



# Phoenix Engineering

## Control Systems Specialists

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### Personal Details

<b>Name</b>	Kevin Trewern
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### Qualifications

<b>Qualifications obtained</b>	City and Guilds Computer Aided Draughting and Design Using AutoCAD. Site Management Safety Training Scheme (SMSTS)
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### Career History

<b>1998 - Present</b>	Phoenix Engineering <b>Director of Software; Production and maintenance of bespoke SCADA software. Design, maintain and improve IT infrastructure. Additional responsibility of PLC programming and customer support.</b>  Kevin is a Commissioning Engineer and Software Director for Phoenix Engineering. Kevin is experienced in several programming languages for SCADA, PLC and instrument configuration. He specialises in control systems and has over 20 years' experience in control panel design and manufacture, testing and troubleshooting installations, and configuration and calibration of instrumentation. Dealing mostly with software and commissioning aspects these days, it is Kevin's job to bring the plant together into an integrated system that is operator friendly. Kevin wrote the current version of Phoenix's in house SCADA software "DLog" which was developed with the operator in mind and is based on experience gained from writing software for over 20 leachate treatment plants. It has been well received and has grown with the client's needs over the years. Kevin also writes the bespoke PLC code for Phoenix's installations and has developed the code for its packaged Ultra-Filtration Plants.
<b>1993-1998</b>	Phoenix Control Panels <b>Electrical Control Panel design, CAD (Electrical and Mechanical), build and manufacture, Installation testing and commissioning.</b>
<b>1992-1993</b>	Greenacre Pumps <b>CAD operator. Electrical and Mechanical drawings as well as engraved label production.</b>
<b>1991-1992</b>	Trewern Electrical Services LTD <b>Electrical Control Panel Building &amp; Storeman</b>

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## Pen Profile

Kevin is a Control and Automation Specialist with over 26 years experience. He has been working for Phoenix Engineering since 1998 and is one of the founders of the company. During his career, he has covered many aspects of the industry including – but not limited to:

- Electrical Control Panel (design, CAD drawings, procurement, manufacture, testing, installation, and troubleshooting).
- Process Instrumentation (installation, commissioning, troubleshooting).
- PLC programming (DirectLogic, Alan Bradley, Productivity, Siemens, Do-More).
- PC programming (C++, C#, Bash Scripting, Python).
- Microcontroller programming (Arduino, ESP, PIC) in C++ and some machine language.
- PC manufacture and setup – from basic green systems to high performance models.
- Control feedback systems – PID/custom.
- Data collection for injection into third-party systems (EQUIUS, customer DB etc).
- Design of control panels including motor starters, PLC control, instrumentation etc.
- Inverter setup and control interfacing.
- Data communications – Ethernet, RS485, Dupline, 4-20mA and so on.
- Wi-fi and similar style datalinks.
- Usage of: Windows, Linux, MS Office, AutoCAD, Borland Developer, Visual Studio.
- CAD – production of Electrical, Mechanical, Site layout, Control panel drawings.
- CAD – production of engraved labels.
- Excellent troubleshooting skills in all the above areas where applicable including phone support often under emergency breakdown conditions.

## Relevant Projects Undertaken (Further project references can be provided on request)

### Highlights include:

#### **Aggregate Industries – Bleakdown (Isle of Wight) – Phoenix 2017**

New control system for upgraded Leachate Treatment Works. Kevin designed the control panels, installed the PC, terminated the instrumentation, installed and commissioned the mobile network connection and undertook the majority of the control commissioning.

#### **CEMEX – Hatfield – Phoenix 2015**

PLC and SCADA software with PC, Instrumentation termination. A last-minute addition of the site leachate collection control system having to be completely gutted and rebuilt on-site with additional local PLC and SCADA PC. Commissioning of the entire system and integration with customers cloud data collection system.

#### **Sita/Suez – Cannon Bridge – Phoenix 2008**

This existing plant was stripped right back and rebuilt as a three-collection tank plant with d-nitrification and our an in house designed and manufactured bespoke Ultra filtration system. Full SCADA control and integration with the UF plant and some interesting level balancing code due to varying tank capacities where encountered on this project.

#### **Microfield Scientific – Phoenix 2004**

Manufacture of safety isolating transformer units for use in the medical industry (ongoing production for several years).

#### **DLog2000 SCADA package – Phoenix 2000**

Produced and started installing bespoke SCADA package running on C++.

#### **FCC - Arpley Landfill Site – Phoenix 2000**

A large treatment plant featuring three parallel treatment paths controlled by four large floor-standing control panels each containing networked PLC systems interlinked to four PC consoles running bespoke SCADA package. Kevin designed the control panels, built and installed the PC's, terminated the instrumentation, dealt with the networking and was heavily involved in the entire commissioning procedure.

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**Rolls Royce (aviation) – Phoenix 1999**

Manufacture and commission Control panel for waste water system.

**AVX - Phoenix 1996**

Produce install and commission Control Panel for zoned PLC controlled HVAC system.

**Hinkley Point Nuclear Power Station – Phoenix 1998**

Communications wiring and testing of wiring and Phoenix software to control water cooling system.

**Other Projects Undertaken (Further project references can be provided on request)**

**Note: Many of the following systems are still in full use today.**

**Devon Deserts – Phoenix 1993-2001**

Various control panels and solutions for production lines

**Yeo Valley – Phoenix 1993-2001**

Various control panels and solutions for production lines

**Dairy fresh Desserts – Phoenix 1996**

Design and Manufacture of various control panels mostly for large refrigeration plant. Detailed Roof void plant space service co-ordination CAD drawings.

**Various involvement in the following new/upgraded plants:-****Many Leachate/Water Treatment Plants and related over the years**

Ravenscraig (+ two upgrades), Sundon, Whitehead, Winterton, Ardley, Brookhill, Mont Cuét (Guernsey), Parkwood, St Helens, Rigmuir, Cowpen Bewley, Hempsted, Stornoway, Ardley (+upgrade), Frampton, Parkwood (+upgrade), Ballymacvea (Ireland), Walleys Quarry, Gremista, Lochhead, United Mines, Masons, Horton, Shelford and many others.

**Several Methane Stripping Plants over the years**

Midgeland, Drinkwater Park, Plank Lane, Hardman Fold, Pink Bank Lane, Amberswood, Bredbury, Cringle Road, Adswood, Barlow Hall.

**Some Compost Production Plants over the years**

Deerdykes, Deerdykes Upgrade, Penhesgyn, Beddington.

**Training Courses and Conferences**

PC manufacture and setup.  
Borland C++ (in house).  
Microsoft Visual Studio (in house).  
Electrical Control Panel manufacture (in house).  
Electrical installation (in house).  
DirectLogic PLC programming (in house).  
Productivity PLC programming (in house).  
Alan Bradley PLC programming (in house).

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