

## **Design and Construction Safety and Health Plan**

## Site: Rathcoole

## Site ID: TDU6416

## Address: Eir Exchange, Rathcoole, Co. Dublin.

	Name & Job Description	Date	Revision
Preliminary Design:			
Construction Stage:			
Approved By:			

### PREAMBLE

1. The following is the generic template for use in the preparation of the Health and Safety Plan for UTS projects. The Safety and Health Plan should be edited appropriately for the site in hand.

2. This Safety and Health Plan template is designed to be completed by the PSDP on a preliminary basis and further developed by the PSCS for the construction stage.

3. This template must be saved to the appropriate project folder

4. For Part 2:

- Text in the lefthand column of the table should not be amended, though additional headings may be added if necessary
- Project information should be inserted in the right-hand columns accordingly by the PSDP and PSCS

4. This Plan should be completed in accordance with the section 4 and 10.1 of TC245 Design and Construction Management Process.



Indicates to be completed by Project Supervisor Design Process

Indicates to be completed by Project Supervisor Construction Stage

Project Supervisor Design Process

A Focus Plus Ltd.

Project Supervisor Construction Stage

Towercom



# Part 1: Project Info (completed by PSDP)

(include name, address, and contact details)	Client Designer(s) Project Supervisor for Design Process (PSDP) PSDP Contact Person / Details	Towercom Focus Plus Ltd Focus Plus Ltd	
contact details)	Project Supervisor for Design Process (PSDP) PSDP Contact Person / Details		
F	Process (PSDP) PSDP Contact Person / Details	Focus Plus Ltd	
F			
	Project Supervisor Construction Stage (PSCS)	Towercom	
F	PSCS Contact Person / Details	Towercom	
	H&S Co-ordinator (where appointed)	Towercom	
	Supply and install 15m lattice towe Outdoor cabinet plinth c/w undergr poles and 300mm cable ladder for tower. Scope of works Site Preparation • Complete pre-works Dilap building & ESB substation • Secure the site using temp • Scan the foundation & plin	<ul> <li>e of works</li> <li>Preparation</li> <li>Complete pre-works Dilapidation Survey, photos &amp; video of the adjoining Eir building &amp; ESB substation building both within the foundation vicinity.</li> <li>Secure the site using temporary fencing.</li> <li>Scan the foundation &amp; plinth area for the new piled foundation to identify any UG services. Mark up any services found by the scan.</li> </ul>	
, c	<ul> <li>up any services found by t vicinity during initial surve</li> <li>Secure the site works area</li> <li>Excavate the earth for the <ul> <li>Hand dig to be deg</li> <li>works area</li> </ul> </li> <li>Dilapidation Survey to be of ducts/services found in the</li> <li>Any damage to the ducts/services found in the</li> <li>Excavated soil from site to</li> </ul>	<ul> <li>tructural</li> <li>Scan the excavation area for the new foundation to identify any UG services. Mar up any services found by the scan. Note no existing services found in foundation vicinity during initial survey.</li> <li>Secure the site works area using temporary fencing.</li> <li>Excavate the earth for the proposed foundation. <ul> <li>Hand dig to be deployed around existing any UG ducts/services within the works area</li> </ul> </li> <li>Dilapidation Survey to be completed of any exposed (by excavation works) UG ducts/services found in the excavation area.</li> <li>Any damage to the ducts/services to be reported and minor damage to be</li> </ul>	



	Install stone/lean-mix concrete from solid ground to underside of new foundation	
	<ul> <li>Install rebar as per schedule outlined in the design drawing</li> </ul>	
	Install lattice tower holding down bolt template for 15m Delmec Del-6 lattice	
	tower.	
	<ul> <li>1st fix lightning protection tape to be installed and tied to rebar</li> </ul>	
	Erect formwork for new foundation	
	Pour concrete for foundation	
	<ul> <li>2 No. operator plinths and ducting to be installed with associated earthing</li> </ul>	
	connected to the overall tower earthing schematic.	
	Remove Shuttering	
	<ul> <li>Install 2.4m high palisade fencing as construction drawing.</li> </ul>	
	2nd fix Lightning Protection to be installed	
	<ul> <li>Site area and access route to be landscaped back to its original condition</li> </ul>	
	Clean and Tidy Site	
	Lattice Tower	
	• Ensure the delivery of proposed 15m lattice tower as per the design specifications.	
	<ul> <li>Install the operators' mounting steelwork to the lattice tower prior to erection</li> <li>Install the proposed 15m Mass lattice tower on to the holding down holt tomplate</li> </ul>	
	<ul> <li>Install the proposed 15m Voss lattice tower on to the holding down bolt template and secure bolts.</li> </ul>	
	<ul> <li>Ensure orientation of the Tower is as per the Construction Drawing</li> </ul>	
	<ul> <li>Install of Latchway Vertical fall arrest system onto new fixed closed end ladder</li> </ul>	
	<ul> <li>Operator cable gantry poles and ladders to be installed &amp; cross-bonded to the new</li> </ul>	
	earthing system.	
	Safety Signage & Security	
	Install tower anti-climb gates & locks	
	Install safety signage.	
	No signage is to be installed on eir property i.e. the compound fencing or on the	
	building.	
	Electrical (some works may be completed at a different stage)	
	<ul> <li>A full CAT scan of the ducting route to be carried out, for the identification and mark-up of all underground utilities</li> </ul>	
	• Vacuum excavation is to be deployed to excavate required trenches for power &	
	fibre ducting	
	<ul> <li>Temporary power s &amp; fibre solution to be installed.</li> </ul>	
	<ul> <li>Proposed 1 No. 50mm ducts from each operator's cabinet position on concrete</li> </ul>	
	plinth to the exchange building for fibre solution (2 No. ducts in total)	
	Proposed 1 No. 50mm ducts from each operators AC PDB position on the	
	proposed concrete plinth to the exchange building for temp power solution (2 No.	
	ducts in total) Also 2 no. 50mm ducts for permanent solution to FRE cabinets and 2	
	no. 125mm red PVC ducts from RFE cabinets to area outside fencing for ESB supply cables.	
	<ul> <li>Proposed ducts to poke up at building wall &amp; sealed with expanding foam</li> </ul>	
	<ul> <li>All ducts to have draw ropes installed.</li> </ul>	
Clients existing		
undertakings		
and other work		
activities on site	Pathenale Carda Station Notification to be cant prior works commencing. Site works will	
Relevant adjoining land	Rathcoole Garda Station- Notification to be sent prior works commencing. Site works will not obstruct Garda's activities.	
<b>uses (High Risk</b> Rathcoole Garda Station is a Protected Structure/ Listed building- Exclusion zone to		
	up around the building and spotters to be used for deliveries.	

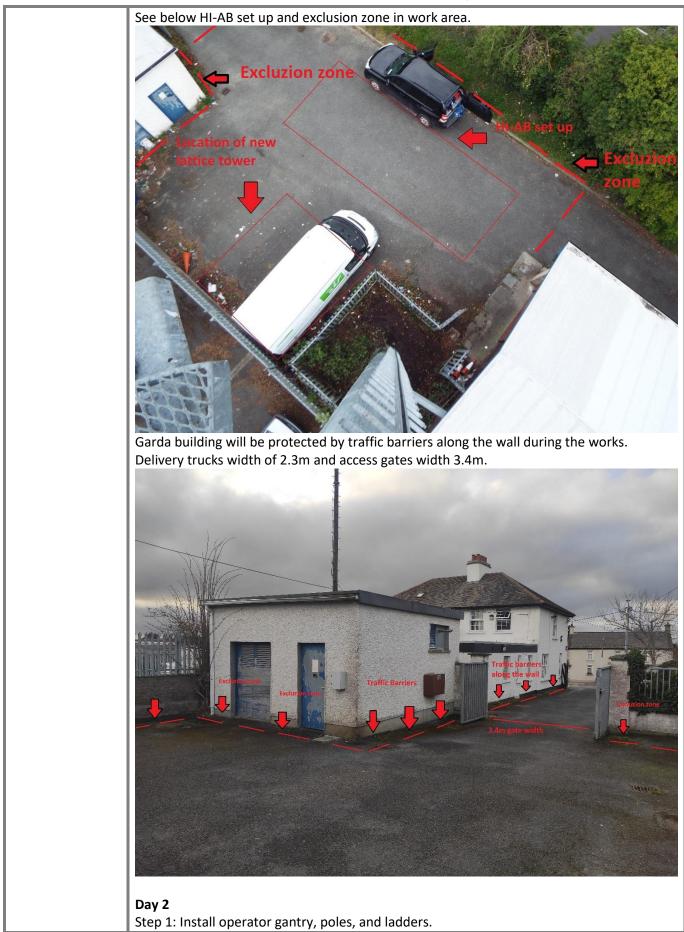


– Schools, Public Areas	
Traffic System and access / Any restrictions	Access from site is onto local urban road, exercise normal care and rules of the road when exiting onto it. Works will be carried inside eir's property. No TMP required as all plant machineries will be delivered on the back of the HI-AB trailer, there is sufficient space to reverse the deliveries on site having no impact to community traffic. Construction vehicles will be parked on street. Tools will be delivered to site by working Van size: Length-4.2m, Width-1.4m, height-1.75m. HI-AB will be set up on site as per below markup drawing.
Environmental restrictions	
Other site Restrictions / Activities	
Security Arrangements	Ensure site is secure using temporary fencing while civil works are taking place.
Intended Commencement Date	TBC 2023
Duration of Project (include basis on which this is established):	5-6 weeks
Noise and Dust	Reduce the noise to minimal on the duration of works. Mud, dirt and dust impact on the area surrounding the construction area will be kept to a minimum. As precaution cleaning equipment will be made available for use if required.



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Sequence /	The works are to be carried out in 2 stages. Civils' -TBC. Second stage, Tower lift -TBC
Phasing of	Stage 1 – Civil Works
works :	
(Include Dates)	Day 1
	Step 1: Complete pre-works Dilapidation Survey - photos & video record.
	Step 2: Install Harris security fence and safety signage around the working area. Ensure
	access for eir personnel will be kept free at all the time.
	Step 3: Existing Service Drawings to be checked. See Appendix 1.
	Detailed Design to be checked for details of other underground and overhead services.
	See Appendix 2.
	Step 4: Works Area to be scanned to confirm the if any underground services are present
	in accordance with Locating Underground Services Procedure.
	See Appendix 3: TC234 Locating Underground Services.
	<b>Permit to dig</b> to be completed prior to any digging.
	See Appendix 4: <b>TC236 Permit to Dig.</b>
	Day 2 & 7
	Step 1: Hand dig excavation for locating underground services.
	Step 2: Excavation of foundation base to the required depth, as per the Detailed Design
	drawing, using 8tonne excavator.
	Dispose of excavated material off-site using accredited waste disposal company.
	Waste disposal vehicles to be loaded directly on the site. Spotter to be in place.
	Driveway to be kept clean and tidy at all times.
	Day 7 & 9
	Step 1: Install rebar as per the schedule in the Detailed Design drawing.
	Step 2: Install lattice tower holding down bolt template as per the Detailed Design
	drawing.
	Step 3: Install power ducting and operator plinths.
	Step 4: Remove safety signage.
	Step 5: Clean, tidy, and secure site.
	Step 6: Complete post-works Dilapidation Survey – photo & video record.
	Stage 2 – Stand Lattice tower
	Day 1
	Step 1: Complete pre-works Dilapidation Survey - photos & video record.
	Step 2: Set up site, safety signage and prepare for delivery of tower.
	Step 3: Receive delivery of tower and stand HI-AB crane. Tower will be received on the HI-
	AB trailer. No other deliveries required.







	<ul> <li>Step 2: Remove security fencing, and safety signage.</li> <li>Step 3: Clean, tidy, and secure site.</li> <li>Step 4: Complete post-works Dilapidation Survey – photo &amp; video record.</li> <li>Step 5: Remove existing Monopole once operator's equipment swapped to new tower.</li> <li>Existing monopole will be removed from site by HIAB, and this will be set up in same location used for installation of new Lattice Tower.</li> </ul>		
Personnel involved in the	Responsibility/Title	Name	Phone No.
project/site works			
WOIKS			
Welfare Facilities			
(Electricity, Sewage, water)	Temporary Welfare facilities	s to be installed & available on site for	the duration of the works.



Restrictions on	
Working Hours	It is anticipated that standard working hours will apply to this project.
	Mondays to Fridays – 8.00am to 6.00pm
	Saturdays – 8.00am to 5.00pm
	Sundays and Public Holidays – as required
	Deviation from these times will only be allowed and may be necessary in order to facilitate
	lifting operations or other plant operations. If this is required, it must be highlighted to the
	PSCS and incorporated in the Site-Specific Method Statement

Note: The intended commencement date and completion period advised above are

provisional, pending confirmation by the Project Supervisor Construction Stage that they are

practicable



# Part 1 Contd.: Project Info (completed by PSDP)

Is there an existing Safety File, site survey or other safety related records?				
Yes No No				
If yes, what If yes, what	bart affects the Design Safety? A bart affects the Construction Safety? and			
	If no records are in place, then an assessment / site survey of on-site hazards may need to be undertaken. (See TC165 Design Survey Form / TC198 Towercom Survey Report & Risk Assessment			
Drawing Reg	nister			
Dwg No:	Safety Reference:			
Existing services	Location on Site	Dwg No.		
LV OHW	There was no overhead power or telephone lines in the project vicinity noticed at the time of the survey.	Sheet No. 02, 03 & 04		
Existing inground services (Power, Telecoms & Sewer)	There is buried power cables to the west, north and south of the proposed foundation and cabinet plinth location. There is also buried telecoms cables to the south of the proposed cabinet location. There is no surface evidence of buried water, sewer or surface drainage in the foundation or cabinet area. There are water or sewer gullies and manhole covers in the tarmacked area (drive way and parking area)	Sheet No. 02, 03 & 04 and all other compound plan areas.		



# **Part 2**: Particular Risks (completed by PSDP and PSCS)

Identify works which involve a particular risk: (As per Schedule 1 of SI504)	PSDP – specify where in the project the risks will arise:	PSCS – specify controlmeasures to be implemented:
<ul> <li>1.Does the works put the persons at risk of:</li> <li>a) Falling from Heights</li> <li>b) Burial under earthfalls</li> <li>c) Engulfment in swampland</li> <li>(Where the risk is particularly aggravated by the nature of the work or processes used or by the environment at the place of work or construction site")</li> </ul>	The lattice tower foundation requires an excavation of a piled foundation of 5m x 5m x 0.95m. The excavation to be checked for stability and edges protected to prevent falls. The erection of the 15m lattice tower will require HIAB works and some working at height	<ul> <li>Identify risks and complete JSSP.</li> <li>Set up exclusion zone in work area.</li> <li>Complete Permit to Dig</li> <li>CSCS trained operator to scan the ground. Location of identify services to be marked on the ground</li> <li>Only toothless bucket to be use for mechanical digging.</li> <li>No mechanical dig within 500mm of live services.</li> <li>Exposed services to be protected and highlighted.</li> <li>Spoil to be stored away from the edge of excavation. Location for storing the spoil to be identified on site</li> <li>Safe access and egress into excavation must be provided.</li> </ul>
2. "Work which puts persons at risk from chemical or biological substances constituting a particular danger to the safety and health of such persons or involving legal requirements for health monitoring"	Not applicable	
3. "Work with ionising radiation requiring the designation of controlled or supervised areas as defined in Article 20 of Directive 96/29/Euratom	Not applicable. Passive work only covered	
4.Works near Live Services a) Underground Services	Before excavation's commence ground to be scanned and discovered services to be sprayed / marked.	<ul> <li>Consult existing service drawings</li> <li>Scan the ground using CAT scan and Genny.</li> <li>Ensure TC234 Locating Underground Services procedure is followed.</li> </ul>
b) Overhead Powerlines	Not applicable	



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5. Works exposing persons to risk of drowning	Not applicable	
6. Work on wells, underground earthwork and tunnels	Not applicable	
7. Work carried out by divers at work, having a system of air supply	Not applicable	
8. Worked carried out in caisson with a compressed air atmosphere	Not applicable	
9. Work involving the use of explosives	Not applicable	
10. Work involving the assembly or dismantling of heavy prefabricated components	Erection of Tower assembly	<ul> <li>Delivery of Tower by approved sub-contractor.</li> <li>Only trained operators will undertake the task.</li> </ul>
11. Other Risks		
11.1 Risk of Covid-19 infection	Travelling to site, interacting with members of the public & colleagues on site. Use PPE, Surgical face mask, wash hands frequently. 70% Alcohol hand sanitizer to be used.	Try to avoid places where you cannot keep 2 metres apart from other people, wear face covering if this is not possible
11.2. Risk of collision with Plant/Machinery/Vehicles on site- or other	Risk Assessment to be carried out on site (SSWP to be completed). Keep emergency escape routes clear at all times. Appropriate PPE to be provided and must be used correctly. Good housekeeping to be maintained at all times.	<ul> <li>All plant operatives will be competent and will have the appropriate CSCS training</li> <li>No site Personnel or Plant/machinery will cross the roped areas as set out by the PICW</li> <li>Only certified Items of plant / machinery will be allowed on this site</li> <li>A certified banksman will be on site at all times to aid plant operator</li> <li>SWL will be adhered to at all times</li> <li>All equipment used for lifting with the excavator must be certified and Banksman required for attaching load.</li> <li>Fire Extinguisher &amp; First aid kit will be available on site</li> <li>Excavated area to be CAT before work begins</li> <li>Plant to be inspected and GA2 to be completed by operator before work commencing.</li> </ul>
11.3. Work involving Lifting (HIAB Operation)	Any HIAB being used will be hired from an authorised dealer and only operated by trained and certified competent personnel. The manufacturer's instructions must be adhered	<ul> <li>Exclusion zone will be installed in work area.</li> <li>The Site Supervisor will ensure that the HIAB has a thorough examination</li> </ul>

	to for operation of the HIAB . A lift plan & GA1 form must be onsite Banksman must direct HIAB operations. Appointed Persons to oversee lift Operate on solid level ground. Two radios required for communication. Physical barriers and signage to be in place where there is a possibility interaction with the members of the public. Beware of overhead cables and slew area.	<ul> <li>certificate(every 12 months - form GA 1)</li> <li>The Site Supervisor will ensure that the lifting appliance has been inspected within the previous 7 days - form GA 2)</li> <li>The Site Supervisor will ensure that the weekly inspections of the automatic safe working load indicator is carried out - forms GA 2/ GA 3</li> <li>The Site Supervisor shall ensure that all lifting gear is supplied with a current test certificates(every 6 months) - note lifting gear includes ropes, slings, chains, block crabs, shackles,</li> <li>taken.</li> <li>A Banksman must be present for all Lifts and must hold relevant CSCS ticket. The Banksman must be in contact with the HIAB operator at all time of the lift either by hand signal or two way communication</li> <li>The Site Supervisor will check that lifting appliances such as gin wheels, pulley blocks, etc. are correctly erected and used.</li> <li>The Site Supervisor will ensure that all lifting appliances are inspected weekly and a record of the inspection made.</li> <li>Where a proposed lifting operation has not been planned for, the Site Supervisor shall seek advice from the Project Manager and put in place the required arrangements.</li> </ul>
11.4 EMF / RF	Not applicable. Passive works only	
11.5 Piling	PPE – Ear protection Noise assessment done If noise levels exceed: 80dB (A) notify employees, hearing protection advised. 85dB (A) Notify employees, make hearing protection mandatory. Post warning signs. Silenced plant.	<ul> <li>JSSP to be completed prior work commencing</li> <li>Ear protection, high cis vest, safety boots, helmet must be worn at all the time</li> <li>All operators must be trained for carrying their task.</li> </ul>

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	Well maintained & certified	
11.6 Works involving use of Equipment / Hand-tools	Well maintained & certified plant/equipment. Screened off areas. Choose tools which make less noise if possible. All staff to be qualified or trained with the machinery they use. All staff to be made aware of the risks of working in the vicinity of machinery with moving parts. All appropriate PPE to be provided & worn while working with machinery with moving parts. All machinery guards and protection to be maintained in its correct position and in working order. Defective guarding on machinery to be reported to supervisor immediately. Training of operatives. Use suitable tools for job. All tools to be maintained in good working. Use PPE. Sharp edges covered when not in use. Take Ergonomic features into account when purchasing new tools.	<ul> <li>Fire extinguisher on site in the Site Office. No Smoking when operating or re-fuelling abrasive wheels</li> <li>Only operatives trained in the use of Abrasive wheels may operate such equipment</li> <li>Ensure correct blade type used for the works</li> <li>Loose clothing, ties, coat sleeves are easily drawn into a revolving wheel and should not be worn.</li> <li>To minimise the risk of bursting, abrasive wheels should always be run within the specified maximum rotation speed. Never remove any Guards that are in place</li> <li>Only 110kv rated electrical hand tools to be used on site</li> </ul>
		<ul> <li>All electrical equipment must be PAT tested.</li> <li>Ensure hands kept clear when hitting ducting into place.</li> </ul>
11.7 Manual Handling	Manual handling training carried out by all operatives. Use mechanical aids provided. Use two or more men for heavy/awkward loads. Correct lifting techniques. Heavy items placed at ground level or level where lifting is assisted. Also work area to be kept tidy.	<ul> <li>Manual Handling Training completed by all site personnel</li> <li>Use mechanical means where possible and practicable for unloading equipment.</li> <li>When lifting manually heavier/awkward loads 2 people should take the weight and carry to location.</li> </ul>
11.8 Other(s) Excavations:	Locate and mark underground services in line with HSA 'Code of Practice for Avoiding Danger from Underground Services'.	<ul> <li>Identify risks and complete JSSP.</li> </ul>



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Fence off excavations. Ensure necessary equipment is available prior to start of work. Use correct support systems. Ensure personnel never enter unsupported excavations. Check & record inspection daily in 'Record Inspection book' if excavation is deeper than 1.25m. Store materials away from excavation. Staff Training, Wear Correct PPE.	<ul> <li>Set up exclusion zone in work area.</li> <li>Complete Permit to Dig</li> <li>CSCS trained operator to scan the ground. Location of identify services to be marked on the ground</li> <li>Only toothless bucket to be use for mechanical digging.</li> <li>No mechanical dig within 500mm of live services.</li> <li>Exposed services to be protected and highlighted.</li> <li>Spoil to be stored away from the edge of excavation. Location for storing the spoil to be identified on site</li> <li>Safe access and egress into excavation must be provided.</li> </ul>

**Part 3**: Principles of prevention (completed by PSDP and PSCS)



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1.Keeping the construction site in good order and in a satisfactory state of cleanliness	A good housekeeping culture. Appropriate & designated storage areas. Keep walkways/traffic route clear	<ul> <li>PSCS Construction controls identified:</li> <li>Access to eir personnel must be kept clear at all the time.</li> <li>Everyone on site must</li> </ul>
2. Choosing the location of workstations, bearing in mind how access to them is obtained, and determining routes or areas for the passage and movement of equipment.	Plan all operations prior to commencement of works. Maintain site tidiness. Remove waste on a regular basis. Stacking areas designated & maintained. Correct signing & guarding. All materials guarded, covered or locked up. Regular Audits.	<ul> <li>adhere to clean as you go policy.</li> <li>All operatives must hold safe pass and Manual Handling for accessing the site.</li> <li>CSCS cards required for undertaking specific tasks</li> <li>Materials storage area to be identified on site, extra care to be considered for keeping the access free.</li> <li>Audits to be caried by Safety Rep</li> </ul>
3.The conditions under which various materials are handled		Ensure PPE is worn when working on site.
4.The conditions under which the dangerous materials used are removed.		N/A
5. The storage and disposal or removal of waste and spoil/debris	To be removed promptly from the site during construction to maintain access to the exchange building	<ul> <li>Dispose of excavated material off-site using accredited waste disposal company.</li> </ul>
6.The adaptation, based on progress made on the construction site, of the actual time to be allocated for the various types of work or work stages		<ul> <li>Extra time and care to be allocated foe high risk activities such as Excavations, HIAB Lift.</li> </ul>
7. Co-operation between employers and self-employed persons		<ul> <li>Good cooperation required between operatives and Supervisor on site.</li> </ul>
8.Interaction with industrial activities at the place within which or in the vicinity of which the construction site is located	Pedestrian access for eir workers to the door and surrounds of the eir exchange building to be always maintained during on site construction activities	<ul> <li>Access/egress to be kept free for eir personnel/visitors.</li> </ul>



# **Part 4**: Site Rules (completed by PSCS)

Project Supervisor Construction Stage	λ.
Safety rules for the execution of the construction work:	<ul> <li>Only authorised personnel allowed on site</li> <li>Safe Pass and Manual Handling training required for access to the site</li> <li>Prior to starting the task all relevant safety paperwork must be briefed to crew and signed by everybody involved</li> <li>Keep the site tidy "clean as you go"</li> </ul>



# Part 5: Environmental aspects (completed by PSCS)

#### Environment aspects for everyone on site

- Comply with all relevant environmental legislation avoiding prosecutions for the contravention of environmental law and regulations.
- Raise environmental awareness throughout the Towercom Site Management Team and sub-contractor group by means of regular Environmental Tool Box Talks and Awareness sessions.
- Achieve zero pollution incidents (emergency spills, noise / nuisance, water contamination, waste storage / management issues) whilst maintaining an operational work site.
- Implement the waste hierarchy: <u>eliminate</u> waste where we can; <u>reduce</u> the waste we create; <u>reuse</u> materials until we can't use them again; <u>recycle</u> waste where reasonably practicable; and only <u>dispose</u> of waste if we are unable to recycle.
- Identify and recognise all designated sites (Sites of Special Scientific Interest, Areas of Outstanding Natural Beauty etc), listed buildings and protected flora, fauna and wildlife that may potentially be affected by Towercom activities. Towercom will instigate appropriate mitigation measures to ensure adequate protection and that minimum disturbance is caused.

#### Environmental controls.

- > All plant equipment when are not in use must sit on a plant nappy / drip tray
- > Spill kit and Fire extinguisher to be in place on site.
- > No refueling will take place within 30m of water course.
- Fuel must be stored in Jerry cans.



## Part 6: Emergency Details (completed by PSCS)

First Aid

		On-site First Aider:	PICW/ site operatives
First Aid		First Aid Box Location:	Location to be identified on site
		Local Hospital:	
	ud	Local Doctor	

### **Emergency Contacts**

	An Garda Síochána:
	Local Authority:
	HSE
	Gas Networks Ireland:
	ESB Services:
	Health and Safety Authority:
	Towercom Head Office:
	Towercom EHS Manager: