Formworker Apprenticeship,

Level 2:

End-point Assessment

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Introduction & Overview

This document sets out the requirements for end-point assessment (EPA) for the Formworker apprenticeship standard. It is written for end-point assessment organisations (EPAOs) who need to know how EPA for this apprenticeship must operate. It will also be of interest to Formworking apprentices, their employers and training providers.
Full time apprentices will typically spend 18-24 months on-programme working towards the apprenticeship standard, with a minimum of 20% off-the-job training. The EPA should only start once the employer is satisfied that the apprentice is consistently working at or above the level set out in the standard, that the pre-requisite gateway requirements for EPA have been met and that they can be evidenced to an EPA organisation. As a gateway requirement, apprentices must complete the NVQ Level 2 Formworking Diploma prior to taking their EPA. Apprentices without English and mathematics at level 2 must achieve level 1 English and mathematics and take the tests for level 2 prior to taking their EPA.
The EPA must be completed over a maximum total assessment time of 9 hours 40 mins, within a 14 week period, after the apprentice has met the EPA gateway requirements. EPA must be conducted by an organisation approved to offer services against this standard, as selected by the employer, from the Education & Skills Funding Agency's Register of End Point Assessment Organisations (RoEPAO).

The EPA consists of three distinct assessment methods:

- Practical Test
- Knowledge Test
- Structured interview

Performance in the EPA will determine the apprenticeship grade of fail, pass or distinction.

On-programme **(typically 18-24 months)**	**End Point Assessment Gateway**	**End Point Assessment** **(maximum 14 weeks)**
Training to develop the occupation standard's knowledge, skills and behaviours	Achieved English and maths Level 1 & attempted Level 2 tests	Practical Test
Working towards English/maths Level 2 (if required)	Achievement of NVQ L2 Formwork	Knowledge test
Working towards NVQ L2 formwork diploma	Employer satisfied apprentice is consistently working at or above the level of the standard Portfolio to support Structured interview	Structured interview Graded fail, pass or distinction
Formworker standard		

Diagram 1. Typical Formworker Apprenticeship Summary

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End-point Assessment Gateway

The EPA should only start once the employer is satisfied that the apprentice is consistently working at or above the level set out in the standard, the pre-requisite gateway requirements for EPA have been met and that they can be evidenced to an EPA organisation. Employers may wish to take advice from their apprentice's training provider(s).

Gateway requirements:

- Apprentices without English and mathematics at level 2 must have achieved level 1 English and mathematics and have attempted the tests for level 2
- NVQ L2 Formwork Diploma
- Portfolio to support Structured interview
- Prior to entering the gateway, the employer, taking advice from the training provider (if applicable) and in consultation with the apprentice will review and confirm that all KSBs have been evidenced.

The portfolio must:

- document off-the-job training that the apprentice has completed to demonstrate competence in the knowledge, skills and behaviours aligned to the Structured Interview (See Annex A);
- contain evidence demonstrating competence against the knowledge, skills and behaviours (KSBs).
- Individual pieces of evidence can be used to demonstrate competence against one or more KSB.
- Evidence sources may include evidence of work undertaken which may be supported by: client feedback, witness testimonies, employer/trainer feedback, training records, appraisal records, training course completion. This list is not definitive, other evidence sources are permissible however reflective accounts and self-evaluations are not allowed.

End-point Assessment Methods, Timescales & Location

The end-point assessment consists of three distinct assessment methods:

- Practical Test
- Knowledge Test
- Structured interview

It is anticipated that all assessments will take place on consecutive days however this is not a requirement, allowing end point assessment organisations flexibility in scheduling and cost-effective allocation of resources.
EPAOs must ensure that the Practical Test takes place in a realistic work environment under normal conditions. The Structured interview element and knowledge test are conducted on site in a suitable controlled environment i.e. quiet room free from distraction and influence, with the necessary equipment for each assessment method e.g. computer, power-point facilities (if required by the apprentice). It is anticipated that EPAOs will use the employer's premises

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wherever possible to minimise costs. They may be conducted face-to-face or via an online platform e.g. video-conferencing. EPAOs must ensure appropriate methods to prevent misrepresentation are in place should an online option be used. For example, screen share and 360-degree camera function with an administrator/invigilator when taking the knowledge test on-line.

Requirements for each assessment method are detailed below.

Method 1 – Knowledge test

- Apprentices must complete a knowledge test during the EPA period.
- The knowledge test must assess against the standard's knowledge and skills as shown in annex 1.
- The knowledge test must consist of 30 multiple-choice knowledge based questions.
- Each question must present 4 options, from which the apprentice must select one or multiple correct options.
- Each question answered correctly must be assigned 1 mark, any incorrect or missing answers must be assigned 0 marks.
- There is a maximum of 1 hour to complete the knowledge test.
- The knowledge test must be closed book i.e. the apprentice can't refer to reference books or materials.
- Knowledge tests can be either electronic or a paper-based.
- Apprentices must take the knowledge test in the presence of an EPAO administrator/invigilator.
- The maximum administrator/invigilator to apprentice ratio must be 1 to 10 if face-to-face; or 1 to 5 if remote.
- Knowledge tests must be marked by EPAO independent assessors or markers following a marking guide produced by the EPAO; electronic marking is permissible.
- Independent assessors must award a grade using the following grading boundaries.

Grading boundaries	**Fail**	**Pass**	**Distinction**
Marks	0-14	15-22	23-30

- It is recommended that EPAOs develop questions in consultation with representative employers.
- EPAOs must ensure the knowledge test is available for apprentices within their 14-week EPA time period
- EPAOs must develop and maintain a knowledge test question bank of sufficient size to prevent predictability and review them regularly (and at least once a year) to ensure they, and the specifications they contain, are fit for purpose.
- EPAOs must ensure that apprentices have a different set of questions in the case of re-sits/re-takes.

Method 2 – Practical Test

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- Apprentices must be observed by an independent assessor completing two tasks providing the opportunity to assess KSBs as shown in Annex A.
- They must be observed carrying out two of the following: using a specification/drawing to select the correct materials and tools and then position and fix in place formwork for a slab, beam, kicker, column, deck, wall or lift shaft. Examples are provided in Annex C.
- During or after the task completion the independent assessor must ask 6 set open questions to assess related underpinning knowledge. They may ask follow up questions where clarification is required. Questioning must be completed within the total time allowed for the practical test.
- KSBs observed and answers to questions must be documented by the independent assessor.
- Apprentices must be provided with both written and verbal instructions on the tasks they must complete including timescales.
- Practical tests must be carried out over a maximum total assessment time period of 8hours (+/- 48 minutes at the discretion of the independent assessor to allow apprentices to demonstrate their full abilities). There may be breaks during the practical test to allow the apprentice to move from one location to another within the work site.
- Practical tests must be conducted in a realistic work situation under normal conditions. It is anticipated that end point assessment organisations will use the apprentice's normal work environment to carry out the practical test.
- Independent assessors may observe up to a maximum of 2 apprentices at any one time, to allow for cost effective use of resources while maintaining quality and rigour.
- Practical test specifications must be determined and standardised by the EPAO.
- EPAO's must develop a bank of practical test specifications of sufficient size to prevent predictability, each including questions relating to underpinning knowledge, to ensure sufficient variation; and review them regularly (and at least once a year) to ensure they, and the specifications they contain, are fit for purpose.

Method 3: Structured interview

- The structured interview must take place on a one-to-one basis between an independent assessor and an apprentice.
- Prior to the structured interview, the independent assessor must have reviewed the apprentice's portfolio (The portfolio is incorporated in the apprentice's NVQ L2 Formwork, which needs to be submitted as part of the EPA gateway requirements) and prepared questions for the questioning element.) Portfolio will be submitted to the EPAO within 4 weeks from agreeing that gateway conditions have been met.
- The interview must take 40 minutes (+/- 4 minutes at the discretion of the independent assessor to allow apprentices to demonstrate their full abilities).
- The independent assessor must ask the apprentice 8-10 open questions; follow up questions are allowed to seek clarification.
- Questions must seek to assess KSBs and depth of understanding to assess performance against the pass and distinction criteria.
- Apprentices may refer to their portfolio aides when answering the questions.
- EPAOs must produce sample questions as a guide for independent assessors.
- The questioning should be recorded electronically.
- Independent assessors must assess the interview using the grading criteria in annex B.

Apprenticeship Grading

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Independent assessors must individually grade each assessment method – fail, pass or distinction, according to the requirements set out in this plan. Restrictions on grading apply where apprentices re-sit/re-take an assessment method – see re-sit/re-take section below.

An independent assessor must combine the grades of all assessment methods to determine the EPA grade.

To achieve an EPA pass, apprentices must achieve a pass in all assessment methods. To achieve an EPA distinction, apprentices must achieve a distinction in all assessment methods. To get a Fail, apprentice will fail in at least 1 EPA method. Where more than one independent assessor is involved, the independent assessor responsible for the assessment method completed last will be responsible for combining the grades.

Independent assessors' decisions must be subject to moderation by the EPAO – see internal quality assurance section below. Decisions must not be confirmed until after moderation.

Re-sit and re-take information

Apprentices who fail one or more EPA method will be offered the opportunity to take a re-sit/retake. Re-sits/re-takes must not be offered to apprentice wishing to move from pass to distinction. A re-sit does not require further learning, whereas a re-take does.

The apprentice's employer will need to agree that a re-sit/re-take is an appropriate course of action. Apprentices should have a supportive action plan to prepare for the re-sit/re-take.

An individual EPA method re-sit/re-take must be taken during the maximum EPA period i.e. 14 weeks of the original test, otherwise the entire EPA must be retaken.

The maximum grade awarded to a re-sit/re-take will be pass, unless the EPAO identifies exceptional circumstances accounting for the original fail.

EPAOs must ensure that apprentices complete a different knowledge test and practical test, and are asked different questions in the structured interview when taking a re-sit/re-take.

End-point Assessment Organisations

Employers must choose an independent EPAO approved to deliver the EPA for this apprenticeship from the Education & Skills Funding Agency's (ESFA's) Register of End Point Assessment Organisations (RoEPAO).

Requirements for Independent Assessors, Invigilators and Markers

EPAOs must appoint:

- administrators/invigilators and markers to administer/invigilate and mark the knowledge test
- independent assessors to grade the knowledge test
- independent assessors to assess and grade the practical test
- independent assessors to assess and grade the Structured interview
- quality assurance staff to undertake moderation of EPA

Independent assessors must meet the following requirements:

- be independent of the apprentice, their employer and training provider(s) i.e. there must be no conflict of interest

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- hold or be working towards an assessor qualification e.g. A1 and have had training from their EPAO in terms of good assessment practice, operating the assessment tools and grading
- be currently working in the industry and be occupationally competent at a minimum of level 3, or equivalent, with a minimum 2 years' post qualification experience in the last 5 years
- undertake a minimum of 1-days' EPAO standardisation training per year

EPAO's must appoint administrators/invigilators and markers to administer/invigilate and mark the knowledge test. They must have no direct connection with the apprentice, their employer or training provider i.e. there must be no conflict of interest. There are no specific qualification or experience requirements for administrators/invigilators/markers. They must be trained in the task(s) by their EPAO and operate according to their guidance.

Quality assurance staff must hold or be working towards quality assurance qualifications. They must be independent of the apprentice, their employer and training provider i.e. there must be no conflict of interest.

Internal quality assurance

Internal quality assurance refers to the requirements that EPA organisation must have in place to ensure consistent (reliable) and accurate (valid) assessment decisions. EPA organisations for this EPA must undertake the following:

- appoint independent assessors that meet the requirements as detailed in this plan – see above
- provide training for independent assessors in terms of good assessment practice, operating the assessment tools and grading
- have quality assurance systems and procedures that support fair, reliable and consistent assessment across organisation and over time
- operate regular standardisation events that enable assessors to attend a minimum of 1 event per year
- operate moderation of assessment activity and decisions, through examination of documentation and observation of activity, with a minimum of 15% of each independent assessors' assessments moderated

Assessment tools and materials

EPAOs must produce assessment tools and supporting materials for the EPA, as follows:

- Sample questions for Structured interview and observation questioning
- Documentation for recording assessment evidence and decisions
- Guidance for independent assessors on conducting the EPA
- Guidance for apprentices, their employers and training providers on the EPA

External Quality Assurance

External quality assurance for this apprenticeship standard will be undertaken by Construction Industry Training Board (CITB).

Implementation

Affordability

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The following factors should ensure the EPA is affordable:

- Employers premises should be used for EPA venues where possible
- Remote assessment is permissible, reducing travel costs
- The practical test is based on realistic work completed for the employer, adding value to the employer

Volumes

It is anticipated that there will be 80 starts per year on this apprenticeship and 100 per year once established.

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Annex A – Knowledge, Skills and Behaviours to be assessed by each assessment method

Key	Assessment Method
SI	Structured interview
KT	Knowledge Test
PA	Practical Assessment

Knowledge	Understanding of	EPA
Health, Safety and Environment	The principles of health, safety and welfare and how it must be applied in relation to work and others and their responsibilities under current legislation, (including the Health and Safety at Work Act 1974; Provision and Use of Workplace Equipment 1998; Manual Handling Operation Regulations 1992) and official guidance to when carrying out formwork activities, including safe erection, use and dismantling of falsework. The different and safe techniques required to move, handle and store resources and how risk assessments, methods statements and manufacturers' guidance relate to their activities	KT SI
Communication	How to communicate with others and follow organisational procedures to conform to productive work practices Effects that poor communication could have on the overall process and how the use of communication correctly would improve teamwork.	SI
Planning, preparing and organising work	The material application relevant in accordance with the contract specification and planning the sequence of works involved with other construction trades. How to interpret and produce building information and use of relevant equipment to produce drawings correctly.	PA KT SI
Technical	How to form, assemble repair, erect and strike formwork and is aware of the different formwork systems including traditional and proprietary and their applications. The principles of building methods and construction technology, different types of building structures and their impact on their energy efficiency levels. Comprehends how to use and maintain hand tools, power tools and ancillary equipment and is able to interpret/ apply information from drawings and specifications	PA KT SI

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Skill	The ability to	
Communication	Communicate in a clear and appropriate manner (verbal, written, body language). Adjusts communication to suit different situations, individuals or teams.	SI PA
Health, Safety and Environment	Apply general workplace health, safety and welfare requirements when undertaking construction formwork/falsework activities. Practice safe working techniques for moving, lifting and handling traditional and proprietary formwork system; which will include working at heights and using access equipment.	PA SI
Planning, preparing and organising works	Demonstrate knowledge of planning and able to undertake different methods of construction used to build structures productively. Competent to read, interpret and apply information from drawings, specifications and construction information. Takes ownership of allocated projects and effectively manages own time.	SI PA
Building Relationship	Use a range of methods used to communicate workplace requirements effectively and demonstrate how key personnel should communicate effectively within a team.	SI PA
Technical	Form and assemble horizontal and vertical formwork as per design drawings and repair, erect and strike formwork. Erect, Strike formwork/ falsework and its components for a range of applications including wall, slabs/bases, columns, beams and precast units to support concrete. Competent to safely use, store and maintain hand tools, power tools and ancillary equipment.	SI PA

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Behaviour	What is required	
Flexibility	Shows willingness to adjust their approach to help organisation and individuals to manage their different priorities as situations change.	SI
Self-management	Is proactive and takes ownership of assigned tasks and effectively manages own time. Logically thinks using clear and valid reasoning when making decision to undertake the work instruction Works effectively with others and completes work in a reliable and productive manner.	PA
Health, Safety and Environment	Promotes and applies safe, healthy and environmental working methods and standards Ensures personal wellbeing and others safety, be able to resist pressures to work following unsafe practices when striking / erecting formwork / falsework and taking clear responsibility for completion of their own work.	SI PA
Building Relationship	Actively seeks to build good and sustainable relationships with work colleagues. Consistently aims to support individuals and co-operate to achieve results as part of a team.	SI PA
Communication	Applies equality, diversity and inclusion when working/communicating respectfully in team and with other trades.	SI PA
Personal development	Takes ownership of their own development by assessing their own skills, qualities and set goals to maximise their potential.	SI

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Annex B – Grading Criteria

End-Point Assessment Element	Fail	Pass Criteria	Distinction Criteria
Knowledge Test	**Score ≤ 14**	**15 - 22**	**23 - 30**
Structured interview	The apprentice has failed to meet the pass criteria	Can describe the steps taken to ensure standards in Health, Safety and Environment are met when carrying out formworking. Can identify the main Acts and/or Regulations in respect of Health, Safety & Environment which apply to the Construction industry. Can explain the reasons for using the correct moving, handling and lifting techniques. Can describe the safe working techniques for moving, lifting and handling traditional and proprietary formwork system; including working at heights and using access equipment.	Meets all the requirements for a pass plus: Can explain the key elements of health and safety welfare and environment and why they are in place. Provides examples of building structures and how the build method/design has maximised energy efficiency, Suggests innovation and recommendations to support improvement of the outcomes/performance of formwork projects. Communicates clearly with others and offers reasons as to why procedures and practices are required. Can describe the range of uses of hand tools, power

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		Can explain the principles of building methods and construction technology. Can list different types of building structures and the impact on their energy efficiency levels. Can explain how to form, assemble, repair, erect and strike formwork. Can list different formwork systems including traditional and proprietary and their applications. Can describe how to form and assemble horizontal and vertical formwork as per design drawings. Can describe the different methods to erect, strike formwork/falsework and its components for a range of applications including wall, slabs/bases, columns, beams and precast units to support concrete.	tools and ancillary equipment and the reasons for safety checks and maintenance, citing consequences of not carrying them out. Interprets and applies information from drawings and specifications. Can provide examples of when they have had to demonstrate flexibility and describe the effect on the project. Can explain the benefits of teamwork to the achievement of a task. Describes the importance of self-evaluation and Continuous Professional Development.

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		Can describe their approach to managing their different priorities as situations change. Communicates with others and follows organisational procedures to conform to productive work practices. Can describe how to use and maintain hand tools, power tools and ancillary equipment according to specification and safety requirements. Correctly identifies information on drawings and specifications. Correctly explains the sequence of work required to achieve the completed formwork. Can describe how they have worked in a team to achieve a completed formwork task.	

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		Can explain the steps taken to evaluate self and plan their personal development.	
Practical Test	Apprentice has failed to meet the pass criteria.	Able to prepare documents/equipment and set up correctly according to specifications/drawings. Works in a safe manner and follows health and safety procedures. The principles of health, safety and welfare is applied in relation to work and others and their responsibilities under current legislation. Correctly fabricates, erects and strikes, formwork and its components for a range of various applications to support concrete according to specification. Produces a fabrication with at least 80% of measurements within the tolerance of +/-5mm.	Meets all the requirements for a pass and: Ensures all documents and equipment are fully and correctly set up to optimise efficiency in the task. Completes the work within deadline and to specification. Completes the task without requesting further materials due to errors or miscalculations. Produces a fabrication with at least 80% of measurements within the tolerance of +/-2mm. Presents the work completed within timescales and specification. Can describe how risk assessments, method

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		Completes at least 80% of the work to deadline. Correctly interprets and produces at least 80% of building information correctly. Correctly applies general workplace health, safety and welfare standards when undertaking construction formworking/falseworking activities. Practices safe working techniques for moving, lifting and handling traditional and proprietary formwork system; including working at heights and using access equipment. Undertakes a minimum of 2 different methods of construction to build structures. Correctly identifies at least 80% of information from	statements and manufacturers' guidance relate to their activities. Correctly interprets and produces fully accurate building information. Correctly uses relevant equipment to produce drawings correctly. Able to undertake any method of construction used to build structures and explain the appropriateness of each. Reads, interprets and applies all information from drawings, specifications and construction information accurately. Takes full ownership of allocated projects. Forms and assembles horizontal and vertical formwork as per design drawings, completing the full task before the set time.

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		drawings, specifications and construction information. Forms and assembles horizontal and vertical formwork as per design drawings completing the 80% or more of the task in the set time. Uses, stores and maintains hand tools, power tools and ancillary equipment safely. Aware of personal wellbeing, able to resist pressures to work following unsafe practices when striking / erecting formwork / falsework and takes responsibility for completion of their own work under supervison of line manager.	Uses, stores and maintains hand tools, power tools and ancillary equipment safely to manufacturers specifications and company procedures demonstrating consideration for the next user. Explains the logic used to plan and undertake the work instruction. Ensures personal wellbeing and the safety of others, demonstrating best practice. Able to resist pressures to work following unsafe practices and takes sole responsibility for completion of their own work.

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Annex C - EPA Practical Assessment example

Example 1.

Task Name: Erecting and striking Falsework Decking

Brief overview of the tasks: two tasks from the below list will be chosen by the assessor and must be completed within 8 hours. A suggested time allowance is given for two tasks, but the apprentice can use a little more or less time on a task as long as he/she finish the whole assignment within 8 hours. The individual must remember that over-running on one task will leave he/she less time for the remaining tasks.

To pass this assignment, he/she must show the assessor that they use safe working practices throughout this assignment. They must use the relevant safety equipment and work to current legislation and regulations. If they do not do this, the assessor must stop the test immediately.

Plan the work and product cutting list (time guide 4 hours)
To do this you must:
• Use the drawings to plan the job
• Plan your work to make the best use of your time
• Show the panel construction of column, using the drawing provided
• Mark out the position of the wall kicker as per drawing
• Produce a cutting list of all the materials you need to complete the whole job (fabricate four wall panels, one stop-end and four column panels)
• Produce a list of all fixings required
• Produce a list of all necessary hand and power tools required

Erect panels for wall and column (time guide 4 hours)
To do this you must:
• Position and fix a wall kicker, working from the column kicker provided
• Erect and position the wall formwork and stop-end to the kicker
• Fix tie rods, soldiers and props as necessary
• Plumb and line the wall
• Erect and position the column formwork to the kicker
• Fix column clamps and props as necessary

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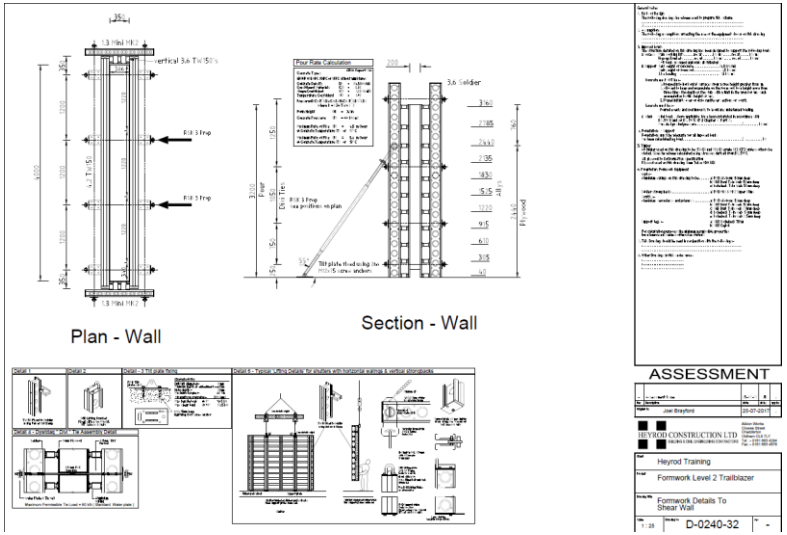
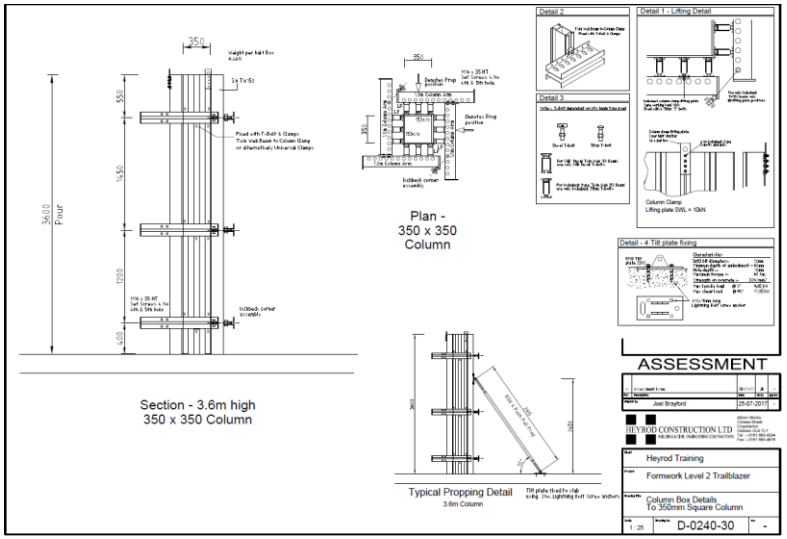
- Plumb and line the column
- Fix the horizontal fillet.





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