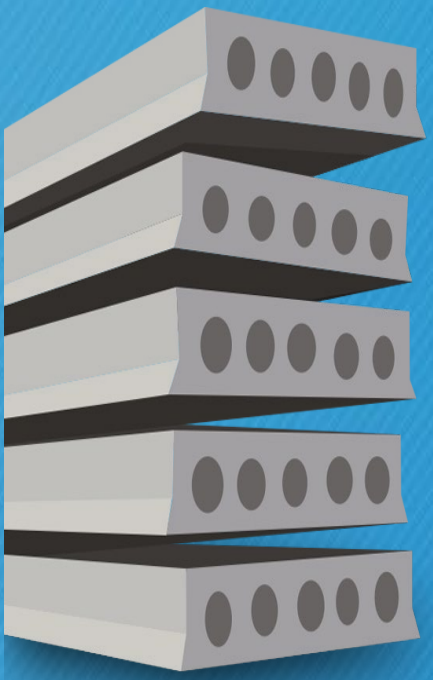
Safe Stressing Competence Programme (SSCP) for Prestressing of Precast Concrete



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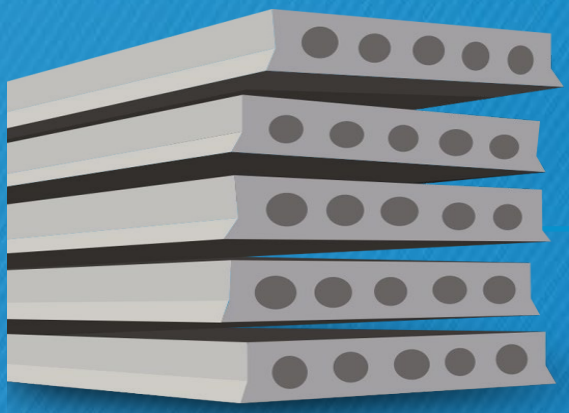


Quality Assurance

Professional Recognition

Proskills Global Limited
Registered in England and Wales 10200788

Section 1 Programme Details

Safe Stressing Competence Programme (SSCP)

Section 2 Coverage and Training Provision

Safe Stressing Competence Programme (SSCP)

Guidance Notes

Module Reference

Foreword

Safe Stressing Competence Programme (SSCP)

Ensuring Excellence and Safety in Prestressing Operations

The Safe Stressing Competence Programme for Precast Concrete (SSCP) is a comprehensive scheme designed to certify the competence of all personnel involved in the Prestressing of Precast Concrete. This includes operational staff such as management/supervisors, maintenance personnel, bed and stressing operatives, and site personnel. The SSCP operates both nationally and internationally, providing a robust framework for ensuring high safety and performance standards in the industry.

Accreditation and Recognition

Competence Testing: Personnel who demonstrate the required skills, knowledge, and competence levels will receive a Certificate and ID of Competence.

National Register: Accredited personnel are recorded on a national register, allowing employers, the Health and Safety Executive (HSE), and other stakeholders to validate their achievements.

Development and Administration

Industry Collaboration: The scheme has been developed by industry experts, training partners, and Proskills Global, in association with the MPA and the HSE.

Proskills Global Limited: As the scheme proprietor and administrative body, Proskills Global monitors and reviews the SSCP, ensuring it remains effective and up to date with industry standards and the MPA Precast Code of Practice 2nd Edition.

Key Benefits

Safety and Competence: The SSCP plays a crucial role in enhancing the safety and competence of personnel in the prestressing industry, significantly contributing to accident reduction.

Recognition of Training Achievements: The scheme supports the recognition of training achievements and underlines a commitment to safety standards across the industry.

Training and Competence

Training Importance: Training is a vital element in ensuring employee competence, with the HSE recognizing this scheme as a major step towards improving safety in the prestressing industry.

Complementary Qualifications: The competencies recognized by the SSCP complement existing National Vocational Qualifications (NVQs) and Scottish Vocational Qualifications (SVQs).

Voluntary Participation

Voluntary Scheme: While the use of the SSCP Scheme is voluntary and not legally required for employment, it is strongly encouraged by the HSE and industry codes of practice.

Industry Recommendation: Proskills Global recommends that all manufacturers involved in prestressing operations adopt this scheme to promote high standards of safety and competence.

Vision Zero

Commitment to Safety: The MPA Precast Code of Practice 2nd Edition aims to achieve "Vision Zero" within the industry, striving to eliminate accidents and enhance health and safety standards.

Why Choose the SSCP?

Rigorous Standards: The SSCP ensures that all personnel meet rigorous safety and competence standards, protecting both workers and the public.

Industry Recognition: Accreditation through the SSCP is recognised and respected across the industry, providing assurance of quality and safety.

Continuous Improvement: The scheme is continually reviewed by the industry working group and updated to reflect the latest industry practices and regulatory requirements.

Health & Safety Executive Foreword

HSE have provided a limited amount of support in the development of this guidance.
HSE encourages and welcomes industry codes of practice such as this produced by MPA Precast, which receive careful consideration and input from key players within the industry who have the health, safety and welfare of those involved in prestressing work foremost on their minds.

If a stressing bed system were to fail, serious injuries or fatalities are a possibility. If the work is planned in line with this code of practice guidelines and carried out by competent operatives, using equipment properly maintained and inspected then many accidents can be prevented.

I am pleased to acknowledge the work of the MPA Precast and those involved in preparing this code of practice. It brings together good practice within the industry and has the interest of those involved in the manufacture of prestressed concrete products at heart. It is only by the industry showing leadership, working in partnership, and taking ownership of the management of risk that improvements will be made, and I commend its use to all concerned.

Health and Safety Executive

MPA CEO Message

This is the second edition of the Code of Practice for the Safe Stressing of Prestressed Concrete Products. Its revision and update is another step towards Vision Zero in the precast industry and accords with the aims of raising standards for health and safety in the workplace.

The dangers of the prestressing process should be fully appreciated, and this code goes a long way towards establishing a safer working environment for all involved in prestressing operations. We therefore advise all manufacturers involved in prestressing operations to take a detailed review of this code and implement all necessary health and safety policies, procedures and physical controls recorded.

'Struck by flying or falling objects;' is one of 'The Fatal 6'; the high consequence hazards that have been responsible for the majority of serious and fatal injuries in the mineral products sector. Prestressing operations present a very significant risk of 'Struck by' injuries if they are not well managed and controlled. This Code goes a long way towards helping to establish a safer working environment for all involved in prestressing operations.

We therefore recommend that all manufacturers involved in prestressing operations perform a detailed review of their prestressing operations and taking into account the content of this Code, implement improvements to their relevant health and safety policies, procedures and physical controls, where required.

MPA CEO – Jon Prichard

Proskills Global Limited MD Message

Launched in January 2024, the Safe Stressing Competence Programme for Precast Concrete (SSCP) is already setting a clear benchmark for safety and competence in prestressing activities. Covering all roles—from management and supervisors to operatives and site staff—the scheme ensures that everyone involved has the skills and knowledge to work safely and effectively.

Developed in collaboration with industry experts, the MPA, and the HSE, and administered by Proskills Global, the SSCP provides accredited certification and a national register of competent personnel.

We are incredibly pleased to see increasing numbers of companies registering with the scheme and, importantly, investing in developing their own in-house trainers and assessors to deliver the course directly. This demonstrates real industry commitment to embedding safety and competence at every level.

While participation is voluntary, the SSCP is strongly supported by the HSE and industry codes of practice. Proskills Global encourages all manufacturers engaged in prestressing to adopt the scheme, ensuring consistent standards of safety, professionalism, and risk management across the sector.

The SSCP is still in its early stages, but its rapid progress shows the industry's shared determination to strengthen safety, raise competence, and safeguard the future of precast concrete stressing.

Proskills Global Limited M.D – Claire Cousins

Acknowledgments

The members of MPA Precast and stakeholders made the publication of the code of practice possible, whilst many individuals contributed, the following deserve a particular mention:

- *Arbour Safety Management Ltd* **– Glenn Rowe**
- *Bison Precast Forterra Building Products Limited* **– Nicola Barron**
- *CEMEX* **– Sue Townsend**
- *HSE* **– Natalie Tinsley**
- *Ibstock Group* **– Mark Vallender**
- *Megasteel* **– Nigel Roberts**
- *Proskills Global Limited* **– Andy Rotherham**
- *Stress-Tec UK Ltd* **– Frank Howarth**

The following organisations and individuals also played a major part in the re-development of the programme:

- **Arbour Safety Management** – Glenn Rowe
- **CEMEX** – Sue Townsend
- **EKC Systems Ltd** – Mark Wilson
- **Proskills Global Limited** – Claire Cousins, Andy Rotherham
- **Stress-Tec UK Ltd** – Frank Howarth

Safe Stressing Competence Programme (SSCP) for Precast Concrete

1. Introduction

a. **The Safe Stressing Competence Programme (SSCP)** is a scheme for the training, registration and certification of all personnel involved specifically with the Prestressing of Precast Concrete.

b. The Scheme continues to be developed and will be administered on behalf of the industry by Proskills Global Limited.

c. The initial Scheme (CTA) was introduced in 2003. This revised update became effective from January 2024.

d. The Scheme will incorporate:
   i. Registration of candidates via Proskills Global Limited.
   ii. On-site training and assessment carried out by Proskills Global Limited approved training partners.
   iii. Certification via Proskills Global Limited.

e. Proskills Global Limited will be the official registering and accreditation body and will issue **Certificates of Competence (SSCC)** to personnel who meet the criteria and specified standards of performance, as defined within the Industry Guidance Notes and other guidelines, as appropriate.

f. Review – the scheme will be reviewed by a working party, including representatives of the industry. These will take place annually or as deemed necessary by the sector.

2. The Scheme Objectives

a. To provide a National/International Registration Scheme.

b. To identify the training requirements for personnel involved specifically with the Prestressing of Precast Concrete and to define the standards to be achieved. The scheme will include Management/Supervisors, Maintenance Personnel and Operatives.

c. To facilitate industry approved training to satisfy 2b. above.

d. To provide Safe Stressing Competence Certificates (SSCC) upon successful completion of the Proskills Global Limited accredited training courses.

e. To provide guidelines to Employers whose personnel participate in the Scheme.

f. To ensure that all personnel certificated under the Scheme have attained an acceptable standard of safety awareness and the necessary basic skills, in order to comply with the relevant Guidance Notes.

g. To provide guidelines which enable participating Employers to meet their continuing responsibilities with respect to training.

3. Scope

a. The Scheme specifies the training and standards to be achieved by all personnel involved with the Prestressing of Precast Concrete.

b. The Scheme will apply to new entrants coming into the industry and to existing personnel with previous experience in the occupational areas identified by the Prestressing of Precast Concrete.

c. The Scheme will stipulate the breadth and depth of the areas it covers and through its guidelines will clearly detail the extent and limitations of coverage by the Safe Stressing Competence Programme (SSCP) for the Prestressing of Precast Concrete.

d. The coverage of the Scheme is intended to relate to RQF/SCQF/SVQs. Therefore, to ensure that there are comparability and consistency of assessment, the competencies promoted by the SSCP will be complementary to those of RQF/SCQF/SVQs, which cover the occupational functions of Safe Stressing of Precast Concrete.

e. The Scheme will be subject to regular review and any changes to the scope, limitations and extent of its coverage, will be made in response to industry requirements.

4. General Guidelines to Employers

a. New or inexperienced personnel should not be permitted to engage in the Prestressing of Precast Concrete, unless supervised by a competent person. Upon reaching the required standards, employers may apply for the person concerned to be assessed on their level of skill and attainment, leading to the subsequent issue of a Safe Stressing Competence Certificate (SSCC).

b. Holders of the SSCC will be required to be reassessed prior to the expiry of their valid certification.

5. Health and Safety

a. Health and Safety requirements and current safety legislation is of paramount importance and must be complied with at all times in respect of any employee engaged in any aspect of the operations covered by the Scheme.

b. Achievement of a SSCC by the employees does not absolve the Employer from its obligation and duty to provide continuing and necessary information, instruction and training as required by the 1974 Health and Safety at Work Act.

c. See Appendix 1 – Legislation, Guidance and Standards relevant to Health and Safety Policy.

6. Training Courses

a. There are 4 modules available, which are listed on page 15 in the guidelines for the Scheme in Section Two "Coverage and Training provision for a SSCC". Essentially the modules are designed to develop the skills and knowledge to undertake the various occupational roles identified with the operations involved. The modules will include legislative requirements and any Guidance Notes associated with the area of operations. See Appendix 1 – Legislation, Guidance Notes and standards relevant to Prestressing of Precast Concrete.

b. Module Delivery: The Basic Health & Safety Unit/General Stressing Awareness (PS1) should be delivered in conjunction with the participant's role as shown in the matrix (page 16), however in the case of office personnel or others who would benefit from the basic awareness training, this unit can be used in isolation.

c. The guidelines for the Scheme provide information on the responsibilities of the varied occupational roles and the operations being conducted.

7. Achievement Tests

a. The Scheme requires that all participating personnel shall satisfy the requirements of practical and theoretical safety achievement tests for which training has been undertaken, before issue of a SSCC. This requirement applies to new entrants and to those persons claiming adequate and appropriate previous experience in the Prestressing of Precast Concrete. Where module 1 has been used as an awareness raiser there will be no practical element, but a multiple-choice assessment must be undertaken on completion of the module, to confirm understanding.

b. Training, achievement testing and individual assessment will be undertaken and administered by trainers accredited for that purpose by Proskills Global Limited (Section 11 refers).

8. Employee Registration and Certification

a. Proskills Global Limited operate a National Training Register for trained and certificated personnel, detailing employee's personal details, categories and safety training achieved, certificate numbers and expiry dates, together with employer's details and a photograph of the person trained for identity purposes.

b. Upon receipt of a completed registration form, and accompanying assessment forms for all modules completed, from an accredited training provider, Proskills Global Limited will record all details on the National Training Register. Employers and the Health and Safety Executive etc. can refer to this Register to confirm an individual's achievements.

c. Training and Assessment fees are available from the Approved Training Providers See Appendix 3.

9. Application Procedure for the Issue and Renewal of SSCCs for Approved Training Providers

a. Certificates of Competence will be issued to employers of operators who have complied with the Scheme criteria and achieved the standards that qualify for the SSCP award. A SSCP will be dated to expire five years from the date of issue. With annual assessments. The need for re-training must be regularly

monitored; after the initial training, annual assessments MUST be completed to ensure the trainee remains competent. This must be logged with Proskills Global using the forms provided to ensure the SSCP remains valid for five years. The SSCP be updated electronically after successful completion of the appropriate assessment. Any additional category can be added to the SSCP on application to Proskills Global Limited.

b. At the point of training, there is also an option to select a 3-year training plan with no annual assessments, although these are highly recommended as a form of best practice.

c. On receipt of the completed Registration and Certification Request Form* and supporting documentation, Proskills Global Limited will issue a digital certificate as per the specific plan selected i.e. 3 years or 5 years.

d. *A passport size photograph, showing the candidates' full face, head and shoulders, must be sent electronically, to Proskills Global Limited to accompany the* Registration and Certification Request form.

e. Lost or damaged SSCC's will be replaced on application subject to a fee and verification by Proskills Global Limited.

See Appendix 2 – example of Certification.

10. Booking Training & Assessments

a. Training and Assessments should be booked directly with the Accredited Training Provider – Details are shown in Appendix 3.

b. To comply with this training scheme, Training and Assessment should only be carried out by the companies listed and the named individuals as shown in Appendix 3.

11. Approved Training Providers

1. Only trainers deemed competent and accredited by Proskills Global Limited may carry out the training and assessment of the Scheme.
2. Proskills Global Limited will only accredit trainers who can demonstrate satisfactory knowledge of operational techniques used in the Prestressing of Precast Concrete and who are able to provide all aspects of training and conduct achievement tests under the Scheme.
3. The initial accreditation process for trainers will be based on CVs plus evidence of competence in the following:

- Instructional competence
- Assessment competence
- Health & Safety competence
- Operational skills
- Satisfactory performance of a training session as assessed via a Proskills Global Limited Assessor.

4. Following the initial accreditation, trainers will be continuously monitored via a process of annual assessment of performance by a Proskills Global Limited approved assessor plus customer/client feedback. See Appendix 3.

5. Accredited trainers will be required to register annually with the Proskills Global Limited. See Appendix 3.

6. The Trainer/Training Provider is responsible for all aspects of the course provision, which will include:

   a. Liaison with the client company, arranging dates, times, etc.
   b. Determining the needs, prior knowledge and experience of the participants and adjusting the course to meet these requirements.
   c. Gathering information on the clients' activities and any pressing issues for inclusion in the course.
   d. Delivery of the training modules.
   e. Briefing participants on the assessment requirements.
   f. Assessing participants, giving feedback and advice.
   g. Recommending successful completion of SSCP.
   h. Completing Certification application.

7. Training Providers employing Accredited Trainers/Assessors will automatically be granted provisional Approved Status pending documentation and experience verification.

12. Scheme Limitations

a. Certificates of Training Achievement issued through the Scheme are intended to be categorised as a certificate of competence.

b. Employers/Assessors are required to determine competence based upon the combination of training received and experience gained relevant to the individual employee's job specification and the particular operational requirements.

13. Scheme Review

a. The operation of the Scheme will be monitored continually by a Steering Committee representing the industry and amendments and changes necessary will be introduced to Scheme meets industry requirements.

14. Appeals Procedures

a. There are no special arrangements under the scheme for appeals. Questions arising should be submitted to: Proskills Global Limited in writing. support@proskillsglobal.co.uk

15. Equal Opportunities / Diversity

a. Candidates will normally be selected and nominated for the course by their Employers. Proskills Global Limited fully support equal opportunities and diversity, therefore the course is open to all staff involved in Prestressing.

16. Implementation of the Scheme

a. The scheme is managed and monitored by Proskills Global Limited on behalf of the industry and a register maintained of applicants, awards and accredited trainers.

17. GDPR Policy

a. Proskills Global Limited is committed to complying with the UK Data Protection Act (DPA) 2018 and the General Data Protection Regulation (GDPR). We protect personal data, which includes any information that identifies an individual, whether in electronic or hard copy form. Proskills Global is registered with the **Information Commissioner's Office (ICO) under registration number ZA359287.**

   As part of our operations, we collect and process personal data from individuals, employers, clients, suppliers, and employees. This is necessary for the effective delivery of our services, including certification and licensing, and we ensure the protection of these data in line with GDPR principles.

   This policy applies to all personal data processed by Proskills Global, including those handled by our staff, partners, consultants, and third parties.

Cover & Training Provision for the Safe Stressing Competence Programme (SSCP) for Prestressing of Precast Concrete

1. Introduction

The Safe Stressing Competence Programme (SSCP) is aimed at all operational staff including Management/Supervisors, Maintenance, Bed and Stressing Operatives and site personnel involved specifically with the Prestressing of Precast Concrete. These are personnel who are directly involved with the prestressing operations.

2. Training Courses

The following certificated courses are currently available for **Management/Supervisors, Maintenance, Bed and Stressing Operatives:**

Modules Reference Module Title

PS1: Basic Health and Safety/General Stressing Awareness

PS2: Stressing Process – Storage, Preparation, Stressing/De-Stress, Product Removal

PS3: Maintenance of Stressing Equipment

PS4: Management of Health & Safety during the Prestressing of Precast Concrete

Basic Health & Safety/General Stressing Awareness (PS1)

Aim: To provide a general awareness of safety issues relating to work in a prestressing environment.

Objectives: At the end of the course the participant will have awareness of the company's responsibilities and the individuals' responsibilities in relation to the Health & Safety at Work Act and Relevant Statutory provision.

This unit should be delivered in conjunction with the specific unit relating to the employees' job role it is not aimed at training in isolation for any of the above. However, there are some employees where the PS1 Unit might be taken as a stand-alone Unit. Examples are office personnel who are required to access factory floor.

1. Background to Prestressing

- *Live end/Dead end*
- *Grips - Barrels - Wedges*
- *Jack*
- *Abutments*
- *Tendons*
- *Calibration*
- *Button Heading*
- *Ferrule*
- *Prestressing*
- *Multi-stressing*
- *Pre-tensioning (prior to multi-tensioning)*
- *Piab system (crane and pulleys)*
- *Isolation*
- *UTS - Ultimate Tensile Strength*
- *Extension*
- *Hazardous area*
- *What happens if a tendon flies - video*
- *High level of stored energy*

2. Types of Hazards Associated with a Prestressing Plant

Non-Machinery – these relate to the environment in which the work is carried out and the hazard/ risks associated with each of the following:

- *Tendon breakages – what could happen?*
- *Damage to abutments*
- *Problems associated with tendons and coils*
- *Button end malfunction/damaged*
- *General housekeeping*
- *Oil on beds*
- *Hand tools/equipment (PUWER regulations)*
- *Slips, trips & falls*
- *Slippage on barrels of wedges*
- *Manual handling*
- *Noise*
- *Accidents, injuries and occupational diseases*

Machinery

- *Overstressing - use of jacks*
- *Lock-off systems*
- *Multi stressing*
- *Hot work on or near tendons*
- *Machines used in stressing/manufacture/moving machinery*
- *Hazards associated with work at live stressing end (factory specific)*
- *Noise*
- *Vibration whole body, vibration white finger (VWF), tools associated with this.*
- *Guarding of machinery*
- *Why use guards?*
- *Different types of guards including Live end/Dead-end guards*
- *Rules around guarding including Provision and Use of Work Equipment Regulations (1998)*

3. Danger of Exclusion Zones

- Exclusion zones during stressing – Live-end/Dead-end
- Rules for access to stressed beds
- Specific areas to be avoided
- Rules around using a platform to cross a bed
- Position of personnel to include operatives and visitors when prestressing operations are underway
- Authorisation
- What to do when hearing or seeing the audible & visual warning system
- Rules for visitors to the site
- Safety around tendon payout & management area

4. Personal Protective Equipment (PPE)

- To raise awareness of the PPE required by the site rules and any relevant requirements concerning Risk Assessment or Safe System of Work (SSOW)
- Importance of wearing, maintaining and storing PPE correctly

5. Risk Assessment (RA) & Safe Systems of Work (SSOW)

- Awareness of Risk Assessment and SSOW
- Legal responsibilities
- Where the RA and SSOW are kept (site and job-specific)

6. Safe Access (entry) & Egress (exit)

7. Warning Audible and Visual

- What is a warning?
- What Audible and Visual systems are in place
- Are they manually activated or automatic?
- Duration of warnings
- What Each warning means and what you should do

a. Work in Progress

- What the sirens mean
- The post-stressing period

b. Power Failure

- What to do if power fails
- Considerations - is the bed stressed, part stressed
- What to do

8. Completion of PS1 Module

- This module is assessed through a written multiple-choice test.

Stressing Process - Storage, Preparation, Stressing/De-Stress, Product Removal (PS2)

Stressing Tendons (PS2a)

Aim: To provide the participants with the skills and knowledge to perform their job roles safely and competently.

Objectives: **At the end of the course, the participants will be able to explain:**

- What a wire/strand/tendon is
- Its properties and uses
- The limitations of use
- Problems that may occur and their remedial actions

1. Undertake relevant checks within their remit concerning receipt of material, these to include, where relevant:

- Paperwork
- Test Certificates
- Load Quantity
- Load Type, Size etc.
- Are Coils etc. Identifiable
- Visible Damage
- General condition

2. Explain the Hazards and Risks associated with:

- Tools/Materials/COSHH
- Safe Handling of Coils to include directional markers and visual inspection
- Storage of Coils to include environment
- Untrained Personnel

3. Explain the Safe System of Work (SSOW) relating to the lifting and handling of prestressing tendons.

4. Explain the safety checks required prior to the handling/lifting of prestressing tendons. (See important note below).

Suitable Handling/Lifting Equipment:

- Fit for Purpose
- Tested
- Capacity
- Visual Damage

Important Note:

Operations using specialised plant i.e. cranes or lift trucks should be trained outside this scheme and the operators should hold the relevant training competencies.

Although this programme does not cover manual handling, correct techniques should be demonstrated throughout the training, and where required, evidence of having attended a manual handling course may be requested.

5. Explain the relevant quarantine requirements and the reasons for them and demonstrate what is required, including reporting.

- Damage
- Unidentified Coils
- Lack of Paperwork e.g. Test Certification
- General Condition

6. Explain the storage requirements laid down by the factory SSOW and the reason behind these.

- Stock Rotation
- Storage position – benefits of storing off the ground
- Environmental impact on stock including damage and contamination
- Benefits of covered storage
- Use of storage systems, i.e. racking systems or lobster pots

7. Legislation

- Lifting Operations and Lifting Equipment Regulations 1998 (LOLER)
- Control of Substances Hazardous to Health Regulations (2022) (COSHH)

- Personal Protective Equipment at Work Regulations 2022 (PPE)
- Manual Handling Operation Regulations 2002
- Risk assessments should have been carried out in relation to the above as required by the Management of Health and Safety at Work Regulations 2006.

8. Personal and Protective Equipment.

Relevant and correct PPE should be worn at all times

9. Completion of PS2a Module.

The assessment process includes direct workplace observation and a written multiple-choice test, supplemented by practical training and audits.

Stressing Process - Storage, Preparation, Stressing/De-Stress, Product Removal (PS2)

Bed Operative Procedures (PS2b)

Aim: This unit will provide participants with the relevant skills and knowledge to enable them to undertake their duties in a safe manner. It forms the core of the training and is suitable for Casting, Specials and Unit Handling.

Objectives: At the end of the course the participants will have knowledge of:

1. The Risks and Hazards Associated with the Operations.

- Housekeeping
- The machinery used during the manufacturing process
- Other non-machinery hazards
- Working on or around tendons with live loads i.e. tying rebar

2. The Importance of Cleaning the Work Area.

- Operatives will understand the importance of cleaning the casting area in preparation for the process
- The use of work area cleaning tools e.g. squeegee mops
- The use of releasing agents and the issues relating to COSHH and PPE

3. Tendon Patterns.

- The different types of tendon patterns
- Tendon drawings showing tendon positions and how to apply them

4. Tendon Displacement, Bed Wiring and Pullers.

- The tendon guides are explained in depth, covering the various patterns used for different product designs
- The positioning of tendons along the casting area and preparation for the stressing operation to take place

- The correct systems for coupling the tendons to the 'dead-end' and the 'live-end' of the casting area
- The correct method for pulling the tendon from the coil and the directional issues
- The importance of continual visual checks on the tendon coils
- The points and dangers to be aware of when pulling tendons
- The positioning of tendon safety restraint systems and reasons for their use
- The importance of inspecting the tendons and the potential problems

5. Correct Method for Fitting Barrels and Wedges.

- We explain the common issues related to barrels and wedges, including typical faults and related hazards
- Correct storage methods for barrels and wedges
- The correct use of barrels and wedges and the different types of tendon connectors
- The importance of inspection for each component and awareness of the relevant problems (practical examples of both acceptable and unacceptable quality are used)
- The methods used for the separation of unacceptable components
- The use of grip release spray and the reasons for using it
- The use of double-ended couplers

6. Fitting the Button Ends

- We explain the relevant faults and issues regarding button-ends
- The storage methods for ferrules and their use
- The inspection of button-ending equipment and test requirements
- Know how to inspect the button-end and the qualities required showing examples of acceptable and unacceptable quality
- The correct methods of cropping tendons before proceeding with the manufacture of the button end

7. Tendon Jointing

- Where joints in the tendons are made, the following is explained:
- The correct operation of the tendon jointer (practical demonstration is given) including essential safety requirements
- Points to be aware of during the jointing procedure

8. Guards and Warnings.

- Relevant and adequate guards
- Position and type of notices
- Use of relevant audible warnings during Pre-stressing operations

9. Safe Systems of Work

- The course always makes specific reference to the procedures set out in the relevant Safe System of Work as authorised by the Factory Manager.
- The above elements of the course are subject to discussion and change.
- The course will be tailored to your site-specific procedures as these may differ by location and company.

10. Completion of PS2b Module.

The assessment process includes direct workplace observation and a written multiple-choice test, supplemented by practical training and audits.

Stressing Process - Storage, Preparation, Stressing/De-Stress, Product Removal (PS2)

Stressing Operative Procedures (PS2c)

Aim: This unit will provide participants with the relevant skills and knowledge to enable them to undertake their duties in a safe manner. This module is to be completed in conjunction with PS2b (Bed Operatives) for all persons involved in stressing activities.

Objectives: At the end of the course the participants will be able to:

1. **Explain the Basic Theory of Prestressing.**
2. **Explain the method(s) of Prestressing and the equipment used at the Factory.**
3. **Explain what is meant by:**
   - Prestressing load
   - Extension
   - De-tensioning
   - Pre-tensioning
4. **Explain the different types of Anchors used at the Factory.**
5. **Explain and demonstrate De-tensioning Method(s).**
6. **Explain the Hazards and Risks with:**
   - Prestressing operations
   - Tools and equipment used in prestressing
   - The working environment
   - Materials used during prestressing (COSHH)
7. **Explain and demonstrate the equipment used during Prestressing Operations.**

8. Explain and demonstrate the relevant checks required by:

- Process
- Calibration of single-strand and multi-stressing
- Pre-start
- On-going
- Principles
- Completion
- Frequency
- De-tensioning
- Responsibilities

9. Know their responsibility and how to check:

- The equipment is suitable for use
- The tendons are in their correct position and free from damage
- The calibration of equipment
- Ensuring that equipment is cleaned, well maintained and in a serviceable condition

10. Explain the dangers and preventative measures relating to various modes of tendon failure.

11. Explain the Near Miss / Incident Reporting Procedure.

12. Explain the Safe System of Work in use at the Factory.

13. Completion of PS2c Module.

- The assessment process includes a written multiple-choice test, supplemented by practical training and audits. If a stressing bed is available this may be followed by direct observation of a practical demonstration

Maintenance of Stressing Equipment (PS3)

Aim: This course is designed for Maintenance Engineers, Foremen, Fitters, and other personnel involved in maintenance operations.

Objectives: On successful completion of this module, personnel will be equipped to:

1. **Explain the Hazards and Risks associated with:**

- *Tools and Materials*
- *Substances that may be hazardous to health that will be used during maintenance and cleaning (COSHH)*

2. **Explain and demonstrate the Lock-off (Hydraulic and Electrical) and Isolation Procedures used at the place of work.**

3. **Explain the relevant safety/inspection checks laid down by either the manufacturer or the SSOW and demonstrate them as required.**

4. **Explain and demonstrate how to carry out the following tasks (where applicable), paying particular attention to SSOW and relevant guidance, including how to conclude all relevant tasks safely and in line with Standard Operating Procedures and SSOW.**

5. **Explain and demonstrate the procedures for the inspection and maintenance of abutments.**

6. **Explain the consequences of changes to abutments and deflection of strands and who these operations should be referred to.**

7. **Explain the relevant quality control requirements including calibration.**

8. **Be aware of and able to complete any relevant records (if required).**
   - **Equipment to include (where applicable):**
   - *Pumps/Jacks*
   - *Anchor Grips/Barrels and Wedges*
   - *Pumps and Jacks – Calibration - Load Cells*
   - *Jack Counterbalance Device*
   - *Lifting straps and chains*
   - *Abutments*

- *Guards*
- *Safety Chains*
- *Lights and Sirens*
- *Strand Pusher*
- *Double Ended Joiners*
- *Button Headers*
- *Tendon Pull Systems/Tendon Guides*
- *Tendon Cutting System*

9. Regulations

- Provision and Use of Work Equipment Regulations 1998 (PUWER)
- Control of Substances Hazardous to Health (COSHH) Regulations 2022
- The Personal Protective Equipment (PPE) at Work Regulations 2022
- The Management of Health and Safety at Work (Amendment) Regulations 2006

10. Guidelines to COSHH (2022)

- The employer should have carried out risk assessments relating to any substances and relevant information, instruction, and training in the use of these substances should have been given to the employees outside this scheme.

11. Manual Handling Operations Regulations (2002)

- The employee should have been provided with relevant information, instruction and training in manual handling outside of this scheme.

12. Maintenance Guidelines

These guidelines are aimed at the relevant equipment used on plant, records to include:

- Maintenance Logs as required under PUWER (1998)
- Job Sheets
- Check sheets

13. Personal Protective Equipment.

- Relevant PPE is to be worn, at all times.

14. Completion of PS3 Module.

- The assessment process includes direct workplace observation and a multiple-choice test, supplemented by practical training and audits.

Management of Health & Safety during the Prestressing of Precast Concrete (PS4)

Aim: To ensure that Managers, Supervisors and Health and Safety representatives are adequately trained, to explain the importance of training due to the complexity and safety implications associated with pre- stressing operations.

This course is delivered as a separate day course for Managers, Supervisors and Health and Safety representatives on site throughout the country.

Objectives: At the end of the course the participants will be able to:

1. Introduction, Expectations, and CoP History

a. Objectives and participants
b. The programme's improvement planning process.
c. Pre-course requirements and expectation
d. History of the Code of Practice (CoP) and the Health and Safety Executive for Northern Ireland (HSENI).
e. Safe Installation CoP and a review of the last annual CoP audit
f. Improvements and action plans.

2. The Management of Health & Safety in the Prestressing Industry

a. Stressing Policy

- Vision and direction
  CoP including planning process
- RA compliance monitoring and reports
- CoP examples review
- Reviewing the policy
- MPA meetings, communication and Fatal 6

b. Code of Practice

- Purpose during local hazard management
- Expectations and achievements
- On site process and procedures, especially RA and SSOW
- CoP review process

c. Risk assessment

- Legal position HASAWA (Implied)and Man Regs (Explicit)
- Principles of prevention
- RA
- Concerns
- Employer and employee responsibilities
- Competence and formal agreements
- RA's improvement, responsibility, planning process
- RA review, current RA standards procedures / process

d. Safe Systems of Work/Safe Operating Procedures

- SSOW and best practice
- SSOW format developed with reference to CoP example
- Safety interventions and review
- Compliance and support
- Review of current SSOW standards and SSOW procedures / process
- SSOW improvement planning process

e. Training and Education

- Expectation and training process
- Work activity logs to support training and assessment requirements
- PS1 – Basic Health and Safety/General Stressing Awareness
- PS2 – Stressing Process - Storage, Preparation, Stressing/De-Stress, Product Removal
- PS3 – Maintenance of Stressing Equipment
- PS4 – Management of Health and Safety During the Prestressing of Precast Concrete
- Annual assessment and 3/5-year refreshers, along with competence for undertaking the assessment process.

f. Pre-job Assessment/Inspection

- Compliance with CoP and safety controls prior to stressing
- Format used / CoP example
- Stop Authority

g. Monitoring, Review, Audit, Inspection and Refreshers

- Inspection scheme / process
- Inspection from daily inspection to annual audits
- Internal audit process linked directly to the CoP requirements
- Internal and external statutory inspection
- Planned V Actual SSOW
- Standards and support improvements

h. Consultation and Communication

- Benefits of an effective consultation process
- CoP meeting
- MPA
- Effective action management

i. Accidents, Incident Reporting and Hazard Alert / Near Miss

- Event / incident management
- Monitoring of route cause analysis
- Effective management of lessons learnt and communication process
- Near miss reporting and hazard alert / observation process
- Accident and incident analysis to identify trends and targets

j. Behavioural Safety

- Behavioural based safety initiatives.
- Current local initiatives, endorsement
- CoP elements
- Ideas for the future

k. Good Practice Documentation

- Benefits of supporting the CoP good practice documentation
- Improvements required

l. Closing Thoughts and Next Stage

m. Completion of PS4 Module

- The assessment process includes a written test and direct questioning, supplemented by training, annual assessments and audits.

Appendix 1

Relevant Legislation, Guidance and Standards

His Majesty's Government

Relevant statutory provisions regulations

(HASAW Act) Health and Safety at Work Act (1974)

HSG65 - Management of Health & Safety at Work Regulations 3Ed (2013), (1999)
PUWER - Provision and Use of Work Equipment Regulations (2002), (1998)
PPER - Personal Protective Equipment Regulations (2022), (1992)
MHOR - Manual Handling Operations Regulations 4Ed (2002), (1992)
COSHH - Control of Substances Hazardous to Health (2002) as amended
CNWR - Control of Noise at Work Regulations (2005), (1999)
LOLER - Lifting Operations and Lifting Equipment Regulations (1998)
WHSW - Workplace (Health, Safety & Welfare) Regulations 1992
HSG 246 - Safety in the Storage and Handling of Steel and Metal Stock (2016)

HSE Guidance note GS49 - Prestressed Concrete - (2014)

BS 8110 Part 1: ***1997***
BS 5896: High Tensile Steel Wire & Strand for the Prestressing of Concrete – Code of Practice 2nd Edition (2023)
The Work at Height Regulations (2005)
The Health & Safey (First Aid) Regulations (1981)
The Electricity at Work Regulations (1989)
The Construction (Design and Management) Regulations (2015)
The Construction (Design and Management) Regulations (Northern Ireland) (2016)
The Reporting of Injuries, Dieses and Dangerous Occurrences Regulations (2013)
The Control of Vibration at Work Regulations (2005)

Please note:

This list may change after publication, please consult the HSE website at: www.hse.gov.uk for up-to-date information.

Appendix 2 Example of Certificate.

Proskills GLOBAL

Certificate of Competence

Safe Stressing of Precast Concrete

CLAIRE COUSINS

of

Proskills Global Limited

For successfully completing an intense course of instruction, in accordance with the training requirements and obligations contained in the Health and Safety at Work Act 1974, Safe Stressing Code of Practice and other legislation as applicable.

Safe Stressing of Precast Concrete

PS1 Basic Health & Safety / General Stressing Awareness

PS2 Stressing Process - Storage, Preparation, Stressing/De-Stress, Product Removal

PS3 Maintenance of Stressing Equipment

PS4 Management of Health & Safety during the Prestressing of Precast Concrete

Certificate No: 00000
Date of Training: 04/03/2026
Expiry Date: 04/03/2029*

Claire Cousins
Managing Director
Proskills Global Limited
Accredited Body

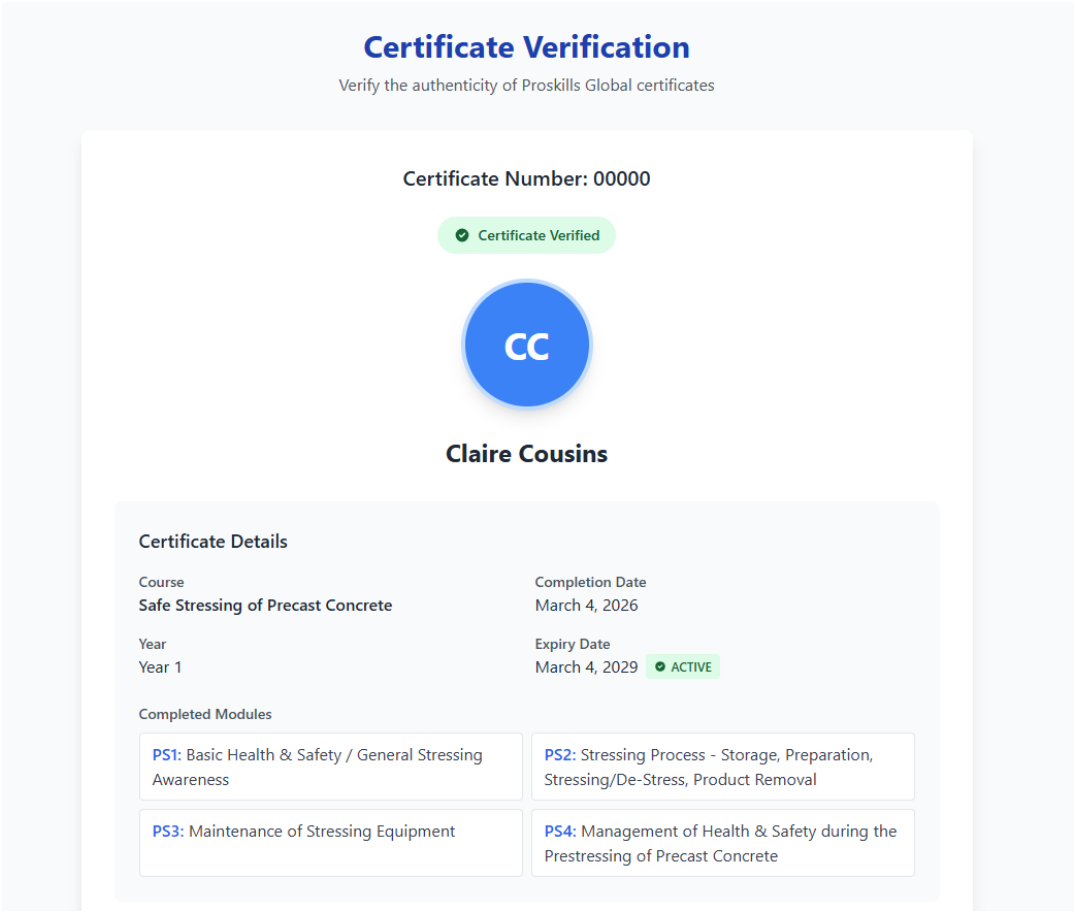
Training conducted by: Stress-Tec

"THREE YEAR TRAINING PLAN SELECTED
Within the three-year training plan, there is no mandatory requirement to log annual assessments with Proskills Global; however, it is considered best practice. to record CPD activities internally.

Proskills Global Limited | 10200788 | Registered in England Wales

Quality Assurance Professional Recognition

Appendix 2 Example of Verification



SSCC Replacement Fees:

Replacement SSCCs can be issued subject to verification by Proskills Global Limited and on receipt of a small fee.

Appendix 3 Booking Training and Assessments

Training should be scheduled directly with approved training partners providing the Safe Stressing of Precast Concrete course, or through the contact page on the Proskills Global website:

Safe Stressing of Precast Concrete Training - Book a Course - Proskills Global Limited

A site checklist will be sent to the designated person booking the training before the session begins, ensuring the assessment area is properly prepared and equipped.

Arbour Safety Management Ltd

Partner Agreement Number: 202425-08/063

Contact Details:

Training Instructor

Glenn Rowe – ID: PGLTA5025GR

Course Accredited and Delivered:

Safe Stressing of Precast Concrete

PS4 Module only: Management of Health & Safety during the Prestressing of Precast Concrete

Address:

Arbour House
58 Arbour Lane
Standish
Near Wigan
WN6 0YJ

Email: glenn@arboursafetymanagement.com

Telephone: +44(0)1257 402 013

Website: www.arboursafetymanagement.com

CEMEX UK Operations Limited

Partner Agreement Number: 202526-08/056

Contact Details:

Training Instructor/s: CEMEX FLOORS UK / CEMEX RAIL

- Susan Townsend – ID PGLTA5011ST
- Nathan Kite – PGLTA5010NK
- Craig Tilton – PGLTA5009CT
- Carlos Milhano – PGLTA5003CM
- Chris Mant – PGLTA5002CM
- Kieran Brennan – PGLTA5012KB
- Tobias Bond – PGLTA5013TB
- Aaron Coote – PGLTA5014AC

Course Accredited and Delivered:

Safe Stressing of Precast Concrete: PS1-PS3 Modules only.

Address:

Head Office:
CEMEX House
Binley Business Park
Harry Weston Road
Coventry
West Midlands
CV3 2TY Website:

Telephone: +44 (0)1788 517000

Website: www.cemex.co.uk

Creagh Concrete Products Limited

Partner Agreement Number: 202526-08/064

Contact Details:

Training Instructor/s: Creagh Toombridge / Creagh Edinburgh

- Noel McPeake – ID PGLTA-500NM
- Niall Quinn – PGLTA-5005NQ
- Niall Hanratty – PGLTA-5006NH
- Subin Thomas – PGLTA-5007ST
- Jerin Mathew – PGLTA-5008JM

Course Accredited and Delivered:

Safe Stressing of Precast Concrete: PS1-PS3 Modules only.

Address:

Creagh Concrete Products Ltd
38 Blackpark Road
Toomebridge,
Co. Antrim
Northern Ireland
BT41 3SL

Email: info@creaghconcrete.com

Telephone: 028 7965 0500

Website: www.creaghconcrete.com

EKC Systems Limited

Partner Agreement Number: 202526-05/009

Contact Details:

Training Instructor:

Mark Wilson – ID PGLTA-5026MW

Course Accredited and Delivered:

Safe Stressing of Precast Concrete: PS1-PS3 Modules only.

Address:

EKC Systems Ltd
78C Walkley Lane
Heckmondwicke
Yorkshire
WF16 0NL

Email: mark@ekcsystems.co.uk or Sales@ekcsystems.co.uk

Telephone: +44 (0) 1924 411604

Stress-Tec (UK) Limited

Partner Agreement Number: 202526-04/055

Contact Details:

Training Instructor:

Frank Howarth – ID PGLTA-5027FH

Course Accredited and Delivered:

Safe Stressing of Precast Concrete: PS1-PS3 Modules only.

Address:

Stress-Tec (UK) Limited
21, Grey Willow Drive
Beverley
HU17 0ZH

Email: sales@stress-tec.co.uk

Telephone: +44 (0) 7954 174069

Website: stress-tec.co.uk

Treanor Pujol Limited

Partner Agreement Number: 202526-07/064

Contact Details:

Training Instructor:

Lee Howard – ID PGLTA-5023LH

Assessor:

Kamil Rodziewicz – PGLA5024-KR

Course Accredited and Delivered:

Safe Stressing of Precast Concrete: PS1-PS3 Modules only.

Address:
Treanor Pujol, Ltd.
Intermezzo Drive
Stourton
Leeds
LS10 1DF

Email: General: info@treanor-pujol.com or Enquiries: enquiries@treanor-pujol.com

Telephone: (+44) 0113 201 6000

Website: www.treanor-pujol.co.uk

Customer Service:

For further information and advice please contact:

Proskills Global Limited
35. Loyd Road
Didcot
Oxfordshire
OX11 8JZ

Telephone: +44 (0)1235 432035

Email: support@proskillsglobal.co.uk

Website: www.proskillsglobal.co.uk

Contact: Get in touch