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GROUND IMPROVEMENT WORKS

at

**Brookvale
Bartons Road
Havant
Hampshire
PO9 5NA**

for

Bellway Homes Limited (Wessex)

WG/19/7002

South West Ground Improvement

Roger Bullivant Limited, Derby Court, Epsom Square, White Horse Business Park, Trowbridge, Wiltshire, BA14 0XG



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Contract No: **WG/19/7002** Contract Name: **Bartons Road, Havant**

Client: **Bellway Homes**

Document Title: **VIBRO STONE COLUMN GROUND IMPROVEMENT**

SCOPE OF WORKS

Roger Bullivant Limited are to install Vibro Stone Columns below house plots and garages as advised at the Bellway Homes site, Bartons Road, Havant.



INTRODUCTION

This Method Statement provides an outline description of the work methods to be adopted for the installation of Vibro Stone Column Ground Improvement at this site. Refer to required method statement for each task undertaken.





Contract No: **WG/19/7002** Contract Name: **Bartons Road, Havant**

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COMPANY DETAILS

Regional Office:

Roger Bullivant Limited, Derby Court, Epsom Square, White Horse Business Park, Trowbridge, Wiltshire BA14 0XG

Telephone No.: 01332 977300

H/O:

Roger Bullivant Limited, Walton Park, Heathcote Road, Swadlincote, Derbyshire, DE11 9DU

Telephone No.: 01332 977300

PROGRAMME

Works are scheduled to commence on w/c 10th June 2019

Duration of works: 7 days from installation of first stone column including testing.

Working hours for this contract are: **Monday – Friday 8:00am – 5:00pm**

SEQUENCE OF WORKS

Vibro Stone Columns to be installed in accordance with RBL Vibro Stone Column Layout drawings are issued by our CAD Technician.

Bellway Homes to set-out centre of bases/centre of trench, & every 30mtrs of floor slab (as per drawing) issued by RBL. RBL to mark out intermediates

PERSONNEL

RBL Foreman – Steve Allsop (07971 122480)
RBL Second Man – Jack Foster
RBL Visiting Site Supervisor - Michael Sheahan (07501 683336)
RBL Contracts Manager - Eric Matthews (07816 661701)
RBL Estimator/Engineer – Dan Tayler (01332 977228 / 07976 832575)
Bellway Homes Site Manager – Antony Cressey (07794 075396)
Bellway Homes QS – Ryan Kavanagh (01425 477666)
RBL H&S Advisor – Clare Brown (07768 648040)

All RBL Site Operatives are holders of a current Construction Plant Competence Card in a category compatible with the rig/plant being operated.

PLANT & EQUIPMENT

Plant & Equipment to be used on this site:

1 x RBL 4000 Series Vibro Ground Improvement Rig
1 x Front End Loader with adapted side tipping bucket & fork attachments
1 x 6mtr Probe
1 x Fuel Bowser
1 x Tool Box

All plant will have the relevant certification.



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SITE ACCESS & DELIVERIES

Access to the site is via Bartons Road, Havant, PO9 5NA

No restrictions have been advised by Bellway Homes with regards to site access or deliveries to site.

EMERGENCY & ENVIRONMENTAL PROCEDURES

Roger Bullivant Limited personnel will comply with Bellway Homes emergency procedures (**to be advised during initial site induction**).

Roger Bullivant Limited Site Foreman is First Aid trained.

The contact details for any emergency or environmental issues is as follows:

Clare Brown Grad IOSH – Health & Safety Advisor

Telephone (Direct): 01332 977239
Telephone (Main): 01332 977300
Mobile: 07768 648040
Email: clare.brown@roger-bullivant.co.uk

HEALTH & SAFETY REQUIREMENTS

All R.B. operatives are equipped with P.P.E. and will correctly use as identified in the risk assessments appertaining to the work being undertaken, head, gloves, hearing and foot protection are mandatory at all times

- Hard Hat
- Safety Glasses
- Gloves
- Safety Boots
- Hi-visibility Clothing

The appointed first aid operative to these works may be the appointed rig operator for this contract.

First aid kit and fire extinguisher will be located in the operatives van/on the rig. The emergency procedure regarding muster points when the fire alarm is raised will be briefed during the site induction carried out by Bellway Homes Limited.

OPERATIONS BRIEFING

Prior to works commencing the RB operatives will be issued with a site pack which will contain all the information they may require to carry out this project.

RB Foreman/Supervisor will complete a 'Five Safe – The Roger Bullivant 5 minute Health & Safety Briefing' daily before commencing works. Any hazardous findings to be recorded and raised with Midas Construction Site Manager.

RB Foreman Supervisor will complete a Site Safety Check-List & Toolbox Talk (1 per week for the duration of the works).



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INSPECTION / TESTS / CHECKS

Testing to verify settlement performance and the quality of site workmanship is to be carried out using both short duration plate load tests and dummy footing tests. Testing will be carried out at the end of the shift or at a time which does not impede upon the stone column installation operation.

Plate Load Tests – A plate test is a short duration small-scale test and is a means of checking the quality of workmanship. The test involves applying load in increments to a 400mm or 600mm diameter steel plate which is located over the stone column.

Dummy Footing Test – A dummy footing test is a short duration small-scale test and is a means of checking the quality of workmanship. The test involves applying load in increments to a rigid steel plate either 450mm x 1500mm or 600mm x 1500mm which is located between the stone columns.

As each stone column is installed the foreman checks the position against their drawing.

CONTROL MEASURES TO BE USED / MONITORING & COMPLIANCE

Working Platform Certificate, Underground Permit to Dig, Pre Start Site inspection, RAMS, Site Induction. No none RB personnel are to enter the working platform whilst works are being carried out without consent of the ground improvement foreman.

ENVIRONMENTAL

All fuel delivered to site will be stored in double bunded bowzers. Spill kits will be available on the rig and in the van of the rig operator. Fuel bowzers to be stored within the site storage area. All work to be carried out within day light hours only. No task lighting required.

RECORDS

Copies of all RB records shall be retained by the Company.

Where possible the RB Foreman shall obtain a signature from the Client or his representative on the record sheets as an agreement to the accuracy of the record data.

	WORK INSTRUCTION DOCUMENT	Page 1 of 9
	GENERAL	REV 4
		Issued: 24.09.18
	ACCIDENT, INCIDENT, NEAR MISS & UNSAFE SITUATION REPORTING	GEN-WID 1404

1.0 Purpose and Scope

- 1.1 The purpose of this Work Instruction Document is to describe the actions to be carried out by all RBL personnel to report an Accident, Incident, Near Miss or Unsafe Situation (SAR) in the work place.
- 1.2 Road Traffic incidents are covered within the RBL Fleet Policy and Driver's Hand Book, and reported accordingly to the requirements contained within those guidance documents. The Group Fleet Manager will enter the details onto the SHEQ Reporting system as stated in this document.

2.0 References

- 2.1 Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013 – (RIDDOR)
- 2.2 BS OHSAS 18001:2007 Clause 4.5.3 (45001:2015 Clause 10.1)
- 2.3 GEN-CSP 014 - Management of NC's, Complaints, CA & PA
- 2.4 Soletanche Freyssinet Reporting Procedure
- 2.5 Soletanche Freyssinet Reporting & debriefing of serious accidents and HiPo Near Misses instruction
- 2.6 GEN-SFD 1404 – Accident/Incident Investigation Report
- 2.7 GEN-SFD 1405 – Near Miss Investigation Report
- 2.8 GEN-SFD 1406 – SHEQ Investigation Report
- 2.9 GEN-WID 1405 – SHEQ Investigation
- 2.10 GEN-WID 1406 – Reporting of RIDDOR to the HSE
- 2.11 GEN-WID 1011 – Work on Railway Managed Infrastructure
- 2.12 Lotus Notes – Safety Alert Database Report
- 2.13 GEN-SFD 0104 – RBL Fleet Policy
- 2.14 GEN-SFD 0105 – RBL Driver's Hand Book

3.0 Terms and Definitions

- 3.1 **Accidents** – A '**sudden event**' causing injury or death to any person caused by or involving Roger Bullivant Limited related activities.
 - 3.1.1 **Serious Accident** - An event leading to an injury which requires hospitalisation for a period in excess of 24 hours for other than medical observation or in which the victim suffers physical permanent consequences (loss of any member of the body or suffers any serious degree of permanent disability)

Document Owner:	Reviewed by:	System Approval:	Approval No:
L Griffiths	C Brown	P Smith	1588
Safety Advisor	Safety Advisor	SHEQ Manager	

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**ACCIDENT, INCIDENT, NEAR MISS & UNSAFE
SITUATION REPORTING****GEN-WID 1404**

- 3.2 **Incidents** – A '**sudden event**' causing physical damage to any machine, plant, property, environmental pollution or damaged caused by, or, involving Roger Bullivant work related activities.
- 3.3 **Near Miss** – A '**sudden event**' that had the potential to cause harm to health, injury or death, with or without damage to property or environmental damage but by chance or good luck, did not do so.
- 3.3.1 **High Potential (HiPo) near miss** "High Potential near misses" are those events that have the potential severity to cause serious injuries, permanent disability or death.
- 3.4 **An Unsafe Situation (SAR)** – for the purposes of further reporting RBL break this category down into 2:
- 3.4.1 **Unsafe Condition – No event** has occurred but any situation that could result in injury or damage to people, property or equipment.
- 3.4.2 **Unsafe Act – No event** has occurred but any act that deviates from a generally recognised safe way or specified method of doing a task or failure to act on an '*Unsafe Condition*' and increases the potential for an accident.
- 3.5 **Close Call (Network Rail)** – Anything that had the potential to cause harm or injury but did not, this time. (To be reported as a Near Miss paragraph 4.6 refers).

4.0 Procedure**4.1 Incident Scene Management****4.2** Priorities must be:

- 4.2.1 Your safety;
- 4.2.2 Others safety;
- 4.2.3 Casualties;
- 4.2.4 Evidence.

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4.3 When at the scene the following details are to be followed:

- 4.3.1 **Observe** – Take your time, outside and in;
- 4.3.2 **Protect the evidence** – what could be lost?
- 4.3.3 **Gather evidence** – photographs, video, initial accounts;
- 4.3.4 **Record what is done** – by who and why;
- 4.3.5 **Account for people** – list interested parties

4.4 **Responsibilities – Person Discovering the Accident, Incident or Near Miss**

- 4.4.1 Once an accident/incident has occurred or been witnessed, stop work as safely and quickly as possible. Care must be taken not to inflame the incident, become injured or cause injury.
- 4.4.2 Treat any casualties or seek medical assistance from others or the emergency services.
- 4.4.3 Make all other workers aware of the accident/incident.
- 4.4.4 If possible avert any further danger, or the incident becoming worse. Do not put yourself in the line of danger.
- 4.4.5 If the accident/incident cannot be contained evacuate the area of all workers in the vicinity.
- 4.4.6 When safe to do so inform the Site Manager (if not already aware), and your Line Manager or Contracts Manager giving all details of the incident.
- 4.4.7 Secure the area, stop any unauthorised personnel from entering the incident area.
- 4.4.8 Preserve any evidence that may help the investigation, note any names of witnesses, list any equipment involved.
- 4.4.9 Do not start work until you are authorised to do so, from either your Line Manager or Contracts Manager. Authorisation to re-commence work must only be given when all evidence for the investigation has been collated e.g. Statements, photographs etc.

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4.5 Lotus Notes Safety Alert Reporting

4.5.1 All Accidents, Incidents, Near Misses and SAR's are to be reported by using the Safety Alert Reports on the RBL Lotus Notes System.



4.5.2 On selecting the RB SHEQ Reporting button as shown above this will bring the screen below. Either select the 'Report it!' icon for Incidents or Improvement icon for suggestions.



4.5.3 On selecting the 'Report it' the following screen will appear.

Report an Accident	Report an Incident	Report a Safety or Environmental Near-Miss	Report an unsafe Situation
(a person has suffered an injury)	(damage to plant, equipment, premises, vehicles or the environment)	(A sudden event has occurred that could have caused injury, death or environmental damage, but did not)	(No event has occurred but it could have, with the potential to cause injury, death, damage, or harm to the environment)
			

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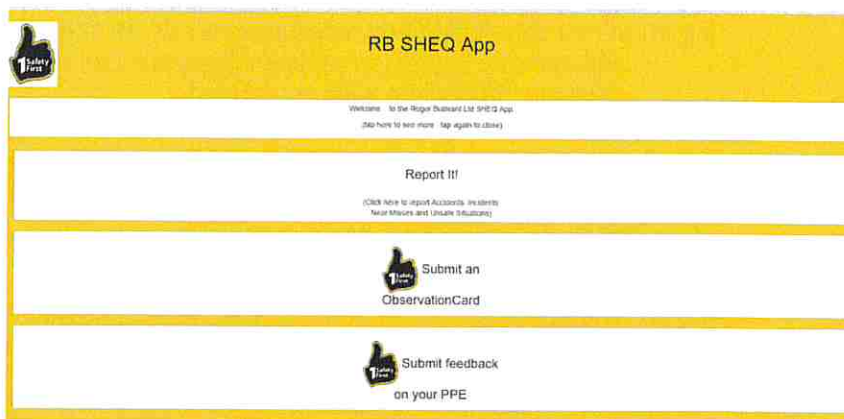
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4.5.4 Select the correct category to report as defined at paragraph 3.0.
There also notes for information given along with the icon.

4.5.5 If on a mobile application or internet with no access to Lotus Notes the following link can be used to access the reporting system as follows.

<http://www.rbl-services.co.uk/databases/bachy/rbhsreporting.nsf/hi2?OpenForm>

4.5.6 This will display the following screen



4.5.7 On selecting the 'Report it' the following screen will appear and the process for reporting follows the same process as stated in paragraph 4.5.4.



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- 4.5.8 When entered into the Reporting System, the report will be given a unique reference number, e.g., SHEQRB0001. This number is to be used when referring to the report during any correspondence or reports.
- 4.5.9 Prior to formally reporting onto the system it is important to assess what has actually happened and take time for details to be confirmed. In this initial period a telephone call can be used to inform the SHEQ department initially who will provide guidance on how to proceed.
- 4.5.10 When completing any report please add as much detail as possible and add any interested parties into to relevant boxes to allow for accurate distribution, where required.
- 4.5.11 All reports will be automatically forwarded to a pre-selected distribution list by the Lotus Notes System.

4.6 Reporting of SAR's

- 4.6.1 These should be reported as soon as the unsafe situation has been identified with details of **any immediate rectification** that has been carried out.
- 4.6.2 If further action is required then this must be ticked under the 'Further Action Required?' heading, providing details on what must happen to rectify the unsafe situation.
- 4.6.3 Unsafe situations that are identified during 5 Safe Briefs, Pre-start Site Inspections, Site Safety Checks, and Engagement Tours and during the normal working day are to recording and entered onto the database.
- 4.6.4 The reporting of these incidents will allow for trend analysis and identify areas of improvement before an incident occurs.
- 4.6.5 The details of SAR's are included within an automated weekly report forwarded to the SHEQ department. Who will assess if further follow up action is required.

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4.7 **Line Manager/Contracts Manager**

- 4.7.1 On notification of an Accident, Incident or Near Miss the Foreman/Line Manager/Contracts Manager is to complete the appropriate Report as previously stated.
- 4.7.2 Visit site, if practicable and dependant on severity of incident, obtain statements for witnesses, injured parties &/or affected parties.
- 4.7.3 Depending on the severity the Line Manager or Contracts Manager is to contact the SHEQ Manager or RBL Duty Director by telephone to discuss the severity of the Accident, Incident or Near Miss and the depth of investigation required and who will carry out the initial review.
- 4.7.4 The SHEQ Manager will send to the relevant manager and request more details, either of the following:
- GEN-SFD 1404 – Accident & Injury Reporting Form
 - or
 - GEN-SFD 1405 – Incident & Near Miss Reporting Form

When completed it to be emailed back to the SHEQ Department within 24 hours.

- 4.7.5 If required a more detailed investigation will be carried out by the SHEQ Department, and further documentation will be raised.

4.8 **SHEQ Manager – (Delegate)**

- 4.8.1 On receipt of information of an accident the SHEQ Manager is to ensure that it is entered onto the SHEQ Incident register.
- 4.8.2 Contact the Line Manager or Contracts Manager to discuss the severity of the incident, further reporting, and/or appoint an investigator to the accident, incident or near miss as required.

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4.9 **Reporting and debriefing**

- 4.9.1 Serious accidents and high potential (HiPo) near misses must be communicated immediately to the Group SHEQ Director, will be declared in the SF H&S reporting tool by the SHEQ Department and the preparation of a preliminary report must follow (within 24 hours of the occurrence).
- 4.9.2 The BU manager with the assistance of the SHEQ manager will be responsible for initiating the investigation process as stated in GEN-WID 1405 Incident Investigation.

4.10 **RIDDOR**

- 4.10.1 The Company has a duty to report all accidents in accordance with RIDDOR 2013, which includes but not isolated to, 'Specified Injuries' 'injuries to workers that result in their incapacitation for 7 days'.
- 4.10.2 Therefore, workers and managers **must** report any lost time due to an accident within 24hrs.
- 4.10.3 Certain Dangerous Occurrences are also reportable in accordance with RIDDOR 2013.

4.11 **Network Rail Reporting**

- 4.11.1 For a complete procedure to reporting rail alerts see GEN-WID 1011 – Work on Railway Managed Infrastructure.
- 4.11.2 All Close Calls (RBL Near Miss) are to be reported immediately to the Site Manager/PC, and then to RBL via the SHEQ Alert System.
- A railway Close call is defined as: Any incident that has occurred due to an unsafe condition or act that in other circumstances could have resulted in personal injury or damage to plant, machinery, infrastructure or the environment.

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- Close Calls must be reported to the SHEQ team and can also be reported direct to the close call system by using the Close Call Postcard or by the Online system at www.closecallsystem.co.uk. Note: If you do use this process ensure you still report the close call to the Person in Charge on site (if it occurred on his site/premises) and also to the SHEQ team.
- A railway Near Miss is defined as: An incident involving a train or rail mounted plant that has occurred due to an unsafe condition or act and which in other circumstances could have resulted in personal injury.

4.11.3 Emergencies such as;

- Animals, objects or people on or near the track,
- Damage or fault at a level crossing,
- A vehicle has hit a bridge,
- A broken fence or open gate allowing access to the track.

Must be reported immediately

Call the Network Rail Emergency 24 hour number on **03457 11 41 41**.

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Schedule of Piling Rig Component Weights, Dimensions, Forces and Pressures				
Rig Manufacturer :		ROGER BULLIVANT		Rig Type :
				4004 to 4009
		Operation mode:		Vibro
Completed by:	Neil Harris	04/04/2017	Checked by:	Chris Hibbert
Item	Mass (kg)	Moment arm (m)	Moment (kNm)	
UPPER WORKS	12310	-0.58	-70.07	
LOWER WORKS	5025	-0.07	-3.45	
ROPE / KELLY / CHAIN SUSPENDED EQUIPMENT	4310	2.46	104.01	
COUNTERWEIGHT	0	0.00	0.00	
OTHER	750	0.05	0.37	
TOTAL	22395	0.14	30.86	
Tracks				
Track bearing length (m)	3.24			
Track pad width (m)	0.5			
Distance between centrelines of tracks (m)	2.35			
Front Foot Pads				
Pad Bearing Area (m ²)	0.00	Actual Dimensions	None	
Pad Maximum Loading (kN)	0.00	Actual Shape	None	
Pad Moment Arm (m)	0.00			
Rear Foot Pads				
Pad Bearing Area (m ²)	0.00	Actual Dimensions	None	
Pad Maximum Loading (kN)	0.00	Actual Shape	None	
Pad Moment Arm (m)	0.00			
Forces				
Maximum Extraction Force (kN)	97.00			
Maximum Penetration Force (kN)	97.00			
Maximum Auxillary Force (kN)	0.00	Auxillary Force Moment Arm (m)	0.00	
Pressure Summary for Platform Design (unfactored)				
MODE	BRE LOAD CASE (1 or 2)	Length (m)	Width (m)	UDL Pressure (kPa)
Standing	1	2.96	0.5	74
Travelling	1	2.96	0.5	74
Handling	1	2.96	0.5	74
Penetrating	2	0.99	0.5	143
Extracting	2	2.03	0.5	135
Other	NOT USED	N/A	0.5	N/A
MODE	WARNING MESSAGES	ERROR MESSAGES FOR FORCES		
Standing	None	Auxiliary Line Force OK	Extraction Force OK	Penetration Force OK
Travelling	None	Auxiliary Line Force OK	Extraction Force OK	Penetration Force OK
Handling	None	Auxiliary Line Force OK	Extraction Force OK	Penetration Force OK
Penetrating	None	Auxiliary Line Force OK	Extraction Force OK	Penetration Force OK
Extracting	None	Auxiliary Line Force OK	Extraction Force OK	Penetration Force OK
Other	None	Auxiliary Line Force OK	Extraction Force OK	Penetration Force OK
MODE	ERROR MESSAGES FOR FOOT PADS		Notes	
Standing	Front Foot Pad Force OK	Rear Foot Pad Force OK	Only for rig operation on level ground with a vertical mast, unless noted below ! Only for use where the rig is working on a ground supported platform ! Foot pad pressures are adjusted to equalise with the track pressures ! Rigs to be operated in accordance with manufacturer's & employer's instructions This spreadsheet presents an "idealised" situation where the leader remains vertical at all times and left-to-right asymmetry is ignored. If in doubt contact Plant Design Department.	
Travelling	Front Foot Pad Force OK	Rear Foot Pad Force OK		
Handling	Front Foot Pad Force OK	Rear Foot Pad Force OK		
Penetrating	Front Foot Pad Force OK	Rear Foot Pad Force OK		
Extracting	Front Foot Pad Force OK	Rear Foot Pad Force OK		
Other	Front Foot Pad Force OK	Rear Foot Pad Force OK		
				

STEVE ALCOB


ROGER BULLIVANT

Controlled Documentation	Document ID PDCD-014-A-09	Revision	A	Date	24/03/2009
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RB Walton Park, Heathcote Road, Swadlincote, Derbyshire. DE11 9DU

Tel: 01332 977 300 Web: www.roger-bullivant.co.uk

REPORT OF TEST AND THOROUGH EXAMINATION OR THOROUGH EXAMINATION OF LIFTING PLANT AND EQUIPMENT

Date of Report:	02/01/19	Report No.	1140/18	Previous test or examination.	22/08/2018
Address at which the examination was made:		Walton Park, Swadlincote			
Identification and Description of the Equipment: Including DOM if known.			Safe Working Load(s):		
4009 Vibro piling rig DoM 01/2008			6,500 kg		
CERTIFICATE VALID FROM 02/01/2019			CERTIFICATE VALID TO 01/01/2020		
Was this equipment: supplied new			Was the examination carried out before being issued for the first time		
Supplied reconditioned			Within an interval of 6 months		
Examined only			Within an interval of 12 months	yes	
Examined and tested only			As part of an examination scheme	yes	
Examined, repaired and tested	yes		After exceptional circumstances		
Identification of any part found to have a defect or could become a danger to persons and a description of that defect. (if none, state NONE);					
None					
Is the above a defect which is of immediate danger to persons?					
If not an immediate danger, when might it become dangerous to persons without rectification?					
Particulars of any repair, renewal or alteration required to remedy the defect identified above:					
Particulars of any tests carried out as part of the examination:					
IS THE EQUIPMENT SAFE TO OPERATE?				Yes	
Person making the Report Mr Rodger Brood		Name of person authenticating this report. Mr Rodger Brood			
Plant Inspector		Signature:			
OFFICE USE ONLY:	PDF		PIMS		

**ROGER BULLIVANT**

Controlled Documentation	Document ID PDCD-014-A-09	Revision	A	Date	24/03/2009
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RB Walton Park, Heathcote Road, Swadlincote, Derbyshire. DE11 9DU

Tel: 01332 977 300 Web: www.roger-bullivant.co.uk

REPORT OF THOROUGH EXAMINATION OF LIFTING EQUIPMENT

Report date: 03/01/2019 Name of recipient / Rig ID / Dept: Steve Allsop / 4009

Address at which the examination was made: Walton Park, Swadlincote

Report Number 17750

Zip	ID	Description details	WLL
6687	CTS8170	Chainsling 2 leg	4.25t
9838	1338749	Harness DoM 11-2014	1 man
9839	T48571-29	Lanyard DoM 2015	1 man
9844	13338751	Harness (Jack Foster)	1 man
9845	T48571-22	Lanyard DoM 2015 (Jack Foster)	1 man
10839	4009	Triple ext ladders	1 man
11640	CG9496	D Shackle	2t
11641	17181465	Roundsling 1m	2t
11727	17181493	Roundsling 1m	2t
11728	14604725	Roundsling 1m	2t
		End of report	

Date of this thorough examination:

02/01/2019

Latest date of next thorough examination:

01/07/2019

IS THE EQUIPMENT SATISFACTORY AT TIME OF INSPECTION?

Yes

I certify that on the date of this thorough examination, the item(s) listed above were thoroughly examined by a trained and competent person employed by Roger Bullivant Ltd, (address above) and that the above report is a full and accurate report on the result of that examination, in accordance with the Lifting Operations and Lifting Equipment Regulations 1998.

Rodger Brood, Authorised Competent Person.

V3 STEVE

Record Number:

133739



Examination Date:

9th July 2018

CERTIFICATE OF THOROUGH EXAMINATION

In Accordance with GN28

Name & address of employer for whom this examination is made:	Location or address examined at (if different):
Roger Bullivant Ltd RB Walton Park Hearthcote Rd Swadlincote, Derbyshire DE11 9DU	Roger Bullivant Southleigh Road Emmsworth Hampshire PO9 2NX

Details of Machine:				
Make	Model	Serial Number	Year	Hours
Case	321E	NEHP00175	2014	2954

DEFECTS

Identification of any part found to have a defect which is or could become a danger to persons and a description of the defect and particulars of any repair, renewal or alteration required to remedy a defect found to be a danger to persons, (Action to take)

Attachments	Serial Number
Fork	128078-1
Bucket	128220/3

DECLARATION BY THE COMPETENT PERSON

I hereby declare that the equipment described in this report was thoroughly examined in accordance with GN28 and:

☒	No faults have been detected.
☐	Faults have been detected and the above actions are required within the time limits specified.
☐	The equipment must not be used until the above recommendations are carried out.

Authorised Examiner	Company Responsible for Thorough Examination
Name: DAVE BRENNAN - 1018169	Warwick Ward (machinery) Ltd Blacker Hill Sidings, Blacker Hill Barnsley, S74 0RE Tel: 01226 747260 www.warwick-ward.com
Signature: <i>D Brennan</i>	



The authenticity of this card can be checked by telephoning: 0844 8157274

Registration No: 00920078

PLANT OPERATOR

CATEGORIES

S/S All Types - Static Duties

Rough Terrain Forklift/Masted Truck

Wheeled Loading Shovel

Piling Rig - Driven above 15 tonnes

This card is issued in accordance with the terms laid out in the CPCS Booklet

CP Construction Plant
CS Competence Scheme



MR S ALLSOP

Registration No: 00920078

Expires End: See Over



TRAINED OPERATOR



The authenticity of this card can be checked by telephoning: 0844 8157274

Registration No: 00920078

PLANT OPERATOR

CATEGORIES

Telescopic Handler - All sizes exc. 360 Slew

Plant and Vehicle Marshaller

EXPIRY DATE

14/02/2019

21/09/2019

To upgrade this card to a Competent Operator card the relevant
SINVQ must be achieved

This card is issued in accordance with the terms laid
out in the CPCS Scheme Booklet



The authenticity of this card can be checked by telephoning: 0844 8157274

Registration No: 04845787

PLANT OPERATOR

CATEGORIES

Slinger/Signaller All Types - Static Duties

Rough Terrain Forklift/Masted Truck

Wheeled Loading Shovel

Piling Rig Attendant

This card is issued in accordance with the terms laid out in the CPCS Scheme Booklet



The authenticity of this card can be checked by telephoning: 0844 8157274

Registration No: 04845787

PLANT OPERATOR

CATEGORIES

Piling Rig - Driven above 20 tonnes

EXPIRY DATE
10/10/2019

To upgrade this card to a Competent Operator card the relevant
S/NVQ must be achieved

This card is issued in accordance with the terms laid
out in the CPCS Scheme Booklet



Site Safety Plus

To certify that

Steven Allsop

has successfully completed the following course

Site Supervisor Safety Training Scheme Refresher

For the Construction and Civil Engineering Industries

Course completion date: 19-02-2015

Certificate expiry date: 29-02-2020

A handwritten signature in black ink, appearing to read 'C. D. Rhymmer'.

Carl Rhymmer
Head of Cskills Awards



The authenticity of this card can be checked by telephoning: 0844 8157274

Registration No: 02023931

PLANT OPERATOR

CATEGORIES

Slinger/Signaller All Types - Static Duties

Rough Terrain Forklift/Masted Truck

Wheeled Loading Shovel

Piling Rig - Driven above 20 tonnes

Piling Rig Attendant

This card is issued in accordance with the terms laid out in the CPCS Scheme Booklet



Site Safety Plus

To certify that

Michael Sheahan

has successfully completed the following course

Site Management Safety Training Scheme

For the Construction and Civil Engineering Industries

Course completion date: 08-05-2015

Certificate expiry date: 31-05-2020



Carl Rhymer
Head of Cskills Awards

Contract No: **WG/19/7002** Contract Name: **Bartons Road, Havant**Client: **Bellway Homes**Doc No: **PGI-GMS 1302** Revision: **2** Date: **16/10/18** Page 1 of 3Document Title: **DRY VIBRO DISPLACEMENT****1.0 Purpose and Scope**

This Method Statement defines the Company Standard Implementation procedure for the formation of Vibro stone columns to ensure the columns are installed correctly and safely

Dry Vibro Displacement is a method of densifying ground to improve the load bearing properties, stiffness, hydraulic conductivity and shear strength of the existing ground

2.0 Health and Safety Controls

2.1 See all relevant Risk Assessments.

3.0 Environmental Controls

3.1 Operational working hours are stated on the Prestart Site Inspection Form.

3.2 COSHH Assessments must be available for all hazardous items used.

3.3 Fuel and Oil spill must be cleared as soon as possible. All spills must be reported.

3.4 All waste must be disposed of via the correct means.

3.5 Vehicle engines must be turned off when not in use.

4.0 Materials

4.1 Generally, stone, crushed concrete or other agreed media is used to form the stone column. The grading of the material used should be in the region of 75mm to 20mm, clean, inert, and with a maximum fines content of 5%.

5.0 Process**5.1 Prior to Starting Work**

5.1.1 The Site Foreman shall ensure that all the safety requirements for the ground improvement operations are in place and in accordance with the Company Health and Safety Policy.

5.1.2 The Site Foreman shall review the site file to ensure all documentation is in place and instructions are clear and complete. Any ambiguities are to be resolved with the Operations Supervisor, once satisfied the Foreman signs acceptance of these instructions on the start-up sheet. The Permit to dig and Risk Assessment are to be read, understood and signed by all Operatives on site.

Prepared by	Eric Matthews		Contracts Manager	03/06/19
	Name	Signature	Position	Date



Contract No: **WG/19/7002** Contract Name: **Bartons Road, Havant**

Client: **Bellway Homes**

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Document Title: **DRY VIBRO DISPLACEMENT**

5.1.3 The Site Foreman is to ensure that the Client has provided sufficient setting out points from which the stone column positions can be established. The setting out points provided by the Client should be clearly marked with a wooden peg or metal pin. It is the responsibility of the Client to maintain these setting out points during the proposed works.

5.1.4 The Site Foreman is to ensure that the Client has provided sufficient setting out points from which the stone column positions can be established. The setting out points provided by the Client should be clearly marked with a wooden peg or metal pin. It is the responsibility of the Client to maintain these setting out points during the proposed works.

5.2 Prior to Vibro Operations Commencing

5.2.1 The Vibro Ground Improvement Rig, Loading shovel and associated equipment shall be offloaded following Method Statement PGI-PMS 1321.

5.2.2 The Vibro Ground Improvement Rig shall be prepared for operation in accordance with the rigging instructions detailed in the specific Vibro Ground Improvement Rig Manual (attached to the machine).

5.2.3 Prior to moving the Vibro Ground Improvement Rig into the proposed working area the operator must be aware of any site specific considerations detailed in the Underground Services Permit to Dig and Avoidance of O/H Services Permit to Work.

5.3 Installation of Stone Columns

5.3.1 The operator moves the Vibro Ground Improvement Rig into position, ensuring that the Vibrating steel probe is over the proposed column location..

5.3.2 The 'probe' is checked to ensure verticality, and then allowed to penetrate the soils to the design depth. The operator should record the maximum penetration depth on his daily record sheet. The depth of treatment is determined by geotechnical consideration of the soil profile, generally, but not necessarily, penetration is to virtual refusal at a competent bearing stratum.

5.3.3 After being held at depth for a short period the 'probe' is then withdrawn, and a charge of stone, crushed concrete or other agreed media is placed within the resulting cavity from working platform level. This is undertaken by a side tipping loading shovel. The 'probe' is then reintroduced into the cavity to compact the stone and force it into the surrounding soils. This process is repeated so as to build up a compacted stone column terminating at working platform level.

5.3.4 When completed the operator should move the Vibro Ground Improvement Rig to the next stone column position. The spacing of the columns are determined by design to the, specified, required bearing capacity, and settlement criteria.



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Client: **Bellway Homes**

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Document Title: **DRY VIBRO DISPLACEMENT**

5.3.5 To complete the above operation successfully it is imperative that the area to be treated has good access, is dry, flat, and has a suitable working platform capable of supporting the Vibro Piling Rig safely, as specified in current FPS guidelines. It is the responsibility of the Client to ensure that the working platform is provided and maintained.

5.3.6 Testing to verify settlement performance and the quality of site workmanship is carried out using short duration plate tests (for method statement see separate sheet). Testing is normally completed at the end of the shift or at a time which does not impede upon the stone column installation operation.

5.4 Installed Columns

5.4.1 In the event that the design depth is not reached due to practical rig refusal, the foreman will notify the Operations Supervisor and design engineer as soon as possible for further instruction.

5.4.2 If design depth is not reached due to a localised obstruction, if achievable, this obstruction should be removed, at no cost to ourselves, and the subsequent void should be backfilled with a wholly granular material.

5.4.3 If design depth is not reached due to variable ground conditions, the event is to be treated as a Site Design Change and the foreman will notify the Roger Bullivant Limited Design Engineer for further instruction.

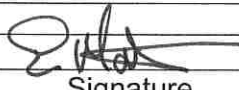
	METHOD STATEMENT		Page 1 of 5
	Ground Improvement		REV C
	Loading & Unloading 4000 Series Vibro Rigs (4004, 4005, 4006, 4007, 4008, 4009). (Excluding 4002)		Issued: 23.08.17
Contract Name:	Bartons Road, Havant	Contract Number:	WG/19/7002
Client:	Bellway Homes		

1.0 Purpose and Scope

- 1.1 This Method Statement defines the Company Standard Implementation Procedure for the loading/unloading of 4004, 4005, 4006, 4007, 4008 and 4009 Vibro Rigs onto and off trailers. **For rig 4002 see PGI-PMS 1323.**

2.0 Health and Safety Controls

- 2.1 The rig operator should be aware of the site conditions as established in the Ground Improvement Pre-Start Site Inspection (PGI-SFD-1334).
- 2.2 During all processes the correct PPE must be worn, safety boots, safety glasses, Hi-Viz, Protective helmet and gloves.
- 2.3 The rig operator is a holder of a current Construction Plant Competence Scheme (CPCS) card in a category compatible with the rig being loaded/unloaded.
- 2.4 The rig operator is responsible for the safe loading/unloading of the rig, (in collaboration with the transport driver) and for the necessary attachment, stowage, locking of brakes and rig safety devices.
- 2.5 The loading/unloading area should be of sufficient size to accommodate the movement of the rig without striking obstructions or causing hazards to others. Special consideration should be given to the position of the mast.
- 2.6 Loading/unloading operations are carried out in an area which is flat, firm and level, away from passing traffic, pedestrians and others not involved in the operation. This area should be inspected prior to loading/unloading operations and be free from obstructions, debris, snow and ice and surface water.
- 2.7 Loading/unloading on public highways should be avoided, however, if necessary adequate and appropriate traffic management should be employed as required under the New Roads and Street Works Act (NRSWA) 1991. This should be provided by others and not Roger Bullivant Ltd.
- 2.8 The rig operator should ensure that the driver has prepared the trailer for loading/unloading, It is the transport drivers responsibility to prepare the trailer for loading/unloading, however, the rig operator shall check that;

Prepared by	Eric Matthews		Contracts Manager	03/06/19
	Name		Position	Date

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Client:	Bellway Homes		

- The park brake is applied to both lorry and trailer.
- All securing chains are removed and free from the rigs access route
- The outriggers are in place and secured.
- Spreader mats are in place underneath the stabilising legs.
- The trailer's air suspension has been dumped.
- Ramps are extended to their maximum width (this should be no less than 3" greater than the width of the outriggers.
- The ramps are clear of any obstructions/debris, snow and ice

2.9 Access to the trailer should only be by safe access/egress and with the appropriate fall arrest and edge protection.

2.10 After the driver has prepared the trailer for loading/unloading the driver should be positioned in a safe location whilst the loading/unloading operation is being undertaken.

2.11 Trailer loads must not exceed tractor unit and trailer axle weights, and should be distributed evenly to avoid the tractor unit and trailer becoming unstable.

2.12 The rig transmission, steering, clutches, brakes, etc should be functioning correctly (Any unserviceable rig might require assistance).

2.13 If the rig operator is to load the plant whilst positioned on the trailer bed swan neck edge protection ('boxing ring') should be securely fixed to the trailer bed swan neck to create a designated area in which the operator can stand safely while undertaking the loading procedure.

2.14 Immediately prior to the loading/unloading operation the Operator and rig attendant shall check that no persons are within the loading/unloading area. The operation shall not begin until the area is clear and it is safe to proceed.

3.0 Environmental Controls

3.1 Operational working hours are stated on the Prestart Site Inspection Form.

3.2 Fuel and Oil spill must be cleared as soon as possible. All spills must be reported.

3.3 COSHH Assessments must be available for all hazardous items used

3.4 All waste must be disposed of via the correct means.

3.5 Vehicle engines must be turned off when not in use

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	Loading & Unloading 4000 Series Vibro Rigs (4004, 4005, 4006, 4007, 4008, 4009). (Excluding 4002)		Issued: 23.08.17
Contract Name:	Bartons Road, Havant	Contract Number:	WG/19/7002
Client:	Bellway Homes		

4.0 Process

4.1 Method of Loading

- 4.1.1 When loading the mast of the rig should be lowered, to the transport position. As per the Operators Manual.
- 4.1.2 The rig operator with the assistance of a rig attendant will position the rig at the base of the ramp continuing to ensure that the direction of movement is in line with the ramps and that the centre line of the rig corresponds with the centre line of the trailer.
- 4.1.3 The rig operator must keep the rig lined up with the ramps when loading, so that the hazardous procedure of spragging whilst on the ramps is kept to a minimum.

4.2 Loading with Operator positioned on Trailer Bed (Trailer with edge protection)

- 4.2.1 Prior to moving the rig onto the ramps, the operator shall access the trailer bed swan neck via the access steps on the tractor unit and take up a central position away from the edge of the trailer. The position should allow a clear view of the rig tracks and the ramp to the left and right side of the rig. This area should be clearly defined by edge protection ('boxing ring').
- 4.2.2 To support the Operator the Rig Attendant should be positioned safely, and be aware of any activity which may put others at risk whilst loading. This may include persons or other plant who may enter the loading area. The rig attendant should police the loading area to prevent access by others.
- 4.2.3 Refer to 4.3 for alternative loading methods.
- 4.2.4 Refer to 4.4 for loading operations.

4.3 Loading with Operator positioned at ground level (Trailer without edge protection)

- 4.3.1 Prior to moving the rig onto the ramps, the operator shall move to a position at the side of the trailer, to a point ahead of the rig which will allow clear view of the rig tracks and the ramp. To support the operator the rig attendant shall move to an adjacent position on the opposite side of the trailer to ensure a clear view of the area not seen by the operator.
- 4.3.2 Refer to 4.4 for loading operations.

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4.4 Loading Operations

- 4.4.1 If safe to proceed the rig operator should select the normal operating speed setting (Micro Speed Control – OFF, Green LED not lit) with sufficient engine revs to allow the rig to move forward at a controllable speed and in a safe manner, particularly at any point of balance. The rig must remain in alignment with the ramps and trailer at all times.
- 4.4.2 Movement up the ramp, over the 'pivot point' and onto the trailer bed should be achieved in one action without stopping.
- 4.4.3 Only when the tracks of the rig are fully on the trailer bed, after passing the pivot point, with the rig in a horizontal position can rig movement be stopped, if necessary, prior to final positioning of the rig.
- 4.4.4 Any movement of the rig, whilst on the trailer bed, (e.g. to centralise it) should be executed with care.
- 4.4.5 Final positioning and securing of the rig, when loaded, should be to the satisfaction of the transporter driver.
- 4.4.6 The loading procedure is completed when the rig has been correctly secured/restrained to eliminate the potential for forward movement during transportation.
- 4.4.7 After loading, the cab will be accessed after securing the Ladder Access System (LAS) to the mounting points, and the engine ignition switched off. This should be undertaken with care and appropriate PPE.
- 4.4.8 Any loose ancillary items should be secured correctly.
- 4.4.9 Remove/stow outriggers and return ramps to normal position for transport.
- 4.4.10 If utilised the edge protection ('boxing ring') should be removed and secured safely prior to transportation.

4.5 Method of Unloading

- 4.5.1 The rig operator should ensure that the unloading operation is safe and compliant with points 2.1 to 2.14 of this document. (Will change when paragraphs removed).

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- 4.5.2 To turn the engine ignition on the operator should first secure the LAS to the mounting points in order to access the cab. This should be undertaken with care and appropriate PPE.
- 4.5.3 When unloading the mast of the rig should remain lowered, in the transport position. As per the Operators Manual.
- 4.5.4 The operator should position himself a safe distance back from the trailer to allow a good view of the unloading operation
- 4.5.5 The Rig Attendant should also be positioned safely, and be aware of any activity which may put others at risk whilst offloading. This may include persons or other plant who may enter the offloading area. The rig attendant should police the offloading area to prevent access by others.
- 4.5.6 If safe to proceed the rig operator shall move the rig backwards at the slowest possible speed, particularly at any point of balance/pivot point. The rig must remain in alignment with the ramps and trailer during this operation.
- 4.5.7 Movement along the trailer bed, over the 'pivot point', and down the ramp, should be achieved in one action without stopping.

4.6 Choice of Plant Transporter and Arrangement of loads – Point to note

- 4.6.1 It is the responsibility of the company providing the transporter and trailer, to ensure that there is sufficient load restraint on each load
- 4.6.2 It is the transporter driver's responsibility/duty to check and ensure that the load is adequately secured at all times, not just at the start of the journey.
- 4.6.3 Company/manufacture specifications on safety, whilst in transit, are strictly adhered to.
- 4.6.4 The transporter driver should be fully briefed on the rig's general specification, (e.g. Gross weight, operating length/height, overall width and transport length/height).
- 4.6.5 It is a legal requirement that the maximum permitted axle and gross weight limits are not exceeded.



Contract No: **WG/19/7002** Contract Name: **Bartons Road, Havant**

Client: **Bellway Homes**

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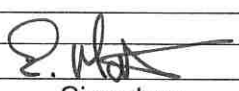
Document Title: **Loading & Unloading of G.I. Equipment & Vibro Cones
(with fork pockets)**

1. Purpose and Scope

- 1.1. This Method Statement defines the Company procedure for the loading/unloading of Vibro equipment and cones c/w fork pockets onto/off trailers.

2. Health and Safety Controls

- 2.1. The Front End Loader operator is a holder of a current Construction Plant Competence Scheme (CPCS) card in a category compatible with the operation of a front end loader.
- 2.2. The Front End Loader operator is responsible for the safe loading/unloading of vibro cone (in collaboration with the transport driver)
- 2.3. The loading/unloading area should be sufficiently large to accommodate the movement of the front end loader, equipment and vibro cone without striking obstructions or causing hazards to others.
- 2.4. Loading/unloading operations are carried out in an area which is flat, firm and level, away from passing traffic, pedestrians and others not involved in the operation.
- 2.5. The trailer bed should be clear of any loose items (timbers, chains, straps etc.).
- 2.6. Loading/unloading on public highways should be avoided, however, if necessary adequate and appropriate traffic management should be employed as required under the New Roads and Street Works Act (NRWSA) 1991. This should be provided by others and not Roger Bullivant. This must be noted on the Prestart Site Inspect.
- 2.7. After the driver has prepared the trailer for loading/unloading the driver should be positioned in a safe location whilst the loading/unloading operation is being undertaken.
- 2.8. Immediately prior to the loading/unloading operation the operator shall ensure that no persons are within the vicinity. The loading/unloading operation shall not begin until both operator and foreman indicate to each other that the area is clear and it is safe to proceed. This area must then be policed by the foreman until loading/unloading has been completed.
- 2.9. Site speed limits must be adhered to at all times.
- 2.10. All operations must be carried out in line with training and manufacturers guidance.
- 2.11. See all relevant Risk Assessments.
- 2.12. GEN-WID 1047 – Rig Exclusion Zones

Prepared by	Eric Matthews		Contracts Manager	03/06/19
	Name	Signature	Position	Date



Contract No: WG/19/7002 Contract Name: Bartons Road, Havant

Client: Bellway Homes

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Document Title: Loading & Unloading of G.I. Equipment & Vibro Cones
(with fork pockets)

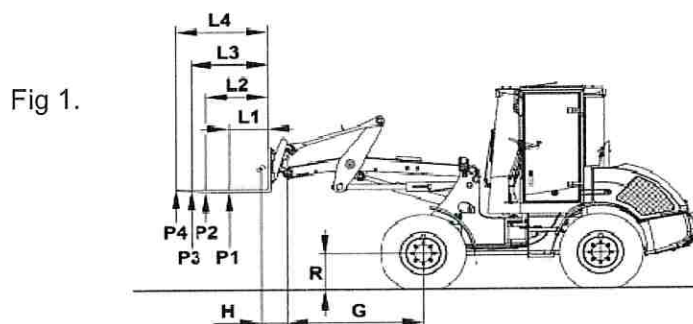
3. Environmental Controls

- 3.1. Operational working hours are stated on the Prestart Site Inspection Form.
- 3.2. COSHH Assessments must be available for all hazardous items used.
- 3.3. Fuel and Oil spill must be cleared as soon as possible. All spills must be reported.
- 3.4. All waste must be disposed of via the correct means.
- 3.5. Vehicle engines must be turned off when not in use.

4. Process

4.1. Method for Loading Cones

- 4.1.1. The front end loader operator should position the machine to align the pallet forks with the fork pockets of the cone, in a position which is perpendicular (90°) to the cone.
- 4.1.2. When aligned the operator should slowly move forward to insert the forks into the fork pockets to the L1 position (Fig 1), lift and tilt the forks back.



- 4.1.3. When moving across the site the operator should ensure that the forks are kept at a low level to prevent instability and overturning, whilst allowing safe movement without contact with the site surface.
- 4.1.4. The front end loader with cone should approach at an angle which is perpendicular to the trailer bed, ensuring that the cone will be in a position which will be, approximately, suitable for securing when placed upon the trailer bed.
- 4.1.5. When close to the trailer, the front end loader operator should slow the machine in order to adjust his position prior to placement of the cone.



Contract No: **WG/19/7002** Contract Name: **Bartons Road, Havant**

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Document Title: **Loading & Unloading of G.I. Equipment & Vibro Cones
(with fork pockets)**

- 4.1.6. When close to the trailer the operator should raise the forks to a height which will allow the cone to be placed upon the trailer. When in position the forks should be lowered, and tilted forward, to place the cone.
- 4.1.7. If multiple cones are on the trailer re-positioning of the pallet forks within the fork pockets may be required for final placement. This should be undertaken whilst the cone is on the trailer bed.
- 4.1.8. Final positioning of the cone when loaded should be to the satisfaction of the transporter driver.
- 4.1.9. When safe to do so the operator should back away from the trailer, extracting the forks from the fork pockets of the cone, and returning the forks to a lower position as soon as is convenient.
- 4.1.10. Upon completion the cones should be secured for transport.

4.2. Method of Unloading Cones

- 4.2.1. The front end loader should approach the trailer with the forks lowered and position the machine to align the pallet forks with the fork pockets of the cone, in a position which is perpendicular (90°) to the cone.
- 4.2.2. When close to the trailer, the front end loader operator should slow the machine in order to adjust his position prior to raising the pallet forks.
- 4.2.3. When aligned the operator should slowly move forward to insert the forks into the fork pockets to the L1 position (Fig 1), lift and tilt the forks back.
- 4.2.4. If multiple cones are on the trailer it may be necessary to re-position the cone with the pallet forks inserted to the P3 or P4 position (Fig 1) prior to insertion of the pallet forks within the fork pockets to the L1 position before removing the cone from the trailer bed.
- 4.2.5. After lifting off the trailer bed the forks/cone should be lowered.
- 4.2.6. When moving across the site the operator should ensure that the forks/cone are kept at a low level to prevent instability and overturning, whilst allowing safe movement without contact with the site surface.

4.3. Loading of Fuel Bowser

- 4.3.1. The fuel bowser shall be loaded as a palletised load and should be inspected before use, any defects should be reported to the Site Supervisor immediately, any hoses should be secured and all taps and caps should be closed to ensure that no spillages can occur.



Contract No: **WG/19/7002** Contract Name: **Bartons Road, Havant**

Client: **Bellway Homes**

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Document Title: **Loading & Unloading of G.I. Equipment & Vibro Cones
(with fork pockets)**

- 4.3.2. Forks shall be positioned to ensure that the bowser is lifted in a central position to the machine, this is to ensure the centre of gravity is in line with the centre of the machine.
- 4.3.3. The operator should be aware of the level of fuel in the bowser and take into consideration the risk of the fuels movement inside the bowser changing the centre of gravity of the load. All movements should be done in a smooth as possible manner to keep this risk to a minimum.
- 4.3.4. Before inserting the forks, fork pockets should be cleared of debris to ensure full contact between the fork and the load.
- 4.3.5. Once the forks have been inserted the load is to be lifted slightly then tilted back for security.
- 4.3.6. The load can then be moved to the trailer, the load must be kept as low to the ground as is practicable to ensure stability.
- 4.3.7. With assistance from the transport driver, the Front End Loader should be stopped at a safe distance from the trailer and at a perpendicular angle (90°) before lifting, consideration should be made for the lift radius (see Fig 1. Ref. positions A & B).
- 4.3.8. The load can then be lifted onto the trailer and placed in a location agreed with the transport driver.
- 4.3.9. If the transport driver is not happy and it is necessary to remove the load to re-position it follow paragraphs 4.4.3 – 4.4.6, the machine and load can then be re-positioned, paragraphs 4.3.7 – 4.3.9 may then be repeated.

4.4. Unloading of Fuel Bowser

- 4.4.1. The transport driver shall prepare the load for unloading.
- 4.4.2. Once all straps, etc. have been removed and the load is ready the front end loader may approach the trailer at a perpendicular angle (90°)
- 4.4.3. Once the front end loader is in a close but safe distance from the trailer the forks may be lifted and inserted into the fork pockets.
- 4.4.4. Once inserted the load may be lifted and tilted back slightly for security.
- 4.4.5. Operator may now reverse away from the trailer, ensuring that the area is clear.
- 4.4.6. The load must be lowered to a safe transportable position from the ground as soon as possible.
- 4.4.7. The load can then be transported to a location agreed by Site Foreman and client representative



Contract No: **WG/19/7002** Contract Name: **Bartons Road, Havant**

Client: **Bellway Homes**

Doc No: **PGI-PMS 1319** Revision **1** Date **25.03.19** Page 5 of 5

Document Title: **Loading & Unloading of G.I. Equipment & Vibro Cones
(with fork pockets)**

4.5. Loading of Cab Guard Cage

- 4.5.1. The cage may need to be chocked to allow forks underneath.
- 4.5.2. Follow paragraphs 4.3.5 – 4.3.9
- 4.5.3. Final positioning of cage may be done by hand if necessary.

4.6. Unloading of Cab Guard Cage

- 4.6.1. Follow paragraphs 4.4.1 – 4.4.2
- 4.6.2. Once the front end loader is in a close but safe distance from the trailer the forks may be lifted, the cage may need to be positioned by hand to allow forks access underneath.
- 4.6.3. Once in position the cage may be lifted and tilted back slightly for security.
- 4.6.4. Follow paragraphs 4.4.5 – 4.4.7.

5. Safety Precautions

- 5.1. Whilst undertaking the above detailed operations always;
- 5.2. Travel at a speed suitable for the location and direction and the load you are carrying.
- 5.3. Be aware of any pedestrians or other persons within the vicinity.
- 5.4. Avoid sudden stops and violent braking.
- 5.5. Slow down when turning.
- 5.6. Apply the park brake, turn off ignition and remove key when the front end loader is not in use.
- 5.7. Face the front end loader and use steps and handholds for access/egress.

6. Choice of Plant Transporter and Arrangement of Loads – Points to Note

- 6.1.1. It is the responsibility of the company providing the transporter and trailer, to ensure that there is sufficient load restraint on each load.
- 6.1.2. It is the transporter driver's responsibility/duty to check and ensure that the load is adequately secured at all times, not just at the start of the journey.

Contract No: **WG/19/7002** Contract Name: **Bartons Road, Havant**Client: **Bellway Homes**Doc No: **PGI-PMS 1320** Revision **1** Date **16.10.18** Page 1 of 3Document Title: **Rigging / De-Rigging Vibro Cones 4000 series
Vibro Rigs 4004, 4005, 4006, 4007, 4008 and 4009****1.0 Purpose and Scope**

- 1.1 This Method Statement defines the Company Standard Implementation Procedure for the Rigging De-Rigging of 4000 series rigs with Vibro Cones. It is specific to 4004, 4005, 4006, 4007, 4008 and 4009 Rigs.

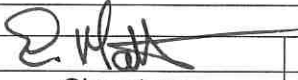
2.0 Health and Safety Controls

- 2.1 The Rig operator and Front End Loader operator/rig attendant must hold a current Construction Plant Competence Scheme (CPCS) card in a category compatible with the operation of a front end loader.
- 2.2 Both operator and rig attendant are responsible for the safe rigging and de-rigging operation.
- 2.3 The rigging/de-rigging area should be sufficiently large to accommodate the movement of the 4000 series rig, front end loader and vibro cone without striking obstructions or causing hazards to others.
- 2.4 Rigging/de-rigging operations must be carried out in an area with an appropriately designed working platform, which is flat, firm and level, away from passing traffic, pedestrians and others not involved in the operation.
- 2.5 Rigging and de-rigging must not be undertaken on public highways.
- 2.6 No persons other than those directly involved in the rigging/de-rigging operation should be allowed within the area designated for the operation. The rig operator and front end loader operator/rig attendant should watch out for pedestrians, plant and other obstructions which stray into this area, at all times.

Immediately prior to the rigging/de-rigging operation the operator and rig attendant shall check that no persons or plant are within the vicinity. The rigging/de-rigging operation shall not begin until both operator and rig attendant indicate to each other that the area is clear and it is safe to proceed

3.0 Environmental Controls

- 3.1 Operational working hours are stated on the Prestart Site Inspection Form.
- 3.2 COSHH Assessments must be available for all hazardous items used.
- 3.3 Fuel and Oil spill must be cleared as soon as possible. All spills must be reported.
- 3.4 All waste must be disposed of via the correct means.
- 3.5 Vehicle engines must be turned off when not in use.

Prepared by	Eric Matthews		Contracts Manager	03/06/19
	Name	Signature	Position	Date



Contract No: **WG/19/7002** Contract Name: **Bartons Road, Havant**

Client: **Bellway Homes**

Doc No: **PGI-PMS 1320** Revision **1** Date **16.10.18** Page 2 of 3

Document Title: **Rigging / De-Rigging Vibro Cones 4000 series
Vibro Rigs 4004, 4005, 4006, 4007, 4008 and 4009**

4.0 Process

4.1 Method of Rigging

- 4.1.1 With the rig mast in the lowered position attach the first safety tether to the vibrator carriage, and the second tether to the vibro cone. The rig operator should now retreat to a safe position, away from the cone while it is being lifted and placed.
- 4.1.2 Move the vibrator carriage so that it is a little behind the cab, ensuring that the clamp is in the open position.
- 4.1.3 Position the cone with the front end loader forks so that the cone is in line with the mast at ground level
- 4.1.4 The cone is lifted, to the maximum lift height with the pallet forks tilted back. The cone is then manoeuvred into a position which is in alignment with the mast and vibrator clamp.
- 4.1.5 When positioned, the forks are tilted into a horizontal position.
- 4.1.6 With the cone stationary, the rig should move forward, remaining in line with the cone to a point at which the top fork pocket (on the cone) aligns, approximately, with the base of the mast. The objective is to ensure that the length of cone overhanging the base of the mast is kept to a minimum, whilst still allowing access by the front end loader.
- 4.1.7 The rig should be manoeuvred to allow the 'fish plate' to meet the vibrator clamp.
- 4.1.8 When aligned, the operator should approach and access the rig cab to operate the controls which close/engage the clamp. The tether attached to the vibrator carriage, and the tether attached to the cone can now be linked with a shackle appropriate for the purpose. When completed the rig operator should retreat to a safe position.
- 4.1.9 The front end loader can now lower the cone so that it is resting on the end of the mast, and then back away extract the forks from the fork pockets.
- 4.1.10 The mast can now be raised. When the tip of the cone comes into contact with the ground, the vibrator carriage should be moved up the mast, whilst allowing the cone to be just clear of the ground. The raising of the mast and vibrator carriage can be completed as on operation.
- 4.1.11 When the mast is vertical, the rig can be tracked to the work area.
- 4.1.12 When installing the first column, after penetrating approximately 2m into the ground the clamp should be opened/disengaged, and then closed/engaged to allow the cone to centralise.



Contract No: **WG/19/7002** Contract Name: **Bartons Road, Havant**

Client: **Bellway Homes**

Doc No: **PGI-PMS 1320** Revision **1** Date **16.10.18** Page 3 of 3

Document Title: **Rigging / De-Rigging Vibro Cones 4000 series
Vibro Rigs 4004, 4005, 4006, 4007, 4008 and 4009**

4.2 Method of De-Rigging

- 4.2.1 As the mast is lowered from the vertical position, the vibrator carriage, with cone attached, should be lowered to ensure that the tip of the cone stays close to the ground, until the de-rigging position is reached.
- 4.2.2 The movement of the vibrator carriage down the mast should stop when the top fork pocket of the cone is, approximately, in line with the base of the mast. The mast should continue to be lowered until it is in the transport position.
- 4.2.3 When the mast and cone are in position the front end loader should approach the cone and fully insert the forks into the fork pockets and tilt the forks up to support the weight of the cone.
- 4.2.4 The rig operator should now approach the cab, release the clamp, and then undo the shackle holding the tethers. After completing this operation the rig operator should retreat to a safe position.
- 4.2.5 The rig can now be backed away to release the cone from the clamp. When clear of the clamp the front end loader can back away and lower the cone to ground level.

4.3 Choice of Plant Transporter and Arrangement of Loads – Points to Note

- 4.3.1 It is the responsibility of the company providing the transporter and trailer, to ensure that there is sufficient load restraint on each load.
- 4.3.2 It is the transporter driver's responsibility/duty to check and ensure that the load is adequately secured at all times, not just at the start of the journey.
- 4.3.3 It is a legal requirement that the maximum permitted axle and gross weight limits are not exceeded.

**METHOD STATEMENT**

Page 1 of 3

Ground Improvement

REV 1

Issued: 25.03.19

General Loading Shovel Operations on Site**PGI-GMS 1309****Contract Name:**

Bartons Road, Havant

**Contract
Number:**

WG/19/7002

Client:

Bellway Homes

1.0 Purpose and Scope

- 1.1. The purpose of this Method Statement is to define the safe working procedure for Loading Shovel operations on site.
- 1.2. This document has been written for use with Case 321E/321F loading shovels.

2.0 Health and Safety Controls

- 2.1 Loading Shovel operator must be a holder of a C.P.C.S. card which is in date and compatible with the Machine to be operated.
- 2.2 The operator must be familiar with the machines Operator's Manual.
- 2.3 The operator shall discuss all manoeuvres with the banksman/marshal prior to starting the process, ensuring that clear signals are given and understood.
- 2.4 Pre-start checks must be carried out prior to work starting, any defects must be reported to works supervisor.
- 2.5 See GEN-RA 1001 General Risk Assessment
 GEN-RA 1005 Vibro Stone Risk Assessment
 GEN-RA 1032 GI Cone Risk Assessment
 GEN-RA 1078 GI Testing

3.0 Environmental Controls

- 3.1 Operational working hours are stated on the Prestart Site Inspection Form.
- 3.2 Fuel and Oil spill must be cleared as soon as possible. All spills must be reported.
- 3.3 COSHH Assessments must be available for all hazardous items used.
- 3.4 All waste must be disposed of via the correct means.
- 3.5 Vehicle engines must be turned off when not in use

4.0 Methods and/or Process**4.1 Loading**

- 4.1.1 The transport driver is responsible for preparing the trailer for loading and unloading, the operator shall ensure that the trailer bed is free from obstructions/debris.
- 4.1.2 Once the trailer has been prepared, the Loading Shovel may approach the ramps in a central position, the lining up and positioning of the machine shall be done with assistance from the transport driver.

Prepared by:	Eric Matthews		Contracts Manager	03/06/19
	Name		Position	Date

	METHOD STATEMENT		Page 2 of 3
	Ground Improvement		REV 1
	General Loading Shovel Operations on Site		Issued: 25.03.19
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Client:		Bellway Homes	

4.1.3 The machine may now be loaded at an appropriate speed.

4.1.4 The final position of the machine shall take into consideration the positioning of the access steps, ensuring that once attached, the access steps allows safe egress, whilst maintaining three points of contact at all times.

4.1.5 Once positioned on the trailer, the machine must be left in a safe and secure manor as per the operator's manual and in agreement with the transport driver

4.1.6 The machine shall then be secured by the transport driver.

4.1.7 The access steps should then be secured to the trailer to allow the operator safe egress to ground level.

4.2 Unloading

4.2.1 The transport driver shall prepare the machine for unloading, ensuring that all securing chains/straps are clear of the machine and unloading route. The trailer should also be free from obstructions/debris.

4.2.2 The access steps should be attached to the trailer and secured, once attached, the operator can then access the machine maintaining three points of contact at all times.

4.2.3 Once the operator is ready to move the machine, the area should be clear of any pedestrians & plant, the banksman/marshal should be in a position that is safe but clearly visible.

4.2.4 The machine may now be unloaded at an appropriate speed, ensuring that it is kept as central to the trailer bed as possible, with the aid of the banksman/marshal.

4.2.5 The machine should be aided by the banksman until it is clear of the ramps.

4.3 Changing of Bucket/Fork attachments

4.3.1 Changing the bucket and fork attachments must be carried out as per Operator's Manual, see pages 3-19 to 3-22.

4.4 Loading/Unloading of equipment using forks

4.4.1 For the loading/unloading of Vibro Cones, please refer to Method Statement PGI-PMS 1319 - Loading & Unloading of G.I. Equipment & Vibro Cones (with fork pockets).

4.5 Assisting of Rigging and De-Rigging Vibro Rig

4.5.1 For rigging and de-rigging please refer to document PGI-PMS 1320 - Rigging / De-Rigging Vibro Cones 4004 - 4009).

	METHOD STATEMENT		Page 3 of 3
	Ground Improvement		REV 1
	General Loading Shovel Operations on Site		Issued: 25.03.19
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Client:	Bellway Homes		

4.6 Transport of stone from stock pile to Column position

- 4.6.1 Loading Shovel shall collect stone/aggregate from stock pile ensuring not to overload the bucket, observations must be made at all times whilst reversing away from stock pile.
- 4.6.2 Loading Shovel shall then travel via an agreed safe route to column location.
- 4.6.3 The Loading Shovel shall then be positioned at a safe distance from the rig and/or rig operator but close enough to side tip the stone/aggregate into the hole.
- 4.6.4 Before stone is discharged neutral gear must be engaged and the hand brake applied.
- 4.6.5 Loading Shovel operator shall then liaise with the rig operator to the frequency and quantity of stone/aggregate discharge.
- 4.6.6 Once the bucket is empty or the rig operator is happy with the amount of stone that has been discharged, the bucket must be returned to the safe travel position, hand brake disengaged and loading shovel moved away from the rig, observations must be made at all times whilst reversing away from the rig.
- 4.6.7 The loading shovel, once safely clear of the rig, may then return via an agreed safe route to the stock pile.
- 4.6.8 If more than one full bucket of stone/aggregate is required then processes 4.3.1. – 4.3.7. shall be repeated until the rig operator is satisfied that the column is complete.

4.7 Other Site Activities

- 4.7.1 It may be necessary to use the loading shovel for other tasks on site such as, stock piling aggregate, moving stone around site etc. all additional tasks shall be done in line with training and manufacturer's guidelines.
- 4.7.2 The loading shovel may be used with the fork attachment to assist fitters with repairs and maintenance. All operations should be done in line with training and manufacturer's guidelines. Any lifting accessories should be tested and in good condition.
- 4.7.3 Whilst assisting fitters it may be necessary to perform manoeuvres in close proximity to plant and personnel, these manoeuvres should be done with extra care and always with the aid of a banksman.
- 4.7.4 The moving of the fuel bowser to the rig shall be done in line with training and manufacturer's guidelines, consideration should be given to the movement of the fuel in the bowser offsetting the centre of gravity.



Contract No: **WG/19/7002**

Contract Name: **Bartons Road, Havant**

Client: **Bellway Homes**

Doc No: **PGI – GMS 1301**

Revision **F**

Page 1 of 2

Document Title:

PLATE LOAD TEST

1.0 Purpose and Scope

- 1.1 The purpose of this Method Statement is to ensure the Plate Load Tests are carried out in a safe and correct manner.

2.0 Health and Safety Controls

- 2.1 See all relevant Risk Assessments

3.0 Environmental Controls

- 3.1 None applicable

4.0 Method and/or Process

4.1 Procedure

- 4.1.1 A plate test is a short duration small-scale test and is a means of checking the quality of workmanship. The test involves applying load in increments to a 400mm or 600mm diameter steel plate, which is located over a stone column.
- 4.1.2 The test plate shall be carefully placed centrally on the exposed stone on a bedding layer of sand (maximum thickness 25mm).
- 4.1.3 In order that results of a plate test are meaningful it is essential that plate tests are undertaken in dry ground. Where there is water seepage into the test trench it is often possible to keep the area of the test dry by directing the water to a sump at one end of the test trench.
- 4.1.4 If a test is undertaken in wet ground results may not be indicative of the long term performance of the treated ground. Where water is present this must be noted on the plate test record sheet.
- 4.1.5 Settlement of the plate shall be measured by means of a minimum of three dial gauge extensometers mounted on steel reference beams positioned on either side of the test plate. Reference beams shall be fixed to steel stakes driven into the base of the test trench at a minimum distance of 1.5m from the centre of the test plate.
- 4.1.6 Load shall be applied by means of hydraulic jack situated centrally over the test plate, and load shall be measured by means of a calibrated pressure gauge. Reaction for plate tests is usually provided by mobile plant such as crawler crane, or the rig.

Prepared by

Eric Matthews

Contracts Manager

03/06/19

Name

Signature

Position

Date



Contract No: **WG/19/7002**

Contract Name: **Bartons Road, Havant**

Client: **Bellway Homes**

Doc No: **PGI – GMS 1301**

Revision **F**

Page 2 of 2

Document Title:

PLATE LOAD TEST

4.1.7 In order to ensure that the test plate is properly bedded an initial "bedding" load of 2 tonnes shall be applied for a short period and removed. Load shall then be applied in predetermined increments (no more than 2 tonnes) to a maximum 2.5 times design bearing pressure, or 11 tonnes whichever is the lesser. Each load increment shall be held for a minimum of 5 minutes, and until the rate of settlement is less than 0.2 mm in two minutes. Once the above mentioned criteria are satisfied at maximum test load the load shall be fully removed and recovery settlement monitored for a minimum of 5 minutes and until the rate of recovery is less than 0.2 mm in two minutes.

4.1.8 In essentially granular soils satisfactory performance has often been recorded by tests on newly constructed stone columns, but in finer grained low permeability soils, especially clays and silts, better performance is often achieved in older stone columns. This is because in low permeability soils it can take some time for high pore water pressure generated by treatment to dissipate.

4.1.9 If plate tests are undertaken before this happens higher plate tests settlement may occur, which would not be indicative of the actual long term performance of the treated ground to take account of this it is preferable to undertake plate tests on stone columns, which are more than 48 hours old.

4.2 Calibration

4.2.1 Each piece of testing equipment must have a calibration certificate referencing the serial number on the equipment and be calibrated within the last 12 months.

4.2.2 When dial gauges fall out of calibration or are damaged within the 12 month period a new calibrated dial gauge should be ordered via the regional office

4.2.3 When the load test jack falls out of calibration it must be returned to the regional office for re-calibration.



Contract No: **WG/19/7002** Contract Name: **Bartons Road, Havant**

Client: **Bellway Homes**

Doc No: **GEN-TMS 1316** Revision **2** Date **25.07.18** Page 1 of 2

Document Title: **DUMMY FOOTING TEST**

1.0 Purpose and Scope

- 1.1 This Method Statement describes the procedure for carrying out Dummy Footing Tests correctly.

2.0 Health and Safety Controls

- 2.1 See all relevant Risk Assessments.

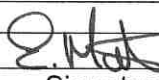
3.0 Environmental Controls

- 3.1 Operational working hours are stated on the Prestart Site Inspection Form.
- 3.2 COSHH Assessments must be available for all hazardous items used.
- 3.3 Fuel and Oil spill must be cleared as soon as possible. All spills must be reported.
- 3.4 All waste must be disposed of via the correct means.
- 3.5 Vehicle and machinery engines must be turned off, key removed and isolated when not in use.

4.0 Process

4.1 Prior to Starting

- 4.1.1 Select a Test position on the centre line of the strip foundation footing, the plate shall then be symmetrically located on an exposed column or columns.
- 4.1.2 A rigid steel plate, either 450mm x 1500mm or 600mm x 1500mm, shall be carefully beaded down on a layer of sand. The load shall be applied centrally to the plate by a means of a hydraulic jack and by using the Vibro Stone Column Rig as a reaction force.
- 4.1.3 The loads will be measured by a calibrated hydraulic gauge or load cell for which certificates are available.
- 4.1.4 The Site Foreman is to ensure that the Client has provided sufficient setting out points from which the stone column positions can be established. The setting out points provided by the Client should be clearly marked with a wooden peg or metal pin. It is the responsibility of the Client to maintain these setting out points during the proposed works.

Prepared by	Eric Matthews		Contracts Manager	03/06/19
	Name	Signature	Position	Date



Contract No: **WG/19/7002** Contract Name: **Bartons Road, Havant**

Client: **Bellway Homes**

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Document Title: **DUMMY FOOTING TEST**

4.1.5 General vertical movement of the bearing plate shall be recorded by means of at least three dial gauges (or linear voltage displacement transducers) mounted on rigid supports at least 500mm clear on either side of the Test area.

4.1.6 For bedding in, a load of 20kN will be permitted prior to loading.

4.1.7 Deflection readings will be taken at each increment of load and held for 30 minutes. Readings will be taken at 5min intervals during this period. The load shall be increased in 20kN increments up to 150kN, this load shall then be held for a minimum of six hours or overnight.

4.1.8 After holding the Test at maximum load for the required period, the load shall be released in 20kN increments at 5min intervals and the recovery recorded.

4.1.9 A final reading will be taken 30mins after return to zero load.

4.1.10 Results shall be recorded on form PGI-SFD 1315 and returned to the office for collation and engineering approval. Upon collation and approval test information shall be returned to the Main Contractor.

4.2 **Calibration**

4.2.1 Each piece of testing equipment must have a calibration certificate referencing the serial number on the equipment and to have been calibrated within the last 12 months.

4.2.2 When dial gauges fall out of calibration or are damaged within the 12 month period the gauges should be replaced

4.2.3 When the load test jack falls out of calibration it must be returned for re-calibration.



Contract Name:	Bartons Road, Havant	Contract No.:	WG/19/7002
Client:	Bellway Homes		
Assessed By:	Eric Matthews	Signature:	
Activity/Process:	GROUND IMPROVEMENT - VIBRO STONE COLUMNS	Date:	03/06/2019
		RA Serial No.	GEN-RA 1005

Risk Assessment Matrix

Severity	Likelihood				
	1	2	3	4	5
1	1	2	3	4	5
2	2	4	6	8	10
3	3	6	9	12	15
4	4	8	12	16	20
5	5	10	15	20	25

Likelihood Key

Score	Likelihood
1	Unlikely
2	May Happen
3	Likely
4	Very Likely
5	Certain

Severity Key

Score	Severity
1	Minor Injury (First Aid)
2	Minor Injury (Hospital Treatment)
3	Seven Day Injuries (Time Lost)
4	Major Injuries
5	Death

Risk Number	Associated Hazard	Person(s) Affected	Consequence	Risk Assessment			Control Measures	Residual Risk		
				L	S	R/R		L	S	R/R
1	Transport of Stone to Rig by Loading Shovel	All Personnel in the vicinity	Impact Injuries Crushing	3	4	12	• Only trained, competent, authorised personnel CCPS Certified Loading Shovel Operator • Restricted access to area during process • Suitable and serviceable PPE to be used - Head, Hearing & Foot Protection	1	4	4
2	Operation of ride on Mobile Plant	All mobile plant	Back Pain Whole Body Vibration	4	3	12	• Regular machinery maintenance • Tyre pressure checks • Seat adjustment in accordance with manufacturers guidelines • Good maintenance of traffic routes • Instruction, Training and supervision • Vibration limits to be checked and set in accordance with equipment use specific to Exposure Action Value (EAV) and Exposure Limit Value (ELV)	1	3	3