



Lusail Real Estate Development Company

Health, Safety, Security, Environment, Logistics & Quality Department

Lusail Construction Safety Procedural Forms/Checklists – HSE Risk Register Active Records

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COMPANY PROPRIETARY INFORMATION

Prior to use, ensure this document is the most recent revision by checking the Master Document List. To request a change, submit a Document Change Request to the Document Control Representative. Master copy of this document will be maintained by the LREDC QA/QC Manager. Not controlled if printed.

Amendment Record

This document is reviewed to ensure its continuing relevance to the systems and process that it describes. A record of contextual additions or omissions is given below:

Rev .No	Description / Comments	Prepared By	Checked By	Approved By	Issue Date
1	(Pg. 2) Contents table insertion	HSE Working Group	Michael Ford	Uwe Krueger	17th Feb 2015
1	(Pg. 4) Risk Matrix insertion	HSE Working Group	Michael Ford	Uwe Krueger	17th Feb 2015
1	All - Risk Levels were amended according to Risk Matrix	HSE Working Group	Michael Ford	Uwe Krueger	17th Feb 2015
2	(Pg. 1) Company Propriety Information – Not controlled if printed has been added.	HSE Working Group	Michael Ford	Uwe Krueger	1st April 2015
2	(Pg. 2) Revised Amendment Table	HSE Working Group	Michael Ford	Uwe Krueger	1st April 2015
3	(Pg.5) Register Table – added Assessment No, Participants and Scope of Works	Bruce Bester	Michael Ford	Uwe Krueger	20th Apr '15
3	(Pg.4) Amended Tolerable Criteria	Bruce Bester	Michael Ford	Uwe Krueger	20th Apr '15
3	(Pg.37) Working at Night – inserted Out of hours call out – Emergency	Bruce Bester	Michael Ford 20 April 2015 <i>Michael Ford</i>	Uwe Krueger <i>Uwe Krueger</i>	20th Apr '15
4	Additional control added after full staff review. Document numbers added in control section.	Bruce Bester	Michael Ford 31 May 2015 <i>Michael Ford</i>	Uwe Krueger <i>Uwe Krueger</i>	27th Aug '15
5	Review of document as per findings of Stage 2 ISO18001 audit	Bruce Bester	Michael Ford	Uwe Krueger <i>Uwe Krueger</i>	27th Aug '15
5	Inclusion of Workers Accommodation Inspection	Bruce Bester	Michael Ford	Uwe Krueger <i>Uwe Krueger</i>	27th Aug '15
5	Amend numbering system to reflect inclusions	Bruce Bester	Michael Ford	Uwe Krueger <i>Uwe Krueger</i>	27th Aug '15

LREDC Activity Hazard Analysis (Sample) Form

Section	Dep	Description
1.1	OH	AHA 01 - Manual Handling
2.1	OH	AHA 02 - Working in Office Facility
3.1	OH	AHA 03 - Inspections during Hot Weather
4.1	OH	AHA 04 - Encountering Venomous Animals
5.1	OH	AHA 05 - Violence/ Harassment at Work
6.1	OH	AHA 06 - Work Stress
7.1	OH	AHA 07 - Workers Accommodation Inspections
8.1	OH	AHA 08 - Exposure to Infectious Organism
9.1	OH	AHA 09 - Exposure to Loud Noise
10.1	OH	AHA 10 - Emergency Drill Activity
11.1	OH	AHA 11 - Exposure to Chemicals
12.1	OH	AHA 12 - Compressed Gas Cylinder Explosion
13.1	Fire	AHA 13 - Electrocution
14.1	Fire	AHA 14 - Fire Exposure
15.1	Fire	AHA 15 - Inspections - Workshops
16.1	Fire	AHA 16 - Inspections – Storage Area
17.1	Fire	AHA 17 - Inspections Open areas
18.1	H&S	AHA 18 - Exposure to Dropped and Flying Objects
19.1	H&S	AHA 19 - Using Cell Phone on Active Construction Site
20.1	H&S	AHA 20 - Earthquake, High Winds, Natural Events
21.1	H&S	AHA 21 - Work Around Heavy Equipment
22.1	H&S	AHA 22 - Working at Night
23.1	H&S	AHA 23 - Work Around Live Public Traffic
24.1	H&S	AHA 24 - Transportation on Site
25.1	H&S	AHA 25 - Working Near Water
26.1	H&S	AHA 26 - Exposure on Commissioning and Start Up Activities Including Pressurized Lines
27.1	H&S	AHA 27 - Confined Spaces

RISK MATRIX						HAZARDOUS SITUATIONS TO CONSIDER	
Lookup details: User selects one CONSEQUENCE and one LIKELIHOOD (result is determined automatically)						1	Can anyone be struck by, or come into contact with anything?
						2	Can anyone be caught in, on, under, against or between anything?
						3	Can anyone slip, trip or fall?
						4	Can anyone be exposed to environmental hazards (e.g.: fumes, lack of oxygen, noise, temperature, extremes, dust, vibrations, radiation, chemical)?
						5	Can anyone be exposed to physical limitations (e.g.: not enough space, lack of access to tools fit for purpose, uncomfortable work position)?
						6	Is anyone at risk from others working in close proximity?
						7	Could process energy be reduced?
						8	Is any environmental damage possible?
						9	Is any property or equipment damage likely?
LIKELIHOOD	CONSEQUENCE						
	1 Minor 1 st Aid 1 < Qr10k	2 Medium MTI Qr10k - Qr20k	3 Serious RWI Qr20k - Qr50k	4 Major LTI Qr50k - Qr100k	5 Catastrophic Fatality > Qr100k		
	A – Almost Certain > 1 per week (>25%)	MODERATE 11	HIGH 16	EXTREME 20	EXTREME 23	EXTREME 25	
	B – Likely 1/week – 1/month (10-25%)	MODERATE 7	HIGH 12	HIGH 17	EXTREME 21	EXTREME 24	
	C – Possible 1/month – 1/year (1-10%)	LOW 4	MODERATE 8	HIGH 13	HIGH 18	EXTREME 22	
D – Unlikely 1/year – 1/10 years (0.1-1%)	LOW 2	LOW 5	MODERATE 9	HIGH 14	HIGH 19		
E – Rare < 1/10 years (0.1%)	LOW 1	LOW 3	LOW 6	MODERATE 10	HIGH 15		
TOLERABILITY CRITERIA	RESIDUAL RISK RATING (after controls in place)	RESULT	CONTROL LEVEL (Authority)	HEIRARCHY OF CONTROLS			
	EXTREME	Unacceptable	CEO / COO	Priority	Control		
	HIGH	Undesirable	Lusail Project Manager	1	ELIMINATION - complete elimination of the hazard / removal of energy source		
	MODERATE	Tolerable, but risk should be reduced if reasonably practical	Supervisory Staff	2	SUBSTITUTION - use something less hazardous		
	LOW	Broadly acceptable	Procedural Control	3	ISOLATION / ENGINEERING - physical barriers, guarding		
				4	ADMINISTRATIVE - procedures, training		
				5	PPE - last form of control to be implemented		

HSE Risk Register

Contractor:	Lusail HSELOQ	Date of Assessment:	31/05/2015	Assessor Name:	HSE Department
Project:	Lusail	Date of Previous Assessment:	15/12/2014	Approved By:	HS&F Working Group
Assessment No.		Scope of Works:	Lusail HS&F Risk Active Records		
Participants:	HS&F Working Group				

SI	Hazard	Exposed Group(s)	Existing Controls	Risk Level			Additional Controls	Risk Level			Accountability
				L	C	RFN		L	C	RRN	
1.1 Manual Handling											
1.1.1	Back Injuries	Lusail Site HSE Staffs	QCS 2010 (Section 11 Part 1.2.7).	C	3	13	Assessment Checklist. Proper lifting techniques training. (TBD)	C	1	4	Lusail Health Advisor
1.1.2	Hand Injuries	Lusail Site HSE Staffs	QCS 2010 (Section 11 Part 1.2.7).	C	3	13	Assessment Checklist. Appropriate PPE to be worn	C	2	8	Lusail HSE Manager
1.1.3	Pinch point Injuries	Lusail Site HSE Staffs	QCS 2010 (Section 11 Part 1.2.7).	C	2	8	Assessment Checklist. Line of fire training (TBD)	D	2	5	Lusail Health Advisor
1.1.4	Ergonomic hazard	Lusail Site HSE Staffs	QCS 2010 (Section 11 Part 1.2.7). LUS-HSE-WG3-446-003 Ergonomic chairs	B	3	17	Assessment Checklist. Training to be provided	D	3	9	Lusail Health Advisor
2.1 Working in the Office											
2.1.1	Hazard of computer work: Eye Strain	Lusail Site HSE Staffs	Frequent breaks as needed. Computers are utilized are UV radiation.	A	2	16	Annual Eye testing.	C	2	8	Lusail Health Advisor
2.1.1	Office hazard Tripping hazard for cables	Lusail Site HSE Staffs	OCEMP Section 27.5 Amal Services daily	B	3	17	Awareness program. General Services	D	3	9	Lusail Health Advisor / Project

SI	Hazard	Exposed Group(s)	Existing Controls	Risk Level			Additional Controls	Risk Level			Accountability
				L	C	RFN		L	C	RRN	
			cleaning of office facility				Contractor to ensure housekeeping (cable/electrical) is maintained on a weekly basis				Manager - EMS
2.1.3	Hazard of preparing tea/coffee: Thermal burns from hot coffee/tea	Lusail Site HSE Staffs	<ul style="list-style-type: none"> Assigned certified food and beverage handler 	E	3	6	N/A				
2.1.4	Work stress	Lusail Site HSE Staffs	<ul style="list-style-type: none"> Frequent breaks as needed. OCS 2010 Section 11 Part 1.2.1.5	B	3	17	Morning stretch program. Counselling for mental health.	D	3	9	Lusail Health Advisor
2.1.5	Ergonomic Hazard	Lusail Site HSE Staffs	Provision of ergonomic chairs and computer.	B	3	12	Regular training about Ergonomics.	D	3	6	Lusail Health Advisor
2.1.6	Thermal Comfort and Air Quality in the office	Lusail Site HSE Staffs	<ul style="list-style-type: none"> Regulate air conditioning for temperature and humidity to ensure employee comfort Avoid locating workstations directly in front of or below air conditioning outlets Install deflectors on air vents to direct airflow away from people. Control direct sunlight (radiant heat) with blinds, louvres and window treatments 	E	2	3	N/A				
2.1.7	Physical hazard (Slips and trips)	Managers/ Office staffs/	<ul style="list-style-type: none"> Proper cable management Clear and 	D	2	5	N/A				HSE Department / Diplomatic Contract

SI	Hazard	Exposed Group(s)	Existing Controls	Risk Level			Additional Controls	Risk Level			Accountability
				L	C	RFN		L	C	RRN	
		Cleaners and messenger	<ul style="list-style-type: none"> unobstructed access Frequent cleaning of floors by office cleaners 								Manager
2.1.8	Electrical hazard	Managers/ Office staffs/ cleaners/messenger and visitors	<ul style="list-style-type: none"> Proper cable management Competent and authorized electricians conducting installation and inspection on the connections. Regular inspection of the electrical lines ELCB and trip breakers are installed. LUS-HSE-WG3-446-024	C	3	13	<ul style="list-style-type: none"> Office Electrical Safety Training to be given to the exposed groups. Multiple warning signs with pictograms to be installed on the office electrical boards, outlets and office appliances/ equipment. 	E	3	6	Project Manager - EMS
2.1.9	Physical hazard (Manual handling)	Office staffs/ cleaners/messenger	<ul style="list-style-type: none"> The work kept close as possible to the body to minimize the stress on the body when reaching to perform a task Commonly accessed stored between hip and shoulder height where possible to avoid bending over and reaching up Use of office carts 	D	2	5	<ul style="list-style-type: none"> N/A 				
2.1.10	Fire hazard	Managers/ Office staffs/ cleaners/m	<ul style="list-style-type: none"> High level of housekeeping are maintained Electrical equipment 	E	2	3	<ul style="list-style-type: none"> N/A 				Diplomatic Contract Manager / Lusail Fire Manager

SI	Hazard	Exposed Group(s)	Existing Controls	Risk Level			Additional Controls	Risk Level			Accountability
				L	C	RFN		L	C	RRN	
		essenger and visitors	<ul style="list-style-type: none"> regularly inspected Adherence to non-smoking policy for office buildings. All chemicals (Toners and toilet chemicals) are stored and used as stated on their MSDS. Cleanliness and appropriate waste disposal methods. Installation of firefighting appliances (smoke detectors, fire extinguishers, etc.) Training and appointment of Fire warden inside the offices. LUS-HSE-WG3-446-011							Responsibly Contractors PM	
2.1.11	Physical hazard (Fall from stairs)	Managers/ Office staffs/ cleaners/messenger and visitors	<ul style="list-style-type: none"> Stairs have hand rails. Anti-slip strips were fixed on the stairways. Safety warning signs installed on the staircases. 	E	2	3	<ul style="list-style-type: none"> N/A 				Project Manager - EMS
2.1.12	Physical hazard (Falling materials from shelves and fall hazard from over reaching)	Managers/ Office staffs/ Document controller and office helpers	<ul style="list-style-type: none"> Shelves are of standard with cover and locks. None placing of documents on top of the shelves 	C	3	13	<ul style="list-style-type: none"> Use of office ladders/ platform ladders when reaching upper shelves. Training on Material stacking and ladder safety to exposed groups. 	E	2	3	Lusail HSE Manager

SI	Hazard	Exposed Group(s)	Existing Controls	Risk Level			Additional Controls	Risk Level			Accountability
				L	C	RFN		L	C	RRN	
3.1 Inspection During Hot Weather											
3.1	Heat related Illnesses like heat exhaustion/heat stroke/heat rash	Lusail Site HSE Staffs	<ul style="list-style-type: none"> • Air conditioned vehicle/offices. • Carry water every time. • Shower facility available during summer months • Heat stress program in place. • Installation of air conditioned rest shelters and facilities • Availability of cold drinking waters via water coolers. • Work/ rest rotation implemented • Implementation of summer working hours mandated by Local Government. • Availability of First Aid stations for heat stress cases. • Supply of water bottles to all workers as part of the PPE during summer time. • Minimum Personal Protective Equipment Dress: 	C	3	13	Facilitate identification and self-recognition training programs. Training (Forum May 2015) Heat related illness programs Bring additional shirts <ul style="list-style-type: none"> • If possible work indoor only during peak hours • Sun block • Lip balm • Cooling Vests 	D	3	9	Lusail Inspectors

SI	Hazard	Exposed Group(s)	Existing Controls	Risk Level			Additional Controls	Risk Level			Accountability
				L	C	RFN		L	C	RRN	
			<ul style="list-style-type: none"> o Long Pants o Shirts with Sleeves o Hardhat o Covered Shoes (Steel Toe Preferred) • Safety Glasses (Potential Eye Hazard Areas) • Wear mask • Wear appropriate clothing. LUS-HSE-WG3-446-036 LUS-HSE-WG3-446-063 QCS 2010 Section 11 Part 1.2.1.8 / 1.2.12.14								
3.1.2	Dehydration	Lusail Site HSE Staffs	<ul style="list-style-type: none"> • Drink small but frequent amount of water . • Refer to Company quick sheet, SOPs, plan, etc. for specific details on heat stress signs and symptoms drink ORS LUS-HSE-WG3-446-053	B	3	17	<ul style="list-style-type: none"> • Continue drinking cold water. • Thermos water container (water bottles) 	D	3	9	Lusail Managements / Inspectors
4.1 Encountering Venomous Animals											
4.1.1	Bites	Lusail Site HSE Staffs	No Policies/procedure.	D	2	5	<ul style="list-style-type: none"> • Awareness program. • Monitoring of Health Performance • Vaccination logs - LUS-HSE-FM4-446-123 	E	2	3	Lusail Health Advisor
4.1.2	Stings	Lusail Site	No Policies/procedures.	D	4	14	<ul style="list-style-type: none"> • Training to be 	E	2	3	Lusail Health

SI	Hazard	Exposed Group(s)	Existing Controls	Risk Level			Additional Controls	Risk Level			Accountability
				L	C	RFN		L	C	RRN	
		HSE Staffs					<ul style="list-style-type: none"> conducted on Flora & Fauna Contact the site first aider Baseline information – allergy reaction history 				Advisor
5.1 Violence / Harassment at Work											
5.1.1	<ul style="list-style-type: none"> Lone workers or small numbers of staff Staff are under pressure Staff shortages may lead to delays, impatience and hostility Contractor factors (under the influence of drug/alcohol) Previous history of assaults or threatening (especially during summer months). 	Lusail Site HSE Staffs	<ul style="list-style-type: none"> Presence of Security personnel Visibility and lighting Physical and non-physical measures that tackle the risk of violence at source. LUS-HSE-WG3-446-053 LUS-HSE-WG3-446-038	C	3	13	<ul style="list-style-type: none"> Training employees in nonviolent response and conflict resolution Post-incident support: counselling 	D	3	9	Lusail HSE Manager / Human Recourses
6.1 Work Stress											
6.1.1	Stress caused by: <ul style="list-style-type: none"> Bullying and harassment, poor relationship with co-workers and superiors Interpersonal conflict: Physical or social isolation Pack of opportunity to be consulted 	Lusail Site HSE Staffs	<ul style="list-style-type: none"> Policies/clear guidelines on appropriate workplace behavior Ensure fair discipline and investigation procedures are in place Early reporting and ensure action is taken LUS-HSE-WG3-446-053	C	3	13	<ul style="list-style-type: none"> Develop and implement a conflict management process Increase opportunities for workplace interaction between employees Open communication between staff Formal complaint system 	D	3	9	Lusail HSE Management / Human Resources

SI	Hazard	Exposed Group(s)	Existing Controls	Risk Level			Additional Controls	Risk Level			Accountability
				L	C	RFN		L	C	RRN	
	<ul style="list-style-type: none"> Lack of social support 		<ul style="list-style-type: none"> to resolve issues Implement consultative arrangements Encourage and promote a positive work culture 								
6.1.2	Job insecurity <ul style="list-style-type: none"> Career uncertainty or stagnation Lack of reward, recognition Low social value of the work Low morale Work Stress due to Employment status 	Lusail Site HSE Staffs	<ul style="list-style-type: none"> Provide employees with certainty on employment arrangements Acknowledge work-related successes Ongoing recognition of the role of employees in organizational success Consult on ways to provide recognition to employees 	C	3	13	<ul style="list-style-type: none"> Provide career development opportunities 	D	3	9	Lusail HSE Management / Human Resources
6.1.3	<ul style="list-style-type: none"> Poor leadership Inadequate information, instruction and/or training 	Lusail Site HSE Staffs	<ul style="list-style-type: none"> Support and role clarity for managers and supervisors Equitable (fair/reasonable/balanced) distribution of work Acknowledge skills, competencies and abilities of staff 	D	3	9	<ul style="list-style-type: none"> Continue mentoring and coaching by managers and co-workers Professional Enhancement/ Development Trainings 	E	3	6	Lusail HSE Management / Human Resources
7.1 Workers Accommodation Inspection											
7.1	<ul style="list-style-type: none"> Harassment during inspection - accommodations are all 	Lusail Site HSE Staffs	<ul style="list-style-type: none"> Group inspection and never stay alone in one place during 	C	3	13	<ul style="list-style-type: none"> Proper induction of the camp boss Self-defense training / 	C	2	8	Camp Manager / Lusail Health Advisor

SI	Hazard	Exposed Group(s)	Existing Controls	Risk Level			Additional Controls	Risk Level			Accountability
				L	C	RFN		L	C	RRN	
	male occupants		<ul style="list-style-type: none"> inspection Wear appropriate dressing during the inspection Early reporting of any untoward and suspicious actions from the occupants. 				<ul style="list-style-type: none"> program Awareness Program Post-incident support: counselling 				
7.2	<ul style="list-style-type: none"> Physical hazards due to slips and trips from the messy belongings of occupants. Hallways with inadequate lightings. 	Lusail Site HSE Staffs	<ul style="list-style-type: none"> Cleaning services must ensure that housekeeping is strictly implemented in the area Adequate illumination on hallways Safety warning signs installed during cleaning to avoid slips 	C	4	18	<ul style="list-style-type: none"> Familiarity to the accommodation Induction from the Camp Boss/ Camp Manager. Issuance of high LUX flashlights to Lusail HSE staffs at night 	D	2	5	Responsibly Camp Manager
7.3	Health Hazard <ul style="list-style-type: none"> Skipping meals 	Lusail Site HSE Staffs	<ul style="list-style-type: none"> Ensure stomach is full prior to commencement of inspection. Arrangements can be made with the other inspection team to eat outside when eating time is already on due Some Camps are offering free meals after inspections 	D	3	9	<ul style="list-style-type: none"> Awareness program. The Inspector shall bring with him small amount of finger foods. (biscuits, crackers, etc...) 	E	2	3	All personnel
8.1 Exposure to Infectious Organism											
8.1.1	<ul style="list-style-type: none"> Contact with bodily fluid including blood and 	Lusail Site HSE Staffs	All staff should follow the following health and	C	4	18	<ul style="list-style-type: none"> Awareness program, regular training. 	D	3	9	Lusail HSE Manager / Lusail

SI	Hazard	Exposed Group(s)	Existing Controls	Risk Level			Additional Controls	Risk Level			Accountability
				L	C	RFN		L	C	RRN	
	vomit • Contact with blood borne diseases or bodily fluids.		safety procedures: • Wear a pair of gloves when dealing with body fluid • A new pair of gloves are worn for each new person to prevent infection of others • Used gloves, soiled dressing and swabs are disposed of separately in the refuse bag marked "Body Fluids" • Any staff with Injury/ breaks the skin will be taken to hospital for post exposure immunization will be needed. LUS-HSE-WG3-446-039				• Provision of Post exposure prophylaxis program. • Consent • Test kit • Vaccination • Prophylaxis • Follow-up • Notification • Referral				Health Advisor
9.1 Exposure to Loud Noise											
9.1.1	Exposure to noise producing equipment • Acoustic trauma-due to high impact noise • Noise induced deafness • Tinnitus(ringing of the ear) • Annoyance/ irritation • Interference with speech communication and perception of	Lusail Site HSE Staffs	• Training/Reduced exposure time • Use of PPE • Hearing protector • Limiting the time exposure of operators and inspectors LUS-HSE-WG3-446-007	C	4	18	• Monitoring of hearing protection, • Continue monitoring • Early detection by hearing test	D	3	9	Lusail HSE Manager / Lusail Health Advisor

SI	Hazard	Exposed Group(s)	Existing Controls	Risk Level			Additional Controls	Risk Level			Accountability
				L	C	RFN		L	C	RRN	
	warning signs • Disruption of job performance										
10.1 Emergency Drill Activity											
10.1.1	Slip tripped and falls Mass Hysteria Panic Confusion	Lusail Site HSE Staffs	<ul style="list-style-type: none"> Developing the EMP – LUS-HSE-WG3-446-011 Ensuring that the EMP is easily identifiable and accessible to appropriate persons Establishing an emergency response team (ERT) to operate in accordance with the EMP 	D	5	19	<ul style="list-style-type: none"> Plan the mitigation, preparedness, response recovery. Implementing the EMP, including: <ul style="list-style-type: none"> disseminating information about the EMP and its procedures to staff. ensuring ERT members understand their roles testing the EMP (on a quarterly basis) reviewing the EMP annually Review and routine servicing of critical and other evacuation system elements Ensuring that records are kept, meeting and involved personnel. Emergency Drills 	E	4	10	Lusail HSE Manager / Lusail Health Advisor / Lusail Fire Manager Plot Developers / Responsible Contractor Project Managers (PM)

SI	Hazard	Exposed Group(s)	Existing Controls	Risk Level			Additional Controls	Risk Level			Accountability
				L	C	RFN		L	C	RRN	
							Schedule o Emergency Kit Checklist o Emergency Management Plan Completion Checklist				
11.1 Exposure to Chemicals (Conducting inspection in the Chemical storage area)											
11.1.1	Physical hazards • Falling objects, slips and trips, sharp objects, explosions, etc.	Lusail Site HSE Staffs	<ul style="list-style-type: none"> Wearing of General PPEs on site Be familiar with the inspection procedure LUS-HSE-WG3-446-017 	B	2	12	<ul style="list-style-type: none"> Site Safety induction to be conducted by the Plot Developers / Responsible Contractor to Lusail Inspectors prior to inspection on the storage area. Construction Manager or HSE Manager to accompany the Lusail Inspector at all times during the course of inspection. Visible Warning signs and posters to be installed by the Plot Developer / Responsible Contractor (verified by the Lusail HSE Department) on / at the hazardous areas and activities. The Plot Developer / Responsible 	D	2	5	Plot Developers / Responsible Contractor Project Managers (PM)

SI	Hazard	Exposed Group(s)	Existing Controls	Risk Level			Additional Controls	Risk Level			Accountability
				L	C	RFN		L	C	RRN	
							Contractor must ensure a system is implemented where only authorized person can only enter the storage area				
11.1.2	Health hazard <ul style="list-style-type: none"> Exposure to chemicals, fumes and other irritants and allergens and Heat stress 	Lusail Site HSE Staffs	<ul style="list-style-type: none"> Wearing of General requirements PPEs on site Be familiar with the inspection procedure LUS-HSE-WG3-446-017. 	B	2	12	<ul style="list-style-type: none"> Site Safety induction to be conducted by the Plot Developers to Lusail Inspectors prior to inspection on the storage area. Construction Manager or HSE Manager to accompany the Lusail Inspector at all times during the course of inspection. Visible Warning signs and posters to be installed by the Plot Developer / Responsible Contractor (verified by the Lusail HSE Department) on / at the hazardous areas and activities A system where only authorized person can only enter the inspection area. Proper ventilation system to be installed by the Plot Developer 	D	2	5	Plot Developers / Responsible Contractor Project Managers (PM)

SI	Hazard	Exposed Group(s)	Existing Controls	Risk Level			Additional Controls	Risk Level			Accountability
				L	C	RFN		L	C	RRN	
						5	/ Responsible Contractor inside the storage area. • The Plot Developer/ Responsible Contractor is to ensure proper storage of chemicals and other materials. • The Plot Developer / Responsible Contractor is to ensure the MSDS on all chemicals in placed an is adhered by its requirements. • The Plot Developer / Responsible Contractor is to install emergency shower or eye wash stations. • The Plot Developer / Responsible Contractor is required to post posters and warning signs inside the area. • Wearing of appropriate PPEs. • COSHH assessment – LUS-HSE-WG3-446-010				
11.1.3	Fire hazard (Combustible and flammable materials)	Lusail Site HSE Staffs	<ul style="list-style-type: none"> Provide the proper ventilation system inside the chemical 	D	2	5					Plot Developers / Responsible Contractor

SI	Hazard	Exposed Group(s)	Existing Controls	Risk Level			Additional Controls	Risk Level			Accountability
				L	C	RFN		L	C	RRN	
			storage and Separation of Flammable and Combustible materials • Fire protection system (Fire extinguishers, fire blanket, sand, fire point, smoke detectors and alarms, etc.) in place. • Poster and warning signs in place. • Wearing of appropriate PPEs LUS-HSE-WG3-446-060								Project Managers (PM)
12.1 Compressed Gas Cylinder Explosion											
12.1.1	Fire Hazards / Explosion Hazards	Lusail Site HSE Staffs	<ul style="list-style-type: none"> No Smoking near the gas storage area Poster and awareness signage Identification of the cylinders types and labelling Properly stored as per the requirements 	D	4	14	<ul style="list-style-type: none"> Site Safety induction to be conducted by the Plot Developers / Responsible Contractor to Lusail Inspectors prior to inspection on the gas storage area. Construction Manager or HSE Manager to accompany the Lusail Inspector at all times during the course of inspection. Visible Warning signs and posters to be installed by the Plot Developer / 	D	2	5	Plot Developers / Responsible Contractor Project Managers (PM)

SI	Hazard	Exposed Group(s)	Existing Controls	Risk Level			Additional Controls	Risk Level			Accountability
				L	C	RFN		L	C	RRN	
							Responsible Contractor (verified by the Lusail HSE Department) • To be familiar with the potential hazards and inspection procedure				
13.1 Electrocutation											
13.1.1	Electrical hazard	Lusail Site HSE Staffs	<ul style="list-style-type: none"> • Proper cable management • Competent and authorized electricians conducting installation and inspection on the connections. • Regular inspection of the electrical lines • ELCB and trip breakers are installed. LUS-HSE-WG3-446-024.	C	3	13	<ul style="list-style-type: none"> • Office Electrical safety Training to be given to the exposed groups. • Multiple warning signs with pictograms to be installed on the office electrical boards, outlets and office appliances/ equipment. • Never touch exposed wires 	E	3	6	Project Manager – EMS / Lusail HSE Manager
14.1 Fire Exposure											
14.1.1	Inhaling smoke for a short time Irritating to the eyes, nose, and throat & headaches	Lusail Site HSE Staffs	<ul style="list-style-type: none"> • Wearing of General requirements PPEs on site • use appropriate respiratory protection • Barricading the fire area and not allowed to enter other persons except fire brigade 	B	3	17	<ul style="list-style-type: none"> • Avoiding smoky situations is the best way to avoid exposure • Put the wet clothing on the face • Wait for the emergency services to arrive on the scene and let them handle the situation 	D	2	5	Lusail Fire Manager Plot Developers / Responsible Contractor Project Managers (PM)

SI	Hazard	Exposed Group(s)	Existing Controls	Risk Level			Additional Controls	Risk Level			Accountability
				L	C	RFN		L	C	RRN	
			<ul style="list-style-type: none"> • Raise the fire alarm and inform to the fire and emergency services • All firefighting equipment are in place • Availability of Oxygen cylinder • Emergency exit route visible & Muster Point signs • Availability of fire wardens LUS-HSE-WG3-446-011				<ul style="list-style-type: none"> • Regular inspection of the firefighting equipment 				
14.1.2	Fire Burns Skin burning, Trauma	Lusail Site HSE Staffs	<ul style="list-style-type: none"> • Keep the safe distance from the fire area • Availability of first aiders and first aid boxes • Smoke detectors • Fire extinguishers 	C	3	13	<ul style="list-style-type: none"> • Dedicated smoking areas • Inform LCCC soon as possible 	C	2	8	Plot Developers / Responsible Contractor Project Managers (PM)
15.1 Inspections - Workshops											
15.1.1	Physical hazards (flying objects, dropped objects, sharp objects, hot surface, etc.)	Lusail Site HSE Staffs	<ul style="list-style-type: none"> • Wearing of General requirements PPEs on site LUS-HSE-WG3-446-006	B	2	12	<ul style="list-style-type: none"> • Site Safety induction to be conducted by the Plot Developers / Responsible Contractor to Lusail Inspectors prior to inspection on the workshop • Construction Manager or HSE Manager to accompany the Lusail 	D	2	5	Plot Developers / Responsible Contractor Project Managers (PM)

SI	Hazard	Exposed Group(s)	Existing Controls	Risk Level			Additional Controls	Risk Level			Accountability
				L	C	RFN		L	C	RRN	
							Inspector at all times during the course of inspection. • Visible Warning signs and posters to be installed by the Plot Developer / Responsible Contractor (verified by the Lusail HSE Department) on / at the hazardous areas and activities				
15.1.2	Fire hazard (Welding, fabrication and other hot works activity)	Lusail Site HSE Staffs	<ul style="list-style-type: none"> Hot work permit system in place Fire protection system (Fire extinguishers, fire blanket, sand, fire point, etc.) in place Poster and warning signs in place. Wearing of appropriate PPEs LUS-HSE-WG3-446-028 LUS-HSE-WG3-446-060	D	2	5	• N/A				Plot Developers / Responsible Contractor Project Managers (PM)
15.1.3	Health hazard • Exposure to chemicals, fumes and other irritants and allergens and Heat stress	Lusail Site HSE Staffs	<ul style="list-style-type: none"> Wearing of General requirements PPEs on site. LUS-HSE-WG3-446-017 LUS-HSE-WG3-446-010	B	2	12	<ul style="list-style-type: none"> Plot Developer / Responsible Contractor is to ensure proper ventilation system to be installed inside the workshop Proper storage of chemicals The Plot Developer / Responsible 	D	2	5	Plot Developers / Responsible Contractor Project Managers (PM)

SI	Hazard	Exposed Group(s)	Existing Controls	Risk Level			Additional Controls	Risk Level			Accountability
				L	C	RFN		L	C	RRN	
						13	Contractor is to isolate activities involving the use of chemicals <ul style="list-style-type: none"> • The Plot Developer / Responsible Contractor is to ensure MSDS on all chemicals in placed an is adhered by its requirements. • The Plot Developer / Responsible Contractor is to install emergency shower or eye wash stations. • The Plot Developer / Responsible Contractor is required to post visible Posters and warning signs in / at affected areas. • The Plot Developer / Responsible Contractor must ensure a system is implemented where only authorized person can only enter the storage area. • Wearing of appropriate PPEs for chemical exposure. 			6	
15.1.4	Electrical hazard <ul style="list-style-type: none"> • From power tools and 	Lusail Site HSE Staffs	<ul style="list-style-type: none"> • Wearing of General requirements PPEs on site. 	C	3	13	<ul style="list-style-type: none"> • Plot Developer / Responsible Contractor is to ensure 	E	3	6	Plot Developers / Responsible Contractor

SI	Hazard	Exposed Group(s)	Existing Controls	Risk Level			Additional Controls	Risk Level			Accountability
				L	C	RFN		L	C	RRN	
	equipment		LUS-HSE-WG3-446-024				proper cable management • Competent and authorized electricians conducting installation and inspection on the connections. • Regular inspection of the electrical lines ELCB and trip breakers are installed. • Multiple warning signs with pictograms to be installed by the Plot Developer / Responsible Contractor on the electrical boards, outlets and appliances / equipment.				Project Managers (PM)
16.1 Inspecting of Storage Area											
16.1.1	Physical hazards • Falling objects, slips and trips, sharp objects, etc.	Lusail Site HSE Staffs	• Wearing of General requirements PPEs on site	B	2	12	• Site Safety induction to be conducted by the Plot Developers / Responsible Contractor to Lusail Inspectors prior to inspection on the storage area. • Construction Manager or HSE Manager to accompany the Lusail Inspector at all times during the course of	D	2	5	Plot Developers / Responsible Contractor Project Managers (PM)

SI	Hazard	Exposed Group(s)	Existing Controls	Risk Level			Additional Controls	Risk Level			Accountability
				L	C	RFN		L	C	RRN	
							inspection. • Visible Warning signs and posters to be installed by the Plot Developer / Responsible Contractor (verified by the Lusail HSE Department) on / at the hazardous areas and activities. • The Plot Developer / Responsible Contractor must ensure a system is implemented where only authorized person can only enter the storage area.				
16.1.2	Health hazard • Exposure to chemicals, fumes and other irritants and allergens and Heat stress	Lusail Site HSE Staffs	• Wearing of General requirements PPEs on site LUS-HSE-WG3-446-017 LUS-HSE-WG3-446-010	B	2	12	• Plot Developer / Responsible Contractor is to ensure proper ventilation system to be installed inside the storage area • Plot Developer / Responsible Contractor ensure proper storage of chemicals and other materials. • The Plot Developer / Responsible Contractor is to ensure MSDS on all chemicals	D	2	5	Plot Developers / Responsible Contractor Project Managers (PM)

SI	Hazard	Exposed Group(s)	Existing Controls	Risk Level			Additional Controls	Risk Level			Accountability
				L	C	RFN		L	C	RRN	
							in placed an is adhered by its requirements • The Plot Developer / Responsible Contractor is to install emergency shower or eye wash stations • Visible Warning signs and posters to be installed by the Plot Developer / Responsible Contractor (verified by the Lusail HSE Department) on / at the hazardous areas and activities. • Wearing of appropriate PPEs.				
16.1.3	Fire hazard • Combustible and flammable material	Lusail Site HSE Staffs	<ul style="list-style-type: none"> Separation of Flammable and Combustible materials storage facility with adequate ventilation. Fire protection system (Fire extinguishers, fire blanket, sand, fire point, smoke detectors and alarms, etc.) in place. Visible Warning signs and posters to be installed by the Plot Developer / 	D	2	5	<ul style="list-style-type: none"> N/A 				

SI	Hazard	Exposed Group(s)	Existing Controls	Risk Level			Additional Controls	Risk Level			Accountability
				L	C	RFN		L	C	RRN	
			Responsible Contractor (verified by the Lusail HSE Department) on / at the hazardous areas and activities. <ul style="list-style-type: none"> Wearing of appropriate PPEs. LUS-HSE-WG3-446-060								
16.1.4	Electrical hazard	Lusail Site HSE Staffs	<ul style="list-style-type: none"> Proper cable management. Competent and authorized electricians conducting installation and inspection on the connections. Regular inspection of the electrical lines. Plot Developer / Responsible Contractor to installed ELCB and trip breakers. LUS-HSE-WG3-446-024	C	3	13	<ul style="list-style-type: none"> Electrical safety Training to be given to the exposed groups. Visible Warning signs and posters to be installed by the Plot Developer / Responsible Contractor (verified by the Lusail HSE Department) on / at on the electrical boards, outlets and appliances/ equipment. 	E	3	6	Plot Developers / Responsible Contractor Project Managers (PM)
17.1 Inspection on Open Areas											
17.1.1	Falling hazard	Lusail Site HSE Staffs	<ul style="list-style-type: none"> Thin Ply board cover Soft Barricade/ warning tapes. LUS-HSE-WG3-446-006 LUS-HSE-WG3-446-018	C	4	18	<ul style="list-style-type: none"> The Plot Developer / Responsible Contractor to ensure floor openings are nailed and covered by a thick plank with red X marking in the 	E	2	3	Plot Developers / Responsible Contractor Project Managers (PM)

SI	Hazard	Exposed Group(s)	Existing Controls	Risk Level			Additional Controls	Risk Level			Accountability
				L	C	RFN		L	C	RRN	
							middle • The Plot Developer / Responsible Contractor is to use scaffolding tubes to barricade open edges. All openings must be covered and barricaded • The Plot Developer / Responsible Contractor to implement an inventory system to be applied on the number of floor openings. • The Plot Developer / Responsible Contractor must ensure a system (permit) is implemented where only authorized person can remove and close floor covers. • Workers involved in activity on the floor opening must wear fall restraints.				
17.1.2	Physical hazard • From slip and trips	Lusail Site HSE Staffs	• Single planks on top of the form works	B	3	17	• The Plot Developers / Responsible Contractor is to ensure only competent personnel erect scaffolding with	D	2	5	Plot Developers / Responsible Contractor Project Managers (PM)

SI	Hazard	Exposed Group(s)	Existing Controls	Risk Level			Additional Controls	Risk Level			Accountability
				L	C	RFN		L	C	RRN	
							double planks tied to each other to be used as access on top of the form works fixed with hand rails. <ul style="list-style-type: none"> • The Plot Developer / Responsible Contractor is to provide visible reflectors or warning tapes on the gaps of the forms works. • Visible Warning signs and posters to be installed by the Plot Developer / Responsible Contractor (verified by the Lusail HSE Department) to warn workers and passerby. 				
17.1.3	Falling hazard	Lusail Site HSE Staffs	<ul style="list-style-type: none"> • Gratings and handrails 	C	4	18	<ul style="list-style-type: none"> • The Plot Developer / Responsible Contractor to ensure an inspection system for regular or daily tightening of grating clips with inspection tags on the entrance of the gratings. • Additional railings on top of the BMU area with fixed lifelines below. • Training to be 	E	4	10	Plot Developers / Responsible Contractor Project Managers (PM)

SI	Hazard	Exposed Group(s)	Existing Controls	Risk Level			Additional Controls	Risk Level			Accountability
				L	C	RFN		L	C	RRN	
							conducted on the safety techniques in walking on top of the gratings. • Visible Warning signs and posters to be installed by the Plot Developer / Responsible Contractor (verified by the Lusail HSE Department) on / at the grating area.				
18.1 Exposure to Dropped and Flying Objects											
18.1.1	Physical Hazard • Dropped objects (Head, face and body injury)	Lusail Site HSE Staffs	<ul style="list-style-type: none"> • Installation of Overhead boards. • Dedicated access routes. • Wearing of Hard hats. • Installation of Warning signs 	C	2	8	<ul style="list-style-type: none"> • The Plot Developer / Responsible Contractor must ensure the installation of toe-boards on all leading edges. (verified by the Lusail HSE Department) • The Plot Developer / Responsible Contractor must ensure the installation of catch nets below the slabs 	E	2	3	Plot Developers / Responsible Contractor Project Managers (PM)
18.1.2	Physical Hazard • Flying objects (Head, face and body injury)	Lusail Site HSE Staffs	<ul style="list-style-type: none"> • Provision of machine guards on the equipment. • Wearing of safety glasses and hard hats 	C	3	13	<ul style="list-style-type: none"> • The Plot Developer / Responsible Contractor are required to isolate workers doing cutting works by providing 	E	2	3	Plot Developers / Responsible Contractor Project Managers (PM)

SI	Hazard	Exposed Group(s)	Existing Controls	Risk Level			Additional Controls	Risk Level			Accountability
				L	C	RFN		L	C	RRN	
							work stations				
19.1 Using Cell Phone on Active Construction Site											
19.1.1	Receiving calls during site inspection Physical hazards from slip, trips and falls.	Lusail Site HSE Staffs	<ul style="list-style-type: none"> Wearing of General requirements PPEs on site 	B	3	17	<ul style="list-style-type: none"> All staffs to attend Site Induction prior to coming on site. Prohibitions of using mobile phones to be included in the site induction. Procedure for taking calls on construction sites to be develop. 	D	3	9	All Staff
20.1 Earthquake, High Winds, Natural Events											
20.1.1	Physical Hazards (From slips, trips, falls, sharp, flying and dropped objects)	Lusail Site HSE Staffs	<ul style="list-style-type: none"> News alerts and information through newspaper, bulletin boards, emails, telephones, radios from relevant Government Agencies. Wearing of Mandatory construction site PPEs. LUS-HSE-WG3-446-011	B	4	21	<ul style="list-style-type: none"> Development of Policy on working during adverse weather conditions. Daily monitoring of weather conditions from Relevant Agencies for pro-activeness. Include Earthquake and other natural disasters in Conducting emergency drills 	E	4	10	Lusail SR. Management Team / Lusail HSE Manager / Lusail Fire Manager
20.1.2	Electrical hazard (During flood and heavy rains)	Lusail Site HSE Staffs	<ul style="list-style-type: none"> News alerts and information through newspaper, bulletin boards, emails, telephones, radios from relevant 	B	4	21	<ul style="list-style-type: none"> Development of Policy on working during heavy rains and floods. Daily monitoring of weather conditions from Relevant 	E	3	6	Lusail HSE Manager / Lusail Fire Manager

SI	Hazard	Exposed Group(s)	Existing Controls	Risk Level			Additional Controls	Risk Level			Accountability
				L	C	RFN		L	C	RRN	
			Government Agencies. • Wearing of Mandatory construction site PPEs. LUS-HSE-WG3-446-024				Agencies for pro-activeness. • Wearing of electrical proof safety boots/ shoes.				
20.1.3	Health hazard (Leptospirosis)	Lusail Site HSE Staffs	• News alerts and information through newspaper, bulletin boards, emails, telephones, radios from relevant Government Agencies. • Wearing of Mandatory construction site PPEs.	D	3	9	• Development of Policy on working during heavy rains and floods. • Daily monitoring of weather conditions from Relevant Agencies for pro-activeness. • Training and awareness about precautions to be done to avoid and prevent Leptospirosis	E	3	6	Lusail HSE Manager/ Lusail Health Advisor
21.1 Work Around Heavy Equipment											
21.1.1	Physical hazard • Collision of heavy equipment, dropped and flying objects	Lusail Site HSE Staffs	• Escorted by responsible site personnel during inspection activities • Plot Developer / Responsible Contractor to ensure Flagman and banksman are positioned in the correct area • Wearing of General	D	4	14	• Construction Manager or HSE Manager to accompany the Lusail Inspector at all times during the course of inspection • Plot Developer / Responsible Contractor to preventing contact between heavy equipment and	E	4	10	Plot Developers / Responsible Contractor Project Managers (PM)

SI	Hazard	Exposed Group(s)	Existing Controls	Risk Level			Additional Controls	Risk Level			Accountability
				L	C	RFN		L	C	RRN	
			requirements PPEs on site • Wearing of reflectorized vest. LUS-HSE-WG3-446-033				pedestrians through Segregation of pedestrian and heavy equipment access. • Plot Developer / Responsible Contractor to ensure adequate mirrors on blind corners be installed. • Plot Developer / Responsible Contractor to ensure adequate road signage are installed.				
21.1.2	Health hazard • Dust and other air bourn particles	Lusail Site HSE Staffs	• Wearing of General requirements PPEs on site. LUS-HSE-WG3-446-008 LUS-HSE-WG3-446-009	B	4	21	• Plot Developer / Responsible Contractor to ensure where practicable separate access route away from the housekeeping activity • Accompaniment of designated personnel from the contractor during the inspection • Plot Developer / Responsible Contractor where practicable to halting or suspension of activity during inspection on a that specific area. • Plot Developer /	E	4	10	Plot Developers / Responsible Contractor Project Managers (PM)

SI	Hazard	Exposed Group(s)	Existing Controls	Risk Level			Additional Controls	Risk Level			Accountability
				L	C	RFN		L	C	RRN	
							Responsible Contractor to ensure dust suppression is maintained. • Wearing appropriate dust mask				
22.1 Working at Night											
22.1.1	Physical hazard • Slips, trips and falls from poor illumination	Lusail Night Site HSE Staff	<ul style="list-style-type: none"> Wearing of General requirements PPEs on site Presence of concrete barrier blinkers and street lights. 	B	4	21	<ul style="list-style-type: none"> Arrangement of additional streets lighting at Lusail vicinity and on the work site Installation of Reflectors on the sidewalks, concrete barriers and blind corners. Installation of reflectorized and powered directional signage. Regular monitoring of illumination on the streets and sites. Issuance of high LUX flashlights to Lusail HSE staffs at night. 	D	2	5	Lusail Logistics Manager
22.1.2	Stress, fatigue and heart attack from emotional distress being a lone worker	Lusail Night Site HSE Staff	<ul style="list-style-type: none"> Availability of pantry and coffee. 	C	4	18	<ul style="list-style-type: none"> A buddy/ partner system to be implemented to avoid lone worker Shortening the time of work during night shift 	E	4	10	Lusail HSE Manager

SI	Hazard	Exposed Group(s)	Existing Controls	Risk Level			Additional Controls	Risk Level			Accountability
				L	C	RFN		L	C	RRN	
							<ul style="list-style-type: none"> As far as practicable administration works to be undertaken during night shift 				
22.1.3	Out of hours call out – Emergency Fatigue Vehicle Accident whilst on route. Physical hazard <ul style="list-style-type: none"> Slips, trips and falls from poor illumination 	Safety and Fire Management Group	<ul style="list-style-type: none"> Lusail Communication and Command Centre Safety Coverage overnight shift Call out schedule roster Review all RA and Method Statements to ensure all necessary controls and resource are assigned and reflect works being conducted 	D	2	5	<ul style="list-style-type: none"> Fatigue management Incident taken on a cases by case bases Endeavor to complete all high risk works are conducted during day light hours. Designation of a Competent Contractor Night Shift Safety Representative who can control, manage and report properly the scenario to illuminate Lusail Staff from responding. 				Lusail HSE Manager
23.1 Work Around Live Public Traffic											
23.1.1	Conducting site inspection around live public traffic Physical hazard <ul style="list-style-type: none"> Collision of vehicles and flying objects 	Lusail Site HSE Staffs	<ul style="list-style-type: none"> Isolation concrete barriers Permanent Flagman and banksman Wearing of General requirements PPEs on site Wearing of reflectorized vest. LUS-HSE-WG3-446-016	C	4	18	<ul style="list-style-type: none"> Preventing contact between vehicles and pedestrians through Segregation of pedestrian and vehicle access. Installation of mirrors on blind corners Installation of road humps to slow done vehicles near the exposed workers. 	E	4	10	Lusail Logistics Manager

SI	Hazard	Exposed Group(s)	Existing Controls	Risk Level			Additional Controls	Risk Level			Accountability
				L	C	RFN		L	C	RRN	
							<ul style="list-style-type: none"> Installation of traffic lights on the area Installation of road signage 				
23.1.2	Health hazard <ul style="list-style-type: none"> Dust and other air bourn particles 	Lusail Site HSE Staffs	<ul style="list-style-type: none"> Wearing of General requirements PPEs on site LUS-HSE-WG3-446-008 LUS-HSE-WG3-446-009	B	4	21	<ul style="list-style-type: none"> Separate access route away from live traffic area Accompaniment of designated personnel from the contractor during the inspection Application of water jetting on the roads. Wearing appropriate dust mask 	E	4	10	Lusail Logistics Manager Plot Developers / Responsible Contractor Project Managers (PM)
24.1 Transportation on Site											
24.1.1	Physical hazards <ul style="list-style-type: none"> Collision of vehicles 	Lusail Site HSE Staffs	<ul style="list-style-type: none"> Valid driving license. Familiar with route Traffic lights and road signage LUS-HSE-WG3-446-016	B	4	21	<ul style="list-style-type: none"> Regular inspection of vehicles by mechanics Daily vehicle check before and after driving Installation of Radars on the main roads Installation of road humps on the corners and service roads Conduct road and defensive driving training all vehicles coming inside Lusail. 	E	4	10	Lusail Logistics Manager/ Lusail Security Manager/ Lusail HSE Manager
24.1.2	Physical hazards <ul style="list-style-type: none"> Collision of vehicles from improper, rough and wet 		<ul style="list-style-type: none"> Familiar with route. Traffic lights and road signage LUS-HSE-WG3-446-016	B	4	21	<ul style="list-style-type: none"> Regular inspection and maintenance on conditions of the roads. 	E	4	10	Lusail Logistics Manager/ Lusail HSE Department

SI	Hazard	Exposed Group(s)	Existing Controls	Risk Level			Additional Controls	Risk Level			Accountability
				L	C	RFN		L	C	RRN	
	roads					5	<ul style="list-style-type: none"> • Regular inspection of vehicles by mechanics • Daily vehicle check before and after driving • Installation of Radars on the main roads • Installation of road humps on the corners and service roads • Conduct road and defensive driving training all vehicles coming inside Lusail. 			5	
25.1 Working Near Water											
25.1.1	Physical hazards • From slips and trips on stones	Lusail Site HSE Staffs	<ul style="list-style-type: none"> • Wearing of General requirements PPEs on site. 	D	2	5	<ul style="list-style-type: none"> • N/A 				
25.1.2	Drowning	Lusail Site HSE Staffs	<ul style="list-style-type: none"> • Wearing of General requirements PPEs on site 	D	4	14	<ul style="list-style-type: none"> • Isolation method by allowing only an authorized entry pass with valid trainings and certificates for working around water. • Conducting safety training and awareness on working around water. • Provision of a standby emergency floater and life guard at all times. • Mandatory wearing of live vest. 	D	2	5	Lusail HSE Manager Plot Developers / Responsible Contractor Project Managers (PM)

SI	Hazard	Exposed Group(s)	Existing Controls	Risk Level			Additional Controls	Risk Level			Accountability
				L	C	RFN		L	C	RRN	
26.1 Exposure on Commissioning and Start Up Activities Including Pressurized Lines											
26.1.1	Conducting Site Inspection during commissioning and start up activities Physical hazard <ul style="list-style-type: none"> From pressure explosion, heat, flying objects, etc. 	Lusail Site HSE Staffs	<ul style="list-style-type: none"> Wearing of General requirements PPEs on site. LUS-HSE-WG3-446-023 	C	5	22	<ul style="list-style-type: none"> Induction program for awareness and safety during commissioning and start up activities. Isolation method by allowing only an authorized entry pass with valid trainings and entering the area Permit system to in placed Posters and safety signage to be installed in the live and hazardous areas. Wearing of specialized PPEs. 	E	4	10	Plot Developers / Responsible Contractor Project Managers (PM)
26.1.2	Health hazard <ul style="list-style-type: none"> Exposure to loud noise and chemicals from commissioning activities 	Lusail Site HSE Staffs	<ul style="list-style-type: none"> Wearing of General requirements PPEs on site. LUS-HSE-WG3-446-008 LUS-HSE-WG3-446-009 	C	4	18	<ul style="list-style-type: none"> Induction program for awareness and safety during commissioning and start up activities. Isolation method by allowing only an authorized entry pass with valid trainings and entering the area Permit system to in placed Limiting the exposure limit and timing during inspection. 	E	4	10	Plot Developers / Responsible Contractor Project Managers (PM)

SI	Hazard	Exposed Group(s)	Existing Controls	Risk Level			Additional Controls	Risk Level			Accountability
				L	C	RFN		L	C	RRN	
							<ul style="list-style-type: none"> Posters and safety signage to be installed in the live and hazardous areas. Wearing of specialized PPEs. 				
26.1.3	Electrical hazard <ul style="list-style-type: none"> From commissioned live panels 	Lusail Site HSE Staffs	<ul style="list-style-type: none"> Wearing of General requirements PPEs on site. LUS-HSE-WG3-446-024	D	4	14	<ul style="list-style-type: none"> Induction program for awareness and safety during commissioning and start up activities. Isolation method by allowing only an authorized entry pass with valid trainings and entering the area Permit system to in placed Posters and safety signage to be installed in the live and hazardous areas. 	E	4	10	Plot Developers / Responsible Contractor Project Managers (PM)
26.1.4	Fire hazards <ul style="list-style-type: none"> From electrical and chemicals during commissioning activities 	Lusail Site HSE Staffs	<ul style="list-style-type: none"> Separation of Flammable and Combustible materials storage facility with adequate ventilation. Fire protection system (Fire extinguishers, fire blanket, sand, fire point, smoke detectors and alarms, etc.) in place. Poster and warning signs in place. Wearing of 	D	2	5	<ul style="list-style-type: none"> N/A 				Plot Developers / Responsible Contractor Project Managers (PM)

SI	Hazard	Exposed Group(s)	Existing Controls	Risk Level			Additional Controls	Risk Level			Accountability
				L	C	RFN		L	C	RRN	
			appropriate PPE LUS-HSE-WG3-446-060								
27.1 Confined spaces											
27.1.1	Conducting Site inspection inside the tunnels and underground facilities Asphyxiation	Lusail Site HSE Staffs	<ul style="list-style-type: none"> Permit to work/ enter the Confined space system procedure in place. Adequate ventilation in place Orientation of the confined space LUS-HSE-WG3-446-015	C	3	13	<ul style="list-style-type: none"> Third party Confined space training to be given to the Lusail Site HSE staffs. Continuous monitoring of the confined space atmosphere. Availability of emergency escape mask and breathing apparatus Standby emergency rescue team outside the space and availability of rescue equipment. Directional signage for emergency exits. 	E	2	3	Plot Developers / Responsible Contractor Project Managers (PM)
27.1.2	Health hazard <ul style="list-style-type: none"> From presence of toxic fumes and gasses 	Lusail Site HSE Staffs	<ul style="list-style-type: none"> Permit to work/ enter the Confined space system procedure in place. Adequate ventilation in place Orientation of the confined space 	C	3	13	<ul style="list-style-type: none"> Confined space to be purge and Gas tested before allowing for entry. Continuous monitoring of the confined space atmosphere. Availability of emergency escape mask and breathing apparatus 	E	3	6	Plot Developers / Responsible Contractor Project Managers (PM)

SI	Hazard	Exposed Group(s)	Existing Controls	Risk Level			Additional Controls	Risk Level			Accountability
				L	C	RFN		L	C	RRN	
							<ul style="list-style-type: none"> Standby emergency rescue team outside the space and availability of rescue equipment. Directional signage for emergency exits. 				
27.1.3	Fire and explosion hazard <ul style="list-style-type: none"> From flammable gasses and oxygen enrichment 	Lusail Site HSE Staffs	<ul style="list-style-type: none"> Permit to work/ enter the Confined space system procedure in place. Adequate ventilation in place. Orientation of the confined space 	C	5	22	<ul style="list-style-type: none"> Confined space to be purge and Gas tested before allowing for entry. Continuous monitoring of the confined space atmosphere. Entrants to be trained in Firefighting Only 12 Volts non explosive lights and equipment to be use inside the confined space during inspection. Suspension of any hot work activity. Firefighting and suppression system to be available inside the confined space. Availability of emergency escape mask and breathing apparatus Standby emergency rescue team outside 	E	4	10	Plot Developers / Responsible Contractor Project Managers (PM)

SI	Hazard	Exposed Group(s)	Existing Controls	Risk Level			Additional Controls	Risk Level			Accountability
				L	C	RFN		L	C	RRN	
							the space and availability of rescue equipment. • Directional signage for emergency exits.				