.





# Customer Satisfaction Survey

## HOW ARE WE PERFORMING?

The Street Lighting section of Environmental Services carries out the replacement, maintenance and repair of all Denbighshire's Street Lighting and Illuminated Signs.

We employ three Electricians and four multi skilled operatives to carry out this work and we want to know that they are performing at an acceptable level as we are committed to providing a quality service which reflects the needs of our customers. Please could you take a few minutes to complete this questionnaire and return it to us, which will assist in evaluating the service delivery.

## STREET LIGHTING SERVICES CUSTOMER SATISFACTION SURVEY

For each question please place a cross x within the box that best represents your answer. Do not mark the form in any other way.

### Section One: what is important to you?

Please tell us how important to you each of the following things are. Answer 'Not applicable' if any of these services are not provided by the Council.

#### a. Services provided

	Extremely important	Very important	Important	Not very important	Not at all important	Not applicable
Prompt repairs to broken/faulty street lights	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Provision of good lighting on main roads	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Provision of good lighting on local streets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Provision of good lighting on footpaths	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Provision of good lighting at accident hotspots	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

#### b. Services standards

	Extremely important	Very important	Important	Not very important	Not at all important	Not applicable
Appearance of street lights	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The Street Lighting service as a whole	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Only complete the following 'Staff and information' section if you have been in contact with a member of the Council's street lighting staff.

#### c. Staff and information

	Extremely important	Very important	Important	Not very important	Not at all important	Not applicable
Friendliness/co-operation of staff	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Presentation of staff	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ease of obtaining information/help	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ease of reporting faults/making complaints	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### Section two: how do you think that we are doing?

Please tell us how you think we are performing with regard to each of the following aspects. Answer 'Not applicable' if any of these services are not provided by the Council.

#### a. Services provided

	Extremely important	Very important	Important	Not very important	Not at all important	Not applicable
Prompt repairs to broken/faulty street lights	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Provision of good lighting on main roads	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Provision of good lighting on local streets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Provision of good lighting on footpaths	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Provision of good lighting at accident hotspots	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

#### b. Services standards

	Extremely important	Very important	Important	Not very important	Not at all important	Not applicable
Appearance of street lights	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The Street Lighting service as a whole	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please tell us how you think we are performing with regard to each of the following aspects.

#### c. Staff and information

	Extremely important	Very important	Important	Not very important	Not at all important	Not applicable
Friendliness/co-operation of staff	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Presentation of staff	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ease of obtaining information/help	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ease of reporting faults/making complaints	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

# Monthly Newsletter

## Includes:-

- **Health and Safety reminders**
- **Staff Issues**
- **Feedback on service delivery – good or bad**
- **Tool to provide consistent messages to all our staff**



# Plant and Equipment

## Installation



# Column Grab



# P.D.A's

The screenshot displays the SLiMS Mobile application interface. At the top, there are status bars for 'SLiMS Mobile' with signal strength, battery, and time indicators (19:19, 19:24, 21:27, 21:28, 19:43). The main screen shows a 'Report Fault' form for 'Unit 9' at 'DENBIGH' on 'BROOMHILL LANE'. The 'Fault Description' field contains 'Lamp Out'. A list of fault types is visible, with 'Lamp Out' selected. Below the form is a keyboard with various function keys like 'Tab', 'CAP', 'Shift', and 'Ctl'.

SLiMS Mobile 19:19 ok

SLiMS Mobile 19:24 ok

Unit 9 21:27 ok

Edit Field Value 21:28 ok

Report Fault 19:43 ok

Location and Unit:

DENBIGH

BROOMHILL LANE

Street Lighting

On corner by

Fault Descript

Lamp Out

Comments:

123 1 2 3 4

Tab q w e

CAP a s d

Shift z x c

Ctl á ü ` \

✓ ✗

- Lamp Out
- Low Burn
- Dayburning
- Shade Off
- Door Off
- Cycling
- Flickering
- New Door Required
- Door Lock Required
- Shade Open
- Re-Align Column
- Re-Align Bracket Arm
- Lantern Damaged



# Fault Reporting

- **Call Centre**
- **Website**
- **Inspections**

**Inspections carried out by :**

**Lighting Engineer**  
**Assistant Engineer**  
**Supervisor**

**Cost 9k per annum**

# Working Arrangements

- **Following inspections the faults are loaded onto Street Lighting Management System**
- **Start of each day list of faults are uploaded onto PDA's for each Electrician to plan daily programme**
- **End of shift repairs downloaded from PDA's back into the management system**

# Revised Working Arrangements

- **Introduction of Night Shift for all Electrical Maintenance**
- **Team of two - Electrician and Mate**
- **Start Shift at 16.00hrs**
- **37 hours Monday – Thursday**
- **Team will finish at 2.45am but remain on call until 07.30am**
- **Night Shift – Fortnightly**
- **Patrol and attend to fault**



# Advantages

- **Easier to plan**
- **Need to comply with EU Drivers hours (Digital Tachographs fitted to all street lighting vehicles)**
- **More efficient fault repairs**
- **Anticipate improved Performance Indicators**
- **Less risk – eliminate single man patrolling**

# Winter Maintenance

## **Street Lighting/Sign Shop provides staff for**

- Highway Emergency Response (Summer and Winter)
- Front Line Gritter Operation (all single manning)



# Other Work

- **Christmas Decorations  
140k**
- **Most installation work  
carried out at night**
- **Team of three: one  
Electrician and two  
Installation Operatives**



# Other Work

## Christmas Lighting



## Denbigh Castle



# Collaboration/Joint Procurement

- **Historically a forum for “Client” Lighting Engineers**
- **Most North Wales Authorities now combined client / contractor**
- **Focus of meeting changed to best value initiatives and method improvements**
- **Open discussions on best practice**
- **Health and Safety high on agenda**
- **Exchange of Safe Working Procedures and Risk Assessments**

# Joint Procurement Initiative - Need For Change

- **Compliance with financial regulations**
- **Benefits of joint procurement existed for energy**
- **Partnerships/collaboration meet both Corporate and Departmental business aims and objectives**
- **Stronger purchasing power due to increased quantities**
- **Associated cost of stock holding in order to complete works on time**
- **Standardisation of component parts**

# Collaboration

- **Need to standardise equipment**
- **Reduce number of components**

# Savings

- **Denbighshire**                      **£21,000**
- **Gwynedd**
- **Wrexham**
- **Flintshire**
- **Conwy**



# Savings

- **In addition to the savings realised by the Street Lighting Section, The Building Maintenance Section will also benefit from the tender.**
- **Bulk lamp replacements in schools and other public buildings.**

# Benefits

- **Compliance with EU Procurement regulations and also our own Financial Regulations**
- **Reduction in the number of suppliers from 12 down to 3**
- **Prices within the agreement cover the bulk of items sourced**
- **New Purchase Order templates created and introduced into our stores for each supplier to be emailed once a month saving on time and paperwork and significantly reducing number of orders placed**
- **Reduction in the number of invoices (one invoice per month from 3 suppliers)**
- **Lead times reduced as distributors agreed to hold stocks on our behalf based on our minimum stock levels**



# Benefits

- **Better Planning - shorter lead times enable better planning of our resources and workload and also to respond to emergency situations.**
- **Reduction in the number of deliveries to the depot this will in turn reduce the carbon footprint due to vehicle mileage.**
- **Allowed closer working and collaboration with neighbouring authorities, the North Wales Street Lighting engineers have reached a partial agreement on the standardisation of product specification.**
- **Two year agreement with the option to extend for a further two years depending upon performance.**
- **Price variation clauses in the contract which prevent the suppliers raising prices without consultation.**

**This agreement is available for use by any of the Welsh authorities and all other Public Sector bodies should they wish to use it**

# DCC Purchase Order Template

## MATERIALS REQUISITION

Cleveland Cable Co Ltd  
Riverside Park Road  
Misslesbrough  
TS2 1QW  
Tel: 01642 241133  
Fax: 01642 226171



Denbighshire County Council  
Kinmel Park Depot  
Bodelwyddan  
Denbighshire  
LL18 5UX

DATE: \_\_\_\_\_

LOT TYPE: CABLE

ORDER NO. \_\_\_\_\_

*Note: Frequently used items by DCC are highlighted as shown*

DCC Commodity Code	Supplier Product Code	Supplier Description (Inc Code)	QTY Per Month	£ Per Unit	Order Value
<b>Electric Cables</b>					
480224	6181YBR	2.5mm Single Core PVC		£14.67	£0.00
480224	6181YBU	2.5mm Single Core PVC		£14.67	£0.00
480100	6242Y1/5	1.5mm Flat Twin Bare Earth		£21.90	£0.00
	6242Y2/5	2.5mm Flat Twin Bare Earth		£33.75	£0.00
	3183Y1/5	1.5mm Flexible 3 Core		£29.35	£0.00
	3183Y2/5	2.5mm Flexible 3 Core		£44.40	£0.00
	XLPE 3X2/5	2.5mm PVC 3 Core SWA		£68.70	£0.00
	XLPE 3X2/5	6.0mm PVC SWA 3 Core		£128.81	£0.00
	SY3X1	1.0mm <sup>2</sup> (LV) SY (24v) Flexible 3 Core		£30.05	£0.00
480202	XLPE 2EX6	6.0mm 3 Core SWA marked 'STL'		£130.92	£0.00
480203	XLPE 2EX10	10.0mm 3 Core SWA marked 'STL'		£212.04	£0.00
480208	XLPE 2EX16	16.0mm 3 Core SWA marked 'STL'		£296.33	£0.00
	XLPE 2EX25	25.0mm 3 Core SWA marked 'STL'		£460.57	£0.00
<b>Earth Wire (PVC Insulated Green or Green/Yellow)</b>					
	TR16EY	6.0mm Tri Rated Flexible Earth Wire		£35.50	£0.00
480106	TR110EY	10.0mm Tri Rated Flexible Earth Wire		£61.80	£0.00
<b>Cable Sleeving</b>					
		2.5mm Sleeving Green or Green/Yellow			£0.00

**Total**      **£0.00**



# The Outcome

- All staff are now qualified to at least NVQ2
- Performance on Street Lighting improved dramatically
- Denbighshire were one of the top four finalists at APSE.s Performance Network Awards in 2006 and 2007
- Business volumes have grown significantly
- Built up good working relationships within other departments within the Authority. Now regarded as a one stop shop for all Lighting and Signage

# The Outcome

- Combining the Client/Contractor improved operational efficiency.
- Committed team well trained and above all flexible which allows us to change work programmes when the work loads change.
- Membership of APSE assists us to demonstrate how the service has improved.

# Questions

**Thank You for Listening**

**Any Questions**