



NOS.EO.01
First Edition

**NATIONAL OCCUPATIONAL STANDARD FOR
ENVIRONMENTAL OFFICER**

ZAMBIA QUALIFICATIONS AUTHORITY

APPROVING AUTHORITY

This National Occupational Standard has been prepared and published under the authority of the Zambia Qualifications Authority Board on 20th December 2023.

ZAMBIA QUALIFICATIONS AUTHORITY

The Zambia Qualifications Authority Act No. 13 of 2011 was enacted by the Government of the Republic of Zambia to ***“provide for the development and implementation of a national qualifications framework; establish the Zambia Qualifications Authority; provide for the registration and accreditation of qualifications; provide measures to ensure that standards and registered qualifications are internationally comparable; and provide for matters connected with, or incidental to the foregoing”***. Among other functions, ZAQA is responsible for ***determining national standards for any occupation***, through various sector specific National Occupational Standards Development Teams (NOSDTs).

REVISION OF NATIONAL OCCUPATIONAL STANDARDS

National Occupational Standards shall be revised every after **5 years**, or whenever necessary, by the issue of either amendments or of revised editions. It is important that users of National Occupational Standards (NOS) ascertain that they are in possession of the latest amendments or editions.

NOS DEVELOPMENT TEAM RESPONSIBLE

This National Occupational Standard was prepared by the Construction National Occupational Standards Development Team, upon which the following organisations were represented:

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2. Engineering Institution of Zambia
3. Ministry of Labour and Social Security
4. Road Development Agency
5. Surveyors Institute of Zambia
6. University of Zambia
7. Zambia Institute of Architects
8. Association of Building and Civil Engineering Contractors
9. Water Resources Management Authority
10. Bari Zambia Limited
11. Zulu Barrow Construction
12. Zambia Occupational Health and Safety Association
13. Ng'andu Consulting
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FOREWORD

The Zambia Qualifications Authority (ZAQA) is a statutory body under the Ministry of Education established by ZAQA Act No. 13 of 2011 to “**develop and implementation a national qualifications framework; register and accredit qualifications; and ensure that standards and registered qualifications are internationally comparable**”.

Among other functions, ZAQA is responsible for “*determining national standards for any occupation*”, through various sector specific National Occupational Standards Development Teams (NOSDTs) of experts composed of representation from appropriate authorities, government departments, industry, academia, regulators, consumer associations and non-governmental organisation’s, etc.

This National Occupational Standard (NOS) has been developed by the Construction National Occupational Standards Development Team in accordance with the procedures and guidelines of ZAQA. All users should ensure that they have the latest edition of this publication as National Occupational Standards are revised from time to time.

This NOS shall be used by, among others, industry, employers, quality assurance bodies, awarding and professional bodies and education and training institutions, as a benchmark to identify training needs, develop job profiles/descriptions, develop curricula and learning programmes, in various sectors where the occupation exists. In the Construction sector, demonstration of competence against this NOS may be required in order to run a business or practice a craft or profession.

JUSTIFICATION

Environmental Officer is one of the critical trades in the construction industry which is common to all types of constructions. The importance of the Environmental Officer in the construction sector has become imperative especially in light of the green economy, preservation of the environment and redressing the impacts of climate change. The development of this National Occupational Standard will ensure relevance of the training to latest advancements in industry, resulting in adequately and appropriately skilled Environmental Officers.

These National Occupational Standard highlights core knowledge, skills, competences and personal attributes that Environmental Officers must possess to be successful in their jobs.

ACRONYMS AND ABBREVIATIONS

EO	Environmental Officer
CS	Core Skill
NOS	National Occupational Standard
NOSDT	National Occupational Standards Development Team
OK	Organisational Knowledge
PC	Performance Criteria
PS	Professional Skill
RPL	Recognition of Prior Learning
TK	Technical Knowledge
ZAQA	Zambia Qualifications Authority
ZQF	Zambia Qualifications Framework
OSHE	Occupational Safety, Health and Environment

GLOSSARY OF TERMS

For the purposes of this NOS, the following terms and definitions shall apply:

Core Skills/Generic Skills: are a group of skills that are key to learning and working in today's world. These skills are typically needed in any work environment. In the context of the NOS, these include communication related skills that are applicable to most job roles.

Disability: Physical or mental impairment that substantially limits one or more major life activities.

Function: is an activity necessary for achieving the key purpose of the sector, occupation, or area of work, which can be carried out by a person or a group of persons. Functions are identified through functional analysis and form the basis of NOS.

Job Title: defines a unique set of functions that together form a unique employment opportunity in an organisation.

Knowledge and Understanding: are statements which together specify the technical, generic, professional and organisational specific knowledge that an individual need in order to perform to the required standard.

National Occupational Standards (NOS): are statements of the standards of performance individuals must achieve when carrying out functions in the workplace, together with specifications of the underpinning knowledge and understanding. They are precise descriptions of what an individual is expected to be able to do in his/her work role.

National Occupational Standards (NOS) Code: is a unique reference code that identifies a NOS.

National Occupational Standards Development Team (NOSDT): means an established group of national stakeholders/experts responsible for the development of National Occupational Standards within a specific economic sector or occupation.

Occupation: is a set of job roles, which perform similar/related set of functions in an industry.

Organisational Context: includes the way the organisation is structured and how it operates, including the extent of operative knowledge that managers have in their relevant areas of responsibility.

Performance Criteria: are statements that together specify the standard of performance required when carrying out a task.

Scope: is the set of statements specifying the range of variables that an individual may have to deal with in carrying out the function which have a critical impact on the quality of performance required.

Sector: is a conglomeration of different business operations having similar businesses and interests. It may also be defined as a distinct subset of the economy whose components share similar characteristics and interests.

Sub Sector: is derived from a further breakdown based on the characteristics and interests of its components.

Technical Knowledge: is the specific knowledge needed to accomplish specific designated responsibilities.

Unit Title: gives a clear overall statement about what the incumbent should be able to do.

1. OVERVIEW

This is an introductory section providing a brief summary and specific information or commentary about the content of the NOS and the targeted sector and occupation to help the user judge whether it is relevant to them.

NOS Code	NOS.EO.01
Occupation	Environmental Officer
Job Title	Environmental Officer
Job Description	An Environmental Officer plays a crucial role in the industry by assessing, monitoring, and managing the impact of industrial activities on the environment. The Environmental Officer is responsible for the development and implementation of environmental policies, ensuring compliance with environmental regulations, implementing sustainable practices, and managing environmental projects or programmes. The expertise of an Environmental Officer contributes to minimizing the organization's ecological footprint and promoting environmentally responsible practices. The Environmental Officer is further responsible for mitigation and remediation of risks, improving environmental performance, and supporting the organisation's commitment to environmental stewardship.
Job Purpose	An Environmental Officer assesses, analyses, and manages environmental issues and risks in various settings. The primary goal is to ensure compliance with environmental regulations and promote sustainable practices.
ZQF Level	Level 7
Sector	Construction
Sub sector	Real Estate and Infrastructure Construction
Other Economic Sector(s) in which the Occupation is Practiced	Mining, Manufacturing, Telecommunication, Agriculture , Aquaculture, Energy, Education/training, etc.
Other Similar Jobs that can be Performed in the Occupation	Environmental Compliance officer, Environmental Technologist, Environmental Team Lead, Environmental Superintendent, Environmental Expert, Environmental Officer, Environmental Safeguard Officer, Environment, Health and Safety Manager, Environmental and Social Safeguard etc.
Minimum Educational Job Entry Qualification(s)	Bachelor's in Chemical Engineering, Civil Engineering, Laboratory Technology, Water and Sanitation Engineering, Environmental Sciences, Construction Management, Public Health, Occupational Health and Safety and other relevant qualifications."
Practicing License Requirements (if any)	Membership with relevant professional body

Training/RPL (Suggested)	<ol style="list-style-type: none"> 1. Environmental Impact Assessment 2. Basic Safety Health and Environmental (SHE) Functions 3. Environmental Management 4. Constructions Management 5. Waste Management 6. Environmental Management System (ISO 14001:2015) 7. Natural Resources Management 8. First aid on construction site
Minimum Job Entry Age	21 years
Prior Experience (Recommended)	<ol style="list-style-type: none"> 1. Minimum of 2 years in the environmental related field (Postgraduate) 2. Minimum of 3 years work experience in the environmental related field (Bachelors)
Performance Criteria	As described in the Units under Section 4

2. SCOPE

This National Occupational Standard highlights core knowledge, skills, competences and personal attributes that Environmental Officers the candidate must possess to be successful in their jobs.

3. PERSONAL ATTRIBUTES (VALUES, ETHICS AND ATTITUDES)

This job requires ability to plan and prioritise work, teamwork, physique to sustain strenuous conditions, and high technological exposure to handle various equipment, tools and materials. The Job also requires sensitivity towards safety for self, others, and equipment; willingness to work across various locations on ongoing construction sites, be well versed with tasks, functions, standards, specifications, codes of practice and safety norms applicable to construction works, be honest and results oriented.

4. UNITS AND ELEMENTS

This National Occupational Standard is divided into 7 Units representing the tasks that a jobholder should undertake in his/her day-to-day work. Each unit is further broken down into elements depicting the number of activities to be carried out for the successful execution of a particular task.

UNIT 1 [This Unit is about Environmental Management].

Unit No.	01
Unit Title	Environmental Management
Description	This Unit is about demonstrating competence in Environmental Management and protection of environment
Scope	This Unit covers the following: <ul style="list-style-type: none"> • Environmental Regulations • Environmental Management Plan • Environmental Protection • Waste Management • Environmental and Social Impact Assessment • Environmental Monitoring and Data Analysis • Environmental Compliance and Reporting
Performance Criteria (PC) with respect to the Scope	
Element	Performance Criteria (PC)
Environmental Regulations	To be competent, the individual must be able to: PC1. Read, interpret and implement national and organisational environmental management policies and regulations. PC2. Review and analyse statutes, regulations, permit/licensing requirements, precedent decisions governing environmental operations used in planning, implementing, and monitoring local environmental compliance programs, and environmental management systems. PC3. Understand and relate international environmental conventions to which Zambia is a party. PC4. Demonstrate understanding of International Environmental Standards.
Environmental Management Plan	To be competent, the individual must be able to: PC5. Plan, develop and implement site environmental programs. PC6. Determine budget and timeline for the environmental programs. PC7. Design and implement effective employee training programs.
Environmental Protection	To be competent, the individual must be able to: PC8. Understand the powers of enforcement contained in the Environmental Management Act. PC9. Maintain management information systems that identify the location of hazardous sites, chemical inventories, and complaint investigations.
Waste Management	To be competent, the individual must be able to: PC10. Prepare waste management strategies in line with regulations PC11. Implement waste segregation/separation, and determine the holding timeline for all waste holding area. PC12. Prepare waste management strategies in line with regulations and waste minimization hierarchy as well as understand the various stakeholders and their roles in waste management.
Environmental and Social Impact Assessment	To be competent, the individual must be able to:

	<p>PC13. Identify the key environmental and social issues and concerns that need to be addressed during scoping exercise of an environmental and social impact assessment.</p> <p>PC14. Conduct baseline studies on the existing environmental and social conditions in a proposed project area, including collecting of data on air quality, water quality, biodiversity, soil conditions, noise levels, cultural heritage, and socio-economic aspects.</p> <p>PC15. Identify and assess potential environmental and social impacts of the proposed project, including their magnitude, extent, and significance.</p> <p>PC16. Evaluate alternative project designs, locations, or technologies to identify options that would result in lesser environmental impacts.</p> <p>PC17. Develop appropriate mitigation measures to eliminate or minimise the impact of the project or activity.</p> <p>PC18. Conduct public consultation and engagement to gather inputs, concerns, and suggestions from the affected communities, stakeholders, and the general public on the project.</p> <p>PC19. Develop an Environmental and Social Management Plan.</p> <p>PC20. Monitor and evaluate project environmental Performance regularly to ensure compliance with the proposed mitigation measures and legal requirements.</p>
Environmental Monitoring and Data Analysis	<p>To be competent, the individual must be able to:</p> <p>PC21. Collect, analyse, and interpret environmental data to assess the state of the environment.</p> <p>PC22. Identify trends, patterns, and potential environmental concerns using appropriate data analysis tools.</p>
Environmental Compliance and Reporting	<p>To be competent, the individual must be able to:</p> <p>PC23. Conduct audits and assessments to verify compliance, as well as prepare and submit environmental reports to regulatory agencies, and exercise high levels of integrity.</p>
Knowledge and Understanding (K)	
A. Organisation-al Context (Knowledge of the company/ organisation and its processes)	<p>The individual on the job must demonstrate knowledge and understanding of:</p> <p>OK1. Environmental statutes, regulations, permit/licensing requirements, precedent decisions and best practices for the organisation.</p> <p>OK2. Organisational Internal and external Policies.</p> <p>OK3. Environmental Global regulations and best practices.</p>
B. Technical Knowledge	<p>The individual on the job must demonstrate knowledge and understanding of local construction codes and mandatory standards below:</p> <p>TK1. Environmental technologies.</p> <p>TK2. Environmental impact assessment process.</p> <p>TK3. Environmental process and associate impacts.</p> <p>TK4. Environmental monitoring and assessment.</p> <p>TK5. Pollution prevention and control measures.</p> <p>TK6. Waste Management techniques.</p>

	TK7. Sustainable development. TK8. Data collection and analysis.	
C. Regulatory Context (Knowledge of Rules and Regulations)	The individual on the job must demonstrate knowledge and understanding of: RK1. National and global regulatory agency requirements for Construction Mining and environmental management	
Skills (S)		
A. Core Skills/ Generic Skills	Writing Skills	
	The individual on the job must be able to: CS1. Write in English and be able to or have the means to give simple instructions in the local language used at the site. CS2. Prepare and provide clear and simple instructions, details and sketches to co-workers.	
	Reading Skills	
	The individual on the job must be able to: CS3. Read English and be able to or have the means to give simple instructions in the local language used at the site. CS4. Read and interpret sketches, drawings or instructions provided for the required work. CS5. Read and interpret internal/external documents. CS6. Read from different sources. CS7. Understand the various colour codes, signage, nomenclature and acronyms related the profession.	
	Oral Communication (Listening and Speaking skills)	
	The individual on the job must be able to: CS8. Express statements or information clearly so that others can hear and understand in English and local languages. CS9. Respond appropriately to any queries relevant to work performance.	
	B. Professional Skills	Decision Making
		The individual on the job must be able to: PS1. Follow organisation rule-based decision making processes. PS2. Take decision with systematic course of actions and/or response.
		Plan and Organise
		The individual on the job should be able to: PS3. Plan and organise work to meet targets within deadline.
Customer Centricity		
The individual on the job should be able to: PS4. Manage customer needs and expectations. PS5. Follow Customer code of conduct.		
Problem Solving		
The individual on the job should be able to: PS6. Recognise problems and provide/search solutions. PS7. Identify best methods to complete assigned tasks. PS8. Engage relevant authorities when required. PS9. Use basic root Cause analysis tools.		
Analytical Thinking		
The individual on the job should be able to:		

	PS10. Apply realm knowledge, observations and data to select course of action to perform tasks.
	Critical Thinking
	The individual on the job should be able to: PS11. Evaluate information obtained from Clients, Management and co-workers to perform day to day activities. PC12. Ask relevant questions and Probe further for better understanding.

UNIT 2 [This unit is about Occupational health and safety Management.]

Unit No.	02
Unit Title	Occupational health and Safety Management
Description	This Unit is about implementing and maintaining Occupational Health and Safety Management.
Scope	<p>This Unit covers the following:</p> <ul style="list-style-type: none"> • Demonstrate understanding of Occupational Health and Safety Regulations and Compliance • Demonstrate understanding of Hazards Identification and Risks Assessment in construction • Demonstrate understanding of Occupational Health and Safety Management systems in construction
Performance Criteria (PC) with respect to the Scope	
Element	Performance Criteria (PC)
Demonstrate understanding of Occupational Health and Safety regulations and Compliance	<p>To be competent, the individual must be able to:</p> <p>PC1. Demonstrate knowledge and understanding of occupational health and safety rules and regulations in construction industry.</p> <p>PC2. Demonstrate knowledge in and understanding of both locals and global Occupational health and safety standards.</p>
Demonstrate understanding of Hazards Identification and Risks Assessment in construction	<p>To be competent, the individual must be able to:</p> <p>PC3. Identify Occupational health and safety hazards and associated risks.</p> <p>PC4. Demonstrate knowledge in and understanding of Physical, Biological, chemical and psychological health hazards and risk control.</p> <p>PC5. Demonstrate knowledge in and understanding Concepts of occupational health and safety culture and its significance in the management of health and safety in an organisation.</p> <p>PC6. Demonstrate knowledge in and understanding of excavation work and confined space hazards and risk control.</p> <p>PC7. Demonstrate knowledge in and understanding work at height hazards and risk control.</p> <p>PC8. Demonstrate knowledge in and understanding demolition and deconstruction hazards and risk control.</p> <p>PC9. Demonstrate knowledge in and understanding principles and practice of risk assessment.</p> <p>PC10. Demonstrate knowledge in and understanding of incident Investigation.</p> <p>PC11. Interpret, demonstrate knowledge in and understanding health and safety Auditing.</p>
Demonstrate understanding of Occupational health and Safety Management	<p>To be competent, the individual must be able to:</p> <p>PC12. Demonstrate knowledge in and understanding of Occupational Health and Safety Management (ISO 45001:2018) and other international standard Requirements.</p> <p>PC14. Interpret, and implement key elements of Health and Safety Management systems.</p>

system in construction	
Knowledge and Understanding (K)	
A. Organisational Context (Knowledge of the company/ organisation and its processes)	The individual on the job must demonstrate knowledge and understanding of: OK1. Relevant standards and procedures followed in an organisation. OK2. Different types of Occupational Health and Safety requirements in construction sites. OK3. Risk Management Skills.
B. Technical Knowledge	The individual on the job must demonstrate knowledge and understanding of local construction codes and mandatory standards below: TK1. National constructional rules and regulation and Occupational health and safety Policy. TK2. Local and global Safety Standards.
C. Regulatory Context (Knowledge of Rules and Regulations)	The individual on the job must demonstrate knowledge and understanding of: RK1. National and global regulatory agency requirements for Construction and, Occupational health and safety management
Skills (S)	
A. Core Skills/ Generic Skills	Writing Skills
	The individual on the job must be able to: CS1. Write in English and be able to or have the means to give simple instructions in the local language used at the site. CS2. Prepare and provide clear and simple instructions, details and sketches to co-workers.
	Reading Skills
	The individual on the job must be able to: CS3. Read English and be able to or have the means to give simple instructions in the local language used at the site. CS4. Read and interpret sketches, drawings or instructions provided for the required work. CS5. Read and interpret internal/external documents. CS6. Ability to read from different sources. CS7. Understand the various colour codes, signage, nomenclature and acronyms related the profession.
	Oral Communication (Listening and Speaking skills)
	The individual on the job must be able to: CS8. Express statements or information clearly so that others can hear and understand. CS9. Respond appropriately to any queries relevant to work performance.
B. Professional Skills	Decision Making
	The individual on the job must be able to: PS1. Follow organisation rule –based decision making process. PS2. Take decision with systematic course of actions and/or response.
	Plan and Organise

	The individual on the job should be able to: PS3. Plan and organise work to meet targets within deadline.
	Customer Centricity
	The individual on the job should be able to: PS4. Manage customer needs and expectations. PS5. Follow Customer code of conduct.
	Problem Solving
	The individual on the job should be able to: PS6. Recognise problems and provide/search solutions. PS7. Identify best methods to complete assigned tasks. PS8. Engage relevant authority when required.. PS9. Use basic root Cause analysis tools
	Analytical Thinking
	The individual on the job should be able to: PS10. Apply realm knowledge, observations and data to select course of action to perform tasks.
	Critical Thinking
The individual on the job should be able to: PS11. Evaluate information obtained from Clients, Management and co-workers to perform day to day activities. PC12. Ask relevant questions and Probe further for better understanding.	

UNIT 3 [This Unit is about Climate Change].

Unit No.	03
Unit Title	Climate Change
Description	This Unit describes the skills, knowledge in Climate Change
Scope	<p>This Unit covers the following:</p> <ul style="list-style-type: none"> • Climate Science and Impacts • Climate Change Mitigation Strategies • Adaptation and Resilience • Climate Policy and Governance • Sustainable Resource Management • Climate Change Awareness • Monitoring, Reporting, and Evaluation
Performance Criteria (PC) with respect to the Scope	
Element	Performance Criteria (PC)
Climate Science and Impacts	<p>To be competent, the individual must be able to:</p> <p>PC1. Demonstrate Knowledge of the fundamental principles of climate science, including the causes and mechanisms of climate change.</p> <p>PC2. Assess and evaluate the potential impacts of climate change on ecosystems, communities, and the economy.</p>
Climate Change Mitigation Strategies	<p>To be competent, the individual must be able to:</p> <p>PC3. Develop strategies designed to reduce greenhouse gas emissions in various sectors.</p> <p>PC4. Demonstrate knowledge of greenhouse gas emissions reduction Techniques.</p> <p>PC5. Demonstrate knowledge of emission reduction policies, regulations, and incentives.</p>
Adaptation and Resilience	<p>To be competent, the individual must be able to:</p> <p>PC6. Identify vulnerabilities and risks associated with climate change impacts.</p> <p>PC7. Develop and implement strategies for adapting to changing Climate conditions.</p> <p>PC8. Incorporate climate resilience considerations into infrastructure, land-use planning, and resource management.</p> <p>PC9. Integrate Climate Change into policies, plans and programmes.</p>
Climate Policy and Governance	<p>To be competent, the individual must be able to:</p> <p>PC10. Demonstrate understanding national and international climate change agreements, protocols, and regulations.</p> <p>PC11. Exhibit knowledge of climate-related policies, laws, and guidelines at various levels (national, regional, local).</p> <p>PC12. Engage in climate change decision-making processes.</p>
Sustainable Resource Management	<p>To be competent, the individual must be able to:</p> <p>PC13. Integrate climate change considerations into resource management strategies.</p> <p>PC14. Exhibit knowledge of sustainable natural resource management.</p> <p>PC15. Demonstrate familiarity with sustainable practices in areas such as water management, waste management, and land-use planning.</p>

Climate Change Awareness	To be competent, the individual must be able to PC16. Create awareness on climate change concepts, it's impacts on ecosystems, communities, and industries and solutions to different audiences. PC17. Engage stakeholders and facilitate climate change discussions. PC18. Develop educational and awareness campaigns to promote climate literacy. PC19. Create awareness regarding international and national climate change agreements, policies, and targets.
Monitoring, Reporting, and Evaluation	To be competent, the individual must be able to: PC20. Collect and analyse data on climate-related indicators and trends in the industry or sector. PC21. Demonstrate knowledge of monitoring and evaluation frameworks for climate change initiatives. PC22. Demonstrate knowledge of reporting requirements and protocols for climate-related information.
Knowledge and Understanding (K)	
A. Organisational Context (Knowledge of the company/ organisation and its processes)	The individual on the job must demonstrate knowledge and understanding of: OK1. Occupation Health, Safety and Environmental rules, regulations and guidelines of an Organisation. OK2. Organisational policies, Global environmental regulations and best practises.
B. Technical Knowledge	The individual on the job must demonstrate knowledge and understanding: TK1. Climate Science and Impacts on the environment TK2. Climate change and adaptation and resilience TK3. Climate Change Mitigation Strategies TK4. Climate Policy and Governance TK5. Sustainable Natural Resource Management TK6. Monitoring, Reporting, and Evaluation
C. Regulatory Context (Knowledge of Rules and Regulations)	The individual on the job must demonstrate knowledge and understanding RK1. National climate change policy.
Skills (S)	
A. Core Skills/ Generic Skills	Writing Skills
	The individual on the job must be able to: CS1. Write effectively in English. CS2. Write technical reports, policies, plans, procedures, guidelines etc.
	Reading Skills
	The individual on the job must be able to: CS3. Read effectively in English.

	<p>Oral Communication (Listening and Speaking skills)</p> <p>The individual on the job must be able to: CS4. Have excellent communication in English.</p>
<p>B. Professional Skills</p>	<p>Decision Making</p> <p>The individual on the job must be able to: PS1. Effectively make decisions using rational thinking.</p>
	<p>Plan and Organise</p> <p>The individual on the job should be able to: PS2. Plan and organise work in a coordinated and orderly manner.</p>
	<p>Customer Centricity</p> <p>The individual on the job should be able to: PS3. Manage clients' needs and expectations bordering on climate change. PS4. Follow Customer code of conduct on climate change.</p>
	<p>Problem Solving</p> <p>The individual on the job should be able to: PS5. Identify environmental problems, evaluate alternative solutions, and make informed decisions. PS6. Analyse, and resolve or provide solutions to problems or challenges.</p>
	<p>Analytical Thinking</p> <p>The individual on the job should be able to: PS7. Analyse and provide solutions to environmental related issues within the organisation or sector. PS8. Think logically and make sound decisions.</p>
	<p>Critical Thinking</p> <p>The individual on the job should be able to: PS9. Apply critical thinking and to address complex environmental challenges. PS10. Analyse, evaluate, and synthesise environmental related information in order to make informed decisions or judgments. PS11. Examine assumptions, evidence, and arguments to make reasoned opinions or conclusions.</p>

UNIT 4 [This Unit is about Environmental management systems].

Unit No.	04
Unit Title	Environmental Management Systems (EMS)
Description	This Unit describes the skills, knowledge and competencies in Environmental Management Systems
Scope	<p>This Unit covers the following:</p> <ul style="list-style-type: none"> • Environmental Legal and Regulatory Compliance • Environmental Planning and Budgeting • Environmental Performance Monitoring and Measurement • Operational Planning and Controls • Training, Communication and Stakeholder Engagement • Emergency Preparedness and Response • Continual Improvement • Documentation and Record-Keeping
Performance Criteria (PC) with respect to the Scope	
Element	Performance Criteria (PC)
Environmental Legal and Regulatory Compliance	<p>To be competent, the individual must be able to:</p> <p>PC1. Formulate clear and comprehensive environmental policy statement that outlines the organization's commitment to environmental protection and sustainability.</p> <p>PC2. Align the organisation's EMS to adhere to all applicable environmental laws, regulations, and permits.</p> <p>PC3. Identify, monitor, and report on compliance requirements.</p> <p>PC4. Implement measures to mitigate any potential non-compliance issues.</p>
Environmental Planning and Budgeting	<p>To be competent, the individual must be able to:</p> <p>PC5. Identify the environmental aspects and impacts of an Organization's operations, products, or services.</p> <p>PC6. Conduct environmental risk assessments.</p> <p>PC7. Establish objectives and targets for environmental performance Improvement and budget for all activities.</p>
Environmental Performance Monitoring and Measurement	<p>To be competent, the individual must be able to:</p> <p>PC8. Track and evaluate environmental performance indicators of an organisation, such as energy consumption, water usage, waste generation, and greenhouse gas emissions.</p> <p>PC9. Regularly monitor and measure activities to assess progress toward meeting set objectives and targets</p>
Operational Planning and Controls	<p>To be competent, the individual must be able to:</p> <p>PC10. Prepare and implement procedures and controls to minimise or eliminate adverse environmental impacts.</p>
Training, Communication and Stakeholder Engagement	<p>To be competent, the individual must be able to:</p> <p>PC11. Raise awareness among employees about their roles and responsibilities regarding environmental protection.</p> <p>PC12. Design programs to enhance environmental awareness, promote best practices, and encourage employee engagement and participation.</p> <p>PC13. Promote effective communication and engagement with both internal and external interested parties of an organisation.</p>

Emergency Preparedness and Response	To be competent, the individual must be able to: PC14. Develop and implement procedures to effectively respond to environmental emergencies. PC15. Develop and implement emergency response plans, training programs, and drills to ensure prompt and efficient response to mitigate environmental risks.
Continual Improvement	To be competent, the individual must be able to PC16. Evaluate the effectiveness of the EMS. PC17. Conduct regular audits and reviews to identify areas for improvement. PC18. Implement corrective actions to achieve better environmental outcomes
Documentation and Record-Keeping	To be competent, the individual must be able to: PC19. Maintain appropriate documentation and records related to environmental Management system activities including policies, procedures, monitoring data, training records, audits, and other relevant documentation.
Knowledge and Understanding (K)	
A. Organisation-al Context (Knowledge of the company/ organisation and its processes)	The individual on the job must demonstrate knowledge and understanding of: OK1. Occupation Health, Safety and Environmental rules, regulations and guidelines of an Organisation. OK2. Organisational policies, Global environmental regulations and best practises.
B. Technical Knowledge	The individual on the job must demonstrate knowledge and understanding of: TK1 Environmental Regulations and Compliance. TK2 Environmental Audits. TK3 Environmental Impact Assessment (EIA). TK4 Pollution Prevention and Control. TK5 Environmental Monitoring and Sampling. TK6 Waste Management. TK7 Environmental Data Management. TK8 Life Cycle Assessment (LCA). TK9 Sustainable Procurement and Supply Chain Management.
C. Regulatory Context (Knowledge of the company/organisation)	The individual on the job must demonstrate knowledge and understanding of; RK1. International and National Environmental related laws, Regulations and Standards.
Skills (S)	
A. Core Skills/ Generic Skills	Writing Skills
	The individual on the job must be able to: CS1. Write effectively in English. CS2. Write technical reports, policies, plans, procedures, guidelines etc.
	Reading Skills
	The individual on the job must be able to: CS3. Read effectively in English.

B. Professional Skills	Oral Communication (Listening and Speaking skills)
	The individual on the job must be able to: CS4. Have excellent communication in English and local language.
	Decision Making
	The individual on the job must be able to: PS1. Effectively make decisions using rational thinking.
	Plan and Organise
	The individual on the job should be able to: PS2. Plan and organise work in a coordinated and orderly manner.
	Customer Centricity
	The individual on the job should be able to: PS3. Manage customer needs and expectations. PS4. Follow Customer code of conduct.
	Problem Solving
	The individual on the job should be able to: PS5. Identify environmental problems, evaluate alternative solutions, and make informed decisions. PS6. Analyse, and resolve or provide solutions to problems or challenges.
	Analytical Thinking
The individual on the job should be able to: PS7. Analyse and provide solutions to environmental related issues within the organisation or sector. PS8. Think logically and make sound decisions.	
Critical Thinking	
The individual on the job should be able to: PS9. Apply critical thinking and to address complex environmental challenges. PS10. Analyse, evaluate, and synthesise environmental related information in order to make informed decisions or judgments. PS11. Examine assumptions, evidence, and arguments to make reasoned opinions or conclusions.	

UNIT 5 [This unit is about Environmental Risk Management].

Unit No.	05
Unit Title	Environmental Risk Management
Description	This Unit describes the skills, knowledge in Environmental Risk Management
Scope	This Unit covers the following: <ul style="list-style-type: none"> • Risk assessment • Risk communication • Risk reduction and prevention • Monitoring and evaluation
Performance Criteria (PC) with respect to the Scope	
Element	Performance Criteria (PC)
Risk Assessment	To be competent, the individual must be able to: PC1. Identify potential environmental risks. PC2. Perform risk and hazard exposure assessment. PC3. Perform ecological impact assessment of the risk. PC4. Carry out risk Characterisation.
Risk Communication	To be competent, the individual must be able to: PC5. Communicate and engage internal and external stakeholders about the nature, extent, and potential consequences of environmental risks and how they are being addressed.
Risk reduction and prevention	PC6. Develop and implement strategies and measures to reduce, prevent, or mitigate environmental risks, such as regulations, technology, best practices, or education.
Monitoring and evaluation	PC7. Track and assess the effectiveness of risk management actions and strategies, such as measuring air or water quality, biodiversity, or human health.
Knowledge and Understanding (K)	
A. Organisational Context (Knowledge of the company/ organisation and its processes)	The individual on the job must demonstrate knowledge and understanding of: OK1. Occupation Health, Safety and Environmental rules, regulations and guidelines of an Organisation. OK2. Organisational policies, Global environmental regulations and best practises.
B. Technical Knowledge	The individual on the job must demonstrate knowledge and understanding of: TK1. Risk assessment and evaluation. TK2. Risk Communication. TK3. Risk reduction and prevention. TK4. Monitoring and evaluation.
C. Regulatory Context (Knowledge of the company/organisation)	The individual on the job must demonstrate knowledge and understanding of; RK1. International and National Environmental related laws, Regulations and Standards.

Skills (S)	
A. Core Skills/ Generic Skills	Writing Skills
	The individual on the job must be able to: CS1. Write effectively in English. CS2. Write technical reports, policies, plans, procedures, guidelines etc.
	Reading Skills
	The individual on the job must be able to: CS3. Read effectively in English.
	Oral Communication (Listening and Speaking skills)
The individual on the job must be able to: CS4. Have excellent communication in English and local language.	
B. Professional Skills	Decision Making
	The individual on the job must be able to: PS1. Effectively make decisions using rational thinking.
	Plan and Organise
	The individual on the job should be able to: PS2. Plan and organise work in a coordinated and orderly manner.
	Customer Centricity
	The individual on the job should be able to: PS3 Follow code of conduct relating to risk management. PS 4 Manage relationships with both internal and external interested parties on service delivery.
	Problem Solving
	The individual on the job should be able to: PS5. Identify, analyse, and resolve or provide solutions to problems or challenges. PS6. Identify environmental problems, evaluate alternative solutions, and make informed decisions. PS7. Analyse, and resolve or provide solutions to problems challenges.
	Analytical Thinking
	The individual on the job should be able to: PS8. Analyse and provide solutions to environmental related issues within the organisation or sector. PS9. Think logically and make sound decisions.
	Critical Thinking
	The individual on the job should be able to: PS10. Apply critical thinking and to address complex environmental challenges. PS11. Analyse, evaluate, and synthesise environmental related information in order to make informed decisions or judgments. PS12. Examine assumptions, evidence, and arguments to make reasoned opinions or conclusions.

UNIT 6 [This unit is about stakeholder engagement and management in respect of environmental protection and sustainability].

Unit No.	06
Unit Title	Stakeholder Management and Communication
Description	This Unit describes the skills and knowledge required for the structured engagement of stakeholders and their management so as to achieve specific tasks and responsibilities by the Environmental Officer to ensure buy-in throughout projects lifecycles.
Scope	This Unit covers the following: <ul style="list-style-type: none"> • Stakeholder identification and analysis • Stakeholder mapping and Prioritisation • Stakeholder Engagement and Communication • Conflict Management • Monitoring and documentation
Performance Criteria (PC) with respect to the Scope	
Element	Performance Criteria (PC)
Stakeholder Identification, analysis	To be competent, the individual must be able to: PC1. Identify the stakeholders relevant to the project or organization and/or might be directly or indirectly impact or be impacted by the project. PC2. Analyse the needs, interests, and potential influence of the identified stakeholders on the project or organization. PC3. Understand the expectations, concerns, and potential areas of collaboration or conflict of the stakeholders on the project or organisation.
Stakeholder mapping and Prioritisation	To be competent, the individual must be able to: PC4. Conduct a stakeholder mapping using appropriate tools. PC5. Conduct a stakeholder prioritisation based on their level of influence, importance, and potential impact on the project or organization.
People and Communication Management	To be competent, the individual must be able to: PC6. Develop stakeholder engagement strategies to ensure stakeholders are informed and have a voice in the project or organisation. PC7. Develop a communication plan that outlines the key messages, communication channels, and frequency of communication with stakeholders.
Conflict Management	To be competent, the individual must be able to: PC8. Develop strategies for conflict management that include negotiation, compromise, or mediation to find mutually beneficial solutions. PC9. Identify and address conflicts regarded to the project or organisation in a proactive and collaborative manner.
Monitoring and documentation	To be competent, the individual must be able to: PC10. Regularly review and reassess stakeholder needs and expectations to ensure they are being addressed appropriately. PC11. Maintain clear records of stakeholder communications, decisions, and agreements.

Knowledge and Understanding (K)	
A. Organisational Context (Knowledge of the company/organisation and its processes)	The individual on the job must demonstrate knowledge and understanding of: OK1. Occupation Health, Safety and Environmental rules, regulations and guidelines of an Organisation. OK2. Organisational policies, Global environmental regulations and best practises.
B. Technical Knowledge	The individual on the job must demonstrate knowledge and understanding of local construction codes and mandatory standards below: TK1. Identification of stakeholders. TK2. Stakeholder analysis and mapping. TK3. Stakeholder engagement and communication. TK4. Collaborative decision-making. TK5. Conflict Management and resolution. TK6. Evaluation and continuous improvement.
C. Regulatory Context (Knowledge of the company/organisation)	The individual on the job must demonstrate knowledge and understanding of; RK1. International and National Environmental related laws, Regulations and Standards.
Skills (S)	
A. Core Skills/ Generic Skills	Writing Skills
	The individual on the job must be able to: CS1. Write effectively in English. CS2. Write technical reports, policies, plans, procedures, guidelines etc.
	Reading Skills
	The individual on the job must be able to: CS3. Read effectively in English.
	Oral Communication (Listening and Speaking skills)
The individual on the job must be able to: CS4. Effectively oral communicate environmental information to diverse stakeholders.	
B. Professional Skills	Decision Making
	The individual on the job must be able to: PS1. Effectively make decisions using rational thinking.
	Plan and Organise
	The individual on the job should be able to: PS2. Plan and organise work in a coordinated and orderly manner.
	Customer Centricity
	The individual on the job should be able to: PS3. Follow code of conduct relating to stakeholder engagement and management in respect of environmental protection and sustainability. PS4. Manage relationships with both internal and external interested parties on service delivery.
Problem Solving	
The individual on the job should be able to: PS5. Identify environmental problems, evaluate alternative solutions, and make informed decisions.	

	PS6. Analyse, and resolve or provide solutions to problems or challenges.
	Analytical Thinking
	The individual on the job should be able to: PS7. Analyse and provide solutions to environmental related issues within the organisation or sector. PS8. Think logically and make sound decisions.
	Critical Thinking
	The individual on the job should be able to: PS9. Apply critical thinking and to address complex environmental challenges. PS10. Analyse, evaluate, and synthesise environmental related information in order to make informed decisions or judgments. PS11. Examine assumptions, evidence, and arguments to make reasoned opinions or conclusions.

UNIT 7 [This Unit Is About Research and Planning].

Unit No.	07
Unit Title	Research and Planning
Description	This Unit describes the skills and knowledge in Research and planning for an environmental expert
Scope	This Unit covers the following: <ul style="list-style-type: none"> • Problem definition • Research design and method • Empirical Evidence (Data collection and Analysis) • Historical research contexts for Environment • Research Outcomes Management
Performance Criteria (PC) with respect to the Scope	
Element	Performance Criteria (PC)
Problem Definition	To be competent, the individual must be able to: PC1. Identify and define environmental related problems. PC2. Design appropriate research questions and objectives. PC3. Conduct comprehensive review of existing literature and scholarly research relevant to the research questions.
Research design and method	To be competent, the individual must be able to: PC4. Design appropriate research methodology.
Empirical Evidence: Data collection and Analysis	To be competent, the individual must be able to: PC5. Gather and document all relevant data to support the research objectives, using appropriate data collection methods. PC6. Organise and analyse data to identify trends, relationships, and patterns that emerge from the research process.
Research Outcomes Management	To be competent, the individual must be able to: PC7. Summarise findings, evaluate the research questions, and drawing conclusions about the research outcomes. PC8. Disseminate the research output. PC9. Use the research output to inform decision making.
Knowledge and Understanding (K)	
A. Organisational Context (Knowledge of the company/ organisation and its processes)	The individual on the job must demonstrate knowledge and understanding of: OK1. Occupation Health, Safety and Environmental rules, regulations and guidelines of an Organisation. OK2. Organisational policies, Global environmental regulations and best practises.
B. Technical Knowledge	The individual on the job must demonstrate knowledge and understanding of: TK1. Methods, tools, and techniques used to gather and analyse data.
C. Regulatory Context (Knowledge of the	The individual on the job must demonstrate knowledge and understanding of; RK1. International and National Environmental related laws, Regulations and Standards.

company/organisation)	
Skills (S)	
A. Core Skills/ Generic Skills	Writing Skills
	The individual on the job must be able to: CS1. Write effectively in English. CS2. Write technical reports, policies, plans, procedures, guidelines etc.
	Reading Skills
	The individual on the job must be able to: CS3. Read effectively in English.
	Oral Communication (Listening and Speaking skills)
The individual on the job must be able to: CS4. Effectively communicate environmental information to diverse Stakeholders in English and local language.	
B. Professional Skills	Decision Making
	The individual on the job must be able to: PS1. Effectively make decisions using rational thinking.
	Plan and Organise
	The individual on the job should be able to: PS2. Plan and organise work in a coordinated and orderly manner.
	Customer Centricity
	The individual on the job should be able to: PS3. Follow code of conduct relating to research ethics. PS4. Manage relationships with both internal and external interested parties on service delivery.
	Problem Solving
	The individual on the job should be able to: PS5. Identify environmental problems, evaluate alternative solutions, and make informed decisions. PS6. Analyse, and resolve or provide solutions to problems or challenges.
	Analytical Thinking
	The individual on the job should be able to: PS7. Analyse and provide solutions to environmental related issues within the organisation or sector. PS8. Think logically and make sound decisions.
	Critical Thinking
The individual on the job should be able to: PS9. Apply critical thinking and to address complex environmental challenges. PS10. Analyse, evaluate, and synthesise environmental related information in order to make informed decisions or judgments. PS11. Examine assumptions, evidence, and arguments to make reasoned opinions or conclusions.	

5. EQUIPMENT, TOOLS AND CONSUMABLE MATERIALS

Equipment, tools and consumable materials used by the job holder include, but are not limited to: Computer and Printer, Personal Protective equipment, Corrective protective equipment, Monitoring and measuring equipment

6. DILEMMAS/CHALLENGES AND COMPLEXITIES FOR A JOB HOLDER

Dilemmas associated with the job of Environmental Officer include: exposure to flames and electrical power supply, working around and with machinery with moving parts, working in dangerous areas with likelihood of sharp or falling materials and objects, working in confined spaces and at heights with likelihood of falls, working in extreme weather such as hot and cold conditions, working in noisy, wet and dusty environments, exposure to welding fumes and odours, wild animals, long working hours, pressure from supervisors and colleagues, pressure from government regulators, etc.

6.1 Alternative Choices (Solutions) to Dilemmas and Complexities

Solutions to dilemmas include wearing protective clothing and ensuring their availability and use by other employees, exercising regularly to maintain physical fitness, exercising proper work ergonomics, participating in workplace safety sensitization and awareness meetings/training sessions, adhering to the organisation's safety and standard operating procedures at all times, consulting extensively within and outside one's department/team on construction safety issues, planning and prioritizing work, etc.

7. WORKING CONDITIONS/ENVIRONMENT

Working conditions include indoor and outdoor construction sites as well as workshops and factories, may also work in commercial buildings or private homes, confined spaces, handling machines with moving parts, working at heights, working in conditions that may be dirty and noisy, exposure to seasonal heat and cold or adverse weather conditions, emergency call-outs, standing or squatting for long hours and lifting relatively heavy objects. In most cases, the job involves working normal hours, but in some instances, shift work and regular overtime may be required. The job also requires wearing suitable protective clothing such as works suits, ear protectors, safety visors or goggles, gloves and hardhats, safety harnesses etc.

8. PARTIES INVOLVED/INTERACTING WITH THE JOB HOLDER OR TRAINEE

8.1 Internal/Within the Organisation

Parties involved/interacting with the job holder who are internal to the organization include supervisors/superiors, trainers, occupational health and safety team, other colleagues, etc.

8.2 External/Outside the Organisation

Parties involved/interacting with the job holder who are external to the organization include government regulators, trainers, clients, suppliers of equipment/ tools/ consumables, fellow Environmental Officers from other organisations, labour unions/ occupational health and safety associations, etc.

9. PHYSICAL DEMANDS ON THE BODY

- Ability to sustain strenuous conditions such as climbing heights;
- Walk and stand for long periods of time;
- Bend, stretch, twist, or reach out;
- Lift, carry, push and pull heavy objects;
- Use fingers, hands and feet with ease to complete the assigned task (dexterity);
- Strenuous works that may cause musculoskeletal disorders;etc.

ANNEX A

Criteria for Assessments based on this NOS

A.1 Guidelines for Assessment

A.1.1 Criteria for assessment for curricula and learning programmes based on this NOS will be created by curricula and programmes developers. Each Performance Criteria (PC) will be assigned marks proportional to its importance in the NOS. Curricula and programmes developers will also lay down proportion of marks for theory and practical skills for each performance criteria, giving more weight to practical skills.

There shall be allocated the 'Total Mark', which will be the sum of all marks in each Unit, distributed across the number of PCs in that particular Unit. The 'out of' mark will be the mark allocated to each PC, which will be shared between theory and skills practical assessments.

A.1.2 Individual awarding/assessment bodies or institutions and other users of the NOS will create unique question papers for the theory part and evaluations for skill practical part for their respective candidates.

ANNEX B NOS Version Control

This Annex gives details necessary for the tracking of the NOS versions based on the number of revisions.

NOS Code	NOS.EO.01		
ZQF Level	7	Version Number	01
Sector	Construction	Date of Approval	December 2023
Sub Sector	Real Estate and Infrastructure Construction	Date of Last Review	N/A
Occupation	Environmental Officer	Date of Next Review	December 2028