



Accredited Provider  
The Skills College for Development and Training (Pty)Ltd.

## **National Certificate: Construction Plant Operations**

*Qualification ID 65789– NQF 2; 120 Credits*

### **INTRODUCTION**

Purpose:

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This Qualification is intended to assist all relevant stakeholders and role-players, including:

Civil and Building Construction companies.

Plant Hire.

Forestry.

Material Handling.

Mining.

Plant manufacturers.

For those who have been in the workplace for a long time, this Qualification can be used in the recognition of prior learning process to assess and recognise workplace skills acquired without the benefit of formal education and training.

For the new entrant, this Qualification describes the learning outcomes required to participate effectively in a structured workplace. For education and training providers, this Qualification provides guidance for the development of appropriate learning programmes and assessment documentation.

For employers, this Qualification enables skills gaps to be identified and addressed ensuring that productivity levels are increased and business objectives achieved.

This Qualification has been developed to assist with the advancement of the learner across the Civil Engineering and Construction Industry and is aimed at Construction Plant Operations practitioners in the Industry, ensuring the upliftment of standards in general.

The combination of learning outcomes will provide the qualifying learner with vocational knowledge and skills appropriate to the context of Construction Plant Operations in the Civil Engineering and Construction environment. It will also equip learners with a foundation for further intellectual development, opportunities for gainful employment and reward for contributions to society.

This Qualification will provide the Industry with qualified Construction Plant Operations practitioners, thereby facilitating social and economic transformation, empowerment and upliftment in the Industry and country in general.

Qualifying learners will be capable of:

Applying health and safety principles in plant operations.

Understanding plant operations in the construction environment.

Performing plant operation related functions.

Adhering to plant operation personnel procedures.

Understanding mechanical and leverage principles to operate earthmoving, transport and/or ancillary plant.

### **Rationale for the qualification:**

The Civil Construction Industry is primarily engaged in the civil engineering work on infrastructure related projects covering such diverse fields as roads, bridgeworks, railways, harbours, sewerage and drainage, electrical infrastructure, pipelines and recreation works. There is a rising demand for qualified plant and machinery operators. Increasingly, contractors are demanding evidence of competence to nationally recognised standards. Rising customer expectations at all levels are driving up standards in plant and machinery operations and fuelling the demand for proven competence through qualifications.

This Qualification has been developed to serve this established function for the Construction Plant occupational area within the Civil Engineering and Construction Industry. The rationale for the introduction of a NQF Level 2 unit standards-based Qualification in Construction Operations is to provide a Qualification for persons who perform construction plant activities on Civil Engineering and Construction sites, whether in micro, small, medium or large operations.

In the past many practitioners in the Civil Engineering and Construction area were denied career advancement and possible professional registration. The introduction of a unit standards based National Certificate in Construction: Plant Operations will allow learners, both unemployed and employed, to reach their full potential of advancement and will allow for Recognition of Prior Learning and further learning.

This Qualification will facilitate the development of a professional community of Construction Plant Operators. The competencies contained in this Qualification are essential for social and economic transformation, empowerment and upliftment within the construction plant operations environment, whilst simultaneously improving the skills base of the country.

The combination of learning outcomes will provide qualifying learners with applied competence in the integration of general construction sitework and technical competencies in areas of specialisation in construction plant operations.

### **LEARNING ASSUMED TO BE IN PLACE**

It is recommended that a learner entering a programme leading to this Qualification has successfully completed a General Education and Training Certificate including, Communication and Mathematical literacy at NQF Level 1.

Recognition of Prior Learning:

The Qualification may be obtained in part or in whole through the process of Recognition of Prior Learning. Learners who successfully meet the requirements of any Unit Standard in this Qualification may apply to the relevant body for Recognition of Prior Learning (RPL) assessment. RPL candidates will be assessed against the assessment criteria and specific outcomes contained in the relevant Unit Standard/s.

Access to the Qualification:

□ There are no access requirements for the achievement of this Qualification, however the learning assumptions described below must be considered

**EXIT LEVEL OUTCOMES**

Apply health and safety legislations, regulations and procedures in plant operations.

2. Understand the nature and extent of earthworks in civil engineering construction.

3. Perform plant operation related functions.

4. Understand mechanical and leverage principles to operate earthmoving, transport and/or ancillary plant.

> Range of earthmoving plant includes, but is not limited to:

> Dragline, grader, scraper, skid steer loader, backhoe/loader, tracked dozer, continuous bucket trencher, excavator, face shovel, front end loader and wheeled dozer.

> Range transport plant includes, but is not limited to:

> Rigid body dump truck, tip truck, tractor, articulated dump truck, service truck and water cart.

> Range of ancillary plant includes, but is not limited to:

> Bitumen spray equipment, sideboom, hot mix asphalt paving machine, milling machine, paving screed and roller.

**TIME PERIOD**

This Learnership can be presented over a period of 12 months

**THE FOLLOWING UNIT STANDARDS WILL BE COMPLETED IN ORDER TO REACH 120 CREDITS:**

**UNIT STANDARDS:**

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	<b>ID</b>	<b>UNIT STANDARD TITLE</b>	<b>PRE-2009 NQF LEVEL</b>	<b>NQF LEVEL</b>	<b>CREDITS</b>
Core	<a href="#">252259</a>	Plan, organise and manage own activities in the organisation	Level 1	NQF Level 01	2
Core	<a href="#">14556</a>	Apply productivity principles on a construction site	Level 2	NQF Level 02	6
Core	<a href="#">9986</a>	Apply quality principles on a construction site	Level 2	NQF Level 02	12
Core	<a href="#">262687</a>	Apply regulatory requirements in plant operations	Level 2	NQF Level 02	3
Core	<a href="#">262726</a>	Demonstrate a basic understanding of the mechanics of plant	Level 2	NQF Level 02	4
Core	<a href="#">114219</a>	Demonstrate an understanding and implement environmental initiatives on a construction activity	Level 2	NQF Level 02	4

Core	<a href="#">262685</a>	Demonstrate an understanding of earthworks	Level 2	NQF Level 02	3
Core	<a href="#">262724</a>	Demonstrate knowledge of civil construction works	Level 2	NQF Level 02	3
Core	<a href="#">9978</a>	Describe the construction industry composition its work procurement systems and communication techniques	Level 2	NQF Level 02	3
Core	<a href="#">9966</a>	Establish and prepare a work area	Level 2	NQF Level 02	4
Core	<a href="#">12484</a>	Perform basic fire fighting	Level 2	NQF Level 02	4
Core	<a href="#">120496</a>	Provide risk-based primary emergency care/first aid in the workplace	Level 2	NQF Level 02	5
Core	<a href="#">12463</a>	Understand and deal with HIV/AIDS	Level 2	NQF Level 02	3
Core	<a href="#">14633</a>	Adhere to disciplinary code	Level 3	NQF Level 03	1
Core	<a href="#">246667</a>	Demonstrate an understanding of Occupational Health, Safety and Environmental Legislations	Level 3	NQF Level 03	4
Core	<a href="#">123258</a>	Foster and maintain customer relations	Level 3	NQF Level 03	10
Fundamental	<a href="#">119463</a>	Access and use information from texts	Level 2	NQF Level 02	5
Fundamental	<a href="#">9009</a>	Apply basic knowledge of statistics and probability to influence the use of data and procedures in order to investigate life related problems	Level 2	NQF Level 02	3
Fundamental	<a href="#">7480</a>	Demonstrate understanding of rational and irrational numbers and number systems	Level 2	NQF Level 02	3
Fundamental	<a href="#">9008</a>	Identify, describe, compare, classify, explore shape and motion in 2-and 3-dimensional shapes in different contexts	Level 2	NQF Level 02	3
Fundamental	<a href="#">119454</a>	Maintain and adapt oral/signed communication	Level 2	NQF Level 02	5
Fundamental	<a href="#">119460</a>	Use language and communication in occupational learning programmes	Level 2	NQF Level 02	5
Fundamental	<a href="#">7469</a>	Use mathematics to investigate and monitor the financial aspects of personal and community life	Level 2	NQF Level 02	2
Fundamental	<a href="#">9007</a>	Work with a range of patterns and functions and solve problems	Level 2	NQF Level 02	5
Fundamental	<a href="#">119456</a>	Write/present for a defined context	Level 2	NQF Level 02	5
Elective	<a href="#">252250</a>	Apply fire fighting techniques	Level 1	NQF Level 01	3

Elective	<a href="#">252244</a>	Describe the impact of customer service on a business	Level 1	NQF Level 01	6
Elective	<a href="#">243275</a>	Erect and dismantle prefabricated aluminium alloy scaffolding	Level 1	NQF Level 01	4
Elective	<a href="#">229998</a>	Explain and perform fall arrest techniques when working at height	Level 1	NQF Level 01	2
Elective	<a href="#">10007</a>	Identify, analyse and select business opportunities	Level 1	NQF Level 01	3
Elective	<a href="#">243189</a>	Manage personal finances	Level 1	NQF Level 01	8
Elective	<a href="#">15091</a>	Plan to manage one`s time	Level 1	NQF Level 01	3
Elective	<a href="#">244605</a>	Demonstrate ability to participate effectively in a team or group	Level 2	NQF Level 02	2
Elective	<a href="#">257077</a>	Illuminate an area using a lighting plant	Level 2	NQF Level 02	2
Elective	<a href="#">229995</a>	Install, use and perform basic rescues from fall arrest systems and implement the fall protection plan	Level 2	NQF Level 02	3
Elective	<a href="#">244365</a>	Lift and move material and equipment by means of a forklift	Level 2	NQF Level 02	3
Elective	<a href="#">262727</a>	Operate a backhoe/loader	Level 2	NQF Level 02	15
Elective	<a href="#">262732</a>	Operate a continuous bucket trencher	Level 2	NQF Level 02	15
Elective	<a href="#">262730</a>	Operate a dragline	Level 2	NQF Level 02	20
Elective	<a href="#">262746</a>	Operate a face shovel	Level 2	NQF Level 02	15
Elective	<a href="#">262747</a>	Operate a front end loader	Level 2	NQF Level 02	12
Elective	<a href="#">262735</a>	Operate a grader	Level 2	NQF Level 02	15
Elective	<a href="#">262787</a>	Operate a hot mix asphalt paving machine	Level 2	NQF Level 02	8
Elective	<a href="#">262788</a>	Operate a milling machine	Level 2	NQF Level 02	8
Elective	<a href="#">243272</a>	Operate a Mobile Elevating Work Platform (MEWP)	Level 2	NQF Level 02	10
Elective	<a href="#">262789</a>	Operate a paving screed	Level 2	NQF Level 02	6

Elective	<a href="#">262731</a>	Operate a rigid body dump truck	Level 2	NQF Level 02	10
Elective	<a href="#">262805</a>	Operate a roller	Level 2	NQF Level 02	5
Elective	<a href="#">262710</a>	Operate a scraper	Level 2	NQF Level 02	12
Elective	<a href="#">262790</a>	Operate a service truck	Level 2	NQF Level 02	8
Elective	<a href="#">262824</a>	Operate a Sideboom	Level 2	NQF Level 02	8
Elective	<a href="#">262712</a>	Operate a skid steer loader	Level 2	NQF Level 02	8
Elective	<a href="#">262734</a>	Operate a tip truck	Level 2	NQF Level 02	8
Elective	<a href="#">262729</a>	Operate a tracked dozer	Level 2	NQF Level 02	15
Elective	<a href="#">262804</a>	Operate a tractor	Level 2	NQF Level 02	8
Elective	<a href="#">262764</a>	Operate a water cart	Level 2	NQF Level 02	8
Elective	<a href="#">262713</a>	Operate a wheeled dozer	Level 2	NQF Level 02	12
Elective	<a href="#">262745</a>	Operate an articulated dump truck	Level 2	NQF Level 02	10
Elective	<a href="#">262744</a>	Operate an excavator	Level 2	NQF Level 02	15
Elective	<a href="#">262785</a>	Operate bitumen spray equipment	Level 2	NQF Level 02	5
Elective	<a href="#">9322</a>	Work in a team	Level 2	NQF Level 02	3
Elective	<a href="#">257041</a>	Bar down loose rocks using appropriate equipment	Level 3	NQF Level 03	4
Elective	<a href="#">115863</a>	Demonstrate an understanding of the preparation of the item for hire	Level 3	NQF Level 03	7
Elective	<a href="#">262728</a>	Grade to final levels using a motor grader	Level 3	NQF Level 03	16
Elective	<a href="#">115880</a>	Interact with customer to provide a complete hire service	Level 3	NQF Level 03	4
Elective	<a href="#">115858</a>	Receive and store new stock for hire	Level 3	NQF Level 03	3

Elective	<a href="#">115861</a>	Receive and store returned hired stock	Level 3	NQF Level 03	4
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