

Title	Prepare and operate plant and confirm post operational procedures in an infrastructure works environment		
Level	3	Credits	20

Purpose	People credited with this unit standard are able to: demonstrate knowledge of specific infrastructure plant and its operation; prepare for plant operation; operate plant; and confirm post operational procedures in an infrastructure works environment.
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Classification	Infrastructure Works > Structural Foundations
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Available grade	Achieved
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Prerequisites	Class of driver licence required for the vehicle being driven.
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Guidance Information

- Learning and assessment within this unit standard must be carried out in an infrastructure works environment and in accordance with the following legislation and codes of practice, as relevant to their role, and any subsequent amendments or replacements:
 - Health and Safety at Work Act 2015;
 - Resource Management Act 1991;
 - Heritage New Zealand Pouhere Taonga Act 2014;
 - Traffic Regulations 1976;
 - Land Transport Rule: Vehicle Dimensions and Mass 2016;
 - Land Transport Rule: Heavy Vehicles 2004;
 - Operator Safety Manual for Earthmoving Machinery, available from the Infrastructure ITO <http://connexis.org.nz/>.
- Definitions

Company requirements include the policy, procedures, and methodologies of the company. They include legislative and regulatory requirements that may apply across the company or to a specific site. Requirements are documented in the company health and safety plans, traffic management plans, contract work programmes, quality plans, policies, and procedural documents.

Job specifications are instructions given to the operator prior to undertaking a job. They may include site safety instructions, contract drawings, and written memos.

Prestart checks include but are not limited to – damage, cracks, visual defects, leaks, fluid levels, wear, faults, safety and maintenance checks, or any assessment or critical checks for ensuring the safe operation of machinery on an infrastructure works site.

Walk round means to walk around the machine inspecting it and its environment for hazards and removing hazards that may impair start-up.

- 3 For the purpose of assessment, *specific infrastructure plant* may include but is not limited to – wheeled loader, hydraulic excavator, motor grader, motor scraper, self-propelled roller, bulldozer, articulated dump truck, road mill or reclaimer stabiliser, rigid dump truck, telehandler.
Evidence of one piece of specific infrastructure plant is required.

Outcomes and performance criteria

Outcome 1

Demonstrate knowledge of specific infrastructure plant and its operation.

Performance criteria

- 1.1 Benefits of using specific plant are explained in terms of purpose and function, serviceability, safety, flexibility of use and attachments, and durability, in accordance with the plant machine specifications.
- 1.2 Capabilities of the plant are explained in terms of the relevant job specifications, technological features and providing solutions for onsite works.
- 1.3 Sustainability features are explained in terms of analysing equipment and job site data to maximise productivity, environmental benefits and reduce costs.

Outcome 2

Prepare for plant operation in an infrastructure works environment.

Performance criteria

- 2.1 Walk round is completed prior to starting work in accordance with company requirements.
- 2.2 Prestart checks are completed, problems are identified, corrective action is taken, in accordance with manufacturer's instructions, operator manual, and company requirements.
- 2.3 Exclusion zones and any services are clarified and confirmed in accordance with company requirements.
- 2.4 Task analysis and assessment of operating conditions are completed and any adjustments to plant operation or attachments are actioned.
- 2.5 Operator skills and good practice behaviours, relevant for daily work operations, are identified in accordance with the operator manual and company requirements.
- 2.6 Personal protective equipment specific to the plant and job specifications is selected in accordance with company requirements.

Outcome 3

Operate plant in an infrastructure works environment.

Performance criteria

- 3.1 Plant operating controls are used safely and productively through all positions in accordance with the operator manual.
- 3.2 Plant is manoeuvred, positioned and controlled on site in terms of adequate clearances, working around services, changing fittings appropriately, smoothness of movement and machine stability.
- 3.3 Plant operations meet the requirements of job specifications and within the design capability of the machine.
- 3.4 Plant is controlled in different site conditions, surfaces and terrain, in accordance with the job specifications and operator safety manual.
- 3.5 Site markers, permanent fixtures and property are preserved in accordance with company requirements.
- 3.6 Machine production quantities are maintained relative to the task, the safety of the operator, in accordance with the operator manual and the manufacturer's instructions.
- 3.7 Communication, hand signals and protocols are maintained with spotters, other operators and site personnel in accordance with accepted industry practice and company requirements.
- 3.8 Sequence of work is followed and work methods are selected in accordance with achieving job requirements in the allotted time.

Outcome 4

Confirm post operational procedures in an infrastructure works environment.

Performance criteria

- 4.1 Procedures for refuelling, storage, maintaining attachments and repairing damage or faults are confirmed in accordance with the operator manual.
- 4.2 Routine maintenance procedures are confirmed in accordance with company requirements.

Range may include but is not limited to – changing oil, testing the battery cables and terminals, air filter, brake fluid, tyres and air pressure.
- 4.3 Results of the maintenance and safety checks are documented and reported to the relevant personnel in accordance with company requirements.

- 4.4 Shut down procedures and checks are confirmed in accordance with manufacturer's instructions and company requirements.
- 4.5 Hazardous items, equipment and lock out tags are identified and communicated to the relevant personnel, in accordance with company requirements.
- 4.6 Improvements in operating procedures are identified and reported in accordance with company requirements.

Planned review date	31 December 2022
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	14 December 2017	N/A
Revision	2	30 August 2018	N/A

Consent and Moderation Requirements (CMR) reference	0101
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

Comments on this unit standard

Please contact the Connexis Infrastructure ITO qualifications@connexis.org.nz if you wish to suggest changes to the content of this unit standard.