

Working Safely and Avoiding Danger

from Underground Services and other Utility Apparatus



Foreword

The Jersey Construction Council welcomes this practical guidance on Working Safely and Avoiding Danger, jointly produced by the Jersey utility companies.

This booklet will prove to be a valuable tool for all associated with the Jersey construction industry. By taking note of its simple guidelines, we can all work safely, avoiding danger. I recommend, as Chairman of The Jersey Construction Council, that firms in the construction industry issue this book to all their operatives and they are encouraged to become familiar with the advice and guidance therein.

It is particularly useful for the variety of earlier guidance from individual utilities to have been consolidated together and updated to cover modern working practices. I believe this guidance will become the standard textbook for working near services.

I would like to congratulate all the Jersey utility companies for their initiative in producing an extremely useful booklet.

Paul W. Harding BA DipArch RIBA
Chairman
The Jersey Construction Council Ltd

Foreword continued

Damage caused to electrical and gas services results in a significant risk of injury to workers and also, in certain situations, members of the public. It is for this reason that health and safety legislation requires measures to be put in place to control these risks.

This booklet, which is a revision of previously published guidance, has been prepared by the utility companies, in conjunction with representatives of the construction industry, with the intention of providing practical guidance on safe working practices which will reduce the risk of injury and help to ensure that the legal requirements for health and safety are met.

In this revision, the opportunity has been taken to extend the guidance on working near services to include water pipes, sewers, drains and telecommunication services. Whilst the immediate impact of damaging these services may not seem to be as severe as electricity and gas services, the potential health risks from damaging water and sewer services and the disruption of communication services can result in serious consequences.

The adoption of the sensible precautions set out in this booklet will help to ensure that safe working practices are carried out. I would therefore recommend that everyone in industry follow the guidance which will help to reduce risks and, by doing so, comply with their legal duties under health and safety legislation.

Colin Myers
Director of Health and Safety Inspectorate
Employment and Social Security Department
States of Jersey

The Council of The Jersey Building and Allied Trades Employers' Federation fully embrace these updated guidance notes covering an important aspect of construction work in the Island.

All those in the industry charged with carrying out work of this nature, will regard this booklet as an essential aid. It consolidates all that is needed, offering simple and helpful guidance, whilst ensuring the utility companies involved are at the end of the telephone. I would hope this booklet is widely distributed so that even the man in the street is aware of his legal responsibility for health and safety in these matters.

Thanks must be extended not only to the utility companies but also to the Jersey Council for Safety and Health at Work for pursuing this initiative to its fruition.

George Gilbertson
President
Jersey Building and Allied Trades Employers' Federation

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1 Introduction

1.1 Scope / where this guidance applies

This booklet updates and replaces the guidance contained in the Jersey Council for Safety & Health at Work booklet 'Working Safely in the vicinity of Underground and Overhead Electrical Cables and Gas Pipes and Gas Installations' published in 1996.

The scope has been widened to include advice for all utilities' apparatus, both buried and above ground, and also provides specific advice for disconnection of services in advance of demolition or building works.

The dangers that can arise from work near underground services and other installations are outlined in conjunction with advice on how to reduce the risks. Only the risks to the health and safety of people and the protection of property are considered, but due regard must be given to consequential risks and losses such as the inability to make an emergency call if a telecommunications cable has been damaged. The costs to repair underground services can be substantial and when loss of profit and other factors are included may run into many tens of thousands of pounds. Fines for non-compliance with Health & Safety legislation may also be of similar magnitude.

This guidance applies to situations where underground services may be found and where work involves penetrating the ground at or below surface level. Buried services are widespread, on both public and private property, and their presence should be assumed unless it has been shown otherwise. Where appropriate, guidance is given for works in the vicinity of above ground utility installations.

1.2 Who this guidance is aimed at

This guidance is aimed primarily at those with legal responsibility for health and safety including contractors, employers, owners and operators of underground services, managers and supervisors and other concerned with planning, organising and supervising work near such services. This work includes work by or for the utilities and also roadworks, construction and demolition work.

The guidance is equally useful to private householders and others who, although not necessarily subject to statutory health and safety legislation, may place themselves at considerable risk if they cause damage to utility services.

1.3 How to use this guidance

Guidance on the general precautions to be taken to prevent damage is contained in the section 'Safe Systems of Work'. Additional guidance for each type of buried service or above ground installation is given in the sections 'Precautions for Particular Services'.

1.4 Definitions

The term 'service(s)' means all underground pipes, cables and equipment associated with the electricity, gas, water (including piped sewage) and telecommunications industries.

The term 'above ground installation' means all electricity sub-stations, gas pressure reduction stations, meter housings, telecommunications connection cabinets, pumping stations etc.

The term 'service connection(s)' means pipe or cables between distribution mains (pipes or cables) and individual premises. These may also be known as 'services', 'communication pipes' or 'customer connections'.

1.5 The Law

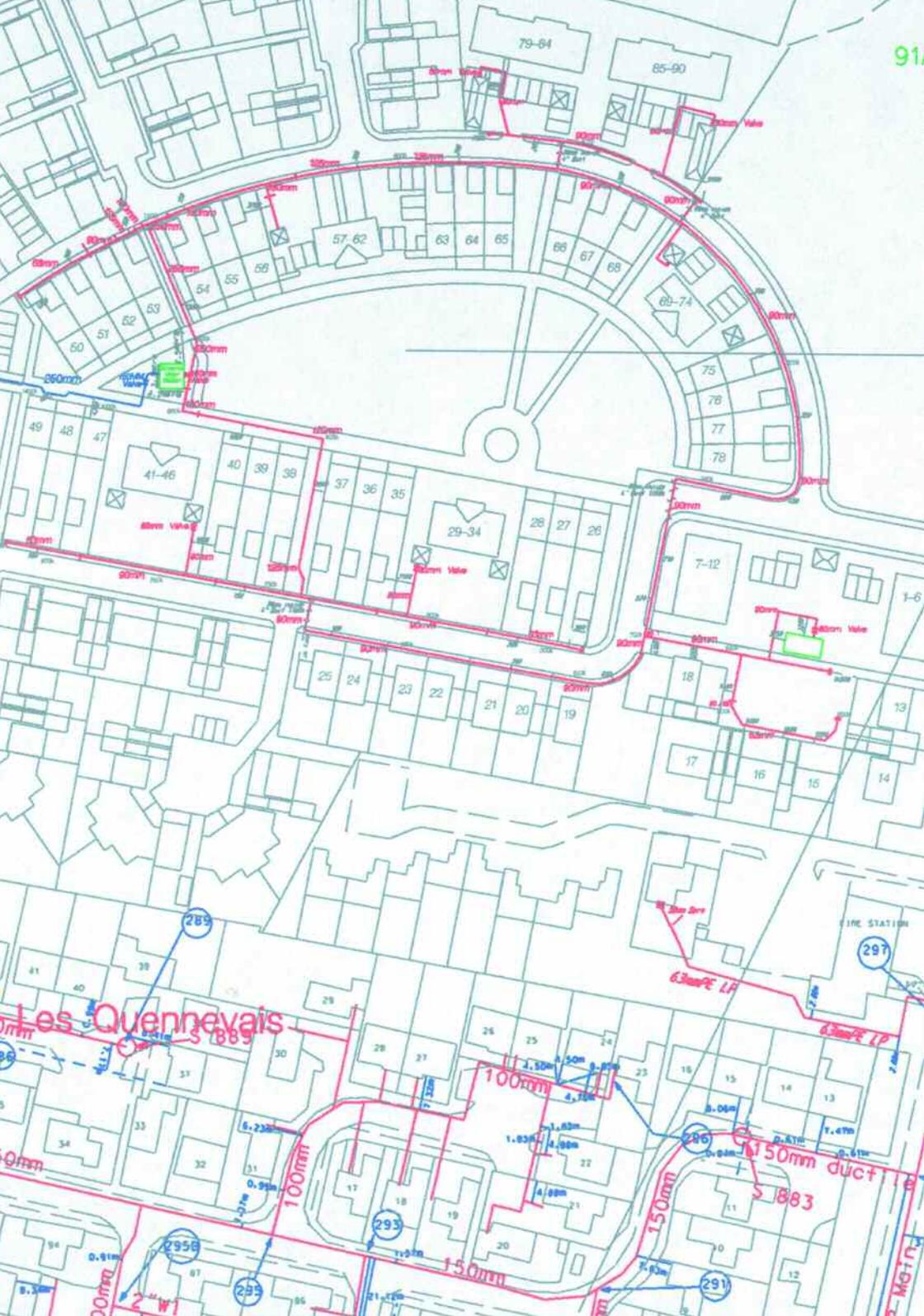
The Health and Safety at Work (Jersey) Law 1989 is the main statutory occupational health and safety law which applies in the Island. Part II of the Law sets out general duties in relation to health and safety at work on all those involved with work activities, including manufacturers, designers, employers, the self employed and employees in respect of persons at work and members of the public.

The Electricity at Work (Jersey) Regulations 1983 sets out detailed requirements to control health and safety risks from electricity. They include specific requirements setting out the need to ensure that electrical equipment is not exposed to wet, dirty, dusty or corrosive conditions and the need to ensure that risks are controlled when working near underground electrical cables or overhead lines.

The guidance set out in this booklet will assist persons with duties under the Health and Safety at Work (Jersey) Law 1989 and the Electricity at Work (Jersey) Regulations 1983 to meet their legal requirements.

Other legal requirements for persons working on construction sites, for example the Construction Safety Provisions (Jersey) Regulations 1970 and the Construction (Personal Protective Equipment) (Jersey) Regulations 2002, may also apply to work carried out involving utility services and equipment. Guidance on meeting these legal requirements is not referred to in this booklet.

Further information on the legal requirements for health and safety may be accessed on www.ess.gov.je/hsi and reference to the law and regulations accessed on www.jerseylegalinfo.je



Les Quenneyais

6.3mPE LP

100mm

150mm duct

150mm

200mm

295

293

296

297

291

291

0.91m

2 The Dangers

2.1 Electricity cables and Overhead Lines

Injuries are usually caused by the explosive effects of arcing current, and by any associated fire or flames that may result, when a live cable is penetrated by a sharp object such as the point of a tool. Such effects can also occur when a cable is crushed severely enough to cause internal contact between the conductors. Injuries are typically severe, potentially fatal, burns to the hands, face and body. There is also a risk of electric shock.

Incidents may also arise from cables that have been damaged but left unreported and unrepaired.

Other nearby services, such as plastic gas pipes, may also be at risk from damaged live electricity cables. This could result in explosions and a greater fire risk.

Inadvertent contact or being in close proximity to overhead electricity lines with equipment such as scaffold tubes, irrigation pipes, metal ladders or vehicles, such as cranes, poses a risk of electric shock. Materials, such as wood or plastic, which are normally considered to be electrical insulators, can also become a pathway for electrical current if damp or dirty. Direct contact with overhead lines is not necessary as electrical current can arc or flashover any gap between the overhead lines and the object.

2.2 Gas pipes

Damage to gas pipes can cause leaks that may lead to fire or explosion. There are two types of damage:

- That which causes an immediate leak;
- That which causes a leak some time later. The damage may occur at the time the work is carried out or subsequently: for example poor backfill compaction or reinstatement may leave a pipe inadequately supported or subject to unequal force. Similarly damage to the protective pipe wrapping may lead to corrosion and eventually a leak. The consequences of such damage may take many years to materialise.

Outside of the areas served by mains gas, bulk LPG (Liquefied Petroleum Gas) supplies may be installed often having buried distribution networks with individual customer connections.

2.3 Water pipes, sewers and drains

Although damage to water pipes is less likely to result in injury, the following may occur;

- A jet of water from a main can injure a person. It may also contain stones or other hard objects ejected from the ground around the pipe;
- Leaks of water from underground pipes can affect adjacent services and reduce support for other structures.
- Damage to, or removal of thrust blocks can result in sudden loss of containment and the movement of pipe fittings that may travel some distance or cause impact damage.

While some sewage is pumped at pressure, sewers are generally gravity-fed, and the main hazards from damage to a sewer are the possibilities of contamination and subsidence.

2.4 Telecommunications cables and fibre optics

Damage to telecommunication and cable TV cables may require expensive repairs and can cause considerable disruption to those relying on the system, especially emergency or essential services. The risks of direct personal injury are normally low, but claims for consequential losses may be substantial.

Flammable and toxic gases can enter cable-carrying ducts, particularly if the duct has been damaged. Such gases can accumulate in chambers, manholes etc. and pose a risk to operatives who need to work there.

2.5 Other services

In addition to the above utility services, the presence of other pipes and cables should be anticipated. These include fuel oil pipes at States housing developments and private electricity and telecommunications cables.

3 Safe Systems of Work

3.1 Risk assessments

Safe systems of work to avoid danger from contact with underground services and overhead lines have six basic elements:

- Assess the risks
- Plan the work - obtain plans and details of services from all utility companies
- Check that the plans are accurate
- Carry out the work in a safe manner
- Ensure remediation work is carried out
- At all stages THINK and REVIEW

The assessment of risk should be considered at all stages of the work, from planning through to final reinstatement. This may be accomplished by the use of formal risk assessments coupled, where necessary, with a work permit system.

Risk assessment should include all related work activities and identify training and competency needs as well as the level of supervision required for the risks involved.

3.2 Planning the work

Many dangers can be avoided by careful planning before the work starts.

Anyone planning or designing an engineering scheme or construction project should take due account of the potential presence of utility services and make arrangements for their diversion, disconnection or protection at the design stage of the work.

3.3 Plans and information

Plans or other suitable information about all buried services and above ground installations in the area should be obtained before excavation work starts.

The utility companies, Public Services and other service operators should provide either up-to-date, readable plans, which show the approximate line and depth (where known) of all their known services in the proposed work area, or other suitable information which achieves the same aim.

Plans vary in scale, content and style and give an indication of the location, configuration and number of services at a particular site. They provide information that should help subsequent tracing by location devices and trial holing, but are rarely drawn accurately to scale and reference points used for dimensions may have changed since the plans were prepared. For various historical reasons utility plans are incomplete and do not normally show service connections.

3.4 Cable and pipe locating devices

The position of any services in or near the proposed work area should be pinpointed as accurately as possible by means of a locating device, using plans and other information as a guide to the possible location of services and to help interpret the signal.

Operatives should be trained in the use of locating devices and competent in their various modes of operation and interpretation of the signals obtained.

The line of any identified services should be noted and marked with degradable waterproof crayon, chalk or paint on paved surfaces such that the marks extend outside of the proposed excavation area. In grassed areas or on unmade ground spray marker paints or shallow wooden pegs may be used to indicate a located service route.

There are many types of locating device available, varying in method of operation, cost and complexity. The principle types are listed below, but all have limitations and selection should be based on the nature of the services to be traced.

- Electricity mains frequency detectors
- Radio frequency detectors
- Transmitter – receiver instruments
- Metal detectors
- Ground probing radar

3.5 Safe working practice

Excavation work should be carried out carefully and follow recognised safe digging practices. Once a locating device has been used to determine position and route, excavation may proceed, with trial holes dug using suitable hand tools as necessary to confirm the position of any buried services. Special care should be taken when digging above or close to the assumed line of such a service.

Hand-held power tools and mechanical excavators are the main causes of danger and they should not be used close to underground services. Advice on appropriate safety margins is given in the relevant sections of 'Precautions for Particular Services'.

Burns are the main injuries that result from damage to live electrical cables or from fire or explosion following a gas leak. In many cases burns are made more severe by the injured person not wearing appropriate protective clothing.

Additional specific measures should be adopted where trenchless methods are used for installing pipes and cables. Existing services should be exposed by careful trial holing and moling or drilling should always be directed away from these services.

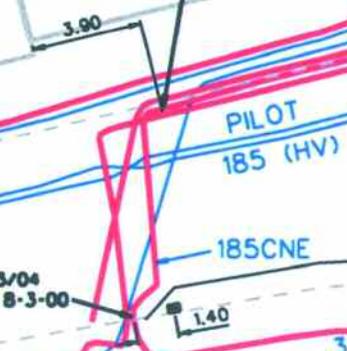
Special precautions are necessary for work in the vicinity of overhead electricity or telephone lines. Advice on appropriate working practice and safety margins is given in the relevant sections of 'Precautions for particular Services'.

CABLE RE-SLEEVED & P.V.C. BOXED
DUE TO DAMAGE.
L. PAGETT, 25-5-99

CABLE RE-SLEEVED & P.V.C. BOXED
DUE TO DAMAGE.
L. PAGETT, 25-5-99

- .2 5848
- .3 4825-4826
- .3 8525
- PILOT 5854
- 185 (HV) 5854
- PILOT 6216
- 185 (HV) 6207
- PILOT 2647-2653
- 185 (HV) 2839-2842
- 95A (HV)
- 95A (HV) 5796

L.V. JOINT
186/07 > 453/04
L. PAGETT, 28-2-00



185CNE

185 (HV) 5854
PILOT 5854

95A (HV) 5854
185A 5848

185 (HV) 6207
PILOT 6216

LA MOTTE HOTEL

(HV)
185A

95A (HV) 5796

.3 5798

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185CNE

Backfill material adjacent to cables, pipes and ducts must be selected fine material or sand and placed to a minimum depth of 150mm below, around and over the pipe or cable. The backfill adjacent to cables and pipes must be well compacted by hand and must not contain stone, bricks or lumps of concrete or tarmac etc. Good compaction is particularly important beneath the duct, pipe or cable to prevent any settlement that could subsequently cause damage. Appropriate tiles or marker tape should be replaced where necessary. Special backfills may be employed on certain 'strategic' circuits that may require replacement by the appropriate Utility.

3.6 Disconnection of services

Services should be disconnected or otherwise made safe prior to demolition works, or other work activity that may cause interference damage. See Section 5 for details of the disconnection procedures to be followed in respect of electricity, gas and other services.

4 Precautions for Particular Services

4.1 Electricity

4.1.1 Electricity cables and installations

There is always a possibility of uncovering an underground electricity cable when carrying out any excavation work.

Jersey Electricity have been laying underground electricity cables since the 1920's when they become the only undertaking permitted in the Island to provide electricity mains supply. However, it is only since the 1950's that large scale records of electricity mains supply cables have been maintained.

Electricity cables may also be uncovered on private property where private networks or sub-mains have been installed, or where electric lighting has been provided in a garden. It is also possible that demolition work has been undertaken without following correct procedures thereby leaving a live electrical cable buried under the rubble.

It is possible that anyone carrying out excavation work may come into contact with a live electrical cable of which no record exists. It is essential that all possible measures be taken in order to minimise the risk of severe injury or creating a dangerous situation.

4.1.2 Identification of Electricity Cables

Electricity mains and service cables are now normally laid at a minimum depth of 700mm below the surrounding ground level, but older cables may be found at depths of 450mm or less. In certain locations cables may be found at a shallower depth where obstructions have been encountered or where the ground level has been reduced since the installation was carried out.

Current and previous methods of marking electricity cables are detailed below:

Circuit Designation	Current Marking Method	Previous Marking Method
90,000 Volt HV Cable	Interlocking Plastic Tiles	Interlocking concrete tiles
33,000 Volt HV Cables	Interlocking Concrete Tiles	Grey Concrete Tiles
11,000 Volt HV Cables	Interlocking Plastic Tiles	Grey or Red Concrete Tiles
415 Volt LV Cables	Yellow Warning Tape	Grey Concrete Tiles
415/240 LV Service Cables	Yellow Warning Tape	Grey Concrete Tiles

The 90,000 & 33,000 Volt circuits are of particular importance and all excavations in the vicinity of these cables should be avoided if possible. If, however, this is not possible, Jersey Electricity should be contacted at the planning stage. Guidance notes entitled 'Notice of Location for 33kV & 90kV Electricity Distribution Cables' are available on request from Jersey Electricity.

It should also be noted that all 90kV and some 11kV Cables may have been encased in a Cement Bound Sand (CBS) backfill that must only be removed by competent persons authorised by the Jersey Electricity Company.

In the past many cables, particularly service cables laid before 1980, may have been installed without any marking. It is also possible that on private property some service cables may have been installed in orange 'Osma' ducting commonly used for drainage purposes. This practice is now prohibited.

There will be a number of instances where electrical cables are not identified. It must not be assumed that these cables are another service supply or that they are no longer in use. If in doubt, work should cease and identification of the cable confirmed.

Remember If in doubt seek advice from Jersey Electricity:

24 hour emergency number 505050

General enquiries during normal office hours 505460

4.1.3 Procedure for Identifying Electricity Cables and Plant

Contact should first be made with Jersey Electricity enclosing a site plan, preferably to a scale of 1:500 or greater in order to ascertain if there is any record of a cable or plant.

If a record of a cable exists, the site plan will be returned with the known cable routes indicated.

It is the Contractors responsibility to ascertain the exact position of the cable. It is recommended that a cable avoidance tool (commonly referred to as a CAT) be used. The ability of these instruments to detect a cable may depend on a number of factors such as the capabilities of the instrument being used, the location and type of cable being detected and the skill and experience of the operator. It should be noted that it may not always be possible to detect a live cable; therefore the absence of an indication of a cable must not be taken as proof that the cable is not present. Similarly the absence of a signal from a known cable should not be taken as indication that the cable is not live. Electrical cables are not necessarily installed in straight lines and care should be taken to ensure that deviations from the route of the cable are identified.

The route of the cable should then be clearly indicated with warning notices. Steel spikes or long pegs which could damage the cable should not be used.

Trial excavations dug by hand across the presumed line of the cable, approximately 5 metres apart or as necessary should be made to locate the route and depth of the cable. When excavating in close proximity to the cable all possible care should be taken. Mechanical excavators or power tools, other than for breaking paved surfaces, should not be used within 0.6 metres (for Low Voltage), or 1 metre (for High Voltage) of the indicated line of the cable unless prior agreement has been reached with Jersey Electricity. Please also refer to 4.1.2 above. When power tools are used to break paved surfaces, care must be taken to ensure that penetration of the surface is kept to the minimum required. Only 'bladed' hand tools (shovels or spades) should be used in the anticipated vicinity of the cable. As the digging progresses a careful watch should be kept for indication of the cable and regular checks made with the cable locating device to determine the position of the cable. Cables embedded in concrete or under other difficult obstacles where the use of power tools is necessary, should be made dead or an alternative method of work agreed with Jersey Electricity before the work is commenced.

Backfill around electricity cables must be either selected 'black' sand or equivalent, or where necessary CBS (cement bound sand) that must be installed by competent persons. Marker tapes or tiles must also be replaced, as they will indicate the presence of cables to other contractors undertaking excavations in the vicinity.

If at any time during excavations around electricity cables or plant, damage should occur or be uncovered, however insignificant, work around the cable or plant should cease, all personnel should be removed from the vicinity and Jersey Electricity must be contacted immediately.

4.1.4 Installation of New Electrical Supplies for New Developments

The Main Contractor must keep on site records of all the buried cables and/or plant installed on a new development and make sure that this information is passed on to anyone carrying out excavation on the site. It is the Main Contractors responsibility to ensure that everyone working on the site is familiar with the precautions and protective measures that need to be taken when working around electricity cables or apparatus.

By agreement with Jersey Electricity, Contractors may install electricity ducts for the installation of cables at a later date. All ducts that are to contain electricity cables must be black and embossed with the wording "ELECTRICITY" and should have yellow Electricity marker tape installed above. Electricity main or service cables will not be installed in any other type of duct.

Jersey Electricity holds records of the installation of electricity main and service cables. However, where the Contractor is responsible for installing the service duct, he should record and inform Jersey Electricity of any variation in the agreed route and depth.

On sites where the electricity main and service cables are installed in stages, it is important to record the progress of the work. As soon as electrical cables are laid in position they must be considered as being live and a possible hazard.

The Main Contractor on a construction site is responsible for ensuring that not only his employees, but also those of any other sub-contractor working on the site are not exposed to risk from operations that are being carried out on the site. It is therefore necessary to ensure that anyone carrying out work adjacent to underground or overhead electrical cables are aware of their location and that the necessary precautions are being taken to avoid the exposure of people to unnecessary risk.

4.1.5 Precautions to be Taken when Working in Close Proximity to Overhead Lines

Before the work commences on site inspect the area for any overhead electrical service lines. Do not assume that overhead lines are telephone lines or other communication cables - if in doubt check with Jersey Electricity. Where any work, movement of equipment or vehicles, is likely to take place within 9 metres of any overhead electrical cables, notify Jersey Electricity.

Advise Jersey Electricity of all anticipated site activities including the use and movement of mechanical plant and its access to and from site and work positions. Note the use of mobile cranes for delivery purposes is often overlooked.

If shrouding is installed by Jersey Electricity, the Contractor should ensure by regular inspection that the integrity of this protection is maintained for the duration of the work.

If such protection is damaged or dislodged, stop work within 3 metres of the incident and notify Jersey Electricity immediately. **DO NOT ATTEMPT TO REPAIR OR REPLACE.**

Shrouding is provided as a means of TEMPORARILY REDUCING the risk of inadvertent contact with bare conductors and **MUST NOT** be considered the same as permanent insulation.

Observe any limitations notified to you by Jersey Electricity Company and ensure all employees or sub-contractors are aware of the safety requirements.

DO NOT erect scaffolding or other structures around overhead lines without prior consultation with Jersey Electricity.

DO NOT hang objects from or lean objects against overhead conductors, particularly ladders, scaffold poles or fittings.

All long objects should be carried horizontally below shoulder level in the vicinity of overhead lines.

Remember – although conductors may be shrouded this does NOT mean that they are safe to touch. The effectiveness of any shrouding will depend on the prevailing weather conditions. Surface moisture or water retention through exposure to rain will significantly increase the risk of electric shock if touched.

Any damage that is discovered or caused to overhead lines, poles or associated equipment should be immediately reported to Jersey Electricity.

4.2 Gas pipes and installations

4.2.1 Identification of gas pipes

Gas mains and service pipes may be of cast iron, ductile (SG) iron, steel, or yellow plastic materials (PE) and operate at pressures up to 7 bar (100psi).

Buried gas networks exist to distribute mains gas and also as local LPG supply networks at housing developments or commercial, horticultural and agricultural establishments. These LPG installations, with either above ground or buried storage vessels, are mainly in areas beyond the extent of the mains gas network.

Both mains gas, as distributed by Jersey Gas Company, and LPG, are heavier than air and can accumulate at ground level or in pits and trenches if allowed to escape.

Plans and safe working advice should be obtained at the planning stage or, in the event of emergency works, as soon as practicable.

Plans may be obtained from: Distribution Drawing Office, Jersey Gas Company Ltd, PO Box 169, St Helier JE4 8RE. Telephone (switchboard) 755550 Fax 769822
Email mains@jsy-gas.com.

Plans do not normally show the position of individual consumer service connections and their existence should be assumed. It may be possible to estimate the probable line of the service connection pipe from the gas meter position, or from the point of entry into the premises. Gas service pipes may be found in both public and private areas and gardens. In some locations service pipes run above ground for part of their route.

It is important that the location of underground gas pipelines is considered when planning building, excavation, landfill or other such work. Such activities may either cause damage to the pipelines or deny access to them for maintenance purposes. Early contact at the planning stage is very important, as it will allow full discussion of proposals to ensure the safety of plant and operatives.

4.2.2 Working in the vicinity of gas pipes

Where heavy plant may have to cross the line of a gas pipe during construction work, the number of crossing points should be clearly identified and kept to an absolute minimum. Crossing points, other than those where the pipe is protected by an existing road, should be suitably reinforced to a design to be agreed with Jersey Gas Company.

The usual depth of cover for gas mains is 750mm in the roadway and 600mm in the footway. The usual depth of cover for gas services is 450mm in both roads and footways, and 375mm on private property. The presence of gas pipes laid in trenches may be indicated by a marker tape laid above the main during backfilling. Remember that the depths given are only a guide and that pipes may be found at shallower, or greater, depths.

Gas pipes are generally laid directly in the ground via open-cut trenches, but if laid by a trenchless technique such as displacement moling there will be no evidence of ground disturbance or visible trench scars. PE mains may be inserted into redundant metallic mains that may be intact or split as part of the insertion process. Pipes laid using the two latter methods will not have marker tape covering them.

PE gas pipes cannot be traced electronically; they should be located by hand dug trial holes before mechanical excavation begins.

Gas pipes may have projections such as housings, valves, siphons and standpipes that are not shown on plans. To allow for this mechanical excavators should not be used within 500mm of a gas pipe.

Where the excavation of trenches adjacent to a gas pipe may affect its support and integrity then consultation must take place to agree a satisfactory method of providing support during the work. If this is not possible then it may be necessary to divert the gas pipe before the work commences and this would be undertaken on a rechargeable cost basis. Gas pipes shall not, under any circumstances, be used as an anchor or support for other plant or equipment.

The danger created by damaging a gas pipe with an excavator is much greater than if the damage is done with a hand held power tool (the opposite is true for work near electricity cables). The effects of mechanical damage may not occur at the point of impact, for example:

- Damage to a service connection may result in unseen damage to the connection inside the building
- Gas from a damaged pipe may travel along the line of a service pipe and into a building, causing a dangerous build-up of gas inside the premises

Thrust blocks, pipe supports or restraints should never be disturbed as this may cause sudden failure of the main.

Services should not be laid above, below or within 300mm of any gas pipe.

Because of the risks they pose, the following should not be undertaken without consultation with Jersey Gas Company:

- The use of explosives within 30 metres of any gas pipe
- Piling or vertical boring within 15 metres of any gas pipe
- Excavation work within 10 metres of any above-ground gas installation*
- Building a manhole, chamber or other structure over, around, or under a gas pipe
- Work which results in a reduction of cover or protection over a pipe
- Work which results in a significant increase in cover over a pipe

* These may be GRP or brick / block built kiosks, or may be an integral part of an existing building or structure.

Uncovered gas pipes should be supported to the satisfaction of Jersey Gas Company and pipes should never be used as an anchor or to give support.

Backfill around gas pipes should be screened sand, quarry dust or other similar fine material, NOT bricks, stones or other hard materials.

Concrete (including foam concrete for reinstatement) backfill should not be used within 300mm of a gas pipe.

Do not use power compaction equipment over a gas pipe until it has been covered with at least 200mm of suitably compacted fine material.

If welding or other hot working involving naked flames or other possible sources of ignition is to be carried out within 10 metres of exposed gas plant, Jersey Gas should be asked to check the atmosphere before work begins and at regular intervals during the work. Care should be taken that no damage occurs, particularly to plastic pipes or to the protective coatings on other gas pipes.

If at any time during excavations around gas pipes damage should occur or be uncovered, however insignificant, work around the pipe should cease, all personnel should be removed from the vicinity and the Jersey Gas Company advised immediately.

4.2.3 Procedure in the event of an escape of gas

If a gas leak is suspected, repairs should not be attempted. Instead the following action should be taken immediately:

- Evacuate everyone from the immediate vicinity of the escape. If it is suspected that gas is entering a building, warn the occupants to leave the building (and any adjacent buildings) until it is safe for them to return
- Inform Jersey Gas Company on 755555
- Prohibit smoking, and extinguish all naked flames and other sources of ignition

4.2.4 Installation of gas pipes for new developments

All enquiries regarding the proposed installation of gas supplies at new developments should be addressed to the Load Development Officer on 755550 at Jersey Gas Company. See section 6 for full contact details.

A large proportion of incidence of interference damage to gas pipes occurs on new development sites. It is therefore essential that the main contractor maintains accurate and current records of all buried utility apparatus and ensures that this information is passed on to anyone carrying out works on site that may create risk of interference damage. The responsible site manager should also ensure that everyone working on site is familiar with and understands the advice contained in this publication.

Where the main contractor undertakes backfilling and reinstatement of trenches following installation of gas pipes he must ensure that the warning marker tape provided is installed in the backfill approximately 200mm to 300 mm above the line of the pipe.

4.3 Water pipes and installations

Water mains and service connections are usually laid at similar depths to gas plant, i.e. between 600mm and 900mm cover for mains and between 375mm and 600mm for service connections. Local circumstances, however, may necessitate shallower depths.

Prior to work commencing plans should be obtained from Jersey Water and services traced using a pipe locator. Safe digging practice should be adopted, especially for trial holes and where hand excavating to locate plastic pipes.

At bends in mains and other locations, concrete thrust blocks may be used. Under no circumstances should either thrust blocks or the ground supporting them be disturbed as this may cause sudden failure of the main.

Exposed water pipes should be supported as necessary and the correct method of backfilling used. See advice for backfilling around gas mains in Section 4 (ii).

If a water pipe or its wrapping is damaged, Jersey Water should be informed immediately. Unauthorised repairs are prohibited.

4.4 Sewers and drains

The advice for sewers and drains is similar to that for water services, especially in respect of pumping sewers, which operate at significant pressures although this pressurisation may not be continuous.

Due regard should be given to the dangers of Leptospirosis and other biological hazards when carrying out works in the vicinity of sewers and drains.



Grassett Park

Le Plat Douet

J140

J137

PH

Garage

VICTORIA DIGI-TOOTH VICTORIA CLOSE

AG-4

AG-4

AG-4

AG-4

AG-4

GIGL-6

AG-4

AG-4

GIGL-6

CR-6

21.0

25.0

27.0

25.0

GIGL-6

CR-6

19.0

4.5 Telecommunications cables and installations

Jersey Telecom, Newtel, or the owner of private communications systems should be contacted prior to the commencement of work and their specific advice sought with regard to safe working practice and the avoidance of potentially costly damage.

5 Demolition and Disconnection of Services

5.1 Electrical Disconnection Procedure for Demolition Works

Jersey Electricity must be informed of the proposed work by the submission of a completed Redundant Service Form including associated Meter and/or Premise numbers for each building and service at least 15 working days prior to the commencement of work.

Jersey Electricity will then remove all known electrical supply cables from the premise(s) unless a request has been made for a works temporary supply. A Certificate of Disconnection will be issued for each individual property. The lower half of this form should be detached and sent to the Health and Safety Inspectorate at the Employment and Social Security Department and the top half kept for record purposes.

Until the Certificate of Disconnection has been issued, no work which may expose persons to risk from coming into contact with a live electrical cable should take place and the service termination must be adequately protected against damage or exposure to the elements.

Being in possession of a Certificate of Disconnection does not exempt the Contractor carrying out the work from ensuring that, as far as it is reasonably practicable, persons are not exposed to undue risk and that should any cable or apparatus be discovered during work on site, these must be protected and treated as being live, and Jersey Electricity called immediately.

5.2 Disconnection of Gas Services

Jersey Gas Company should be contacted at least 15 working days in advance of the proposed demolition to determine whether a service disconnection is required, and the estimated cost of this work.

Note: At least 8 days notice is required for the serving of opening notices for consent to excavate in Main or Parish roads.

The presence of 'live' gas services should always be anticipated, particularly old service connections that may have been disconnected beneath floor or ground level and which are still connected to their parent main.

The Jersey Gas Company issue Disconnection Certificates showing the disconnection location and giving advice in the event that other suspect services are discovered.

5.3 Disconnection of Water Services

Jersey Water should be contacted at least 15 working days in advance of the proposed demolition to determine whether a service disconnection is required and the cost estimated to determine such works.

Enquirers are advised that Jersey Water is required to obtain permission from the relevant authority, if applicable, before undertaking disconnections in any public highway.

The presence of a 'live' water service can usually be determined by a stopcock or meter surface box located near the boundary of the property. Once a disconnection form has been completed the water supply to the property will be turned off in the first instance. Work being undertaken in the vicinity of Jersey Water's stopcock should be performed with care. If the supply pipe (downstream of the stopcock) interferes with construction works the pipe should be disconnected from the stopcock to prevent damage to the company's apparatus.

5.4 Disconnection of Sewers and Drains

The Public Services Dept, Drainage Division, should be contacted at least 15 working days in advance of the proposed demolition to determine whether a service disconnection is required.

5.5 Disconnection of Telecommunication Services

Jersey Telecom should be contacted at least 15 working days in advance of the proposed demolition to determine whether a service disconnection is required.

A similar advance notification period is required for telecommunications services supplied by Newtel Solutions or other service providers.

6 Contact details

6.1 Jersey Electricity

Jersey Electricity Company Ltd,
The Powerhouse
PO Box 45, Queens Road
St Helier JE4 8NY
Customer Care Telephone
505460

Fax 880413

24hr Emergency 505050

Email jec@jec.co.uk

Website www.jec.co.uk

Requests for plans should be addressed to the Drawing Office.

6.2 Jersey Gas Company

Jersey Gas Company Ltd
PO Box 169, St Helier JE4 8RE
Telephone (switchboard) 755550
Emergency telephone 755555

Fax 769822

Email mains@jsy-gas.com

Website www.jsygas.com

Requests for plans should be addressed to the Distribution Drawing Office.

6.3 Jersey Water

Jersey Water
Mulcaster House, Westmount Road
St Helier JE1 1DG

Telephone (switchboard) 707300

Emergency telephone 707302

Fax 707400

Email info@jerseywater.je

Website www.jerseywater.je

Request for plans should be addressed to the Distribution Department.

6.4 Public Services Dept

Public Services Dept, PO Box 412
States Offices, South Hill, St. Helier,
Jersey JE4 8UY

Telephone (switchboard) 601690

Fax (South Hill) 768950

6.5 Jersey Telecom

Jersey Telecom, Po Box 53
No 1 The Forum, Grenville St
St Helier, Jersey JE4 8PB

Telephone (switchboard) 882882

24 hr Emergency 882882

Fax 882883

Website www.jerseytelecom.com

Requests for plans should be addressed to the Access Network Manager.

6.6 Newtel Solutions

(Incorporating Newtel Limited, Newtel
Cable and Newtel Networks)

Newtel Solutions

PO Box 233, 1 Colomberie
St. Helier, Jersey JE4 9SY

Telephone (24 hours) 506400

Fax 507979

Email mail@newtelsolutions.com

Website www.newtelsolutions.com

Right: Working safely is no accident.

Flash from low voltage cable strike.

The figure shown is a model. The effects are real.



