RAMS044-CEN

Portable Traffic and Pedestrian Light Production

HATTON TRAFFIC MANAGEMENT LTD
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SIGNATORIES

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DOCUMENT REVISIONS

Revision	Date	Name	Amendment
1	05/02/2025	Louis Eames	Initial Issue
2	27/03/2025	Louis Eames	Updated to include assessment of lone working risks.

CONTENTS

SUMMARY

This RAMS document provides the steps and precautions necessary for the safe manufacturing, assembly and testing of portable traffic and pedestrian lights. The procedures outlined below must be followed to ensure the safety of personnel and the protection of the environment.

Any deviation from this RAMS document or any linked documents mentioned below, must be agreed with by the owner of the document and the Hatton QHSE Manager.

LINKED DOCUMENTS

Document Name	Location
PY003-CEN Incident Reporting Policy	Documents/QHSE/Policies/Policies
PY007-CEN Lone Working Policy	Documents/QHSE/Policies/Policies
PY036-CEN Health & Well Being Policy	Documents/QHSE/Policies/Policies
PY053-CEN Personal Protection Policy (PPE)	Documents/QHSE/Policies/Policies
RA003-CEN Use of Power Tools	Documents/QHSE/QHSE Approved RAMS
RA008-CEN COSHH Assessments	Documents/QHSE/QHSE Forms
RA007-CEN General Office Work	Documents/QHSE/QHSE Approved RAMS
RA016-CEN Manual Handling	Documents/QHSE/QHSE Approved RAMS
RA021-CEN Use of Ladders	Documents/QHSE/QHSE Approved RAMS
RAMS042-CEN Using Batteries and Battery Charging	Documents/QHSE/QHSE Approved RAMS

Notes:

- If you are unable to find any of the documents, please speak to your Line Manager.
- This set of RAMS MUST be read before undertaking any production duties.

SCOPE OF WORK

- Subassembly manufacture
- Final assembly
- Testing

RESPONSIBILITIES

QHSE Manager

- Auditing to ensure adherence to safety protocols.

Depot Manager

- The production area is checked frequently for safety and housekeeping standards.
- The production area is equipped with PPE that is serviceable, maintained and the correct type.
- The production area, tools and equipment are only available to those that have been trained and are competent in the production process.
- Ensure that all personnel are taken through the RAMS and have signed to say they understand what is required of them when working in the production area.
- Ensure fire extinguishers are easily accessible in the production area and that personnel are aware of the method of use.

Line Manager

- Ensure that personnel are trained and competent to carry out operations within the production area, this training is to be documented.
- They are wearing the correct PPE for the task they are undertaking, and that they are following the RAMS.

Production Technician

- Component purchasing
- Parts control
- Workspace management and maintenance
- Tool management and maintenance
- Subassembly production
- Final assembly production
- Inspection and test
- Completed stock control
- Waste management

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Minimum requirements for these RAMS are for all personnel working in the production area:

- Safety shoes or boots with protective toe cap and anti-slip sole
- Safety eye protection glasses or goggles are to be worn when drilling or soldering
- Safety gloves are to be worn when using a guillotine or knife

Notes:

- **PPE is to be clean, fit for the operation you are undertaken.**
- **Any defective PPE MUST be reported to the Depot Manager and exchanged.**

EMERGENCY PROCEDURES

- In case of accident:
  - Minor - report to the designated first aider
  - Serious – call 999 for emergency medical help immediately.
- In case of fire, use the appropriate fire extinguisher. If the fire involves electrical equipment, ensure the power is disconnected before attempting to extinguish.
- In case of electric shock, do not touch the affected person unless you are trained in CPR or first aid. Call 999 for emergency medical help immediately.

Note:

- **All incidents are to be reported through the Notify Reporting IM APP and immediately to the QHSE Department.**

MONITORING

- The production area and equipment are to be regularly inspected and maintained.
- All personnel **MUST** be trained, competent and familiar with the procedures.

PROCEDURE

The following documents provide further detail on the procedures, parts and tools utilised in the production process:

- HTM-303 Bill of Materials 303-R0003
- HTM-303 Portable Light Wiring Schedule 303-R0012
- HTM-303 Portable Light Connectivity 303-R0004
- HTM-303 Production Assembly 303-R0011
- HTM-303 Production Test Plan 303-R0013

These documents are stored in the technical file for the portable traffic and pedestrian lights, the latest version of each document must always be utilised.

An overview of the tasks involved in the production process is detailed below.

Component Purchasing:

- Correct identification of parts from the parts list
- Requesting quotes for price and lead times
- Management of order placement timing considering lead times
- Ordering from online marketplaces such as RS, Farnell, Mouser etc.
- Keeping track of components ordered and outstanding
- Resolving component availability issues by identification of alternative suppliers
- Flagging components which have become obsolete
- Monitoring for late deliveries
- Interaction with the accounts department to progress and authorise purchase orders

Parts Control

- Setup stock storage, organised into subassembly kits to provide easy access to components
- Setup cable and wire racks
- Introduce suitable labelling for kits and parts within the kits
- Introduce a stock monitoring and control system including consideration of continuous alignment of the latest parts list in the product technical file
- Check in parts as they are delivered to keep track of stock levels and identify incorrect part shipments and parts incorrectly manufactured
- Check out parts as they are utilised
- Setup storage for completed subassemblies ready for final assembly
- Setup storage for masts and bogies ready for final assembly

When lifting heavy parts or heavy boxes of parts, safety shoes or boots must be worn, and appropriate lifting techniques must be used to avoid strain and injury. Trollies and/or Mechanical lifting aids are to be used when moving or lifting heavy parts or heavy boxes of parts.

Workspace Management and Maintenance

- Setup and build a reconfigurable production workspace which can be quickly organised for the current task
- Consider flow of production tasks to minimise time and ease the process
- Ensure the production workspace is ergonomic before embarking on a repetitive task and consider methods of reducing strain on the body
- Ensure there is a range of work surface heights available to accommodate production tasks best suited standing and tasks best suited seated, additionally a raised platform may aid work on the bogie
- Consider health and safety aspects for each task by identifying and reducing risks to an acceptable level
- Identify methods and mechanisms of ensuring quality in the production process to ensure that the product is consistently built correctly to operate safely, reliably and robustly
- Ensure the production area is tidy at the end of each subassembly build and at the end of each day
- Continuously monitor the workspace for potential improvements to implement for the production process over time

When lifting heavy furniture or heavy boxes, safety shoes or boots must be worn, and appropriate lifting techniques must be used to avoid strain and injury. Trollies and/or Mechanical lifting aids are to be used when moving or lifting heavy parts or heavy boxes of parts.

Tool Management and Maintenance

- Identify and acquire the tools required for each stage of the build process
- Consider and evaluate the cost benefit of tools which may ease and reduce production time
- Identify and implement storage methods for tools to aid ease of access for each subassembly and enable ease of identification of tools which are mislaid
- Identify and replace tools which are broken or worn
- Identify and order consumables required such as solder, flux paste, drill bits and implement suitable storage
- Identify and PPE required for each stage such as eye protection, fume extraction
- Continuously monitor the tool selection for potential improvements to implement for the production process over time

Subassembly Production

- Cable and wire cutting and stripping, crimping of wire terminations
- Harness and conduit assembly
- Connector and interconnect assembly – solder, screw, push in and clamps
- Soldering wires to panel mount components
- Soldering components to PCBs
- Enclosure panel cutouts and population of panel mount components and gaskets
- Mounting PCBs within enclosures
- Downloading code to programmable devices
- Mechanical fixing of components using machine screws
- Labelling and configuration management
- Continuously monitor the production process and documentation for potential improvements to implement for the production process over time

When handling printed circuit boards without ESD protective packaging and loose electronic components which are susceptible to ESD damage, an ESD mat and wrist strap must be worn.

When using a guillotine or knife, safety gloves must be worn.

When drilling enclosure panel cutouts and soldering, safety eye protection must be worn.

When soldering, fume extraction and filtering equipment must be used.

Final Assembly Production

- Build and assemble final assemblies from the subassemblies and metalwork

When lifting heavy subassemblies and final assemblies, safety shoes or boots must be worn, and appropriate lifting techniques must be used to avoid strain and injury. Trollies and/or Mechanical lifting aids are to be used when moving or lifting heavy parts or heavy boxes of parts.

Inspection and Test

- Inspect electronics, electrical and mechanical assemblies
- Production acceptance testing utilising testing equipment
- Production inspection and test result documentation
- Update the configuration register to reflect the serial numbers and part numbers associated with each top level mast and bogie assembly

Completed Stock Control

- Setup storage for completed masts and bogies ready for test and deployment

When lifting heavy final assemblies, safety shoes or boots must be worn, and appropriate lifting techniques must be used to avoid strain and injury. Trollies and/or Mechanical lifting aids are to be used when moving or lifting heavy parts.

Waste Management

- Ensure WEEE waste is dealt with appropriately
- Ensure packaging is recycled appropriately
- Ensure batteries are recycled at end of life appropriately

TOOLS & EQUIPMENT

The tools and equipment used in the production process include:

- Spanners
- Screwdrivers
- Battery powered drill
- Crimping tools
- Wire cutters
- Wire strippers
- Soldering iron
- ESD mat
- ESD strap
- Fume extractor
- Heat gun
- Miniature guillotine
- Program download tools
- PC
- Test equipment
- Insulation test equipment

RISK ASSESSMENT

The following risk assessment is made on the production procedures and production area, the following operational hazards and risks provide a general indication of what may be encountered on these works.

If at any point throughout your work, you encounter an unsafe situation you **MUST** stop work and contact your Supervisor immediately for guidance.

- If ANY risk is **HIGH**, **do not proceed with the operation**, abandon the job or look into doing it a different way.
- If ANY risk is **MEDIUM**, **proceed only with caution**, introduce additional controls, where possible.
- If ALL risk is **LOW**, **proceed with work**.

Likelihood Categories		Severity Score				
Category	**Description**	**1**	**2**	**3**	**4**	**5**
A	**Extremely Unlikely**					
B	**Unlikely**					
C	**Occasional**					
D	**Likely**					
E	**Expected**					

Severity Score Descriptions	
1	Minor injuries/inconveniences. Employee can continue to work. Short term local damage
2	Minor injuries. Operative requires first aid treatment. Stops work. Medium term local/short term regional damage.
3	Reportable/LTI or illness Long term local/regional damage
4	Major injury or illness with long term effects Long term widespread damage
5	Fatalities Widespread permanent damage

Action Required	
Low Risk	Check that no other risks can be eliminated by modifications of design then proceed with design. Record residual risks
Medium Risk	Reduce risks as far as reasonably practical. Consider alternative design or construction method. If alternatives are not available, specify precautions to be adopted. Record residual risks.
High Risk	Seek alternative solutions. If alternatives are not available, specify precautions to be adopted & advise Senior Management & Supervisor (if appropriate). Record residual risks

Hazard Phase Codes			Examples of Persons at Risk
SIS	Site Investigation/Survey		Inexperienced (I)
OD	Outline Design		Vulnerable Road Users (VRU)
DD	Detailed Design		Public (P)
C	Construction		Cyclists (C)
CMT	Commissioning /Testing		Lone workers (LW)
O	Operation		Operative (OP)
M	Maintenance		Site Personnel (SP)
D	Demolition/Decommissioning/Dismantling		All

Hazard(s)	Persons at Risk	Risks	PRE-RCM			Risk Control Measures (RCM)	POST-RCM		
			Likelihood	Severity	Risk		Likelihood	Severity	Risk
Trip or Slip Hazards C, CMT	OP/SP	Cluttered or untidy production area increases the likelihood of slips and trips by site personnel.	**D**	**2**	**M**	a. Maintain a clean and organised production area. b. Weekly Walk around checks to be carried out on regular housekeeping. c. Tools and equipment to be stored away correctly in an organised manner.	**B**	**2**	**L**
		Inappropriate footwear, such as shoes without adequate grip or incorrect footwear size, can increase the likelihood of slips by site personnel.	**C**	**2**	**M**	a. Non-slip, protective footwear to be used for all personnel in the production area. b. Weekly checks of the condition of flooring and footwear requirements.	**B**	**2**	**L**
		Cables between mains sockets and equipment can create trip hazards for site personnel if not managed properly.	**C**	**2**	**M**	a. Utilise battery operated equipment when not working at work benches and desks. b. Use mains powered equipment at the work benches and desks. c. Route cables away from high-traffic areas.	**B**	**2**	**L**
Cuts or Bruising Hazards C, CMT	OP/SP	Incorrect use of hand tools such as spanners, screwdrivers, miniature guillotine, knives, wire cutting or crimping tools cause cuts or bruises to site personnel.	**C**	**2**	**M**	a. Utilise cut resistant safety gloves when using the miniature guillotine or knives. b. Utilise the correct hand tool and size of hand tool for the procedure being performed. c. Ensure site personnel are adequately trained and are competent to utilise the required hand tools. d. First use checks are to be carried out on tools.	**B**	**2**	**L**
		Incorrect use of power tools such as drills may cause cuts or bruises to site personnel.	**C**	**2**	**M**	a. Utilise the correct power tool, type and size of accessory for the procedure being performed. b. Ensure site personnel are adequately trained and are competent to utilise the required power tools.	**B**	**2**	**L**

Hazard(s)	Persons at Risk	Risks	PRE-RCM			Risk Control Measures (RCM)	POST-RCM		
			Likelihood	Severity	Risk		Likelihood	Severity	Risk
		Airborne material which may occur during drilling of parts during the production process cause a cut to site personnel.	**C**	**2**	**M**	c. Wear appropriate clothing to protect the body when drilling parts. d. First use checks are to be carried out on tools.	**C**	**1**	**L**
Burn Hazards C, CMT	OP	Inadvertent touching of soldering iron tip or heat gun will lead to burn injury of site personnel.	**B**	**2**	**L**	a. Ensure site personnel are adequately trained and are competent to utilise a soldering iron. b. Soldering iron to be switched off overnight and when not in use.	**A**	**2**	**L**
Eye Injury Hazards C	OP	Solder splashes which may occur during soldering cause eye injury to site personnel.	**B**	**4**	**M**	a. Wear eye protection glasses when soldering.	**B**	**1**	**L**
		Airborne material which may occur during drilling of parts during the production process causes eye injury to site personnel.	**B**	**4**	**M**	a. Wear eye protection glasses when drilling parts.	**B**	**1**	**L**
Lighting Fixture Hazards C, CMT	OP/SP	Poor visibility due to insufficient lighting intensity in the production area will make it difficult for site personnel to spot trip hazards or may cause a procedure to be performed incorrectly.	**D**	**2**	**M**	a. Adequate lighting fixtures with sufficient light intensity has been installed in the production area. b. Weekly checks to be carried out and lighting systems to be maintained.	**A**	**2**	**L**
	OP	Glare from lighting which is too bright, or reflections will	**D**	**2**	**M**	a. Lighting fixtures have been installed in the production area which are not bright enough to discomfort due to glare.	**B**	**2**	**L**

Hazard(s)	Persons at Risk	Risks	PRE-RCM			Risk Control Measures (RCM)	POST-RCM		
			Likelihood	Severity	Risk		Likelihood	Severity	Risk
		cause discomfort for site personnel when working or may cause a procedure to be performed incorrectly.				b. The walls, workbenches and desks have a matt finish to reduce discomfort due to excessive reflections. c. The covers on the light fixtures have a diffuser to even out the light emitted from the light sources.			
	OP	Shadows or inconsistent light levels caused by incorrect lighting fixture positions may cause discomfort for site personnel or may cause a procedure to be performed incorrectly.	**D**	**2**	**M**	a. The light fixtures are evenly spaced and cause consistent lighting over the entire production area. b. The high ceiling and white walls in the production area reduce shadows to an acceptable level in the centre and around the edges of the production area.	**B**	**2**	**L**
	OP	Flicker or strobe effect on lighting will cause discomfort for site personnel.	**C**	**1**	**L**	a. The light fixtures in the production area are designed utilising LED light sources which do not flicker or strobe as was common with fluorescent light sources. b. The light fixtures do not have dim control which can cause LED light sources to flicker.	**A**	**1**	**L**
	OP	Lack of emergency lighting during a power failure increases the likelihood of slips and trips by site personnel.	**B**	**2**	**L**	a. An emergency light is fitted above the door in the production area which is activated upon loss of the mains power supply. b. Emergency lighting in the depot are all subject to the routine inspection and maintenance program.	**A**	**2**	**L**
Natural Light Hazards C, CMT	OP	Glare or reflections from bright sunlight will cause discomfort for site personnel when working or may cause a procedure to be performed incorrectly.	**D**	**2**	**M**	a. The production area is housed within the main depot building so has reduced natural light. b. Bright low sunlight is able to shine through the production area window when the main depot roller shutter door is open, but blinds have been fitted to the windows to eliminate any glare when this occurs.	**B**	**2**	**L**

Hazard(s)	Persons at Risk	Risks	PRE-RCM			Risk Control Measures (RCM)	POST-RCM		
			Likelihood	Severity	Risk		Likelihood	Severity	Risk
Heating and Ventilation Hazards C, CMT	OP	Fumes from soldering iron are inhaled causing respiratory damage to site personnel.	D	3	H	a. The design of the portable traffic and pedestrian light product has been designed to minimise the amount of soldering by utilising crimped and screw connections where possible. b. The PCBs are manufactured and populated by an external company. c. The fume extractor must be used when soldering. d. The fume extractor has a triple layer filter achieving a purification rate of 99.97%. It has a variable speed control and adjustable hose to ensure that the fumes are removed from the vicinity.	A	3	L
	OP	Production area being too hot or poor ventilation causes inability to concentrate on production tasks leading to injury to site personnel or damage to parts or equipment.	D	2	M	e. The production area is fitted with 3 electric heaters which each have their own temperature control. f. The windows in the production area have trickle vents which can be opened to provide ventilation. The top pane of the windows is also able to be opened to increase ventilation further if required.	B	2	L
	OP	Production area being too cold compromises dexterity or ability to concentrate on production tasks leading to injury to site personnel or damage to parts or equipment.	E	2	H	a. The production area is fitted with 3 electric heaters which each have their own temperature control. These heaters provide sufficient heat to the production area during all seasons.	B	2	L
Electrical Hazards C, CMT	OP	Faulty connections or exposed wires on mains powered equipment leading	C	4	H	a. Routine PAT testing on electrical equipment, including inspection of wires. b. Report faulty connections on electrical equipment to enable repair or replacement.	A	3	L

Hazard(s)	Persons at Risk	Risks	PRE-RCM			Risk Control Measures (RCM)	POST-RCM		
			Likelihood	Severity	Risk		Likelihood	Severity	Risk
		to electric shock to site personnel or fire.				c. Do not use electrical equipment with faulty connections or exposed wires. d. Insulating soles on safety shoes to be worn at all times.			
	OP	Faulty electrical equipment leads to electric shock to site personnel or fire.	**B**	**4**	**M**	a. Report faulty electrical equipment to enable repair or replacement. b. Do not use faulty electrical equipment. c. Insulating soles on safety shoes to be worn at all times.	**A**	**3**	**L**
	OP	Touching the metal ends of the probes of the insulation test equipment when the test is active will cause electric shock to site personnel.	**C**	**2**	**M**	a. Ensure site personnel are adequately trained and are competent to utilise the insulation testing equipment. b. Do not touch the metal ends of the insulation testing equipment.	**B**	**2**	**L**
Fire Hazards C, CMT	OP/SP	Soldering iron catches fire to adjacent flammable materials causing harm or damage.	**C**	**3**	**M**	a. Soldering iron to be switched off overnight and when not in use. b. Soldering area to be kept clean and tidy. c. No flammable materials to be adjacent to the soldering iron while it is on or still hot. d. Soldering iron to be placed in its stand in between soldering actions. e. A fire extinguisher suitable for electrical fires is installed in the production area beside the door. f. The site personnel are aware of how to operate the fire extinguisher, releasing the pin, aiming at the base of the fire, press lever, keep hands back from the end of the nozzle, switch off electrical outlets in the vicinity if safe to do so. g. Fire extinguishers in the depot are all subject to the routine inspection and maintenance program.	**A**	**3**	**L**

Hazard(s)	Persons at Risk	Risks	PRE-RCM			Risk Control Measures (RCM)	POST-RCM		
			Likelihood	Severity	Risk		Likelihood	Severity	Risk
	OP/SP	Heat gun catches fire to adjacent flammable materials causing harm to site personnel or damage.	C	3	M	a. No flammable materials to be adjacent to the heat gun when in use. b. A fire extinguisher suitable for electrical fires is installed in the production area beside the door. c. The site personnel are aware of how to operate the fire extinguisher, releasing the pin, aiming at the base of the fire, press lever, keep hands back from the end of the nozzle, switch off electrical outlets in the vicinity if safe to do so. d. Fire extinguishers in the depot are all subject to the routine inspection and maintenance program.	A	3	L
	OP/SP	Electrical heater vents are covered, or objects placed too close to heater causing fire leading to harm to site personnel or damage.	C	3	M	a. The electrical heaters should not be covered. b. The electrical heaters have a label stating that they should not be covered. c. Do not place items and storage equipment too close to the electrical heaters. d. A fire extinguisher suitable for electrical fires is installed in the production area beside the door. e. The site personnel are aware of how to operate the fire extinguisher, releasing the pin, aiming at the base of the fire, press lever, keep hands back from the end of the nozzle, switch off electrical outlets in the vicinity if safe to do so. f. Fire extinguishers in the depot are all subject to the routine inspection and maintenance program.	A	3	L
Physical Hazards C, CMT	OP	Lifting of heavy final assemblies or containers of parts leads to manual	D	2	M	a. Personnel must be taken through Manual Handling procedures. b. Traffic and pedestrian masts weigh around than 20kg and should only be lifted with the centre of gravity below shoulder height and lifted close to the body.	C	1	L

Hazard(s)	Persons at Risk	Risks	PRE-RCM			Risk Control Measures (RCM)	POST-RCM		
			Likelihood	Severity	Risk		Likelihood	Severity	Risk
		handling injury to site personnel.				c. The bogie should not be lifted by site personnel in the production area. d. A raised workbench with ramps has been provided for working on the bogie. e. Decant heavy objects from heavy containers to reduce the weight. f. Use mechanical lifting aids and trollies.			
	OP	Tooling requires excessive force to operate causing injury to site personnel.	**D**	**2**	**M**	a. First use checks to be carried out on tools before use. b. Any tooling which requires excessive force should not be used and reported. An alternative method or tool will be established for the task.	**B**	**2**	**L**
Drop and Topple Hazards C, CMT	OP	Shelving unit topples over causing injury of site personnel due to unsuitable loading, inadequate fixings or unstable footing.	**B**	**2**	**L**	a. The wiring rack is firmly fixed to the wall utilising wooden planks to distribute the load and screw fittings into the battens behind the plaster to prevent detachment from the wall. b. The shelving units at risk of toppling must be fixed to the wall to prevent toppling. c. Shelving units not to be overloaded. d. Protective safety shoes must be worn in the production area at all times.	**A**	**2**	**L**
	OP	Injury to feet of site personnel when manual handling - lifting and inadvertently dropping product parts, containers of parts or assemblies.	**C**	**3**	**M**	a. Personnel must be taken through Manual Handling procedures. b. Protective safety shoes must be worn in the production area at all times.	**B**	**2**	**L**
	OP	Injury to feet of site personnel if parts, containers	**C**	**3**	**M**	a. Protective safety shoes must be worn in the production area at all times.	**B**	**2**	**L**

Hazard(s)	Persons at Risk	Risks	PRE-RCM			Risk Control Measures (RCM)	POST-RCM		
			Likelihood	Severity	Risk		Likelihood	Severity	Risk
		of parts or an assembly are inadvertently knocked from a workbench, desk or shelf.							
Ergonomic Hazards C, CMT	OP	Poor production area layout causing awkward postures and discomfort to site personnel.	**D**	**2**	**M**	a. The production area has been designed with mobile work benches where possible to enable the site personnel to adjust the workspace to the current task.	**B**	**2**	**L**
	OP	Work bench or desk height causing awkward postures and injury to site personnel when performing production procedures or operating computer workstations.	**D**	**2**	**M**	a. A raised workbench with ramps has been provided for working on the bogie. b. The work benches have been sourced with a suitable working height in mind, either for standing or for sitting with a draughtsman's chair which is suitable for working with raised working surfaces. c. The desks are electronically height adjustable to enable the site personnel to set the desk height to their comfortable level.	**B**	**2**	**L**
	OP	Chair height, footrest height or arm rest height causing awkward postures of site personnel causing discomfort or strain injury when performing production procedures or operating computer workstations.	**D**	**2**	**M**	a. The draughtsman's chairs have adjustable height and adjustable footrest height. The arm rests are fixed to a suitable position relative to the chair. b. The desk height is electronically adjustable to be compatible with the chair arm rest height.	**B**	**2**	**L**
	OP	Repetitive strain injury to site personnel caused by performing the same task	**D**	**4**	**H**	a. Repetitive tasks must be interspersed with other tasks throughout the working day which involve different working positions and muscles. b. Breaks must be taken as soon as discomfort is encountered.	**B**	**2**	**L**

Hazard(s)	Persons at Risk	Risks	PRE-RCM			Risk Control Measures (RCM)	POST-RCM		
			Likelihood	Severity	Risk		Likelihood	Severity	Risk
		multiple times over an extended period.				c. Tasks which cause pain must be stopped immediately and reported. An alternative method will be established.			
Lone Working Hazards C	OP	Injury while lone working requires emergency medical assistance.	**C**	**4**	**H**	a. Employer must ensure employees are suitably qualified and experienced to carry out the tasks involved in the production area. b. Employee must consider risks of tasks through dynamic risk assessment and consider whether they need assistance or someone else to be present. c. Employee must regularly check in with other staff. d. Employee must follow the emergency procedure to use a mobile phone to call for help. e. Employee must keep a mobile phone with them at all times. f. Employee must use a fall detect device to detect falls or a lone worker alarm to call emergency services and/or emergency contact. g. Employee must supply relatives with a phone number to call to find out whereabouts of employee.	**B**	**2**	**L**
	OP	Medical emergency due to medical condition while lone working requires emergency medical assistance.	**C**	**5**	**H**	a. Employee must consider risks of tasks through dynamic risk assessment and consider whether they need assistance or someone else to be present. b. Employee must regularly check in with other staff. c. Employee must inform the employer of known medical conditions. If applicable, a medical assessment must be sought by a GP or other suitably qualified medical person and medication supplied to the employee. d. Medication for known medical conditions must be accessible in the workplace.	**B**	**2**	**L**

Hazard(s)	Persons at Risk	Risks	PRE-RCM			Risk Control Measures (RCM)	POST-RCM		
			Likelihood	Severity	Risk		Likelihood	Severity	Risk
						e. At the first sign of feeling unwell relating to a known medical condition, the employee must stop work and inform their supervisor or a colleague. f. Employee must always keep a mobile phone with them. g. Employee must use the emergency procedure of using GP supplied medication if appropriate for known medical conditions and use a mobile phone to call for help. h. Employee must use a fall detect device to detect falls or a lone worker alarm to call emergency services and/or emergency contact. i. Employee must supply relatives with a phone number to call to find out whereabouts of employee. The residual risk of harm is similar to a medical emergency when not alone.			

ENVIRONMENTAL RISK ASSESSMENT

- If ANY risk is **HIGH**, **do not proceed with the operation**, abandon the job or look into doing it a different way.
- If ANY risk is **MEDIUM**, **proceed only with caution**, introduce additional controls, where possible.
- If ALL risk is **LOW**, **proceed with work**.

Control		Severity Score				
		Insignificant /Positive	Minor	Moderate	Major	Severe
Category	Rating Description	1	2	3	4	5
A	High degree of control					
B	Medium degree of control					
C	Moderate degree of control					
D	Slight degree of control					
E	Negligible degree of control					

Severity Score Descriptions	
1	All aspects fully controlled or have negative effect upon the environment
2	Aspects exist at recognisable levels, which may impact on the environment; but any change is easily recoverable with no lasting effect
3	Will have an effect on the environment. Damage is short term and is always recoverable
4	Major Impact. Damage is not permanent, but may take some time to remedy
5	High Impact. Risk of severe environmental damage

Action Required	
Low Risk	Low impact identified - Control measure to be adopted and monitored
Medium Risk	Medium impact identified - Ensure that the aspect & impact assessment is reviewed, further controls may be necessary
High Risk	High impact identified - Re-evaluate the aspect & impact assessment and develop / determine greater controls

Hazard Phase Codes		Examples of Receptor
SIS	Site Investigation/Survey	Air (A)
OD	Outline Design	Land (L)
DD	Detailed Design	Water (W)
C	Construction	Natural Resources (NR)
CMT	Commissioning /Testing	Community/Residence/Pedestrians (CRP)
O	Operation	Operative (Op)
M	Maintenance	Ecology /Habitat (EH)
D	Demolition/Decommissioning/Dismantling	All

Key Environmental Issues	
Local effects of Pollution (air quality, noise, waste, lighting, odour	Carbon emissions and greenhouse effect global warming
Water source and ocean Pollution	Deforestation, soil erosion and land quality
Material resources & Land despoliation, supply chain issues & inequal disruption to impacts	Energy Supplies, innovations in food and fuel
Waste and International waste trade	Agricultural issues arising from global trade
Climate change and extreme weather events	Biodiversity loss

Item	Activity	Phase Code(s)	Aspect	Receptor	Potential Impact	PRE-Risk Control Measures			Risk Control Measures	POST-Risk Control Measures		
						Control	Severity	Risk		Control	Severity	Risk
1	Disposal of Waste	C, CMT	Avoidance of disposal of waste or Failure to put waste in the correct receptor	All	Local effects of pollution (air quality, noise, waste, lighting, odour) Water source and ocean pollution Waste and international waste trade Deforestation, soil erosion and land quality Biodiversity loss	**B**	**3**	**M**	a. Waste that is generated from this operation is to be disposed of correctly in the correct waste receptors, either locally within the production area or in the depot receptors. b. Waste receptors are to be labelled to enable identification of the type of waste to be disposed of in the receptor. c. Waste stored in receptors locally within the production area is to be transferred to the depot receptors before or when the local receptors are full. d. A Contractor GoGreen manages waste. e. Reports are generated by the QHSE Manager and reported on at the Senior Management QHSE meetings. f. A weekly walk around check is carried out within the depots to ensure waste is in the correct areas.	**A**	**3**	**L**