



# **CERTIFICATION BOARD FOR INSPECTION PERSONNEL**

## **Guidelines for Certification - Elevating Work Platforms Inspectors**

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# GUIDELINES FOR CERTIFICATION - ELEVATING WORK PLATFORMS INSPECTORS

## FOREWORD

This Guidelines for Certification – Elevating Work Platform Inspectors (GCEWP), in conjunction with the Guidelines for Certification – General Requirements, defines the requirements for the issue of Discipline Recognition to inspectors performing inspection of elevating work platforms within the scope of current WorkSafe approved Industry Good Practice Document or *Approved Code of Practice* as detailed on the CBIP web site, together with any referenced standards, regulations or legislation.

The regulatory authority has indicated a preference for inspectors of elevating work platforms to hold a relevant CBIP Competence Certificate. The CBIP requirements for a Competence Certificate are detailed in the Guidelines for Certification - General Requirements, and include that an elevating work platform inspector must hold a relevant Discipline Recognition before they may hold a Competence Certificate.

Certification and re-certification in accordance with this GCEWP confirms at the time of examination and re-examination the qualifications, training, experience and examined competence of elevating work platform inspectors.

The qualifications described by this GCEWP have been prepared for registration at level 4 on the NZQA framework for Category 1 inspectors and level 5 on the NZQA framework for Category 2 inspectors.

This GCEWP must be read in conjunction with the Guidelines for Certification – General Requirements.

## 1 SCOPE AND GENERAL

### 1.1 Scope

This Guidelines for Certification – Elevating Work Platform Inspectors (GCEWP) covers the learning expectations, training, experience and examination requirements for the issue of a Discipline Recognition to inspectors performing in-service inspection of Elevating Work Platforms (EWPs) and inspection of newly constructed EWPs.

Note: An inspector holding a Discipline Recognition requires a Competence Certificate before they may practice inspection (See Guidelines for Certification – General Requirements).

### 1.2 Discipline Recognition Range

Discipline Recognitions which may be granted under this GCEWP are:

(a) Elevating Work Platforms Category 1. (Inspector EWP Category 1)

An Inspector EWP Category 1 performs the six-monthly inspections of EWPs required in New Zealand.

(b) Elevating Work Platforms Category 2. (Inspector EWP Category 2)

The primary role of the Inspector EWP Category 2 is the preparation and implementation of an Inspection and Test Plan (ITP) and the review of the EWP maintenance, in-service and disassembly inspection results.

An Inspector EWP Category 2 performs the major inspections of EWPs required in New Zealand.

(c) Elevating Work Platforms Category 3. (Inspector EWP Category 3)

An Inspector EWP Category 3 may perform either or both of the functions of an Inspector EWP Category 1 and Inspector EWP Category 2.

Note: Previous GCEWPs allowed for the award of an EWP Type 1 certificate to candidates who gained EWP Type 2 certification. [Henceforth (June 2015) Category 1 etc.] This practice has been discontinued and EWP Category 1 certification is now awarded only through examination or in accordance with the recognition and exemption process in Section 6. Existing Discipline Recognitions are not affected but inspectors shall, at the appropriate time, separately recertify their EWP Category 1 and EWP Category 2 certification. In May 2015 it was decided to eliminate any possible future confusion over the varying capabilities of the two classes of inspector (it remains possible for an inspector to be Category 2 without necessarily being awarded Category 1) by establishing the combination Category 3 recognition. At the next issue of Competence Certificates only one Category will be shown (1, 2 or 3).

## 2 CERTIFICATION PROCESS

Candidates seeking a Discipline Recognition shall satisfy the requirements of the Guidelines for Certification – General Requirements and this GCEWP, for their category of EWP inspection discipline, for either:

- Inspector EWP Category 1,
- Inspector EWP Category 2, or
- Inspector EWP Category 3

## 3 PRE-REQUISITES FOR DISCIPLINE RECOGNITION

Candidates shall meet the following training, qualifications and experience requirements. Candidates may submit alternative training, qualifications, and experience for consideration which may provide equivalence to that listed.

Candidates shall provide evidence of qualifications with their application for certification. CBIP does not issue a schedule of recognised qualifications, therefore the applicant must provide sufficient information for an evaluation to be completed.

### 3.1 EWP Discipline Recognition

Candidates shall have training, qualifications and experience which demonstrates understanding of EWPs, including their design, maintenance and operation.

Candidates shall demonstrate proficiency of welding process technology, metallurgy, weld testing and inspection, standards and specifications relating to steel structures to at least the level of Welding Supervisor (AS 2214) or be able to demonstrate equivalent knowledge. This knowledge could be demonstrated by holding a current Welding Supervisor's Certificate (AS 2214) (WS), CBIP Certified Welding Inspector (CWI) or Senior Welding Inspector (SWI) Competence Certificate

### 3.2 Inspector EWP Category 1

#### 3.2.1 Qualifications

Candidates shall have training and a qualification such as:

- A trade qualification in a relevant automotive, electrical, hydraulic or engineering discipline.
- A CBIP Competence Certificate as a crane inspector (any category)
- A diploma in engineering from a recognised training establishment.
- 1st Class Marine Engineer's Certificate.
- Bachelor or Master's Degree in Engineering or a relevant Technology or Science.
- New Zealand Certificate of Engineering or an equivalent qualification.
- Chartered Professional Engineer.

### **3.2.2 Training**

Candidates shall provide evidence of training in EWP inspection sufficient for them to be knowledgeable in the requirements of section 5.

Training shall include knowledge requirements for inspection, including in-service inspection, and practical training on EWPs.

### **3.3 Experience**

Candidates shall have a minimum of one years' experience, preferably with increasing experience, in EWP inspection, fabrication, maintenance, operation or similar experience in a related field. Maintenance and inspection experience shall preferably include time under the effective supervision of a holder of a CBIP Competence Certificate as an Inspector EWP Category 1 or Inspector EWP Category 3. The experience shall include inspection, including in-service inspection, be on a range of EWPs, and include documentation of results sufficient to demonstrate competence in the requirements of section 5.

## **3.3 Inspector EWP Category 2**

### **3.3.1 Qualifications**

Candidates shall have training and a qualification such as:

- Successful completion of an independently assessed, verified and recognised course in EWP inspection.
- An advanced trade qualification in a relevant automotive, electrical, hydraulic or engineering discipline.
- A CBIP Inspector EWP Category 1 Competence Certificate.
- A CBIP Crane Inspector Competence Certificate (any category)
- A diploma in engineering from a recognised training establishment.
- 1st Class Marine Engineer's Certificate.
- Bachelor or Masters Degree in relevant Engineering, or a relevant Technology or Science.
- New Zealand Certificate of Engineering or an equivalent qualification.
- Chartered Professional Engineer.

### 3.3.2 Training

Candidates shall provide evidence of training in EWP inspection sufficient for them to be knowledgeable in the requirements of section 5.

Training shall include knowledge requirements for inspection, including in-service inspection, and practical training on EWPs.

### 3.3.3 Experience

Candidates shall have a minimum of three years' experience, preferably with increasing experience, in EWP inspection, fabrication, maintenance, operation or similar experience in a related field. Maintenance and inspection experience shall preferably include time under the effective supervision of a holder of a CBIP Competence Certificate as an Inspector EWP Category 2 or Inspector EWP Category 3. The experience shall include inspection, including in-service inspection, be on a range of EWPs, and include documentation of results sufficient to demonstrate competence in the requirements of section 5.

## 3.4 Inspector EWP Category 3

An Inspector EWP Category 3 shall hold Discipline Recognition as both Inspector EWP Category 1 and Inspector EWP Category 2.

## 4 TRAINING EVIDENCE

Candidates shall provide with their application an affidavit signed by their employer which certifies that the candidate has completed the required training.

Candidates who are not employees of an inspection body should refer to section 7 of the Guidelines for Certification – General Requirements for guidance on providing the necessary evidence of training.

## 5 COMPETENCY AND PERFORMANCE REQUIREMENTS FOR EWP INSPECTION

The competency and performance requirements for EWP inspection are given in Appendix A.

## 6 EXAMINATIONS

### 6.1 Inspector EWP Category 1, Category 2 & Category 3

The examinations for Inspector EWP Category 1 and Inspector EWP Category 2 Discipline Recognitions are comprised of the following:

- (a) Written examination: EWP inspection
- (b) Practical examination: Field assessment and reporting

There are no separate examinations for Inspector EWP Category 3.

#### 6.1.1 Examination References

References for the EWP examinations and completing the examinations are listed on the CBIP website.

Candidates should bring with them to the written examination an unmarked hardcopy (electronic not permitted) of whatever references they wish to bring from those listed, which shall have no additional markings that may advantage the candidate.

### 6.1.2 Written Examination

The EWP inspection papers examine candidates on the knowledge requirements outlined in Appendix A.

These are **open book examinations** comprised of thirty questions with multi-choice answers plus other questions requiring short narrative answers. Sample questions are provided in Appendix A.

### 6.1.3 Practical Examination

The practical examination is based on an assessment of the candidate's inspection of EWPs at the candidate's place of work. The type or types of EWP to be used in the assessment will be determined by the assessor and will generally not be restricted to a single simple EWP.

### 6.1.4 Technical Content of Examinations

Examiners may question candidates on the application of industry standards and use photographs and samples illustrating operation and maintenance problems pertinent to in-service inspection of EWPs.

- (a) Candidates for Inspector EWP Category 1 will be examined on the current WorkSafe approved Industry Good Practice Document or *Approved Code of Practice* as detailed on the CBIP web site (See 6.1.1), together with any referenced standards, regulations or legislation. In particular, this will focus on the six-month inspection and testing requirements.
- (b) Candidates for Inspector EWP Category 2 will be examined on the prevailing WorkSafe approved Industry Good Practice Document or *Approved Code of Practice* as detailed on the CBIP web site (See 6.1.1), together with any referenced standards, regulations or legislation. In particular, this will focus on the major inspection and testing requirements.

Candidates are required to demonstrate competence in the following matters pertinent to the inspection and testing of EWPs:

- (a) Knowledge of legislation and the responsibilities of inspectors
- (b) Operation of equipment.
- (c) Inspection methods and procedures.
- (d) Safe working during inspection
- (e) Knowledge of materials of construction
- (f) Type and causes of deterioration and defects
- (g) Planning and documenting inspections, and interpreting, evaluating and reporting of inspection results, including approval of inspection and test plans and preparation/approval of any specific inspection procedures required.
- (h) Maintenance of inspection records
- (i) Assessing operating and maintenance records
- (j) Welding processes, including use of approved welding procedures
- (k) NDT methods
- (l) Review and implementation of repair procedures
- (m) Fitness of equipment for service.



(n) Understanding and application of CBIP Code of Ethics.

## **6.2 Recertification**

### **6.2.1 Inspector EWP Category 1**

The recertification exam will require the applicant re-sitting the Inspector EWP Category 1 examination.

### **6.2.2 Inspector EWP Category 2**

The recertification exam will require the applicant re-sitting the Inspector EWP Category 2 examination.

### **6.2.3 Inspector EWP Category 3**

The recertification will be awarded upon successful completion of the recertification requirements for Inspector EWP Category 1 and/or Inspector EWP Category 2 depending on which has expired.

## **6.3 Sample Questions**

Sample questions for examination papers are given in Appendix A.

## **6.4 Knowledge Requirements**

The knowledge requirements underlying the examination papers for EWP inspectors are given in Appendix A.

## **6.5 Exemptions from Examination**

CBIP will consider applications for exemption from examinations.

Application for exemptions from examination papers shall be made in accordance with the requirements of the Guidelines for Certification – General Requirements.

## APPENDIX A.

### Outline of Knowledge Requirements (Normative)

#### A1 Introduction - Inspectors all Categories

It is an important factor in the safe and reliable operation of any elevating work platform (EWP) to ensure mechanical integrity, reliability, safety and fitness for purpose and service. It is therefore essential that the inspectors who perform the inspection functions have the necessary knowledge to be competent in the inspections that they perform.

##### A1.1 Knowledge Requirement

It is essential that an Inspector has sufficient knowledge of the specialised areas identified in Section B2 to be able to understand the limits of his or her knowledge, what he or she is competent to assess and certify, when specialist knowledge and competencies are required and what competencies, qualifications and credentials are appropriate in such circumstances.

The Inspector's knowledge shall be such that they can converse with specialists and also evaluate the results of their examinations. Training in these fields may be required to create sufficient knowledge.

An Inspector needs to understand the principles, applicability and limitations of the various processes, requirements and methods used for inspection, e.g. NDT. Their knowledge of these subjects should be such that they can measure and appraise the results of examinations completed by themselves or others. Training in the various specialised methods and technologies may only be required to create an awareness of such methods and technologies and their applications.

#### A2. General Requirements

##### A2.1 Introduction

The following sub-sections define the core requirements of knowledge required in order to guide candidates on both the examinations and their future work. This Appendix outlines the requirements and knowledge for the Inspector EWP Category 1 and Inspector EWP Category 2. (Category 3 being both Category 1 and Category 2)

##### A2.2 Process operation

It is essential that an Inspector understand the EWP equipment's operational conditions and underlying reasons that dictate materials selection in order to determine where to give attention during the inspection.

##### A2.3 Degradation mechanisms

An Inspector needs to understand the EWP equipment's operational conditions and underlying reasons that dictate materials selection in order to identify where and what damage, corrosion/degradation mechanisms are expected and consequently where to give attention during the inspection.

##### A2.4 Welding

Welding knowledge is taken as a limited knowledge requirement whereby an Inspector shall be able to identify the welding processes and have an understanding of welding and welder-approval procedures. As a minimum, an Inspector needs to have an understanding of the various forms of common welding techniques as well as procedures and welder approvals that apply to the common welding processes i.e. SMAW, GMAW, FCAW, GTAW, SAW. The Welding Supervisor qualification (AS 2214) is one acceptable means of demonstrating this level of knowledge.

### **A2.5 Electrical, hydraulic and pneumatics**

Electrical, hydraulic and pneumatic knowledge is taken as a limited knowledge requirement whereby an Inspector shall be able to understand the basic principles and have an understanding of the conditions that may have an effect on the operation of the EWP. As a minimum, the Inspector needs to have an understanding of:

- (a) the various forms of deterioration that may occur.
- (b) the visual recognition of deterioration, wear and damage to electrical, hydraulic and pneumatic systems.
- (c) the safety aspects for inspecting electrical, hydraulic and pneumatic systems, e.g. fuses, interlocks, levels etc.

### **A2.6 Inspection techniques and NDT**

An Inspector needs to have an understanding of the applicability, safety and accuracy of various methods and inspection techniques (invasive and non-invasive) used to detect defects or degradation mechanisms in EWPs. Appropriate techniques used and commonly applied inspection methods include visual and NDT techniques.

### **A2.7 Mechanical maintenance**

An Inspector shall be aware of the purpose, tasks and roles of the maintenance function. They should have a clear understanding of routine and non-routine activities.

An Inspector shall have sound knowledge and experience in the use of the applicable codes and standards covering design, manufacturing, repair and maintenance with the applicable type of EWP. An Inspector shall understand the fundamental principles within the standards.

It is essential that an Inspector is fully aware of the requirements for the implementation of inspection procedures.

### **A2.8 Inspection options**

An Inspector shall be aware of the various options available to determine “fitness for purpose” of equipment. They must recognise the limitations of the various inspection methods used and take this into account when deciding on the values of the methods and techniques employed (i.e. it may be necessary to supplement the method used with another one to increase confidence).

### **A2.9 Record keeping and report writing**

An Inspector shall prepare and maintain accurate records and reports of all relevant inspections to build up the necessary historic data to maintain the reliability of the equipment and also meet statutory and standards-based requirements.