

# CONTACT

September 1972



## New Chairman for Consultative Council

**T**HE Secretary of State for Trade and Industry has authorised the appointment of Mr. Charles Searrell McKenzie of Caernarvon as Chairman of the Merseyside and North Wales Electricity Consultative Council, in succession to Mr. H. Evans, O.B.E., J.P., who is to retire at the end of his current appointment on September 30th.

Mr. McKenzie, was born and bred in Scotland, but later became almost a naturalised Welshman when he settled down to an active business and social life in his mother's native county of Caernarvonshire.

Mr. McKenzie's mother hailed from Beddgelert, but it was at Aberfeldy in Perthshire that he was born and spent his school-days. After serving an electrical engineering apprenticeship at Aberfeldy, he joined the R.A.F. on the outbreak of war, and served for six years, working on the electrical side of aircraft servicing.

Moving to Caernarvon at the end of the war, he joined partner-



Mr. McKenzie

ship with his brother-in-law, Mr. W. Brown, in the engineering business of McKenzie and Brown Ltd. The 26-years-old company has now expanded to the stage of employing 160 people.

In addition to his part in

building a thriving business, Mr. McKenzie plays an active part in other aspects of Caernarvonshire life.

He is a member of the Welsh Regional Committee of the Confederation of British Industries, and of the North Wales Industrial National Savings Committee, and vice-Chairman of the Governors of Caernarvonshire Technical College.

His hobbies include shooting and sailing, and he is Rear Commodore of the Royal Welsh Yacht Club.

Mr. McKenzie was appointed to the Consultative Council in 1961, and became Deputy Chairman in 1969.

He is married, with four daughters.

### Mr. H. EVANS

**P**RIOR to becoming a part-time member of the Board in January 1948, Mr. Evans was an official of the National Union of General and Municipal Workers. His association with the electricity supply industry began some years prior to nationalisation as he served as a trade union representative on the District Joint Industrial Council for the North Western area and was a member of the Liverpool City Council's Electric Power and Lighting Committee. He has therefore been active in the supply industry for over 30 years.

As his appointment as a part-time member of the Board in 1948 arose from his experience in the industrial relations and joint consultation fields, he was appointed by the Board as one of their

representatives on all the District negotiating bodies—the District Joint Industrial Council, the District Joint Council, the District Joint Board, and the District Joint Advisory Council, which is concerned with joint



Mr. Evans

consultation. For about six years he served as Chairman of the Board's side of the District Joint Industrial Council. He also represented the Board on the National Joint Industrial Council, and the National Joint Council, and as a member of the negotiating committees of both Councils represented the Industry nationally. Mr. Evans continued his work in the industrial relations field until he resigned from these bodies in 1956.

When Mr. Evans accepted the Chairmanship of the Consultative Council in December 1949 the Council had had only three meetings and had not set up any Local Committees. He therefore played a leading part in the formation of the structure of the Local Committees, and in the establishment of six Local Committees covering the Board's area, each consisting of up to 20 members. The Council and its

*(Continued on page 181)*

## PRIZE CROSSWORD

Here we go again with another puzzle—not so easy this time—but we know now that this is what you like . . . a challenge.

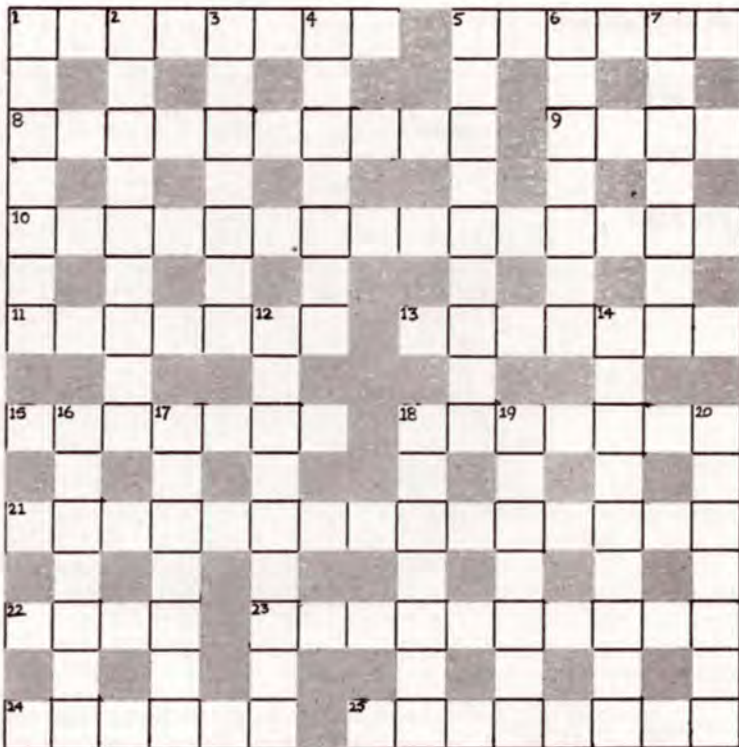
Our thanks go to our old friend **Mr. F. G. Lott** for providing the test and we offer prizes of £2 each to the senders of the first three all-correct solutions opened on October 16th.

Send your entries to *The Editor, 'Contact,' MANWEB, Head Office, Sealand Road, Chester CH1 4LR.*

Don't forget to add your own name and office address. Our pensioners are invited to compete too.

### CLUES ACROSS

- 1 When there's likely to be no tomorrow (8)
- 5 Chloe's about a hundred; the hat has upset her (6)
- 8 Toady (10)
- 9 Funny bird (4)
- 10 Rich lush catmint (anag) (6, 9)
- 11 Tried writing (7)
- 13 Can is so arranged to take ammunition (7)
- 15 People are sometimes held in it (7)
- 18 Tasty weather? (3, 4)



- 21 Disinclination to leave anything behind? (4, 2, 4, 5)
- 22 He's raised for a rumpus (4)
- 23 A bit of leg, lobster for example (10)

- 24 Flotsam's companion (6)
- 25 Celts are more easily seen (8)

### CLUES DOWN

- 1 Bed lace in a mess (7)
- 2 Sudden cries—because the cistern's given way? (9)
- 3 Stiff architectural feature in the pig shed (7)
- 4 Humiliated because what is left from the fire is badly made (7)
- 5 Applies for a job round at a work by Voltaire (9)
- 6 Gold slopes in France (7)
- 7 Hamlet's friend (7)
- 12 Day of jubilation at school (3, 2, 4)
- 14 Unblemished fairy tale character (4, 5)
- 16 Not conscious of Browning's boughs and brushwood sheaf (7)
- 17 Proceeds (7)
- 18 Greasy bribe (4, 3)
- 19 In a lamp Horatio may have used (he would have needed both hands) (7)
- 20 This is one fifth! (3, 4)

### New Chairman for Consultative Council (Continued)

Committees were involved in many difficult policy matters in the early years, particularly those concerning rural electrification, Board organisation, and standardisation of tariffs—to mention just three important subjects. The Council and its Local Committees played an important role in representing consumers' interests and then justifying the decisions they had reached on these very important matters they were called upon to consider.

The amount of work involved in dealing with the one subject of rural electrification will be appreciated, as in the Merseyside and North Wales Area 4,000 square miles out of the total area of 4,800 square miles are rural

and at Vesting Day no supplies existed in most parts of the rural area. The pressures from local authorities and other organisations and individuals wanting supplies were very considerable, necessitating the Local Committees in particular having to spend considerable time in investigating all such representations.

The part played by Mr. Evans as Chairman of the Council and as an ex-officio member of its Local Committees has been acknowledged in Resolutions passed by all the Local Committees expressing the members' appreciation of the contribution made to the supply industry by Mr. Evans.



THE STAFF MAGAZINE OF THE MERSEYSIDE  
AND NORTH WALES ELECTRICITY BOARD

# CONTACT

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Keith Baldwin  
John F. Perry  
Sam Dougherty

## EDITORIAL

### *A Cleaner Prospect*

THE nineteen-seventies will probably go into the history books as the decade during which the "developed nations" were forced to come to grips with the problems caused by the various kinds of pollution introduced to the environment by our ever-increasing efforts to exploit the earth's resources.

This battle is one which must be fought on many fronts. If the seas are to be saved as ready sources of increasingly-necessary foodstuffs, and as health-giving centres of recreation for the land-locked millions, we must find a way of reversing the current process of turning them into poisoned cesspits.

**If the health and sanity of millions of city-dwellers is to be protected, ways must be found to protect our lungs and cars from the ever-increasing clouds of poisonous fumes and mounting crescendo of noise created by that great enemy of environmental purity, the internal combustion engine.**

Technological stumbling-blocks in battery development still leave the motorist who must drive far and fast dependent on the petrol pump, and on his dirty, noisy and dangerous chariot. At the same time there is taking place at the moment a quiet and almost un-noticed revolution in various forms of transport which must make an ever greater contribution to the peace and cleanliness of our surroundings—the development and extension of battery-electric motive power.

This number of *Contact* contains a feature which outlines and explains some of these lines of progress, and these are a hopeful portent for the future.

**We can only earnestly wish every possible success to those who are constantly seeking to hasten the day when fume-free cars—and who knows, even heavy transport—will glide silently under electric power along our motorways!**

## WEDDINGS

We offer our very best wishes for a happy future to Miss Hilary Panting and Mr. Charles Smith



Mr. and Mrs. Smith receive a 'Good Luck' token

who were married at the St. Barnabas Church in Bromborough on August 30th.

Hilary, who works as a supervisor in the Work Study Section at Craven Street, Birkenhead, is

well known throughout the Board's area as she has visited most of our Districts in her capacity as "The Girl from MANWEB 1971" when she did a great job.

Her husband Charles, is a company director with Victor Smith (Footwear) Limited.

The happy couple spent their honeymoon in the Lake District.

### PERRY-HISLOP

Our congratulations go to a very popular young man at Head Office, Mr. Reuben Perry and his new bride Miss Anita Hislop, a schoolteacher from Croxteth in



Mr. and Mrs. Perry

Liverpool. They were married at the Queen of Martyrs Church in Croxteth on August 12th.

Reuben works at Sealand Road as a Registry supervisor and is a leading light in the Sports and Social Club as one of our top table tennis players.

The honeymoon was spent in London.

### EEIBA SUPPER DANCE

Friday, October 20th, 1972  
at the

MANWEB Restaurant

Tickets £1.50 each.

from Mr. T. H. Dutton or  
Mr. J. G. Roberts, Welfare  
Section, Head Office.

## ENGAGEMENT

We offer our best wishes for a happy future to Miss Jean Roberts and Mr. Gwynfor Roberts who recently announced their engagement.

Jean, who hails from Llanberis, and Gwynfor who comes from Caernarvon, both work at our Gwynedd District Office.

### PENSIONERS VISIT TRAWSFYNDYD

The thriving Liverpool pensioners group, whose activities have been reported in previous numbers of *Contact*, are still very active, and their latest venture was a coach trip to Trawsfynydd Power Station.

A party of 44 left the group's headquarters at Thingwall Road sports ground one morning in July, and after a smooth journey were greeted at the power station with a short lecture on the station's statistical and performance details.

After an enjoyable lunch the visitors set out in four parties, each escorted by a lady guide, for an

informative and interesting tour of the power station, and the journey home was completed in time for a late buffet tea arranged by the ladies.

This trip, arranged at very reasonable cost, was greatly enjoyed by all those who went along, and the Chairman of the group (Mr. H. Robertson), asks us to remind all ex-MANWEB pensioners living on Merseyside that well-attended and interesting meetings are held each month at Thingwall Road, where all pensioners and their wives will find a warm welcome, the chance to renew old friendships, and to make some new ones.

[The happy group set off for their trip to Trawsfynydd.]



**Echoes  
from  
the  
past**



**and  
shape  
of  
things  
to come**

*Above:* An early model electric car—a class of vehicle which once held the world's land speed record!

*Below:* The latest battery-electric 'bus—a silent newcomer recently undergoing evaluation trials in various British cities.



# THE BATTERY-ELECTRIC TRANSPORT FUTURE?

FOR something like half a Century the travelling public of Liverpool, in common with their neighbours in most of our major cities, moved about their business by electrical power.

The Liverpudlian would "go by car" to and from his work, and on his social visits, and by this phrase he meant not the petrol-driven toy of the wealthy, but the electrically-driven monsters which rumbled and grumbled their lurching ways along the granite-paved streets of the Liverpool of yesterday.

From the first horse-drawn "trams" of the late 19th-Century there developed the early electrically-powered trams, drawing their power from a complex system of overhead lines, iron wheels grinding and bumping along iron rails.

With the passage of the years the early open-topped trams developed into the streamlined "Green Goddesses" of the late 1930's, capable of 40 m.p.h. and more along the enclosed tracks of the outer boulevards—and also capable of shifting enormous queues of passengers in a very short space of time.

## Trams to buses

As the motor-car became "King of the Road" after the second world war, so the trams, limited as they were by their fixed rails and overhead wires, began to disappear from the scene. One route after another was switched from trams to buses, but over the years the more manoeuvrable bus has been found to create problems, as well as to solve them.

The acceleration of the bus cannot compete with that of the tramcar it replaced and the modern city bus does much to help fill our cities with offensive and unhealthy exhaust fumes.

But a few months ago there were signs that the wheels of public city transport may be turning almost full circle.

Into the streets of central Liverpool crept a silent and unobtrusive newcomer—a battery-electric bus capable of carrying 26 passengers in comfort and silence, and adding nothing in the way of pollution to the streets along which it travels.

The bus is one of two built by Crompton Leyland Electric Ltd., for the Department of Trade and Industry, and put into service for varying periods in Leeds, Liverpool, Bournemouth, Birmingham, Sheffield, Bolton and Glenrothes (Fife) for performance evaluation over a 12-months period.

It has a range of about 35 miles per battery charge, when fully laden, in city traffic conditions, rising to 70 miles when driven non-stop. Top speed on level ground is about 25 m.p.h.—adequate for most built-up areas, and the bus is powered by lead-acid batteries which can be re-charged overnight or replaced quickly with a spare set to extend the daily range.

So silent and smooth have the new vehicles proved to be that some people have even been known to describe them as "eerie," while one wag has suggested that they should be fitted to cowbells to help the passengers to settle down!

The arrival of the battery-electric bus on our city streets is, however, only perhaps the most public manifestation of the remarkable progress made in recent years in the development and application of battery-electric vehicles.

Since the 1950's the production of battery-electric road vehicles and industrial trucks has increased more than five-fold in Britain. Probably the most commonly-known member of the battery-electric family is the milk float, and 80% of our milk-delivery vehicles are now electrically-powered, but battery-electrics are finding an ever-increasing amount of clean, silent work to do in many fields of industry, commerce, and public service.

## Many successful users

The Electric Vehicle Association of Great Britain, formed in 1938 by leading makers of battery-electric vehicles and industrial trucks, as well as the makers of batteries, charging equipment, etc., reports great success in the use of vehicles of this type at such locations as hospitals, airports, docks, railway termini, and for street clearing operations.

*Electric motors can now power anything from mini-buses to overhead maintenance vehicles, from fork-lift trucks to tractors, and from dust-carts to personnel carriers. The electric vehicle is now a common sight in factories and warehouses, as well as on the road, and over 70% of industrial trucks in use in Britain are "electrics," with the proportion growing each year.*

Improvements in such matters as storage batteries, control devices, and regenerative braking (in which deceleration helps to re-charge the batteries) have all contributed to this progress.

*(Continued on page 186)*



The ubiquitous milk-float—the most common battery-electric on the British roads.

## *The Daily Round . . .*

Another invaluable battery-electric work-horse—the municipal refuse cart.







***With  
Battery - Electrics  
for work . . .  
and play***

*Above (left):* Street-lamp maintenance by battery-electric.

*(right):* The battery-electric everybody knows—the fork lift truck so indispensable in stores and warehouses.

*Right:* Lord Erroll of Hale (President of the E.V.A.), at the wheel of a battery-electric personnel carrier equipped as a golf buggy, at Earl's Court.



In industry, where some 70,000 trucks and tugs are in daily use, "electrics," by the very nature of their design and performance, are making valuable contributions to the economy by their low operating costs, reliability and precision handling of goods—sometimes under the extreme handicap of restricted operating space and other adverse working conditions.

The expansion of battery-powered vehicles into the industrial sector began soon after the second world war with the development of fork-lift and platform trucks. Diversification followed fast, and today there is a wide variety of special purpose trucks on the market capable of solving almost all industrial handling problems. They can be rider—pedestrian—or remote-controlled, and can operate under almost any conditions, whether, extremely cold, excessively hot, or highly-explosive.

#### **Ideal for hospitals**

The clean, quiet, and fumeless qualities of electric vehicles have made them ideal for hospital use transporting patients, staff, food and other supplies. Their economy has earned them increasing popula-

rity with municipal authorities for refuse collection duties, maintenance and public cleansing, and they have proved eminently suitable for use as travelling shops and canteens, airport buses, and delivery vehicles of all types.

In these capacities electric vehicles have several advantages over their petrol or diesel-engined equivalents, notably greater economy, longer life and less wear and tear.

While battery-electrics usually have a higher initial cost than diesel, petrol, or gas driver vehicles, this is much more than offset by their greater fuel economy and smaller maintenance costs. For instance, a cushion-tired fork-lift truck, with a 4,000-lb. capacity, costs about £587 a year over a ten year-period, compared with figures of £674 £1,051, and £765 for diesel, petrol, and gas-powered vehicles—with the added advantages of silence and complete cleanliness. Comparisons of this kind may similarly be made for other classes of battery-electric vehicles.

In addition, when electric vehicles are stationary there are no moving parts to wear, and there is no wastage of fuel.

## **British Leyland Pull Out— EVA comment**

After the recent news that British Leyland has disposed of its interest in Crompton Leyland Electricars and has abandoned its electric car project, coupled with press statements that B.L.M.C. is "... putting it on ice until the Electricity Industry comes up with a suitable battery...", the EVA commented:

*"The Electric Vehicle Association of Great Britain Ltd., wishes to make it quite clear that the present traction battery as used in thousands of milk floats, delivery vans, fork lift trucks and tugs is the outcome of many years of research and development and is giving excellent results both in terms of outstanding reliability to the vehicles it propels and also in economy of running for which 'electrics' are generally acknowledged to be cheaper and more reliable than petrol, gas or diesel equivalents.*

*"Manufacturing members of this Association are also producing passenger-carrying vehicles in the form of personnel carriers and commuter vehicles. In this sphere such vehicles give excellent results, and whilst it is true that their present capacity limits them to speeds not exceeding 40 m.p.h., and to distances around 40 to 50 miles per charge, it is equally true that they have a wide and satisfactory application, particularly in dense traffic conditions. With rapid acceleration as one of their virtues, their performance in situations where 30 m.p.h. is the legal limit is really outstanding. As to their range on one charge, they are capable, inter alia, of covering two or three times the daily mileage needed to take the children to school and the housewife shopping... both these exercises being almost the sole function of a family's second car."*

Right: Happy smiles from prize-winner Mrs. Jenny Vickers, of Laburnum Cottage, Kelsall, her husband Gordon and their daughter Jayne, as they receive their prize at our Chester shop. Making the presentation is Mr. Attwooll and completing the picture we have Mrs. Pat Eagar (BDA demonstrator), left, and Mr. Steve Airey (Regional Sales Controller), second from left.

.....

## COLOUR T.V. COMPETITION WINNERS AT ...



..... Chester .....

Winners of 19-inch colour TV sets in a competition organised by MANWEB, NORWEB and the British Domestic Appliances Ltd., were recently presented with their prizes by Mr. R. Attwooll, BDA Regional Sales Manager. With the sets went a year's licence and maintenance, and free installation and aerial.



..... Portmadoc .....

In the competition which attracted a wide entry, competitors had to place in order of importance a list of eight advantages in shopping at Electricity Board shops. Minor prizes in the competition included kettles, percolators, hand food mixers, irons, hair dryers and toasters.

In addition to the winners pictures on this page, TV sets were also won by Mrs. L. Porter of Lower Heswall and Mr. G. Jepson of Crewe.

..... Llanrwst .....



.....

Right (middle): Mrs. F. West, of Drws-y-coed, Tremadoc, came along with her husband to Portmadoc shop to receive their set. Regional Sales Controller Mr. Les Smith looks on approvingly.

(below): Mrs. G. Thomas, of Gwynfryn Dairy, Talybont, with her husband, takes over her prize at Llanrwst shop.



## They're a Knock-out!

Sports and Social Club members from Head Office entered a team to compete in a local version of the popular TV game "It's a Knock-out" held as part of the Bebington Summer Show a few weeks ago.

The five events which made up the game were crazy football, ladies tug-of-war, roll of drums, ladies log sawing and the wheelbarrow joust.

Our MANWEB team gave a good account of themselves and finished the day in first place with the team from Clatterbridge Hospital.

The members of our ladies' teams were chosen from Chris Byrne, Carole George, Karen Hughes, Gill Jones, Jane Moore and Anne Stevenson, all from Accounts, plus Joan Hughes from Commercial and Gill Humphreys from Secretarial.

The men's team were Hugh Farrow (*captain*) from Engineering, Pat Byrne (Secretarial), Rod Kenyon (M.S.U.) and Mike March (Accounts).

Our pictures on the left show some of the MANWEB team in action — at tug-of-war and roll of drums.

Staff from Queensferry won both first prizes in the recent 'Treasure Hunt' organised by the MANWEB (Chester) Sports and Social Club. The two routes were devised by Bob Blair and Charles Lynch.

The winners were Max Cooksey and Eddie Groves for one route and John Hulmeston and his daughter Janet for the other.

The Clwyd Gate Inn was the finishing point where all competitors and officials enjoyed a chicken supper and discotheque dancing.

## TREASURE HUNT

The prizewinners, from left to right: Messrs. Cooksey and Groves, Mr. Gren Roberts (*Club Secretary*), Miss and Mr. Hulmeston.



# LIGHTING for LIVING

By  
MR. GERRY WORTHINGTON  
LIGHTING ENGINEER  
ENERGY SALES



**I**N THE last three numbers of *Contact* we have been able to briefly look at the many ways in which lighting can improve and enhance the home. By the time you will be reading this fourth article, advertising for "Lighting for Living Fortnight" will be appearing in the national and trade press, further promoting the use of better lighting for making the most of your home.

As all the previous ideas and suggestions have been restricted to the interior living spaces, I feel we should now consider how to make our homes even more attractive by installing exterior lighting. One of the ways this can be achieved, and one that will certainly create a wave of envy among the neighbourhood, is by installing decorative garden lighting.

**The object of garden lighting is to extend the hours in which the garden can be enjoyed and used. In addition, garden lighting can reveal an unsuspected beauty in the familiar. A favourite tree lit by spotlight and viewed after dark through a picture window adds a tremendous sense of spaciousness, and underwater lights add a touch of magic to an ornamental pond.**

Why should the garden die as the sun sets? So few weekend gardeners are home early enough on week-day evenings during the major part of the year to enjoy the results of their labours, but to see only an empty blank void behind the house seems hardly worth the effort. Each year we spend some £80,000,000 on plants, seeds, fertilisers and other products for private gardens. How much more enjoyable would this financial outlay be if the results could be viewed an extra 2,000 hours per year during the period between sunset and midnight?

## Practical uses

It must not be overlooked, however, that there are as many practical as decorative reasons for outdoor lighting. Lighting steps, pathways, patios, and doorways prevents accidents and enables any night time callers to be recognised quickly. Any house which uses good exterior lighting is auto-

matically a less attractive proposition to the house-breaker!

If you are considering decorative lighting in the garden the first decision to be made is whether you primarily require a "picture" to be viewed through the windows from inside the house or whether you wish to walk about within your newly created fairyland. It is easier to obtain a planned stage-like effect if there is only one fixed view point through a window but much stronger lighting will be required than if the garden is to be viewed outside.

Garden installations can be broadly classified into two types. The most interesting is where the site is designed from scratch to utilise lighting to the best advantage, with the wiring being part of the laying out of the grounds. It is in this type of installation that the best lighting effects can be obtained throughout the year, and a growing number of people are considering such schemes.

The other type of installation—simpler, cheaper and therefore more popular—is the temporary illumination of the garden for some special occasion or a limited period. A barbecue or party, Christmas and Bonfire Night are such occasions, and for such purposes a temporary arrangement of predominantly incandescent lamps is usual.

## The use of spot-lights

If equipment is limited, concentrate on lighting trees and shrubs rather than flower borders. Conifers look best if a concealed spotlight is aimed in such a way that light touches the edges of the branches. Trees with a high canopy, like elms, should be spotlighted upwards into the leaves from almost immediately below. Outdoor spotlights with a 100 watt or 150 watt flood reflector lamp on a ground spike are usually adequate for tree lighting but the wiring must be carefully concealed or protected from accidental damage. It is most important that you get advice from a qualified electrician on suitable outdoor lighting fittings, and he must also carry out the installation.



## A GARDEN FAIRYLAND

The pictures on this page show what can be done to transform an attractive suburban garden into an after-dark wonderland. Viewed (*above*) from the garden itself, and (*below*) from the French window, the scene is set by the following lights:

**160W sodium** (trees on left); **two 18W 12V underwater** (amber and blue), in fountain; **400W MBI blue** up into large tree; **150W par red, white and blue** lights on small weeping tree and conifers (far right), with **150W par white** lights on border by people and at extreme right. The lawn area is illuminated by a **500W TI floodlight** (dimmed) from house eaves.



In a garden it is what is lighted that matters—not the lights themselves. These should be, as far as possible, concealed in a flower border, or hidden in branches or behind shrubs. Where concealment is difficult—the edge of a lawn or a treeless area or patio, mount the lights so that they are above the normal line of vision.

Using white light will reproduce the colours naturally, and while colour on stonework or shrubberies may be acceptable, most people prefer to see flowers or blossom in as natural a light as possible. It can, however, be more exciting to think of the garden as a stage set, and use strong coloured lights to create a fairyland of light. Be adventurous in trying out colours: the range of Pressed Glass Par 38 Lamps include colours blue, yellow, green and red as well as clear.

#### Use of colour

If you do decide to use colour, the leaves of a large tree can become a delicate canopy of most attractive iceblue. The best place for colour is where it is used to accent garden features like statues or ornaments. A blue lamp at the end of the garden will draw away the insects from the terrace where you are sitting. It has also been found that the use of a pale yellow lamp will attract less flying insects than a white lamp.

For lighting a large area it is often convenient to use a Tungsten-Halogen floodlight giving 500 watts of light. These fittings measure only about 6½" wide x 3" high yet just one mounted approximately 12' high on walls will light the average garden sufficiently to read even the small ads in the newspaper or mow the lawn at midnight, should you feel energetic. This type of lamp costs about £7. It is a good idea to incorporate two-way switching so that in the event of a night prowler being suspected the sudden light switched from the bed makes an excellent deterrent. Floodlights must never be mounted where they might interfere with highway traffic, or be a source of glare.

*Apart from providing a welcoming light at the door, porch lights should allow visitors to find the door bell and the number or name of the house. Ideally there should be a light on every side of the house, or at least one for each entrance. Porch light fittings have to be weatherproof, but prices are as low as 75p for a simple plastic fitting to take a 100 watt lamp. Glass fittings provide the most light and there are numerous wall bracket and overhead fittings for the porch or doorways. Indeed one of the good things about lighting a home or garden is the wide range of fittings available.*

When lighting a path or patio the lamps should be in reflectors which not only hide the lamp but direct light on to the paving or steps. A bollard



The weeping tree in close up. Weatherproof spotlights with colour filters aimed at a tree or large shrub cost from £6 each, and will bring the whole garden to life at night.

fitting is ideal for general illumination of paths without glare, the lamp being housed in a white or clear glass fitting on top of a short post which is usually set into the ground adjacent to the path. These are particularly good at the entrance of a long garage drive. Any underground wiring should always be carried out by a qualified electrician.

#### Lights with water

Water-tight floodlight fittings can be submerged in a pool and provide a dramatic point of interest particularly where there is an overhanging tree like a willow. This type of fitting is ideal for use with a fountain and is generally positioned at the base of the jet.

If you are fortunate enough to have a small pond or stream in the garden this is ideal for creating a lighting effect. Conceal lights among the plants at the edge rather than among the stones. Alternatively it can be lit with an outdoor spotlight mounted on an adjacent tree.

The Electricity Council's 16-page colour brochure "Lighting your Home" also gives more information on lighting the garden. It is available on request from any of our Board Shops.

## 1975 Outdoor Lighting Awards

Imaginatively-lit outdoor areas add to the benefit and enjoyment of the local community and make a centre more attractive for visitors. They could qualify for the "1975 Outdoor Lighting Awards." This competition has been planned to celebrate the meeting in this country of the International Commission on Illumination in September, 1975.

Lord Mancroft has accepted an invitation from the National Illumination Committee of Great Britain to become Chairman of the Sponsoring Committee, which also includes representatives of the Civic Trust, the Lighting Industry Federation, the Local Authority Associations of Great Britain, the Tourist Boards of England, Scotland, Wales and Northern Ireland, and The Electricity Council.

The 1975 Outdoor Lighting Awards will be made for outstanding examples of lighting of

buildings and open areas intended for the direct enjoyment of the public. The Awards will appeal particularly to local authorities and other public bodies, as well as private and commercial interests. Eligible lighting schemes may be for built, landscaped or natural environments.

The world's first urban floodlighting on a generous scale was initiated in this country when the International Commission met here in 1931. The sponsors of the Awards hope that the whole concept of public amenity lighting will be advanced as radically in 1975 as it was forty years ago.

*The secretary of the 1975 Outdoor Lighting Awards is based at Trafalgar Buildings, 1 Charing Cross, London SW1A 2DS. A descriptive brochure containing a provisional entry form will be available in October, 1972.*

## FLU STRIKE'S THE WORST STRIKE

Strikes during 1970 robbed British industry of 10.98 million working days, a formidable figure indeed. But losses due to influenza were nearly three times as great. In the six months between Autumn 1969 and Spring 1970 they amounted to nearly 30 million working days. Of the eight million people who contracted influenza during that period, 8,000 died—or one in every 1,000.

Influenza—*real* influenza, and not the common cold which so many laymen mistake for it—is a serious disease. It is easily communicated, especially in factories and offices where people are in close daily contact: yet at present there is no known cure. Treatment is purely palliative, and the disease runs its natural course—which means that a worker is incapacitated for anything up to 14 days, and will almost certainly be below full working capacity for several weeks thereafter. People suffering from bronchitis (itself responsible for many millions of working days lost each year) are particularly vulnerable to influenza and its far-reaching complications.

In a report to the World Health Organisation by the committee on International Surveillance of Commercial Diseases it was stated:

**'Influenza is in terms of morbidity and mortality a much more serious threat to public health than cholera.'**

## PROTECTION FOR YOU!

Of the 1,200 people working at our Head Office at Chester, 320 were inoculated against 'flu at the beginning of last winter.

Ten of those inoculated caught 'flu—a proportion of 3.1%.

Among the remaining 880 people who were not inoculated there were 83 cases of 'flu—a proportion of 9.6%!

So although anti-'flu vaccine may not give you 100% protection against this common but wretched ailment, the moral seems to be that those who are not inoculated are three times more likely to have a dose of 'flu this winter than those who take the trouble to line up for a 'shot in the arm.'

Anti-'flu inoculations will be available to all MANWEB employees this Autumn—at a cost of 25p each.

The arrangements are being made by District Administrative Officers, and by the Welfare section at Head Office.

**THERE IS STILL TIME FOR YOU TO ARRANGE FOR YOUR OWN PROTECTION BY GETTING IN TOUCH WITH YOUR D.A.O., OR (FOR HEAD OFFICE STAFF) WITH THE WELFARE SECTION . . . . . NOW!**



# Keeping them Flying

by Mr. JOHN SHALLCROSS

(Technical Drawing Office)

FROM time to time, visits to places of interest are arranged by the MANWEB (Chester) Sports and Social Club, and many members of the staff take advantage of these. Recently there was an interesting tour round the police headquarters in Chester and another party went along to Manchester Airport to see how British European Airways carried out maintenance work on their aircraft.

This servicing work is usually done overnight, so it was around 10 p.m. when our party arrived at Ringway airport.

They were told by their guide, Mr. Max Pilbrow, an engineering officer, that this was the service unit for the B.E.A. fleet of 18 B.A.C. 1/11 'bus-stop' jets.

In the maintenance hangar, they went aboard 'Mike Victor,' one of the six aircraft in for service that night. The guide explained the functions of some of the mass of dials on the pilot's instrument panel and described the check procedures carried out before take-off.

Any fears that anyone had

about flying were put at rest, at least temporarily, when they saw the safety equipment which is fitted in every aircraft.

As the tour continued, mechanics were working feverishly carrying out tests in an effort to trace a fault which had developed.

During the hour that the group spent aboard 'Mike Victor,' the fault was traced to the auxiliary generator. The B.A.C. 1/11 is powered by two Rolls Royce Spey engines and has an auxiliary engine for use when the pilot needs to boost his electrical system when on the ground and when there are no support facilities.

An interesting point to the MANWEB visitors was the odd

voltage—28 volts—on which the aircraft operated, although the current was rated at 400 k.v.a.

Half-an-hour before our party arrived in Manchester, another 1/11, 'Mike November,' had touched down and was scheduled for the morning flight to Germany. In the meantime, it had to undergo a 250-hour service, which meant an army of 25 mechanics, each with his own set of rigorous checks to carry out, swarming all over the aircraft.

It was astonishing how quickly the 'plane was jacked-up, the wheels removed and scaffolding, seemingly thrown up to encompass the flying machine.

When an aircraft has completed 3,500 flying hours, B.E.A. change the engines. This sounds simple enough, but when you consider that a Spey engine costs £110,000, and the auxiliary self-support engine costs £98,000, then you realise that safety in flying costs money.

Judging by what our visitors saw as the maintenance crews went about their jobs, they were unanimous in the view that B.E.A. place safety as a number one priority in their service.

One of the B.E.A. fleet of B.A.C. 1/11 'bus stop' jets being taken apart in the service hangar.



# EXCHANGE VISIT TO FRANCE

Story by Mr. ALAN REID

(Student Engineer)

**E**ACH year the Electricity Council organises an exchange scheme with its equivalent authority in France. Eighteen apprentices from the Area Boards and CEGB are selected to be guests of the nationalized Electricité de France (E.D.F.).

This year's journey to France was by B.E.A. Trident to Orly Airport, Paris. At the Airport we were greeted by our hosts, who were to accompany us for the two weeks stay.

For most of the stay the party was based at one of EDF's schools for Craft and Technical Apprentices at La Perroliere, about 20 km from Lyon.

The school, of which there are three in France owned by EDF, is completely self-contained. 300 apprentices spend three blocks of six months' duration at the school. The basic difference of the apprenticeship compared with the British system is that both the academic and practical training is undertaken by EDF. The training is considerably shorter—eighteen months followed by one year's probationary period in the Electrical Industry. Since all aspects of training are undertaken the school has very comprehensive facilities for the apprentices. In addition to the usual workshops,

overhead line and jointing schools there are simulated Power Station and Grid Control Rooms. Conventional classrooms are supplemented by lavishly-equipped laboratories and full use is made of sophisticated teaching aids.

The school is residential, so EDF have provided numerous facilities for recreation and sport. A swimming pool, gymnasium, tennis courts, sports stadium containing running track, football and rugby pitches are just a few of the sports facilities available to the apprentices. For recreation there are various clubs and societies which include painting, sculpture, wood carving, photography, model aircraft, amateur radio, philately and music.

The school places great emphasis on team work and responsibility. All the clubs are run by the apprentices, who plan their own budgets by means of a general committee.

For the purpose of the visit the school was used as a base. Daily excursions were made to places of interest and the programme comprised of a busy schedule balanced with technical and informal social visits.

The technical visits included a visit to the Berliet



The author, Alan Reid, pictured at a vantage point above the dam which created the reservoir for the Serre Poncon Hydro-Electric Power Station.

lorry and coach factory. In 1971 Berliet manufactured 26,000 vehicles representing 53% of the French production in industrial vehicles. The famous physicist Ampere lived for a large period of his life in a country villa near Lyon and in memory of his significant contribution to the discovery of electricity EDF have converted the villa into a museum, which we visited. The museum contains numerous models which Ampere and his contemporary colleagues used in their experiments.

The social visits included a tour of Lyon, founded in 43 BC by the Romans as the capital of Gaul, and now the second largest city in France with a population of 1.2 millions.

Perhaps the most splendid indulgence of the French people is their eating habits. The quality and variety of the meals was superb. Mid-day meals usually last two hours while dinner did on certain occasions last three hours and involve up to nine courses. Such a meal was eaten when dining with the British Consulate and Regional Directors of EDF at the Pavillion du Parc, Lyon.

In contrast to the metropolis of Lyon a visit to the medieval city of Pérouges was made, and we also spent three days touring the French Alps. We travelled via Valence, Montemiar and Orange to Gap which is situated in the heart of the Alps. After an overnight stop we continued following the course of the River Durance to the ancient Roman fortified city of Briançon, and on to the winter ski-ing resort of Val d'Isere, after negotiating three snow-clad passes, which included the second highest pass in France, Cols d'Iseran (9,058 ft.). These passes are closed from November to June by snow drifts up to 40 ft. deep. Following an overnight stay at the Summer ski-ing resort of Tigne we proceeded to the holiday resort of Annecy, situated on the periphery of the Alps. From Annecy we had a cruise on the lake and cable car ride which made it possible to see Mont Blanc in the distance, rising majestically above the clouds.

While touring the Alps we had the opportunity of seeing three different types of hydro-electric schemes EDF derives a substantial part of its electrical energy from comprehensive hydro-electric schemes. The River Rhone provides a vast source of potential energy which EDF exploits at no less than sixteen generating stations, which produce a total output of 2,945 MW. The first scheme visited was Poincaré at Chateauf-neuf-du-Rhone. The station consisted of a barrage across the Rhone which produces a differential in waterweight of 69 ft., suitable for a generating capacity of 330 MW. Serre Ponçon and La Bathie were the other schemes visited. These are of a conventional type capable of producing 360 MW and 500 MW respectively.

When touring these stations it was apparent that

EDF were very conscious of the prestige of these schemes. The planners and architects had gone to considerable expense to ensure that the schemes appeared more than just generating stations but monuments to technology blending into the surrounding environment while enhancing the amenities of the area.

As a finale to our memorable stay at La Perrolliere the apprentices organised a variety show which exhibited their many talents. Judging by the high standard of the show they must have been practising for months to perfect the acts which included comedy, ventriloquist, pop music, chorus singing, etc. Personally the most impressive act was an extract from the Rock Musical "Godspell."

#### **Genuine interest**

As a souvenir from La Perrolliere we were each given an LP produced by the school's pop group. It was obvious from general impressions that our French counterparts were showing a genuine interest in our visit. We had several opportunities on informal occasions to exchange views and ideas on an array of subjects. The language barrier was never a problem as the majority of the apprentices spoke some English and EDF had provided two interpreters.

A visit to France would be incomplete without a tour of Paris. Thanks to the hospitality of EDF we were able to spend one-and-a-half days in the capital. While staying in Paris we were taken to the nationalized Renault car factory, where we discovered that cars are made from raw materials to completion in nine hours! The workers are invited to buy shares in the company and have the opportunity to take their holidays at a resort in the French Alps owned by Renault.

The French people place much emphasis on sporting activities. Whereas in Britain every large city has a football ground, in France they have a sports stadium. We visited the National Institute of Sport, owned and operated by the Government. The Institute serves a dual purpose, firstly to educate physical instructors for schools and secondly to provide a residential training institute for athletes of Olympic standards. Fortunately while at the Institute we were able to see many French Olympic athletes in training.

We were given a guided tour of Paris by day and night and also dined with the Directors of EDF.

The hospitality of our French hosts was tremendous. They had obviously gone to great lengths to ensure the visit would be a success.

On recollection of innumerable memories of France, perhaps the most amusing occurred when a French student asked me whether it was really true that there are lions and elephants in Picadilly Circus!

# NEW FILMS FROM THE ELECTRICITY COUNCIL

## For Architects and Developers

**"IED—PROGRESS REPORT"** is a new Electricity Council film produced to show progress made in Integrated Environmental Design buildings in this country since the first such building was completed in 1969. It is directed towards architects and developers and features buildings constructed in accordance with IED principles in both public and private sectors.

The film starts off by showing the adverse effects that lack of proper environmental control can have on the occupants of buildings. It then discusses the benefits of constructing a building envelope of good thermal performance and incorporating heat recovery air conditioning to maintain a comfortable internal environment. These benefits can only accrue when building in accordance with the multi-disciplinary approach of IED, as all those concerned in the construction and use of the building

are able to integrate their contributions right from the sketch plan stage.

**Implementing the Integrated Environmental Design process provides an initial capital cost saving in building construction. A conventional building with full air conditioning and separate heating costs more than a comparable IED building. Total energy costs for the IED building are lower and further environmental benefits are gained—close temperature control, clean air, good quality lighting and acoustic control.**

The first IED building featured in the film is the North Eastern Electricity Board's meter testing and research station at Wallsend-upon-Tyne near Newcastle. This building, completed in 1969, was among the first British projects to use heat recovery air conditioning.

**The film also shows the first Integrated Environmental Design office block in this country—our own Head Office at Chester.**

One of the largest office complexes now under construction to the IED concept is for Simon Engineering in Cheshire. But not only large offices and factories can benefit from IED. A new infants school at Eastergate near Chichester shows the advantages ensuing from IED buildings of modest size. These two buildings featured in the film show the range of requirements that can be met by integrated environmental

design. It is explained how this technique can be applied with equally successful results to such commercial under-takings as shopping complexes, museums, etc.

The film demonstrates the considerable progress which Integrated Environmental Design has made in the past three years and shows that there is wide scope for its application to industrial and commercial buildings in the future.

**"IED—Progress Report"** in 16 mm colour/sound lasts 16 minutes and is now available from The Electricity Council Film Library, 1 Charing Cross, London SW1A 2DS.

## 'THAT'S ELECTRIC IRON JOE'

**"That's Electric Iron, Joe,"** a new film about modern methods of electric melting, is now available from The Electricity Council Film Library, 1 Charing Cross, London SW1A 2DS. In 16 mm colour/sound, it has a running time of 22 minutes.

The film is intended to be shown to iron foundry and factory management, metallurgists, buyers and users of castings, and appropriate training and educational audiences. Speakers' notes are provided with the film and it is strongly recommended that they should be used with all film audiences.

**"That's Electric Iron, Joe"** centres around foundry worker Joseph Taplow, retired after fifty years of coke, sweat and tears. Joe's ex-apprentice, Albert Markby, now foundry manager explains modern methods of electric melting to a sceptical Joe. The benefits of electric melting are made clear. Best quality iron is produced using cheaper materials in the melt, control is accurate, working conditions are better and profitability is higher.

## TWO NEW 'ELECTRICAIRE' FILMS

Two new films about *Electrificaire* warm air central heating have been added to The Electricity Council Film Library.

**"Sold on Electrificaire"** is intended for showing to house builders and developers. **"Trouble-free Electrificaire"** is directed towards local authority audiences.

The films show typical installations in modern homes with *Electrificaire* central heating and electric water heating. The owners give their comments and reactions on the comfort and economy of the systems.

Both films are in 16 mm colour/sound and each runs for 16 minutes.

The films are obtainable from The Electricity Council Film Library, 1 Charing Cross, London SW1A 2DS.

# GROW ELECTRIC

## WATER

### Practical and Decorative uses Outdoors

By a Gardening Correspondent

**W**ATER has a very important part to play in the garden. It can be a very practical aid to the gardener, keeping his various plants supplied with essential moisture when the weather is dry. It can also be used as a source of pleasure as a tranquil pool or a dramatic waterfall or a sparkling fountain. Water controlled by electric taps and pumps can be of wonderful service.

Pop-up watering heads, which rise above the ground when in action, and return to their holes when the supply is turned off, provide a labour and time saving method of watering gardens as well as golf-courses. They are controlled by low-voltage electric valves activated by a central control panel. The amount of water applied can be set, also the duration. A fascinating aspect is that the watering system can be set to come on at certain times and parts of the garden watered in rotation. This is a very useful feature because the water can be applied at night when usually pressure is at its best because there is little or no demand.

In some areas water pressure is sometimes well below the average, about 50 p.s.i., and a "boost" is often necessary. An electrical pressure pump is the answer. If water pressure is not constant, this type of centrifugal pump will ensure an even flow. Powerful electric pumps can be used to bring up water from wells or from streams for the garden.

Amateur gardeners are particularly interested in the use of water for water features especially as pre-formed plastic liners for pools, stream courses and waterfalls makes the installation easy. The basic unit in all water features is the electric pump, small ones deal with about 250 gallons per hour. Larger types

have an approximate output of 3,000 galls. per hour, depending on the head of the vertical distance between the water surface of the pool and the outlet.

Pumps can be either submerged or, in the case of surface pumps, situated outside the pool. These require a little more plumbing but are very efficient and powerful. For a modest effect the smaller pumps are quite

adequate for the average garden. Several submersible pumps operate on low-voltage of about 24 volts through a specially designed transformer which is supplied with the pump. Some can work a fountain and a small waterfall simultaneously. If a larger flow of water is required, a larger capacity pump is necessary—especially where a big waterfall is designed.

For a fountain effect, a special head is fixed to the pump itself or a length of plastic pipe connects the fountain and the pump. For a waterfall or stream effect, a pipe is connected to the outlet end of the pump and taken to the top of the waterfall or stream course. An electric pump can be used in conjunction with a wall-mounted ornament such as a lion's head. Here the water spouts out of the beast's mouth and into a pool on a patio floor. Most of the electric pumps for water features are mains-voltage types and if expertly installed are completely safe.

## Dinorwic Scheme—Mobile Exhibition

**A** mobile exhibition is visiting 19 towns and villages in North Wales over an eight-week period ending on October 14th, to ensure that local people are fully informed about the Central Electricity Generating Board's proposals for a hydro-electric pumped storage scheme at Dinorwic, near Llanberis, Caernarvonshire.

It will be similar to the five-day exhibition, "Power in the Welsh Mountains," held at Llanberis in June and will carry the same title. Though over 7,000 people visited the last exhibition many others interested in the scheme, particularly those living outside Llanberis, were unable to attend. The CEGB, therefore, felt that a mobile exhibition would be welcome. It will enable people living within a 10-mile radius of Llanberis to obtain an 'on-the-doorstep' explanation of the scheme and also give those already familiar with the project another opportunity to question CEGB engineers.

The mobile exhibition consists of a specially produced 20-minute colour film, "Power in the Welsh Mountains," with Welsh and English commentaries, and a scale model of the scheme and display material.

Admission to the exhibition is free, and it will be open from 2.30 p.m. to 8.30 p.m. on the following final days:

### October

3rd	—Brynrefail
4th	—Bontnewydd
6th—7th	—Penygroes
10th	—Llanrug
11th—14th	—Llanberis

# INCREASED BENEFITS

## For only 10p per week

### As from 1st October, 1972

#### Hospital In-Patient

£10.50 per week – Contributor  
£2.80 " " – Wife of contributor  
£1.75 " " – Children of contributor

#### Continuation Sickness

£3.50 per week following In-Patient  
treatment for contributor only

#### Hospital Out-Patient

£3.50 per week for contributor only

#### Maternity

£7.50 for each baby born.

#### Convalescent Service

Two weeks convalescence for contributor,  
with Cash Grant of £3.00 per week –  
£2.00 per week for contributor's wife.

#### Optical

For contributor only  
£2.50 for one pair of spectacles  
£4.00 for two pairs of spectacles  
(reading and distance)  
£4.00 for bifocals

#### Dental

For contributor only  
£2.50 for upper or lower set of dentures  
£4.00 for full set

Can you honestly afford  
*not* to join this scheme?  
Think of the *extra security*  
and *added protection* you'll  
be giving yourself and  
your family for the future –  
and all for **only 10p per  
week.**

Be wise, be a contributor.

**THESE BIG BENEFITS  
CAN BE YOURS.  
POST THE COUPON  
FOR FULL DETAILS**



Please send me your latest  
leaflet.  
I am/am not a contributor.

Name \_\_\_\_\_

Address \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Age \_\_\_\_\_

To:  
Merseyside Hospitals Council  
(Inc.),  
87 Lord Street, Liverpool L2 6PQ,  
Tel: 051-236 7051