POLICY STATEMENT ON ADDRESSING POTENTIALLY UNSAFE SCAFFOLDING IN NSW

1. INTRODUCTION

It has come to WorkCover NSW's attention that there is an increasing amount of scaffolding systems being made available to the construction industry that may not comply with the NSW legislative requirements for scaffolding. Three principal issues have been identified as the source of the potential problem viz –

(a) inferior quality scaffolding being imported into the State.

(b) mixing of components from different proprietary scaffolding systems; and

(c) poorly maintained components.

All three of these items represent potential risks to persons using the scaffolding or otherwise affected by it (e.g. in an adjoining street) as they reduce the assumed performance requirements of the system. Owners, suppliers, renters and lessors of scaffolding systems have been identified as key players in addressing these problems as they control the quality of the product that is erected on the construction sites.

2. GENERAL REGULATORY REQUIREMENTS

The recently promulgated *Occupational Health and Safety Regulation 2001* places general obligations on designers, manufacturers, suppliers and hirers or lessors of plant, and employers who use plant, to identify hazards associated from using the plant and to assess and control the resulting risks.

In addition, there are specific obligations on hirers or lessors of plant to implement particular risk control measures pertaining to the maintenance, repair, testing and cleaning of their plant. It should be noted that the Regulation states that a person who imports plant into the State for their own use or for subsequent supply, hiring or leasing to others, assumes the position and therefore the responsibilities of the designer and manufacturer as relevant.

These requirements in the Regulation supplement those in Part 2, Division 1 of the *Occupational Health and Safety Act 2000* which state the general duties relating to health, safety and welfare at work of employers (Section 8), controllers of work premises, plant or substances used by people as or at a place of work (Section 10), and designers, manufacturers and suppliers of plant and substances for use at work (Section 11).

Similar requirements were contained in Sections 15, 17 and 18 respectively of the *Occupational Health and Safety Act 1983* which was repealed once the *OH&S Act 2000* was promulgated, so they should not be subject to the one year transitional period applicable to new requirements under the new Regulation.

3. SPECIFIC REGULATORY REQUIREMENTS FOR SCAFFOLDING

Clause 94(c) of the *Occupational Health and Safety Regulation 2001* specifies that scaffolding be designed in accordance with the requirements of AS(/NZS) 1576, and Clause 58(d)(i) states that scaffolding must be erected and dismantled in compliance with AS/NZS 1576.1. These are not new requirements as Regulation 86(1A) of the superseded *Construction Safety Regulations* stated that scaffolding (i.e. its design and erection) must comply with the relevant part of AS(/NZS) 1576, so they are not subject to the one year transitional period applicable to new requirements under the new Regulation.

4. DETERMINATION OF A "COMPETENT PERSON"

This policy requires a number of tasks to be carried out by a "competent person". In accordance with the Australian Standards, a *competent person* is deemed to be:

> A person suitably qualified, adequately trained and appropriately experienced for the particular class of work described.

Whoever is responsible for ensuring a particular task is carried out must determine that the person employed to carry out that task is competent to do so. In determining a person's competency, due consideration must be given to their qualifications, the training they have received relevant to the task in hand, and their previous experience in doing similar tasks. Some tasks will require a particular competence, such as a degree in Structural Engineering and associated experience in scaffolding design, or a Scaffolding Certificate with sufficient training and experience, and this document gives guidance on what WorkCover considers the level of competence required in relation to some of the tasks required herein.

5. AUSTRALIAN STANDARDS

5.1 Testing The Australian Standard series AS(/NZS) 1576 *Scaffolding* comprises six separate parts, with AS/NZS 1576.1 *General requirements* being applicable to all types of scaffolding and the five other parts applicable to specific types or components. Most scaffolding used on construction sites in metropolitan districts of NSW is erected from proprietary prefabricated components that are assembled to form a complete system. The relevant part of the Standard that covers these types of scaffolding is AS/NZS 1576.3 *Prefabricated and tube-and-coupler scaffolding*, and Clause 4.1 of that Standard specifies its general performance requirements.

This Clause states that a scaffolding system and its components must be tested in accordance with the requirements specified in the Standard to determine their load carrying capacity, and to confirm compliance with the stability requirements specified in AS/NZS 1576.1; there is no allowance for assessing compliance by any other means such as calculation or structural analysis. Therefore, in order to comply with AS/NZS 1576.3, and therefore NSW legislation, the scaffolding system must be tested in accordance with the tests required by that Standard.

The Australian Standards Scaffolding Committee, BD-036, developed the testing requirements in Part 3 of AS/NZS 1576 as a means of determining a scaffold system's performance under load and therefore its load rating as specified in AS/NZS 1576.1 *Scaffolding – General requirements*. This is essential to ensure the appropriate and safe application of the scaffolding system. There is some evidence that indicates that testing to other Standards produces different load ratings than specified in AS/NZS 1576.1.

However, it should be noted that the Australian Standards represent the minimum requirements that must be met to obtain an identified outcome. Alternative measure may be applied providing they achieve at least the equivalent performance and safety results that would be achieved by applying the requirements specified in the Australian Standard. Therefore, if alternative tests are

carried out on the scaffolding system, they must be at least as rigorous as those specified in the Australian Standard, and the results must be able to be applied in such a manner as to achieve the same outcomes as the test results from the Australian Standard. Any certification provided as a means of showing compliance with the Australian Standard would need to be presented so that the information required by the Australian Standard has been obtained and is clearly identifiable.

Testing should only be carried out by an appropriate testing facility, such as a NATA accredited laboratory.

5.2 Verification of compliance An assertion of compliance with the Standard should be accompanied by a verification statement or certification which should not be confined to the testing but should encompass the critical aspects of the Standard, including the duty loading of the scaffold, the materials used – eg type, strength and thickness of sections – results of the requisite tests, which should be conducted by a reputable testing body, and all limiting factors, such as maximum height and tying requirements. Such a statement or certification should be made by a competent person, such as a Structural Engineer with experience in the design of scaffolding.

5.3 Mixing components Clause 4.1 of AS/NZS 1576.3 also states:

(a) That if a component of the system, such as a ledger or transom, is varied, then the component must be tested to verify its load capacity. “Component” does not mean an individual item, such as an isolated ledger or transom; rather it means all the transoms or an entire row of transoms.

(b) Where the system is varied, the load capacity can be determined by either testing or structural analysis. Such a variation may include individual elements being replaced by others that do not form part of the “parent” system.

The mixing of components on site would invoke the requirement specified in (b) above, which means that the structural adequacy of a scaffold system that incorporates constituent members from more systems must be verified by either testing or structural analysis. Such structural analysis must consider the various combinations that mixing of components can produce.

Further guidance is given in AS/NZS 4576 *Guidelines for scaffolding*, which is a publication that contains the relevant sections of the AS(/NZS) 1576 series of Standards, but rewritten in plainer English principally to provide practical guidance to scaffolders. Clause 10.3.5 states that components from different scaffold systems can only be mixed if one of the suppliers both approves the mix and guarantees their compatibility in size, strength, deflection characteristics and fixing, and that the mixing does not lessen the strength, stability, rigidity or suitability of the scaffold. The requisite approval and guarantee must be based on either structural analysis or testing, as per Clause 4.1 of AS/NZS 1576.3, and should only be provided by a competent person, such as a Structural Engineer with experience in scaffolding design. An opinion, whether it is derived from manufacturers’ data or visual appraisal, is not sufficient to determine the compatibility of components from different systems.

5.4 Maintenance Section 3 of AS/NZS 1576.3 specifies the requirements for the materials and the components to be incorporated into the scaffolding system. It provides no guidance on maintenance of the components other than stating that the supplier must provide documented maintenance instructions.

Instead, information pertaining to maintenance requirements is given in AS/NZS 4576. Section 13 of that document covers the inspection, testing and maintenance of scaffolding components, and includes means to determine the suitability of components for use on site. Whereas this is not a Standard and is not directly referenced in the *Occupational Health and Safety Regulation 2001*, it is called up in the Code of Practice that supplements the Regulation so the

requirements it stipulates should be followed unless equivalent or better procedures are developed and implemented. It is also the primary tool used to train and assess people for their Scaffolding Certificate of Competency, so scaffolders in NSW should be familiar with its requirements

6. RECOMMENDATIONS

6.1 Owners, Suppliers, Lessors and Hirers

To address the concerns over possible sub-standard scaffolding being used in the construction industry, WorkCover should write to all scaffold owners, suppliers, lessors and hirers in the State reminding them of their obligations under NSW occupational health and safety legislation. The circular should advise the parties as a minimum:

(a) They should be in a position to provide confirmation that their scaffolding has been assessed by a competent person, such as a Structural Engineer with experience in scaffolding design, as complying with the relevant parts of AS(/NZS) 1576. The assessment should be documented and should include verification that the scaffolding has been tested in accordance with AS/NZS 1576.3 and that it has passed such tests, the scaffolding's duty loading and other relevant information including the materials used – eg type, strength and thickness of sections – and all limiting factors, such as maximum height and tying requirements.

(b) If they have altered a constituent component of the scaffolding system, such as an entire row of transoms, they should have documentation provided by a competent person, such as a Structural Engineer with experience in scaffolding design, that confirms that the component's load capacity has been verified by testing and that it does not adversely affect the system's strength, stability, rigidity or suitability.

(c) If they permit mixing components from other proprietary scaffolding systems, including different systems of their own manufacturer, they should have documented confirmation that substantiates any assertion that the components being matched to their parent system are fully compatible and will not lessen the strength, stability, rigidity or suitability of the scaffold. Such material should be developed by a competent person, such as a Structural Engineer with experience in scaffolding design, and should include as a minimum the product of a structural analysis of the conglomerate system, such as calculations and CAD printouts.

(d) They should have a procedure for ensuring the quality of their products prior to them being supplied to industry or erected on site, and that all relevant personnel have been trained in the application of the procedure. The procedure should include a visual examination of the components, means to identify sub-standard components and means to either repair or discard such sub-standard components. Both the procedure and the training records should be documented.

(e) If they permit mixing components from other proprietary scaffolding systems, the means of identifying such components when preparing an order needs to be established and all relevant personnel have been trained in the application of the procedure. Both the procedure and the training records should be documented.

The circular will advise the parties that until such time as they produce the requisite documentation to WorkCover, the use of their scaffolding may be prohibited in NSW.

6.2 Scaffolding currently erected on site

(a) All scaffolding systems currently in use on construction sites should be assessed for compliance with AS/NZS 1576 if there is any doubt as to its integrity. If the assessment indicates that a system does not comply with the requirements of AS/NZS 1576.1 and 3, it shall either be immediately replaced by a complying system or be subjected to rigorous site controls such as de-rating its intended duty loading providing this is acceptable to WorkCover NSW.

(b) The assessment should include an *in situ* inspection by a competent person to verify that the scaffolding has been erected and is being used in accordance with the requirements of AS/NZS 1576.1, AS/NZS 1576.3 and AS/NZS 4576, and all problems that may affect its safe use are immediately rectified. For example, if a non-proprietary element is identified, it should either be replaced with or supported by an alternative that has been approved for use with the parent system.

(c) Scaffolds that are intended to remain erected for greater than six months should be subjected to a more stringent site assessment.

(d) When the scaffolding is dismantled and before its reuse, it should be checked for mixed components and serviceability as outlined in Sections 6.1(d) and (e) above.