



PSRO
PLANT SECTOR
REPRESENTATIVE
ORGANISATION



Plant Occupations Competency Framework

www.psro.org.uk



A. PSRO OVERVIEW

The Plant Sector Representative Organisation (PSRO) is an employer-led body comprising of representatives from construction-focussed Federations, Associations and other bodies that have a valid interest in plant-based certification.

Note – The term “employer” is used to include those who have significant and direct control over the work activity of a relevant worker [as per HSWA]

The following is a statement of intent for the long-term outcome of all PSRO aims, objectives and initiatives:

- *Supports the planning and actioning for a sufficient supply of plant operatives and associated occupations; that possess a level of competence that optimises risk management and total cost; who are trained and assessed against an agreed PSRO-devised competency framework that is well defined and understood by employers; which has been arrived at in the most efficient and sustainable way.*

The principal aim of the PSRO is to act as the Sector Representative Organisation (SRO) for the construction plant sector and advise industry, relevant authoritative bodies including the Construction Leadership Council (CLC) and other relevant parties over the necessary standards required for plant occupational-related training, assessment and certification activities.

B. PSRO ROLE AND OBJECTIVES

1. The objectives of the PSRO are to:
 - 1.1 Identify employer needs against plant-based operational practices defined in the scope of item 3 including any barriers relating to certification, delivery and skills identification;
 - 1.2 Make recommendations over industry requirements for training, assessment and certification to the CLC and relevant Standard Setting Bodies (SSB);
 - 1.3 Define, in liaison with standard setting bodies and others, a framework for competency that relate to plant occupation-based standards and certification, including apprenticeships;
 - 1.4 Determine the impact on employers of certification body delivery activities against Government and construction industry initiatives, legislative and national requirements;
 - 1.5 Review and report on certification body and national training and assessment standards against construction industry operational and safety initiatives, legislative requirements, new equipment and changed working methods;
 - 1.6 Provide an industry-agreed competency framework to guide the development of certification body standards and delivery methods, including apprenticeships;
 - 1.7 Advise relevant standard setting bodies and funding agencies on grant and payment support strategy policies for plant-related training, assessment and apprenticeship activities;
 - 1.8 Provide guidance and advice in the event of any compliance issues arising around certification bodies interpretation of the PSRO-derived competency framework and the practices and standards contained within.

2. In fulfilling the role, the PSRO:
 - 2.1. Has a Board which comprises of representatives encompassing major stakeholders as listed in item 4.1;
 - 2.2. Specifies Stakeholder Groups with corresponding interests or activities as listed in item 3 and arranges and hosts both permanent standing and ad-hoc sub-groups to allow meetings of these stakeholders where required through industry initiatives and changes;
 - 2.3. Considers feedback through various methods from employers, employer representative bodies and other relevant organisations listed in paragraph 4.1 to ensure that industry needs are identified. *Note: the list is for guidance purposes only and cannot be considered exhaustive.*
 - 2.4. Reviews and maps all applicable information including, but not restricted to, relevant legislation, regulations, official guidance, industry good practice and relevant qualifications, ensuring that specific conditions for the plant and related sectors are identified and checked against this framework, assessment strategy criteria and other applicable standard-defining material;
 - 2.5. Make recommendations to the CLC, SSBs and others, where relevant, over compliance with this framework in relation to certification body activities, delivery methods and standards;
 - 2.6. Liaise with the CLC, SSBs and other industry-led working groups to identify, inform, harmonise and seek future improvements on construction industry plant training standards, assessment criteria and certification requirements.

C. SCOPE, SECTORS, OCCUPATIONS AND ROLES

3. The activities within item 2 will be confined to:
 - 3.1 Operation of construction-based plant, equipment and accessories;
 - 3.2 Lifting Operations within the context of construction;
 - 3.3 Installation, maintenance, examination and inspection operations for activities within items 3.1 and 3.2;
 - 3.4 Other relevant hire and supply activities that relate to the safe and efficient use of plant used within construction;
 - 3.5 Supporting construction plant-based occupations including but not restricted to:
 - Slinging/signalling;
 - Plant/vehicle marshalling;
 - Commissioning, erecting and dismantling of plant;
 - Loading, unloading and transporting of plant;
 - Planning and supervision of plant activities (as a defined role);
 - Directly supporting plant operations e.g. rig attendant, second-person (as a defined role);
 - Other roles where considered relevant.

D. PSRO COMPOSITION

4. The Membership of the PSRO Board ensures a balanced composition for the representation of both SME and large employers but be limited to major associations or federations representing construction-linked employers directly involved in the activities listed in item 3 and will comprise of:

(cont'd)

4.1. Members representing the following employer associations and federations:

- Build UK
- Civil Engineering Contractors Association (CECA)
- Construction Plant-hire Association (CPA)
- Federation Piling Specialists (FPS)
- Home Builders Federation (HBF)
- National Federation Demolition Contractors (NFDC)
- Scottish Plant Owners Association (SPOA).

E. COMPETENCY FRAMEWORK - OVERVIEW

5. This framework has been devised by the PSRO Technical Review Group, a standing group that consists of nominated representatives from each of the partner federations listed in 4.1. The framework is considered as the principal method of ensuring that skills, knowledge and experience which benchmark competency are properly recognised by certifying bodies that operate within the construction sector. It further provides guidance to employers on competency requirements.

6. The Technical Review Group works within the scope of a defined terms of reference and reports directly to the PSRO Board. Nominated representatives on this group have an up-to-date working knowledge of the sector, occupation or activity they represent within the construction and allied sectors along with an understanding of plant-based training and assessment requirements. The group is guided by administrative-body personnel who have long, in-depth backgrounds in plant-based national occupational standards and qualification development for the construction SSB.

7. The Technical Review Group has a number of functions, including maintaining this competency framework for plant occupations and provide ongoing definition of each of the competence benchmarking requirements for plant-specific occupations for certifying bodies.

8. The primary aim of the framework is to review and map applications from certifying bodies seeking to bear or maintain the CSCS logo so that they are compliant as a minimum with the CLC requirement, along with any additional standards required by the plant sector. The technical review group would subsequently make recommendations on any application to the PSRO Board respectively.

F. FRAMEWORK DEVELOPMENT

9. In constructing the framework, the technical review group referenced numerous publications where plant-based competence forms a key component or subject matter, such as regulatory and industry-devised documents and including but not limited to:

Construction Design and Management Regulations 2014

Provision and Use of Work Equipment Regulations 1998

Competence in Construction - CITB/Pye Tait

Competence to Operate Construction Plant – Construction Industry Plant Safety Group

10. Further reference was made to the various editions of the BSI Flex 8670 *Built Environment - Core criteria for building safety in competence frameworks – Code of practice* to ensure compliance and content mapping.

G. FRAMEWORK COMPOSITION AND SCOPE

11. The framework comprises of four parts:

- Part A outlines the principles of competency;
- Part B denotes the principles for certification and details the learning-journey stages and compliance requirements by both employers and certifying bodies;
- Part C is a specification for compliance by certification bodies;
- Part D is a guidance specification for employers.

12. The framework sits within the scope of the Construction Leadership Council's *Criteria for Card Schemes Operating in Construction* publication, which outlines what card schemes need to comply with in order to bear the CSCS logo. The framework only provides any additional requirements over and above the CLC publication.

13. The framework is not intended to provide the technical competencies for specific occupations or equipment types, but to act as a signpost to what technical standards and processes certifying bodies need to comply with when offering certification based on training and assessment programmes. For employers, not only does this framework provide them with what card schemes should be complying with, but also how they should be managing the attainment and maintaining of competence for plant-based occupations and roles.

14. The technicalities of the skills, knowledge and competency requirements will ultimately be derived from National Occupational Standards and formal Standard Setting Body training and assessment standards and qualification compliance requirements, for which will map to this industry-derived competency framework. The framework further provides the specification for card scheme card-type criteria, as the range and criteria for plant-based cards may alter compared to the CSCS criteria.

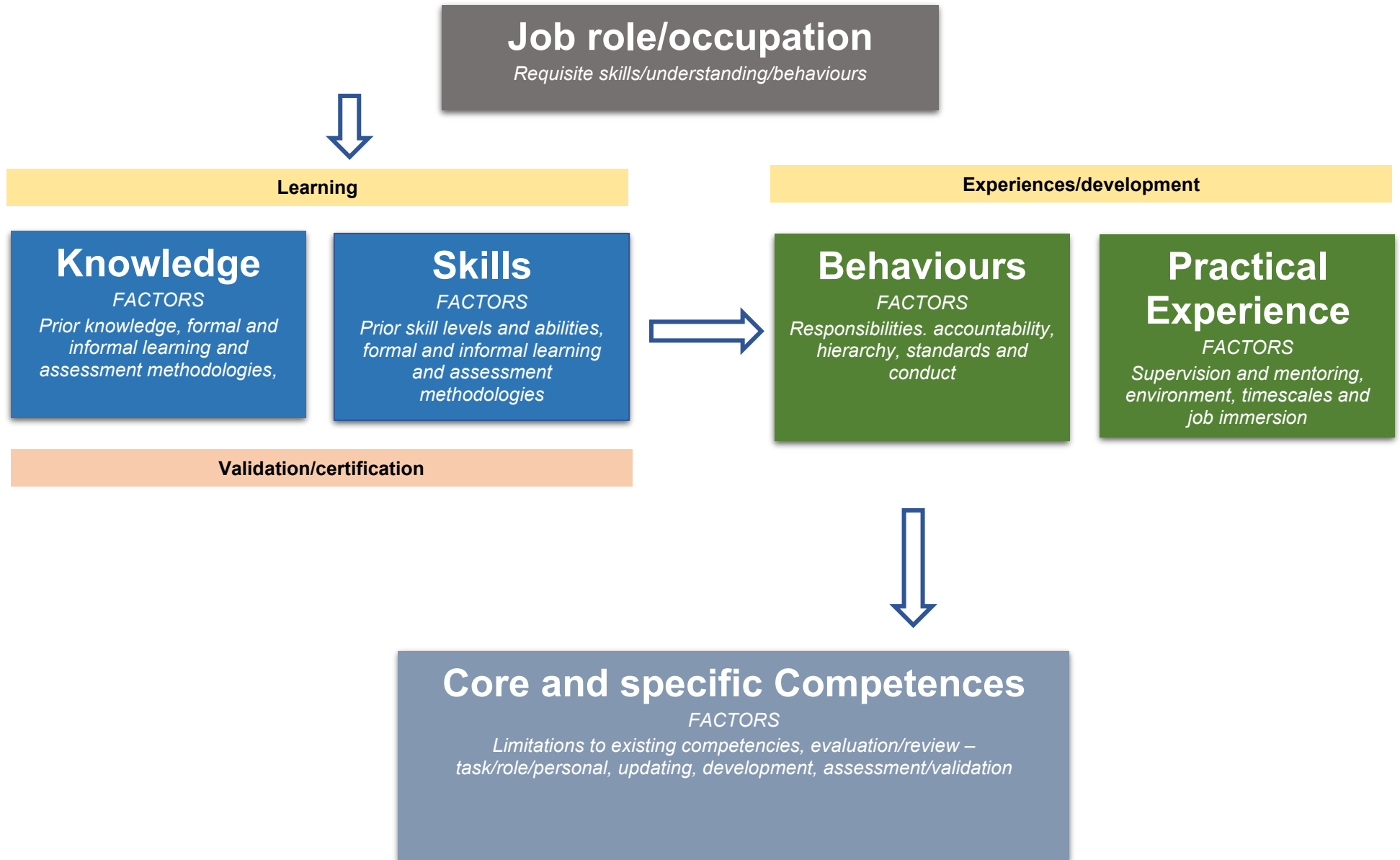
16. The PSRO Technical Review Group works closely with CITB, the SSB for construction occupations to assist in determining the correct level and content of their training and assessment standards. The content of standards from entities such as the Health and Safety Executive and the Construction Industry Plant Safety Group will further be used within these training standards.

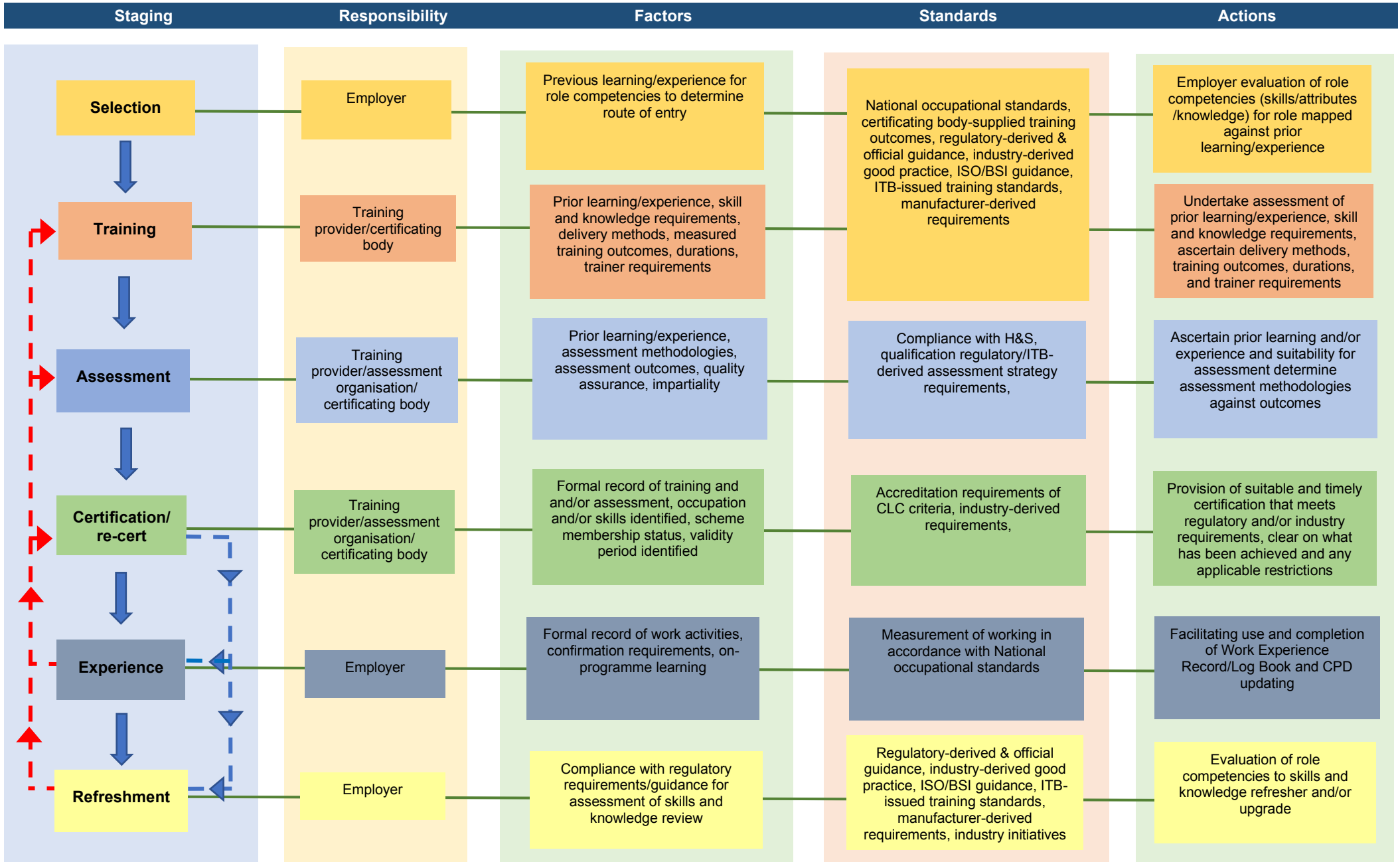
17. The framework remains a fluid document and subject to ongoing review by the Technical Review Group, based on changes to the listed reference documents and feedback from both the sector and certifying bodies.

For further information or clarification on this plant operation competency framework, please contact the PSRO administrative body at enquiries@psro.org.uk

Competency Framework - Plant Occupations

Overarching Principles of Personal Competency





	Subject	F/W Compliance Requirements	Supporting information/Evidence
Standards	National occupational standards (NOS)	Relevant to the core or nearest plant-based occupation incorporating all units within occupational suite	Plant Operations, plant maintenance, piling operations, demolition operations, controlling lifting operations
	Certifying body-supplied training outcomes	To be derived and constructed from all listed reference material in standards and includes health and safety elements specific to the sector and machine type	
	Regulatory and official guidance derived	Includes codes of practice, regulatory body guidance material with emphasis on compliance with H & S requirements	MHSWR, PUWER, LOLER, Workplace Transport, Signs and Signals, Road and Streetworks, Construction and Use/Road Traffic Act etc.
	Industry-derived good practice	(CPA) Plant Safety Group safe use documents, CPA Special Interest Group documents, other specialist areas e.g. piling, demolition, lifting/transportation, planning, supervision	Tower cranes, crawler cranes, mobile cranes, lorry loaders, MEWPs, dumpers, excavators (lifting), quick-hitch couplers, telehandlers, ground conditions, unintended movement,
	BSI/ISO guidance	Relevant to standards that encompass safe operation and training requirements	BS7121, BS7212, BS5975, ISO18893 etc.
	ITB-issued training standards	Adoption of content of training standards specific to each item of plant	Training content to reflect standards inc. core skills and operational knowledge, safety-critical items and health, safety and environmental-specific.
	Manufacturer-derived requirements	Information contained within Operator's Manuals, other manufacturer-derived operational information	Core areas adopted for relevant items of plant
	Assessment Strategy	ConstructionSkills Consolidated Assessment Strategy – Plant Operations	Adherence to the assessment strategy for competence-based qualifications and/or programmes
	Industry Initiatives	Health, Safety and Welfare culture, attitudes and behaviours, roles and responsibilities, future skills/additional learning e.g. Eco-operating/Net zero-carbon compliance, machine control etc.	Introduction of industry initiatives into course content and assessment material
	Training Delivery	Programmes Management	External transparency of course content/learning outcomes, durations and delivery methodologies Regular validation of programmes contents for relevancy and changed working methodologies/regulatory changes

	Programming/Duration	Evaluation of prior personal relevant elements of competencies mapped against course requirements Verification of course programme for employer/candidate role requirements Pre-course information and induction requirements	Lists of ideal pre-requisites for training and assessment Publicly-available course content documentation including timescales Publicly-available criteria on requisites for training inc. materials, equipment and other study aids
	Resources (Practical)	Equipment/accessories/tools/consumables need to be relevant to the subject matter/category type, in sufficient quantity for cohort size Requisite equipment/accessories/tools etc. safe, good working order, maintained and inspected, in compliance with regulations Environment (area/ground/location) safe and suitable for relevant programme	Publicly-available content on required resources where training being undertaken on other locations and premises
	Resources (knowledge/understanding)	Relevancy, sufficiency, emulates current practices, mapped/compliant against current standards (above), Learning/delivery environment that supports effective learning	Publicly-available criteria on knowledge and understanding requirements inc. pre-study material and candidate-supplied resources e.g. manuals,
	Expertise/Delivery	Delivered by qualified and experienced trainers/instructors, clear and comprehensive programmes of learning, aims/objectives identified for each session, suitable/sufficient timescales of delivery, ongoing assessments of candidates, sufficient quality assurance and CPD programmes for trainer/instructor delivery	Minimum trainer qualifications: <ul style="list-style-type: none"> • <i>Qualified (or working towards) a qualification listed on the Register of Regulated Qualifications</i> • <i>Content is predominantlyly education, training and/or learning</i> • <i>Of at least Level 3</i> • <i>Of at least 100 hours of Total Qualification Time</i> Direct and sufficient experience against the relevant occupation and machine/equipment types, supported by comprehensive assurance process Clear CPD programmes for trainers/instructors that encompass both instructing skills/methods along with regular technical and health and safety updating, relevant to the occupation/plant and equipment types Quality Assurance programmes in place to ascertain and ensure trainer/instructor compliance with delivery requirements

Assessment Methodologies	Assessment Management	<p>External transparency of assessment content, durations and delivery methodologies</p> <p>Regular validation of content and methodologies for relevancy and changed working methodologies/regulatory changes etc.</p> <p>Assessment methodologies relevant to specific KSBs</p> <p>Range of assessment methods</p> <p>Clear demarcation between training and assessment delivery</p> <p>End/final assessment that quantifies full range of role/occupational skills and knowledge of individual</p>	<p>Dialogue with employers/sector on programme relevancy and applicability, suitable assessment methods for occupation/equipment type,</p>
	Delivery/Duration	<p>Evaluation of specific assessment against employer/candidate needs/role requirements</p> <p>Pre-assessment programme information attendance, timings and induction requirements</p> <p>Defines assessment material for each element and methodology of assessment</p>	<p>Transparency of documented assessment requirements for particular needs, equipment type, role/occupation, assessment locations and environment</p>
	Resources (Practical)	<p>Equipment/accessories/tools/consumables need to be relevant to the subject matter/category type, in sufficient quantity for specific assessment type</p> <p>Requisite equipment/accessories/tools etc. safe, good working order, maintained and inspected, in compliance with regulations</p> <p>Environment (area/ground/location) safe and suitable for specific assessment requirements</p>	<p>Transparency of documented assessment requirements for particular needs, equipment type, role/occupation, assessment locations and environment</p>
	Resources (knowledge/understanding)	<p>Relevancy, sufficiency, emulates current practices, mapped/compliant against current standards (above),</p> <p>Delivery environment that supports effective, fair and uninterrupted assessment process</p>	<p>Transparency of documented assessment requirements for particular needs, equipment type, role/occupation, assessment locations and environment</p>

	Expertise/Delivery	Delivered by qualified and experienced assessors	<p>Transparency of assessor approval criteria for each occupational/role/equipment</p> <p>Minimum assessor qualifications:</p> <ul style="list-style-type: none"> • <i>Qualified (or working towards) a qualification listed on the Register of Regulated Qualifications</i> • <i>Content is predominantly assessment of learning/training</i> • <i>Of at least Level 3</i> • <i>Of at least 100 hours of Total Qualification Time</i> <p>Direct and sufficient experience against the relevant occupation and machine/equipment types, supported by comprehensive assurance process</p>
	Grading/marketing/resulting	Grading/marketing criteria clearly mapped against, required standard with no ambiguity or levels of interpretation and defines clearly level of required skill and knowledge in an achieved/non-achieved grading process	Transparency of criteria that highlights areas of achievement and non-achievement clearly identified so that candidates/employers are clear on what they need to do to achieve
	Quality Assurance/Auditing	<p>Effective programme of internal and external QA</p> <p>Range of QA methods to ensure compliance with defined standards</p>	<p>Auditing processes are clear, fair and measurable</p> <p>CPD and update programmes for assessors</p>
Certification	Terminology, description	Non ambiguous, clearly identifiable by sector, maps/copies descriptions in codes of practice, official/industry-derived guidance,	Meets industry requirements for consistency and clarity
	Restrictions/limitations	Descriptions of achievement supported by clear identification of limitations to the occupation/role/skill	Compliance with CLC Card Schemes Criteria
	Renewal	<p>Requirements and processes for renewing including limitations, timescales etc. to be made clear at the point of certification issue</p> <p>Renewal processes ensures continuing competencies are maintained and additional industry-led factors such as incident-causing updates and zero-carbon practices are understood at the point of renewal.</p>	<p>Transparency and clarity through publicly-available sources of renewal requirements</p> <p>Renewal requirements ensures competency through verification of experience, skills and knowledge</p>

Note – Part C subject to ongoing and continual review and amendments to reflect changes, updates and additional sector-derived requirements.

Annex A – Card type criteria

In addition to the standard CSCS card design criteria (<https://www.cscs.uk.com/applying-for-cards/cscs-card-design/>), these cards should comply with the following PSRO criteria:

Trained Operator Card (*identifies those who have been assessed for core skills and knowledge and are gaining experience before undergoing and achieving competency-based assessment*).

- Coloured red or having red font and bearing the description of ‘Trained Operator’
- Identifies the category of plant or occupation
- Identifies the expiry date of each category, being no more than two years from the date of issue for that category
- Each category awarded on the successful completion of the relevant skills assessment, comprising of both practical and knowledge assessment on that item of plant
- Non-renewable (*except for extensions due to authentic/unforeseen circumstances*).

Competent Operator Card (*identifies those who have achieved competency-based certification*)

- Coloured blue or having blue font and bearing the description of ‘Competent Operator’ or ‘Skilled Worker’
- Identifies the category of plant or occupation
- Identifies the expiry date of each category, being no more than five years from the date of issue for that category
- Each category awarded on the successful completion of the approved CLC minimum qualification or PSRO/SSB-approved alternative, inc. apprenticeships
- If directly applying for this card without going via the trained operator card route, in addition, each category awarded on the successful completion of the relevant skills assessment, comprising of both practical and knowledge assessment on that item of plant (*exemptions can apply to PSRO-approved apprenticeship alternatives*)
- Is renewable that meets CSCS criteria and PSRO criteria

Provisional (Operator) Card (*identifies those who are undergoing formal training, such as an apprenticeship, before being assessed for core skills and knowledge and the issue of a trained operator card*)

- Coloured yellow or having yellow font and bearing the description of ‘Provisional’
- Identifies the category of plant or occupation
- Identifies the expiry date of each category, being no more than 6 months from the date of issue for that category
- Each category awarded on the successful completion of the following:
 - Health and safety training of at least seven hours duration
 - CITB HS&E test (or approved equivalent)
 - Has undertaken basic* training on the item of plant (** comprising capabilities on machine preparation/basic manoeuvring/one relevant operational activity*)
- The card may be inscribed or detailed as ‘Site Access’, to allow access to site for non-operational training activities, such as observations of work activities for learning etc.
- Non-renewable (*except for extensions due to authentic/unforeseen circumstances*)

	Subject	Supporting Guidance
Role/activity identification	Role evaluation	Analysis of the required skills, knowledge, behaviours and pre-learning or experiences for role, occupation, activity, task, equipment type etc.
	Regulatory requirements (a)	Includes codes of practice, regulatory body guidance material with emphasis on compliance with H & S requirements e.g. CDM, PUWER, LOLER
	Regulatory requirements (b)	What programmes/training specification/certification may be specified/advised for role/activity/equipment type by regulations/good practice guidance inc. BSI/ISO
	Comparison-mapping	References to: National Occupational Standards, Regulatory inc. HASWA, MHSR, CDM, PUWER, LOLER
	Industry Initiatives	Health, Safety and Welfare culture, attitudes and behaviours, roles and responsibilities, efficiencies, technology (BIM etc.), future skills/additional learning e.g. Eco-operating/Net zero-carbon compliance, machine control etc.
	Selection of personnel	Prior learning
Attributes and behaviours		Manual dexterity for role, mechanical aptitude, abilities to interpret technical information through various mediums, understanding of own limitations, appetite for learning/new skills, specific learning abilities, personal barriers to learning, numeracy and literacy for the role, communication abilities
Expertise/autonomy levels		Level of autonomy identified for required role/activity, pre and post programme expertise suitable and beneficial for role/activity, academic levels of required learning programme
Pre-assessment		Selected personal evaluated for intended programme to ensure/aid successful learning, uncoerced/voluntary acceptance of programme, aware/co-operative for need for learning/certification, self-evaluation against selected programme to allow self-confirmation of suitability
Sourcing training/ assessment/ certification	Course/programme content	Clear and comprehensive programmes of learning relevant to role/occupation/equipment type, aims/objectives identified for each session, clear and documented pre-course information and induction requirements, offered course/programme ensures skills/competencies attained for role/activity
	Delivery/Duration	Evaluation of required skills, knowledge and competencies mapped against training provider course/programme material, Suitable/sufficient timescales of delivery with regular ongoing course/progression assessments
	Expertise/Delivery	Provider criteria for course/programme delivered by qualified and experienced trainers/instructors relevant to subject matter/activity/equipment type
	Quality Assurance/Auditing	Clear identification of effective programme of internal quality assurance, identification of external quality assurance by accrediting or independent body, QA methods suitable to ensure compliance with defined standards
	Assessment	External transparency of assessment content, durations and delivery methodologies, assessment methods suitable for programme/activity/equipment type, clear impartiality between training and assessment delivery, end/final assessment that quantifies full range of role/occupational skills and knowledge of individual
	Certification	Clear on what has been achieved, on what and to what level, clear identification of limitations and restrictions inc. renewal/updating requirements.

Post-training management/application of skills/development of competence	Post-course work programme	Recognition of limitations of individual's skills and experience post-course, programming of works to allow integration of individual with suitable supervision and mentoring, interview with individual to recognise self-limitations and the need for controlled integration and application of skills
	Application limitations	Controlled and progressional limitations on skills application due to new environment/new equipment/unfamiliarity with terminology/practices etc, based on learnt skills and workplace learning
	Mentoring	Selection of suitably competent individuals with suitable attributes to guide/advise/encourage newly trained personnel, mentoring autonomy and appetite for mentoring role
	Supervision	Levels of appropriate supervision identified and relevant to skills/knowledge application in the workplace, reduction/alteration of supervision as application of skills increases, ongoing evaluation of skills/knowledge application
	Restrictions/limitations	Descriptions of achievement supported by clear identification of limitations to the occupation/role/skill based on learning outcomes of course/programme, reduction of limitations as skills/confidence increases
	Maturity/young persons	Heightened supervision levels for young persons, mandated mentoring/job shadowing, ongoing evaluations of risk awareness and changing perceptions of risk, defined and clear programme of additional support required for young persons, regulatory requirements adhered to
	Familiarisation/conversion training	All new tasks/activities/equipment evaluated against learnt programme, evaluation on whether familiarisation or conversion training needed, familiarisation/conversion training delivered by competent individuals,
	Ongoing assessment	Regular evaluations of activity/role and identifying skills gaps or under-skilling as external factors alters the activity
Lifelong learning and evaluation	New technologies	Identification of changing or new technologies/equipment etc. and evaluation to determine when and how re-training/familiarisation etc. is required
	Revised good practice	Identification of changing work practices and evaluation to determine when and how re-training/familiarisation etc. is required
	CPD Programmes	Clear CPD programmes that encompass regular technical and health and safety updating relevant to the occupation/role/sector/equipment types
	Re-certification	If, when and how certification/carding requires to be renewed/updated, Renewal process, Extent of certifying bodies requirements that meets employer needs