



ESB Telecoms Ltd Contractor Safety Guidelines

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DISCLAIMER: - THE CONTRACTOR ACKNOWLEDGES AND AGREES THAT: -

- (1) THE CONTRACTOR'S IMPLEMENTATION OF AND COMPLIANCE WITH THESE PROCEDURES IN NO WAY REDUCES, LIMITS, LESSENS OR RESTRICTS THE CONTRACTOR'S RESPONSIBILITIES AND DUTIES UNDER THE TERMS OF THE CONTRACT OR APPLICABLE LEGISLATION; AND**
- (2) THESE PROCEDURES SHALL BE READ TOGETHER WITH ALL OTHER DOCUMENTS WHICH FORM THE CONTRACT**

NOTE: - ESB Telecoms Ltd reserves the right from time to time to make minor changes, amendments, deletions or insertions to these Contract Safety Guidelines that do not have time or cost implications to the overall Contract. Changes that have a time or cost implication require the prior written agreement of the Contractor.

These Contractor Safety Guidelines have been reviewed by Ger Buckley, ESB Networks.

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1.0 Definitions

In these Contractor Safety Guidelines except where otherwise appears, - words and expressions shall have the meanings.

Client means the person who commissions the project and may be the ESB or a Telecommunications Company such as Vodafone, O2, Meteor or Hutchison.

Contractor means the Company contracted to undertake the specific tasks identified as the Works in the Contract.

ESB Compound means the premises where a high voltage transformer station is located.

ESB Representative means the person nominated by ESB Telecoms to be the contact person for any site-related queries.

ESB Safety Department means a person nominated by ESB Telecoms to approve Safety and Health Plans prior to any Contractor commencing work, without prejudice to such Contractor's statutory or contractual responsibilities.

Method Statement means a statement outlining risks, precautions and a step by step explanation of how the work is to be done.

Project Supervisor Construction Stage (PSCS) means the person nominated to produce the Safety and Health Plan, prepare and update the Safety File, co-ordinate health and safety, ensure that contractors comply with the Safety and Health Plan, notify the HSA if the duration of the works will be in the excess of 30 days.

Project Supervisor Design Process (PSDP) means the person nominated to ensure that health and safety is taken into account whilst designing the project.

Regulations	means the Safety, Health and Welfare at Work (Construction) Regulations 2006 and “Regulation” means a particular clause of such Regulations.
Risk Assessment	means an assessment of any particular risks or hazards that have a potential to cause a danger to safety.
Safety Audit	means a random check on the Works to ensure that all Health and Safety procedures and precautions have been applied.
Safety and Health Plan	means the plan required to be prepared by the Project Supervisor (Construction Stage) pursuant to Regulation 16 (a) to identify all potential safety hazards and to provide adequate measures to minimise the risks associated with them.
Person in Charge of Work (PICW)	means the person nominated to take control of on site health and safety and supervision of on site construction activities.
Safety Induction Course	means a training course provided by ESB Telecoms to inform persons of the safety procedures and hazards associated whilst undertaking construction work on ESB sites.
Site Safety File	means the Safety file required to be prepared by the Project Supervisor (Construction Stage) pursuant to Regulation 21.
Site Safety Representative	means a person elected as site safety representative where 20 or more people are likely to be working on the site.
Work	means all activities relating to the construction, installation, commissioning, repair or maintenance of telecommunication equipment on ESB sites.

2.0 Introduction

These guidelines provide information on the basic control measures that ESB Telecoms Limited has put in place to ensure contractors working on telecom construction activities within ESB property (e.g. Substations, Area Offices/Depots, Generating Stations, Communication Sites and Pylons etc) on ESB's behalf or with the ESB's express or implied permission where the work is for a third party client, comply with all applicable safety standards. It also details the safe working practices that are required of contractors and their personnel.

The purpose of the guidelines is to minimise danger to human life arising through construction accidents or incidents, particularly when working in the vicinity of electrical equipment, overhead lines or underground cables.

These guidelines are not strictly without prejudice to ESB Telecoms assertion that neither it nor ESB has any liability under the regulations.

Under no circumstances shall any requirements of ESB Telecoms or ESB in relation to health and safety issues lessen or reduce or be deemed to lessen or reduce the responsibilities or duties of the contractor under the regulations, any contract or otherwise.

For the purposes of these guidelines "**Work**" refers to all activities relating to the construction activities of masts, towers, poles, installation, removal or modification of any antenna, aerial, dish, support structure, excavation, communication cable, fibre optic cable, building or any other communication equipment, installed either over or underground.

Contractors shall be expected at all times to pay the utmost attention to managing safety in the daily activities of executing the work.

While these procedures outline ESB's approach to contractor safety, the contractor is ultimately responsible for ensuring the safety of his staff, contractors and agents by implementing these requirements and in addition taking all further precautions as the contractor deems necessary to ensure additional safety.

It is the responsibility of the Contractor to carry out a risk assessment and produce a safety and health plan, method statement and safety file.

The contractor is encouraged to implement best practice in relation to safety management and practices.

It is the duty of the contractor to bring these guidelines as well as other safety documentation to the attention of his staff, sub-contractors and agents, before they undertake any work on ESB sites.

In the interest of continually improving safety the ESB and the contractor shall endeavour to share knowledge of work methods and safety management techniques.

These guidelines have been reviewed by Ger Buckley, Safety Manager of ESB Networks.

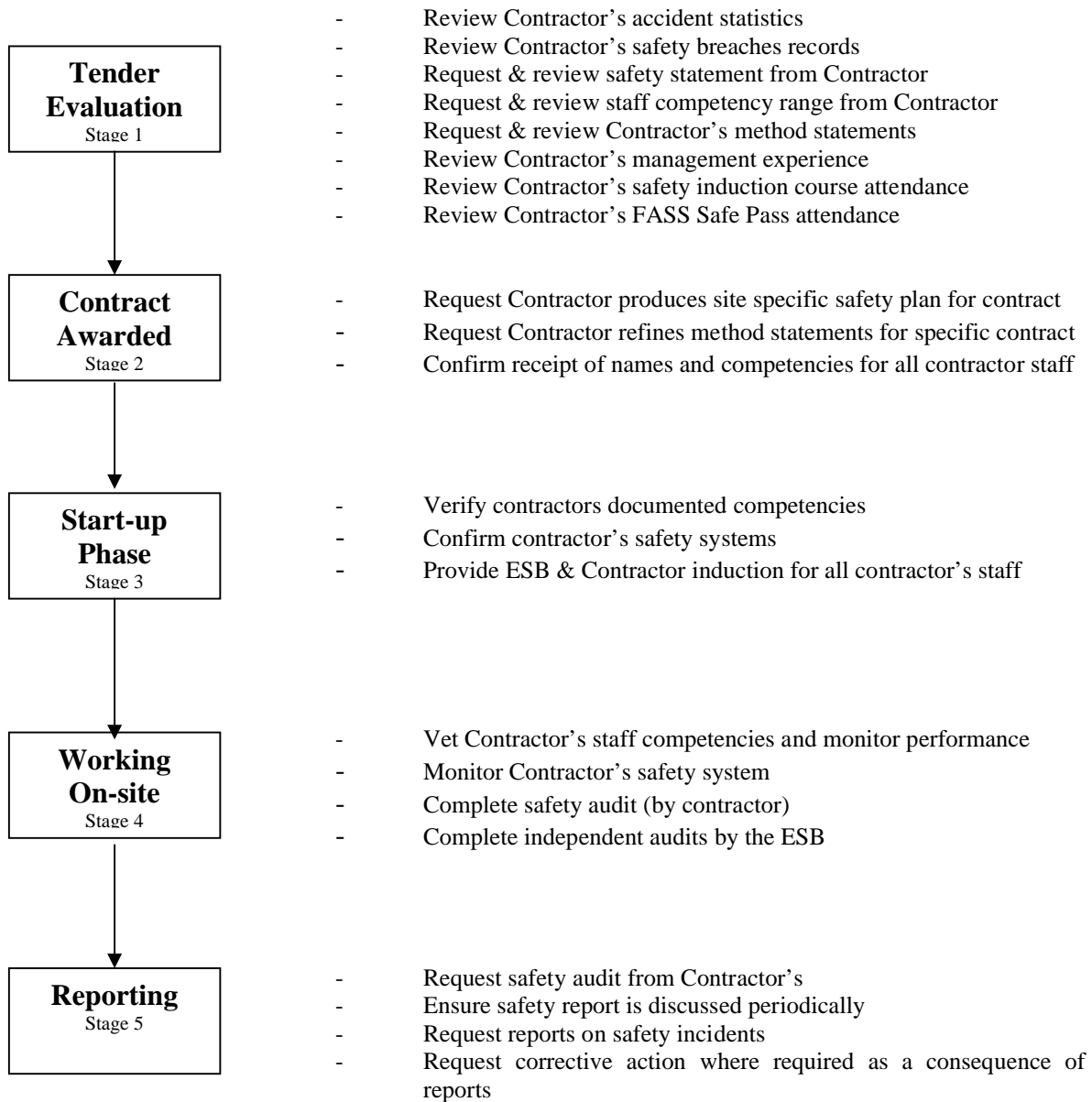
2.1 Safety Assurance Process Diagram

The following diagram outlines the process that shall be undertaken to ensure contractors manage safety during the course of implementing the work.

Stage 1 to 3 will be employed for new contractors.

Existing contractors or contractors that have undertaken substantial work for ESB will be assessed on their performance record during employment.

Stages 4 to 5 will apply to all contractors.



3.0 Compliance with Legislation

The Contractor shall **comply with all relevant and applicable Irish and European Safety Legislation.**

In particular but by no way limiting the contractor's overall responsibility to comply with the law, the contractor warrants and undertakes that he is competent to and shall comply with the safety, health and work act as amended or re-enacted from time to time and any regulations made hereunder including without limitation.

The Safety, Health and Welfare at Work Act 2005.

The Safety, Health and Welfare at Work (Construction) Regulations, SI 504 of 2006.

The Safety, Health and Welfare at Work (General Applications) Regulations, SI 299 of 2007.

3.1 Client

As required by the Safety, Health and Welfare at Work (Construction) Regulations SI 504 of 2006 the client will appoint a competent PSDP and PSCS.

3.2 ESB Telecoms Safety Statement

The ESB Telecoms safety statement is available on the ESB Telecoms web site to review.

The safety statement identifies generic hazards that are encountered while working within ESB Telecom Ltd telecommunication sites and the precautions that shall be taken to minimise or eliminate the associated risks.

Within the safety document box located on ESB Telecom sites a hazard identification form is located together with risk assessments for associated hazards.

If any person encounters any change to existing hazards or identifies any new hazard, then that person must report the hazard immediately to their immediate supervisor and the ESB safety department.

3.3 Safety Violations

ESB reserves the right to conduct safety audits at any time so as to confirm compliance with these guidelines.

A serious breach or persistent or regular minor breaches of these guidelines may lead to the termination of contract in accordance with its terms.

The ESB representative or his/her nominee is empowered to stop the work immediately at any time if unsafe practices are being used and there is an immediate risk to any individual, any third party or to the general public.

The ESB representative also reserves the right to insist on the removal from the work of any individual found to be in breach of these guidelines.

Where a particular practice has been identified as unsafe in the opinion of the ESB representative or his/her nominee, he/she will inform the contractor and request that the contractor terminates the practice immediately. If an alternative safe method of proceeding can be agreed the contractor shall adopt this method and proceed with his work, noting any revisions in the safety and health plan and method statement.

If no other safe method is available the contractor shall be asked to vacate the site until the PSDP and PSCS agree a suitable solution to the unsafe practice.

A revised safety and health plan and method statement should be forwarded to the ESB Telecoms safety department for authorisation prior to work recommencing.

3.4 Safety File

The safety file shall include all design details, including drawings that will ensure the safety of persons performing any future maintenance or construction work to the site.

The contractor on completion of the works shall submit to ESB Telecoms all relevant ground and tower information to enable as built drawing to be maintained.

All information should be returned to H&Sdrawings@esbtelecoms.ie

The PSCS shall deliver the safety file to ESB Telecoms on completion of the project.

Details of telecommunication sites are available on the ESB Telecoms Safety Extranet.

4.0 Control of Safety

ESB Telecoms Limited is committed to the provision of best practice management strategy; the non-observance of ESB safety rules, codes of safe practice or non-compliance with these safety guidelines may result in termination of contract in accordance with its terms.

The contractor, prior to any communication mast being climbed must advise the ESB in advance.

4.1 Site Access Arrangements

Prior to entering and on leaving any ESB site the PICW must log into the ESB Telecom Operations Centre (TOC) by SMS text to 087 6846599 or manually by contacting 01 7026599.

In the event of emergency access to an ESB telecommunication site being required after normal working hours the TOC will co-ordinate access arrangements.

Where plant is being used on a telecommunication site located within an ESB Networks sub-station compound the relevant Distribution Control Centre must be contact.

4.2 Types of Access

All persons are required to have attended an ESB safety induction course and are in possession of a valid 'FAS' Safe Pass certificate before access is allowed to any ESB site.

a) Un-Restricted Access

□ *Independently Fenced Communication Site*

Where the communication equipment is located within its own security fence and can be accessed through a pedestrian gate, the access gate will be secured by an ESB issued Multi-T-Lock only.

□ *ESB Store Yard*

Where the communication equipment is located within an ESB yard local restrictions must be followed that may be issued by the local ESB supervisor.

□ *Roof Top Locations on Office Building's*

Where the communication equipment is located on a rooftop local restrictions must be followed that may be issued by the local ESB security.

□ *Pylon's (Shelter Only)*

Access is restricted to work within the shelter **only**.

b) Restricted Access

□ *Communication Site within a Sub-Station Inner Compound*

Where the communication equipment is located within the inner security fence of an ESB sub-station, access at all times must be accompanied by an approved ESB official.

The Contractor or their agent's will be advised, prior to entering the live compound, of all hazards therein and shall be inducted into the safety procedures that are required of them whilst work is being carried out.

The National Control Centre must be contacted on 01 2917776 before entering the station and on leaving the station.

□ *Backbone Radio Site's*

Where the communication equipment is located on the rooftop or on a tower, access at all times must be agreed with the ESB representative.

□ *Pylon's (climbing work)*

The communication equipment will be fitted at the agreed location on the pylon; access to climbing is restricted to riggers approved by ESB.

□ *Communication sites located within ESB Power Generation property*

Where the communication equipment is located within ESB Power Generation owned property access at all times must be approved by the ESB Station Appointed Person.

The Contractor or their agent's must have undertaken local site induction prior to entering the PowerGen property. This induction will brief of all hazards therein and shall identify the local safety procedures that are required of them whilst work is being carried out.

c) Vehicular Access

Where the communication equipment is located within the outer security fence of an ESB sub-station requiring the use of a MEWP, crane or any other vehicles to maintain, install or transport equipment, an approved ESB official must accompany access at all times.

The contractor or his agent's will be advised, prior to entering the live compound, of all hazards therein and shall be inducted into the safety procedures that are required of them whilst work is being carried out.

4.3 Site Security

After entering or exiting an ESB site, the site gate must be closed and locked at all times to avoid trespass by third parties. Locks that are to be fitted to a communication site gate or anti climb device must be only of the ESB Multi-T-Lock type, locks issued by telecommunication operators are ***not*** acceptable. Contractors must follow any agreed log-in/log-out procedures, where applicable, when entering a designated ESB building.

4.4 Work Zone

The work shall be confined to the fenced off communication site only, safety measures should be put in place to prevent hazards from work activities, (e.g. items falling from height, excavation areas, etc).

Where a local fence does not secure the work area, i.e. within an existing ESB compound, the work zone should be cordoned off/roped off during construction/installation period and or other suitable control procedures put in place.

4.5 Lone Working

Where the work involves the need for Working Alone a specific lone working risk assessment must be undertaken to ensure that the task is safe to undertake and you must ensure that an emergency plan is in place in case of an accident. Your own company's Lone Working procedure must be followed at all times.

5.0 General Responsibility's

ESB shall appoint a person(s) to be known as the ESB Telecoms Ltd Safety Department. These person(s) shall have the responsibility for authorising the safety and health plan and method statement provided by the contractor.

ESB will also appoint a person to be known as the ESB representative who will be made known to the contractor. This person (or his/her nominee) shall be available to resolve any site-related queries that may arise during the works.

ESB may request the PSCS to be present at all times during work on certain sites that the ESB deem to of high risk.

The PSCS shall have the minimum responsibility for the following:

- Providing completed safety reports as specified within this procedure.
- Transmitting the instructions of the ESB representative to the contractor's personnel (including sub-contractor's working for the contractor) and for seeing that these instructions are carried out.
- The safety of all persons affected by the contractor's own activities and/or its employees, agents and sub-contractors.
- The safety of the contractor's personnel (including without limitations his/her sub-contractors and/or agents working for the contractor) with respect to all hazards, including any hazards advised by the ESB representative.
- Advising the ESB representative of any hazards that the contractor's activities might pose to persons other than the contractor's own personnel (including sub-contractors working for the contractor) or to the ESB plant and equipment.
- Compliance with all safety, health and welfare at work legislation's, the safety and health plan, method statement and the ESB safety statement. The PSCS shall, on consultation with the ESB safety department, update or modify the safety and health plan as the need arises during the work.
- Ensuring that all personnel working under his/her control are trained and competent for the work they are to carry out, they are appraised of all

hazards and safety regulations pertaining to the site and the work to be carried out.

Except by prior and mutual agreement or in all cases of emergency, all communication on safety related issues shall be between the ESB representative and the contractor's PSCS. Where other persons are given such a role, their mandates shall be clearly established and confirmed in writing between each person.

5.1 Safety Induction

Prior to commencement of works, the PSCS shall ensure that safety induction (in addition to ESBT induction training) is given to all the contractor's and sub-contractors personnel who are to visit or work on site.

A daily Job Site Safety Plan shall be completed and shall be kept in the safety file.

Throughout the contract period, the PSCS shall ensure that regular safety briefings are given as refreshers and to take account of any changes in circumstances whatsoever affecting the execution of the works.

5.2 Control of Sub-contractors

The provisions of these guidelines apply to both contractor's and to any sub-contractor under their control. Responsibility for implementing these provisions with respect to sub-contractors rests entirely with the contractor. No sub-contractor, other than those specified in the safety and health plan, may be brought on site without the explicit prior written agreement of the ESB safety department.

5.3 Record of Contractor's Staff

The Contractor shall submit to the ESB Telecoms safety department a *list of all staff* (including those of sub-contractors) who shall work on ESB sites. The contractor shall provide valid certification that verifies that all such staff has necessary competence to carry out their work safely.

Should additional staff, other than those previously approved, be required to carry out work on ESB sites then their names and details, including a statement on competency shall be provided to the ESB safety department.

The contractor shall maintain a daily site log of all staff (including sub-contractors) and shall be kept on site and be available for inspection at all times.

5.4 Interference

Contractor's (including sub-contractors or agents) must not interfere with any ESB equipment, be it locks, hold-off or danger notices, safety barriers, flags, lamps or other safety devices.

No person shall open any ESB equipment (e.g. container/cabinet), climb an overhead line pole or mast, touch the insulator supporting any conductor or

the insulation on any cable, disturb a cable, or interfere with any other item of electrical equipment or telecommunication equipment.

5.5 Safety Regulations

The Contractor is responsible for ensuring that each member of his staff; agents or sub-contractors comply with these contractor safety guidelines and understand the dangers of working in close proximity to electrical overhead/underground cables and wires.

A copy of the contractor safety guidelines must be available on site during all work activities.

5.6 ESB Power Generation Regulations

Where the work takes places on or within ESB Power Generation property a person will be appointed by PowerGen known as the ***ESB Station Appointed Person*** who will have the responsibility for the safety of contractor's personnel only in so far as their safety may be affected by ESB plant.

All contractors must receive local site safety induction training from the ESB Station Appointed Person or a nominee prior to commencing work.

Prior to commencing any work all the contractors staff must be briefed by the ESB Station Appointed person on possible hazards that may effect the contractors work and emergency procedures.

Work must not commence until the PICW has received a PERMIT to WORK from the ESB Station Appointed Person.

6.0 General Safety Requirements

6.1 Safety Statement

The contractor's *signed and current* safety statement shall be submitted to the ESB safety department. This statement shall contain written risk assessments on the hazards to which the contractor's staff, agents and/or sub-contractors are likely to be exposed and the corresponding control measures to be implemented to minimise or eliminate these risks.

6.2 Preliminary Safety and Health Plan

The PSDP shall prepare a preliminary safety and health plan which takes into account, as a minimum, the safe design of the project, the safe method of undertaking the associated work and future use of the site.

The PSDP shall risk assess all hazards that may be encountered prior or during the work and provide safe methods of undertaking the work.

The preliminary plan should be presented to the client for review.

6.3 Construction Stage Safety and Health Plan

The PSCS shall develop the preliminary safety and health plan into a construction stage plan and submit it to the ESB Telecoms safety department

for approval a minimum of three working days prior to the start date of the project.

Method statement's should be included detailing a step by step explanation of how all aspects of the work is to be completed, especially in relation to the safety and health aspects of the work.

If possible it should follow a recognised code of practice where available, or be otherwise proven in a similar work situation.

Method Statements must be agreed with the ESB representative and shall be approved by the ESB safety department, prior to the start of work, without prejudice to the contractor's obligations, responsibilities and duties pursuant to the contract and applicable law and regulations

6.4 Permit to Work

The ESB safety department will issue a permit to work to the contractor once the safety and health plan has been approved.

The permit to work and approved safety and health plan must be available for inspection on the work site at all times.

6.5 Safe Place of Work

The contractor shall take full responsibility for the adequacy, stability and safety of all site operations and safe methods of construction for all construction activities arising out of the works.

6.6 Personal Protective Equipment

It shall be the responsibility of the contractor at his sole expense to ensure that all the requisite items of personal protective equipment ("PPE"), necessary for the various working conditions pertaining to the works, are available and used correctly by his/her staff and the staff of his/her sub-contractors.

Such items of PPE shall comply with all relevant and applicable standards. Unless otherwise agreed with the ESB representative, this shall include, as a minimum, high visibility vest, safety helmet, safety footwear, eye and ear protectors, overalls, gloves, fall arrest and safety harnesses.

Wind speed meters and personal RF monitors shall be made available during all rigging activities.

The following are examples of work situations and activities where PPE shall be correctly used; these examples are not exhaustive:

- All the contractor's staff, agents, sub-contractors and visitors in all situations shall wear safety helmets, high visibility vests and safety footwear.
- Eye protectors (e.g. visors, goggles and safety glasses) shall be correctly used for all work activities and situations that could otherwise cause serious eye injury (e.g. welding, grinding and when using chainsaws).
- Appropriate Fall Arrest system
- Tower rescue equipment
- Wind speed meters
- Personal RF meters

6.7 Emergency Procedures

The contractor's shall make provision for any likely emergency that could arise as a result of their activities. This shall include a method for contacting the emergency services, taking immediate action to mitigate the consequences of the emergency, and administering any specialist first aid treatment that may be required.

In addition, Contractors shall co-operate fully with the ESB emergency procedures when working on the ESB Networks and equipment.

Contractors shall ensure that all their personnel are familiar with their own and the ESB emergency procedures.

6.8 Clean-up of Work Area

The contractor shall, prior to completion of works, clean up, remove and dispose of safely and in an environmentally acceptable manner, all materials brought onto site and waste generated while on site.

The Contractor shall leave the work area in a clean condition to the satisfaction of the ESB representative.

Particular care shall be taken to ensure that the works area is kept as clean and tidy as possible so as to minimise the risks to both people and animals.

6.9 Work within ESB Power Generation Property

Contractors shall notify the ESB Station Appointed Person prior to carrying out welding, cutting, grinding, or any other activity involving a source of ignition. *Where a fire hazard exists*, the ESB Station Appointed Person will specify appropriate precautions to the contractor and issue a Hot Work Permit. Such controls will include the provision of two persons at all times during hot work and a mandatory fire watch for at least one hour after completion of the work or as instructed by the ESB Station Appointed Person.

7.0 Site Safety

7.1 Work Near Exposed Live Electrical Equipment or Apparatus

The contractor shall ensure that the utmost care be taken where the works are to be undertaken '*in the vicinity*' of exposed live electrical equipment and apparatus, be it overhead lines, underground cables, transformers, switchgear, control and protection systems, or other unspecified electrical apparatus.

The safe limit of approach for people and equipment to exposed live electrical equipment or overhead lines are set out in Table 1(see page 17) for the different types of ESB substations and lines.

The ESB prior to work commencing must agree to the method of erection of a communications mast in the safety and health plan and method statement.

An additional safety clearance of 3 metres is required from exposed live electrical equipment while the mast is being erected and while any crane, MEWP or similar machine is being used on site.

It is not permissible to work over exposed live equipment where a person if falling would be within the safe limits of approach.

In this situation the minimum clearance should be increased by a 2 Metre horizontal clearance to allow for the height of the person.

Table 1 - Limits of Approach

Voltage of live equipment	Limits of approach (minimum)	Limits of approach (working overhead)	Limits of approach (using crane/MEWP or other mobile plant)
1kV to 38kV	3.0 Metres	5.0 Metres	6.0 Metres
110kV	4.0 Metres	6.0 Metres	7.0 Metres
220kV	5.0 Metres	7.0 Metres	8.0 Metres
400kV	7.0 Metres	9.0 Metres	10.0 Metres

7.2 Danger of Falling Objects

When work is to be carried out from a position from which a person, equipment or tools could fall on any person or ESB equipment, approved means must be employed and used to prevent such an occurrence, including, but not limited to, safety barriers and warning signs.

7.3 Dealing with Fallen Conductors

If a situation is encountered where there is a conductor on the ground or in a dangerously low position, the conductor must be treated as being **live**, stand clear of it, keep others away and immediately notify the ESB emergency telephone number **1850 372999**.

7.4 Working in Close Proximity to Live Radiating Antenna

Only personnel approved by either ESB or the contractor may climb a mast and/or work in close proximity to live radiating antennae on ESB sites/property.

Approved personnel should be familiar with the ESB Telecoms RF guidelines, appropriate safety procedures and codes of safe practice for working near live radiating antennae.

The contractor will present to the ESB a safety and health plan and method statement for approval prior to the contractor climbing an ESB communications mast for repair or renewal.

Where two or more operators' share a mast, arrangements must be agreed between each operator and the ESB for safe access to the mast.

The ESB will advise each operator of the other operator's antennae emissions where applicable.

Where appropriate, joint inspections and maintenance programs should be agreed.

7.5 Roof Installations

Where possible for anyone to come into close proximity to antennae and or dishes located on a roof, warning signs must be erected and a no go area (exclusion zone) must be clearly marked out on the roof by the Communications Company or operator.

Where work has to be carried out on a roof which has no safety rails details of the safety precautions, (e.g. use of safety harness, temporary safety railing) should be detailed in the safety and health plan and method statement.

7.6 ESB HV Suspension Towers

Only persons employed by ESB or otherwise approved by ESB at its absolute discretion may climb an ESB overhead line towers, for the purpose of installation, maintenance, repair, replacement or removal of communications equipment or fittings.

Any work in the vicinity of an ESB tower is subject to compliance with such conditions as ESB sees fit to impose from time to time in the interest of security and safety.

It is a requirement that the local ESB Network line supervisor be named in the safety and health plan and is contacted at the start and end of work.

It is not permitted to drill any part of the tower to locate any type of equipment and should be fixed by the use of an appropriate clamping system.

No additional equipment can be erected or installed onto the tower or existing equipment inspected without the approval of the ESB.

Climbing legs of the tower must be free of antennas at all times.

All proposed equipment *must* be installed in the exact location on the pylon as agreed with ESB.

7.7 Construction Skills Certification Scheme

It is a requirement that where applicable that all persons must hold a valid CSCS card as defined within the construction regulations.

7.8 Cranes and Mobile Elevated Working Platform

Cranes, MEWP, tipper trucks, excavators or similar machinery **must** be carefully controlled when in the vicinity of ESB overhead lines or exposed live electrical equipment.

Careful consideration should be taken to determine the set up location of all plant; machinery and the location of materials to be stored remain outside the safe limits of approach to live electrical equipment.

Special care should be taken to assess the location of HV overhead lines and live electrical equipment when operating cranes or MEWP's to ensure that

their jibs or baskets remain at all times outside the safe limits of approach to live electrical equipment as detailed in section 7.1.

Goal posts and bunting should be erected to ensure that there is a visible marker available to control the movement of the crane and slewing action of the jib.

Care should be taken to control the movements of any guide ropes that may be used during any lifting process near electrical equipment.

A detailed drawing should be provided with the safety and health plan showing the set up location of the crane or MEWP, slewing area, location of overhead lines and storage area of materials.

A nominated ESB official must earth to the station grid all cranes or MEWP when being used in station compounds.

Cranes and MEWP's used on ESB sites must be in possession of valid certification and all persons operating these machines should be adequately trained in their use.

No mobile telephones may be used by any person, other than communication, if necessary, between banks man and crane operator, during the erection of a communication structure.

Double lanyards must be used when working from the basket of a MEWP at all times

7.9 Mobile Plant

The overnight storage of mobile plant on any ESB work site is prohibited, arrangements must be made to remove plant at the end of each working day. In the event of an exceptional circumstance where plant cannot be removed agreement to leave plant on site has to be obtained from the ESB safety department.

Where plant is to be left on site arrangements shall be made to provide fixed site security after normal working hours.

7.10 Ladders

Where ladders are to be used, they shall be of a suitable length for the work involved and shall be adequately secured to prevent them from slipping or falling.

When using ladders in the vicinity of live electrical equipment or overhead lines extra care should be exercised to prevent a breach of the limits of close proximity.

Aluminium ladders or long pieces of steelwork are **not** allowed in any ESB site containing live electrical equipment.

Fibreglass or wooden ladder should only be used when working near live electrical equipment.

Where work involves the movement of scaffolding poles, ladders or other long objects sufficient space should be provided so as to ensure that these objects might be handled in absolute safety and should also be carried underarm in a horizontal position to the work location.

7.11 Fibre Wrap

Where line outages are required ESB Telemess procedures must be carried out as identified within the ESB Safety Rule Book.

It is essential that approved procedures are followed to identify the line to be worked on prior to testing for absence of voltage.

Work must not commence until main and local earths are attached.

Approved procedures must be used when undertaking work activities.

7.12 Working at Height

Where a person could fall from height from an unprotected edge or from a telecommunication structure a safe means of work must be applied to the work.

Fall arrest systems that are fitted to a fixed ladder must be used at all times to climb the structure, where work takes place away from a fixed ladder and where a fall arrest system has not been installed double lanyards shall be used.

A minimum of two riggers certified in tower rescue techniques must be on site when working at height is being undertaken.

7.13 Work in Inadequate Lighting Conditions

Working at height is prohibited at all times in non-daylight conditions.

Where emergency work is required to repair equipment located within a cabin or cabinet, suitable lighting must be provided by the contractor for safe access & egress.

7.14 Work in High Noise Areas

Where contractors activities generate noise levels of 87dB or above, attempts must be made, where practical, to reduce the noise level at source.

Where noise levels in the work location exceeds 85dB ear protectors must be used by all contractors' personnel.

7.15 Work Near Deep Water

Where work is carried out within 3 metres of an unprotected waters edge all personnel must wear a life jacket specified to the required legislation or a safety harness with lanyard attached to a secure point.

Rescue boats maybe required during certain work activities.

7.16 Work with Hazardous Substances

The contractor must advise ESB Telecoms of all hazardous substances to be used during the work and advise on any hazards posed to personnel or plant.

Occupational exposure levels set down in the latest Safety, Health and Welfare at Work Regulations shall not be exceeded.

7.17 Electrical Tools & Equipment

All work equipment liable to deterioration, where deterioration can affect safety must be inspected at regular intervals and maintained in a safe condition.

A non exhaustive list include of such equipment include portable electrical tools, portable air tools, ladders, portable grinders, welding equipment, compressors, high pressure hoses & safety harnesses.

Portable electrical tools with a rating below 2kVA shall have a voltage not exceeding 125V.

Transformers supplying 125V shall be of the double wound type with the centre point of the lower voltage earthed.

Supplies at voltages exceeding 125V shall be protected by one or more residual current devices having a tripping current not exceeding 30mA.

Cables carrying voltages exceeding 125V AC shall be of the steel wire armoured type.

7.18 Adverse Weather

Work at height must cease in the event of adverse weather conditions such as wind speeds greater than 25 mph, electrical storms or heavy rain.

8.0 Safety during Site Development

8.1 Fences

Communication sites must be fenced off to at least the same standard as the existing fence around the ESB site and to a minimum height of 2.4 metres.

Fence erection/construction work may only be undertaken outside the safe limits of approach to live electrical equipment; designated ESB officials must be present when there is exposure to live electrical equipment.

Nothing should be erected or stored in the immediate vicinity of a fence as to cause a climbing aid.

Welding should not be carried out on any galvanised ESB fence when new fencing is being connected to existing fencing; a bolting/clamping arrangement should be used.

Temporary fencing shall be secured to the existing boundary fence or similar materials by the use of chains and locks.

The use of approved couplers will be used to join temporary fencing sections.

8.2 Drains

Care must be taken during excavation/construction to ensure that existing drains, down pipes or water courses are not broken or blocked which could result in the flooding of ESB's site.

8.3 Mast/Antennae

Orientation and size of mast foundations, cabin or cabinet plinth and working area must be pegged/marked out on site and agreed by the ESB to ensure all working areas are clear of cables, overhead lines or exposed live electrical equipment before any excavation takes place.

Excavated waste should not be stored less than 1 metre away from the edge of excavations.

Excavations deeper than 1.25M should be shuttered or have the wall battered adequately to prevent collapse.

Excavations must be suitably fenced off/protected at night or when not being worked on to ensure that no person or animal can fall into the excavation.

The method of fixing antenna/dishes etc should be agreed with the ESB to ensure that they do not come loose and fall onto ESB equipment.

The method for the erection of a communication mast, especially if a crane is being used, must be agreed, and recorded in the method statement, by the PSCS prior to its erection. Particular care must be taken when the work is in the vicinity of exposed live electrical equipment or overhead lines; ESB supervision must be present during erection and/or arrangements made to switch out the live electrical equipment.

Suitable lockable, anti climbing devices must be installed on the mast.

8.4 Earthing

There are a number of criteria where the earthing of telecommunication equipment has to be considered.

a) **Size of earth conductors**

The size of the earth conductor for green field telecommunication sites and sites located within a 38kV sub station shall be 50²mm.

For sites located within 110kV sub station or above the earth conductors shall be of 95²mm.

Earth cables shall be buried a minimum of 350cm below ground level.

Earth rods may **only** be driven in the base of the mast foundation after the absence of underground cables by the use of cable drawings and CAT scanning has been confirmed.

The use of earth rods at any other location is prohibited.

b) **The telecommunication equipment located within the zone of influence of the station earth grid (within the perimeter fence).**

If the new communication site earth and/or any fencing are within 3M of the earthed station (inner) compound fence then the communication site earth must be bonded to the station earth grid.

The communication site earth includes earth grids associated with the fence, mast, cabin, cable gantry, all steelwork and the equipotent bonding within the cabin.

The earth resistance of the local earth grid should be equal to the station earth grid.

An outer earth ring shall be installed 1M outside the fence line of the compound and include the opening arc of the entrance gates.

c) The communication equipment is outside the zone of influence of the station earth grid.

Where a communication site is built adjacent to a station inner fence a minimum distance greater than 3 metres must be maintained from the existing station inner fence and the new communication site fence.

The communication site earth includes earth grids associated with the fence, mast, cabin, cable gantry, all steelwork and the equipotent bonding within the cabin.

The earth resistance of the local earth grid should be a maximum of 10 ohms.

An outer earth ring shall be installed 1M outside the fence line of the compound and include the opening arc of the entrance gates.

d) The communication equipment is located in a Greenfield site.

The communication site earth includes earth grids associated with the fence, mast, cabin, cable gantry, all steelwork and the equipotent bonding within the cabin.

The mast must have an additional earth grid made up of earth rods in the ground at each corner of the mast and bare copper strips to minimise risks from lightning strikes.

The earth resistance of the local earth grid should be a maximum of 10 ohms.

e) The communication Ariel/equipment is on a building.

It is acceptable to utilise the existing lightning protection service that is currently on the building.

If there is no lightning protection on the building a system should be installed as specified in current electrical regulations.

f) The communication Ariel is located on a HV suspension tower.

Site earth includes earth grids associated with the tower, cabin, cable gantry, all steelwork and the equipotent bonding within the cabin.

Two legs of the tower shall be bonded to the site earth.

The earth resistance of the local earth grid should be a maximum of 5 ohms.

8.5 Underground Cables

Cable drawings should be obtained for reference purposes from the ESB Central Site Office at the design stage of the project.

All ESB underground cables in or near a construction site should be identified and their exact location marked on the ground with the help of a cable detector e.g. (CAT).

All identified cables should be recorded on the as built drawing and/or the information returned to the ESB Telecoms safety department.

Where practicable arrangements should be made to divert cables away from the communication site or have the cables switched out before working.

ESB cables remaining on the communication site or working area must be exposed by the ESB and protected (piped/ducted) by the ESB before any excavation takes place.

Any excavation in the vicinity of ESB cables must be carried out by the ESB or under supervision from the ESB.

When it is necessary to excavate over and/or under ESB cables, the area must be hand dug to avoid damage to cables and risk to life under no circumstances should a mechanical digger be used over or under cables.

Where excavations take place under cables, the cables must be temporarily supported.

All other excavations should be carefully carried out by the use of an excavator fitted with a toothless bucket only.

As an additional safety precaution a second scan with the CAT over the working site is recommended after the first 300mm of soil is excavated in order to pinpoint/confirm cable locations or absence of cables.

8.6 Overhead Lines

Any overhead lines in direct conflict with the communications site or right-of-way access must be diverted or routed underground before access is allowed to the site.

Goal posts/barriers/bunting must be erected to ESB specifications under or adjacent to any overhead lines in the vicinity of the communication site before any excavation takes place to warn all at work of the presence of the overhead lines.

Goal posts/barriers/bunting must be agreed with the ESB and noted in the safety and health plan and method statements prior to being erected.

Goalposts must be erected using a minimum size of 100mm red & white material, the horizontal bar must always be of a solid construction.

Clearance from overhead lines should not be reduced by the dumping or tipping of spoil/waste material or by the creation of storage areas under ESB lines.

8.7 Future Construction

Once the mast, with the agreed number of antennae, and the cabinet/shelter has been erected/installed no further construction/erection/replacement or additions should be carried out without prior consultation of the ESB and safety and health plan and method statements being approved.

8.8 Temporary Generators

The location of temporary generators must be agreed with the ESB prior to their deployment at any communication site.

All generators must be of a fully contained type that have their exhausts vented to the top of the generator and have adequate precautions to minimise fuel and oil spillage, the maximum noise rating for this type of generator shall be 65dBA at 7 metres.

Where the communication site is near to residential areas a whisper type generator should be used having a maximum noise rating of 59 dBA at 7 metres.

A safety and health plan and method statement should be submitted to the ESB safety department for any work involving the placement, maintenance or removal of a temporary generator.

8.9 LV Supply

The LV supply shall be provided as referenced in the ESB Networks Distribution Standard - Earthing of Distribution Networks July 1997 document and the ESB Earthing & Supply of Telecom Installations Adjacent to Network HV Sub Stations January 2005 document.

Responsibility for the type of supply rests solely with ESB Networks.

9.0 Safety Reporting

All incidents, injuries and accidents including without limitation minor or those incidents incurring lost time and dangerous occurrences shall be reported immediately verbally within 24 hours and in writing, within 2 working days, to the ESB representative.

The contractor shall co-operate with and assist the ESB representative in its investigations of serious incidents, injuries and dangerous occurrences. Incidents, injuries and accidents are categorised as follows:

Fatal Accident This type of accident includes fatality involving contractor staff, ESB staff or a member of the public. It shall include any fatal accident or accidents, which has resulted in serious injury and may lead to fatality.

Lost Time Accident (LTA) This is an accident which has resulted in one of the contractor's staff being unable to attend normal work for a period of 2 working days.

Minor Accident (MA) This is an accident which does not lead to one of the contractor's staff being absent from the site for more than the current working shift.

Near Miss (NM) A near miss is an incident that could have resulted in an accident, but through good fortune or due to the diligence of the contractor or ESB staff an accident was avoided.

Near miss reporting should be encouraged and will be viewed in a positive perspective when reviewing contractor safety records.

The contractor in accordance with statutory requirements shall report all accidents to the HSA.

All Fatal Accidents and Lost Time Accidents shall be notified to the ESB representative immediately in verbal form and reported formally in writing to the ESB Telecom safety department.

Reportable accidents and dangerous occurrences shall be reported *directly by the Contractor* to the Health and Safety Authority in accordance with the Safety, Health and Welfare at Work Regulations, the contractor shall provide a copy of the statutory forms (e.g. IR1 and IR3) to the ESB safety department.

10.0 Safety Audits

Contractors shall complete regular self safety audits when working on ESB sites, ESB Telecoms contractors shall forward reports to the ESB Telecoms safety department on a monthly basis.

ESB Telecoms or ESB reserves the right to carry out random safety audits (notified or otherwise) of the contractor's works.

The ESB shall provide a copy of the audit to the contractor and request that any defective practices are reviewed, improved or prevented within a specific time-period.

11.0 Job Site Safety Plan

Daily, before beginning works the contractor's PICW shall undertake a JSSP, Safe System of Work Plan or 'tailboard conference' taking due consideration of all safety issues.

This may involve considering the daily risks associated with the works and record steps taken to mitigate the risks identified.

The contractor shall demonstrate that adequate safety planning is undertaken by recording the daily tailboard conference; these records shall be held in the site safety file.

12.0 First Aid Facilities

The contractor shall provide occupational first aid facilities, as appropriate to the level of risk and the number of people employed.

The ESB may examine these facilities during safety audits.

13.0 Welfare Facilities

The contractor shall, where applicable, provide occupational welfare facilities as appropriate to the level of people employed.

The ESB may examine these facilities during safety audits.

Signed by Peter Gregg On behalf of ESB Telecoms Limited