Formworker

Overview of the role

Preparing, installing and managing all stages of the formwork and falsework processes.

L2: Formworker
Version 2.0

Title of occupation

Formworker

UOS reference number

ST0461

Core and options

No

Level of occupation

Level 2

Occupational maps data

Route: Construction and the built environment
Pathway: Onsite Construction
Cluster: Core building tradesperson

Typical duration of apprenticeship

18 months

Occupational summary

This occupation is found in The Construction and the Built Environment sector.

Formworkers work on various developments including commercial and industrial units, multi-storey housing and civil engineering projects like nuclear power stations, tunnels, and bridges.

The broad purpose of the occupation is to facilitate the construction of concrete structures by creating the moulds, or forms, into which concrete is poured. By building these forms accurately and to specification, formworkers ensure that concrete structures are constructed with precision, strength, and durability. Their work is essential for creating a solid foundation for buildings, bridges, dams, and other infrastructure projects.

Formworkers work to architectural and engineering specifications to shape and mould concrete according to the required dimensions, shapes, and configurations.

In their daily work, an employee in this occupation interacts with other trades such as steel fixers, banksperson, groundworkers, scaffolders as well as supervisors, site management, engineers. The working environment is often outdoors on a construction site and can be physically demanding. Formworkers often work at height, such as on high rise buildings, and therefore health and safety are of paramount importance.

An employee in this occupation will be responsible for working in a team, under supervision, using machinery and tools to create structures or components from the designs, digital model, plans and specifications of architects and designers that meet the clients' expectations.

Occupation duties

DUTY	KSBS
Duty 1 Work in compliance with occupational health and safety and environmental legislation, relevant regulations, and recognised industry guidance to ensure the health, safety and wellbeing of self and others always. Report in a timely manner any non-compliances to the appropriate person.	K1 K2 K3 K4 K5 K6 K7 K8 K9 K10 K11 K12 K13 K14 K15 K16 K17 K18 K19 K20 K21 K22 K23 K24 K25 K26 K27 K28 K29 K30 K31 K32 K33 S1 S2 S3 S4 S5 S6 S7 S8 S9 S10 S11 S12 S13 S14 S15 S16 S17 S18 S19 S20 S21 S22 S23 S24 S25 S26 S27 B1 B2 B3 B4 B5 B6 B7
Duty 2 Deliver work in accordance with design and specification.	K1 K2 K4 K5 K6 K7 K8 K9 K10 K11 K12 K13 K14 K15 K16 K17 K18 K19 K20 K21 K22 K23 K24 K25 K26 K27 K28 K29 K30 K31 K32 K33

DUTY	KSBS
Duty 3 Use a range of equipment, hand, and power tools to carry out the assembly and installation of formwork.	S1 S2 S3 S4 S5 S6 S7 S8 S9 S10 S11 S12 S13 S14 S15 S16 S17 S18 S19 S20 S21 S22 S23 S24 S25 S26 S27 B1 B2 B3 B4 B5 B6 B7 K1 K2 K3 K4 K5 K6 K7 K8 K9 K10 K11 K12 K13 K14 K15 K16 K17 K18 K19 K20 K21 K22 K23 K24 K25 K26 K27 K28 K29 K30 K31 K32 K33
Duty 4 Fabricate and maintain timber and prefabricated formwork systems.	S1 S2 S3 S4 S5 S6 S7 S8 S9 S10 S11 S12 S13 S14 S15 S16 S17 S18 S19 S20 S21 S22 S23 S24 S25 S26 S27 B1 B2 B3 B4 B5 B6 B7 K1 K2 K3 K4 K5 K6 K7 K8 K9 K10 K11 K12 K13 K14 K15 K16 K17 K18 K19 K20 K21 K22 K23 K24 K25 K26 K27 K28 K29 K30 K31 K32 K33
Duty 5 Erect and dismantle timber and prefabricated formwork.	S1 S2 S3 S4 S5 S6 S7 S8 S9 S10 S11 S12 S13 S14 S15 S16 S17 S18 S19 S20 S21 S22 S23 S24 S25 S26 S27 B1 B2 B3 B4 B5 B6 B7 K1 K2 K3 K4 K5 K6 K7 K8 K9 K10 K11 K12 K13 K14 K15 K16 K17 K18 K19 K20 K21 K22 K23 K24 K25 K26 K27 K28 K29 K30 K31 K32 K33
Duty 6 Prepare the work area, checking it is safe and in accordance with method statements and risk assessments and implement the necessary control measures.	S1 S2 S3 S4 S5 S6 S7 S8 S9 S10 S11 S12 S13 S14 S15 S16 S17 S18 S19 S20 S21 S22 S23 S24 S25 S26 S27 B1 B2 B3 B4 B5 B6 B7 K1 K2 K3 K4 K5 K6 K7 K8 K9 K10 K11 K12 K13 K14 K15 K16 K17 K18 K19 K20 K21 K22 K23 K24 K25 K26 K27 K28 K29 K30 K31 K32 K33
Duty 7 Maintain a clear, tidy workspace, and ensure that waste materials are disposed of in accordance with current legislation and sustainably.	S1 S2 S3 S4 S5 S6 S7 S8 S9 S10 S11 S12 S13 S14 S15 S16 S17 S18 S19 S20 S21 S22 S23 S24 S25 S26 S27 B1 B2 B3 B4 B5 B6 B7 K1 K2 K3 K4 K5 K6 K7 K8 K9 K10 K11 K12 K13 K14 K15 K16 K17 K18 K19 K20 K21 K22 K23 K24 K25 K26 K27 K28 K29 K30 K31 K32 K33

DUTY	KSBS
Duty 8 Work to the construction programme, adapting to changes in schedule and requirements where necessary.	K1 K2 K3 K4 K5 K6 K7 K8 K9 K10 K11 K12 K13 K14 K15 K16 K17 K18 K19 K20 K21 K22 K23 K24 K25 K26 K27 K28 K29 K30 K31 K32 K33 S1 S2 S3 S4 S5 S6 S7 S8 S9 S10 S11 S12 S13 S14 S15 S16 S17 S18 S19 S20 S21 S22 S23 S24 S25 S26 S27 B1 B2 B3 B4 B5 B6 B7
Duty 9 Carry out quality checks against specification and take remedial action where instructed.	K1 K2 K3 K4 K5 K6 K7 K8 K9 K10 K11 K12 K13 K14 K15 K16 K17 K18 K19 K20 K21 K22 K23 K24 K25 K26 K27 K28 K29 K30 K31 K32 K33 S1 S2 S3 S4 S5 S6 S7 S8 S9 S10 S11 S12 S13 S14 S15 S16 S17 S18 S19 S20 S21 S22 S23 S24 S25 S26 S27 B1 B2 B3 B4 B5 B6 B7
Duty 10 Conduct work safely at height.	K1 K2 K3 K4 K5 K6 K7 K8 K9 K10 K11 K12 K13 K14 K15 K16 K17 K18 K19 K20 K21 K22 K23 K24 K25 K26 K27 K28 K29 K30 K31 K32 K33 S1 S2 S3 S4 S5 S6 S7 S8 S9 S10 S11 S12 S13 S14 S15 S16 S17 S18 S19 S20 S21 S22 S23 S24 S25 S26 S27 B1 B2 B3 B4 B5 B6 B7
Duty 11 Collaborate with stakeholders such as management and other construction trades.	K1 K2 K3 K4 K5 K6 K7 K8 K9 K10 K11 K12 K13 K14 K15 K16 K17 K18 K19 K20 K21 K22 K23 K24 K25 K26 K27 K28 K29 K30 K31 K32 K33 S1 S2 S3 S4 S5 S6 S7 S8 S9 S10 S11 S12 S13 S14 S15 S16 S17 S18 S19 S20 S21 S22 S23 S24 S25 S26 S27 B1 B2 B3 B4 B5 B6 B7
Duty 12 Carry out continuous professional development to maintain knowledge of current and future developments affecting the role.	K1 K2 K3 K4 K5 K6 K7 K8 K9 K10 K11 K12 K13 K14 K15 K16 K17 K18 K19 K20 K21 K22 K23 K24 K25 K26 K27 K28 K29 K30 K31 K32 K33 S1 S2 S3 S4 S5 S6 S7 S8 S9 S10 S11 S12 S13 S14 S15 S16 S17 S18 S19 S20 S21 S22 S23 S24 S25 S26 S27 B1 B2 B3 B4 B5 B6 B7

KSBs

Knowledge

K1: Awareness of health and safety regulations, standards, and guidance and impact on role. Employer and Employee responsibilities under the Health and Safety at Work Act (HASWA) Control of Substances Hazardous to Health (COSHH). Lifting Operations and Lifting Equipment Regulations (LOLER). Reporting of Injuries Diseases and Dangerous Occurrences (RIDDOR). Provision and Use of Work Equipment Regulations (PUWER). Fire safety. Health and Safety at Work Act. Asbestos awareness. Fire extinguishers. Safety signage. Situational awareness. Slips, trips, and falls. Working in confined spaces. Working at height. Electrical safety awareness.
K2: Methods of safe working including risk assessments, method statements, control measures and safe systems of work.
K3: Safety control equipment and how to use personal protective equipment-PPE.
K4: Safety warning signs and physical barriers.
K5: Awareness of standards and regulations associated with formwork activities: British standards, building regulations and manufacturers' instructions and warranty. Impact on how these inform drawings and formwork specifications.
K6: Verbal communication techniques and industry terminology.
K7: Principles of team working.
K8: Awareness of traditional and modern methods of construction: on site and off-site building methods.
K9: Manual handling techniques.
K10: Formwork resources and materials principles and characteristics: timber, nontimber - for example plywood, plastic - proprietary and pre-manufactured systems and their components.
K11: Methods of interpreting relevant information from drawings and specifications.
K12: Basic principles of digital design and modelling systems.
K13: Formwork hand tools and power tools, use and storage techniques.
K14: Formwork systems structures, types and building construction methods: columns, beams, slabs, walls, soffits.
K15: Timber and nontimber Components: types and fabrication methods. panels, make ups, box, outs, stop ends bolt boxes.
K16: The principles and practices of working at height safely and the use of access and fall protection equipment.
K17: The types and uses of formwork components: soldiers, walings, release agents, ties, sheathing panels, shoring supports, braces, clamps, ancillary items
K18: Quality assurance requirements and monitoring processes for formwork.
K19: Techniques to measure, mark out, and cut timber and nontimber formwork materials.
K20: Formwork in situ: installation, techniques, and risks.
K21: Formwork using pre-manufactured and proprietary products: installation and alignment into position, techniques, and risks.
K22: The use of digital equipment for positioning: laser levels, theodolites, Global Positioning Systems.
K23: Legislative guidance relating to equity, diversity, and inclusivity in the workplace.
K24: Ethical principles: ethical and unethical behaviour and the routes for reporting unethical behaviour.
K25: Awareness of issues and common symptoms and warning signs of stress, anxiety, and depression, plus where to go for help and the resources available.
K26: Work planning and pre- work and post work checking requirements and techniques.
K27: How to maintain and reuse formwork.
K28: Techniques to attach and remove soldiers and walings, push-pulls, tie systems.
K29: Techniques to strike box outs and bolt boxes, grout checks, level controls, angle fillets and features.

K30: Techniques to apply release agents.
K31: Concrete pressure in formwork.
K32: Awareness of environmental and sustainability regulations, how to use resources efficiently, principles of recycling, reuse, and safe disposal of waste.
K33: Lifting and lowering techniques using equipment appropriate to the task.

Skills

S1: Comply with health and safety regulations, standards, and guidance.
S2: Apply safe systems of work and apply control measures.
S3: Select and use personal protective equipment - PPE.
S4: Select and use safety barriers and signs.
S5: Comply with industry regulations, standards, and guidance.
S6: Communicate verbally with colleagues or management using industry terminology.
S7: Applies team working principles.
S8: Move, lift, and handle materials.
S9: Interpret information from drawings and specifications.
S10: Select, use, and store hand tools and power tools.
S11: Fabricate and install timber formwork components. For example, panels, stop ends, bolt boxes, make ups, upstands.
S12: Work at height and use access and fall protection equipment.
S13: Use formwork components and ancillary items.
S14: Follow quality assurance procedures.
S15: Measure, mark out and cut timber and nontimber formwork materials.
S16: Apply processes and techniques to install proprietary systems.
S17: Apply processes and techniques to install pre-manufactured form work structures, for example, columns, walls, pile caps and slabs.
S18: Follow equity, diversity and inclusion legislative guidance and principles.
S19: Apply ethical principles.
S20: Plan order of works and carry out pre-work and post work checks.
S21: Follow work instructions- verbal or written.
S22: Maintain and re-use formwork.
S23: Attach and remove soldiers and walings, push-pulls, tie systems.
S24: Strike box outs and bolt boxes, grout checks, level controls, angle fillets and features.
S25: Apply release agents.
S26: Comply with environmental and sustainability regulations, standards, and guidance. Segregate resources for reuse, recycling, and disposal
S27: Use lifting and lowering techniques.

Behaviours

B1: Put health, safety, and wellbeing first.
B2: Consider the environment when using resources and carrying out processes.
B3: Take ownership of given work.
B4: Contribute to an inclusive and diverse culture.
B5: Seek learning and development opportunities.
B6: Team-focus to meet team goals including, considering the wider build team.
B7: Adapt to new and changing situations.

Qualifications

English and maths

English and maths qualifications must be completed in line with the apprenticeship funding rules.

Does the apprenticeship need to include any mandated qualifications in addition to the above-mentioned English and maths qualifications?

No

Subject sector area

5.2 Building and construction