

**BRITISH
PRECAST**

**2012 Health & Safety
Awards**

(Sponsored by Lafarge Cement UK)



Theme: Physical Safety, Behavioural Safety or Occupational Health

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Date:	09/03/12

One Entry Form for each distinct Entry

Entry Form and supporting documents e.g. e-documents, with High Resolution Images where used, to arrive at British Precast no later than Friday, 16th March 2012.

We thank Lafarge Cement UK for their continuing support

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Precast Safety

A submission to
British Precast Federation
Safety awards 2012

Prepared by

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Safety, Health & Environmental Team
Stonemarket
Roadmeetings
Carlisle
ML8 4QG

March 2012

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1. Executive summary
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3. Methodology
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1. Executive Summary

The task was to improve the working environment for our staff within our precast department from the mixing of our concrete mix to the finished product.

The department had not only Physical Safety issues, but there were also Occupational Health issues for our staff.

Marshalls PLC has improved the site since 2007 when it was purchased from the previous private owner.

The Precast batching was an old Wingert mixer which was housed in a tin shed type building which had little or no protection from the weather. The operator was either too hot in summer or too cold in winter.

The mixer hopper was manually filled with aggregates by the operator using the large winch assisted shovel as shown in the pictures below.



The bagged cement was then lifted into place on the hopper, the bags were then cut open by a shovel and the bags then manually tipped into the hopper.

Any colour, additives or chemicals were then also added by hand.

Various types of PPE were provided but this was not always comfortable to wear due to it being a manual task with varying ambient temperatures depending on the time of year.

Once the batch was mixed it would then be transferred into a small skip and then transported into the plant by a fork lift truck and tipping skip.

This concrete was then tipped into a small hopper above the vibrating table.

The operator then operated a switch to dispense the concrete into moulds which had been placed on the vibrating table under the hopper by another operator.

The main task was to reduce the manual handling, dust inhalation and the exposure to vibration for the operators.

2. Background

The site made a case to put to the board for the capital sum of £174,000 to invest in the department but was not confident of approval due to the reduction in capital expenditure by the group.

The site also confirmed that the improvements could be made without minimal interruption to the production.

The product made in the department is one of the best manufactured within the group and the group were looking to the site to increase the production. Using the present machinery would increase the manual handling and the dust and the vibration issues for the staff in the department.

3 Methodologies

The first solution was to reinstate a semi automatic machine which had stood idle for several years before the acquisition of the site.

This also involved the transfer of over a 1000 moulds from their current state onto boards that could be handled by the machine. The work was done in house.

The move to this machine would allow the operators to make the extra product without any increase in vibration exposure or manual handling.

In fact there would be a significant reduction in exposure to both as the moulds are carried in trays by a fork lift truck and placed below the concrete hopper automatically by the machine.

The operators are also isolated from the vibration by the machine guarding. The mix design has also been changed to allow the use of a self levelling concrete which also reduces the amount of time the vibration is running.

Having reduced the vibration levels and operating time the department has seen a reduction in overall noise levels, a benefit not considered at the outset.

Previously cured product was stripped from the moulds by hand. The men would work as a team turning over the moulds and then lifting the product onto a pallet. This machine demoulds the product automatically.



The second improvement was to the batching or mixing of the concrete; this would involve the installation of a mixer, silos, a new building, hoppers and conveyors.

The majority of the equipment used was second hand with a sizeable amount being refurbished by the onsite maintenance team.

All aggregates, cement, additives and colours are now added automatically to the mixer which then produces the finished mix for the production.

The concrete is now fed by screw conveyor directly into the machine hopper which removes the use of a fork lift truck and tipping skip and also allows the doors to the factory to remain closed for longer.

This reduces the fluctuation in temperatures whilst also giving a reduction in fuel used to heat the building.

By having silos and a mixer we would take away the manual handling issues and exposure risk from the dust and cement.

Environmentally the changes are an also improvement as the cements used are now stored in silos and not in bags on pallets and any dust is controlled by filters on the silos.

4. Benefits

The team on site put a case together based on the benefits to the company of increased Production, but more important was the reduction of manual handling, dust inhalation and vibration risks.

Environmental impacts were also considered while building the case.

In May 2011 the board agreed the agreed the capital for all the improvements for the department.

In June 2011 work started on the building for the mixer.

Work also started on the installation of the new silos for the product as shown in the picture below.



During the main building work our engineers also worked on the automatic machine for making the product, this would reduce any risk from the old vibrating table and the manual handling of the product.

Amongst the many benefits to the site and operators are;

1. Reduced dust levels on the site
2. Reduced exposure to dust for operators.
3. Reduced Manual handling.
4. Reduced exposure to vibration
5. Reduction in department noise level
6. Reduced FLT traffic into and within department.
7. Increased production capacity.
8. Improved consistency and reliability of manufacture.

Costs

The cost for the project was £174,000 but the site is now able to safely produce almost 50% more product for the same labour/overhead cost.

7.0
3.0
16.0
8.0
7.0
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7.0
7.5
9.0

Marshalls Carluke

Risk assessments pre and post project

Section 1: Task Overview

General Risk Assessment Work Sheet

Ref No.		PRAW.01
Dept/Area	Metcast	Assessor:
Task	Mould fillings	John Clarkson/Gerry Maley
Issue No	3	Date Assessed
Review Date	18/12/2012	

Description of Task/Area being assessed

Moulds are placed by hand onto a vibrating table. They are then filled with concrete from an overhead hopper controlled by the operator. The mould is then pushed along the table, picked up and placed on a stack. The heavier products are lifted with a vacuum lift.

Are there any specific assessments required? (Highlight as appropriate)

P.P.E.

Manual Handling

C.O.S.H.H.

Section 3: Action Diary

Ref No.	Agreed Remedial Actions	By Whom	By When	Completed
	Move as much as possible to Cassani line	Management	end 2011	Dec-11

Specific Training Requirements

Management sign off	Name	Position	Date
Likelihood	Severity	Safety: Consider degree of possible injury and number affected	Environmental: Consider size of potential spillage, ease of containment and level of effort
1 Unlikely	1 Minor	1 - 4 Low	
2 Possible	2 Moderate	5 - 12 Med	
3 Likely	3 Major	15 - 26 High	
4 Probable	4 Serious		
5 Certain	5 Catastrophic	Quality: Consider possible reject rate and level of difficulty to rectify	

Section 2: Hazard Identification

Ref No. **PRAW.01**

Ref No.	Hazards/Aspects: Describe/List them below	Those at Risk: Impact	Uncontrolled Rating			Consider Hierarchy of controls (see guidance sheet) Existing Controls	Controlled Rating			Further Controls/Suggested Improvements
			L	S	R		L	S	R	
1	Manual Handling	Operators	3	3	9	Job rotation, Manual Handling training	1	3	3	Scissor lifts
2	Noise induced hearing loss	All	4	3	12	PPE and health surveillance	2	3	6	Monitor PPE use
3	Slips trips and falls	All	2	3	6	Housekeeping	1	3	3	maintain good standards
4	Wet concrete burns etc	Operators	3	3	9	PPE	1	3	3	Monitor PPE use
5	Foreign body in the eye	Operators	2	3	6	PPE	1	3	3	Monitor PPE use
6	Vibration	Operators	2	4	8	SOPs and health surveillance	1	4	4	Move to automated line
7	Behaviour - horse play	All employees	4	4	16	Interview selection process, Induction training, Safety awareness training, On going assessment, supervision	1	2	2	
8	Capabilities - experience	Maintenance staff	5	4	20	Induction training, training program, other training depending on what the individual requires	1	4	4	
9	Capabilities - health	Maintenance staff	5	4	20	Pre-employment health questionnaire / annual health screening, group health procedure	1	4	4	
10					0				0	
11					0				0	
12					0				0	
13					0				0	

Section 1: Task Overview

General Risk Assessment Work Sheet

Ref No. PRAW/01

Dept/Area	Westcast	Assessor:	John Clarkson	Date Assessed	10/01/2012
Task	Mould fillings	Issue No	3	Review Date	08/01/2014

Description of Task/Area being assessed

Moulds are placed by hand onto a vibrating table. They are then filled with concrete from an overhead hopper controlled by the operator. The mould is then pushed along the table, picked up and placed on a stack. The heavier products are lifted with a vacuum lift. This is now a reduced frequency as the product is being transferred onto the Cassani semi automatic machine.

Are there any specific assessments required? (Highlight as appropriate)

P.P.E.

Manual Handling

C.O.S.H.H.

Section 3: Action Diary

Ref No.	Agreed Remedial Actions	By Whom	By When	Completed
	Move as much as possible to Cassani line	Management	end 2011	Dec-11

Specific Training Requirements

Management sign off	Name	Position	Date
Likelihood	Severity		
1 Unlikely	1 Minor		
2 Possible	2 Moderate		
3 Likely	3 Major		
4 Probable	4 Serious		
5 Certain	5 Catastrophic		
	Safety: Consider degree of possible injury and number affected		
	Environmental: Consider size of potential spillage, ease of containment and level of effort		
	Quality: Consider possible reject rate and level of difficulty to rectify		

1 - 4 Low

5 - 12 Med

13 - 26 High

Section 2: Hazard Identification

Ref No. **PRAW.01**

Ref No.	Hazards/Aspects: Describe/List them below	Those at Risk: Impact	Uncontrolled Rating			Consider Hierarchy of controls (see guidance sheet) Existing Controls	Controlled Rating			Further Controls/Suggested Improvements
			L	S	R		L	S	R	
1	Manual Handling	Operators	1	3	3	Job rotation, Manual Handling training, Moving products to Cassani	1	3	3	Scissor lifts
2	Noise induced hearing loss	All	1	3	3	PPE and health surveillance	2	3	6	Monitor PPE use
3	Slips trips and falls	All	1	3	3	Housekeeping	1	3	3	maintain good standards
4	Wet concrete burns etc	Operators	1	3	3	PPE	1	3	3	Monitor PPE use
5	Foreign body in the eye	Operators	1	3	3	PPE	1	3	3	Monitor PPE use
6	Vibration	Operators	1	4	4	SOPs and health surveillance	1	4	4	Move to automated line
7	Behaviour - horse play	All employees	4	4	16	Interview selection process, Induction training, Safety awareness training, On going assessment, supervision	1	2	2	
8	Capabilities - experience	Maintenance staff	5	4	20	Induction training, training program, other training depending on what the individual requires	1	4	4	
9	Capabilities - health	Maintenance staff	5	4	20	Pre-employment health questionnaire / annual health screening, group health procedure	1	4	4	
10					0				0	
11					0				0	
12					0				0	
13	PRAW.00				0	2			0	Paver Systems

Section 1: Task Overview

General Risk Assessment Work Sheet

Section 1: Task Overview			Ref No.	PRAW.02
Dept/Area	Wetcast	Assessor:	John Clarkson/Gerry Maley	Date Assessed
Task	Filling the hopper with concrete	Issue No	4	Review Date
				08/03/2013

Description of Task/Area being assessed

Wet concrete is carried by fork lift truck in a skip. The skip is lifted and the concrete is emptied into the hopper.

Are there any specific assessments required? (Highlight as appropriate)

P.P.E.

Manual Handling

C.O.S.H.H.

Section 3: Action Diary

Ref No.	Agreed Remedial Actions	By Whom	By When	Completed
	Automate batching		Maintenance & M&D	May-11
				Dec-11

Specific Training Requirements

Management sign off	Name	Position	Date
Likelihood	Severity		
1 Unlikely	1 Minor		
2 Possible	2 Moderate		
3 Likely	3 Major		
4 Probable	4 Serious		
5 Certain	5 Catastrophic		
		Safety: Consider degree of possible injury and number affected	
		Environmental: Consider size of potential spillage, ease of containment and level of effort	
		Quality: Consider possible reject rate and level of difficulty to rectify	

1 - 4 Low

5 - 12 Med

13 - 26 High

Section 2: Hazard Identification

PRAW.02

Ref No.

Ref No.	Hazards/Aspects: Describe/List them below	Those at Risk: Impact	Uncontrolled Rating			Consider Hierarchy of controls (see guidance sheet) Existing Controls	Controlled Rating			Further Controls/Suggested Improvements
			L	S	R		L	S	R	
1	Fork truck collisions	All	2	4	8	Trained drivers and pre use check books	1	4	4	
2	Slips, trips and falls	Operator	2	3	6	Safe operating procedures	1	3	3	
3	Skips slipping from the forks	All	2	3	6		1	3	3	retaining device for skip
4	Concrete spills and splashes	All	3	2	6	House keeping and trained drivers/operators	1	2	2	Automate batching and feed direct into machine
5	Behaviour - horse play	All employees	4	4	16	Interview selection process, Induction training, Safety awareness training, On going assessment, supervision	1	2	2	
6	Capabilities - experience	Maintenance staff	5	4	20	Induction training, training program, other training depending on what the individual requires	1	4	4	
7	Capabilities - health	Maintenance staff	5	4	20	Pre-employment health questionnaire / annual health screening, group health procedure	1	4	4	
8					0				0	
9					0				0	
10					0				0	
11					0				0	
12					0				0	
13	PRAW.00				0	2			0	Paver Systems

Section 1: Task Overview

General Risk Assessment Work Sheet

Ref No.

PRAW.02

Dept/Area

Wetcast

Assessor:

John Clarkson

Date Assessed

10/01/2012

Task

Filling the hopper with concrete

Issue No

5

Review Date

08/01/2014

Description of Task/Area being assessed

Wet concrete is carried by fork lift truck in a skip. The skip is lifted and the concrete is emptied into the hopper. This is a much reduced operation as the Cassani has an automatic batching plant feeding into the hopper.

Are there any specific assessments required? (Highlight as appropriate)

P.P.E.

Manual Handling

C.O.S.H.H.

Section 3: Action Diary

Ref No.

Agreed Remedial Actions

By Whom

By When

Completed

Automate batching

Maintenance & M&D

May-11

Dec-11

Specific Training Requirements

Management sign off

Name

Position

Date

Likelihood

Severity

Safety: Consider degree of possible injury and number affected

- 1 Unlikely
- 2 Possible
- 3 Likely
- 4 Probable
- 5 Certain

- 1 Minor
- 2 Moderate
- 3 Major
- 4 Serious
- 5 Catastrophic

Environmental: Consider size of potential spillage, ease of containment and level of effort
Quality: Consider possible reject rate and level of difficulty to rectify

1 - 4 Low

5 - 12 Med

13 - 25 High

PRA.00

Section 2: Hazard Identification

PRAW.02

Ref No.

Ref No.	Hazards/Aspects: Describe/List them below	Those at Risk: Impact	Uncontrolled Rating			Consider Hierarchy of controls (see guidance sheet) Existing Controls	Controlled Rating			Further Controls/Suggested Improvements
			L	S	R		L	S	R	
1	Fork truck collisions	All	1	4	4	Trained drivers and pre use check books	1	4	4	
2	Slips, trips and falls	Operator	1	3	3	Safe operating procedures	1	3	3	
3	Skips slipping from the forks	All	1	3	3		1	3	3	retaining device for skip
4	Concrete spills and splashes	All	1	2	2	House keeping and trained drivers/operators	1	2	2	Automate batching and feed direct into machine
5	Behaviour - horse play	All employees	4	4	16	Interview selection process, Induction training, Safety awareness training, On going assessment, supervision	1	2	2	
6	Capabilities - experience	Maintenance staff	5	4	20	Induction training, training program, other training depending on what the individual requires	1	4	4	
7	Capabilities - health	Maintenance staff	5	4	20	Pre-employment health questionnaire / annual health screening, group health procedure	1	4	4	
8					0				0	
9					0				0	
10					0				0	
11					0				0	
12					0				0	
13	PRA.00				0	2			0	Paver Systems

Section 1: Task Overview

General Risk Assessment Work Sheet

Section 1: Task Overview					General Risk Assessment Work Sheet			Ref No.	PRAW/03
Dept/Area	Metcast		Assessor:	John Clarkson/Gerry Maley			Date Assessed	10/03/2011	
Task	Mixer Operation			Issue No	4		Review Date	08/03/2013	

Description of Task/Area being assessed

The mixer weigh hopper is filled with aggregates by means of an electrically assisted scoop. The cement is then added by hand. This is supplied in 25kg bags. Any colour or other additives are then also added to the weigh hopper by hand. This is then lifted by hydraulic cylinder and tipped into the rotating mixer drum. The water is then added by the operator. When the mix is complete the drum is reversed by pulling a lever, the forces the concrete to pour into a skip which has been placed by the drum chute. The skip is then taken by fork lift to the required hopper.

Are there any specific assessments required? (Highlight as appropriate)

P.P.E.

Manual Handling

C.O.S.H.H.

Section 3: Action Diary

Ref No.	Agreed Remedial Actions	By Whom	By When	Completed
	Automate batching operation	Maintenance & MI&D	May-11	Dec-11
11	Use alternative to silica sand	Management	May-11	May-11

Specific Training Requirements

Management sign off	Name	Position	Date
Likelihood	Severity		
1 Unlikely	1 Minor		1 - 4 Low
2 Possible	2 Moderate		5 - 12 Med
3 Likely	3 Major		15 - 25 High
4 Probable	4 Serious		
5 Certain	5 Catastrophic		
		Quality; Consider possible reject rate and level of difficulty to rectify	

Section 2: Hazard Identification

PRAW.03

Ref No.

Ref No.	Hazards/Aspects: Describe/List them below	Those at Risk: Impact	Uncontrolled Rating			Consider Hierarchy of controls (see guidance sheet) Existing Controls	Controlled Rating			Further Controls/Suggested Improvements
			L	S	R		L	S	R	
1	Operation of the scoop	Operators	2	2	4	Trained operators	1	2	2	Automatic mixer
2	Splashing of wet concrete	Operators	2	2	4	P.P.E	1	2	2	Monitor PPE use
3	Noise induced hearing loss	Operators	2	3	6	P.P.E & Health surveillance	1	3	3	Monitor PPE use
4	Inhalation of dust/cement	Operators	2	3	6	P.P.E & Health surveillance	1	3	3	Monitor PPE use
5	Contact with moving machinery	Operators	2	3	6	Trained operators	1	3	3	
6	Slips, trips and falls	Operators	2	2	4	Housekeeping	1	2	2	Maintain housekeeping standards
7	hazardous substances added by hand	Operators	2	3	6	P.P.E & Health surveillance	1	3	3	COSHH assessments
8	Electric shock	Operators	2	3	6	Housekeeping	1	3	3	Report defects
9	Manual Handling	Operators	2	3	6	25kg bags	1	3	3	Automatic mixer
10	Cleaning down using pressure washer	Operators	2	3	6	Safe operating procedure	1	3	3	
11	Inhalation of silica	Operators	2	3	6	P.P.E & Health surveillance, Safe operating procedure	1	3	3	Monitor PPE. Use alternative product
12	Behaviour - horse play	All employees	4	4	16	Interview selection process, Induction training, Safety awareness training, On going assessment, supervision	1	2	2	
13	Capabilities - experience	Maintenance staff	5	4	20	Induction training, training program, other training depending on what the individual requires	1	4	4	

Section 1: Task Overview

General Risk Assessment Work Sheet

Ref No.			PRAW.03
Dep/Area		Wetcast	Assessor:
Task		Mixer Operation	Issue No
			5
			Review Date
			08/01/2014

Description of Task/Area being assessed

The mixer weigh hopper is filled with aggregates by means of an electrically assisted scoop. The cement is then added by hand. This is supplied in 25kg bags. Any colour or other additives are then also added to the weigh hopper by hand. This is then lifted by hydraulic cylinder and tipped into the rotating mixer drum. The water is then added by the operator. When the mix is complete the drum is reversed by pulling a lever, the forces the concrete to pour into a skip which has been placed by the drum chute. The skip is then taken by fork lift to the required hopper. This is a much reduced operation now due to automated batching system feeding the machine.

Are there any specific assessments required? (Highlight as appropriate)

P.P.E.

Manual Handling

C.O.S.H.H.

Section 3: Action Diary

Ref No.	Agreed Remedial Actions	By Whom	By When	Completed
	Automate batching operation		May-11	Dec-11
11	Use alternative to silica sand	Management	May-11	May-11

Specific Training Requirements

Management sign off	Name	Position	Date
Likelihood	Severity		
1 Unlikely	1 Minor	Safety; Consider degree of possible injury and number affected	1 - 4 Low
2 Possible	2 Moderate		
3 Likely	3 Major	Environmental; Consider size of potential spillage, ease of containment and level of effort	5 - 12 Med
4 Probable	4 Serious		
5 Certain	5 Catastrophic	Quality; Consider possible reject rate and level of difficulty to rectify	15 - 25 High

Section 2: Hazard Identification

Ref No.

PRAW.03

Ref No.	Hazards/Aspects: Describe/List them below	Those at Risk: Impact	Uncontrolled Rating			Consider Hierarchy of controls (see guidance sheet) Existing Controls			Controlled Rating			Further Controls/Suggested Improvements
			L	S	R	L	S	R	L	S	R	
1	Operation of the scoop	Operators	2	2	4				1	2	2	
2	Splashing of wet concrete	Operators	1	2	2				1	2	2	Monitor PPE use
3	Noise induced hearing loss	Operators	1	3	3				1	3	3	Monitor PPE use
4	Inhalation of dust/cement	Operators	1	3	3				1	3	3	Monitor PPE use
5	Contact with moving machinery	Operators	1	3	3				1	3	3	
6	Slips, trips and falls	Operators	1	2	2				1	2	2	Maintain housekeeping standards
7	hazardous substances added by hand	Operators	1	3	3				1	3	3	
8	Electric shock	Operators	1	3	3				1	3	3	Report defects
9	Manual Handling	Operators	2	3	6				1	3	3	
10	Cleaning down using pressure washer	Operators	2	3	6				1	3	3	
11	Inhalation of silica	Operators	1	3	3				1	3	3	
12	Behaviour - horse play	All employees	4	4	16				1	2	2	
13	Capabilities - experience	Maintenance staff	5	4	20				1	4	4	

Section 1: Task Overview			General Risk Assessment Work Sheet			Ref No.	PRAW.04
Dept/Area	Wetcast	Assessor:	John Clarkson/Gerry Maley		Date Assessed	20/12/2010	
Task	Stripping moulds and oiling	Issue No	3		Review Date	18/12/2012	

Description of Task/Area being assessed

Once a product has cured the moulds are stripped by hand. This involves lifting a mould from a stack and turning it over to allow the product to drop out. The finished product is checked for quality and then placed on a pallet. The pallet is then finished by banding and shrink-wrapping as required. The empty mould is cleaned and then release agent is applied using a spray gun. The mould is then wiped with a cloth to remove excess oil

Are there any specific assessments required? (Highlight as appropriate)	P.P.E.	Manual Handling	C.O.S.H.H.
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Section 3: Action Diary

Ref No.	Agreed Remedial Actions	By Whom	By When	Completed
	Move to Cassani	Management	End 2011	Dec-11

Specific Training Requirements

Management sign off		Name	Position	Date
Likelihood	Severity			
1 Unlikely	1 Minor			
2 Possible	2 Moderate			
3 Likely	3 Major			
4 Probable	4 Serious			
5 Certain	5 Catastrophic			
Safety; Consider degree of possible injury and number affected		1 - 4 Low		
Environmental; Consider size of potential spillage, ease of containment and level of effect		6 - 12 Med		
Quality; Consider possible reject rate and level of difficulty to rectify		15 - 25 High		

Section 2: Hazard Identification

Ref No.

PRAW.04

Ref No.	Hazards/Aspects: Describe/List them below	Those at Risk: Impact	Uncontrolled Rating			Consider Hierarchy of controls (see guidance sheet) Existing Controls	Controlled Rating			Further Controls/Suggested Improvements
			L	S	R		L	S	R	
1	Manual Handling	Operators	2	3	6	Manual Handling Training	1	3	3	
2	Product falling from pallets	Operators	2	2	4	PPE and personal awareness	1	2	2	
3	Slips trips and falls	Operators	2	2	4	Housekeeping	1	2	2	
4	Dermatitis	Operators	1	4	4	PPE - COSHH assessments	1	4	4	
5	Spills of oil/release agent, product, risk of eye injury	Environment, operator	1	4	4	Spillage procedures, PPE, Bunded Stands	1	4	4	
6	Over oiling	Quality	2	2	4	Trained operators	1	2	2	
7	Behaviour - horse play	All employees	4	4	16	Interview selection process, induction training, Safety awareness training, On going assessment, supervision	1	2	2	
8	Capabilities - experience	Operators	5	4	20	Induction training, training program, other training depending on what the individual requires	1	4	4	
9	Capabilities - health	Operators	5	4	20	Pre-employment health questionnaire / annual health screening, group health procedure	1	4	4	
10					0				0	
11					0				0	
12					0				0	
13					0				0	
PRA.00			2			Paver Systems				

Section 1: Task Overview

General Risk Assessment Work Sheet

Dept/Area	Wetcast	Assessor:	John Clarkson	Ref No.	PRAW.04
Task	Stripping moulds and oiling	Issue No	4	Date Assessed	10/01/2012
Description of Task/Area being assessed			Review Date	08/01/2014	

Once a product has cured the moulds are stripped by hand. This involves lifting a mould from a stack and turning it over to allow the product to drop out. The finished product is checked for quality and then placed on a pallet. The pallet is then finished by banding and shrink-wrapping as required. The empty mould is cleaned and then release agent is applied using a spray gun. The mould is then wiped with a cloth to remove excess oil. The main products are demoulded automatically by the Cassani and are also oiled on the machine. Therefore the operation frequency is largely reduced.

Are there any specific assessments required? (Highlight as appropriate) P.P.E. ☐ Manual Handling ☐ C.O.S.H.H. ☐

Section 3: Action Diary

Ref No.	Agreed Remedial Actions	By Whom	By When	Completed
	Move to Cassani	Management	End 2011	Dec-11

Specific Training Requirements

Management sign off		Name	Position	Date																		
<table border="0"> <tr> <td>Likelihood</td> <td>Severity</td> <td></td> </tr> <tr> <td>1 Unlikely</td> <td>1 Minor</td> <td>1 - 4 Low</td> </tr> <tr> <td>2 Possible</td> <td>2 Moderate</td> <td></td> </tr> <tr> <td>3 Likely</td> <td>3 Major</td> <td>5 - 12 Med</td> </tr> <tr> <td>4 Probable</td> <td>4 Serious</td> <td></td> </tr> <tr> <td>5 Certain</td> <td>5 Catastrophic</td> <td>15 - 25 High</td> </tr> </table>					Likelihood	Severity		1 Unlikely	1 Minor	1 - 4 Low	2 Possible	2 Moderate		3 Likely	3 Major	5 - 12 Med	4 Probable	4 Serious		5 Certain	5 Catastrophic	15 - 25 High
Likelihood	Severity																					
1 Unlikely	1 Minor	1 - 4 Low																				
2 Possible	2 Moderate																					
3 Likely	3 Major	5 - 12 Med																				
4 Probable	4 Serious																					
5 Certain	5 Catastrophic	15 - 25 High																				
<p>Safety: Consider degree of possible injury and number affected</p> <p>Environmental: Consider size of potential spillage, ease of containment and level of effect</p> <p>Quality: Consider possible reject rate and level of difficulty to rectify</p>																						

Section 2: Hazard Identification						Ref No.		PRAW.04		
Ref No.	Hazards/Aspects: Describe/List them below	Those at Risk: Impact	Uncontrolled Rating			Consider Hierarchy of controls (see guidance sheet) Existing Controls	Controlled Rating		Further Controls/Suggested Improvements	
			L	S	R		L	S	R	
1	Manual Handling	Operators	2	3	6	Manual Handling Training	1	3	3	
2	Product falling from pallets	Operators	2	2	4	PPE and personal awareness	1	2	2	
3	Slips trips and falls	Operators	2	2	4	Housekeeping	1	2	2	
4	Dermatitis	Operators	1	4	4	PPE - COSHH assessments	1	4	4	
5	Spills of oil/release agent, product, risk of eye injury	Environment, operator	1	4	4	Spillage procedures.PPE. Bunded Stands	1	4	4	
6	Over oiling	Quality	2	2	4	Trained operators	1	2	2	
7	Behaviour - horse play	All employees	4	4	16	Interview selection process, Induction training, Safety awareness training, On going assessment, supervision	1	2	2	
8	Capabilities - experience	Operators	5	4	20	Induction training, training program, other training depending on what the individual requires	1	4	4	
9	Capabilities - health	Operators	5	4	20	Pre-employment health questionnaire / annual health screening, group health procedure	1	4	4	
10					0				0	
11					0				0	
12					0				0	
13					0				0	
PRA.00						2				Paver Systems

MANUAL HANDLING ASSESSMENT WORKSHEET: Ref No. PRAW.06

Job Title:	Wet cast filling	Location:	Paver Systems
Task:	Filling moulds from hopper	Date: 20/12/2010	Revision No: 2
No of Persons Effected:	6	Assessor's Name:	John Clarkson

Section A - Preliminary Assessment:

Q1 - Do the operations present a significant risk of injury? No
If "Yes" go to Q2. If "No" the assessment need go no further.

Q2 - Can the operation be avoided/mechanised/automated at a reasonable cost? No
If "No" go to Section B. If "Yes" do it, then check that the result is satisfactory.

Section C - Overall Assessment:

Q1 - What is the overall assessment of the risk of injury?	0	2	4	6	8
	None	Insignificant	Low	Medium	High

If "L/M/H" go to Section D. If "None/Insignificant" the assessment need go no further.

Section D - Remedial Actions:

Q1 - What remedial actions should be taken in order of priority?

- 1 Noise survey to be carried out
- 2 Scissor lift required at stacking table
- 3 Local lighting to be improved
- 4 Move suitable products to Cassani line
- 5

Section E - Assessment Comments:

Section B - Detailed Assessment:

Questions to consider:	Level of risk:			Possible remedial actions:
	H	M	L	
The Task: does it involve:-				
holding away from the trunk?				Use of vacuum lift reduces manual handling. Additional elements include exposure to noise and vibration. Earing protection to be worn and separate assessments to be carried out. Look at moving suitable products to Cassani line with automated stripping
turning - twisting?				
stooping?				
reaching upwards?				
long vertical movements?				
long carrying distances?				
strenuous pulling or pushing?				
unpredictable movement of loads?				
repetitive handling?				
insufficient rest or recovery?				
workrate imposed by process?				
Individuals capability: does the job:-				
require unusual capabilities?				
hazard those with health problems?				
hazard those who are pregnant?				
call for special information/training?				
The Loads : are they:-				
heavy?				When stacking heavier products vacuum lift is used.
bulky/unwieldy?				
difficult to grasp?				
unstable/unpredictable?				
intrinsically harmful (eg sharp or hot?)				
The Working Environment: are there:-				
constraints on posture?				Local lighting to be improved.
poor floor conditions?				
variations in levels?				
hot/cold/humid conditions?				
strong air movements?				
poor lighting conditions?				
Other factors:-				
is movement or posture hindered by clothing or P.P.E.				

When Section B is completed go to Section C

MANUAL HANDLING ASSESSMENT WORKSHEET: Ref No. PRAW.06

Job Title:	Wet cast filling	Location:	Paver Systems
Task:	Filling moulds from hopper	Date: 10/01/2012	Revision No: 3
No of Persons Effected:	6	Assessor's Name:	John Clarkson

Section A - Preliminary Assessment:

Q1 - Do the operations present a significant risk of injury? No

If "Yes" go to Q2. If "No" the assessment need go no further.

Q2 - Can the operation be avoided/mechanised/automated at a reasonable cost? No

If "No" go to Section B. If "Yes" do it, then check that the result is satisfactory.

Section C - Overall Assessment:

Q1 - What is the overall assessment of the risk of injury?	0	2	4	6	8
	None	Insignificant	Low	Medium	High

If "L/M/H" go to Section D. If "None/Insignificant" the assessment need go no further.

Section D - Remedial Actions:

Q1 - What remedial actions should be taken in order of priority?

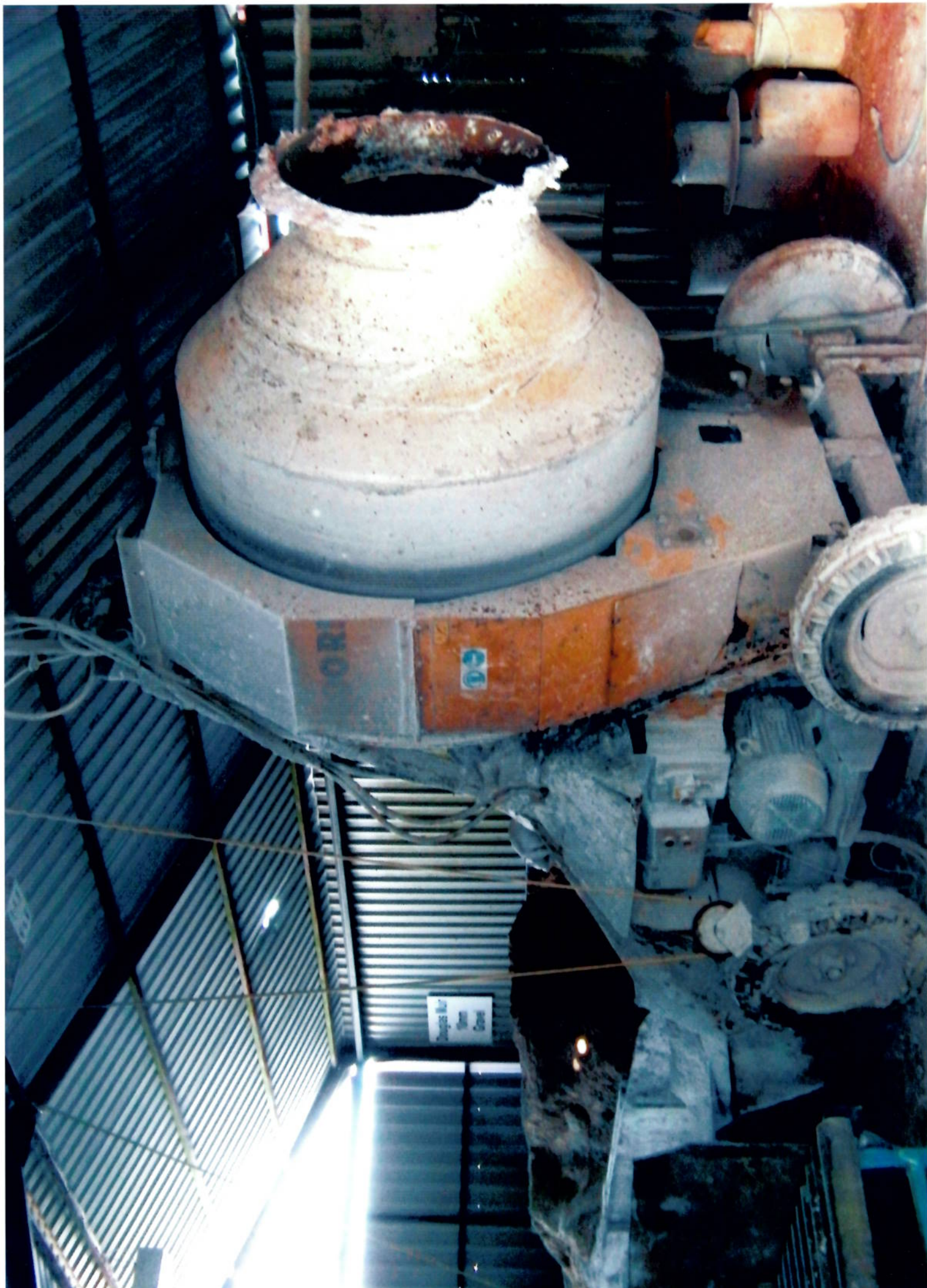
- 1 Noise survey to be carried out - complete
- 2 Scissor lift required at stacking table - complete
- 3 Local lighting to be improved - ongoing mayintenance
- 4 Move suitable products to Cassani line - majority complete
- 5

Section E - Assessment Comments:

Section B - Detailed Assessment:

Questions to consider:	Level of risk:			Possible remedial actions:
	H	M	L	
The Task: does it involve:-				
holding away from the trunk?				Use of vacuum lift reduces manual handling. Additional elements include exposure to noise and vibration. Earing protection to be worn and separate assessments to be carried out.
turning - twisting?				
stooping?				
reaching upwards?				
long vertical movements?				
long carrying distances?				
strenuous pulling or pushing?				
unpredictable movement of loads?				
repetitive handling?				
insufficient rest or recovery?				
workrate imposed by process?				
Individuals capability: does the job:-				
require unusual capabilities?				
hazard those with health problems?				
hazard those who are pregnant?				
call for special information/training?				
The Loads : are they:-				
heavy?				When stacking heavier products vacuum lift is used.
bulky/unwieldy?				
difficult to grasp?				
unstable/unpredictable?				
intrinsically harmful (eg sharp or hot?)				
The Working Environment: are there:-				
constraints on posture?				Local lighting to be maintained
poor floor conditions?				
variations in levels?				
hot/cold/humid conditions?				
strong air movements?				
poor lighting conditions?				
Other factors:-				
is movement or posture hindered by clothing or P.P.E.				
When Section B is completed go to Section C				

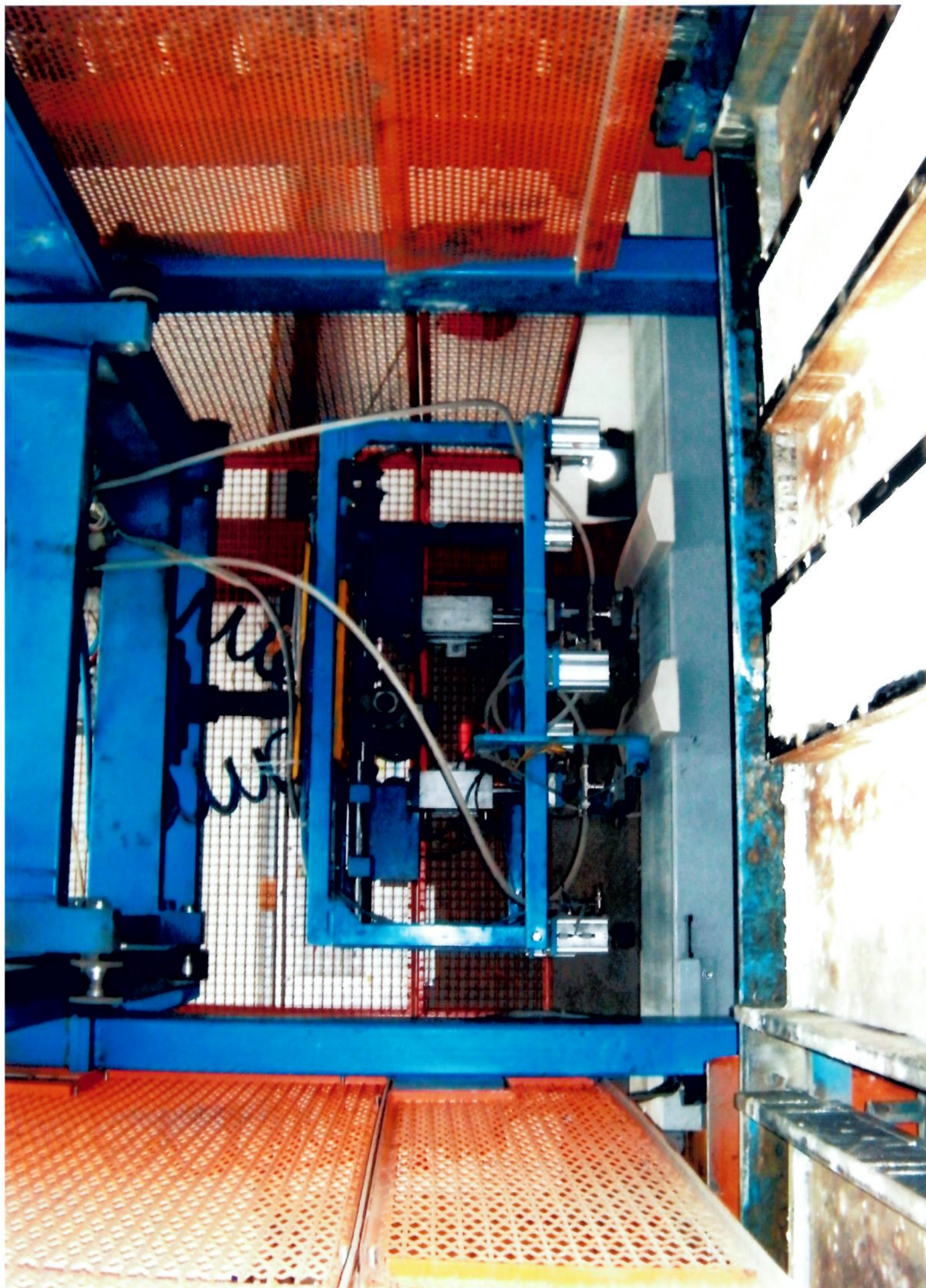
Marshall's Carlisle BPCF 2012 Picture 1



Marshall's Carlisle BPCF 2012 Picture 2



Marshall's Carlisle BPCF 2012 Picture 3



Marshalls Carluke BPCF 2012 Picture 4

