

# AECINNEWS



## AECI Council Meeting in Cork

On 19th February, the AECI Executive Council held its monthly meeting in Cork. It was held to celebrate Cork's year as European Capital of Culture and to thank our President, Mr. Jack Hegarty for all the diligent work he has done over the last two years.

The Lord Mayor of Cork, Mr Sean Martin welcomed the AECI Executive Council to the city and, in conjunction with Árachas, helped launch our 2005 Education Programme at a special event in Murphy's Brewery.

Afterwards we toured the Murphy's Brewery facility and were looked after exceptionally well by Johnny Crowley and his team. We would like to express our deep gratitude to everyone who made our visit to Cork such an enjoyable experience.



(left to right)  
Mr. George Kennedy-  
Executive Secretary AECI,  
Mr. Guy Percival-  
Operations Director  
Árachas, Mr. John Crowley-  
Marketing Manager Murphy's  
Brewery, Alderman Séan  
Martin-Lord Mayor of Cork,  
Mr. Jack Hegarty-President  
AECI, Donal Cronin-  
Managing Director Árachas.

## Redundancy Payments Act 2003 (Commencement) Order 2005:

Mr Michael Martin T.D, Minister for Enterprise, Trade and Employment has signed the above Commencement Order, which will bring sections 7, 11, and 12 of the Redundancy Payments Act 2003 into operation in April, 2005.

Section 7 provides a comprehensive new redundancy form (Known as RP50), which combines the existing, forms RP1 (Notice of Redundancy) RP2 (Certificate of Redundancy) RP3 (Rebate claim) and RP14 (Employee's Application for a Lump Sum from the Social Insurance Fund). This new form will provide the basis for any rebate/lump sum claim from the 10th of April 2005.

Please note that an employee who receives notice of redundancy on or after 10th of April 2005 will receive his/her notice of redundancy on Form RP50. This form will also be used to record the receipt by the employee of the statutory redundancy amount from the employer and will be used by the employer to claim a rebate from the Social Insurance Fund.

The old forms (RP1, RP2, RP3 and RP14) should not be used in respect of redundancies where the date of notice occurs on or after the 10th of April 2005.

Section 11 confirms the rates of redundancy payment in place since the 25th of May 2003 by amending Schedule 3 of the Redundancy Payments Act, 1967, with the added proviso that all "excess days will be credited as a proportion of the year.

Section 12 provides that continuity of service is preserved even where there are certain 'breaks' in employment. E.g. Sickness or lay-off etc.

It provides that such "breaks" in service are reckonable in the calculation of a lump sum, except occurring in a three year break period prior to the date of termination of employment. These are non-reckonable in all lay off cases and non-reckonable after 52 weeks of absence within this 3 year period due to occupational accident or disease, as well as being non-reckonable after 26 weeks of absence (again within this 3 year period) due to any other illness or injury.

These new provisions are applicable to all redundancies where Notice of Redundancy is formally conveyed to the employee on or after 10th of April 2005, by means of the receipt of a Notice of Redundancy on the prescribed format i.e. the new Comprehensive Redundancy Form RP50.

This new Form RP50 is available from AECI head office and further information can be found on the Department's website [www.entemp.ie](http://www.entemp.ie).

## Procedures for requesting work from ESB Networks and metering issues arising from Opening of the Electricity Supply Market to all customers

### 1. Market Opening.

On the 19th February 2005 the electricity market opens to all 1.8 million users.

From this date customers will be able to choose their supplier. This means a change in the way requests are made for some work that would previously have been made directly to ESB Networks.

The following requests must be made through the customer's supplier quoting the Meter Point Reference Number. (MPRN)

Re-energisations or De-energisations.  
Meter Exchanges for Change of Tariff.  
Meter Removals (Load transferred or No longer required)  
NSH Meter and Time Switch Installation or Removal.

These requests are processed by the supplier and are passed to ESB Networks.

A Work Order is then sent to the relevant Supervisor who arranges to have the work completed.

### 2. Networks Services Bureau (NSB) and Unmetered Registrar (UMR)

All applications for New Connections and Increase in Capacity for metered connections are now processed in Networks Services Bureau, ESB Networks, PO Box 29, Garrycastle, Athlone, Co. Westmeath.

All applications for New Connections and Increase in Capacity for unmetered connections are now processed in UMR, ESB Networks, Abbeylax Road, Portlaoise, Co. Laois.

All applications for New Connections must be accompanied by an ordinance survey map clearly showing the site location and site address.  
It is important to fill in all the relevant information on the application form as these forms will be returned if there are any omissions, resulting in delays in logging the request on to the system.

Following issue of a quotation, receipt of payment, a signed connection agreement and any other required documents, design/construction work will commence.

However the connection will not be energised until:

- A valid wiring cert has been submitted (to designated ESB Networks address either directly or via the relevant regulatory body as appropriate).
- The customer whose name electricity bills should be issued to, has been submitted.

In addition for premises where the required capacity is 30kVA or above or where an unmetered connection is required, the customer must have an agreement with an electricity supplier, who in turn will register their MPRN and name with ESB Networks.

Note: A work order will not be released to the relevant supervisor until the above requirements have been met.

Also if all metering has been de-energised for more than two years, the MPRN for that premises will be terminated under rules agreed by CER with Suppliers.

Accordingly anyone seeking a re-connection (re-energisation) at that premises must now submit a new connection application to the NSB Office in Athlone or UMR Office in Portlaoise.

Also, requests for a connection on the basis of a Temporary Wiring certificate at the permanent metering location at a premises for which a permanent new connection has already been requested, is now treated as a request to provide the permanent connection at an earlier date. It cannot be treated as a separate connection because the rules agreed by CER with Suppliers do not allow a premises to have two separate MPRNs. The provision of this earlier connection is subject to sufficient advance notice of this requirement being provided to ESB Networks. Once the permanent connection has been provided on this basis, the subsequent permanent wiring certificate should be returned directly to the relevant regulatory body.

### 3. De-Energisations and Re-Energisations

Once the connection to a customer's premises has been energised, all requests to de-energise this connection must be made via the customers Electricity Supplier rather than directly to ESB Networks, either centrally or locally under rules agreed by CER.

The only exception to this rule is where an emergency de-energisation is required for safety reasons, such as in the event of a fire, flooding etc.; or if the customer only wants the premises de-energised for less than 24 hours in order to do some work. In these cases the request can be made directly to ESB Networks via 1850 372 999 for emergency de-energisations or via 1850 372 757 for non-emergency de-energisations Networks number.

If a customer wants to have their premises re-energised again they must again submit this request via their Electricity Supplier.

The only exception to this rule is where the original de-energisation request was for less than 24 hours and the re-energisation request is made within 24 hours. In these cases the request can be made directly to Networks via 1850 372 757 or as arranged previously when the de-energisation was originally requested or locally during the de-energisation.

Note again, as mentioned above under New Connections, the requirement to submit a new connection application if the re-energisation request is for a premises which has been de-energised for more than two years.

If the premises was de-energised for more than six months or alterations were made to the customer interface wiring, a wiring cert must also be submitted to the local ESB Networks Office or returned to the regulatory body in line with current arrangements.

Note: A wiring cert cannot be used to initiate a re-energisation. If a re-energisation request is not received from the Customer's Electricity Supplier the re-energisation cannot be carried out.

A customer wishing to move into an existing premises which is de-energised must first contact an electricity supplier, enter into a supply agreement and request that supplier to submit a re-energisation request.

### 4. Meter Relocations and Service Alterations

All service alterations and meter relocations will be subject to a charge from ESB Networks. This charge will apply regardless of the original location of the service or meter

Standard charges for Domestic premises:  
Cost in Euro inc. VAT

Alteration to a domestic service,  
whether overhead or underground: €299

Relocate meter only: €189

All requests should be made via the 1850 372 757 telephone number.

An invoice for the charge will issue to the applicant and when payment and wiring cert, where required, is received, a Work Order is then sent to the relevant Supervisor who arranges to have the work completed.

Note: A wiring cert cannot be used to initiate work. All requests must be submitted via the 1850 372 757 telephone number.



## Relevant Contracts Tax – Principal and Sub – Contractors

Relevant Contracts Tax is a far reaching tax which potentially affects any self employed person in the construction, forestry or meat processing industries.

Relevant Contracts Tax (RCT) applies to any sub contractor in the above industries whether Irish Resident or not. The basic rule is all principal contractors must deduct withholding tax at 35% from any payments to sub contractors. This may be avoided however by the operation of the C2 system which we will discuss shortly.

It is important to distinguish whether someone carrying out work for someone else in the above industries are deemed employees or self employed. If someone is employed, the PAYE system will operate however if they are a sub-contractor then the RCT system will operate. To decide whether someone is deemed to be employed or self-employed Revenue looks at the facts of each case. The main criteria used to decide include;

- Whether a person is under direction of a site foreman regarding how, when and where the work is carried out.
- Whether a person is exposed personally to financial risk.
- Whether a person decides their own work hours.
- Whether a person provides their own materials, plant and equipment for the job.
- Whether a person can hire other people at their own expense.
- Whether a person owns their own business or can provide the same service to a number of people or businesses at the same time.
- Whether a person is entitled to expenses, subsistence payments, travel payments etc.
- Whether a person provides their own insurance cover.
- Whether a person has their own fixed place of business to take orders or bookings for contracts etc.

If it is clear that a person is self employed under a sub- contract in one of the above industries they must jointly sign a Form RCT1 with the principal contractor. This declares that the contract is not a contract of employment and that is a contract in the one of the above industries. It certifies that RCT applies.

The form RCT 1 must be signed for each relevant contract entered into. In the case of a group or gang of sub contractors, each member is treated separately and each must jointly sign and submit a separate Form RCT 1 with the principle contractor.

The Principal contractor is then obliged to deduct 35% tax from each payment to the sub-contractor. This 35% deduction is in effect a payment of tax on account. The sub-contractor still has a duty to make an Income Tax Return for the year of all income earned from the contract, including income on which the 35% tax basis has been paid.

The sub-contractor may then make a claim for a credit or refund of the RCT deducted by the principal contractor. To do so the sub-contractor should ensure that he receives a form RCTDC from the principal contractor. This is effectively a receipt for RCT deducted and must be submitted to the Revenue Commissioners to claim a refund of RCT paid. RCT paid may also be used as a credit against any other tax liability the sub-contractors may have such as Income Tax, PAYE/PRSI or VAT.

If a sub-contractor also has contracts with other sub- contractors he may be acting as a principal contractor in that capacity. He may have a duty to deduct tax at 35% as principal. The RCT which was deducted from the sub-contractor may be offset against any RCT which should be paid over to the Revenue Commissioners as princi-

### C2 Certificate

A C2 is a certificate of authorisation which allows the sub contractor to be paid by the principle contractor without the deduction of 35% RCT. It is in the form of a card not unlike a bank card or credit card, which has a picture of the sub contractor on it. It has great tax flow advantages as the sub-contractor is paid the full amount due without deduction RCT.

To apply for a C2 a person must satisfy the following criteria:-

- Be or about to become a sub-contractor in the construction, forestry or meat processing industry.
- Trade from a fixed place of business with adequate equipment, stock and other facilities. This place of business need not be within the state.
- Keep proper and accurate records.
- Ensure all Tax due is paid and up to date. If it is a company applying for a C2 then each director's record is also examined.

To actually apply for a C2 the sub-contractor must sign and complete a form RCT5 and provide all the information requested on that form. In addition Revenue will need a signed photo card application with 3 recent passport photographs signed on the reverse. The Revenue will also insist on seeing a copy of the relevant contract.

If Revenue receive this application and all the criteria are satisfied then they will issue the C2 which must be collected in person by the sub-contractor from the relevant Revenue district.

The sub-contractor will then show the C2 to the principal contractor in person and then they jointly sign and submit a form RCT46. The sub-contractor should not leave the C2 with the principal contractor. The form RCT46 is an application for a relevant payments card. When the principal contractor has the relevant payments card he is free to make payments to the sub-contractor without deducting the relevant contracts tax of 35%, hence allowing the sub-contractors to be paid the full amount due to him.

As these industries in particular the construction industry are such an important part of the Irish economy and involve so many self-employed contractors, it is vitally important that anyone involved in these industries seriously consider the implications of the Relevant Contracts Tax.

Padraig O'Donoghue,  
HLB Nathans.

Mark O'Keeffe,  
HLB Nathans.

### Force Majeure Leave

Force Majeure Leave is a type of paid leave from work that everybody is entitled to, but few people understand. It arises where, for urgent family reasons, the immediate presence of the employee is indispensable as a result of injury to, or illness involving, a close family member.

Force Majeure can only be taken in blocks of one day. Altogether the maximum amount of leave allowable is three days in any 12 month period or five days in a 36 month period.

## OTHER IMPORTANT INFORMATION

### I. Note to Contractors regarding ESB Networks Seals.

#### Important Notice

Under the "Energy (Miscellaneous Provisions) Act 1995 enacted 21st December 1995 it is an offence to unlawfully interfere with any article (including a meter) owned by ESB

ESB seals are registered on customer's meter record. DO NOT break them.

There have been a number of instances where seals have been removed in installations where some electrical work had taken place. If contractors find seals broken or missing please report this to ESB Networks BEFORE starting work on an installation.

Do not work on, or move ESB Networks metering equipment, including CTs and time switches, as this can give rise to serious contractual problems with customers and suppliers. Sealing and the removal of all seals, shall be undertaken by ESB Networks staff only.

The above note is on page 9 of the Interface Book available from AECl Head Office.

### Useful Contact Numbers.

1850 372 999 ESB Networks All Supply Failures / Emergencies

1850 372 757 ESB Networks All New Connections, Service/Meter Alterations etc.

1850 372 372 ESB Customer Supply/Accounts where ESB is the electricity supplier.

1850-372 772 ESB Public Lighting Faults where ESB Contracts are the public lighting maintenance contractor.

Thinking of buying an investment property?.....

.....Think Clever



An interview with Colin Younger, Financial Services Director, Arachas Corporate Brokers Ltd

**Question:** I am thinking of buying an investment property and understand there is a very tax efficient method of doing this through my company, or indeed self-employed pension arrangement. Is this the case?

**Answer:** Yes. Using a pension mortgage you can actually get your business to re-pay the loan you have to take out to buy an investment property in your own individual name.

And what's more, you can secure tax relief for your company when you do this.

**Question:** Sounds almost too simple. Where's the catch?

**Answer:** It's not uncommon for me to come across this type of sceptical view. The reality is that there is no catch. The pension arrangements that are put in place are fully approved by the Revenue prior to inception. There is a lot of consultation and logistical work that has to be done before we can actually put these plans in place, but there again that's our job and indeed that is why people are talking with us on a daily basis about this type of arrangement.

**Question:** Can you give me a very brief synopsis as to how it actually works?

**Answer:** Firstly, the individual will choose a property to - purchase. Arachas will then source an interest only loan to secure the property.

As the property will be owned in the individual name all rent will go directly to the property owner. We can show you how to reduce the income tax due on any rental income.

The company, (or indeed, the individual in the case of a self employed person), involvement centres on setting up a Pension Plan, which is funded to a sufficient level to cover the capital element of the individual's loan.

The company/individual will obviously receive full tax relief on their contributions.

At the nominated retirement age the pension fund is then used to pay off the capital sum on the bank loan leaving the individual with the property in their own name

The benefits are obvious. If you would like to know more about how this works just make contact with me. All enquiries are treated in the strictest of confidence.

Colin Younger is the Financial Services Director for Arachas. He has more than 15 years experience in the financial services industry. Colin advises Arachas clients on all aspects of income protection, family protection, mortgages, tax efficient retirement planning and private health care.

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## Succession Planning in a Family Business – a Synopsis.

In the July Issue of our Newsletter, we ran an article regarding succession of leadership in businesses. At the same time, one of our members Mr. Mark Elmore, Managing Director of Elmore's Group, was doing research for his thesis entitled: *"Managing Family Business: Succession Planning in an Irish Context"*. This study has only recently been published and is already getting a lot of publicity. Only last month the thesis was quoted heavily in an article by the Sunday Tribune. As more and more businesses are passing onto second generations, it is important that companies be aware of the pitfalls. Below is a brief synopsis of the thesis.

With increased media attention in recent times into the successes and failings of family businesses in Ireland, comes the realisation that there is an exceptionally high failure rate of these enterprises as a result of the transition from generation to generation within the family. Worldwide statistics show that only 30% of family businesses survive through the second generation and 10% survive through the third, and the statistics for Ireland are no different.

Considerable work has been done in the field of taxation, inheritance, and estate planning and these issues can be dealt with in a businesslike manner. It would not be uncommon for an external consultant to hear a business owner say *"what are the tax implications, our family doesn't have any problems!"*. However succession, the hand over from parent to sibling, is a far more complex matter. This involves ability, training, dedication and of course emotions. Having built up a business over a number of decades, the founder then passes the baton to the next generation and expects the same drive and dedication which will see the business grow over the following decades. This makes perfect sense in theory but reality shows a different picture, one which is fraught with problems for both sides of the generational gap.

The literature reviewed details many reasons for poor succession planning and the demise of family businesses as they transfer from generation to generation, such as; fear of mortality, fear of losing power / control, sibling equality and in many cases rivalry. It explores the issues surrounding the suitability of a sibling and the commitment they have to the business. The primary research undertaken support the literature reviewed and uncovers further topics of relevance such as; the criteria for successor selection, factors that impede succession planning and external support for companies in succession.

This study indicates that there is no "one best way" in dealing with a generational transition and that many factors can present themselves which deter the predecessor from planning for succession. It outlines the failure of government to recognise the severity of this issue and suggests a number of areas for further research. The findings suggest that the most successful transitions are those that result from establishing a partnership with the next generation, based on mutual responsibility, respect and commitment.

**This synopsis is of the thesis written by Mark Elmore entitled *"Managing Family Business: Succession Planning in an Irish Context"* Further details are available through the AECl Head Office.**



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## AECl Annual Trade Show 28<sup>th</sup> May 2005

Don't forget, as part of our Annual Conference weekend, the AECl is holding a Trade Show in the Radisson SAS Athlone. This year we have 40-50 exhibitors who service all aspects of the electrical contracting and business arena. Also, in order to make the event more relevant to contractors, there will be three seminars running alongside the Trade Show.

11.00 & 11.30	ESB/ Networks and their impact on Electrical Contractors.
12.00 & 12.30	FÁS/ Apprenticeship/ Impact on Electrical Industry
2.00 & 2.30	Unilever/ How Marketing can Increase your earnings.

The Trade Show will run from 9.30am – 4.00pm and will be officially opened by Minister Micháel Martin (Dept. Enterprise,

## Information Evenings

The AECl's Free Information Evenings took place throughout the country during February. Events were held in Cork, Waterford, Limerick, Galway, Navan, Dublin South, Dublin North, Dundalk, Killarney, Castlebar, Sligo, Letterkenny, Newbridge and Cavan, in order to provide information to the widest audience. More than 500 Electrical Contractors attended these events and, from feedback, they have proven to be very successful.

Presentations were given by ESB Networks personnel, HLB Nathans Accountants, Ulster Bank and the AECl itself. The information given was extremely helpful to Contractors and a lively debate ensued at all meetings. Of particular interest is the offer of cheaper finance from Ulster Bank. Among several attractive items on offer is commercial borrowing at the rate of 4.125% interest.

Such was the success of these evenings and because of the excellent feedback and interest they have caused, we are planning to hold more of them around the country, adding a wider variety of topics and issues to suit all contractors.

Further information is available from our office on all subjects covered during these meetings.

**Please contact us at 1800 671 671.**

## Great Place to Work

The Great Place to Work Institute claims that great workplaces enjoy significant advantages such as lower employee turnover (leading to lower costs of recruiting and training new employees); great innovation and creativity; an enhanced reputation as a company that can be trusted to “do the right things”; all of which results in higher productivity and profitability.

Based on its research over the past 20 years, the institute defines a great place to work as one in which employees “trust the people they work with, have pride in what they do and enjoy the people they work with.” This is measured by the quality of three interconnected relationships: The relationship between the employee and management; the relationship between the employee and his or her job; and finally the employees relationship with other employees. Most important in creating a great place to work, is the level of trust between managers and employees. This trust is composed of three dimensions:

### Credibility

This means managers regularly communicate with employees about the companies direction and plans and ask for their input. It involves co-ordinating people and resources efficiently and effectively, so that employees know how their work relates to the company's goals.

### Respect:

This involves providing employees with the equipment, resources and training they need to do their job. It means appreciating good work and extra effort and includes reaching out to employees and making them partners in the company's activities and creating a work environment that's safe and healthy.

### Fairness:

In a company that's fair, everybody receives equal opportunity for recognition. Decisions on hiring and promotion are made impartially.

There are also three other dimensions by which a great place to work can be measured:

### Pride:

Pride in a workplace is measured by the feelings of pride that employees have towards their jobs, team or workgroup and the company as a whole.

### Camaraderie:

Camaraderie within the workplace is a factor of the quality friendship, hospitality and community experienced by employees.

### Fun at Work:

It is a proven fact that fun at work boosts productivity rather than drains it. This is especially important during times of stress.

The forthcoming AECI “Business Skills” Training programme will cover this, and much more, in detail.

## Customer Relations

Last Issue we spoke about interviewing a new employee. This issue we are turning the tables. Whether you believe it or not, when you are called out price a job, or to meet a customer, the rules of interviews very much apply and certain skills can help you get the job. This is particularly true of first time meetings with new/ prospective clients.

### Familiarity

If the customer is a large or well known company, it can't hurt to know something about them. You may have done work for the company before, or in another branch, or know people who have done work for them. All these things lend credibility and professionalism to your own company and if quotations are of similar price for a job, familiarity could be the difference between getting the job and not.

### Selling points

You should have a list of key attributes that you want the prospective customer to remember you by. These selling points must be relevant and could include skills, experiences, achievements and qualifications of you and your staff. Examples of previous work should also be given. These give the customer an idea of the standard and type of work that you have done.

### F.A.Q

Whether Domestic, Commercial or Industrial, there are always typical questions that the customer asks. Having these prepared is always a good option.

### First Impressions Last

You can destroy your chances (or at least weaken them significantly) of getting the job if you make a poor first impression. Whether we are aware of it or not, we all make quick judgements on people or circumstances. This usually happens within the first 15 seconds of meeting people. Non-verbal (personal appearance, tidiness of van etc.) and verbal (language, the way we say things) all play a part in how the customer views us. Obviously, different situations call for different tactics, but being conscious of these can help you in the long run.

## AECI Bite-size

**Did you know?** You have to keep RECI/ECSSA Test Certificates for at least 6 years.

**Did you know?** Under the Organisation of Working Time Act 2001 records must keep records of:

The Number of hours worked by employees (excluding meals and rest breaks) on a daily and weekly basis  
A record of leave granted to employees in each week by way of annual leave or in respect of a public holiday and payment made in respect of that leave.  
A weekly record of the notification of the starting time and finishing time of employees.

These records must be kept for 3 years.

## Cat 5 Standard

When the first Cat 5 Standard\* for structured cabling was ratified in 1995, it established a common standard to which all the main stakeholders in the industry could adhere. However, a large number of untrained installers entered the market at this time and installed what they loosely described as “Cat5 Systems”. These networks were initially running on systems that operated at 10-Base T\*\* (10Mbps) and, to a large extent, appeared to be satisfactory.

Problems began to emerge in the late nineties when 100-base T\*\*\* (100Mbps) became commonplace. A significant number of older systems did not operate properly on the 100-Base T system that required a faster transmission rate capability. On investigation, these older systems did not pass the Cat5 standard test. The question is then asked “Were they tested properly in the first instance”?

In many cases, failure was due to bad installation practices such as poor termination techniques and lax cable installation practices. A large proportion of these systems had to be upgraded by competent installers, a costly and time-consuming exercise.

We are now approaching the next phase in the development of network systems where data transfer rates are increasing to gigabit speeds. This gives rise to a new set of questions:

- Will existing installations be capable of meeting the demands of such developments?
- Is the industry up to the challenge that faces it as a consequence of ongoing change?
- What steps need to be taken now to ensure quality in the future?

These issues can be best addressed through education and training. However, we need to consider the problems of how much and for whom. A clear distinction must be made between the requisite skill sets for designers and installers. Each of these requires a different level of knowledge and skill. Although a network may be well designed, unless properly installed, it can give rise to dire consequences for the end user, causing major disruption and loss of earnings.

Designers, for example, need to know about the variety and suitability of cable management systems that are available, but they do not need the skills to install and handle them. The designer should have a knowledge and understanding of the standards with the ability of to incorporate these in good design.

The needs of installers present a different set of issues. Installers do not need the associated mathematics required for the design of such systems. However they do require the skills of handling and installing cable management systems and some knowledge of the principles of balanced transmission cables and the care required in their installation. They would also need to have an understanding of the test parameters in the standards and the ability to interpret the results. The installer would also need knowledge of earthing and grounding systems along with power supplies and protection.

To date training has been provided by the main manufacturers or small private training facilities. There is clearly and urgent need for a recognised national standard for installers but the big question is, should they be specifically trained for the industry or should they progress from the electrical or telecom trades?

It is believed that the most suitable model is an apprenticeship, which has at Level 1, a core set of electrical installation skills. The apprentice may now select a number of higher-level modules from a range of options to meet the needs of different specialities, including data cabling systems. Examples of higher-level modules include:

- Data Cabling Systems
- Industrial Controls and Maintenance
- Fire Alarm and Emergency Detection
- Intruder Alarm Systems
- Lifts
- Electrical Installation in specialist and hazardous areas.

This list is not exhaustive but is intended to give an idea of the types of modules that could be available within the Standards-Based Apprenticeship scheme that has the flexibility to address specific industry needs. The modules offered could be available on a part-time basis to allow qualified people to train in other areas to facilitate career advancement and development. To paraphrase the Qualifications Education and Training Bill 1999, “all programmes should allow students opportunities for access, transfer and progression.”

The suggested model would mean a radical change in the electrical apprenticeship area so that the needs of specialist areas, such as data cabling, can be met and the opportunities available to apprentices can be enhanced.

### \*Cat5 Standard

ISO 11801 (1995) to support 100 Mbit transmissions. As systems have developed, new standard Cat5 has been ratified and is known as ISO 11801 (1999)

### \*\*10 Base T

One of several adaptations of the Ethernet (IEEE 802.3) standard for local area networks (LAN's). The 10 Base-T system operates at 10Mbps and uses base band transmission methods.

### \*\*\*100 Base T

100 Base-T standard is IEEE 802.3u. A networking standard that supports data transfer rates up to 100 Mbps. Because it is only 10 times faster than Ethernet, it is often referred to as Fast Ethernet.



## Electric Shock

Strange as it may seem, most fatal electrical shocks happen to people who should know better. Here are some electromedical facts that should make you think twice before taking chances.

It's not the voltage but the current that kills. People have been killed by 100 volts AC in the home and with as little as 42 volts DC. The real measure of a shock's intensity lies in the amount of current (in milliamperes) forced through the body. Any electrical device used on a house wiring circuit can, under certain conditions, transmit a fatal amount of current.

Currents between 100 and 200 milliamperes (0.1 ampere and 0.2 ampere) are fatal. Anything in the neighbourhood of 10 milliamperes (0.01) is capable of producing painful to severe shock. Take a look at the table below:

	Readings	Effects
Safe Current Values	1 mA or less	Causes no sensation - not felt.
	1 mA - 8mA	Sensation of shock, not painful; Individual can let go at will, since muscular control is not lost
Unsafe Current Values	8 mA - 15 mA	Painful Shock; Individual can let go since muscular control is not lost
	15 mA - 20 mA	Painful Shock: control of adjacent muscles lost; victim cannot let go
	50 mA - 100 mA	Ventricular fibrillation (a heart condition ) that can result in death is possible
	100 mA - 200 mA	Ventricular fibrillation occurs
	200 mA and over	Severe burns, severe muscular contractions. So severe that chest muscles clamp the heart and stop it for the duration of the shock (this prevents ventricular fibrillation)

As the current rises, the shock becomes more severe. Below 20 milliamperes, breathing becomes laboured. It ceases completely even at values below 75 milliamperes. As the current approaches 100 milliamperes ventricular fibrillation occurs. This is an uncoordinated twitching of the walls of the heart's ventricles. Since you don't know how much current went through the body, it is necessary to perform artificial respiration to try to get the person breathing again; or if the heart is not beating, cardio pulmonary resuscitation (CPR) is necessary.

Electrical shock occurs when a person comes in contact with two conductors of a circuit or when the body becomes part of the electrical circuit. In either case, a severe shock can cause the heart and lungs to stop functioning. Also, severe burns may occur where current enters and exits the body.

Prevention is the best medicine for electrical shock.

**Respect all voltages**, have a knowledge of the principles of electricity, and follow safe work procedures. **Do not take chances**. All electricians should be encouraged to take a basic course in CPR (cardiopulmonary resuscitation) so they can aid a co-worker in emergency situations.

Always make sure portable electric tools are in safe operating condition. Make sure there is a third wire on the plug for earthing in case of shorts. The fault current should flow through the third wire to earth instead of through the operator's body to earth if electric power tools are earthed and if an insulation breakdown occurs.

## FIRST AID FOR ELECTRIC SHOCK:

Shock is a common occupational hazard associated with working with electricity. A person who has stopped breathing is not necessarily dead but is in immediate danger. Life is dependent on oxygen, which is breathed into the lungs and then carried by the blood to every body cell. Since body cells cannot store oxygen and since the blood can hold only a limited amount (and only for a short time), death will surely result from continued lack of breathing.

However, the heart may continue to beat for some time after breathing has stopped, and the blood may still be circulated to the body cells. Since the blood will, for a short time, contain a small supply of oxygen, the body cells will not die immediately. For a very few minutes, there is some chance that the person's life may be saved.

The process by which a person who has stopped breathing can be saved is called artificial ventilation (respiration). The purpose of artificial ventilation is to force air out of the lungs and into the lungs, in rhythmic alternation, until natural breathing is re-established. Records show that seven out of ten victims of electric shock were revived when artificial ventilation was started in less than three minutes. After three minutes, the chances of revival decrease rapidly.

Artificial ventilation should be given only when the breathing has stopped. **Do not give artificial ventilation to any person who is breathing naturally**. You should not assume that an individual who is unconscious due to electrical shock has stopped breathing. To tell if someone suffering from an electrical shock is breathing, place your hands on the person's sides at the level of the lowest ribs. If the victim is breathing, you will usually be able to feel movement.

Once it has been determined that breathing has stopped, the person nearest the victim should start the artificial ventilation without delay and send others for assistance and medical aid. The only logical, permissible delay is that required to free the victim from contact with the electricity in the quickest, safest way. This step, while it must be taken quickly, must be done with great care; otherwise, there may be two victims instead of one.

In the case of portable electric tools, lights, appliances, equipment, or portable outlet extensions, the victim should be freed from contact with the electricity by turning off the supply switch or by removing the plug from its receptacle. If the switch or receptacle cannot be quickly located, the suspected electrical device may be pulled free of the victim. Other persons arriving on the scene must be clearly warned not to touch the suspected equipment until it is de-energized.

The injured person should be pulled free of contact with stationary equipment (such as a bus bar) if the equipment cannot be quickly de-energized or if the survival of others relies on the electricity and prevents immediate shutdown of the circuits. This can be done quickly and easily by carefully applying the following procedures:

- Protect yourself with dry insulating material.
- Use a dry board, belt, clothing, or other available nonconductive material to free the victim from electrical contact. Do NOT touch the victim until the source of electricity has been removed.
- Once the victim has been removed from the electrical source, it should be determined whether the person is breathing. If the person is not breathing, a method of artificial respiration is used



## PRSI Contribution Rates 1 January to 31 December 2005

Private and public sector employments					
Rates of contribution from 1 January 2005					
Class A		This covers employees in industrial, commercial and service-type employment who have reckonable pay of €38 or more per week from all employments and Public Servants recruited from 6 April 1995.			
Subclass	Weekly limits	Contributors		Annual pay ceiling	
Weekly pay is the employee's money pay plus notional pay (if applicable).					
	Weekly pay band	How much of weekly pay		Rate on first €44,180	Rate on balance over €44,180
A0	€38 - €287 inclusive	All	Employer	8.5%	8.5%
		All	Employee	Nil	Nil
AX	€287.01 - €356 inclusive	All	Employer	8.5%	8.5%
		First €127	Employee	Nil	Nil
		Balance	Employee	4.00%	Nil
AL	€356.01 - €400 inclusive	All	Employer	10.75%	10.75%
		First €127	Employee	Nil	Nil
		Balance	Employee	4.00%	Nil
A1 or	more than €400	All	Employer	10.75%	10.75%
		First €127	Employee	2.00%	2.00%
		Balance	Employee	6.00%	2.00%
A2*	more than €400	All	Employer	10.75%	10.75%
		First €127	Employee	Nil	Nil
		Balance	Employee	4.00%	Nil
*Subclass A2 applies to medical card holders and people getting a social welfare Widow's or Widower's Pension, One-Parent Family Payment or Deserted Wife's Benefit or Allowance. See note on page 7.					
Community Employment participants only					
Subclass	Weekly limits	Contributors		Annual pay ceiling, €44,180	

Self-employed				
Class S		This covers self-employed people, including certain company directors.		
Weekly limits				No annual ceiling
	Weekly pay band	How much of weekly pay		All Income
<b>S0</b>	Up to €400	All	ER S/E	Nil 3.00%
<b>S1</b> or	More than €400	All	ER S/E	Nil 5.00%
<b>S2</b> <sup>*</sup>	More than €400	All	ER S/E	Nil 3.00%

Can be paid on a weekly basis or at the end of the Year.

### Beware of losing your SSIA bonus

The Government bonus given to investors in the Special Savings Incentive Accounts (SSIAs) could be lost if they fail to fill out a disclosure notice three months before their savings term ends, bank executives warned this week.

The first batch of the 1.2m SSIA accounts will mature in May 2006, meaning those account holders must have their declaration forms in by March 1 next year, said Brian Forrester, managing director of Bank of Ireland Life.

"This is a very important piece of paper," he emphasized, speaking at the release of BOI research into SSIAs earlier this week.

A saver who fails to comply with that technicality could be penalized at the last minute as if they had pulled out of the SSIA during the mandatory five-year term.

By incurring a 23% tax on both principal and interest, it would be as if they never got the 20% government top-up on their contributions - the very thing that drew so many into the scheme (46% of BOI respondents).

Less than 10% of people have pulled out of the SSIA scheme whereas "over 30%" discontinuation is typical for savers, Mr. Forrester said.

The declaration attests that the SSIA account holder was resident in Ireland for the full term, did not borrow the funds contributed, etc.

"There's a real need for advice," Mr. Forrester added. Most (76%) of the SSIA participants said they were saving for the first time.

Since 85% of the 400 BOI customers polled said that making their SSIA payments "presents no financial difficulty", savers were urged to increase their contributions to the maximum of 254 a month. The closer you are to the end of the savings term, the more the top-up is worth, said Gareth McQuillan. You get the Exchequer's 20% without having to wait five years for it.

"If you put in €100 in the last month, at the end of the month it's worth €120, before you count interest," he said.

## Case Study: Old Buildings/ Electrical Drawings?

Local community based centres are often housed in old convent or school buildings which would not have sufficient electrical standards and they certainly would not come up to safety regulation requirements. The choice whether to refurbish and remain in the older type building, or to relocate to a newly constructed customised facility must be considered.

It is important to note that if the decision has been made to stay in the old facility, the economic outlay required to modernise such buildings can be excessive.

A contractor recently encountered some problems relating to this issue. He was requested to inspect and provide a professional opinion by way of a written report of a provincial town community services centre building. The centre comprises of two principal multi-functional buildings – an old convent building and a more modern adjoining building with a sizable auditorium. The challenge presented to him was that there were no electrical installation or service drawings of the existing buildings available. This called for some challenging detective work, an able electrician and a good deal of patience.

He first examined the buildings to determine essential outline detail, from which a set of drawings of existing systems could be compiled. It was necessary for him to create a Line Diagram of the electrical distribution system, inclusive of the incoming ESB supply line to the main distribution board, and further feeding the various sub-description boards within the main building and the distribution board in the auditorium **Figure 1**.

In addition to the main distribution board, located on the first floor of the old building, there were five additional sub-distribution boards located on various sites throughout the main building. With minor exceptions the new installation within the auditorium was of a good standard and would not require modernisation. It appeared that the first floor had not, to date benefited from upgrading to the same extent as other areas within the buildings. There was a lot of contributing factors that led to making access difficult from the corridor to the distribution board, for example a concrete wall at the top of the stairwell.

The main incoming distribution board was in need of extensive modification and modernisation and it was advised that this board be totally redesigned and replaced. It was agreed that the ESB section be redesigned to incorporate a single three-phase meter only with three incoming main fuses.

Also it was recommended that the board be relocated to a more central part of the building. This would be beneficial from a rewiring viewpoint, enabling better distribution to both the main hall and to various key locations within the main building.

A layout of the main sub-description board is shown in **Figure 2**. The distribution board in the auditorium was of a modern design and was deemed adequate to cater for the electrical load of the building. It was agreed the reduction in the amount of sub-description board would make for a more compact and unified system. A sub-description board located on the half stairwell of the old building comprised the central fuse board for most of the lighting circuits in the main building. It was recommended that this unit be updated by insertion of a modern MCB distribution board.

While considering the power sockets and communications outlets within the buildings, it was sure that they would benefit from the upgrading. Several of the existing telephone cables were to be rewired and routed, as many had been run at surface level and were not protected in trunking or may be hidden from view.

As regards lighting, the building was well equipped with twin five-foot fluorescent fittings available in many office locations. Although the upper floor and the corridor sections on the ground floor would also require some additional fittings. The building had no fire protection, which meant major upgrading was required in this area also.

Upon the completion of the electrical services survey of the buildings, an executive summary, detailed report and complete set of electrical layout service drawings were prepared. This provided a basis by which the community services committee was in a position to issue for tender for the up grading of electrical network within the centre. The report facilitated tender for a number of options from partial to complete rewiring of the centre. Quotations for a complete overhaul of the system were typically in the region of 130,000. The decision to proceed would hinge on total costing associated with additional significant proposed structural modifications to the main entrance of the building and to restructuring of some of the internal rooms and corridors. In the event of relocation to a custom built facility, the building will most likely be utilised and require up grading.

This case study illustrates how, when faced with renovating an old building without the original electrical drawings, a contractor can still create a system that meets regulatory needs.

Fig 1

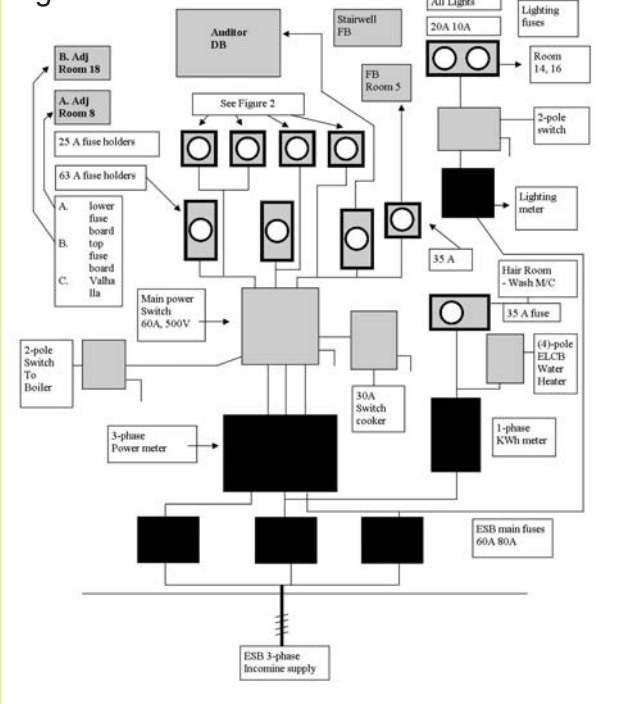
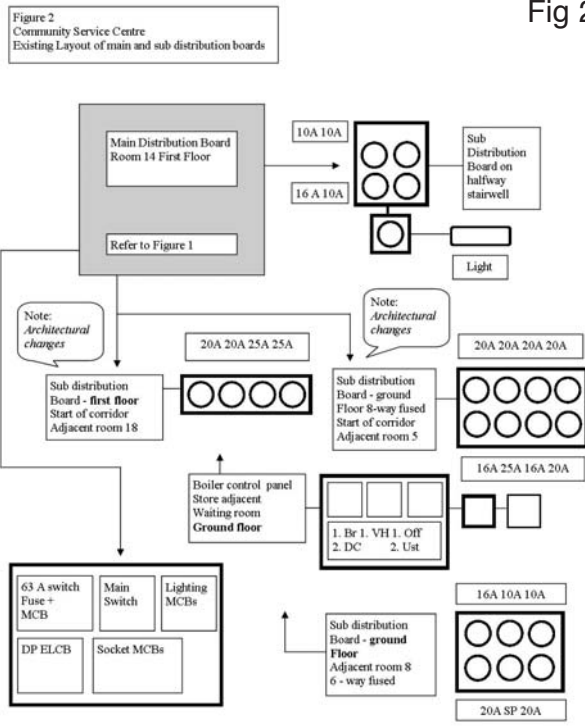


Fig 2



## AGM

“Decisions are made by those who turn up.”

The AECI **A**nnual **G**eneral **M**eeting takes place on Saturday 23<sup>rd</sup> April in the Radisson SAS in Athlone at 11.00am.

If you have an opinion on the way forward for both the Association and the electrical industry, then it is essential that you be there.

## Credit Card Fraud

Credit Card fraud is an undesirable trend that is growing at an alarming rate.

You must learn to be ruthlessly distrustful of giving out any personal information to anyone unless they are known to you. A credit card company may need to know specific information, like our date of birth, so it can prove your identity, but for strangers who call unexpectedly, claiming to be from our bank, they do not need to know information that is already on their files. The same rule should apply to your PIN numbers, social welfare number and other information that could be cash into the wrong hands. There are serious risks at stake if a cold call from someone offering a prize or other attractive item that requires your personal data.

But there are other areas that you must be careful about. Recently in Dublin, a person was fined by the County Council litter warden for dumping rubbish on a nearby green area. This person had never dumped any rubbish illegally, but it so happened that plastic sacks were taken from his rubbish bin and their contents were emptied onto the green area. The County Council were able to use his discarded mail to trace him and fine him. However, months later the person discovered that the information taken by the rubbish thieves was used to perpetrate credit card and other fraud. Bank and credit card holders should receive monthly account statements, which list all transactions. If these account statements are not arriving punctually there may be a problem. If this is the situation you must check it out immediately with the organisation concerned.

To highlight this particular threat it is worth remembering that very recently Bank of Ireland alerted its customers to ignore emails from a source suggesting to be Bank of Ireland. The bank explained that it had discovered that a number of its customers and non-customers had received emails directing them to a website where they were requested to input personal banking information. Bank of Ireland stressed that it never requests customer information in this way and strongly warned customers to ignore the email. The same should apply for every banking organisation. If in doubt, ring your bank. It is better to be safe than sorry.

## BE WARNED.

## In Memoriam:

The AECI would like to express our sincere condolences to our ex-executive secretary, Noel Jameson on the recent death of his wife Patricia. We would also like to express our sincere condolences to the family of Mr. Tim O'Brien, Skibereen, Co. Cork who has also recently passed away. Tim was a very active and respected member and served for several years on the Executive Council.

May they rest in peace.



## Amendment to the National Rules for Electrical Installations.

The ETCI has recently published the second Amendment to the National Rules for Electrical Installations. ET101/2004. This amendment of the wiring rules is to allow for changes in building practices and changes in CENELEC European Harmonisation Directives.

The Amendment will include changes in:

Part 2:	Definitions:
Chapter 44	Protection against over-voltage – A new section dealing with over voltages in the installation resulting from either internal switching or atmospheric lighting.
Chapter 46	Isolation and Switching – This is a major revision to the existing section 466 involving the setting up of a new section 539.
Chapter 54	Identification of conductors by colour and supplementary marking of cables by e.g. sleeving or tape. The new European cable colour code.
Chapter 52	Protection of cables in solid or hollow walls.
Chapter 53	A new section on Isolation incorporating the old section 466.
Chapter 55	Various changes, including socket outlets and extraction fans.
Chapter 64	Additional test.
Chapter 701	Amendment
Annex 43.A	Clause 2, Cookers

### Eight Deadly Sins of Service- Why customers leave?

- 1% - Die
- 3% - Move
- 5% - Buy From a Friend
- 9% - Prefer the competition
- 14% - Judge all like businesses due to a bad encounter
- 68% - Leave because of indifference, rudeness or lack of service from a service provider.

## Hand-Arm Vibration Syndrome

Hand-Arm Vibration Syndrome (HAVS) is a condition caused by the use of vibrating tools for long periods of time. People most at risk are those who regularly operate drills, breakers, grinders and cutting machinery. The disorder affects blood vessels, nerves, muscles and joints of the hand, wrist and arm. Symptoms include: pins and needles, pain and numbness in the fingertips, skin discolouration and loss of feeling or strength. It can take a few months to several years for signs of HAVE damage to appear.

### Vibration Exposure

There are two legally defined exposure values to which all measurements must be adhered – Exposure Action Value A (8) and Exposure Limit Value (8) – with tool vibration expressed as  $\text{m/s}^2$  (metres per second squared).

At any level of exposure, the risk must be eliminated or reduced to the lowest possible reasonable level. However, if exposure is above the Action Value, an employer must have a programme of actions to control risk and health. For example, an operative carrying out an operation using a tool that has a vibration level of  $2.5\text{m/s}^2$  can work with the tool for eight hours before reaching Exposure Action Value A(8). If the vibration level of the tool is higher, the work time must be reduced accordingly. In modern construction practices over 90% of tools have a vibration level exceeding  $2.5\text{ m/s}^2$ .

Hilti have recently launched a booklet entitled “Reduce Hand Arm Vibration Health Risks”. A copy is available from [www.hilti.co.uk](http://www.hilti.co.uk) or from AECI Head Office.