

QUALIFICATIONS PACK - OCCUPATIONAL STANDARDS FOR GREEN JOBS

What are Occupational Standards (OS)?

- OS describe what individuals need to do, know and understand in order to carry out a particular job role or function
- OS are performance standards that individuals must achieve when carrying out functions in the project site, together with specifications of the underpinning knowledge and understanding

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Contents

1. Introduction and Contacts.....[1]
2. Qualifications Pack.....[2]
3. Glossary of Key Terms[3]
4. OS Units.....[5]
5. Annexure: Nomenclature for QP & OS...[20]
6. Assessment criteria.....[22]

Introduction

Qualifications Pack- Site Surveyor-Wind Power Plant

SECTOR: GREEN JOBS

SUB-SECTOR: RENEWABLE ENERGY

OCCUPATION: ENGINEERING AND DESIGN

REFERENCE ID: SGJ/Q1202

ALIGNED TO: NCO-2015/ NIL

Brief Job Description: Site Surveyor - Wind Power Plant carries out site inspection, site assessment, checking site access, approach roads, grid availability for power evacuation, substation availability & its capacity and other relevant proximity of site

Personal Attributes: This job requires the individual to survey the site for feasibility. Therefore concentration and diligence are desired attributes for individuals performing this role. S/he must also be medically fit to work on heights, demonstrate strong work ethics, an ability to communicate courteously with co-workers, sub-ordinates and superiors

Qualifications Pack For “Site Surveyor-Wind Power Plant”

Job Details

Qualifications Pack Code	SGJ/Q1202		
Job Role	Site Surveyor-Wind Power Plant [This job role is applicable in both national and international scenarios]		
Credits(NSQF)	TBD	Version number	1.0
Sector	Green Jobs	Drafted on	01/09/2016
Sub-sector	Renewable Energy	Last reviewed on	24/11/2017
Occupation	Engineering and Design	Next review date	30/09/2019
NSQC Clearance on	N.A.		

Job Role	Site Surveyor – Wind Power Plant
Role Description	Site Surveyor – Wind Power Plant is responsible to carry out site inspection, site assessment, checking site access, approach roads, grid availability for power evacuation, substation availability and its capacity and other relevant proximity of site
NSQF level	6
Minimum Educational Qualifications	B.E. / B. Tech. (Electrical/ Mechanical/ Civil/ Electronics and Communication / Electrical and Electronics/ Control & Instrumentation)
Maximum Educational Qualifications	NA
Prerequisite License or Training (Suggested but not mandatory)	NA
Minimum Job Entry Age	21 years
Experience	Not Required
Applicable National Occupational Standards (NOS)	Compulsory: <ol style="list-style-type: none"> 1. SGJ/N1204 Conduct site survey for wind power plant 2. SGJ/N1201 Perform basic health and safety practices at project site (Ground and Height) 3. SGJ/N0120 Work effectively with others
Performance Criteria	As described in the relevant OS units.

Definitions

Keywords /Terms	Description
Sector	Sector is a conglomeration of different business operations having similar business and interests. It may also be defined as a distinct subset of the economy whose components share similar characteristics and interests.
Sub-sector	Sub-sector is derived from a further breakdown based on the characteristics and interests of its components.
Occupation	Occupation is a set of job roles, which perform similar/ related set of functions in an industry.
Job role	Job role defines a unique set of functions that together form a unique employment opportunity in an organisation.
Occupational Standards (OS)	OS specify the standards of performance an individual must achieve when carrying out a function in the project site, together with the knowledge and understanding they need to meet that standard consistently. Occupational Standards are applicable both in the Indian and global contexts.
Performance Criteria	Performance criteria are statements that together specify the standard of performance required when carrying out a task.
National Occupational Standards (NOS)	NOS are occupational standards which apply uniquely in the Indian context.
Qualifications Pack (QP)	QP comprises the set of OSs, together with the educational, training and other criteria required to perform a job role. A QP is assigned a unique qualifications pack code.
Electives	Electives are NOS/set of NOS that are identified by the sector as contributive to specialization in a job role. There may be multiple electives within a QP for each specialized job role. Trainees must select at least one elective for the successful completion of a QP with Electives.
Options	Options are NOS/set of NOS that are identified by the sector as additional skills. There may be multiple options within a QP. It is not mandatory to select any of the options to complete a QP with Options.
Unit Code	Unit code is a unique identifier for an Occupational Standard, which is denoted by an 'N'
Unit Title	Unit title gives a clear overall statement about what the incumbent should be able to do.
Description	Description gives a short summary of the unit content. This would be helpful to anyone searching on a database to verify that this is the appropriate OS they are looking for.
Scope	Scope is a 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 quality of performance required.
Knowledge and Understanding	Knowledge and understanding are statements which together specify the technical, generic, professional and organisational specific knowledge that an individual need to perform to the required standard.
Organisational Context	Organisational context includes the way the organisation is structured and how it operates, including the extent of operative knowledge managers have of their relevant areas of responsibility.
Technical Knowledge	Technical knowledge is the specific knowledge needed to accomplish



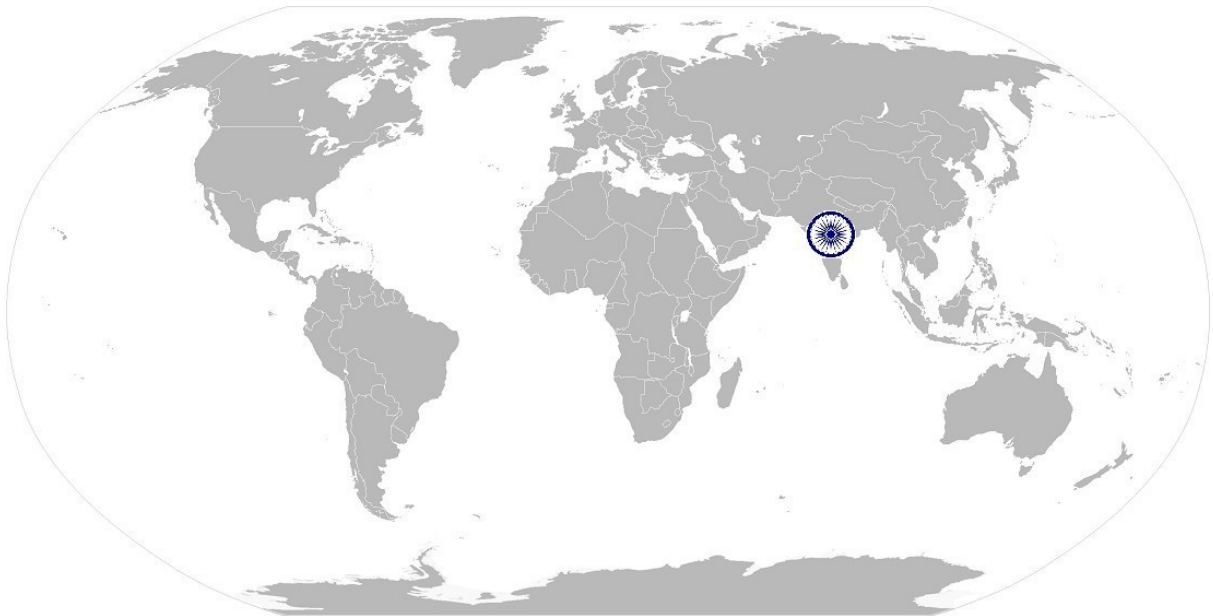
Qualifications Pack For “Site Surveyor-Wind Power Plant”

	specific designated responsibilities.
Core Skills/ Generic Skills	Core skills or generic skills are a group of skills that are the key to learning and working in today’s world. These skills are typically needed in any work environment in today’s world. In the context of the OS, these include communication related skills that are applicable to most job roles.

Acronyms

Keywords/Terms	Description
SCGJ	Skill Council for Green Jobs
NOS	National Occupational Standards
NSQF	National Skills Qualification Framework
NVEQF	National Vocational Educational Qualification Framework
NVQF	National Vocational Qualification Framework
OS	Occupational Standards
PC	Performance Criteria
QP	Qualification Pack
SSC	Sector Skills Council
STU	State Transmission Utility
CTU	Central Transmission Utility
NREL	National Renewable Energy Laboratory
GPS	Global Positioning System
DGPS	Differential Global Positioning System
GIS	Geographic Information System

National Occupational Standard



Overview

This unit is about site conducting survey of wind power plant.

SGJ/N1204 Conduct Site Survey for wind power plant

Unit Code	SGJ /N1204
Unit Title (Task)	Conduct site survey for wind power plant
Description	This unit is about site survey of wind power plant
Scope	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> • wind resource analysis • contour mapping • physical site accessibility • transmission line & grid availability analysis • report preparation
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
Wind resource analysis	<p>To be competent, the user/ individual must be able to:</p> <p>PC1. analyse detailed site information</p> <p>PC2. analyse the daily, monthly and annual wind resource data of site to evaluate the potential for wind energy generation</p> <p>PC3. ensure the collection of data on local weather conditions such as temperature range, flooding (in case of onshore), wind speed, humidity, rainfall and assess its impact on wind energy generation</p> <p>PC4. assess the ground water availability and quality, load bearing capacities, pH levels and seismic risk</p> <p>PC5. analyse the pre-site selection baseline data for project execution suitability</p> <p>PC6. identify location for Power Curve test</p> <p>PC7. ensure installation of meteorological mast (met mast) at site</p> <p>PC8. analyse wind data collected from met mast for wind potential</p>
Contour mapping	<p>To be competent, the user/ individual must be able to:</p> <p>PC9. prepare a detailed survey plan of the land proposed for installation of wind power plant with elevations and topography</p> <p>PC10. calculate the exact land area of the proposed site where installation is to be commenced</p> <p>PC11. prepare contour map of proposed wind plant site</p> <p>PC12. conduct field surveys and give site ranking</p> <p>PC13. identify position of WTG, substation, transmission line, transformers, etc.</p>
Physical site accessibility	<p>To be competent, the user/ individual must be able to:</p> <p>PC14. identify accessibility of the site i.e., its connectivity to various transport mechanisms including rail, road, connecting roads etc.</p> <p>PC15. ensure conducting of route survey</p> <p>PC16. identify soil type and its strength</p> <p>PC17. identify state/central law of land leasing and purchase</p>
Transmission Line & Grid Availability Analysis	<p>To be competent, the user/ individual must be able to:</p> <p>PC18. assess grid availability for power evacuation including nearest substation and transmission line capacity</p> <p>PC19. identify the relevant grid authority</p> <p>PC20. check the feasibility of point of power evacuation</p>
Report preparation	<p>To be competent, the user/ individual must be able to:</p> <p>PC21. validate collected wind data from site</p> <p>PC22. verify the wind potential with other resources such as NREL/ATLAS</p>

SGJ/N1204

Conduct Site Survey for wind power plant

	PC23. prepare detailed site survey report using GPS/DGPS and wind data analysis software
Knowledge and Understanding (K)	
A. Organizational Context (Knowledge of the company / organization and its processes)	The user/individual on the job needs to know and understand: KA1. legislation, standards, policies, and procedures followed in the organization relevant to own employment and performance conditions KA2. reporting structure, inter-dependent functions, lines and procedures in the work area KA3. relevant people and their responsibilities within the work area KA4. escalation matrix and procedures for reporting work and employment related issues
B. Technical Knowledge	The individual on the job needs to know and understand : KB1. definition of the terms: energy and power, WTG, blades, substation, transformer, switchgear, transmission line, etc. KB2. concepts related to site survey like seismic risk, pH, load bearing capacity, etc. KB3. basics functioning, specifications and operating principle of various components of a wind power plant KB4. the plant layout, technical drawings and manuals, blueprints, schematic drawing, technical specifications, operating principle and functioning of various components in a wind power plant KB5. tools, tackles and equipment required to carry out specific activities in a wind power plant relating to site survey of wind power plant KB6. types of small and large wind farm capacity wise and technology wise KB7. various types and layers of soils and their properties KB8. survey techniques, guidelines, methodology and tools applicable including GPS, , DPGS, GIS and other technologies KB9. how to identify sites with potential breeding and roosting KB10. read and interpret wind data resources such as NREL, ATLAS etc. KB11. how baseline survey information should be used to assess whether there is a need for an additional survey effort and/or specialised techniques and survey report presentation KB12. process of pre-survey re-search - including site location, footprint of any proposed access roads and temporary construction areas or other associated development KB13. information potentially relevant to the site assessment including: literature, maps and aerial photographs, habitat data KB14. process of assessment of nearest grid availability, substation capacity and transmission line for power evacuation KB15. how to estimate time, material and equipment needed to complete assignments KB16. quality parameters, quality assessment based on physical parameters KB17. process of preparation of detailed survey report KB18. selection of appropriate PPE for specific activities
Skills	
A. Core Skills/ Generic Skills	Writing Skills The user/ individual on the job needs to know and understand how to: SA1. prepare documentation as per relevant industry standards SA2. present information in a logical and organized way

SGJ/N1204

Conduct Site Survey for wind power plant

	Reading Skills
	The user/individual on the job needs to know and understand: SA3. advanced level of English language SA4. how to interpret manuals, health and safety instructions, memos, other company documents SA5. how to read and interpret data from various sources
	Oral Communication (Listening and Speaking skills)
	The user/individual on the job needs to know and understand how to: SA6. express statements or information clearly so that others can hear and understand SA7. participate in and understand the main points of simple discussions SA8. respond appropriately to any queries SA9. communicate with peers, superiors and sub-ordinates
B. Professional Skills	Decision Making
	The user/individual on the job needs to know and understand how to: SB1. follow organization rule-based decision making process SB2. take decision with systematic course of actions and/or response
	Plan and Organize
	The user/individual on the job needs to know and understand how to: SB3. plan and organize service work to meet deadlines SB4. plan to utilize time and equipment's effectively SB5. work constructively and collaboratively with others
	Customer Centricity
	The user/individual on the job needs to know and understand how to: SB6. follow code of conduct SB7. manage relationships with customers with intent on satisfying its requirements for service delivery
	Problem Solving
	The user/individual on the job needs to know and understand how to: SB8. generate solutions to specific problems for a wide range of activities SB9. choose best methods to complete assigned tasks
	Analytical Thinking
	The user/individual on the job needs to know and understand how to: SB10. apply wide range of factual and theoretical knowledge to select the right course of action to perform tasks related to wind power plant
Critical Thinking	
The user/individual on the job needs to know and understand how to: SB11. use reasoning skills to identify and resolve basic problems SB12. use intuition to detect any potential problems which could arise during operations SB13. use acquired knowledge of the process for identifying and handling issues	

SGJ/N1204

Conduct Site Survey for wind power plant

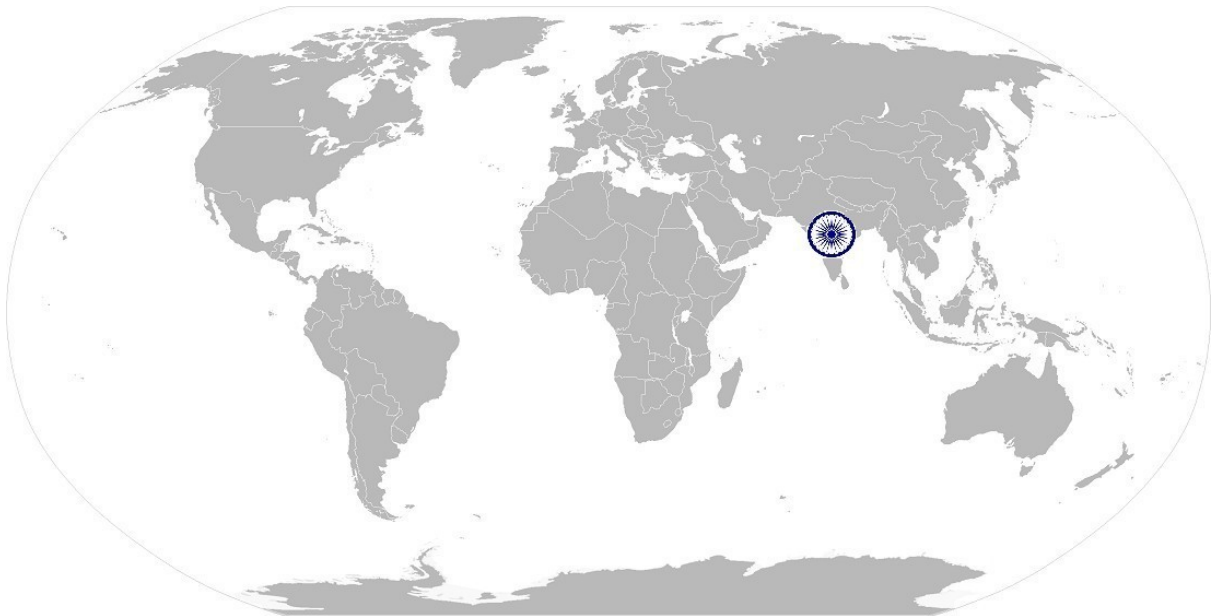
NOS Version Control

NOS Code	SGJ/N1204		
Credits (NSQF)	TBD	Version number	1.0
Industry	Green Jobs	Drafted on	01/09/2016
Industry Sub-sector	Renewable Energy	Last reviewed on	24/11/2017
Occupation	Site survey	Next review date	30/09/2019



[Back to Top](#)

National Occupational Standard



Overview

This unit covers health and safety practices to be maintained at project site

SGJ/N1201

**Perform basic health and safety practices at project site
(Ground and Height)**

National Occupational Standard

Unit Code	SGJ/N1101
Unit Title (Task)	Perform basic health and safety practices at the project site (Ground and Height)
Description	This unit covers health and safety practices to be maintained at project site
Scope	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> Adherence to safe working practices at project site Fire safety and tackling emergency situations
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
Adherence to safe working practices at the project site	<p>To be competent, the user/ individual must be able to:</p> <p>PC1. select the relevant protective clothing/equipment for specific tasks and work</p> <p>PC2. state the name and location of relevant documents and people responsible for health and safety at the project site</p> <p>PC3. identify possible causes of risk at project site and their mitigation measures</p> <p>PC4. identify and follow warning signs on site</p> <p>PC5. establish safe working procedures at the project site</p> <p>PC6. ensure safe working practices when working at heights, confined areas and trenches</p> <p>PC7. identify methods of accident prevention in the work environment</p> <p>PC8. follow safe operating procedures for lifting, carrying and transporting heavy objects & tools</p> <p>PC9. inspect the project site on a regular basis for any signs of spillage</p> <p>PC10. ensure safe storage of flammable materials and machine lubricating oil</p> <p>PC11. apply good housekeeping practices at all times by removal/disposal of waste products</p> <p>PC12. inform relevant authorities about any abnormal situation/behavior of any equipment/system promptly</p>
Fire safety and tackling emergency situations	<p>To be competent, the user/ individual must be able to:</p> <p>PC13. exhibit the use of various appropriate fire extinguishers on different types of fires correctly</p> <p>PC14. demonstrate rescue techniques applied during fire hazard</p> <p>PC15. administer appropriate first aid to victims were required e.g. in case of bleeding, burns, choking, electric shock, poisoning etc.</p> <p>PC16. respond promptly and appropriately to an accident situation or medical emergency in real or simulated environments</p> <p>PC17. participate in emergency procedures: raising alarm, safe/efficient, evacuation, correct means of escape, correct assembly point, roll call, correct return to work</p> <p>PC18. report the accident to the relevant authority in the prescribed format</p>
Knowledge and Understanding (K)	
A. Organizational Context (Knowledge of the company / organization and its processes)	<p>The user/individual on the job needs to know and understand:-</p> <p>KA1. names (and job titles if applicable), and where to find, all the people responsible for health and safety in a project site</p> <p>KA2. names and location of documents that refer to health and safety in the project site</p> <p>KA3. escalation matrix and procedures for reporting work and employment related issues</p>


SGJ/N1201

**Perform basic health and safety practices at project site
(Ground and Height)**

<p>B. Technical Knowledge</p>	<p>The individual on the job needs to know and understand:</p> <p>KB1. meaning of “hazards” and “risks”</p> <p>KB2. various types of safety signs and what they mean</p> <p>KB3. health and safety hazards commonly present in the work environment and related precautions</p> <p>KB4. possible causes of risk and accident and their mitigation measures</p> <p>KB5. safe working practices when working with tools and machines</p> <p>KB6. location of first-aid and safety equipment in the project site</p> <p>KB7. appropriate basic first aid treatment relevant to the condition e.g. shock, electrical shock, bleeding, breaks to bones, minor burns, resuscitation, poisoning, eye injuries</p> <p>KB8. standard safety procedures and equipment to be used to work at heights, trenches and confined places</p> <p>KB9. importance of using PPE and its selection as per the activity</p> <p>KB10. various causes of fires: heating of metal; spontaneous ignition; sparking; electrical heating; loose fires (smoking, welding, etc.); chemical fires; etc.</p> <p>KB11. precautionary activities taken to prevent fire accident or any other emergency situation</p> <p>KB12. different types of fire extinguishers and their usage and methods of extinguishing fire using various techniques</p> <p>KB13. emergency rescue techniques to be applied during a fire hazard or any other emergency situation</p>
<p>Skills (S)</p>	
<p>A. Core Skills/ Generic Skills</p>	<p>Reading and writing skills</p> <p>The user/ individual on the job needs to know and understand:</p> <p>SA1. proper documentation as per relevant industry standards</p> <p>Reading skills</p> <p>The user/ individual on the job needs to know and understand:</p> <p>SA2. vernacular/English language</p> <p>SA3. manuals, health and safety instructions, memos, other company documents</p> <p>SA4. how to read and interpret data from different sources</p> <p>SA5. the various colour codes, as per standard electrical, mechanical and civil nomenclature</p> <p>Oral communication (listening and speaking skills)</p> <p>The user/ individual on the job needs to know and understand how to:</p> <p>SA6. express statements or information clearly so that others can hear and understand</p> <p>SA7. participate in and understand the main points of simple discussions</p> <p>SA8. respond appropriately to any queries</p> <p>SA9. communicate with peers, superiors and sub-ordinates</p>
<p>B. Professional Skills</p>	<p>Decision Making</p> <p>The user/individual on the job needs to know and understand how to:</p> <p>SB1. follow organization rule-based decision making process</p> <p>SB2. take decision with systematic course of actions and/or response</p> <p>Plan and Organize</p> <p>The user/individual on the job needs to know and understand how to:</p> <p>SB3. plan and organize work to meet deadlines</p> <p>SB4. plan to utilize time and equipment effectively</p> <p>SB5. work constructively and collaboratively with others</p>

SGJ/N1201

**Perform basic health and safety practices at project site
(Ground and Height)**

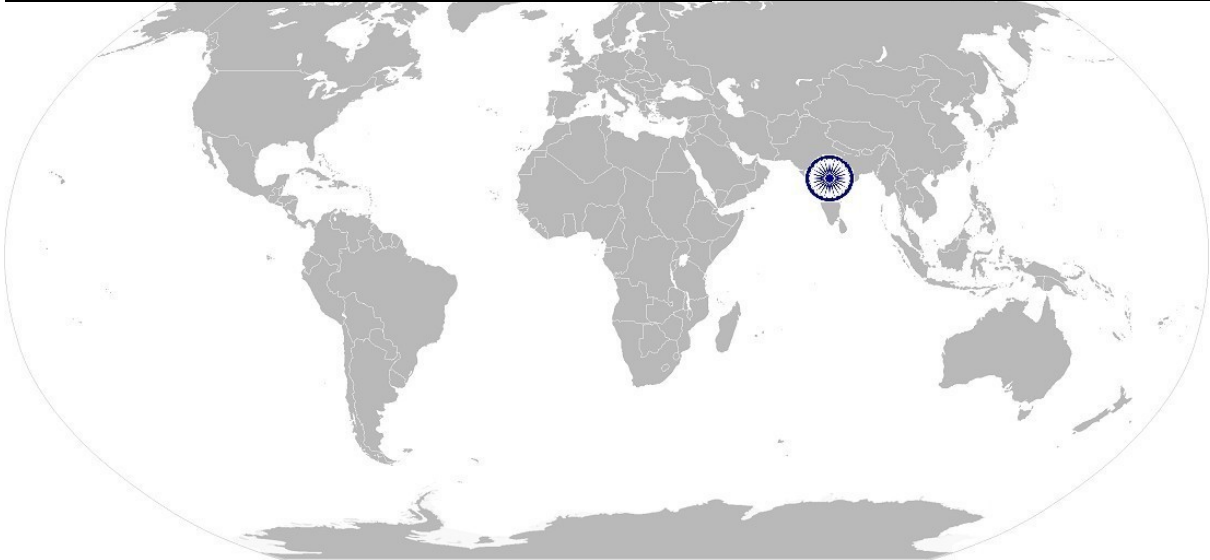
	<p>Customer Centricity</p> <p>The user/individual on the job needs to know and understand how to:</p> <ul style="list-style-type: none"> SB6. follow organisation code of conduct SB7. manage relationships with customers with intent on satisfying its requirements for service delivery
	<p>Problem Solving</p> <p>The user/individual on the job needs to know and understand how to:</p> <ul style="list-style-type: none"> SB8. recognize problems and provide solutions using a range of cognitive and practical skills SB9. approach relevant authority when required
	<p>Analytical Thinking</p> <p>The user/individual on the job needs to know and understand how to:</p> <ul style="list-style-type: none"> SB10. apply knowledge of facts, principles and processes to select the right course of action to perform tasks
	<p>Critical Thinking</p> <p>The user/individual on the job needs to know and understand how to:</p> <ul style="list-style-type: none"> SB11. use reasoning skills to identify and resolve basic problems SB12. use intuition to detect any potential problems which could arise during operations SB13. use acquired knowledge of the process for identifying and handling issues
	

SGJ/N1201

Perform basic health and safety practices at project site
(Ground and Height)

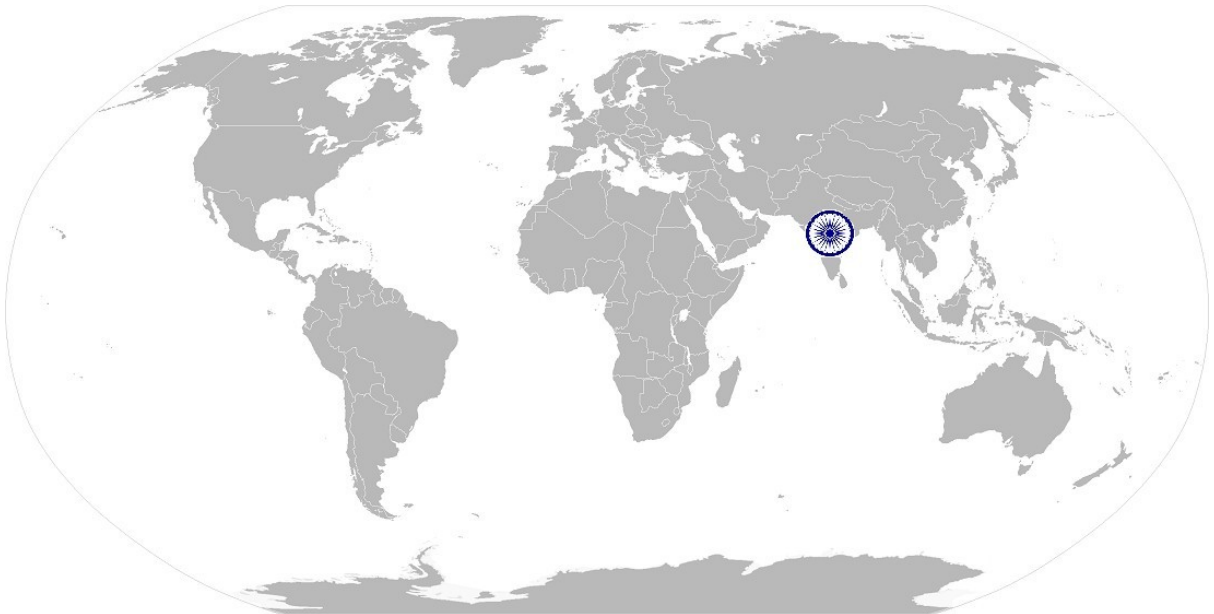
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NOS Code	SGJ/N1201		
Credits (NSQF)	TBD	Version number	1.0
Industry	Green Jobs	Drafted on	01/09/2016
Industry Sub-sector	Renewable Energy	Last reviewed on	24/11/2017
Occupation	Health and Safety	Next review date	30/09/2019



[Back to Top](#)

National Occupational Standard



Overview

This unit covers basic practices that improves the effectiveness of working with others in an organizational set-up

National Occupational Standard

SGJ/N0120 Work effectively with others	
Unit Code	SGJ/ N0120
Unit Title (Task)	Work effectively with others
Description	This unit covers basic etiquette and competencies that a candidate is required to possess and demonstrate in their behavior and interactions with others at the project site
Scope	This unit/task covers the following: <ul style="list-style-type: none"> working with others
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
Working with others	<p>The user/individual on the job should be able to:</p> <p>PC1. accurately pass on information to the authorized persons who require it and within agreed timescale and confirm its receipt</p> <p>PC2. assist others in performing tasks in a positive manner where required and possible</p> <p>PC3. consult and assist others to maximize effectiveness and efficiency in carrying out tasks</p> <p>PC4. display appropriate communication etiquette while working</p> <p>PC5. display active listening skills while interacting with others at work</p> <p>PC6. demonstrate responsible and disciplined behaviors at the project site</p> <p>PC7. escalate grievances and problems to appropriate authority as per procedure to resolve them and avoid conflict</p> <p>PC8. identify the need for common grounds with clients, team members, etc. and negotiate in an effective manner to achieve the same</p> <p>PC9. consider and respect the opinions, creativity, values, beliefs and perspectives of others</p> <p>PC10. ensure collaboration and group participation to achieve common goals</p> <p>PC11. promote a friendly, co-operative environment that is conducive to employee's sense of belonging</p> <p>PC12. facilitate an understanding and appreciation of the differences among team members</p>
Knowledge and Understanding (K)	
A. Organizational context (Knowledge of the company / organization and its processes)	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. legislation, standards, policies, and procedures followed in the organization relevant to own employment and performance conditions</p> <p>KA2. reporting structure, inter-dependent functions, lines and procedures in the work area</p> <p>KA3. relevant people and their responsibilities within the work area</p> <p>KA4. escalation matrix and procedures for reporting work and employment related issues</p>
B. Technical Knowledge	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. various categories of people that one is required to communicate and co-ordinate with in the organization</p> <p>KB2. importance of effective communication in the project site</p> <p>KB3. importance of teamwork in organizational and individual success</p> <p>KB4. various components of effective communication</p>

SGJ/N0120

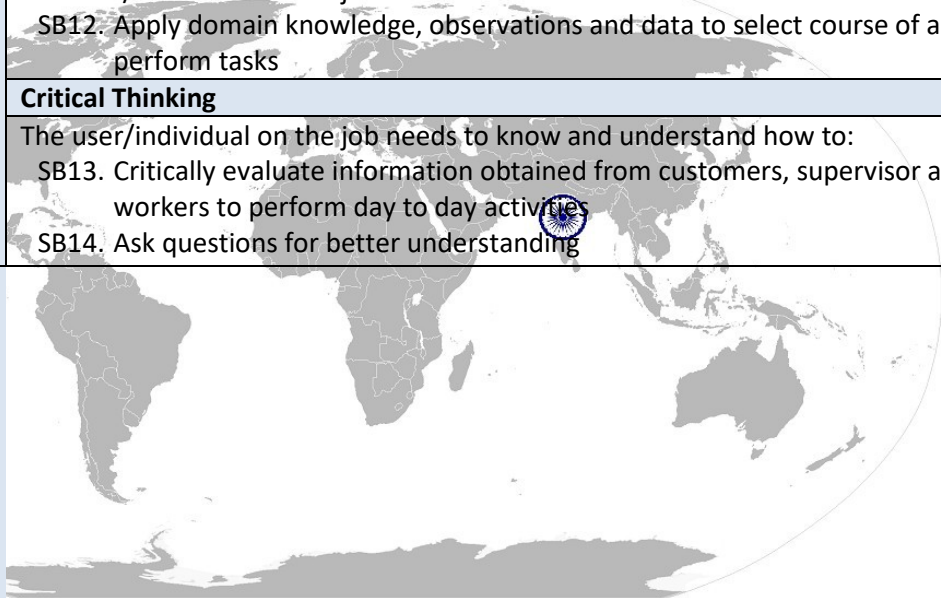
Work effectively with others

	<p>KB5. key elements of active listening KB6. value and importance of active listening and assertive communication KB7. barriers to effective communication KB8. importance of tone and pitch in effective communication KB9. importance of avoiding casual expletives and unpleasant terms while communicating professional circles KB10. how poor communication practices can disturb people, environment and cause problems for the employee, the employer and the customer KB11. key elements and importance of non-verbal communication KB12. importance of ethics for professional success KB13. importance of discipline for professional success KB14. what constitutes disciplined behavior for a working professional KB15. common reasons for interpersonal conflict KB16. importance of developing effective working relationships for professional success KB17. expressing and addressing grievances appropriately and effectively KB18. importance and ways of managing interpersonal conflict effectively KB19. importance of teamwork and collaboration</p>
Skills (S)	
<p>A. Core Skills/ Generic Skills</p>	<p>Writing Skills</p>
	<p>The user/ individual on the job needs to know and understand how to: SA1. Note the information communicated SA2. Record the readings of various parameters in the prescribed format SA3. Note down observations related to the activity SA4. Write information documents to internal departments/ internal teams</p>
	<p>Reading Skills</p>
	<p>The user/individual on the job needs to know and understand how to: SA5. Read vernacular/English language SA6. Read and understand equipment manuals, health and safety instructions, memos, other company documents SA7. Read from different sources- books, screens in machines and signage SA8. read internal information documents sent by internal teams</p>
<p>B. Professional Skills</p>	<p>Oral Communication (Listening and Speaking skills)</p>
	<p>The user/individual on the job needs to know and understand how to: SA9. Express statements or information clearly so that others can hear and understand SA10. Participate in and understand the main points of simple discussions SA11. Respond appropriately to any queries SA12. Communicate effectively with supervisor, peers and subordinates</p>
	<p>Decision Making</p>
	<p>The user/individual on the job needs to know and understand how to: SB1. Follow organization rule-based decision making process SB2. Analyze critical points in day to day tasks and identify control measures to solve the issue SB3. Handle issues in case the superior is not available (as per the authority matrix defined by the organisation)</p>
	<p>Plan and Organize</p>
	<p>The user/individual on the job needs to know and understand how to : SB4. Planning and organization of work to meet deadlines</p>

SGJ/N0120

Work effectively with others

	SB5. Work constructively and collaboratively with others SB6. Support the superiors in scheduling tasks
	Customer Centricity
	The user/individual on the job needs to know and understand how to: SB7. Follow organisation code of conduct SB8. Manage relationships with customers with intent on satisfying its requirements for service delivery
	Problem Solving
	The user/individual on the job needs to know and understand how to: SB9. Recognize problems and search for solutions SB10. Choose best methods to complete assigned tasks SB11. Approach relevant authority when required
	Analytical Thinking
	The user/individual on the job needs to know and understand how to: SB12. Apply domain knowledge, observations and data to select course of action to perform tasks
Critical Thinking	
The user/individual on the job needs to know and understand how to: SB13. Critically evaluate information obtained from customers, supervisor and co-workers to perform day to day activities SB14. Ask questions for better understanding	

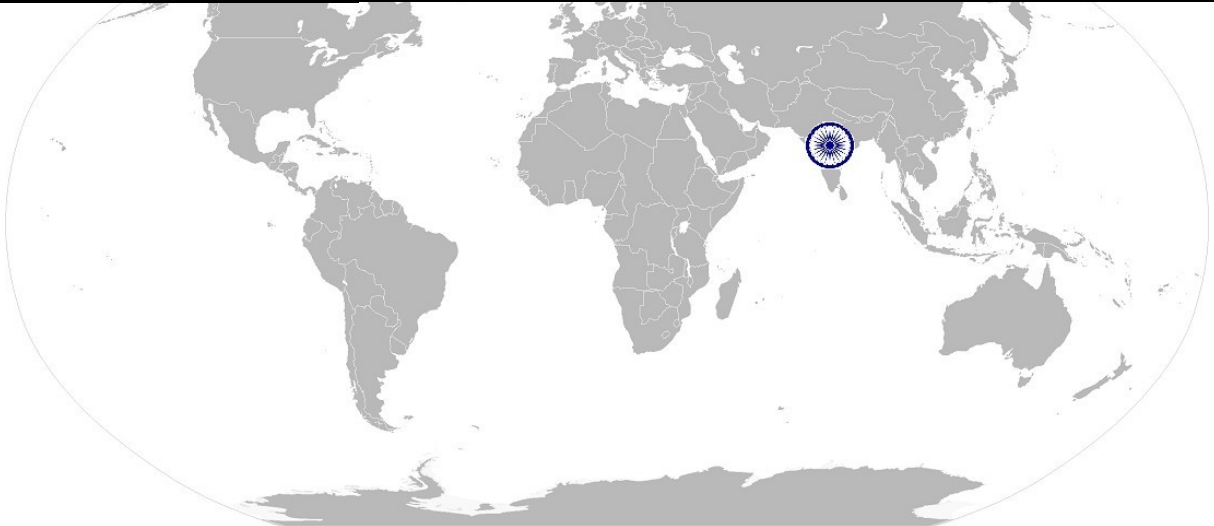


SGJ/N0120

Work effectively with others

NOS Version Control

NOS Code	SGJ/N0120		
Credits (NSQF)	TBD	Version number	1.0
Industry	Green Jobs	Drafted on	01/09/2016
Industry Sub-sector	Renewable Energy	Last reviewed on	15/02/2017
Occupation	Team management	Next review date	30/09/2019

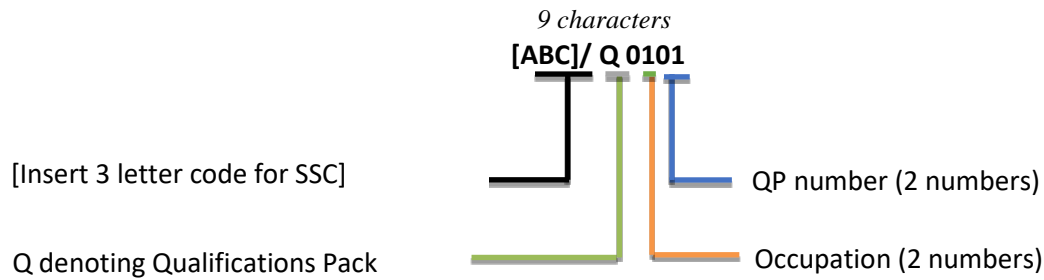


[Back to Top](#)

Annexure

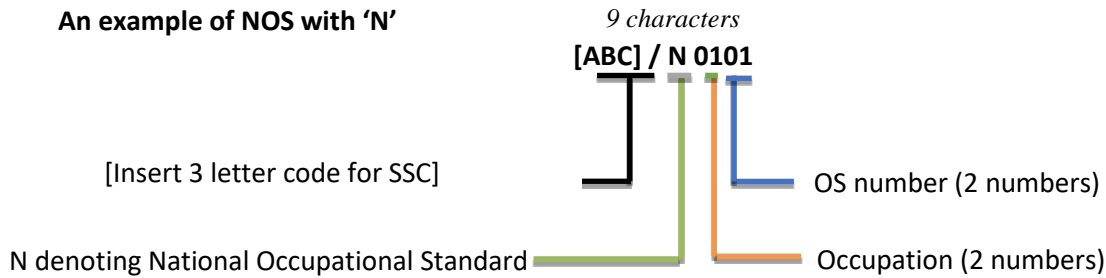
Nomenclature for QP and NOS

Qualifications Pack



Occupational Standard

An example of NOS with 'N'



[Back to top...](#)

The following acronyms/codes have been used in the nomenclature above:

Sub-sector		Range of Occupation numbers
Renewables (01-35)	Solar Photovoltaic	01-05
	Solar Thermal	06-10
	Wind	11-15
	Hydro	16-20
	Biomass	21-25
	Geothermal	26-30
	All Renewables (Cross-cutting/ Enabling Activities)	31-35
Green Transportation (36 - 40)	Alternative Fuel Transportation	36-40
	Bio-fuels and Farming	40-45
	Other Green Transportation	46-50
Green Construction (51- 60)	Green Buildings	51-55
	Energy Efficiency	56-60
Waste Management (61- 65)	Waste Management	61-65
Water Management (66-70)	Water and Wastewater Management	66-70
Co- Generation (71 - 75)	Co-generation	71-75
Other Green Jobs (76- 99)	Carbon Sinks	76-80
	Environmental Compliance and Sustainability Planning	81-85
	Other Green Jobs	85-99

Sequence	Description	Example
Three letters	Industry name	SGJ
Slash	/	/
Next letter	Whether QP or NOS	Q or N
Next two numbers	Occupation code	01
Next two numbers	OS number	01

[Back to top...](#)

CRITERIA FOR ASSESSMENT OF TRAINEES

Job Role Site Surveyor - Wind Power Plant

Qualification Pack SGJ/Q1202

Sector Skill Council Skill Council for Green Jobs

Guidelines for Assessment

1. Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each Performance Criteria (PC) will be assigned marks proportional to its importance in NOS. SSC will also lay down proportion of marks for Theory and Skills Practical for each PC.
2. The assessment for the theory part will be based on knowledge bank of questions created by the SSC.
3. Assessment will be conducted for all compulsory NOS, and where applicable, on the selected elective/option NOS/set of NOS.
4. Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training center (as per assessment criteria below).
5. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/training center based on this criterion.
6. To pass the Qualification Pack, every trainee should score a minimum of 70% of aggregate marks to successfully clear the assessment.
7. In case of *unsuccessful completion*, the trainee may seek reassessment on the Qualification Pack.

Compulsory NOS		Marks Allocation			
Total Marks: 300		Total Marks	Out Of	Theory	Skills Practical
Assessment outcomes	Assessment Criteria for outcomes				
SGJ /N1204 Conduct site survey for wind power plant	PC1. analyse detailed site information	100	4	1	3
	PC2. analyse the daily, monthly and annual wind resource data of site to evaluate the potential for wind energy generation		5	2	3
	PC3. ensure collection of data on local weather conditions such as temperature range, flooding (in case of onshore), wind speed, humidity, rainfall and assess its impact on wind energy generation		4	1	3
	PC4. assess the ground water availability and quality, load bearing capacities, pH levels and seismic risk		5	2	3
	PC5. analyse the pre-site selection baseline data		4	1	3
	PC6. identify location for Power Curve test		4	1	3



SGJ/Q1202

Qualifications Pack For "Site Surveyor Wind Power Plant"

	PC7. ensure installation of meteorological mast (met mast) at site		4	1	3
	PC8. analyse wind data collected from met mast for wind potential		5	2	3
	PC9. prepare a detailed survey plan of the land proposed for installation of wind power plant with elevations and topography		4	1	3
	PC10. calculate the exact land area of the proposed site where installation is to be commenced		4	1	3
	PC11. prepare contour map of proposed wind plant site		4	1	3
	PC12. conduct field surveys and give site ranking		4	1	3
	PC13. identify position of WTG, substation, transmission line, transformers, etc.		5	2	3
	PC14. identify accessibility of the site i.e., its connectivity to various transport mechanisms including rail, road, connecting roads etc.		5	2	3
	PC15. ensure conducting of route survey		4	1	3
	PC16. identify soil type and its strength		4	1	3
	PC17. identify state/central law of land leasing and purchase		4	1	3
	PC18. assess grid availability for power evacuation including nearest substation and transmission line capacity		5	1	4
	PC19. identify the relevant grid authority		4	1	3
	PC20. check the feasibility of point of power evacuation		4	1	3
	PC21. validate collected wind data from site		5	2	3
	PC22. verify the wind potential with other resources such as NREL/ATLAS		5	2	3
	PC23. prepare detailed site survey report using GPS/DGPS and wind data analysis software		4	1	3
		TOTAL	100	30	70
SGJ/N1201 Perform basic health and safety practices at project site (Ground and Height)	PC1. select the relevant protective clothing/equipment for specific tasks and work	100	5	1	4



SGJ/Q1202

Qualifications Pack For "Site Surveyor Wind Power Plant"

PC2. state the name and location of relevant documents and people responsible for health and safety at the project site	5	1	4
PC3. identify possible causes of risk at project site and their mitigation measures	6	2	4
PC4. identify and follow warning signs on site	6	2	4
PC5. establish safe working procedures at the project site	6	2	4
PC6. ensure safe working practices when working at heights, confined areas and trenches	6	2	4
PC7. identify methods of accident prevention in the work environment	6	2	4
PC8. follow safe operating procedures for lifting, carrying and transporting heavy objects & tools	6	2	4
PC9. inspect the project site on a regular basis for any signs of spillage	5	1	4
PC10. ensure safe storage of flammable materials and machine lubricating oil	6	2	4
PC11. apply good housekeeping practices at all times by removal/disposal of waste products	6	2	4
PC12. inform relevant authorities about any abnormal situation/behavior of any equipment/system promptly	5	2	3
PC13. exhibit the use of various appropriate fire extinguishers on different types of fires correctly	5	1	4
PC14. demonstrate rescue techniques applied during fire hazard	5	1	4
PC15. administer appropriate first aid to victims were required e.g. in case of bleeding, burns, choking, electric shock, poisoning etc.	5	2	3
PC16. respond promptly and appropriately to an accident situation or	6	2	4



SGJ/Q1202

Qualifications Pack For "Site Surveyor Wind Power Plant"

	medical emergency in real or simulated environments				
	PC17. participate in emergency procedures: raising alarm, safe/efficient, evacuation, correct means of escape, correct assembly point, roll call, correct return to work		6	2	4
	PC18. report the accident to the relevant authority in the prescribed format		6	2	4
		TOTAL	100	30	70
SGJ/N0120 Work effectively with others	PC1. accurately pass on information to the authorized persons who require it and within agreed timescale and confirm its receipt	100	9	3	6
	PC2. assist others in performing tasks in a positive manner where required and possible		8	3	5
	PC3. consult and assist others to maximize effectiveness and efficiency in carrying out tasks		8	2	6
	PC4. display appropriate communication etiquette while working		8	2	6
	PC5. display active listening skills while interacting with others at work		8	2	6
	PC6. demonstrate responsible and disciplined behaviors at the project site		8	2	6
	PC7. escalate grievances and problems to appropriate authority as per procedure to resolve them and avoid conflict		8	2	6
	PC8. identify the need for common grounds with clients, team members, etc. and negotiate in an effective manner to achieve the same		9	3	6
	PC9. consider and respect the opinions, creativity, values, beliefs and perspectives of others		8	2	6
	PC10. ensure collaboration and group participation to achieve common goals		9	3	6

SGJ/Q1202

Qualifications Pack For "Site Surveyor Wind Power Plant"

	PC11. promote a friendly, co-operative environment that is conducive to employee's sense of belonging		8	3	5
	PC12. facilitate an understanding and appreciation of the differences among team members		9	3	5
		TOTAL	100	30	70

[Back to top...](#)