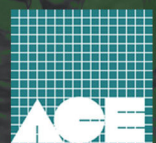


DAMAGED ROADS CLEARING & RESTORATION

in South Lebanon
LOT 3 (Marjeyoun Caza)

**Occupational Health
& Safety
Management Plan
(OHSMP) REV. 02**

JANUARY 2026



ASSOCIATED CONSULTING ENGINEERS (ACE) S.A.L.

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LIST OF ABBREVIATIONS & ACRONYMS

Abbreviations and Acronyms	Description
ACM	Asbestos-Containing Materials
BAC	Battle Area Clearance (BAC)
CDR	Council for Development and Reconstruction
CDW	Construction and Demolition waste
CHS	Community Health and Safety
CoC	Code of Conduct
EO	Explosive Ordnance
EOD	Explosive Ordnance Disposal
EORE	Explosive Ordnance Risk Education
EPR	Emergency Preparedness and Response
EPRP	Emergency Preparedness and Response Plan
ERT	Emergency Response Team
ERW	Explosive Remnants of War
ESF	Environmental and Social Framework
ESMP	Environmental and Social Management Plan
ESS	Environmental and Social Standards
GRM	Grievance Redress Mechanism
JHA	Job Hazard Analysis
IFC	International Finance Cooperation
ILO	International Labour Organization
ISF	Internal Security Forces
ISO	International Organization for Standardization
KPIs	Key Performance Indicators
LAF	Lebanese Armed Forces
LMP	Labor Management Procedures
LMAC	Lebanon Mine Action Center
LTIFR	Lost-Time Injury Frequency Rate
MoE	Ministry of Environment
MoPH	Ministry of Public Health
NCN	Non-Compliance Notices
NGOs	Non-Governmental Organizations
OHS	Occupational Health and Safety
OSHA	Occupational Safety and Health Administration Standards
OHSMMP	Occupational Safety and Health Management Plan
PFA	Psychological First Aid
PIU	Project Implementation Unit
SEA	Sexual Exploitation and Abuse
SH	Sexual Harassment
SOPs	Standard Operating Procedures
TMP	Traffic Management Plan
TSS	Temporary Storage Site
UN	United Nations
UNDP	United Nations Development Programme
UNEP	UN Environment Program
UNOPS	United Nations Office for Project Services
UXO	Unexploded Ordnance
WB	World Bank

DEFINITIONS

Term	Definition
Accident	An unplanned event resulting in injury, illness, fatality, or damage to property, the environment, or community infrastructure.
Explosive Ordnance Risk Education (EORE)	Educational activities that reduce mines/ERW (including unexploded submunitions) injuries by raising awareness and promoting safe behavior among impacted communities.
Incident	Any unplanned event that caused or could have caused harm, including accidents, near-misses, unsafe acts, or unsafe conditions.
Near-Miss	An event that could have caused injury, fatality, or damage but did not, due to chance or immediate intervention.
Serious Near-Miss	A high-risk near-miss involving machinery, collapse, explosive ordnance, falling objects, or any scenario that could reasonably have resulted in severe injury or fatality.
Non-Compliance Notice (NCN):	A formal written notice issued by the Supervising Engineer to the Contractor when a deviation from the OHS Management Plan, ESMP Checklist, contractual obligations is identified. NCNs may be classified as Critical, Major, or Minor and require defined corrective actions within specified timeframes.
Unsafe Act	A human action that increases the likelihood of an incident (e.g., bypassing PPE, entering a hazard zone).
Unsafe Condition	A physical hazard in the workplace (e.g., unstable rubble, blocked roads, exposed wires).
STOP-WORK	Mandatory halt of activities when unsafe conditions or UXO/ERW suspicion is identified. Only the Supervising Engineer + Contractor OHS Officer + LMAC may authorize resumption.
UXO/ERW	Unexploded Ordnance / Explosive Remnants of War – items that may explode if disturbed. Clearance is the exclusive responsibility of LAF/LMAC.
LMAC	Lebanon Mine Action Center – the national authority for survey, risk management, mapping, and explosive ordnance disposal.
Debris	<i>As per OCHA–UNEP–MSB–UNDP disaster waste guidelines:</i> “A mixture of building waste and rubble typically arising from damaged buildings and their demolition, possibly including natural materials (clay, mud, wood, trees, branches).”
Disaster Waste	All solid and liquid waste generated from a disaster, including building materials, damaged infrastructure components, household furnishings, electronic waste, natural debris, industrial materials, chemicals, fuel, paints, solvents, healthcare waste, damaged vehicles, relief-operation waste, and UXO fragments.
Project Classification (Debris/Rubble)	For this Project, all debris from conflict-affected areas is treated as disaster waste due to mixed composition and possible contamination with hazardous materials and UXO. “Debris,” “rubble,” and “debris/rubble” are used interchangeably.
Debris Removal	Immediate post-crisis activity aimed at clearing access and enabling life-saving movement.
Debris Management	Medium- and long-term recovery process involving sorting, legal compliance, routing, treatment, recycling, and final disposal; includes debris removal.
MoE Circular 6/1 (2024)	Requires Municipalities/Unions to assign environmentally degraded quarry sites as debris reception areas and notify the Ministry of Environment; forms the legal basis for GPS tracking and trip-ticket procedures.
Trip Ticket	Official document recording rubble origin, routing, transport, delivery, and disposal in compliance with MoE Circular 6/1.

Job Hazard Analysis (JHA)	Task-specific risk assessment required before any activity, identifying hazards, controls, PPE, supervision, and STOP-WORK triggers.
Permit-to-Work (PTW)	Formal written authorization for high-risk tasks (excavation near unstable structures, mechanical loading, hot works, handling hazardous materials).
Exclusion Zone	Physically demarcated area where worker entry is restricted due to hazards (UXO, unstable structures, heavy machinery).
Competent Person	A trained, experienced individual authorized to identify hazards and implement corrective actions (e.g., OHS Officer, UXO focal point).
Emergency Assembly Point	Pre-designated safe location where workers must gather during evacuations.
LMAC Clearance	Written confirmation from LMAC that an area is safe for work following NTS/TS/EO clearance procedures.
High-Risk Activity	Any work with potential for serious injury (UXO exposure, excavation near unstable structures, mechanical loading, hazardous materials handling, work at height).

1 INTRODUCTION

1.1 Project Context and Scope

In response to urgent national priorities, the proposed project—implemented by the Council for Development and Reconstruction (CDR) with support from the Ministry of Public Works and Transport (MoPWT) and funded by the World Bank (WB)—aims to restore conflict-damaged classified and local roads within the Bint Jbeil, Sour, Marjeyoun, Nabatiyeh, Hasbaya Cazas, and the Southern Suburbs of Beirut. **The works are carried out under Component 1 (Immediate Response) and Component 2 (Rapid Recovery) of the Lebanon Emergency Assistance Project (LEAP).** LEAP supports immediate response to the 2023–2024 conflict and facilitates recovery through rubble management, restoration of vital infrastructure, and rehabilitation of damaged roads in priority areas.

The Project covers the removal of obstacles from conflict-damaged Class A roads and the implementation of initial temporary restoration works under Component 1 (Immediate Response). Activities include debris clearance, reconstruction of base and subbase layers, and localized temporary asphalt surfacing to restore immediate access. Component 2 (Rapid Recovery) addresses localized repair and patching of selected Class B Road sections to improve trafficability, enhance road safety, and support socio-economic recovery. Only road sections damaged by the conflict are eligible under both components.

This Occupational Health and Safety Management Plan (OHSMP) applies exclusively to Component 1 (Immediate Response) and covers Class A road segments in Marjeyoun Caza requiring debris clearance and initial temporary restoration works.

The Project is implemented in a post-conflict environment characterized by:

- Potential presence of Explosive Remnants of War (ERW) and Unexploded Ordnance (UXO);
- Unstable roadside and adjacent structures;
- Potential hazardous materials embedded in rubble (including asbestos-containing materials (ACM));
- Interaction between machinery, workers, and nearby communities, particularly in re-populated villages and along connecting roads;
- Additional context-specific hazards that may trigger emergencies beyond routine workplace incidents, including the discovery of human remains, sudden hazardous material exposure, or localized security escalation.

These conditions require a robust, context-specific OHS framework that integrates national requirements—including Lebanese Armed Forces/Lebanese Mine Action Center (LAF/LMAC) UXO/ERW protocols and MoE Circular 6/1 for debris clearing and handling—together with the World Bank (WB) Environmental and Social Framework (ESF), specifically ESS2 (Labor and Working Conditions) and ESS4 (Community Health and Safety).

1.2 Objectives of the OHSMP

The OHS Management Plan (OHSMP) establishes mandatory health, safety, and community-protection measures governing contractor and supervising entities' operations. It provides a comprehensive operational framework for emergency road-clearing in post-conflict areas. It addresses all high-risk hazards, including UXO/ERW, unstable structures, hazardous rubble, asbestos, community safety, and traffic management. The main objectives are presented in Table 1-1.

Table 1-1 Objectives of the OHSMP

Objective	Objective Statement
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Objective	Objective Statement
Worker Safety	Ensure a safe and healthy work environment for all workers, supervisors, and field personnel.
Community Protection	Protect surrounding communities, maintain safe public access, and prevent secondary harm during road-clearing activities.
Incident & Fatality Prevention	Prevent fatalities, serious injuries, and high-risk exposure through structured hazard controls and STOP-WORK protocols.
UXO/ERW Risk Management	Integrate strict UXO/ERW procedures in accordance with LAF/LMAC guidance and mine-action standards.
Hazardous Material Control	Control exposure to hazardous rubble and asbestos-suspect materials through safe handling, isolation, and mandatory reporting
Traffic & Machinery Safety	Reduce traffic and machinery-related risks in rural, agricultural, and urban settings.
Debris & CDW Management	Ensure safe, compliant debris handling, loading, transport, and disposal at MoE-approved Temporary Storage Sites (TSS) following Circular 6/1 and MoE–UNDP Standard Operating Procedures (SOPs) (2025).
Regulatory Compliance	Ensure compliance with Lebanese environmental & OHS legislation, the WB Environmental and Social Framework (ESF), and IFC General EHS Guidelines (2007).
Operational Clarity for Contractors	Provide clear, enforceable operational instructions, templates, PTW procedures, and daily obligations for contractors and supervising entities.
Coordination & Interface Management	Ensure clear coordination between contractors, supervising engineers, municipalities, LAF/LMAC, and MoE during implementation.
Reporting & Continual Improvement	Promote transparent reporting, accountability, corrective action, and continual improvement in OHS performance.
Integration with ESMP Checklists	Apply this OHSMP directly alongside the Caza-level ESMP Checklists as the Project’s overarching safeguards framework.

1.3 Key OHS Risks and Impact Summary

Critical OHS and Community Health & Safety risks (Table 1-2) associated with the Project include:

Table 1-2 Summary of Key Risk Categories & Associated Hazards for Post-Conflict Debris Clearance & Initial Restoration activities

Risk Category	Specific Hazards / Risk Description
UXO / ERW Risks	- Presence of unexploded items buried under debris, shoulders, or embankments - Fatal risk if machinery disturbs ERW - Need for STOP-WORK upon any suspicion; work proceeds only after LAF/LMAC clearance
Structural & Debris Hazards	- Collapse of unstable walls, retaining structures, or damaged buildings - Sharp, heavy, or unstable debris creating crush/impact injuries
Hazardous & Contaminated Materials	- Asbestos-containing materials (ACM) within demolished structures - Hazardous rubble requiring MoE classification - Potential chemical or electrical fragments
Machinery & Traffic Risks	- Heavy machinery movement in narrow village roads - Limited visibility; reversing equipment; blind spots - Risks to pedestrians, children, elderly, and vulnerable persons
Community Health & Safety (CHS)	- Obstruction of access to homes, farms, and local businesses - Movement of uncovered or overloaded trucks - Inadequate signage or temporary traffic control
Worker Health Risks	- Heat stress, fatigue, dehydration

	- Noise and dust exposure - Inadequate Personal Protective Equipment (PPE) or lack of training - Improper manual handling.
Social & Labor Risks	- Noncompliance with Labor Management Procedures (LMP) - Lack of awareness regarding Grievance Redress Mechanism (GRM) - Risks of exploitation, or abuse (SEA/SH); if Codes of Conduct (CoC) are not enforced - Stress and trauma exposure for workers operating in post-conflict high-risk environments. - Migrant worker vulnerabilities requiring non-discrimination and equal PPE
Security & Contextual Risks	- Escalation of conflict (shelling, rockets, drones) - Need for rapid evacuation and immediate suspension of works
Emergency / Rare Hazards	- Any sudden, non-routine incident not covered above, including accidental discoveries, unexpected chemical or biological hazards, fire, or other events requiring immediate STOP-WORK and coordination with authorities.

1.4 Alignment With ESMP Checklist and World Bank ESSs

This OHSMP is fully aligned with Environmental & Social Management Plan (ESMP) **Checklist** prepared at Caza level; Lebanese national laws, the World Bank' Environmental and Social Framework (ESF), IFC General EHS Guidelines (2007), ISO 45001:2018 + A1:2024, and MoE/UNDP (2025) SOPs for post-disaster debris management.

The OHSMP defines the procedures, roles, documentation, risk controls, and emergency protocols required to ensure safe implementation of all works under the Project. It operationalizes and enforces the risk-control measures presented in the Caza-level ESMP Checklists and is binding for all contractors, supervising consultants, and field personnel.

This OHSMP shall be read in conjunction with **Appendix 1 – UXO/ERW Safety Procedures** and **Appendix 2 – Hazardous Materials, Asbestos, and Chemical Residues Control**, which form integral and binding parts of the OHSMP.

2 OHS POLICY, PRINCIPLES & OBJECTIVES

2.1 OHS Policy Statement

The Council for Development and Reconstruction (CDR), the Supervising Engineer/Consultant, and all Contractors commit to implementing the Project in a manner that prevents harm to workers, affected communities, public assets, and the environment.

The Project operates in a post-conflict environment with elevated risks, including contextual security threats that may affect worker safety, potential UXO/ERW presence, unstable structures, hazardous rubble, and interactions between heavy machinery and the public along local roads in re-populated villages. Accordingly, all Project entities shall:

- Treat health, safety, and community protection as core values.
- Comply with applicable Lebanese legislation.
- Apply World Bank ESS2 and ESS4, and the relevant IFC General EHS Guidelines.
- Follow the MoE/UNDP (2025) SOPs for Post-Disaster Rubble Management.
- Respect LAF/LMAC UXO/ERW clearance protocols as the sole national authority for explosive ordnance matters.

- Ensure that all workers have the right to STOP WORK if unsafe conditions or suspected UXO or hazardous materials are encountered.
- Guarantee non-discrimination, fair working conditions, and strict enforcement of Codes of Conduct (CoC), including Prevention of Sexual Exploitation and Abuse / Sexual Harassment (SEA/SH)

CDR and the Contractors commit to providing all necessary resources—including personnel, equipment, training, supervision, and time—to implement this OHSMP effectively.

2.2 OHS Commitments & Principles

In accordance with ISO 45001:2018 and subsequent guidance updates, the Project integrates OHS considerations directly into all core business processes, including planning, procurement, contractor selection, budgeting, scheduling, site logistics, and emergency operations, ensuring that safety is embedded in every operational decision.

This Project adopts the following internationally recognized OHS principles:

1. Zero Harm Philosophy:

All fatalities, serious incidents, and major injuries are preventable.

2. Risk Prevention First:

Priority is given to eliminating hazards at the source before relying on PPE or administrative controls.

3. ISO 45001 Approach (Plan–Do–Check–Act):

- **Plan:** Identify risks, establish controls, prepare procedures
- **Do:** Implement SOPs, train workers, supervise works
- **Check:** Monitor compliance, inspect sites, document non-conformities
- **Act:** Apply corrective actions and continually improve performance

4. Compliance with LMAC UXO Protocols:

- No work begins without LMAC clearance.
- UXO = STOP WORK → Secure Area → Notify LMAC.

5. Respect for Community Safety:

- Works shall not unnecessarily impede access to homes, places of worship, or fields, and any temporary constraints shall be coordinated in advance.

6. Transparency & Worker Engagement:

- Workers are informed, trained, and empowered to speak up.

7. SEA/SH Zero-Tolerance:

- Codes of Conduct (CoC) are mandatory for all workers and supervisors.
- SEA/SH awareness and reporting training is required for every worker before accessing any site.
- Any SEA/SH allegation triggers immediate escalation to CDR–PIU, in line with ESS2 and ESS4.

- Workers found in violation of the CoC will be removed from site and subject to disciplinary measures, including contract termination.
- Anonymous reporting options must be available through the Worker GRM.

2.3 Operational Safety Priorities for Contractors

To ensure risk-controlled implementation of the Project, the following OHS objectives are established:

Table 2-1 Responsibility Matrix – Operational Safety Priorities for Contractors

Operational Safety Priority	Contractor	Supervising Engineer	CDR-PIU	LMAC	Municipality
Prevent fatalities and life-altering injuries	R	A	C	I	I
Prevent UXO/ERW incidents through daily briefings, trained supervisors, and STOP-WORK authority	R	A	C	C/A (clearance & response)	I
Ensure safe use of machinery and vehicles, particularly on local roads	R	A	C	I	C
Maintain safe and unobstructed public access during works	R	A	C	I	C
Control exposure to dust, noise, asbestos-suspected materials, and hazardous debris	R	A	C	I	I
Ensure compliance with MoE Circular 6/1 for debris transport and disposal	R	A	C	I	C (verify trucks & routing)
Provide all workers with appropriate PPE, induction, and task-specific training	R	A	C	I	I
Implement effective traffic management and pedestrian safety management near communities and places of worship	R	A	C	I	C
Ensure full compliance with GRM and worker feedback channels	R	A	C	I	I
Maintain complete documentation: inspections, checklists, permits, and incident logs	R	A	C	I	I

R = Responsible (does the task) A = Accountable (signs/approves) C = Consulted (provides input) I = Informed (receives updates)

2.4 Worker Health & Welfare Commitment

To support safe working conditions and align with ESS2 and ISO 45001, the Project commits to:

- Providing drinking water, sanitation facilities, shaded rest areas, and heat-stress protection on all active worksites.
- Ensuring safe and reliable transportation arrangements for workers, particularly in remote villages.
- Prohibiting work beyond safe maximum daily hours in high-risk environments or extreme temperatures.
- Ensuring that migrant and vulnerable workers receive equal access to PPE, training, and welfare facilities.
- Maintaining respectful and dignified working conditions, including adequate rest breaks and on-site welfare arrangements.

2.5 OHS Targets and Key Performance Indicators (KPIs)

Targets and Key Performance Indicators (KPIs) are presented in Table 2-2:

Table 2-2 OHS KPIs

Area	Key Performance Indicator (KPI)	Target
Safety Performance	Lost-Time Injury Frequency Rate (LTIFR)	0
	Fatalities	0
	Serious Near Misses	0 serious near misses resulting in harm (all serious near misses to be recorded and investigated).
Training	% of workers receiving induction	100%
	Daily toolbox attendance	≥ 95%
UXO/ERW Safety	% of sites with daily UXO briefing	100%
	Response time to UXO STOP-WORK	Immediate
Debris Management	% of debris loads with trip tickets	100%
	% of trucks tracked via GPS	100%
Traffic Safety	% of sites with approved Traffic Management Plan (TMP) — 100%	100%
PPE Compliance	Observed PPE compliance rate	≥ 95%
Documentation	Daily OHS inspection reports	100% issued

3 LEGAL AND OTHER REQUIREMENTS

The Project's OHS MP is implemented in compliance with the applicable Lebanese legal framework, international standards, and World Bank requirements. This chapter summarizes the applicable legal, regulatory, and institutional requirements governing OHS, labor conditions, debris management, hazardous materials, traffic safety, and UXO/ERW risk management (Table 3-1).

Table 3-1 Legal and Other Requirements Applicable to the Project

Category	Legal / Standard Source	Requirement
Occupational Health & Safety / Labor	Labor Law (1946)	- Governs worker rights, non-discrimination, working hours, minimum age, and safe working conditions.
	ILO Conventions (29, 105, 111, 122, 138)	- Prohibit forced labor and discrimination, ensure equal employment opportunities, and strictly forbid child labor or hazardous work for persons under 18.
	OHS Decree 11802/2004	- Establishes employer obligations for hazard prevention, PPE provision, supervision, and accident prevention.
Waste & Debris Management	Law 80/2018	- Integrated Solid Waste Management Law, covering hazardous and non-hazardous waste routing and roles of authorities.
	Decree 5605/2019	- Tasks Unions of Municipalities with CDW collection centers.
	Decree 5606/2019	- Defines hazardous waste classification, transport, and disposal processes.
	Decree 118/1977	- Assigns municipalities responsibility for waste collection and transport, and Governorates for disposal.
	MoE Circular 6/1 (2024)	- Requires municipalities and Unions to designate degraded quarry sites as temporary rubble reception areas and mandates debris transport controls, including GPS tracking and trip-ticket procedures.
Traffic & Transport Safety	Traffic Law 243	- Governs roadside safety, signage, speed control, and protection of road users during operations.
Lebanon's National Mine Action Policy	Official Gazette (Art. 3-7)	- Lebanon's National Mine Action Policy designates the Lebanon Mine Action Centre (LMAC) as the sole national authority responsible for survey, mapping, marking, accreditation, tasking, quality control, and clearance of landmines, ERW, and unexploded ordnance. - Accordingly, all UXO/ERW procedures under this Project shall follow LMAC's instructions, and only LMAC/LAF Explosive Ordnance Disposal (EOD) teams are authorized to assess or remove explosive ordnance. - Contractors are restricted to STOP-WORK, securing the area, and notifying LMAC.
World Bank ESF	ESS2 – Labor and Working Conditions	- Addresses worker safety, nondiscrimination, prevention of child labor, Codes of Conduct, worker GRM, and OHS obligations.
	ESS4 – Community Health and Safety	- Requires mitigation of risks from machinery, traffic, debris movement, hazardous materials, UXO, and emergency preparedness.
IFC EHS Guidelines	IFC Environmental, Health and Safety (EHS) Guidelines	- These provide international benchmarks for safe machinery operation, dust/noise control, waste management, and traffic safety.
ISO 45001	ISO 45001:2018 + A1:2024	- The Project's OHS Management System (OHSMS) integrates: Hazard identification; Risk assessment; Competency and training; Participation and communication; Monitoring and continual improvement; Embedding OHS into planning, procurement, scheduling, and contractor management.
MoE–UNDP Rubble SOP (2025)	UNDP–MoE SOPs for Post-Disaster Rubble Management (2025)	- Provide national guidance for handling debris, hazardous materials, and EO-contaminated rubble in post-conflict settings.

4 OHS MANAGEMENT SYSTEM STRUCTURE

The OHS Management System (OHSMS) provides the overarching framework for hazard identification, operational control, emergency preparedness, monitoring, reporting, and continual improvement across all Project activities.

4.1 ISO 45001+A12024 Framework (Plan–Do–Check–Act Model)

The Project's OHSMS is based on the **PDCA cycle** (Table 4-1), ensuring continuous risk reduction:

Table 4-1 ISO 45001 + A1:2024 Framework (Plan–Do–Check–Act Model)

PDCA Stage	Requirements
PLAN	- Integrate OHS considerations into work planning, design reviews, procurement decisions, and contractor onboarding (ISO 45001 +A1:2024). - Identify hazards (UXO/ERW, debris, unstable structures, machinery, hazardous materials) - Conduct Job Hazard Analyses (JHAs) - Establish safe-work procedures and mitigation measures - Determine legal and other requirements (per Chapter 3) - Set OHS objectives and KPIs (per Chapter 2)
DO	- Implement all OHS procedures and Safe Operating Practices - Deliver worker induction and task-specific training - Provide PPE and supervision - Enforce STOP-WORK authority - Apply LMAC-compliant UXO safety methods - Conduct safe debris clearing, transport, and traffic management - Ensure procurement, scheduling, and resource allocation explicitly incorporate OHS requirements.
CHECK	- Daily inspections by the Contractor OHS Officer - Weekly audits by Supervising Engineer - CDR–PIU field verification - Monitoring of compliance with MoE Circular 6/1 - Incident, near-miss, and UXO report - Documentation reviews and performance tracking
ACT	- Implement corrective and preventive actions - Revise method statements and JHAs based on lessons learned - Update OHS procedures as conditions change - Continually improve safety performance

4.1.1 Integration of Security Risk Management

Due to the unstable security environment, the OHSMS integrates a Security Risk Management layer (Table 4-2). The Security Risk Management layer is directly linked to the Emergency Evacuation Procedure described in Chapter 8 and illustrated in Figure 8-1.

Outcomes of the daily security assessment and the GO/NO-GO decision tool constitute formal triggers for the activation of emergency response and evacuation measures. When predefined security thresholds are exceeded, work activities are immediately suspended and evacuation procedures are initiated in accordance with the Emergency Evacuation Plan.

Table 4-2 Security Risk Management Integration into OHSMS

Security Risk Management Component	Requirement
Daily Security	- Daily assessment of security conditions before deployment.

Assessment	
GO/NO-GO Tool	- A Red/Amber/Green (RAG) “GO / NO-GO” operational decision tool.
Mandatory Suspension of Work	- Mandatory work suspension during shelling, drones, or cross-border fire. - Work suspension and evacuation orders shall be issued based on directives from the Lebanese Armed Forces (LAF) and/or Internal Security Forces (ISF), or upon instruction from the Contractor’s designated Security Focal Point following verified security alerts.
Coordination with Security Forces	- Coordination with LAF/ISF for safe access routes.

4.2 **Components of the Project OHS Management System**

The OHSMP covers the following core components:

- OHS Policy and Leadership Commitment (Chapter 2)
- Legal and Other Requirements Register (Chapter 3)
- Roles and Responsibilities (Chapter 5)
- Hazard Identification and Risk Assessment System (Chapter 6)
- Operational Controls and Standard Operating Procedures, including:
 - UXO/ERW risk management
 - Debris and hazardous-material handling
 - Machinery and electrical safety
 - Traffic and community safety
- Permit-to-Work (PTW) System for high-risk activities
- Emergency Preparedness and Response Plan (EPRP) (Chapter 8)
- Training, Competency, and Worker Participation Framework (Chapter 9)
- Monitoring, Reporting, and OHS Documentation Requirements (Chapter 10)
- Incident Notification, Investigation, and Corrective Action System (Chapter 11)
- Continual Improvement Mechanism

4.3 **Worker Welfare Provisions (ISO 45001 & ESS2)**

The OHSMS embeds worker welfare into safety controls, including:

- Heat stress prevention plans.
- Rest breaks aligned with task risk level.
- Availability of shaded resting areas.
- Minimum sanitary facilities per workforce size.

4.4 **Roles & Responsibilities within the OHSMS**

The OHSMS clearly defines roles and responsibilities for (Full detailed roles are in **Chapter 5**):

- **CDR–PIU** (oversight; WB compliance)
- **Supervising Engineer** (supervision; OHS audits)
- **Contractor** (day-to-day OHS implementation)
- **Contractor OHS Officer** (inspection, documentation, STOP-WORK activation)
- **LMAC/LAF** (exclusive authority for UXO/ERW)
- **Municipalities/Unions** (supporting debris routing & community safety)
- **MoE** (hazardous waste classification & disposal site approval)
- **Ministry of Public Health (MoPH)** (human remains protocols)

4.5 **Communication and Coordination Mechanisms**

The OHSMS requires structured communication, including:

- Daily toolbox talks
- Daily UXO/ERW safety briefings
- Coordination with municipalities for access & detours
- Continuous communication with LMAC focal points
- Weekly OHS site meetings led by Supervising Engineer
- OHS reporting to CDR–PIU and the World Bank

4.6 OHS Documentation and Record-Keeping

The OHSMS includes mandatory documentation:

1. OHSMP and Caza-level ESMP Checklists
2. Method statements and JHAs
3. Daily OHS inspection checklists
4. PTW forms
5. Daily UXO briefings
6. Debris trip tickets & GPS logs (MoE Circular 6/1)
7. Training attendance records
8. Incident/near-miss reports
9. Corrective action logs
10. Emergency response reports
11. Waste routing records

All documents must be:

- ✓ Available onsite
- ✓ Updated regularly
- ✓ Provided to Supervising Engineer and CDR–PIU upon request
- ✓ Stored securely for auditing

4.6.1 Security Communication Protocols

All sites shall maintain a communication channel dedicated to security alerts, including:

- Real-time instructions from LAF/ISF and municipalities.
- Rapid notification systems for evacuation.
- Radio/phone redundancy to maintain communication during network outages.

4.7 Continual Improvement

In alignment with ISO 45001 Clause 10, continual improvement is achieved through:

- Lessons learned from incidents and near misses
- Updates to JHAs and SOPs
- Feedback from workers, municipalities, and communities
- Audit findings and corrective actions
- Changes in site conditions or new risks (e.g., newly exposed UXO)

Contractors must update their OHS documents whenever risks evolve.

4.8 Operational Control and SOPs

4.8.1 Rubble Removal in EO-Contaminated Areas (refer to Appendix 1).

- Use of **LMAC risk database** for rubble task classification.
- Mandatory **non-technical survey (NTS)** before works.
- **Three-phase clearance methodology:**
 1. Visual Search & Marking.
 2. Mechanical Removal with EOD Support (100 m safe distance rule).
 3. Spreading rubble in thin layers for final visual inspection- in locations designated by LMAC and only under LMAC supervision; the Contractor is not authorized to perform any EO search.
- STOP-WORK upon suspicion of UXO/ERW.
- Continuous **risk assessment and risk review** during operations.
- Protection of **culturally significant and religious items** found within rubble.

4.8.2 Risk Management Cycle

As required by LMAC:



Figure 4-11 Risk Management Cycle

4.8.3 Emergency Response & First Responders

- Only **LMAC/LAF EOD teams** may handle or remove UXO.
- Contractors must maintain immediate communication with LMAC focal points.

4.8.4 Handling Sensitive or Sacred Items

Debris may contain objects of **religious or cultural value**.

These must be handled respectfully, documented, and returned through coordination with:

- local authorities
- religious leaders
- community representatives

4.8.5 Hazardous Materials and Asbestos Handling

- Identification of suspect asbestos-containing materials (ACM) during debris clearance.
- STOP-WORK and MoE notification if ACM is encountered.
- Isolation of the area until classification is confirmed.

- Use of appropriate PPE (Type 5/6 protective suits, P3 respirators).
- No cutting, breaking, crushing, or dry sweeping of ACM-containing debris.
- Moisture application to minimize dust.
- Proper bagging, labeling, and routing under MoE supervision.
- Only MoE-approved entities may classify or dispose of ACM.

4.8.6 Institutional Responsibilities in Lebanon

- **MoL:** Enforces Labor Law and OHS Decree 11802/2004
- **MoE:** Debris management (Circular 6/1), hazardous waste classification, TSS approval
- **LMAC/LAF:** Sole authority for UXO/ERW assessment, clearance, and EOD response
- **Municipalities/Unions:** Local coordination, access, community notifications, debris routing support
- **CDR-PIU:** Oversight, WB compliance, inter-agency coordination
- **Supervising Engineer:** Daily/weekly OHS monitoring, approvals, Non-Compliance Notices (NCNs)
- **Contractor:** Full implementation of OHSMP, daily OHS control, documentation

4.8.7 Security and Emergency Law Compliance

Given the post-conflict environment, the Project shall comply with:

- Directives issued by LAF, ISF, and Governorates related to security restrictions, road closures, and access limitations.
- Civil Defense protocols for emergency evacuation during shelling, drone activity, or cross-border fire.
- Any temporary movement bans or curfews affecting worker deployment and site operations shall be strictly complied with, and works shall be suspended as required.

5 ROLES AND RESPONSIBILITIES

Effective implementation of the OHSMP requires clear assignment of responsibilities across all Project entities. The roles below are aligned with ISO 45001 (Leadership and Worker Participation) and reflect the governance structure of CDR, the Supervising Engineer, LMAC, MoE, and the World Bank. These responsibilities define who approves, supervises, implements, and enforces OHS measures during all emergency road-clearing and restoration activities (refer to Table 5-1).

Table 5-1 Roles and Responsibilities for the OHSMP Implementation

Entity	Key Responsibilities
CDR – Project Implementing Unit (PIU)	- Ensure OHSMP implementation across all Caza and contracts. - Oversee performance of contractors and Supervising Engineer. - Require corrective action for non-compliance. - Report significant OHS incidents to the World Bank. - Coordinate with MoE, LAF/LMAC, MoPH, ISF, and municipalities.
Supervising Engineer (Consultant)	- Conduct site inspections, audits, and verification. - Approve Method Statements, JHAs, PTWs, TMPs. - Issue Non-Compliance Notices (NCNs). - Verify STOP-WORK implementation (UXO, asbestos, instability). - Ensure full contractor documentation and reporting.
Contractor – Project Manager	- Implement OHS on site and provide resources (staff, PPE, equipment). - Approve JHAs and method statements. - Ensure all worker training and inductions. - Guarantee compliance with MoE Circular 6/1. - Enforce disciplinary measures including SEA/SH zero-tolerance.
Contractor – OHS Officer (Mandatory)	- Conduct daily inspections and enforce OHS rules. - Lead toolbox talks + daily UXO/ERW briefings. - Identify hazards and activate STOP-WORK. - Maintain OHS and debris documentation. - Coordinate with Engineer, PIU, LMAC, MoE, municipalities.
Specific OHS Officer Protocols	- Human Remains: stop work, notify MoPH, secure area. - Electrical Disconnection: verify/document full power isolation before clearing operations.
Contractor – Additional Required Designations	- Security & Access Focal Point: responsible for monitoring official security channels (LAF, ISF, municipality), assessing daily security conditions, implementing the GO/NO-GO assessment, ordering immediate evacuation or site lockdown if threats are identified. The name and contact details of the Security & Access Focal Point shall be included in the site Emergency Response Team (ERT) binder and Emergency Contact List. - Traffic Management Supervisor: oversees TMP implementation. - Certified Machine Operators: operate machinery in accordance with approved method statements, JHAs, and TMPs; participate in ERT response when required. - Environmental & Waste Control Officer: ensures Circular 6/1 and TSS verification. - Social Expert: ensures implementation of social risk mitigation measures, including SEA/SH prevention and zero-tolerance enforcement, worker code of conduct, operation of the grievance mechanism, community liaison, and referral pathways for psychological first aid following traumatic incidents. - Training Coordinator: manages induction, toolbox talks, refresher training.
Contractor – Obligations Before Mobilization	- Conduct hazard mapping. - Update emergency contacts + hospitals. - Confirm TSS/quarries with MoE/municipalities. - Submit Debris Management Plan (GPS, trip tickets, TSS).

Entity	Key Responsibilities
	- Prepare TMP + site-specific OHS documents.
Contractor – Obligations During Works	- Daily UXO/ERW briefings + toolbox talks. - All-time OHS Officer on site. - Certified machinery operators + banksman for reversing. - PPE compliance; covered trucks + GPS + trip tickets. - SEA/SH, child labor, forced labor zero-tolerance. - Under NO circumstances shall Contractor personnel attempt to inspect, probe, move, or clear any item suspected to be UXO/ERW.
Workers (Contractor/Subcontractor)	- Follow OHS procedures; attend training. - Wear PPE at all times. - Report hazards, unsafe conditions, and UXO suspicion. - Exercise STOP-WORK authority when needed.
Lebanon Mine Action Center (LMAC)	- Conduct NTS and maintain EO risk database. - Respond to UXO/ERW incidents and perform EOD. - Certify clearance. - Provide EORE training; support safe rubble removal.
Ministry of Environment (MoE)	- Classify hazardous materials (including asbestos). - Approve TSS/quarry sites under Circular 6/1. - Oversee debris transport chain-of-custody. - Monitor environmental compliance.
Municipalities & Unions	- Facilitate access, detours, community notifications. - Support Circular 6/1 implementation. - Coordinate with households and local leaders. - Support emergency response.
Ministry of Public Health (MoPH)	- Lead human remains protocols. - Provide hospital referral pathways. - Coordinate with local health centers.
Internal Security Forces (ISF) / MoI	- Support traffic management. - Secure debris transport routes. - Support crowd control in emergencies.

The personnel identified in Table 5-1— including the Contractor OHS Officer, trained machinery operators, banksman/flagmen, and other workers designated by the Contractor— shall constitute the site Emergency Response Team (ERT) described in Section 8.2. These personnel are responsible for implementing emergency procedures, including medical response, UXO/ERW, human remains discovery, fire, hazardous material events, and traffic or machinery emergencies.

6 HAZARD IDENTIFICATION AND RISK ASSESSMENT

This chapter describes how hazards are systematically identified, assessed, and controlled in accordance with **ISO 45001 Clause 6.1**, World Bank ESS2/ESS4, and the **MoE / UNDP Debris Management SOPs**.

The process covers all Project activities, including UXO/ERW-exposed rubble clearance, debris handling, transport, road restoration and operations in narrow village roads.

6.1 Risk Management Approach

The Project applies a **structured risk management cycle**, consistent with LMAC guidance:

1. **Risk Identification** – identify all hazards related to UXO/ERW, debris, unstable structures, machinery, traffic, hazardous materials (asbestos, possible phosphorus residues), noise, dust, heat stress, etc.
2. **Risk Analysis** – estimate **likelihood** and **severity** for each hazard (e.g. minor injury vs. fatal, rare vs. likely).
3. **Risk Evaluation** – classify risks as **low, medium, or high**, with priority given to high-risk, life-threatening conditions.
4. **Risk Treatment** – define and implement control measures (elimination, engineering controls, administrative controls, PPE).
5. **Risk Review** – regularly update risk assessments as conditions change (new rubble exposure, new EO findings, weather, community patterns).

Contractors must prepare **Job Hazard Analyses (JHAs)/Job Safety Analyses (JSAs)** for all major tasks and submit them to Supervisor Engineer for review and approval **before** work starts.

Risk assessments must explicitly consider “reasonably foreseeable emergency situations” (ISO 45001:2018+A1:2024 requirement).

6.2 Main Hazard Categories

For this Project, hazards are grouped into the following main categories:

1. UXO/ERW and Explosive Ordnance Hazards
2. Human Remains Discovery (Chance Find) – Non-Routine Hazard Scenario
3. Debris, Structural and Excavation Hazards
4. Traffic and Machinery Hazards
5. Hazardous Materials (Asbestos, Chemical/Phosphorus Residues)
6. Environmental Exposures (Dust, Noise, Heat, Weather)
7. Labor & Social/OHS-related Risks (e.g. fatigue, SEA/SH, stress)
8. Context-related Hazards (security escalation, shelling, drone activity, sudden evacuations).

The following hazard identification tables summarize the main risks associated with project activities. These tables provide an overview of typical risks, contributing factors, and high-level mitigation measures. Detailed step-by-step emergency procedures for each hazard are provided in Chapter 8.

6.2.1 UXO/ERW Hazards

Category	Details
Typical Risks	- UXO buried under rubble or road shoulders. - Explosive items exposed during mechanical scraping or excavation. - Secondary detonation hazards if EO is struck by machinery - Risk increases when debris is compacted, bulldozed, or pushed aside without prior UXO scanning.
Risk Factors	- History of shelling or bombardment. - Proximity to former frontlines or military positions. - Reports from LMAC database and NTS. - Presence of burned/fragmented munitions.
Notes / Controls	- Mitigation is addressed in Appendix 1 (UXO/ERW Safety Procedures) but must always appear in the JHAs.

6.2.2 Human Remains Discovery (Chance Find) Hazards

Procedural, legal, psychosocial, and public health risks arising from the accidental discovery of human remains during debris removal and road works, requiring immediate work suspension and coordination with competent authorities.

Category	Details
Typical Risks	- Discovery of human remains during debris clearing, excavation, or road repair activities. - Biological exposure risks. - Psychological trauma to workers. - Accidental injuries from handling rubble or disturbed soil.
Risk Factors	- Conflict-affected areas, former frontlines, or rubble from destroyed or abandoned structures.
Notes / Controls	- This is a non-routine hazard managed through the Chance Find Procedure (see Section 8.6.3). - Immediate work suspension and access control are mandatory. - Psychological First Aid (PFA) shall be made available to affected workers. - Works may resume only after written clearance from competent authorities.

6.2.3 Debris, Structural, and Excavation Hazards

Category	Details
Typical Risks	- Collapse of partially destroyed buildings or retaining walls near the road. - Falling blocks or sliding rubble. - Landslides/embankment failures during excavation. - Sharp objects (rebar, glass, metal) causing cuts/punctures. - Hidden voids or cavities beneath rubble leading to equipment instability or worker falls (common in war-damaged areas).
Risk Factors	- Presence of overhanging or leaning structures. - Heavy machinery working near unstable slopes or foundations. - Vibrations from compactors and trucks.
Notes / Controls	- Controls (detailed in subsequent chapters) include exclusion zones, pre-inspections, shoring, and strict machine positioning.

6.2.4 Traffic and Machinery Hazards

Category	Details
Typical Risks	- Collision between trucks/machinery and pedestrians. - Reversing vehicles in narrow streets without banksmen. - Inadequate signage and lighting. - Interaction with local traffic worshippers near mosques/churches. - Risk of machinery overturning on uneven, rubble-covered, or partially collapsed road shoulders. - Interaction between paving machinery (pavers, rollers) and live traffic. - Increased risk of collisions during asphalt laying and compaction operations. - Burns or crushing injuries during asphalt compaction and truck unloading.
Risk Factors	- Village cores where population has partially returned - Proximity to schools, markets, and places of worship. - Poor visibility, dust, night driving.
Notes / Controls	- Mitigation will be addressed in Traffic & Community Safety and Machinery Safety chapters.

6.2.5 Hazardous Materials

6.2.5.1 Asbestos & Chemical/Phosphorus Residues

Category	Details
Typical Risks	- Asbestos-Containing Materials (ACM): roofing, panels, pipes, insulation within rubble. - Chemical/Phosphorus Residues: in localized zones where conflict munitions or fires may have left hazardous residues in soil or rubble.
Risk Factors	- Rubble from older buildings (pre-2000s) with corrugated asbestos roofs or insulation. - Unusual powdered or fibrous materials. - Oily, white, or unusual residues, persistent smoke, or burnt patches in rubble/soil.
Notes / Controls	- Controls (detailed in Appendix 2): - STOP-WORK if suspicious materials are found. - No breaking/crushing suspected ACM or chemical residues. - MoE/LMAC notification. Contractor ensures isolation, marking, and PPE protection only; segregation, wetting, labeling, and routing are performed exclusively by MoE/LMAC or authorized specialists.

6.2.5.2 Bituminous Materials

Category	Details
Typical Risks	- Exposure to bituminous fumes during asphalt laying and compaction. - Skin burns from contact with hot asphalt materials.
Risk Factors	- Hot work (asphalt placement, compaction) in confined or poorly ventilated areas. - Summer temperatures and extended outdoor work increasing heat stress. - Close proximity to pedestrians or workers during paving activities.
Notes / Controls	- Mandatory PPE: heat-resistant gloves, long sleeves, eye

	- protection, N95 respirator if fumes are concentrated. - Hydration stations and shade for workers during hot conditions. - Work/rest cycles to reduce heat stress. - Dust and fume control through water spraying and proper ventilation. - Maintain separation from pedestrians and workers; clearly mark asphalt work zones. - Toolbox talks covering asphalt hazards, burn prevention, and STOP-WORK triggers for unsafe conditions.
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6.2.6 Environmental Exposures (Dust, Noise, Heat, Weather)

Category	Details
Typical Risks	- Dust inhalation from debris handling and vehicle movement. - Excessive noise from machinery. - Slips and loss of control during wet conditions - Heat stress to workers during hot asphalt placement, especially in summer conditions. - Localized air pollution from machinery exhaust during paving activities.
Risk Factors	- Dry, windy conditions increasing dust dispersion during clearing and loading. - Continuous movement of trucks and loaders along narrow roads forcing dust into homes and shops. - Summer temperatures above 30–35°C increasing heat stress, especially for workers in PPE. - Long work hours in exposed areas without adequate shade. - Machinery intensifying noise exposure in confined village corridors. - Rain events causing surface slickness, reduced visibility, and unstable ground.
Notes / Controls	- Water spraying to reduce dust. - Mandatory respiratory protection in high-dust areas. - Hearing protection near noisy equipment. - Work/rest cycles, shade, and drinking water. - Suspension or modification of activities under extreme weather.

6.2.7 Community Health & Safety Hazards

Category	Details
Typical Risks	- Blocking access to homes, fields, health centers, or schools. - Risk to children playing near machinery. - Inadequate communication about detours and work schedules. - Increased risk of accidents near sensitive receptors (schools, mosques, churches, hospitals). Risk of debris/laden trucks passing too close to returning families or elderly persons in partially reoccupied areas.
Risk Factors	- Risk of debris-laden trucks passing too close to returning families or elderly persons in partially reoccupied areas. - Villages with returning households generating unpredictable pedestrian and local traffic movement near the works. - Children playing unsupervised in debris-affected areas or around machinery. - Sensitive receptors (schools, mosques, clinics) located directly on the alignment (<10–20 m). - Poor visibility due to dust, smoke, or debris piles obstructing sight lines.
Notes / Controls	Controls (detailed in Traffic & Community Safety chapter): - Advance information to municipalities and communities.

- Clear signage, barriers, and flagmen.
- Detour planning that maintains access.
- Daytime work near sensitive sites (no night work in dense residential zones).

6.2.8 Labor, Psychosocial, and SEA/SH-Related Risks

Category	Details
Typical Risks	- Worker fatigue from long hours, heat, or stress. - Poor communication and confusion over safety procedures. - Harassment or SEA/SH incidents involving community members or workers. - Psychological First Aid (PFA) referral pathway for workers exposed to traumatic events (UXO incidents, human remains discovery, fatalities, conflict escalation).
Risk Factors	- Mixed labor force with differing literacy levels, languages, and prior experience with OHS. - Economic pressure pushing workers to accept unsafe tasks, overtime, or inadequate rest. - Anxiety from UXO discoveries, near-miss incidents, or structural collapses. - Lack of supervisory presence or unclear instructions generated by rapid mobilization. - Gender norms inhibiting reporting of harassment, bullying, or SEA/SH. - Limited privacy or confidentiality mechanisms for complaints.
Notes / Controls	- Compliance with Labor Law and LMP (working hours, rest breaks). - Toolbox talks and continuous communication. - Enforcement of Codes of Conduct (CoC) with SEA/SH provisions. - Worker GRM and community GRM access.

6.2.9 Contextual Hazard: Security Escalation / Active Hostile Threat

Category	Details
Typical Risks	- Injury or fatality from shelling, gunfire, or explosive remnants of war (ERW) during attacks - Damage to equipment and site infrastructure - Panic, stampede, or vehicle accidents during sudden withdrawal - Disruption of emergency services
Risk Factors	- Road located in a village that is still under threat - Sparse early warning systems or intelligence on incoming attacks - Village/road exposed with limited cover
Notes / Controls	- STOP WORK, immediately if threat detected - Evacuate all personnel to pre-identified safe shelters- Security Focal Point coordinates with LAF/ISF for real-time alerts - Vehicles kept fueled and ready for rapid withdrawal - Daily security briefings and early warning drills- Resume work only after clearance from Security Focal Point in coordination with authorities

6.3 Documentation of Risk Assessment

For all major tasks (e.g., debris clearing, excavation, loading, transport, restoration):

- A **site-specific Job Hazard Analysis (JHA/JSA)** shall be prepared by the Contractor **for each task**, detailing hazards, risk levels, control measures, and STOP-WORK triggers.
- **Emergency-specific hazards** such as UXO/ERW or chance-find human remains **follow the hazard-specific procedures in Section 8.6**.
- The JHA shall include **task-relevant checks**, e.g., visual inspection for structural cracks, ground instability, or surface deformation where applicable.
- JHAs must be **reviewed and approved by the Supervising Engineer** prior to work.
- JHAs shall be **revised whenever conditions change** (e.g., discovery of new hazards, weather changes, unusual debris, or altered work conditions).
- **Maintain JHAs and related logs on site** for daily review and inspection.

7 TRAFFIC & COMMUNITY SAFETY MANAGEMENT

The detailed UXO/ERW response protocol and STOP-WORK procedures are provided in **Appendix 1 – UXO/ERW Safety Procedures** and shall be applied in full during all project activities.

Project works include road clearing, debris transport, and restoration of **existing roads**, many of which are currently closed or only partially accessible.

Traffic and community safety risks arise primarily where works interface with **re-populated villages, already open road segments, debris haulage routes, and adjacent connecting roads**. These conditions require strict, context-specific traffic and community safety controls in line with **ESS4** and the **World Bank EHS Guidelines**.

Given that debris transport is a primary risk driver, the **Traffic Management Plan (TMP)** shall explicitly cover haulage routing to MoE-approved TSSs, including timing, speed controls, and community notifications along connecting roads.

This chapter sets mandatory requirements for traffic control, pedestrian protection, public access management, detour planning, and machinery operation **where community exposure exists**.

Contractors shall prepare **site-specific TMP** proportionate to local conditions. TMP shall be reviewed by the Supervising Engineer and approved by the CDR-PIU prior to implementation.

7.1 Traffic Safety Objectives

- ✓ Prevent vehicle–pedestrian collisions.
- ✓ Protect vulnerable groups where present (e.g., children, elderly persons, persons with disabilities, farmers, and returning households), particularly along haulage routes and partially re-inhabited areas.
- ✓ Control vehicle speeds and unsafe driving behavior.
- ✓ Manage traffic flow to avoid unsafe overtaking and congestion on narrow **narrow Local Roads & Re-populated Areas**.
- ✓ Separate machinery movement from pedestrian activity where interaction may occur.
- ✓ Maintain safe access to homes, farmland, community facilities, and services **where located along active work sections or haulage routes**.
- ✓ Warn communities in advance of works and temporary disturbances.
- ✓ Prevent secondary accidents caused by poor signage, dust, or visibility.
- ✓ Protect sensitive receptors **where identified within the project area**.

7.2 General Traffic Safety Requirements

TMPs are required for work locations and debris haulage routes **where interaction with vehicular traffic, pedestrians, or surrounding communities may occur**.

A TMP may be simplified for fully closed and uninhabited segments, provided that debris haulage routing, signage, and speed controls remain in place.

Each TMP shall include, as applicable:

- Road width and cross-section
- Expected traffic volumes (if any)
- Pedestrian movement and crossing points (where present)
- Access points to homes, farms, and businesses (where present)
- Signage and detour layout
- Banksman/flagger positions

- Machinery circulation and parking plan
- Coordination with municipalities and ISF
- Emergency access routes

Haulage routes to TSSs shall be agreed with municipalities/ISF prior to transport, prioritizing routes with the lowest social and safety impacts and avoiding sensitive receptors and pedestrian activity areas where feasible.

TMPs must be approved prior to work commencing on the relevant segment or haulage route.

7.3 Key Safety Requirements for Machinery Operation

- Maximum speed in work zones and villages: **≤20 km/h**
- Reduced speeds (≤10 km/h) **where schools, clinics, or mosques are functional and present**
- Use reversing alarms, flashing lights, and horns only as required for safety
- Mandatory trained banksman for all reversing or maneuvering operations
- No simultaneous operation of multiple machines in narrow or constrained sections
- Machinery shall not block emergency access routes or agreed access points
- No operation during school pick-up/drop-off times **where schools are operational**, unless coordinated with authorities

7.4 Mandatory Signage and Road Devices

Contractors shall install appropriate signage and devices **where required by site conditions**, including:

- Road works warning signs (reflective)
- Speed-limit signs
- Cones, barriers, and reflectors
- Night-time warning lights
- “STOP – WORKS AHEAD” / “HEAVY MACHINERY OPERATING” signage

Signage placement shall be adapted to road classification and visibility.

7.5 Driver Safety Protocol

- Speed limits strictly enforced
- Seatbelts mandatory
- No mobile phone use while driving
- No reversing without a banksman
- No night driving inside villages without Supervising Engineer approval
- Maximum driving time: ≤10 hours/day

7.6 Pedestrian & Community Protection

Where pedestrian activity exists:

- Establish protected pedestrian paths using cones or barriers
- Provide temporary crossings where needed
- Fence active work zones to prevent entry
- Workers to wear high-visibility PPE at all times

Contractors must slow machinery and actively manage pedestrian movement.

7.7 Detours and Access Management

- Maintain access where roads are already open or partially open and community access is active; otherwise, maintain emergency and municipal access as agreed
- Provide temporary ramps or alternative access where required
- Coordinate closures with municipalities and ISF
- No full road closure without:
 - o municipal approval
 - o community notification
 - o emergency access plan

7.8 Traffic Management Near Sensitive Receptors

- Suspend works during prayer times where mosques are functional
- Enhanced signage and banksmen near schools or clinics
- No vibration-intensive works near clinics during operating hours
- TMP to include emergency bypass routes

7.9 Community Notifications

Contractor must deliver timely messaging through:

- Municipal announcements
- Door to door
- WhatsApp village groups
- SMS or loudspeaker notifications
- Posters near work areas
- Advance notice (24–48 hours) for major disruptions

Community must know:

- when works begin
- expected duration
- detours
- emergency contact numbers

7.10 Enforcement and Monitoring

Contractor OHS Officer must:

- Inspect TMP implementation **twice daily**
- Keep a **Traffic Safety Log**
- Document signage, detours, and incidents
- Coordinate with ISF/Municipal Police
- Issue immediate corrective actions

Supervising Engineer

- Weekly audits
- Approve corrective actions
- Report non-compliance to CDR

CDR-PIU:

- Final oversight
- Ensures compliance with ESS4
- Reviews major incidents and reports to WB

8 EMERGENCY PREPAREDNESS & RESPONSE

Given the post-conflict context of the Project and the presence of war rubble, ERW/UXO, collapsed structures, and hazardous materials, emergency preparedness and response (EPR) is a critical aspect of safe implementation.

The purpose of this chapter is to establish **clear, immediate, and coordinated actions** to prevent fatalities, reduce injuries, protect nearby communities where exposure exists, and ensure rapid coordination with competent authorities.

8.1 Emergency Scenarios Anticipated

The Project has several high-risk emergency scenarios requiring dedicated procedures (Figure 8-1):

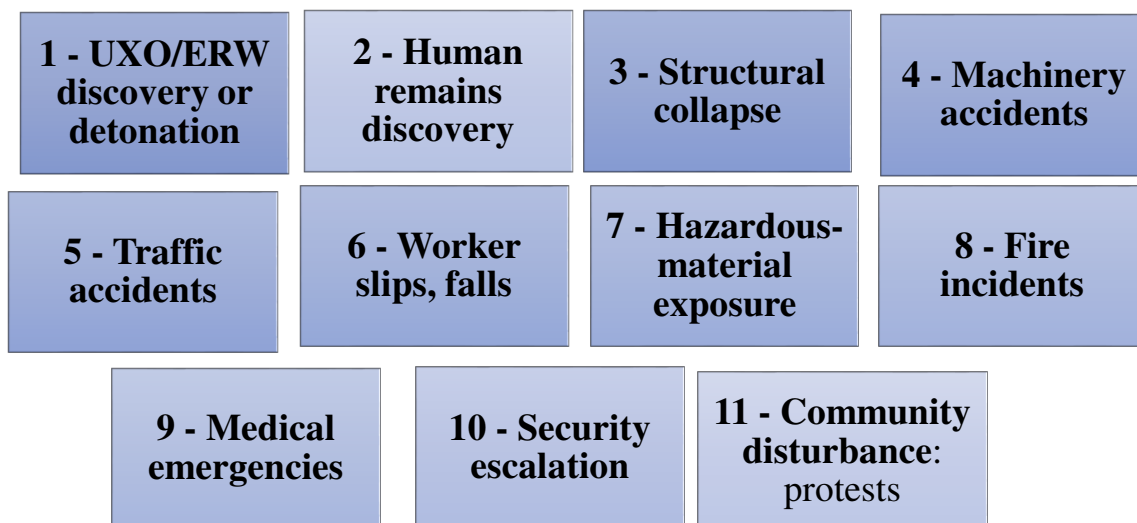


Figure 8-1 Considered Emergency Scenarios

(All emergency scenarios must be explicitly considered during risk assessments (ISO 45001:2018+A1:2024 requirement: “*reasonably foreseeable emergencies*”).

All emergency actions related to suspected or confirmed explosive ordnance shall follow the step-wise procedure described in **Appendix 1 – UXO/ERW Safety Procedures**.

8.2 Emergency Response Team (ERT) Structure

Each Contractor must establish an **Emergency Response Team (ERT)** on every active site (Figure 8-2). The ERT consists of a core group of trained on-site responders, supported by designated coordination and liaison roles that are activated as required depending on the nature of the incident.

The ERT is responsible for the immediate response to on-site incidents, including medical emergencies, machinery accidents, traffic events, spills or hazardous material incidents, fire outbreaks, and specialized hazards such as UXO/ERW or human remains. The team consists of designated personnel and is led by the Contractor's OHS Officer. Members are trained to respond to hazards, provide initial interventions, and immediately alert the ERT Leader when required. Designated ERT members, particularly machinery operators, shall also receive training in fire prevention and initial response using on-site fire extinguishers. A trained ERT member shall take on the role of Fire Warden during any fire-related incident.

The ERT operates in coordination with, but is not limited to, the Contractor's designated Security & Access Focal Point, internal environmental and social specialists, and relevant national authorities for specialized hazards.

ERT Composition

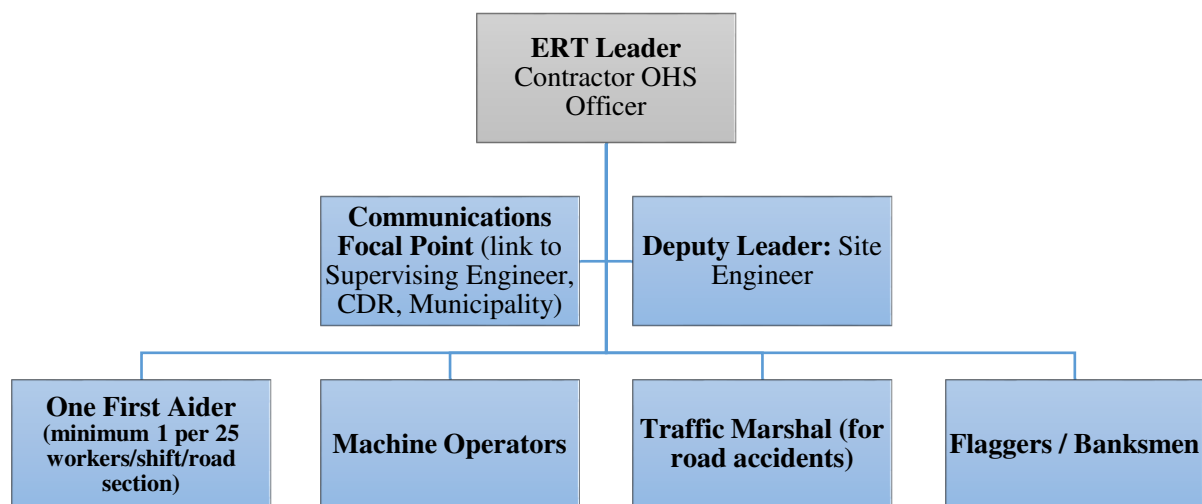


Figure 8-2 Emergency Response Team (ERT) Structure

External Authorities in Emergencies

- **LMAC** – Sole authority for UXO/ERW response
- **LAF** – Security + cordon control
- **Lebanese Red Cross (LRC)** – Emergency medical response
- **Civil Defense** – Fire rescue, evacuations
- **Ministry of Environment (MoE)** – Hazardous waste incidents
- **Ministry of Public Health (MoPH)** – Human remains & hospital coordination
- **ISF / Municipal Police** – Traffic & crowd control

8.3 Emergency Equipment Required On-Site

Every active road-clearing site must have:

Table 8-1 Required Equipment

Type	Description
Medical	- First-aid kit compliant with Lebanese Red Cross standards shall be readily accessible within 2-3 minutes from any work location. - Stretcher - Eye-wash bottle - Burn kit - Trauma kit (pressure dressings, tourniquets) – essential for blast/sharp-object injuries - Defibrillator (AED for <i>large teams</i> (>20 workers)) - Emergency thermal blankets - Dedicated first-aid responder on each site
Fire	- Fire extinguishers (powder + CO₂) - Machines - Sand bucket - Fire blanket - Fire-beaters (if vegetation fire risk exists)
UXO/ERW	- Hazard cones and barrier tape - UXO marking flags (preferred format by LMAC) - Whistle/horn for immediate STOP-WORK - Laminated UXO “DO NOT TOUCH / KEEP OUT” signs - GPS or mobile app for recording coordinates of suspect item
Communication	- Charged phones (minimum 2 dedicated for emergencies) - Laminated emergency contact list (LAF/LMAC, ISF, nearest hospital, Supervising Engineer, municipality) - Loudspeaker or megaphone - Two-way radios (mandatory where mobile network is unreliable) - Vehicle-mounted horn/siren for evacuation signal
Other	- Flashlights - High-visibility vests - Hard hats, gloves, goggles, and steel-toe boots - Emergency vehicle access kept open at all times - Spill-control kit (absorbent pads, sand, containment) - Traffic safety kit: cones, reflectors, stop/slow paddle, night reflectors - Temporary shelter or safe assembly point marked and known by all workers
Security & Evacuation (Important for Escalating Areas)	- Pre-identified evacuation routes - Assembly point signage - Vehicle always fueled for emergency withdrawal - Security focal point on site monitoring updates - Daily security briefing integrated into toolbox talk

8.4 Emergency Contact List (Mandatory on ALL Sites)

The Emergency Contact List shall be displayed visibly at the site entrance and included in the Emergency Response Team (ERT) binder.

While minimum emergency response arrangements are defined in this OHSMP, the Contractor shall prepare, maintain, and display a Site-Specific Emergency Contact List as part of the Site-Specific OHS Plan. The contact details shall be verified prior to mobilization and updated as required throughout the works. The table below provides reference contacts and the nearest primary medical facility serving Marjeyoun Caza and shall be completed, confirmed, and supplemented by the Contractor for each work site.

Primary Contacts

Table 8-2 Primary Contacts

Entity	Phone
LMAC Regional Office – South Lebanon	+961 5 956 143
LAF Operations Room	117
Lebanese Red Cross	140
Civil Defense	125
ISF	112
ISF (local site station)	To be completed by Contractor
Nearest hospitals	Mays El-Jabal hospital ~500 m away - 07/866102-4

Additional Guidance in Case of Fatality or Serious Incident

- The Contractor shall immediately notify local ISF and the nearest hospital.
- In the event of a fatality or serious incident requiring forensic investigation, the Contractor shall coordinate with the Ministry of Public Health (MoPH) and forensic authorities, in accordance with Lebanese law.
- Details of MoPH/forensic contacts shall be included in the site-specific Emergency Contact List.

Project Contacts

(To be completed by Contractor before mobilization)

Table 8-3 Project Contact Details

Role	Name	Phone	Email	Notes
Contractor Project Manager	(to be completed)	(to be completed)	(to be completed)	
Contractor OHS Officer	(to be completed)	(to be completed)	(to be completed)	
Security & Access Focal Point	(to be completed)	(to be completed)	(to be completed)	
Supervising Engineer	(to be completed)	(to be completed)	(to be completed)	
CDR–PIU Safeguard Specialist	(to be completed)	(to be completed)	(to be completed)	
Municipality Focal Point(s)	(to be completed)	(to be completed)	(to be completed)	

8.5 Emergency Evacuation Procedure

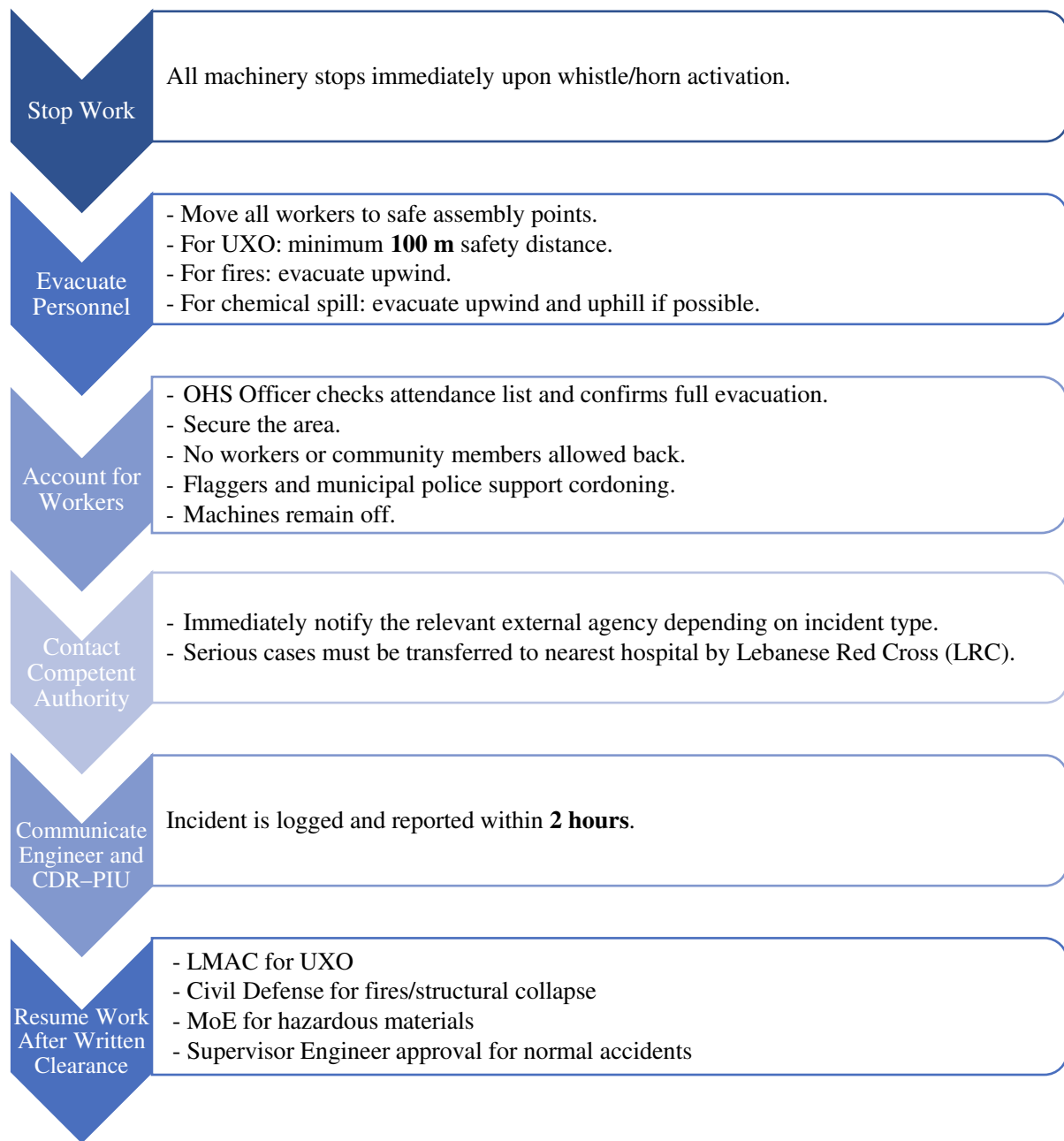


Figure 8-3 Emergency Evacuation Procedure

8.6 Specific Emergency Procedures (Critical)

8.6.1 UXO/ERW Discovery or Detonation

- STOP WORK immediately.
- Evacuate personnel ≥ 100 m from the object.
- Mark the area without approaching the item.
- Notify ERT, OHS Officer, Security Focal Point, Supervising Engineer, Supervising Engineer, CDR-PIU, LMAC.
- Resume work only after written authorization from LMAC.
- Do not touch, move, kick, carry, or photograph suspected ordnance unless explicitly authorized for location reporting.
- Only LAF/LMAC personnel may inspect, document, handle, or clear explosive ordnance.

8.6.2 Structural Collapse (retaining structures)

- STOP WORK.
- Evacuate and cordon off the area.
- Notify ERT, OHS Officer, Security Focal Point, Supervising Engineer, Supervising Engineer, CDR-PIU, and Call Civil Defense.
- Assess the area.
- Review and implement stabilization measures before resumption of work.
- Restrict access until the area is deemed safe.

8.6.3 Discovery of Human Remains (Chance Find Emergency Procedure)

- STOP WORK immediately and secure the area.
- Only authorized personnel may access the site.
- Notify Contractor OHS Officer, Security Focal Point, Supervising Engineer, ISF, and MoPH.
- Suspend all activities in the affected area until formal written authorization is issued.
- Treat remains with dignity and confidentiality; no unauthorized communication or photography.

8.6.4 Machinery Accidents

- Stop work and shut off machinery.
- Evacuate non-essential staff.
- Provide first aid and arrange transport via Lebanese Red Cross if needed.
- Secure scene for investigation and record incident and corrective actions.

8.6.5 Traffic Accidents

- STOP WORK of affected machinery.
- Provide first aid if needed.
- Notify ISF and Lebanese Red Cross.
- Manage traffic until authorities arrive.
- Investigate causes and implement corrective actions before resuming work.

8.6.6 Hazardous Material / Asbestos Exposure

- STOP WORK and evacuate workers.
- Do not disturb material.
- Notify OHS Officer → Supervising Engineer/CDR → MoE.
- Seal the hazard zone.
- Provide medical checks if dust exposure occurs.

- Resume work only after clearance from MoE.

8.6.7 Fire

- Raise alarm and switch off machinery.
- Use appropriate fire extinguishers.
- Call Civil Defense if the fire is uncontrollable.
- Evacuate personnel upwind and investigate the root cause

8.6.8 Security Escalation

- STOP WORK immediately if any threat is identified.
- Notify Security & Access Focal Point and OHS Officer.
- Activate site evacuation procedures if needed.
- Evacuate personnel to pre-identified safe shelters using mapped routes.
- Maintain communication with LAF/ISF and ERT.
- Restrict site access until the threat is resolved.
- Resume work only after written authorization from Security Focal Point.
- Document incident, actions taken, and communications for reporting.

8.7 Communication & Reporting Flowchart

Immediate (Within Minutes):

- OHS Officer → Supervisor Engineer → CDR-PIU → Relevant Authority (LMAC/LRC/Civil Defense)

Within 2 Hours:

- Contractor submits Preliminary Incident Report.

Within 24 Hours

- Full Incident Report including:
 - description
 - photos
 - injured persons
 - root cause
 - corrective actions

Within 72 Hours:

- Root Cause Analysis (RCA) for major incidents.

8.8 Training & Drills

All workers must receive:

- Emergency induction training
- UXO/ERW awareness (LMAC format)
- First-aid basics
- Emergency communication protocol
- Fire extinguisher use
- Spill response

Emergency drills:

- Performed **monthly** and after every major incident.

8.9 Community Emergency Notification

- Municipalities must be informed immediately if incidents happen nearby:
 - schools
 - mosques/churches
 - hospitals
 - residential clusters
- Contractor must support:
 - warnings
 - area closure/detours

9 TRAINING, INDUCTION & COMPETENCY REQUIREMENTS

Ensuring that all workers, operators, and supervisors have the necessary knowledge, competency, and awareness is essential to maintain safety during debris removal and restoration activities. This chapter sets the minimum mandatory training requirements for all Project personnel, consistent with ISO 45001 and WB ESS standards.

The objective is to ensure that all workers understand project-specific hazards, including **UXO/ERW, unstable structures, traffic risks, hazardous materials, asbestos, and community protection measures**.

Additionally, workers will receive awareness training on chance-find human remains, including recognition, STOP-WORK procedures, immediate notification to the ERT and MoPH/ISF, site cordoning, and basic psychological first-aid awareness to support colleagues.

9.1 General Training Requirements

The Contractor must:

- Provide OHS induction to **all workers before they enter the site**
- Keep training records, attendance lists, and competency certificates
- Ensure machinery operators are certified and trained for applicable equipment
- Provide refresher trainings monthly
- Provide specialized training for OHS-critical tasks (flagging, machinery handling, chemical handling)
- Ensure training is in **Arabic**, with simple instructions and demonstrations

Ensure training complies with ISO 45001 Clause 7.2 (Competence) and fits emergency-response conditions.

9.2 Mandatory Induction Training (Before Any Worker Starts Work)

All workers must receive an induction covering:

Project Overview

- Nature of emergency road clearing
- Sequence of works (clearing → loading → transport → restoration activities)
- Sensitive receptors (schools, mosques, hospitals, homes)

Key OHS Risks

- UXO/ERW risks
- Structural collapse risks
- Traffic hazards in narrow village roads
- Machinery and reversing hazards
- Dust, noise, vibration
- Hazardous materials / asbestos

STOP-WORK Authority

- All workers have the right and obligation to STOP WORK IMMEDIATELY if they observe or encounter a situation posing a serious safety, health, or security risk.
- Scenarios include, but are not limited to: UXO/ERW discovery, human remains (chance find), structural collapse, machinery incidents, traffic hazards, hazardous materials, or any unsafe condition.
- Upon STOP-WORK, workers must cordon the area (if safe to do so) and follow the established notification sequence: Emergency Response Team (ERT) → Supervising

Engineer → CDR-PIU → MoPH / ISF → other relevant authorities, with the Security & Access Focal Point responsible for authorizing resumption of work in any security-related incident.

- No worker shall resume work in the affected area until written authorization is provided by the competent authority (e.g., Supervising Engineer for safety/health hazards, Security & Access Focal Point for security hazards).

Worker Rights and Responsibilities

- No child labor
- No forced labor
- Equal treatment (ESS2)
- Right to PPE
- Respectful behavior
- No SEA/SH (zero tolerance)
- Worker GRM

Emergency Procedures

- Evacuation alarms
- Contact persons
- Assembly points
- LRC ambulance protocol
- LMAC coordination
- Workers must understand the role of the site Emergency Response Team (ERT), led by the Contractor OHS Officer, and follow ERT instructions for all incidents, including medical emergencies, UXO/ERW, human remains, fire, hazardous materials, or traffic/machinery events.

Personal Protective Equipment (PPE)

- Mandatory PPE
- Correct use
- Cleaning/disposal of contaminated PPE (asbestos, chemicals)

Environmental Requirements

- Dust control
- Waste handling
- Debris transport (MoE Circular 6/1)
- Spill response

9.3 Specialized Training Requirements

Certain roles require enhanced training:

9.3.1 UXO/ERW Awareness Training (MANDATORY FOR ALL WORKERS)

This is one of the most important training requirements of the Project.

Training must follow **LMAC-approved content**, including:

- Types of common EO found in South Lebanon
- Signs of UXO presence
- Visual recognition of suspicious items
- Safe distances
- STOP-WORK protocol
- Reporting mechanism
- What NOT to do
- Evacuation route

- EO marking methods
- EO risk in rubble (sub-surface and embedded)

Delivered by: LMAC or LMAC-trained certified organization or the Supervising Engineer/Contractor OHS Officer trained directly by LMAC.

9.3.2 Chance-Find Human Remains Awareness

- Recognition of human remains
- STOP-WORK and cordoning procedures
- Notification sequence: Worker → ERT → Supervising Engineer → CDR-PIU → MoPH / ISF → other relevant authorities (Municipality, Civil Defense)
- Psychological first-aid awareness for colleagues
- Documentation and reporting

9.3.3 Machinery Operator Training

Operators must be certified for: excavators, wheel loaders, skid-steer loaders and dump trucks.

Training includes:

- safe entry/exit
- reversing risks
- banksman coordination
- night operation restrictions
- avoiding structural contact
- what to do if machine hits resistance (possible UXO)

9.3.4 Traffic Controllers / Flaggers

Flagmen must receive:

- Safe flagging techniques
- High-visibility clothing use
- Positioning rules
- Communication with machinery
- Managing community traffic
- Protecting pedestrians near functional schools, mosques, or other sensitive receptors
- Emergency stop signals

9.3.5 Asbestos & Hazardous Materials Awareness

All workers must be trained to:

- identify asbestos sheets/insulation
- avoid breaking/disturbing ACM
- recognize chemical containers, stains, odors
- STOP-WORK for any suspected hazard
- understand decontamination and PPE disposal
- notify OHS Officer immediately

Detailed removal is **not** trained — only recognized & STOP-WORK.

9.3.6 First Aid and Emergency Response Training

First-aiders per site must be trained in:

- bleeding control

- fractures
- crush injuries
- heat stress
- CPR
- shock
- evacuation of injured workers
- communication with LRC

9.3.7 Fire Safety Training

Workers and Machine operators must learn:

- use of fire extinguishers
- machinery fire prevention
- fuel storage risks
- emergency response
- evacuation routes

9.4 Toolbox Talks (Daily)

Toolbox talks must be conducted **every morning** before work begins and must include:

- daily tasks
- new hazards identified
- weather impacts
- UXO reminders
- traffic risks
- community notifications
- safe machine-operating instructions
- Near-miss review from previous day
- Chance-find of human remains reminder: recognition, STOP-WORK, cordoning, notification to authorities, psychosocial support.

Duration: **10–15 minutes**

Delivered by: Contractor OHS Officer or Site Engineer

Attendance: **Mandatory for all**

9.5 Competency Verification

Workers must demonstrate:

- correct PPE use
- ability to follow hand signals
- safe operation of machinery
- understanding of STOP-WORK
- recognition of UXO/ERW
- familiarity with emergency procedures
- ability to follow detours and signage control
- Recognition and correct handling of human remains (STOP-WORK, cordoning, notification chain)

Workers unable to demonstrate required competency must receive retraining.

9.6 Training Records and Documentation

Contractors must maintain:

- attendance sheets
- course materials
- certificate copies
- worker lists
- refresher training logs
- toolbox talk records
- evaluation sheets

Records must be accessible to:

- Supervising Engineer
- CDR-PIU
- WB missions

10 DOCUMENTATION, REPORTING & RECORD-KEEPING REQUIREMENTS

Proper documentation and accurate reporting are essential to ensure compliance with ISO 45001, the World Bank Environmental and Social Framework (ESF), Lebanese legislation, and sector-specific SOPs for post-conflict environments. All documentation enables verification, accountability, traceability, and effective emergency response—particularly for **UXO/ERW, hazardous materials, traffic incidents, and community safety concerns**. The Contractor must establish a **Document Control System** ensuring that all records are stored, accessible, and protected from loss or tampering.

10.1 Categories of Required Documentation

Documentation must be maintained in the following categories:

Table 10-1 Documentation Categories and Required Records (Checklist Format)

Category	Required Documentation / Checklist Items	Check
A. OHS Management Documentation	✓ OHSMP ✓ Site-specific Traffic Management Plan (TMP) ✓ Site-specific Emergency Response Plan (ERP) ✓ Hazard Identification & Risk Assessments (HIRA/Risk Matrix) ✓ Job Hazard Analyses (JHAs) ✓ Method Statements (MS) ✓ Permits to Work (PTWs) ✓ Daily Toolbox Talk Records ✓ Worker Induction & Training Records	☐
B. UXO/ERW Documentation	✓ Daily UXO Awareness Briefing Sheets ✓ UXO/ERW Suspicion & Discovery Reports ✓ UXO Logbook (LMAC format) ✓ LMAC Clearance Confirmations ✓ Updated Clearance Plans ✓ Hazard Mapping	☐
C. Hazardous Material & Asbestos Documentation	✓ STOP-WORK notifications ✓ Suspected asbestos/chemical hazard reports ✓ MoE classification reports ✓ Hazardous-waste tracking forms ✓ Decontamination records ✓ Disposal receipts at MoE-approved sites	☐
D. Traffic & Community Safety Documentation	✓ TMP implementation logs ✓ Traffic incident records ✓ Signage/emplacement checklists ✓ Community notification records (WhatsApp, municipal messages, posters) ✓ Sensitive receptor access records (schools, mosques, hospitals)	☐
E. Monitoring & Supervision Documentation	✓ Daily OHS Inspection Checklists ✓ Weekly Supervising Engineer Reports ✓ Non-Compliance Notices (NCNs) ✓ Corrective Action Logs ✓ Photographic evidence (before/after)	☐
F. Debris Management	✓ Trip tickets (origin → transport → quarry)	☐

Category	Required Documentation / Checklist Items	Check
Documentation (<i>MoE Circular 6/1 – 2024</i>)	✓ GPS vehicle tracking records ✓ Chain-of-custody forms ✓ Quarry site receipts ✓ Tonnage/volume logs ✓ Vehicle inspection checklists	
G. Incident & Emergency Documentation	✓ Incident Notification Form (within 2 hours) ✓ Full Incident Report (within 24 hours) ✓ Root Cause Analysis (within 72 hours) ✓ First-aid treatment log ✓ Emergency drills log ✓ Evidence/photos/maps ✓ Human Remains Discovery Report: - Location, date, time of discovery - Personnel involved - Immediate actions taken (STOP-WORK, cordoning) - Notification sequence: worker → ERT → Supervising Engineer → CDR-PIU → MoPH / ISF → other relevant authorities (Municipality, Civil Defense) - Follow-up actions and outcomes - Photographic or site mapping evidence (only if safe and authorized)	□

10.2 Document Control Requirements

The Contractor must implement document control procedures to ensure:

10.2.1 Availability

Documents must be accessible to:

- Contractor PM & OHS Officer
- Supervising Engineer
- CDR-PIU
- World Bank missions
- Relevant Lebanese authorities (LMAC, MoE, MoPH, ISF) upon request

10.2.2 Version Control

All documents must include:

- Version number
- Date of issue
- Author / approval signature
- Validity period

10.3 Reporting Frequency

“The ‘Check’ column is to be completed by the Contractor and verified by the Supervising Engineer during implementation.”

Table 10-2 Reporting Requirements and Frequency (Checklist Format)

Reporting Level	Report Type / Frequency	Required Contents	Check
Contractor → Supervising Engineer	Daily Report	➤ Work activities ➤ OHS inspection results ➤ Toolbox talk summary ➤ UXO daily briefing ➤ Traffic safety notes ➤ Any near-miss or unsafe act ➤ Photos of work zone ➤ Weather / visibility risks	☐
Supervising Engineer → CDR-PIU	Weekly Report	➤ Summary of safety compliance ➤ Status of TMP implementation ➤ Corrective actions issued/closed ➤ EO/UXO interactions with LMAC ➤ Environmental observations ➤ Debris transport compliance (trip tickets) ➤ Community concerns / GRM updates	☐
CDR-PIU → World Bank	Monthly Report	➤ Safety performance indicators ➤ Number of trained workers ➤ Number of inspections ➤ Incident and near-miss statistics ➤ Hazardous-material events ➤ Community safety updates ➤ Gender / SEA-SH monitoring ➤ GRM summary	☐

10.4 Incident Reporting Protocol

10.4.1 Immediate Notification (within 15 minutes)

“Immediate verbal notification followed by written confirmation.”

To:

- Contractor PM
- Supervising Engineer
- CDR-PIU
- LMAC (if UXO/ERW)
- Municipality / ISF as needed

10.4.2 Preliminary Report (within 2 hours)

Contains:

- time, location, activity
- type of incident
- injured persons (if any)
- immediate actions taken
- STOP-WORK status

10.4.3 Full Investigation Report (within 24 hours)

Includes:

- event description
- photographic evidence
- witness statements

- root cause
- corrective and preventive measures

10.4.4 Root Cause Analysis (within 72 hours)

Required for:

- fatality
- severe injury
- UXO/ERW event
- collapse
- major traffic accident
- hazardous-material exposure

10.5 **Key Performance Indicators (KPIs)**

Contractor must report KPIs monthly, including:

- number of incidents
- number of near-misses
- number of STOP-WORK activations
- number of EO/UXO findings
- number of community complaints
- % of workers trained
- number of toolbox talks
- TMP compliance score
- number of environmental spills

These KPIs allow CDR–PIU and WB to track safety trends.

10.6 **GRM Documentation**

The Contractor must:

- disclose GRM contact details on site
- record all complaints (verbal and written)
- classify complaints (safety, dust, traffic, behavior, SEA/SH)
- update GRM log weekly
- follow up corrective actions
- escalate SEA/SH complaints immediately to CDR PIU

10.7 **Record Keeping for Debris Transport & Disposal (MoE Circular 6/1)**

To ensure legal compliance:

Mandatory Records

- origin of debris
- truck plate number
- routing path
- departure/arrival time
- GPS coordinates
- driver signature
- site supervisor signature
- quarry gate receipt
- weight/volume data

These records must be kept **per truck trip**.

11 PERFORMANCE MEASUREMENT, AUDITS & CORRECTIVE ACTIONS

Effective monitoring, evaluation, and continuous improvement are essential for safe and compliant implementation of emergency road-clearing and restoration works. This chapter outlines the performance measurement framework required under ISO 45001, World Bank ESS2/ESS4, CDR requirements, LMAC EO protocols, and MoE Circular 6/1 for debris routing.

Performance measurement ensures that the Contractor, Supervisor Engineer, and CDR-PIU systematically identify unsafe practices, detect non-compliances, and implement corrective actions to prevent recurrence.

11.1 Objectives of Performance Measurement

The objectives are to:

- Evaluate the effectiveness of the OHSMP
- Identify systemic weaknesses in site operations
- Measure compliance with national and international safety requirements
- Track trends in incidents, near misses, and STOP-WORK events
- Evaluate the effectiveness and timeliness of emergency responses by the site Emergency Response Team (ERT), including incidents involving UXO/ERW, human remains, fire, hazardous materials, machinery accidents, and traffic events.
- Ensure continuous improvement
- Support reporting to CDR and the World Bank
- Maintain safety in a post-conflict environment with heightened risks

11.2 Key Performance Indicators (KPIs)

The Contractor must **compile and submit** KPIs monthly to Supervising Engineer and CDR-PIU. These indicators form part of WB monitoring.

UXO/ERW and human remains are monitored as **separate hazard categories** under hazard-specific and emergency-related KPIs, to ensure targeted oversight, compliance with national legal requirements and international protocols, and the safe management of post-conflict risks. Indicators **B (UXO/ERW)** and **C (Human Remains)** capture hazard-specific occurrences and response actions, while **Indicator D (Emergency Response & Security)** measures overall site emergency preparedness, coordination, and response performance across all incident types. This structure enables both detailed risk tracking and integrated assessment of emergency response effectiveness at the site level.

Table 11-1 Key Performance Indicators (KPIs) for Monthly Reporting

<i>KPI Category</i>	Indicators
<i>A. Safety Indicators</i>	❖ Number of incidents (fatalities, lost-time injuries, minor injuries) ❖ Number of near misses ❖ Number of STOP-WORK activations ❖ Number of unsafe acts/unsafe conditions observed ❖ Number of site-hours worked without a lost-time incident
<i>B. UXO/ERW Indicators</i>	❖ Number of UXO/ERW suspicions ❖ Number of confirmed UXO/ERW findings ❖ Number of requests submitted to LMAC ❖ Time between UXO discovery and LMAC response ❖ % of workers who completed UXO awareness training
<i>C. Human remains discovery indicators</i>	❖ Number of confirmed human remains findings ❖ Number of chance-find suspicions reported

KPI Category	Indicators
	❖ Number of STOP-WORK activations due to suspected remains ❖ Time between discovery and notification of ISF/MoPH/Forensic authorities ❖ % of workers trained in chance-find emergency procedures ❖ Number of incidents where Psychological First Aid (PFA) was provided to workers ❖ Number of worksites cleared to resume after official written authorization
D. Emergency Response & Security Indicators	❖ Number of ERT activation ❖ Response time to incidents (medical, fire XO/ERW, human remains) ❖ Number of times Security & Access Focal Point issued GO/NO-GO or site lockdown order ❖ % of ERT members trained and current on emergency protocols
E. Traffic & Community Safety Indicators	❖ Number of traffic incidents (vehicle/vehicle or vehicle/pedestrian) ❖ TMP compliance score (checklist-based) ❖ Number of signage deficiencies detected ❖ Number of community complaints related to traffic/dust/noise/access
F. Hazardous Materials & Environmental Indicators	❖ Number of hazardous-material STOP-WORK events ❖ Number of asbestos/chemical hazard identifications ❖ % compliance with MoE Circular 6/1 trip-ticket requirements ❖ Number of spills/leaks observed ❖ Dust/noise exceedances
G. Training & Competency Indicators	❖ % of workers inducted ❖ % of workers trained in UXO/ERW awareness ❖ Number of toolbox talks conducted ❖ Number of workers trained in first aid, flagging, machinery operation
H. Corrective Action Indicators	❖ Number of Non-Compliance Notices (NCNs) issued ❖ % of NCNs closed on time ❖ Number of repeated non-compliances ❖ Number of major vs minor non-conformities

11.3 Site Inspections

Inspections ensure that operations remain safe and compliant throughout implementation.

11.3.1 Daily Contractor Inspections

Performed by:

- Contractor OHS Officer
- Site Engineer

Includes:

- PPE compliance
- Machinery operation safety
- Traffic control
- Signage/barriers
- Debris transport controls
- Hazardous materials

- UXO/ERW checks
- Community access

11.3.2 Weekly Independent Supervision Inspections

Supervising Engineer must:

- Verify Contractor's daily inspections
- Issue NCNs
- Follow up on corrective actions
- Assess TMP implementation
- Verify debris routing and trip tickets
- Audit training and documentation
- Assess community safety

11.3.3 Monthly CDR–PIU Field Reviews

CDR–PIU must:

- Review Supervising Engineer's findings
- Spot-check high-risk segments
- Verify EO/UXO reports
- Verify MOE Circular 6/1 compliance
- Confirm closure of major NCNs
- Report summary to World Bank

11.4 Internal Audits (ISO 45001 Clause 9.2)

The Contractor must perform **internal OHS audits every 8 weeks**, covering:

- OHSMP implementation
- Training records
- Incident reporting
- Hazardous material management
- Trip-ticket chain of custody
- Equipment maintenance
- Emergency readiness
- Worker interviews
- Compliance with STOP-WORK procedures
- Compliance with LMAC clearance requirements
- Compliance with WB ESS2/ESS4 provisions

Findings must be documented and shared with SUPERVISING ENGINEER.

11.5 Non-Compliance Management

A NCN is issued by Supervising Engineer when a deviation from the OHSMP, ESSs, or contractual obligations is observed.

11.5.1 Categories of Non-Compliance

- **Critical:** Life-threatening / immediate danger (EO, collapse, machinery strike, major traffic risk)
- **Major:** Creates serious unsafe conditions; work must stop until corrected
- **Minor:** Does not immediately threaten safety but requires correction

11.5.2 Contractor Obligations

The Contractor must:

- Respond to NCNs in writing within **24 hours**
- Propose corrective actions
- Implement corrective measures within supervising engineer-defined deadlines
- Provide photographic and documentary evidence of closure

11.6 Corrective and Preventive Actions

Corrective actions address **existing issues**, while preventive actions reduce the chance of recurrence.

Corrective Action Procedure

1. Identify the non-compliance
2. Assign responsible person
3. Define corrective action
4. Implement corrective measure
5. Document completion
6. Verify effectiveness (Supervising Engineer + CDR-PIU)

Preventive Action Procedure

1. Identify trends (repeated NCNs, near misses)
2. Modify method statements or JHAs
3. Enhance training or toolbox talks
4. Improve signage or traffic control
5. Update Emergency Response Plan if needed
6. Strengthen communication with communities

11.7 Incident Investigation & Root Cause Analysis

Major incidents require full RCA:

- UXO/ERW event
- Machinery rollover
- Structural collapse
- Fatality or severe injury
- Hazardous material exposure
- Serious community incident

RCA must identify:

- Immediate causes
- Underlying causes
- Organizational issues
- Training gaps
- Preventive measures

RCA must be submitted to Supervising Engineer and CDR-PIU within **72 hours**.

11.8 Continuous Improvement (ISO 45001 Clause 10.3)

OHS performance must improve progressively. Continuous improvement is achieved through:

- Lessons learned from incidents
- Monthly KPI review

- Updated training programs
- Revised risk assessments
- Improved traffic management
- Better emergency readiness
- Enhanced communication with residents
- Integration of LMAC feedback
- Periodic OHSMP revisions

12 APPENDICES AND ANNEXES

APPENDIX 1 UXO/ERW SAFETY PROCEDURES

(ISO 45001 Clause 6.1 – Eliminating life-threatening hazards)

Explosive Remnants of War (ERW) and Unexploded Ordnance (UXO) are **major life-threatening hazards** in South Lebanon. The Project must fully comply with all **LMAC and LAF EO safety protocols**, as these are the **only national authorities** permitted to assess, clear, or remove explosive ordnance.

This appendix operationalizes LMAC requirements for contractor-managed works, including consultation of NTS results, STOP-WORK triggers, exclusion zones, reporting, and coordination with LMAC.

Mandatory Principles

These principles apply to ALL workers, supervisors, and contractors:

- No work begins without prior LMAC clearance and daily safety briefings.
- If ANY suspicious item is found → STOP WORK IMMEDIATELY.
- Workers must never touch or move EO. Photography is prohibited **for general staff**.
 - If instructed by LMAC for reporting purposes, photography may be conducted **ONLY** by the Contractor OHS Officer or Supervising Engineer from a safe distance.
 - A **proposed safe distance** (e.g., >50 m using zoom) may be used, solely for official reporting purposes.
 - The **exact minimum safe distance and photography protocol** shall be confirmed and approved by LMAC prior to field implementation.
 - Photos are for **official reporting only** and must **not be shared publicly**.
- Only LAF/LMAC are authorized to investigate, assess, or remove UXO.
- A minimum 100 m safety distance is mandatory when EO is suspected or found.
- All EO incidents must be recorded and communicated within 15 minutes.

LMAC EO Risk Database and Non-Technical Survey (NTS)

LMAC deployed **Non-Technical Survey teams** in all war-affected villages to classify:

- Areas with **immediate EO threats**
- Rubble sites requiring safe removal
- Sites requiring **Battle Area Clearance (BAC)**
- Priority levels based on:
 - EO risk
 - structural stability
 - presence of asbestos or other hazards

Before the Contractor begins work:

- Supervising Engineer and Contractor must consult the **LMAC rubble risk database**.
- Each road segment must be cross-checked against LMAC's NTS classifications.
- High-risk zones must receive specific LMAC instructions before operations.

EO Risk Assessment

Hazards are evaluated by assessing:

- Type and condition of expected EO
- Building integrity / structural risk (any unstable structure next to the road)
- Environmental & terrain conditions

- Weather impacts (visibility, rain)
- Probability of unintentional detonation
- Presence of chemicals (including possible phosphorus residues)
- Human factors (fatigue, inexperience)
- Machine-related risk
- Security situation

This assessment must be updated **daily** and whenever conditions change.

Three-Phase LMAC Clearance Methodology

The Project MUST follow LMAC's **three-phase safe clearance workflow** before any debris is removed or roads are opened.

The following three-phase methodology is adapted from MoE/UNDP SOPs (2025) for Post Disaster Rubble Management, Ministry of Environment. Beirut, Lebanon.

Phase 1 — Visual Search of the Marked Area

Performed by **LMAC-trained searchers** under EOD-experienced supervision.

Tasks:

1. Conduct a **systematic visual search** of the marked area.
2. Identify any suspicious EO items.
3. **STOP-WORK** immediately if anything is suspected.
4. Notify LMAC for EOD response.
5. Update the clearance plan based on findings.
6. Mark safe lanes and hazard areas.

Only after this is completed may machinery enter the site.

Phase 2 — Mechanical Clearance of Rubble with EOD Support

During mechanical works:

- The machinery operator must maintain **clear visual control** of rubble.
- Work must stop **immediately** if anything suspicious appears.
- The site supervisor must maintain **at least 100 m distance** from the machine OR be behind solid cover.
- All staff must evacuate the danger area when EO is suspected.
- LMAC will evaluate, secure, and clear the EO.
- The clearance plan will be updated **every time new hazards appear**.

Phase 3 — Transporting and Spreading Rubble for Final Visual Search

Where Phase 3 is required, the inspection area and sequence shall be determined by LMAC; transport to TSSs proceeds only after LMAC confirms clearance/authorization for the relevant material stream

After machine removal:

- Wheel loaders transport rubble to a designated inspection area identified by LMAC.
- Rubble is spread in thin, controlled layers to allow safe inspection.
- Spreading and inspection occur only under LMAC instruction and supervision; the Contractor does not conduct any explosive ordnance search.
- LMAC-trained searchers visually inspect each layer for potential EO fragments or items.

- Any suspicious or confirmed EO is marked, cordoned, and immediately reported to LMAC for EOD response.
- No rubble may be reused, stockpiled, or transported to disposal sites until LMAC confirms the area as cleared.

EO Reconnaissance and First Responders

The LMAC Humanitarian Demining School trains first responders (LRC, Civil Defense, NGOs). Contractor OHS Officers and key supervisors **must attend LMAC's EO awareness induction** or receive equivalent LMAC-approved training.

Required training topics:

- EO identification basics
- What NOT to do
- Safe approach distances
- Communication protocol
- Emergency actions
- Scene isolation
- Marking and reporting

STOP-WORK Triggers

STOP-WORK must be activated **immediately** if:

1. A suspicious object or fragment is seen.
2. A machine hits hard/fixed resistance.
3. A worker reports unusual smoke, burning, oily residues (possible phosphorus).
4. Unstable structures vibrate or shift unexpectedly.
5. A member of the public enters an exclusion zone.

Everyone has STOP-WORK authority — not just supervisors.

Site Control Measures

Contractors must implement:

- Marked safe lanes for machines and separate lanes for personnel
- Daily UXO toolbox talks
- Clear signage: "DANGER – UXO RISK AREA"
- 100 m exclusion zones during suspected EO events
- No person may approach a suspected EO item to use mobile phones or take photographs; all communications shall be conducted from the designated safe area in accordance with the reporting chain
- Safe escape routes and assembly points

Coordination Protocol With LMAC

The Contractor OHS Officer must:

- Maintain daily communication with LMAC focal points
- Share NTS data with Supervising Engineer and CDR-PIU
- Notify LMAC **immediately** when EO is suspected or found
- Document all EO events in the EO Logbook
- Ensure STOP-WORK zones are protected until LMAC declares the site safe

Emergency Procedures for UXO/ERW

In case of EO discovery:

1. **STOP-WORK** immediately
2. Evacuate workers to a safe area (≥ 100 m)
3. Secure the area
4. Notify LMAC (provide exact location, GPS coordinates, photos ONLY from safe distance)
5. Notify Supervising Engineer and CDR-PIU
6. Record the incident in the EO Logbook
7. Await LMAC EOD assessment
8. Resume work ONLY after LMAC confirmation

Documentation Requirements

Mandatory records include:

- Daily UXO/ERW briefings (toolbox talk) are mandatory before works start and when conditions change
- EO suspicion / EO discovery reports
- EO Logbook (LMAC format)
- Updated clearance plans
- Updated risk assessments
- Site maps with hazard markings
- LMAC communication log
- Final clearance confirmation

No debris may be transported until EO clearance is formally confirmed by LMAC.

APPENDIX 2 HAZARDOUS MATERIALS, ASBESTOS, AND CHEMICAL RESIDUES CONTROL

Conflict-damaged structures, roadside rubble, and collapsed buildings may contain a variety of **hazardous materials**, including asbestos-containing materials (ACM), chemicals, oils, paints, solvents, and unknown residues. Improper handling creates serious risks to workers, communities, and the environment.

This chapter establishes clear, mandatory procedures to identify, isolate, and manage hazardous materials.

Core Principles

All Contractor teams must apply the following principles:

- STOP-WORK if any hazardous material is suspected.
- Workers must NEVER touch, break, or disturb hazardous materials.
- Only MoE-authorized specialists classify hazardous waste.
- No debris segregation, sorting, or handling is permitted on site until LMAC has cleared the work area of EO risks and the material has been confirmed safe from hazardous substances; only identification and marking of items is allowed on site, while segregation, recovery, and processing will take place at designated Temporary Storage Sites (TSS).
- ACM must be handled intact, not crushed.
- All hazardous waste must be double-bagged, labelled, and transported ONLY to MoE-approved facilities.
- All workers must wear minimum required PPE for dust, fibers, and chemical exposure.

Types of Hazardous Materials Expected in the Project Area

Based on MoE/UNDP SOPs (2025) and field conditions in South Lebanon, the following hazards are possible:

A. Asbestos-Containing Materials (ACM)

Common in old construction in the study area including:

- Corrugated roofing sheets
- Wall panels
- Insulating wraps on hot water pipes
- Decorative wall layers
- Cement-asbestos boards
- False ceilings

B. Chemical Residues

Potentially present in destroyed commercial workshops, garages, and agricultural structures, such as:

- Oils and lubricants
- Solvents and adhesives
- Battery residues
- Paint cans
- Pesticide containers
- Fuel contamination from damaged underground tanks

C. Conflict-Related Combustion and EO Residues

Including:

- Powder residues from munitions
- Oily black residues
- Phosphorus scorch marks (rare but possible)
- Localized scorch marks and residues from incendiary or phosphorus-based munitions (in limited, site-specific areas)
- Burnt chemical deposits

D. Household Hazardous Waste in Rubble

- Broken cleaning chemical containers
- Chlorine products
- Small gas cylinders
- Paint thinners
- Electronic waste

E. Biological and Decomposition Hazards

- Dead animals
- Spoiled food
- Mold-contaminated materials
- Household waste mixed into rubble

Identification of Suspected Asbestos or Hazardous Materials

Workers and supervisors must be trained to **recognize warning signs**, including:

Asbestos indicators

- Grey, white, or brown corrugated sheets
- Fibrous material exposed from broken edges
- Old water heaters wrapped with white insulation
- Dust that “flakes” in fibers
- Disintegrating flat boards

Chemical contamination indicators

- Strong chemical smells
- Oily patches or unexpected discoloration
- Intact or ruptured chemical containers
- Residues that corrode metal
- Smoke or fumes from disturbed rubble

Phosphorus residue indicators

- White or yellow chunks that ignite or smoke on contact with air
- Oily, garlic-like odor
- Persistent white smoke from rubble

Workers must NOT test or disturb the item.

STOP-WORK Triggers for Hazardous Materials

STOP-WORK must be activated immediately if workers observe:

- Any suspect asbestos sheets or insulation
- Fibrous dust clouds
- Smoke, fumes, or oily residues
- Ruptured chemical containers
- Drums or barrels

- Unknown powders
- Unusual odors
- Suspected phosphorus residue
- Black oily burn patterns (possible eo residue)
- Leaking batteries
- Suspicious liquids on debris

No work resumes until Supervising Engineer, MoE, and LMAC confirm the area is safe.

PPE Requirements for Hazardous Material Situations

For suspected asbestos, chemical residues, or EO burn/phosphorus residues, contractor workers are **not** allowed to perform intrusive handling or decontamination. Their role is limited to safe evacuation, basic isolation, and protection from incidental dust or contact until MoE/LMAC or other specialized teams intervene.

Minimum PPE for workers in the vicinity of suspected hazardous materials:

- Type 5/6 disposable protective suit (or equivalent coveralls)
- P3 filter mask (EN 143) or half-face respirator with P3 particulate filter
- Chemical-resistant gloves (EN 374)
- Safety boots (EN 20345)
- Chemical splash goggles (EN 166)
- High-visibility vest (EN ISO 20471) when near traffic

In case MoE/LMAC confirm the presence of active phosphorus or other complex hazardous materials, **only specialized, authorized teams** equipped with specific PPE will handle removal and decontamination. The Contractor's duty is to maintain the exclusion zone and follow MoE/LMAC instructions.

Handling of Suspected Asbestos

Workers must NOT:

- Break, cut, or disturb ACM
- Use heavy machinery directly on ACM
- Crush ACM into fragments
- Sweep or blow dust
- Unload ACM into mixed debris piles

Procedures:

- STOP WORK.
- Mark the area and prevent access.
- Notify the Contractor OHS Officer.
- The OHS Officer notifies SUPERVISING ENGINEER + MoE focal point.
- Only MoE-authorized waste specialists classify ACM.

If removal is required, it must be:

- Handled intact
- Double-bagged in 200-micron labelled bags
- Sealed with duct tape
- Temporarily stored in a designated safe zone
- Transported with a trip ticket system
- ACM must be disposed only at MOE-approved hazardous waste receiving sites.

Handling of Chemical or Unknown Hazardous Materials

When chemicals or unknown residues are found:

Workers must NOT:

- Open any container
- Inhale fumes
- Dilute or wash residues into soil or drains
- Attempt to identify substances manually

Contractor OHS Officer must:

- Isolate the area
- Classify the situation as **low / moderate / high risk**
- Notify supervising engineer + MOE
- Ventilate the area (if safe and open-air)
- Prevent public access

For ruptured batteries, oils, solvents, or fuels:

- Absorb with sand or inert absorbent
- Double-bag
- Treat as hazardous waste
- Never dispose with general rubble

Rubble Handling Requirements

No on-site sorting - Segregation, recovery, and processing will take place at designated TSS.

No crushing of rubble on site- Reduces release of fibers and hazardous dust.

Vehicles must:

- Be covered with impermeable liners
- Prevent dust emissions during transport
- Avoid spills
- Follow MOE-approved routing to quarry sites

Transport controls:

- GPS tracking (as required by MOE)
- Trip tickets
- Chain-of-custody documentation
- Disposal verification at receiving site

Decontamination Procedures

When hazardous materials are suspected:

- Establish a **basic decontamination station** near the site.
- Workers exiting the hazard zone must:
 - Remove PPE carefully
 - Place disposable PPE in hazardous waste bags
 - Wash face and hands with clean water

- No PPE may be reused if visibly contaminated.

Final Clearance and Handover

A hazardous-materials clearance can only be issued by:

- **MoE**
- **LMAC (if EO or phosphorus contamination is involved)**
- **Supervisor Engineer (supervision validation)**

Clearance includes:

- Photographic evidence
- List of materials removed
- Trip ticket proofs
- Disposal site certification

Only after full clearance may activities resume

Any confirmed phosphorus-related contamination or complex EO residue is treated as an Explosive Ordnance / hazardous-material incident and is managed exclusively by LMAC and MoE or their specialized partners. The Contractor's role is strictly limited to STOP-WORK, isolating the area, and maintaining the exclusion perimeter until authorities take over.

ANNEXES & FORMS

This chapter compiles all mandatory OHS tools, forms, and templates required for the implementation, monitoring, and reporting of OHS performance under the Project. Annexes are grouped into thematic parts for ease of use by CDR, the Supervising Engineer, the Contractor, and field personnel.

Table 0-1 Annexes and Forms

PART A — CORE OHS IMPLEMENTATION TEMPLATES (CDR / WB / SUPERVISION)	-	Annex A— Daily OHS Inspection Checklist
	-	Annex B — Weekly OHS Audit Checklist (Engineer / OHS Officer)
	-	Annex C — Job Hazard Analysis (JHA) Template
	-	Annex D — Permit-to-Work (PTW) Form (High-Risk Activities)
PART B — EMERGENCY RESPONSE & INCIDENT MANAGEMENT	-	Annex E — Emergency Contact List (To be posted at all sites)
	-	Annex F — Incident / Near-Miss Report (Full Version)
	-	Annex F-1 — Incident / Near-Miss Report (Field Short Version)
	-	Annex G — Worker Emergency Evacuation Pocket Card
PART C — UXO/ERW SAFETY FORMS	-	Annex H — UXO/ERW Reporting Form (STOP-WORK Protocol)
PART D — HAZARDOUS MATERIALS & ASBESTOS CONTROL	-	Annex I — Asbestos / Hazardous Material Suspicion Form
	-	Annex J — Hazardous Materials STOP-WORK Activation Form
PART E — RUBBLE & DEBRIS MANAGEMENT	-	Annex K — Debris Trip Ticket (Field Version)
	-	Annex L — Disposal Site Delivery Form
PART F — TRAFFIC & COMMUNITY SAFETY MANAGEMENT	-	Annex M — Traffic Safety Daily Log
	-	Annex N — Community Notification Log (Optional)
	-	PART G — Supportive Worker Tools
	-	Annex O — Worker Field Safety Manual (Pocket Version)

Annex attached

PART A — CORE OHS IMPLEMENTATION TEMPLATES

ANNEX A — DAILY OHS INSPECTION CHECKLIST

Project: _____

Segment / Village: _____

Date: ____ / ____ / 2025

Inspector: _____

1. GENERAL SAFETY

Item	Yes	No	N/A	Comments
PPE used (helmet, boots, hi-vis, gloves, mask)	☐	☐	☐	
First-aid kit available	☐	☐	☐	
Emergency contacts visible	☐	☐	☐	
Assembly point marked	☐	☐	☐	
Unsafe conditions corrected	☐	☐	☐	

2. UXO/ERW CONTROLS

Requirement	Yes	No	Comments
Daily UXO briefing completed	☐	☐	
Safe lanes marked	☐	☐	
STOP-WORK triggers understood	☐	☐	
Suspicious item noticed	☐ Yes (report attached)		☐

3. MACHINERY & TRAFFIC

Requirement	Yes	No	Comments
Banksman directing machinery	☐	☐	
Reversing alarms functional	☐	☐	
Speed limits respected	☐	☐	
Barriers & cones properly placed	☐	☐	

4. DEBRIS HANDLING

Requirement	Yes	No	Comments
Trucks covered with liners	☐	☐	
GPS tracking active	☐	☐	
Trip tickets available	☐	☐	
No on-site crushing/sorting	☐	☐	

5. HAZARDOUS MATERIALS

Requirement	Yes	No	Comments
Suspicious materials found	☐	☐	
Area isolated	☐	☐	
STOP-WORK activated	☐	☐	
MoE notified	☐	☐	

Inspector Signature: _____

ANNEX B — WEEKLY OHS AUDIT CHECKLIST (ENGINEER / OHS OFFICER)

Project: _____

Contractor: _____

Week: _____

Auditor: _____

1. DOCUMENTATION & COMPLIANCE

Requirement	Yes	No	Comments
OHS MP available on site	☐	☐	
Activity-specific JHA/JSA	☐	☐	
Toolbox talk records	☐	☐	
Worker training records (UXO, asbestos, PPE)	☐	☐	
Emergency plan displayed	☐	☐	
Incident register updated	☐	☐	
Fire extinguishers inspected	☐	☐	

2. UXO/ERW RISK MANAGEMENT

Requirement	Yes	No	Comments
LMAC clearance confirmed	☐	☐	
Workers received refresher briefing	☐	☐	
STOP-WORK applied when needed	☐	☐	
No unauthorized digging	☐	☐	
UXO reporting protocol followed	☐	☐	

3. MACHINERY & EQUIPMENT

Requirement	Yes	No	Comments
Machine inspections complete	☐	☐	
Reversing alarms operational	☐	☐	
Seatbelts functional	☐	☐	
ROPS intact	☐	☐	
Operator licenses valid	☐	☐	
Banksmen assigned	☐	☐	

4. PPE QUALITY

Requirement	Yes	No	Comments
PPE condition acceptable	☐	☐	
P3 masks available	☐	☐	
Asbestos PPE stored on site	☐	☐	
Hearing protection used	☐	☐	
First-aid kit stocked	☐	☐	

5. EXCAVATION & RUBBLE HANDLING

Requirement	Yes	No	Comments
Excavation stable	☐	☐	
Workers outside swing zone	☐	☐	
Dust suppression used	☐	☐	
No on-site segregation	☐	☐	

6. DEBRIS TRANSPORT & TSS

Requirement	Yes	No	Comments
Trucks covered	☐	☐	
GPS tracking functional	☐	☐	
Waste register completed	☐	☐	
Trip tickets filed	☐	☐	
No leaks/spills	☐	☐	
TSS complies with Circular 6/1	☐	☐	

7. COMMUNITY SAFETY

Requirement	Yes	No	Comments
Access for residents maintained	☐	☐	
Coordination with schools / mosques	☐	☐	
Signage visible	☐	☐	
Flaggers present	☐	☐	
GRM functioning	☐	☐	

Auditor Signature: _____

Date: _____

ANNEX C — JOB HAZARD ANALYSIS (JHA) TEMPLATE

Activity: _____

Location: _____

Date: ____ / ____ / 2025

Persons at Risk: ☐ Workers ☐ Operators ☐ Drivers ☐ Community ☐ Pedestrians

1. HAZARDS IDENTIFIED

- _____
- _____
- _____

2. INITIAL RISK LEVEL

☐ Low ☐ Medium ☐ High

3. CONTROL MEASURES

- _____
- _____
- _____

4. RESIDUAL RISK LEVEL

☐ Low ☐ Medium ☐ High

Prepared by: _____

Approved by (Supervising Engineer): _____

ANNEX D — PERMIT-TO-WORK (PTW) — EMERGENCY ROAD CLEARING

This PTW applies ONLY to:

- ☐ Excavation near unstable structures
- ☐ Mechanical debris removal in UXO-suspected areas (post-LMAC briefing)
- ☐ Work adjacent to damaged retaining walls / embankments
- ☐ Night / reduced-visibility operations

Location: _____

Authorized Person: _____

Validity: From _____ To _____

Mandatory Conditions

- Daily UXO briefing completed
- Safe lane marked and maintained
- Machinery supervised by OHS Officer
- Banksman present at all times
- STOP-WORK protocol understood
- No workers inside swing radius
- No contact with unstable structures

Issued by (Supervising Engineer): _____

Accepted by (Contractor PM): _____

PART B — EMERGENCY & INCIDENT MANAGEMENT

ANNEX E — EMERGENCY CONTACT LIST

(To be posted at every site)

LMAC (UXO): _____

ISF (Police): _____

Civil Defense: _____

Red Cross Ambulance: _____

Nearest Hospital: _____

Municipality Focal Point: _____

Contractor PM: _____

OHS Officer: _____

Supervising Engineer: _____

ANNEX F — INCIDENT / NEAR-MISS REPORT (FULL VERSION)

Report No.: _____

Date: ____/____/2025

Reported by: _____

A. TYPE OF EVENT

- ☐ Injury ☐ Near-miss ☐ Machinery accident ☐ Traffic accident
☐ UXO/ERW ☐ Hazardous material ☐ Fire ☐ SEA/SH ☐ Community complaint

B. EVENT DESCRIPTION

C. IMMEDIATE ACTIONS

D. PERSONS INJURED / AFFECTED

E. PRELIMINARY ROOT CAUSE

F. CORRECTIVE ACTIONS

1. _____
2. _____

OHS Officer: _____

Supervisor: _____

CDR-PIU: _____

ANNEX F-1 — INCIDENT / NEAR-MISS REPORT (FIELD SHORT VERSION)

Date/Time: _____

Location: _____

Reported by: _____

Type of Event

☐ Injury ☐ Near-miss ☐ Machinery ☐ Traffic ☐ UXO ☐ Fire ☐ Hazardous ☐ SEA/SH ☐ Complaint

Description:

Immediate Action:

Injured / Affected:

Reported to Supervisor: _____

PART C — UXO/ERW SAFETY

ANNEX H — UXO/ERW REPORTING FORM

Date & Time: _____

GPS Location: _____

Reported by: _____

1. DESCRIPTION OF SUSPECTED ITEM

☐ Metal object ☐ Fuse ☐ Projectile

☐ Scorched residue ☐ Other: _____

2. ACTIONS TAKEN

☐ STOP-WORK

☐ Area isolated

☐ Workers evacuated (≥ 100 m)

☐ LMAC notified

☐ Supervisor notified

Sketch / Notes:

**PART D — HAZARDOUS MATERIALS & ASBESTOS
CONTROL**

ANNEX I — ASBESTOS / HAZARDOUS MATERIAL SUSPICION FORM

Location: _____

Date: ____ / ____ / 2025

Reported by: _____

1. MATERIAL OBSERVED

- ☐ Asbestos sheet
- ☐ Insulation
- ☐ Chemical container
- ☐ Oily/black residue
- ☐ Unknown powder
- ☐ Battery acid leak
- ☐ Fuel drum

2. ACTIONS

- ☐ STOP-WORK
- ☐ Area isolated
- ☐ Workers evacuated
- ☐ MoE notified
- ☐ Supervisor notified
- ☐ PPE applied (P3 mask + suit)

Notes: _____

ANNEX J — HAZARDOUS MATERIAL STOP-WORK FORM

Location: _____

Date: ____ / ____ / 2025

Reported by: _____

Material Suspected

- ☐ Asbestos ☐ Chemicals ☐ Fuel/oil spill
☐ Battery acid ☐ Residual black soot
☐ Unknown powder ☐ Other: _____

Actions Taken

- ☐ STOP-WORK activated
☐ Workers evacuated
☐ Area isolated and taped
☐ MoE notified
☐ Supervising Engineer notified
☐ PPE isolation protocol applied

Supervisor Signature: _____

PART E — DEBRIS & RUBBLE MANAGEMENT

ANNEX K — DEBRIS TRIP TICKET (FIELD VERSION)

Origin (Village / Segment): _____

Truck Plate: _____

Driver Name: _____

Time Out: _____

Destination (TSS/Quarry): _____

Time In: _____

Quantity: _____ m³ / tons

Driver Signature: _____

OHS Officer Signature: _____

ANNEX L — DISPOSAL SITE DELIVERY FORM (CIRCULAR 6/1)

Date: ____ / ____ / 2025

Truck Plate: _____

Driver: _____

Delivered To (TSS/Quarry):

Site Name: _____

Arrival Time: _____

Material Category

☐ Non-hazardous rubble

☐ Hazardous-like debris

Verification

Receiving Officer: _____

Signature: _____

Stamp: _____

PART F — TRAFFIC & COMMUNITY SAFETY

ANNEX M — TRAFFIC SAFETY DAILY LOG

Segment: _____

Date: ____ / ____ / 2025

Requirement	Yes	No	Comments
Signage installed & visible	☐	☐	
Flaggers in position	☐	☐	
Speed control (<20 km/h) enforced	☐	☐	
Sensitive receptors notified	☐	☐	
Pedestrian paths secured	☐	☐	
Dust suppression applied	☐	☐	

Supervisor Signature: _____

ANNEX N — COMMUNITY NOTIFICATION LOG (OPTIONAL)

Village / Segment: _____

Date: ____ / ____ / 2025

Group Notified	Yes	No	Notes
Municipality	☐	☐	
Schools	☐	☐	
Mosques / Churches	☐	☐	
Residents (door-to-door)	☐	☐	
Vulnerable households	☐	☐	

PART G — WORKER TOOLS

ANNEX O — WORKER EMERGENCY EVACUATION CARD (POCKET CARD)

Project: _____
Worker Name: _____
ID / Badge No.: _____

1. EVACUATION SIGNAL

- Long continuous horn blast OR supervisor shouting **EVACUATE**.

2. GO TO ASSEMBLY POINT

Assembly Point: _____

3. UXO EMERGENCY

- STOP-WORK immediately
- Move ≥ 100 m away
- Do NOT touch anything
- Call Supervisor + LMAC

LMAC Hotline: _____

4. SECURITY EMERGENCY

(shelling, drones, cross-border fire)

- Follow “GO–NO GO” instruction
- Move to pre-identified safe shelter
- Await clearance from Supervisor / LAF / ISF