

Qualification Title: Level 2 NVQ Diploma in Sub-structure Work Occupations (Construction)

- Pathway 1:** Level 2 NVQ Diploma in Sub-structure Work Occupations (Underpinning Operations – Excavated Underpinning)
- Pathway 2:** Level 2 NVQ Diploma in Sub-structure Work Occupations (Underpinning Operations – Underpinning Piling)
- Pathway 3:** Level 2 NVQ Diploma in Sub-structure Work Occupations (Chemical and Resin Grouting)
- Pathway 4:** Level 2 NVQ Diploma in Sub-structure Work Occupations (Retaining Structures)
- Pathway 5:** Level 2 NVQ Diploma in Sub-structure Work Occupations (Dewatering – Well Points)
- Pathway 6:** Level 2 NVQ Diploma in Sub-structure Work Occupations (Dewatering – Deep Wells)
- Pathway 7:** Level 2 NVQ Diploma in Sub-structure Work Occupations (Dewatering – Ejectors)
- Pathway 8:** Level 2 NVQ Diploma in Sub-structure Work Occupations (Ground Anchors – Driven)
- Pathway 9:** Level 2 NVQ Diploma in Sub-structure Work Occupations (Ground Anchors – Open Hole)
- Pathway 10:** Level 2 NVQ Diploma in Sub-structure Work Occupations (Ground Anchors – Self-drilling)
- Pathway 11:** Level 2 NVQ Diploma in Sub-structure Work Occupations (Box Beam Post Tensioning)
- Pathway 12:** Level 2 NVQ Diploma in Sub-structure Work Occupations (Installation of Gas Membranes)
- Pathway 13:** Level 2 NVQ Diploma in Sub-structure Work Occupations (Structural Waterproofing)
- Pathway 14:** Level 2 NVQ Diploma in Sub-structure Work Occupations (Basement Construction – Underpinning Operations - Excavated Underpinning Operations)
- Pathway 15:** Level 2 NVQ Diploma in Sub-structure Work Occupations (Basement Construction - Underpinning Operations – Underpinning Piling)
- Pathway 16:** Level 2 NVQ Diploma in Sub-structure Work Occupations (Basement Construction - Chemical and Resin Grouting)
- Pathway 17:** Level 2 NVQ Diploma in Sub-structure Work Occupations (Basement Construction - Retaining Structures)
- Pathway 18:** Level 2 NVQ Diploma in Sub-structure Work Occupations (Basement Construction - Dewatering – Well Points)
- Pathway 19:** Level 2 NVQ Diploma in Sub-structure Work Occupations (Basement Construction - Dewatering – Deep Wells)
- Pathway 20:** Level 2 NVQ Diploma in Sub-structure Work Occupations (Basement Construction - Dewatering – Ejectors)
- Pathway 21:** Level 2 NVQ Diploma in Sub-structure Work Occupations (Basement Construction - Ground Anchors – Driven)
- Pathway 22:** Level 2 NVQ Diploma in Sub-structure Work Occupations (Basement Construction - Ground Anchors – Open Hole)
- Pathway 23:** Level 2 NVQ Diploma in Sub-structure Work Occupations (Basement Construction - Ground Anchors – Self-drilling)
- Pathway 24:** Level 2 NVQ Diploma in Sub-structure Work Occupations (Basement Construction - Box Beam Post Tensioning)
- Pathway 25:** Level 2 NVQ Diploma in Sub-structure Work Occupations (Basement Construction - Installation of Gas Membranes)
- Pathway 26:** Level 2 NVQ Diploma in Sub-structure Work Occupations (Basement Construction – Structural Waterproofing)

Value for TQT (pathway 1): 810

Value for TQT (pathway 2): 730

Value for TQT (pathway 3): 540

Value for TQT (pathway 4): 590
 Value for TQT (pathway 5): 480
 Value for TQT (pathway 6): 480
 Value for TQT (pathway 7): 480
 Value for TQT (pathway 8): 420
 Value for TQT (pathway 9): 450
 Value for TQT (pathway 10): 530
 Value for TQT (pathway 11) 510
 Value for TQT (pathway 12): 440
 Value for TQT (pathway 13): 460
 Value for TQT (pathway 14): 1470
 Value for TQT (pathway 15) 1390
 Value for TQT (pathway 16) 1200
 Value for TQT (pathway 17) 1250
 Value for TQT (pathway 18) 1140
 Value for TQT (pathway 19) 1140
 Value for TQT (pathway 20) 1140
 Value for TQT (pathway 21) 1080
 Value for TQT (pathway 22) 1110
 Value for TQT (pathway 23) 1190
 Value for TQT (pathway 24) 1170
 Value for TQT (pathway 25) 1100
 Value for TQT (pathway 26) 1120

**CITB unit ref for internal use only*

Mandatory units for all pathways

*CITB unit ref	Title	Level
641	Conforming to general health, safety and welfare in the workplace	1
642	Conforming to productive working practices in the workplace	2
643	Moving, handling and storing resources in the workplace	2

Mandatory unit for pathway 1 (Underpinning Operations – Excavated Underpinning)

*CITB unit ref	Title	Level
167v2	Setting out and marking positions for-underpinning sequence in the workplace	3

Optional units for pathway 1

A minimum of 14 credits from ONE unit must come from Optional Group A with a further 44 credits from FOUR units which must come from Optional Group B

Group A (credit value 14) ONE unit

*CITB unit ref	Title	Level
168v2	Excavating for underpinning in the workplace	2
173v3	Excavating and providing temporary support to pits and trenches in the workplace	2

Group B – (credit value 44) FOUR units

*CITB unit ref	Title	Level
161v2	Erecting and striking underpinning formwork in the workplace	2
164v2	Installing reinforcement steel for underpinning in the workplace	2
169v2	Installing drypacking in the workplace	2
171v2	Repairing sub-structure after underpinning in the workplace	2
225v2	Placing and compacting concrete in the workplace	2
763v1	Installing, constructing, maintaining, dismantling and removing temporary works in the workplace	2

Mandatory units for pathway 2 (Underpinning Operations – Underpinning Piling)

*CITB unit ref	Title	Level
167v2	Setting out and marking positions for underpinning sequence in the workplace	2
170v2	Installing piles in areas of restricted access (micro- or mini-piling) in the workplace	2
657	Inspecting and completing user maintenance on plant or machinery in the workplace	1

Optional units for pathway 2		ONE Units
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*CITB unit ref	Title	Level
171v2	Repairing sub-structure after underpinning in the workplace	2
173v2	Excavating and providing temporary support to pits and trenches in the workplace	2
225v2	Placing and compacting concrete in the workplace	2
402Av2	Slinging and hand signalling the movement of suspended loads in the workplace	2
763v1	Installing, constructing, maintaining, dismantling and removing temporary works in the workplace	2

Mandatory units for pathway 3 (Chemical and Resin Grouting)		
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*CITB unit ref	Title	Level
520v2	Preparing the site for chemical and resin grouting and soil injection in the workplace	2
521v2	Carrying out chemical and resin grouting and soil injection in the workplace	2

Optional units for pathway 3		ONE Unit
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*CITB unit ref	Title	Level
360v3	Installing, maintaining and removing work area protection and safety equipment in the workplace	2
402Av2	Slinging and hand signalling the movement of suspended loads in the workplace	2
657	Inspecting and completing user maintenance on plant or machinery in the workplace	1

Mandatory units for pathway 4 (Retaining Structures)		
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*CITB unit ref	Title	Level
360v3	Installing, maintaining and removing work area protection and safety equipment in the workplace	2
400v2	Preparing and operating powered units, tools or pedestrian plant, machinery or equipment in the workplace	2
401v2	Setting out secondary dimensional work control in the workplace	2

Optional units for pathway 4**ONE Unit**

*CITB unit ref	Title	Level
563v2	Installing mass gravity retaining structures in the workplace	2
564v2	Installing precast concrete retaining structures in the workplace	2
565v2	Installing reinforcement for the formation of soil structures and slopes in the workplace	2
566v2	Stabilising steep slopes in the workplace	2

**Mandatory units for pathway 5
(Dewatering – Well Points)**

*CITB unit ref	Title	Level
486v2	Preparing the site for the installation of dewatering systems in the workplace	2
487v2	Installing well point dewatering systems in the workplace	2

**Mandatory units for pathway 6
(Dewatering – Deep Wells)**

*CITB unit ref	Title	Level
486v2	Preparing the site for the installation of dewatering systems in the workplace	2
489v2	Installing deep well dewatering systems in the workplace	2

**Mandatory units for pathway 7
(Dewatering – Ejectors)**

*CITB unit ref	Title	Level
486v2	Preparing the site for the installation of dewatering systems in the workplace	2
490v2	Installing ejector dewatering systems in the workplace	2

Optional units for pathways 5, 6 and 7 ONE Unit

*CITB unit ref	Title	Level
360v3	Installing, maintaining and removing work area protection and safety equipment in the workplace	2
400v2	Preparing and operating powered units, tools or pedestrian plant, machinery or equipment in the workplace	2
402Av2	Slinging and hand signalling the movement of suspended loads in the workplace	2
657	Inspecting and completing user maintenance on plant or machinery in the workplace	1

**Mandatory units for pathway 8
(Ground Anchors – Driven)**

*CITB unit ref	Title	Level
513v2	Preparing the site to install ground anchors in the workplace	2
514v2	Installing mechanical ground anchors in the workplace	2

**Mandatory units for pathway 9
(Ground Anchors – Open Hole)**

*CITB unit ref	Title	Level
513v2	Preparing the site to install ground anchors in the workplace	2
515v2	Installing open hole ground anchors in the workplace	2

**Mandatory units for pathway 10
(Ground Anchors – Self-drilling)**

*CITB unit ref	Title	Level
513v2	Preparing the site to install ground anchors in the workplace	2
516v2	Installing self-drilling ground anchors in the workplace	2

Optional units for pathway 10 ONE Unit

*CITB unit ref	Title	Level
400v2	Preparing and operating powered units, tools or pedestrian plant, machinery or equipment in the workplace	2
657	Inspecting and completing user maintenance on plant or machinery in the workplace	1

**Mandatory units for pathway 11
(Box Beam Post Tensioning)**

*CITB unit ref	Title	Level
360v3	Installing, maintaining and removing work area protection and safety equipment in the workplace	2
518v2	Preparing the site for the installation of post tensioning systems as sub-structural repair in the workplace	2
519v2	Installing post tensioning system as sub-structural repair in the workplace	2

**Mandatory units for pathway 12
(Installation of Gas Membranes)**

*CITB unit ref	Title	Level
612v2	Preparing to install gas membranes in the workplace	2
613v2	Installing gas membranes in the workplace	2

**Mandatory units for pathway 13
(Structural Waterproofing)**

*CITB unit ref	Title	Level
491v2	Preparing surfaces for structural waterproofing in the workplace	2
492v2	Carrying out structural waterproofing in the workplace	2

Optional units for pathway 13

*CITB unit ref	Title	Level
360v3	Installing, maintaining and removing work area protection and safety equipment in the workplace	2
400v2	Preparing and operating powered units, tools or pedestrian plant, machinery or equipment in the workplace	2
401v2	Setting out secondary dimensional work control in the workplace	2
657	Inspecting and completing user maintenance on plant or machinery in the workplace	1

**Mandatory units for pathway 14
(Basement Construction – Excavated
Underpinning Operations)**

*CITB unit ref	Title	Level
167v2	Setting out and marking positions for-underpinning sequence in the workplace	3
762v1	Working on basement construction projects in the workplace	2
763v1	Installing, constructing, maintaining, dismantling and removing temporary works in the workplace	2

Optional units for pathway 14

A minimum of ONE unit must come from Optional Group A with a further minimum of FOUR units must come from Optional Group B

Group A ONE unit

*CITB unit ref	Title	Level
168v2	Excavating for underpinning in the workplace	2
173v3	Excavating and providing temporary support to pits and trenches in the workplace	2

Group B –FOUR units

*CITB unit ref	Title	Level
161v3	Erecting and striking underpinning formwork for in the workplace	2
164v2	Installing reinforcement steel for underpinning in the workplace	2
169v2	Installing drypacking in the workplace	2
171v2	Repairing sub-structure after underpinning in the workplace	2
225v2	Placing and compacting concrete in the workplace	2
763v1	Installing, constructing, maintaining, dismantling and removing temporary works in the workplace	2

Optional units for pathway 16 **ONE Unit**

*CITB unit ref	Title	Level
360v3	Installing, maintaining and removing work area protection and safety equipment in the workplace	2
402Av2	Slinging and hand signalling the movement of suspended loads in the workplace	2
657	Inspecting and completing user maintenance on plant or machinery in the workplace	1

**Mandatory units for pathway 17
(Basement Construction –Retaining Structures)**

*CITB unit ref	Title	Level
360v3	Installing, maintaining and removing work area protection and safety equipment in the workplace	2
400v2	Preparing and operating powered units, tools or pedestrian plant, machinery or equipment in the workplace	2
401v2	Setting out secondary dimensional work control in the workplace	2
762v1	Working on basement construction projects in the workplace	2
763v1	Installing, constructing, maintaining, dismantling and removing temporary works in the workplace	2

Optional units for pathway 17 **ONE Unit**

*CITB unit ref	Title	Level
563v2	Installing mass gravity retaining structures in the workplace	2
564v2	Installing precast concrete retaining structures in the workplace	2
565v2	Installing reinforcement for the formation of soil structures and slopes in the workplace	2
566v2	Stabilising steep slopes in the workplace	2

**Mandatory units for pathway 18
(Basement Construction – Dewatering –
Well Points)**

*CITB unit ref	Title	Level
486v2	Preparing the site for the installation of dewatering systems in the workplace	2
487v2	Installing well point dewatering systems in the workplace	2
762v1	Working on basement construction projects in the workplace	2
763v1	Installing, constructing, maintaining, dismantling and removing temporary works in the workplace	2

**Mandatory units for pathway 19
(Basement Construction – Dewatering –
Deep Wells)**

*CITB unit ref	Title	Level
486v2	Preparing the site for the installation of dewatering systems in the workplace	2
489v2	Installing deep well dewatering systems in the workplace	2
762v1	Working on basement construction projects in the workplace	2
763v1	Installing, constructing, maintaining, dismantling and removing temporary works in the workplace	2

**Mandatory units for pathway 20
(Basement Construction – Dewatering –
Ejectors)**

*CITB unit ref	Title	Level
486v2	Preparing the site for the installation of dewatering systems in the workplace	2
490v2	Installing ejector dewatering systems in the workplace	2
762v1	Working on basement construction projects in the workplace	2
763v1	Installing, constructing, maintaining, dismantling and removing temporary works in the workplace	2

Optional units for pathways 18, 19 and 20 ONE Unit

*CITB unit ref	Title	Level
360v3	Installing, maintaining and removing work area protection and safety equipment in the workplace	2
400v2	Preparing and operating powered units, tools or pedestrian plant, machinery or equipment in the workplace	2
402Av2	Slinging and hand signalling the movement of suspended loads in the workplace	2
657	Inspecting and completing user maintenance on plant or machinery in the workplace	1

**Mandatory units for pathway 21
(Basement Construction - Ground Anchors
- Driven)**

*CITB unit ref	Title	Level
513v2	Preparing the site to install ground anchors in the workplace	2
514v2	Installing mechanical ground anchors in the workplace	2
762v1	Working on basement construction projects in the workplace	2
763v1	Installing, constructing, maintaining, dismantling and removing temporary works in the workplace	2

**Mandatory units for pathway 22
(Basement Construction - Ground Anchors
– Open Hole)**

*CITB unit ref	Title	Level
513v2	Preparing the site to install ground anchors in the workplace	2
515v2	Installing open hole ground anchors in the workplace	2
762v1	Working on basement construction projects in the workplace	2
763v1	Installing, constructing, maintaining, dismantling and removing temporary works in the workplace	2

**Mandatory units for pathway 25
(Basement Construction - Installation of
Gas Membranes)**

*CITB unit ref	Title	Level
612v2	Preparing to install gas membranes in the workplace	2
613v2	Installing gas membranes in the workplace	2
762v1	Working on basement construction projects in the workplace	2
763v1	Installing, constructing, maintaining, dismantling and removing temporary works in the workplace	2

**Mandatory units for pathway 26
(Basement Construction –Structural
Waterproofing)**

*CITB unit ref	Title	Level
491v2	Preparing surfaces for structural waterproofing in the workplace	2
492v2	Carrying out structural waterproofing in the workplace	2
762v1	Working on basement construction projects in the workplace	2
763v1	Installing, constructing, maintaining, dismantling and removing temporary works in the workplace	2

Optional units for pathway 26

*CITB unit ref	Title	Level
360v3	Installing, maintaining and removing work area protection and safety equipment in the workplace	2
400v2	Preparing and operating powered units, tools or pedestrian plant, machinery or equipment in the workplace	2
401v2	Setting out secondary dimensional work control in the workplace	2
657	Inspecting and completing user maintenance on plant or machinery in the workplace	1

Unit endorsements for Level 2 NVQ Diploma in Sub-structure Work Occupations (Construction)

*CITB unit ref	Endorsement
161	One of the following endorsements required (i.e. own area of work): Excavated underpinning Basement Construction – Excavated Underpinning
170	Two of the following endorsements required: Open auger Hollow stem auger Sectional flight auger (cfa) Down-hole hammer In-hole support drilling Drop hammer Jacked down piling Pneumatic displacement piling Proprietary micro piling systems
171	Two of the following endorsements required: Brickwork Blockwork Concrete Timber Facings Linings Waterproofing systems
173	One of the following endorsements required: Timber Trench sheet Frames Support systems
225	Three of the following endorsements required: Chute Elephants trunk Skip Pump Mono-rail Manual
360	One of the following endorsements required (i.e. own area of work): Dewatering Structural waterproofing Box beam post tensioning Chemical and resin grouting Retaining structures

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*CITB unit ref	Endorsement
400	One of the following endorsements required: Generators Pumps Pedestrian operated plant or machines Mixers Compressors Self-powered tools
401	Three of the following endorsements required: Lines Levels Depths Areas Heights Angles
402A	The following endorsement required (i.e. own area of work): Slinger signaller – Underpinning Piling only Slinger signaller – Dewatering only Slinger signaller – Self-drilling Ground Anchor only Slinger signaller – Chemical and Resin Grouting
487	Two of the following endorsements required: Set up pumping system Commission and monitor system Decommission system
563	Two of the following endorsements required: Gabions Crib walls Dry laid segmental blocks
657v2	One of the following (i.e. own area of work) Underpinning piling Dewatering Structural waterproofing Ground anchors Chemical and resin grouting
762	One of the following endorsements required: Underpinning Dewatering Structural waterproofing Ground anchors Box beam post tensioning Grouting Retaining structures Installation of gas membranes
763	Four of the following endorsements required: Protective screens, hoardings and covers Access and egress routes Supports Supporting structures Removal equipment Diverting equipment Site facilities Stabilisation

Note: Where industry requests an Awarding Organisation to further endorse a unit, the Awarding Organisation must first seek approval from CITB (standards.qualifications@citb.co.uk) to ensure the endorsement is appropriate to the unit.