PLANT GUARDING AUDIT

SAMPLE COMPANY NAME

June 2013

1. Scope of works

Mr Sample Manager, Sample Company requested an inspection of the current guarding controls of timber processing equipment, in particular conveyors systems, and provide an audit report outlining current levels of compliance, prevailing OH&S issues and provide recommendations to ensure that the controls are in line with current OH&S requirements in Victoria.

A cross section of plant was inspected across the site. Those areas that were inspected are indicative of current guarding practices and highlight OHS issues that were indicated by the Manager to the auditor.

Premier Safety conducted the audit in line with AS/NZ 4801: 2001 Occupational Health and Safety Management systems and applicable Standards:

This audits was also conducted in accordance with the:

- Occupational Health & Safety Act (Victoria) 2004,
- Occupational Health & Safety Regulations (Victoria) 2007 – Plant and
- Compliance Codes & Codes of Practice of Victoria

Additional references used:

- AS/NZ 4024-2006 Safety of machinery
- AS/NZ 4024.1801 – 2006 Part 1801 : Safety distances to prevent danger zones being reached by the upper limbs

Legislative Requirements

Under the current OH&S Regulations Part 3.5 Plant it is required of the employer to establish if the guarding of equipment is adequate to prevent injury to the user, and if not adequate put in place controls to ensure adequacy. The Regulations in part require:

3.5.2 Hazard identification may be for classes of plant

(b) is required under this Part to identify the hazards to that health or safety .

Further to this if Sample company are required to alter/improve current guarding or to fabricate and fit new guarding it will be regarded as the manufacturer under the current Regulations. The following sections are to be followed by Sample company.

3.5.4 Guarding

(1) If a designer of plant uses guarding as a measure to control risk, the designer must, so far as is reasonably practicable, ensure that the guarding designed for that purpose will prevent access to the danger point or danger area of the plant.

(a) if access to the area of the plant requiring guarding is not necessary during operation, maintenance or cleaning of the plant, the guarding is a permanently fixed physical barrier; or

(b) if access to the area of the plant requiring guarding is necessary during operation, maintenance or cleaning of the plant, the guarding is an interlocked physical barrier

that allows access to the area being guarded at times when that area does not present a risk and prevents access to that area at any other time; or

(c) if it is not reasonably practicable to use guarding referred to in paragraph (a) or (b), the guarding used is a physical barrier that can only be altered or removed by the use of tools; or

(d) if it is not reasonably practicable to use guarding referred to in paragraph (a), (b) or (c), the design includes a presence-sensing safeguarding system that eliminates any risk arising from the area of the plant requiring guarding while a person or any part of a person is in the area being guarded.

(3) If a designer of plant uses guarding as a measure to control risk the designer must ensure that the guarding is—

(a) designed to make by-passing or disabling of the guarding, whether deliberately or by accident, as difficult as is reasonably possible; and

(b) designed so as not to cause a risk in itself.

(4) If a designer of plant—

(a) uses guarding as a measure to control risk; and

(b) the plant to be guarded contains moving parts and those parts may break or cause work pieces to be ejected from the plant—

the designer must ensure, so far as is reasonably practicable, that the guarding will control any risk from those broken or ejected parts and work pieces.

(5) Despite anything to the contrary in this regulation, any guarding a designer of plant uses as a measure to control risk in relation to plant may be of a kind that is able to be removed to allow convenient repair, servicing and maintenance of plant at any time that the plant is not in normal operation.

2. Findings

Listed below are the findings from the guarding audit. Risk is rated from extreme to low and these ratings represent the level of potential if these hazards remain uncontrolled.

3. Recommendations

It is recommended that all conveyor ends be protected by fixed guarding to prevent any access to these exposed ends. These are to be applied to ends that are in, or close to, pedestrian walkways, work area or areas that are regularly accessed by workers and other staff members. Guarding will also prevent workers being drawn into moving and rotating parts during operation as they are walking past, while attempting to free material, cleaning away material and will control maintenance workers performing any work during operation or maintenance and adjustment of belts.
Some guarding may need to be constructed out of open mesh type material to allow sawdust, small timber particles to move away from these ends, while in other circumstances solid guarding would provide adequate protection of moving parts.
Guarding shall be locked by methods that will prevent unauthorized access and removal.
Where possible the guarding shall be hinged to prevent exposure to hazardous manual handling during removal of the guarding due to the conveyor locations, various heights and shape of the guarding, and limited or restricted access during the removal process.

Removing guarding as described could pose significant risk to those removing the guards with a high probability of suffering some type of musculoskeletal injury.

Electrical isolation is required to be built into the new guarding to prevent the use of the conveyors when the guarding is in the upright or open position. Electrical interlocking will prevent conveyors from being powered up during any adjustments, repair or replacement of belts. Once the guarding is back in place and locked in place, only then can powered operation take place.

Guarding with integrated electrical interlocking systems of the conveyor ends and conveyor belt adjustments will also allow Sample Company to comply with Brickworks MSP Isolation Procedure and Process WHS-MSP-All-07.017 as electrical isolation is required of all processes for and during installation, maintenance, cleaning tasks and any process that may cause entrapment or entanglement.

Conveyor belt adjustment and belt replacement requires the running of the conveyors to ensure that they are running true. Presently maintenance workers complete any adjustments of the conveyors while the belts are running (energized) and they are not protected by any guarding or they remove guarding to make adjustments while plant is running.

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PREMIER SAFETY
HS&E CONSULTANTS

Photo # 1 Conveyor end main belt pulley

Photo # 2 Double conveyor Grey Bench area

Photo # 3 Conveyor system to circular table

Photo # 4 Conveyor with restricted gate access

Photo # 5 Steps and platform over chipper conveyor no mid rail

ITEM	NON COMPLIANCE/ISSUE	LEGISLATION/REGULATION/ STANDARD BREACH	RISK LEVEL	RECOMMENDATION
MAINBELT PULLEY/ CONVEYOR – Stairwell in south end of main shed				
1	Conveyor guarded at side and end not locked to prevent unauthorized removal during use, cleaning or maintenance	OHS Act 2004 Sec 21 OHS Regulations 2007 Plant sec 3.5.4	High	Ensure that the guarding can only be altered or removed by the use of a tool or key to lock and open
2	Conveyor guarding does not prevent access during use, cleaning or maintenance	OHS Act 2004 Sec 21 OHS Regulations 2007 Plant sec 3.5.4	High	Fit fixed guarding in accordance to AS/NZ 4024 and relevant sections See photo 1
3	Conveyor end not guarded at top and unable to prevent work pieces being ejected from plant	OHS Act 2004 Sec 21 OHS Regulations 2007 Plant sec 3.5.4	High	Fit fixed guarding in accordance to AS/NZ 4024 and relevant sections
4	Conveyor end not guarded at top and unable to control any risk from those broken or ejected parts and work pieces	OHS Act 2004 Sec 21 OHS Regulations 2007 Plant sec 3.5.4	High	Fit fixed guarding in accordance to AS/NZ 4024 and relevant sections
DOUBLE CONVEYOR – Grey saw bench area				
6	No guarding of conveyor belts to prevent access to adjustment, cleaning or maintenance when in operation	OHS Act 2004 Sec 21 OHS Regulations 2007 Plant sec 3.5.4	High	Fit fixed guarding in accordance to AS/NZ 4024 and relevant sections See photo 2
CONVEYOR SYSTEM TO CIRCULAR TABLE				
7	Conveyor belt ends have no guarding to prevent access during cleaning, maintenance or operation	OHS Act 2004 Sec 21 OHS Regulations 2007 Plant sec 3.5.4	High	Fit fixed guarding in accordance to AS/NZ 4024 and relevant sections See photo 3
8	Conveyor belt ends adjustments have no guarding to prevent access during maintenance or operation	OHS Act 2004 Sec 21 OHS Regulations 2007 Plant sec 3.5.4	High	Fit fixed guarding in accordance to AS/NZ 4024 and relevant sections See photo 3

ITEM	NON COMPLIANCE/ISSUE	LEGISLATION/REGULATION/ STANDARD BREACH	RISK LEVEL	RECOMMENDATION
CONVEYOR adjacent DOCKING SAW				
9	Conveyor belt ends have no guarding to prevent access during cleaning, maintenance or operation	OHS Act 2004 Sec 21 OHS Regulations 2007 Plant sec 3.5.4	High	Fit fixed guarding in accordance to AS/NZ 4024 and relevant sections
CHIPPER CONVEYOR - north end				
10	Steps that go over chipper conveyor- platform hand rail has no mid rail to prevent Potential for workers falling through and onto operational conveyor	OHS Act 2004 Sec 21 AS 1657: Fixed platforms, walkways, stairways and ladders – Design, construction and installation	High	Install a mid-rail to prevent fall through the guarding system See photo 5