Seven Dials Warehouse

Survey of Internal Brickwork

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Introduction

- We were approached by Scott Osborn Ltd to inspect and comment on the condition and possible works and methodology that may be required to clean and repair both the internal brickwork on Seven Dials Warehouse, Earlham Street, London WC2.
- The Exposed Internal Brick Appraisal Document was issued to us and the requirements made in this were noted.
- We attended site and surveyed the 3rd, 4th and 5th floor levels internally.
- The building is Grade II listed and was originally known as Brewery House.

- The building was fire damaged and a major refurbishment was undertaken in 2008 which involved the total rebuilding of the internal structure. Please see the attached photo which we have found on the internet of the set up internally to Earlham Street. This gives indication of the removed walls and original parapet heights and makes understanding the existing set up easier to visualise.
- A Dropbox of various photographs taken at each of the floor levels internally:

https://www.dropbox.com/sh/vr003hr0hj1hizs/AACCzfDBJgtUhi6gZzeLNnQia?dl=0

- For information Stone Restoration Services Ltd are active members of the Stone Federation of Great Britain and have been involved with the cleaning, repair and renovation of high quality buildings for the past 20 years.
- The survey was carried out by Charles Gilbert who is the Estimating Director for the company and he has over 40 years of experience in the masonry business.

Internal Observations 1

- 5th Floor Level
- There is a ledge at a height of 2.1 metres off the floor slab that extends around the whole floor at this level above which the wall thickness decreases and this is part of the original parapet set up. There is much evidence of concrete build up on this projection which we assume was left after the last refurbishment.
- Multiple layers of paint are present on the brick surfaces. We are unaware of any tests being undertaken and there is therefore the possibility that there may be lead presence in the paint.
- Large areas of brickwork damage are present in patches.
- Areas of concrete fill are present in numerous locations.
- Old service ducts are still visible where they perforate the brick faces.

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- 5th Floor Level Continued
- The condition of the bricks and pointing cannot be determined at present but extensive works would appear to be required to bring the brickwork into any sort of condition that would allow them to be left uncovered.
- The 'Exposed Internal Brick Appraisal' makes specific reference to the retaining of the bullnose brick surrounds to the windows and although these remain mostly enclosed where we could view these they seem generally to be intact but some are damaged or missing.
- On Shelton Street elevation at the ledge level there is evidence of a timber wall plate and this is part of the fire damaged structure that remains from the 2008 refurbishment.

5th Floor Internal

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Internal Observations 2

- 4th Floor Level
- Multiple layers of paint are present on the brick surfaces. We are unaware of any tests being undertaken and there is therefore the possibility that there may be lead presence in the paint.
- Large areas of brickwork damage are present in patches.
- Areas of concrete fill are present in numerous locations.
- Old service ducts are still visible where they perforate the brick faces.
- The condition of the bricks and pointing cannot be determined at present but extensive works would appear to be required to bring the brickwork into any sort of condition that would allow them to be left uncovered.

- <u>4th Floor Level Continued</u>
- The ‘Exposed Internal Brick Appraisal’ makes specific reference to the retaining of the bullnose brick surrounds to the windows and although these remain mostly enclosed where we could view these they seem generally to be intact but some are damaged or missing.
- On Neal Street section of the walls plaster is still in place in some areas. This may or may not contain horse hair and should be tested accordingly.

4th Floor Level Internal

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Internal Observations 3

- 3rd Floor Level
- Multiple layers of paint are present on the brick surfaces. We are unaware of any tests being undertaken and there is therefore the possibility that there may be lead presence in the paint.
- Large areas of brickwork damage are present in patches.
- Areas of concrete fill are present in numerous locations.
- Old service ducts are still visible where they perforate the brick faces.
- The condition of the bricks and pointing cannot be determined at present but extensive works would appear to be required to bring the brickwork into any sort of condition that would allow them to be left uncovered.

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- <u>3rd Floor Level Continued</u>
- The ‘Exposed Internal Brick Appraisal’ makes specific reference to the retaining of the bullnose brick surrounds to the windows and although these remain mostly enclosed where we could view these they seem generally to be intact but some are damaged or missing.
- On the Neal Street end of the building plaster is still in place on the some areas of the walls. This may or may not contain horse hair and should be tested accordingly.

3rd Floor Level Internal

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Recommendations 1

- Paint Removal and Cleaning of Internal Brickwork

Prior to any works being carried out to the painted brickwork samples of the coatings should be taken from various locations on each of the floor levels and tested for the presence of lead and this will determine what methods can safely be used to remove the paint from the surfaces.

After results are received it is possible that the following methodology may be used either separately or jointly as a process.

- *DOFF High Temperature Steam Cleaning*
- *TORC Swirling Vortex Cleaning*
- *Poultice Application using products such as KlingStrip or Peelaway (this may be a necessity if lead is detected to significant levels)*
- *Gel type paint remover such as those supplied by Tensid or Stonehealth.*

Consideration will need to be given to how any water would be controlled internally but this is not insurmountable as the floors are solid and the site is barren at present.

We have not suggested dry blasting of the walls at present as this could cause further damage to the bricks and the pointing.

Recommendations 2

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- Internal Brickwork Repairs and Repointing

In contrast to the external repairs the internal requirements will be much more extensive and will only become fully apparent after the paint removal and cleaning process is completed.

As with the external works the tasks that are envisaged would be as follows.

- Raking out and repointing of open, defective or previously mismatched joints using a lime based mortar possibly NHL 3.5 and sand to a ratio of 1:2 in a pointing style to match the existing. Depth of raking out to be not less than 25mm.
- Cutting out and replacement of defective or previously mismatched bricks using either matching new bricks or second hand salvaged materials. Bedding and pointing using a lime based mortar possibly NHL 3.5 and sand to a ratio of 1:2 in a pointing style to match the existing.

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Internal Brickwork Repairs and Repointing Continued

In addition to this the following items will be required.

- Removal of plasterwork from brickwork walls. This should be initially tested for animal hair and the possible presence of Anthrax.
- Possible cutting back of concrete infills to allow installation of brick facings subject to the architects view on this.
- Cutting out and bonding in of large patches of brick in areas where walls have been previously demolished.
- Cutting out and bonding in of varying sized patches where holes for services have been cut in the past.

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Internal Brickwork Repairs and Repointing continued

- Re-bedding of loose brickwork areas and removal of the concrete deposits on the 5th floor ledge 2.1 m above existing floor slab level.
- Replacement of areas of missing brickwork.
- As with the cleaning, samples of repointing and brick replacement would be undertaken to determine the exact mortar constituency and the correct brick replacement. We cannot be sure how many brick types are present on the internal walls but this may need to be a mixture of brick types from varying providers.

Photo of Interior of End Wall and Part Earlham Street Prior to Earlier Refurbishment

Provisional Method Statements

- The following method statements and technical data sheets have been compiled using documentation that would be fine tuned for this specific project in due course.

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Method Statements & Risk Assessments
For

Site /Project	Seven Dials Warehouse, Earlham Street, London WC2
Contract Number	
Tasks/activities:	Cleaning, Pointing and Repairs
Other information:	Draught Proposals for Methodology that may be Required.

Risk assessment sign off					
Prepared by:	Colin White	Signature:		Date:	21/03/17
Reviewed by:	Charles Gilbert	Signature:		Date:	22/03/17
Date for review:	This risk assessment should be reviewed if additional risks not covered in this assessment are identified or if there is any reason to suggest that the control measures are deemed to be insufficient.				

Document issue record

Amendment number	Issue date	Date amended	Person amending	Remarks

Distribution schedule

Registered number	Issue number	Date	Name	Designation

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Employee/s: TBA

I have been inducted on all site rules and safety procedures and fully understand what is expected from me.

I have read the Risk Assessment and Method Statement which have been explained to me and fully understood its contents and the risks involved in the works being undertaken.

I have been issued with the correct PPE relevant to the work needing to be carried out.

I fully understand why the PPE has been selected / issued and the importance of using it correctly and reporting when defects/replacements are required.

It is the duty of all employees under regulation 14 of the "Management of Health and Safety at Work (Amendment) Regulations2006" to inform the employer of any circumstances that may indicate any shortcomings in this assessment

I have received a toolbox talk relevant to the work being carried out.

I agree to work to the method stated and if changes are required I will agree a new method for which a new risk assessment may be deemed necessary.

SRS will instruct all operatives of the contents of the procedures listed within this Method Statement before any work commences.

All local conditions not covered by this Methods Statement will be assessed by on site operatives.

Where hazards and risks are identified, which are of high risk then work will stop immediately and brought to the attention of the Health and Safety advisor who will amend the Method Statement.

Employee/s Signature/s:
Date:

Description of Task/Activity	Cleaning, pointing and repairs
Project Name	Seven Dials Warehouse
Date of Works/Duration	TBA
Hours of Work	7:30 – 4:00 pm / signing in required
Site Address/Location	Seven Dials London, 41 Earlham St, London WC2H 9LX
Personnel Involved/ Site Management	TBA
Communication and Co-operation	Principle Contractor will provide safety induction to employees working on the project prior to commencement of works. No persons are allowed to work on the site until they have received Site Safety Induction by Principle contractor. Induction to include the following:- Emergency Evacuation Procedures, Fire Prevention, Stone Restoration Services Ltd Safety Policy and Site Rules, the Client's Safety Rules and Policy, the Risk Assessment and Safe Method of Work Statement for the job. SRS will have their representative in attendance to direct operatives to the work area and they will have control to make quick decisions on any changes if required after commencement of works. All employees will be instructed to their duty to co-operate with all parties involved in the project and abide by all site rules. All operatives are to have the necessary certifications covering health and safety i.e. CSCS/IPAF/PASMA/1st aid cards for use of any relevant plant they are required to use.
CDM	In accordance with these Regulations, Stone Restoration Services Ltd will support the Principal Contractor in providing safety information for inclusion in their Health and Safety Plan as and when requested. Information for the Safety File must be maintained by the Company's Project Team and handed over to the Client's representative/Principal Designer at the end of the Contract with all relevant Health and Safety information that may be useful to the end user.
CORDONING-OFF OR DEMARCATION OF WORKING AREAS	Areas of work which could pose a risk to others not associated with the works will need to be adequately safeguarded. Consideration should be given to the type of security measures necessary. These arrangements will need to be checked and co-ordinated
	Appropriate warning signs will be displayed on the hoarding, i.e., "No Unauthorised Access", "Men At Work" etc.
Key Plant and Tools required	Hand tools (trowel/toothed masonry chisel/plugging chisel/long necked jointing chisel/club hammer) Hilti DCG 125" grinder tipped with diamond blade Transformer Leads Extractor/vacuum

	Hilti TE30 Doff system Torc Cleaning System (NB All plant will be 110V and fully PAT tested) – a fully trained competent member of SRS will provide in house testing regularly to ensure all plant is suitable for use and tested records held at HO)
Key Materials Required	Sand NHL 3.5 Hydraulic Lime Calcite Grit Dolomite Kling Strip NB-610
Other Essential Equipment	Buckets / rubble bags/sponges Brushes Shovels
Description of method/process	**Torc Cleaning Brickwork and Granite** Ensure drains are protected and any gutters/downpipes leading to soakaways are diverted to solid matter impairing drainage system Any other areas protected using 500-gauge polythene securely taped at all edges with waterproof tape (note protection shall be inspected at the start of each working day to ensure its integrity) The Torc system should be placed in a location easily accessible to the trained operative. The pressure pot must prevent ingress of water or debris. With torc system clean wall working from top down. Pressure will need to be raised whilst cleaning Granite. Samples would identify pressures required to Both Bricks and Granite Rinsing of the surface should take place every2-3 metres or at least before unrinsed surface is dry (this can be achieved by using the nozzle with the granulate turned off) On completion wash down wall with low pressure washer Clear all debris from ground floor Clear away all plant and materials Leave clean and tidy **Doff Cleaning Brickwork** Protect points of ingress with low tack tape and polythene Carry out sample area to check level of cleaning changing pressures to protect surface of brick Position machine either on roof of building if accessible by goods hoist or on ground near a mains pressure water supply and 110v 32amp power supply which cannot by more than 15m away. Working from Top clean each lift working in sections from left to right and then in

same section from top to bottom
Move along lift and repeat operation as above.

Paint removal with Poultice

Test paint to check if any lead is found
Apply Kling Strip to wall between 3mm – 6mm thick. Depending on the thickness of the material depends on the time to cure
Cover with thin polythene to prevent drying too quickly.
After the poultice is dried remove polythene and scape material in the rubbish bags
If lead is found to be in the paint the bag with need to be sealed with heavy duty tape and disposed of in special waste skip.
If no lead is found material can be disposed of in normal skips
Doff clean wall to remove remaining chemical residue

Paint removal with Gel Type remover

Test paint and check if and any lead is found.
If proved no lead is found using a low odour solvent based chemical apply generously to surface.
Leave on painted surface for up to 90 minutes making sure product does not dry out or additional chemical is required.
If prior to this time the paint dissolves wash off with Doff High temperature cleaning system working from bottom upwards

Brick Replacements

Carefully cut out bricks ensuring damage is not caused to surrounding area.
All loose and friable material will be removed prior to placing new mortar, as it requires a sound surface to adhere to. A stiff bristled brush will be used to remove any remaining debris, followed by lightly spraying water into the joints to remove any remaining dust and debris
Re-instate using the new approved brick and repoint to approved Mix

Rake out and repointing of bricks

Carefully remove existing pointing to 20-25mm using diamond tipped blade .

Wash clean joints and carry out sample using 1:3 NHL3.5/well graded sand

Force mortar into joints ensuring adhesion and maximum pressure

Fill joints flush or slightly recessed.

Emergency Procedures  Rescue Plan :	Name of First Aider on Site: TBA First Aid Box Location: In Site office Nearest Emergency Hospital University College Hospital 250 Euston Road, London, Greater London, NW1 2PG **Tel:** 0845 155 5000 **Fax:** 020 7380 9963 In the event of a very serious accident an ambulance should be called by dialling 999. SRS emergency number 07970196712. FIRE: If necessitated fire extinguishers will be brought to site and kept in a suitable location. On finding a fire employees should 1) raise the alarm 2) evacuate those in immediate danger 3) close doors and windows 4) tackle the fire if it is safe to do so and they are trained to do so On hearing the alarm employees will 1) stop what they are doing and switch off any tools if possible 2) evacuate the building by closest/safest/advised route 3) Not stop to collect personal belongings 4) proceed to the assembly point

Risk Matrix

Risk rating guidance	**Likelihood (L)** 1 Improbable 2 Remote 3 Possible 4 Probable 5 Likely	5	5	10	15	20	25	Likelihood (L) x Severity (S) = Risk Rating (RR).
		4	4	8	12	16	20	
		3	3	6	9	12	15	
		2	2	4	6	8	10	
		1	1	2	3	4	5	
			1	2	3	4	5	
		Severity (S) (1) Plant or environmental (2) Minor Injury (3) Ill health (4) Major Injury 5:Fatal Injury						
Acceptability of risk guidance	**High-risk: 15 – 25**	High-risk activities should cease immediately. Further effective control measures to mitigate risks must be introduced.						

	Medium-risk: 8 – 12	Medium-risks should only be tolerated for the short-term and only whilst further control measures to mitigate the risks are being planned and introduced.
	Low-risk: 1-6	Low-risks are largely acceptable. Where it is reasonable to do so, efforts should be made to reduce risks further.
Guidance. When completing a risk assessment, you should:	1. Identify the persons at risk and the significant hazards. 2. Calculate an initial RR for the activity. 3. Identify risk control measures that reduce the risks to an acceptable level. 4. Calculate a revised RR - you should consider how much safer the task will be if the control measures are followed. Here, you should consider changing both the likelihood (L) and the severity (S) ratings.	
Note. Ideally, you should look to reduce the risks so that the task can be classified as "low-risk".		

Personal protective equipment (PPE) assessment								
In many instances, you will be able to reduce risks further by asking staff/others to wear/use PPE. You should identify which items are required for the task here:								
Type of PPE:								
	Head (BS EN 397)	**Foot** (BS EN 345-1)	**Eye** (BS EN 165:2005)	**Hand** (BS EN 420:2003)	**Hearing** (EN 352-1)	**Hi-Visibility Vest** (BS EN 471)	**RPE**	**Fall Arrest** (BS EN 361)
	X	**x**	**x**	**x**	**x**	**x**	**x**	
Standards or Additional requirements (list here):	• Goggles must conform to EN166 1B 349 (for cutting/chemical and hot works together) or EN 166 1B 34 (for cutting and chemical) or EN166 1B (for cutting/angle grinders and breakers) • Safety helmets to conform BSEN397/EN50365 neither damaged nor time expired–inclusive of chin strap? • High visibility waistcoats to BSEN 471 Class 2 • Safety boots with steel insole and toecap to EN20345:2011 200 joules mid-sole protection • Ear protection muffs to BSEN 352-1 / plugs to BSEN 352-2 • Gloves must be level 3 abrasion/slip and tear resistant EN3131 BSEN388 (abrasion/cuts – levels A-D) EN374 (chemical),407,420 or 511 as appropriate • Respirators EN143/149 :P3 filters (particulate) • Respirators EN14837/EN405 : Gas/Vapour : Filters B (inorganic gas/vapour ie chlorine) Filter K (ammonia)							
Note. PPE must only be considered as, when other control measures, such as guarding, local exhaust extraction, preventing noise at source, eliminating the need to work at height etc. are not possible. PPE should always be considered as a last resort option. PPE should only be worn when there is reasonable justification for doing so.								

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Seven Dials Warehouse

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Risk assessment									
Activity	Persons at risk	Significant hazards	Initial			Risk control measures	Residual		
			L	S	R R		L	S	R R
Site compound access and egress.	Employees Young persons Contractors Public Visitors	Tripping, slipping, poor housekeeping, stacking and storage materials, insufficient illumination, congestion, soft and uneven ground, gradient slopes, pedestrian pavement cross-over's.	**4**	**3**	**12**	Ensure compound entrance signs are well displayed, i.e., "Caution – Entrance" and "Danger – Keep Out – Authorised Persons only Ensure the entrance to the site is well illuminated during dark hours of working. Physical measures to be implemented to prevent access to works, e.g. doors to plant rooms, roof or work site are locked when unattended, use of lockable gates, hoardings, perimeter fencing	**1**	**2**	**2**
Working on or nearby the footpath.	Public Visitors	Endangering the general public, obstructing footpaths and roadways, i.e., scaffold works, site perimeter works, deliveries, vehicle pavement cross-over's, lifting operations, service connections etc.	**4**	**4**	**16**	Clear marking of authorised routes for visitors. Security guard patrols where appropriate Operatives to be made aware of the importance and the arrangements for keeping the footpath free from hazards during Site inductions and before any works start which may have an effect on the general public.	**1**	**2**	**2**
Access routes	Employees Contractors Public Visitors	Unsafe obstructions. Cross contamination of other works, uneven surfaces, trips, slips and falls, congestion, vehicle manoeuvres.	**4**	**4**	**16**	Ensure that access routes are demarcated clearly and are not unsafely obstructed by works/operations and that storage and parking do not cause an obstruction. Access routes should also be kept in good condition, well illuminated during hours of darkness, firm and without surface trips and slipping hazards. Consideration should be given to bad weather, particularly with regard to wet and freezing conditions. Authorised visitors to be accompanied, to wear PPE and to receive a site safety induction Give regular Tool Box Talks to the works personnel and inform visitors with regard to keeping access routes free from unsafe obstructions. Any obstruction of access routes should be removed immediately. Investigate the reasons obstructions occurred and eliminate the problem at source where possible or provide additional provisions to prevent obstruction problems from reoccurring.	**2**	**2**	**4**

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Risk assessment										
Activity	**Persons at risk**	**Significant hazards**	**Initial**			**Risk control measures**	**Residual**		
Working at height	Employees Young persons Contractors Public Visitors	Fall of persons or tools/equipment/components, suitability & condition of access equipment & working platforms, bad weather conditions, rain, wind, snow, ice & hot weather.	**4**	**5**	**20**	All persons required to work at height must be competent Persons working at high levels must not put themselves at risk from falling, or put persons who may be in the vicinity at risk from falling materials or equipment Working in windy conditions will involve greater safety control measures to be employed to protect persons and materials, etc., from falling. Wet conditions – extra care and control taken to prevent slipping. Weather conditions should be checked www.metoffice.gov.uk/weather/uk Waste materials to be removed from scaffold regularly throughout the day and returned to SRS vehicle to remove daily (or a wait and load) Operatives must remain within the handrails at all times Protection of scaffold and roof edges to prevent materials and tools falling on to passers by, e.g. by use of netting, toe boards, close double boarding, plastic sheeting, tool lanyards Measures to be taken to reduce access to scaffolds when unattended, e.g. removal of ladders, base of scaffold enclosed. Where work is undertaken on windows, window restrictors to be reinstated where applicable, before area is made generally accessible. Avoidance of projections from scaffolding at pavement level. Scaffolding to be protected from collision by vehicles and pedestrians by, e.g. padding, high visibility tape, barriers and lighting. **SCAFFOLD**: All tubular scaffolding will be erected and dismantled in accordance with the National Access and Scaffolding Confederation (NASC) Technical Guidance Note TG20:08 *Guide to good practice for scaffolding with tubes and fittings*. Only trained scaffolders to erect and dismantle tubular scaffolds. All tube and fitting scaffolds to be designed, and have strength and stability calculations provided by a competent person, unless it is a "basic scaffold" designed in accordance with NASC Technical Guidance TG20: All completed scaffolds to be inspected by a competent person and a handover certificate to be issued to the user. A scaffolding register to be provided after this inspection has been completed The scaffold must be designed for the task being undertaken as a general guide masonry works are deemed heavy duty: **Type Uses Kn/M2 loading typical load per bay** Very Light Access .075 75kg/M2 1 man/tools	**2**	**4**	**8**

						Light cleaning 1.50 150kg/M2 2 men/tools General brickwork 2.0 200kg/M2 2 men/175kg mats Heavy masonry 3.0 250kg/M2 2men/250kg mats			

Risk assessment

Activity	Persons at risk	Significant hazards	Initial			Risk control measures	Residual		
Working with dust (respirable silica):	Employees Contractors		**4**	**4**	**16**	Dust levels – any replacement stonework will be cut off site however it dressing in of stone and repointing/repair works will create dust if not suppressed. Vacuums will be used to reduce dust however we deem all stone dust hazardous and all employees must wear FP3 respirator protection. WEL : Silica dust 0.01mg/m3 8hr TWA A risk assessment should be undertaken for the stone being cut and the level of silica content the stone registers. All RPE should be recorded and a face fit test undertaken to ensure operatives are protected. Cutting Bricks and Stone : Staff may be exposed to silica dusts when cutting or sawing leading to respiratory conditions • FP3 respirators and eye protection to be supplied and worn when cutting . • Supervisors to regularly check that PPE is being worn. • Angle grinders should be avoided where possible for cutting bricks/stone Extraction systems to be in place on power tools and any residual dust to be wetted before sweeping up. Do not use compressed air to clear away dust.	**2**	**3**	**6**
Using power tools, machines & plant	Employees Contractors	Others not keeping a safe distance, congested working environment, noise, dust, electrical shocks, cuts, abrasion, entrapments, amputation, eye injuries from flying particles, insufficient guarding, equipment failure, poor maintenance, incompetent operator, respiratory issues from breathing in dusts.	**5**	**3**	**15**	Operators of power tools, machines and plant must be competent and suitably trained and instructed on their safe use and general safety awareness with regard to how this equipment could affect others safety. Check that operatives using power tools, machines and plant are competent. Ensure that power tools, machines and plant are in good order before issue and use. All guards must be in place and equipment which generates dust should be of the design to suppress dust or have dust collection devices fitted. The Method of Work when using power tools etc must be fully considered to minimise dust, noise and dangers from moving parts or fragments flying-off of materials being worked on. Ensure power tools, machines and plant are properly maintained and a record kept of servicing and repairs. Ensure the correct power tools, machines and plant are used for the job. Equipment that has been designed properly for a job will minimise the risks and hazards, but there will always be a need to take into account the environment where equipment is used and how that may affect the operator or others in the vicinity.	**2**	**3**	**6**

						Machines and plant being maintained or repaired must be safely isolated, locked-off where there could be a possible risk of entrapment or electrical hazards, etc. To minimise the risks of electrical shock when using electrically powered tools, battery powered tools should be used wherever possible or 110v. Battery powered tools additionally eliminate trailing lead hazards. Inspection and PAT testing of portable appliances, keeping maintenance records and manufacturers data sheet **Grinders** if used must only be used by trained operatives who must ensure that the guards remain in place/the diamond blade is new and arrives on site tested with correct flange in place. Position the disc against the work, do not press too hard allow the grinder to do the work and ensure dead-man's handle operational. Operative to ensure handle is positioned to the left or right according to their needs. Stand with the disk facing away from the body at all times, and ensure that a firm grip is always maintained on the angle grinder's handle. **Abrasive Wheels** : must be in line with HSG17 / PUWER 98. Before the disc is mounted a check must be made to ensure the maximum speed identified on the disc must not be exceeded and must be mounted on a machine suitable for the disc. A check on the grinder to ensure the speed will not exceed the maximum speed of the recommendation. Before the blade is run the guard must be adjusted and secured. Failure to isolate the power supply prior to working on a wheel may lead to unintentional start up. The blade must be reinforced. Flanges must be of equal diameter – blotters are not required for 400mm or less. Spindles should not be allowed to become overheated. Operatives to hold an abrasive wheels certificate in training or equivalent. Make sure that there is a blotter (a large washer) on each side of the wheel when mounted When securing a new wheel, ensure that the direction of tightening the flange nuts is opposite to the direction of rotation of the wheel and that nuts are just tightened sufficiently to cause the wheel to be driven			

Risk assessment

Activity	Persons at risk	Significant hazards	Initial			Risk control measures	Residual		
Housekeeping	Employees Young persons Contractors Public Visitors	Untidy working areas causing unnecessary obstructions/ hazards and stability of stacked materials/components. Build-up of rubbish increases risk of fire.	**4**	**4**	**16**	Ensure personnel are made aware of the importance of the arrangements for housekeeping during Inductions and Safety Tool Box Talks. Tools, machinery and hazardous substances to be locked away out of hours.	**1**	**2**	**2**

Noise	Employees Young persons Contractors Public Visitors	Plant & machine operation noise levels exceeding acceptable levels for employees & environmental levels. Employees subjected to other contractors or environmental noise. Noise-induced hearing loss; distraction; not hearing warning signals; not hearing moving vehicles; not hearing instructions; short-term effects including headaches, stress and temporary reduction in hearing ability; neighbour complaints	**3**	**4**	**12**	Company personnel who could be affected by noise levels should receive adequate information regarding safeguarding their hearing. This information should be given during Induction and regular Safety Tool Box Talks. Noise levels to be determined through measurement or estimated using manufacturer's data – we would consider any stone cutting to be above 75db we will deem any cutting on site a "ear protection area and all employees and other trades must wear suitable ear protection. All plant creating noise levels above 80Dbs will be assessed to either shield or distance from affected personnel. Ensure that noise suppression techniques are employed where appropriate. Where noise data is unavailable the 2 metre rule to be used to give an initial indication, i.e. is it necessary to raise ones voice to be heard by a colleague standing at 2 metres distance? If yes, the noise level may be greater than 80 dB(A). Warning signs to be displayed where the machine emits noise above 80 dB(A). If the noise level is known or likely to exceed 80 dB(A) a detailed noise assessment to be undertaken in compliance with the Control of Noise at Work Regulations 2005. Workers to be consulted with during the assessment and on its completion Plant and machinery to be well maintained in order to reduce noise output. <u>Current Exposure Limits</u> Noise: 80db action / 85 db upper action **Makita 9565**= 85db **Hilti DCG125** (5" grinder) :90db **Hilti wall chaser (DCSE20)** : 104db **Hilti DCH 230** (9" grinder): 102db **Hilti TE30** (combi hammer/drill) 89 db **Generators** : 90-100db **Hilti breakers** : 87-94db **Rotary hammer :**87-91 db **Hilti Cordless Grinder AG125** : 83 db **Bosch GWS pro** 9" grinder : 92db **Stihl 410** petrol 12" cutter : 98db	**3**	**3**	**9**

Risk assessment							
Activity	**Persons at risk**	**Significant hazards**	**Initial**			**Risk control measures**	**Residual**

Hand Arm Vibration	Employees Contractors	Plant & machine operation levels exceeding acceptable levels for employees.	**3**	**4**	**12**	<u>Current Exposure Limits:</u> Exposure action 2.5 m/s2 A(8) EAV Exposure limit 5 m/s2 A(8) ELV **Hilti cordless AG125** : 3.8m/s2 **Hilti DCG125s** 5" grinder: 5.7 m/s2 92 mins EAV/368 mins ELV **Hilti DAG125s** : 4.6 m/s2 142 mins EAV / 568 mins ELV **Hilti wall chaser (DCSE20)** : 4.3m/s2 (limestone) 162 mins EAV/649 mins ELV or 5.8m/s2 (concrete) 89 mins EAV / 356 mins ELV **Hilti DCH 230 Grinder:** Limestone cutting 45mm 109 mins EAV/436 mins ELV. Concrete cutting 45mm 58 mins EAV / 232 mins ELV **Aloisi Pnuematic Hammer** : 3.3m/s2 = 275 mins EAV / 1080 mins ELV **Stihl 410** 12" cutter : 3.9m/s2 = 197 mins/ 789 mins ELV **Hilti TE60 AVR**: 7.5m/s2 = 53 mins EAV/212 mins ELV **Hilti TE30 AVR** : 12m/s2 = 21mins EAV/84 ELV **Breakers Hilti** : TE3000AVR :7:00m/s2 = 61mins EAV/244 ELV TE1000AVR : 6.5 m/s2 =71 mins EAV / 284 ELV TE1500AVR : 12 m/s2 = 21mins EAV/84 ELV TE905 AVR : 8.5m/s2= 42 mins EAV/166 ELV	**2**	**3**	**6**

STONE RESTORATION SERVICES

Risk assessment											
Activity	**Persons at risk**	**Significant hazards**	**Initial**			**Risk control measures**	**Residual**		
Dermatitis	Employees Young persons Contractors	Contact with skin any allergic reactors (cement, chemicals, sealant etc.)	**3**	**3**	**9**	Simple skin surveillance: looking for skin damage on hands from using certain products should be undertaken by employees. Principal Contractor will have adequate welfare facilities on site including flushing toilet/hot and cold running water, soap, towels /first aid equipment/ heated canteen with kettle or equivalent. Mortar Mixing: • Direct skin contact with mortar to be avoided by the use of suitable gloves. • Staff to be given a safety briefing on the dangers of skin contact with mortars and resins. • Adequate washing facilities to be provided for staff. • Don't allow resins to dry on hands			
Asbestos	Employees Young persons Contractors	The Control of Asbestos Regulations 2012 Asbestos can be found blended with cement/similar materials. Exposure to asbestos dust can result in asbestosis, a disease of the lungs due to the inhalation of asbestos particles. Lung Cancer, Mesothelioma Cancer and Laryngeal Cancer are other diseases that can be suffered from after contact with asbestos dust	**4**	**4**	**16**	**Prior to a project commencing** SRS must ensure that a suitable asbestos survey is provided from the client. Information required includes asbestos policy, asbestos surveys/reports and drawings/incident records. **If asbestos is found or suspected** at the workplace where it is likely to be disturbed, stop any work which could disturb the asbestos, or work that may be carried out in an area where asbestos contamination has occurred and inform Site Management immediately so that proper procedures can be put in place to safeguard against the hazards. SRS will not undertake any works where asbestos is present. **Only properly trained and competent persons are allowed to disturb or work with asbestos.** Companies must be Licensed Contractors when working with 'Brown' - Amosite or Mysorite, or 'Blue' - Crocidolite asbestos. The Company's Management have the responsibility to ensure that all persons are protected from harmful asbestos exposure. All Company employees are required to be made aware of all necessary precautionary measures and controls related to work which may disturb asbestos. Refresher training on asbestos awareness for employees	**1**	**3**	**3**
Fire	Employees Young persons Contractors Public Visitors	Building fire plans, smoke detection, fire fighting equipment, fire alarms, fire drills, fire wardens, gas compounds, gas/oxygen leaks from cylinders, hoses and mains supply, hot works, smoking, solvents and bonfires.	**5**	**4**	**20**	**Fire Assessments are required** to be carried out for all Company premises and places of work to determine the likely sources of ignition, the buildings existing fire containment / protection, the effectiveness of raising the alarm, means of escape, fire signage, emergency fire fighting equipment, reviewing the performance of fire drills and fire procedures. An Assessment and review should take place as regular as necessary to ensure the potential of fires is kept to a minimum. **Fire Policy** is contained in the Company Health & Safety Policy, Part 2, along with standard checklists and control measures contained in Part 3 **Appropriate fire fighting equipment** must be located in accordance with the Fire Policy and Fire Plans for places of work. They must be regularly checked to ensure they are in good working order. **Combustible & flammable materials:** These materials should be kept to a minimum in the Company premises and places of work. Fire proof and fire retardant materials, furniture and decoration, etc., should be utilised wherever possible. . Waste should be managed to prevent unnecessary accumulation of combustibles.	**2**	**3**	**6**

						Fire drills required for the Clients premises must be made known to SRS **Sources of ignition, such as naked flames, must be kept to a minimum**. Other sources of ignition, such as equipment, must be used correctly and kept in good order.			

Risk assessment

Activity	Persons at risk	Significant hazards	Initial			Risk control measures	Residual		
Biological hazards	Employees Young persons Contractors Public Visitors	Hygiene standards with regard to canteens, clothing and environmental working conditions	**5**	**3**	**15**	**Ensure that all Company personnel are adequately instructed** on biological hazards with regard to risks related to vermin, food hygiene, sharps, etc. **Food preparation and eating areas should be kept hygienically clean** and adequate washing facilities made available to personnel	**1**	**3**	**3**
Stacking & storage of materials & components	Employees Young persons Contractors Public Visitors	Stability, floor loading, potential obstructions, ergonomics, accessible locations.	**4**	**3**	**12**	**Appropriate arrangements and provisions are to be made** for the safe storage and stacking of materials, in particular preventing the need to work at height, preventing double handling, the need to minimise manual handling, the stability of stacked materials and maintaining safe access around storage areas, etc. Storage areas should be clearly demarcated. **Safe stacking of bulk materials.** Secure storage areas to be used for waste and materials to avoid children and other trespassers gaining access. Long lengths to be laid flat or in bespoke racks. Flat materials to be secured so they are not being blown by the wind - especially if stored at height. Palletised materials to be stored on level ground, no more than three high. Materials to be strapped or wrapped to improve stability where necessary. Do not stack above the height of brick guards on scaffolding. Do not leave vertical faces on piles of sand etc. Personnel are to be made aware of the stacking and storage arrangements for the premises and site operations.	**2**	**2**	**4**

Welfare Facilities	Employees	Suitable welfare facilities available on site for all employees	**3**	**4**	**12**	Workplace temperatures are comfortable and above recommended minimums. Wall mounted thermometers are provided within the site during winter consider exposure to extreme of weather and temperature Supply of drinking water made available. Staff advised that they must be fully clothed whilst working outdoors. Facilities to wash and dry clothing Adequate toilet/hand basin facilities Storage area for tools / employees belongings Adequate rest facilities are provided. Adequate facilities are provided for the consumption of food. Up to date policies for dealing with alcohol and drug abuse in place. Adequate facilities provided for the changing of work clothing The premises are deemed a "No Smoking" site. – smoking only permitted during allowed breaks	**2**	**2**	**4**

STONE RESTORATION SERVICES

Risk assessment										
Activity	**Persons at risk**	**Significant hazards**	**Initial**			**Risk control measures**	**Residual**		
Working in /alongside occupied premises	Employees Public	Mortar falling from scaffold Water ingress to building Public entering scaffold	**3**	**4**	**12**	Special attention must be given to people working inside the building who would be at greater risk. Ensure access ways are kept free from unsafe obstructions Ensure adequate protection when undertaking stone cutting/drilling (and windows to be shut) Hand tools and power tools must not be left unattended Ensure that the fire arrangements for the premises are not affected by the works or work strictly in accordance with appropriate Permits to Work. If employees experience difficulties in complying fully with occupiers safety requirements, stop work, safeguard the area and contact your Supervisors / Foremen immediately. Ensure all ladders with access to scaffold are removed daily to ensure public cannot enter	**3**	**2**	**6**

TORC

What is Torc?

The TORC systems's most distinctive feature is its revolutionary modulised nozzle, which creates a gentle swirling vortex utilising low volumes of water, fine inert granulate and air. When in the hands of a competent person the results that are produced are probably the most sensitive and efficient methods of cleaning masonry.

The TORC system supersedes and offers additional benefits as well as other improvements over the original Jos system which Stonehealth introduced into the UK back in the 1980s.

The innovative TORC nozzle is available in a range of different sizes and types which can be selected for cleaning and removing unwanted matter from many various surfaces including large areas of ashlar or fine detailed stone carvings without damaging the substrate.

Not a blasting system, it has sensitive controls.

Air cooler - built-in pump.

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TORC

What is TORC most effective in removing?

Carbon sulphation
Lime & cement based paints
Paint and plaster residues
Some old oil based paints
Bitumen (if oxidised)
Limescale
Efflorescence

What surfaces should I use the TORC on?

It is most effective in removing carbon pollutants and other unwanted matter from stone, brick, terracotta, ceramic tiles, glass, faience and concrete; also oxidation and sulphation from bronze, brass, copper, and anodised aluminium.

How TORC works?

The TORC is supplied in the basic sizes: 'TORC' and the 'TORC Studio'. The TORC Head is modularised into separate components which results in an efficient and gentle swirling vortex using less water and granulate, without losing a patina if appropriate. The TORC has a removable nose section allowing choice of 5, 7, 9, 11 or 13mm apertures. Plus a 5mm parallel version, for detailed cleaning.

Some of the notable buildings where the TORC system has been used within the UK:

Buckingham Palace and other Royal Palaces
Canterbury & many other Cathedrals
Westminster Abbey
Hampton Court, Tower of London & other historic Royal Palaces
Oxford & Cambridge University buildings
St. Pancras, other mainline and underground stations
Harrods store
Marine Barracks & other buildings in Portsmouth Historic Dockyard
Norwich Castle

TECHNICAL SPECIFICATION — TORC SYSTEM

Power Supply Consumption	The standard version needs no electrical power but if the auxiliary pump is required 110/115/230 volt 50&60hz 13/16 amp 2 Kva (generator)			
Water Consumption	Max 60 litres per hour			
Ambient Temperature	Do not use below 5 degrees Centigrade (41 degrees Fahrenheit)			
Dry Weight kg	200kgs standard, if auxiliary pump is used + 40kgs			
Measurements mm		Length	Width	Height
	Pressure Pot	540	560	880
	Air Cooler	450	740	550
	Pump (elec.) if used	600	310	340
Export Packing mm		1020	820	1030
Compressed air volume required	125 cfm (3540 litres per minute)			

DOFF

What is DOFF?

The DOFF Integra is a market leading, expertly engineered system that utilises a normal water supply to remove some of the more resistant forms of unwanted matter from a range of surfaces. The DOFF Integra is an advancement of the original DOFF Standard, providing greater ease of operation - eg improved manoeuvrability, quick release of modular components, digital displays and easy loading.

The water supply is fed via a pump into a hot-box where it is rapidly heated to temperatures of up to 150°C.
The heated water is then fed through high temperature heat resistant hoses to the special nozzle at a rate of between 3 to 5 litres per minute.

Once cleaned, the surface dries within minutes which prevents any long-term damage as a result of trapped moisture.

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What is the DOFF most effective in removing?

Paint coatings (most oil and plastic types)
Certain types of graffiti
Bird or vermin fouling
Algae, moss, and fungi
Wax coatings
Chewing gum
Bitumen, Oil, Grease and many others, all without causing any damage or disfiguring the substrate.

What surfaces should I use the DOFF on?

We recommend the DOFF for use on surfaces such as brick, stone, concrete, tiled (glazed and encaustic), wood, faience and terracotta.
It is a useful sterilisation tool for kitchens, toilets, swimming pools, hospitals and factories.

Where can I use DOFF?

DOFF can be used in Building restoration, Industry, Food production, Hygiene control, Hospitals, Factories, Transport & vehicle depots, Workshops etc.

How does DOFF work?

A normal water supply is taken through the pump into the Hotbox, where a range of temperatures of up to 150° C can be achieved. The low volume of super heated water and steam (5 litres per minute) is then fed through heat resistant hoses to special nozzles where a genuine 150° C is delivered. The surface being cleaned does not suffer any damaging pressure, thermal shock or deep saturation and dries within minutes. A range of different lances and nozzles are available.

TECHNICAL SPECIFICATION — DOFF INTEGRA

Power Supply Consumption	230 volt 50 hz 13 amp or 6.5 Kva (generator), 50 hz 30 amp or 6.5 Kva (generator), 115 volt 60 hz 30 amp or 6.5 Kva (generator), 110v 50hz 30 amp or 6.5Kva (generator)
Water Consumption	Min 3, max 5 litres per minute. Use only clean cold water supply – if bowser or other, consult our technical team for advice
Maximum Operating Pressure	100 bar 1450 psi
Temperature Range	30°C to 150 °C
Maximum Water Input temp.	30 °C
Dry Weight kg	89 (hotbox) + 34.5 (pump) = when loaded 123.5
Measurement mm	Length / Width / Height Pump 500 / 282 / 310 Hotbox 680 / 630 / 1030 When pump loaded length = 960
Export Packing mm	1020 / 820 / 1150

Strippers Paint Removers
P.O. Box 6, Sudbury, Suffolk, CO10 6TW. Tel: 01787 371524 Fax: 01787 313944
www.StrippersPaintRemovers.com

USAGE DATA SHEET

PRODUCT: STRIPPER NB-610

TYPE: Low odour, solvent-based paint remover.

USES: For removing various stubborn masonry paints and other coatings, including epoxy finishes.

METHOD OF USE:

Preparation: Ensure adequate through-draught ventilation. Do not use in confined or unventilated areas. The product is supplied ready for use. The surface of the coating to be removed must be dry. The product will take longer to work in ambient temperatures below 10°C. Carry out a test on a small area first. See also "COMPATIBILITY" below.

Application: Ensure adequate through-draught ventilation. Do not use in confined or unventilated areas
Apply by brush, spreader or suitable airless spray equipment. (Please ask for details of specification for airless sprayers.)
Do not use brushes with plastic bristles. The product must be applied generously – i.e. on vertical surfaces allow it to run over itself to form a thick layer. Brushing out too thinly will cause the volatile ingredients in the product to evaporate before they can work on the paint.
A small area of the surface to be stripped should be tested first to determine the time necessary for the product to work. This will be from a few minutes, for very thin layers, up to 90 minutes for thicker layers and sprayed on coatings. The product must not be allowed to dry out before being washed off otherwise re-applying will be necessary.
When using NB-610 indoors, ensure adequate through-draught ventilation.

Removal: The dissolved paint is then removed with a hot water pressure-washer. A cold water machine may be adequate, but hot water is usually quicker and more effective. When pressure-washing, avoid wetting the areas coated with the product until they are actually being cleaned by the jet of water. Hold the nozzle of the pressure-washer lance close enough to the surface for effective washing off of the paint residues but not so close that the water jet damages the substrate.
Where use of a pressure-washer is not practical, use a bucket of hot soapy water, a scrubbing brush or green, abrasive washing-up cloths and a sponge. This will usually give good results on reasonably smooth substrates, but be aware that a jet of water is much more effective than the bristles of a brush for removing the dissolved paint from rough, porous surfaces. Repeat application and removal where necessary.

N.B. Our WASHVAC pressure- washer/vacuum cleaner attachment makes it possible to use a pressure washer in areas where the spray and runoff from a normal pressure-washer lance would be unacceptable.

COVERAGE: Approximately 1 litre per square metre per application.

P.T.O.

COMPATIBILITY: The product is compatible with most masonry and timber surfaces. Some plastics and enamels are damaged by the product. Always test a small area first. Polythene is compatible, making it a suitable material for masking, etc.

STORAGE: Store in cool, well-ventilated area. Must not be exposed to frost or stored at temperatures in excess of 30°c. Do not leave containers in direct sunlight. Ensure containers are tightly closed.

HEALTH, SAFETY & FIRST AID:

Do not use in confined or unventilated areas. Ensure adequate through-draught ventilation.

Suitable protective clothing must be worn when handling or using the product.

For full health and safety information see Material Safety Data Sheet.

SKIN CONTACT: Splashes on the skin should be washed off immediately with plenty of water. Splashes and spillages on absorbent clothing should similarly be removed and washed out immediately.

EYE CONTACT: Flush the eye immediately with copious quantities of water. Ensure the eyelid lid is open and water is bathing the eye. Continue flushing for at least 15 minutes and seek medical attention.

INHALATION: Remove to fresh air, if not breathing administer artificial respiration. Seek medical attention.

INGESTION: If swallowed, give plenty of water to drink and seek immediate medical treatment. Do NOT induce vomiting. Do NOT give an unconscious person anything to drink.

** Keep out of reach of children & animals.

** Avoid contact with skin and eyes. Contains dichloromethane.

** Wear rubber or pvc gloves, eye and face protection and suitable protective clothing.

** Do not breathe vapour.

For full health and safety information see Material Safety Data Sheet.

Barrettine

SAFETY DATA SHEET
Peel Away 1

1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

PRODUCT NAME	Peel Away 1
PRODUCT NO.	PEWA1
APPLICATION	Paint remover.
SUPPLIER	Barrettine Barrettine Works St Ivel Way Warmley Bristol BS30 8TY 0117 960 0060 0117 935 2437 sales@barrettine.co.uk
EMERGENCY TELEPHONE	0870 190 6777

2 HAZARDS IDENTIFICATION

Causes severe burns.

Irritating to respiratory system.

CLASSIFICATION C;R35. Xi;R37.

HUMAN HEALTH

Corrosive to skin and eyes.

3 COMPOSITION/INFORMATION ON INGREDIENTS

Name	EC No.	CAS-No.	Content	Classification
water	231-791-2	7732-18-5	30-60%	-
SODIUM HYDROXIDE	215-185-5	1310-73-2	10-30%	C;R35
surfactant			1-5%	Xi;R36/38.

The Full Text for all R-Phrases are Displayed in Section 16

4 FIRST-AID MEASURES

GENERAL INFORMATION

First-aiders should avoid direct contact with this product and should wear protective gloves, goggles and clothing.

INHALATION

Remove victim immediately from source of exposure. Keep the affected person warm and at rest. Get prompt medical attention.

INGESTION

NEVER MAKE AN UNCONSCIOUS PERSON VOMIT OR DRINK FLUIDS! Rinse mouth thoroughly. Get medical attention immediately!

SKIN CONTACT

Remove victim from source of contamination and immediately drench affected areas with water.
Remove contaminated clothing and shoes. Wash skin thoroughly with running water. Take especial care to clean folds, crevices, creases and groin.
Get prompt medical attention.
Launder clothing and clean shoes thoroughly before re-use.

EYE CONTACT

Immediately remove victim from source of exposure.
Check for contact lenses which must be removed from the eyes before rinsing.
Promptly rinse eyes with plenty of clean water while lifting the eyelids.
Continue to rinse for at least 15 minutes. Continue until the eyes are free of all traces of contamination.
Get immediate medical attention.

Peel Away 1

5 FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA

This product is not flammable. Extinguish with foam, carbon dioxide or dry powder. Do not use high pressure water jet as this may spread burning material. Cool containers exposed to fire with water spray.

SPECIFIC HAZARDS

In case of fire, toxic and corrosive gases may be formed.

PROTECTIVE MEASURES IN FIRE

Wear self-contained breathing apparatus and full protective clothing. Keep all unnecessary people away. Fire water run-off must not be allowed to contaminate ground or enter drains, sewers or water courses. Provide bunding against fire water run-off.

6 ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS

Wear protective clothing (see Section 8).

ENVIRONMENTAL PRECAUTIONS

Do not allow ANY environmental contamination.

SPILL CLEAN UP METHODS

DO NOT TOUCH SPILLED MATERIAL! Stop leak if possible without risk. Absorb in vermiculite, sand or other absorbent inert material. Place into clearly labelled container for recovery or disposal (see section 13). Rinse site with copious amounts of water, which should not be allowed into drains, sewers or water courses.

7 HANDLING AND STORAGE

USAGE PRECAUTIONS

Avoid spilling, skin and eye contact. Wash thoroughly after handling.

STORAGE PRECAUTIONS

Store in tightly closed original container in a dry, cool and well-ventilated place. Keep away from food, drink and animal feeding stuffs.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Name	Std	LT - ppm	LT - mg/m3	ST - ppm	ST - mg/m3
SODIUM HYDROXIDE	WEL				2 mg/m3

INGREDIENT COMMENTS

WEL = Workplace Exposure Limits

PROCESS CONDITIONS

Provide eyewash, quick drench.

ENGINEERING MEASURES

Provide adequate general and local exhaust ventilation.

RESPIRATORY EQUIPMENT

In case of inadequate ventilation use suitable respirator.

HAND PROTECTION

Use gauntlet type rubber gloves. Wear suitable protective gloves. Seek recommendations from manufacturer or supplier. After using gloves the hands should be washed and dried thoroughly and a suitable moisturiser applied.

EYE PROTECTION

Wear tightly fitting safety goggles.

OTHER PROTECTION

Wear appropriate clothing to prevent any possibility of skin contact.

HYGIENE MEASURES

DO NOT SMOKE IN WORK AREA! Wash at the end of each work shift and before eating, smoking and using the toilet. Wash promptly if skin becomes wet or contaminated. Promptly remove any clothing that becomes contaminated. When using do not eat, drink or smoke.

9 PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE	Off-white paste
ODOUR	Negligible

Peel Away 1

SOLUBILITY	Miscible with water. Insoluble in organic solvents		
RELATIVE DENSITY	1.40 - 1.45	pH-VALUE, CONC. SOLUTION	>13. (Strongly alkaline)
VISCOSITY	12000 - 18000 cSt		

10 STABILITY AND REACTIVITY

STABILITY

Stable under normal conditions of storage and use. See section 7.

CONDITIONS TO AVOID

Avoid contact with acids and oxidising substances.

HAZARDOUS DECOMPOSITION PRODUCTS

In fires or in conditions of excessive heat may give off toxic fumes and gases.

11 TOXICOLOGICAL INFORMATION

GENERAL INFORMATION

Caustic. Prevent contact. Burns and ulceration are the effects of exposure to this chemical.

INHALATION

May cause damage to mucous membranes in nose, throat, lungs and bronchial system. Inhalation of vapours, mist or spray causes coughing and watering of the eyes.

INGESTION

May cause burns in mucous membranes, throat, oesophagus and stomach.

SKIN CONTACT

May cause serious chemical burns of the skin.

EYE CONTACT

Causes burns.

12 ECOLOGICAL INFORMATION

ECOTOXICITY

Not regarded as dangerous for the environment.

MOBILITY

The product is soluble in water.

BIOACCUMULATION

The product is not bioaccumulating.

DEGRADABILITY

Discharge of large amounts causes changes in pH which may affect effluent and sewage treatment processes.

13 DISPOSAL CONSIDERATIONS

GENERAL INFORMATION

Do not dispose to landfill or in water courses. Product is hazardous waste. Do not allow into drains, sewers or water courses.

Disposal must be by means of a licensed waste contractor.

DISPOSAL METHODS

Dispose of waste and residues in accordance with local authority requirements.

14 TRANSPORT INFORMATION

UK ROAD CLASS	8		
PROPER SHIPPING NAME	SODIUM HYDROXIDE SOLUTION		
UN NO. ROAD	1824	UK ROAD PACK GR.	II

Peel Away 1

ADR CLASS NO.	8	ADR CLASS	Class 8: Corrosive substances.
ADR PACK GROUP	II	HAZARD No. (ADR)	80
ADR LABEL NO.	8	HAZCHEM CODE	2W
CEFIC TEC(R) NO.	80GC5-II+III	RID CLASS NO.	8
RID PACK GROUP	II	UN NO. SEA	1824
IMDG CLASS	8	IMDG PACK GR.	II
EMS	F-A, S-B	MARINE POLLUTANT	No.
UN NO. AIR	1824	AIR CLASS	8
AIR PACK GR.	II		

15 REGULATORY INFORMATION

LABELLING

Corrosive

CONTAINS SODIUM HYDROXIDE

RISK PHRASES

R35	Causes severe burns.
R37	Irritating to respiratory system.

SAFETY PHRASES

S26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S45	In case of accident or if you feel unwell, seek medical advice immediately (show label where possible).
S51	Use only in well-ventilated areas.
S24/25	Avoid contact with skin and eyes.
S36/37/39	Wear suitable protective clothing, gloves and eye/face protection.
S60	This material and its container must be disposed of as hazardous waste.

EU DIRECTIVES

EC Regulation 1907/2006 (as amended) : 'REACH'.

Dangerous Substance Directive 67/548/EEC.

Dangerous Preparations Directive 1999/45/EC.

STATUTORY INSTRUMENTS

Chemicals (Hazard Information and Packaging for Supply) Regulations 2002 No. 1689. (CHIP3)
Control of Substances Hazardous to Health Regulations (as amended). (COSHH)
Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2007. (CDG 2007)
Management of Health & Safety at Work Regulations 1999.

APPROVED CODE OF PRACTICE

Control of substances hazardous to health - Approved Code of Practice and Guidance L5 (2005) HSE Books.

GUIDANCE NOTES

CHIP for everyone HSG(108).

16 OTHER INFORMATION

REVISION COMMENTS

First Issue.

REVISION DATE 01-Aug-08

REV. NO./REPL. SDS GENERATED 1

RISK PHRASES IN FULL

NC	Not classified.
R35	Causes severe burns.
R36/38	Irritating to eyes and skin.

Peel Away 1

Strippers Paint Removers
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www.stripperspaintremovers.com

USAGE DATA SHEET

PRODUCT: **KLING-STRIP** **TYPE:** Poultice-type alkali-based paint-remover

APPLICATIONS: For removing thick layers of oil-based paints, distempers etc, old varnishes and stains, from timber, render, stone, marble, brick, fibrous plaster, cast-iron and many other substrates. Being a wet process, it also provides a safer means of removing paint containing lead.

PRINCIPLES OF THE PRODUCT: Kling-Strip is a thixotropic paste which, when applied thickly to the surface, will gradually dissolve the paint to a water soluble residue which is then simply washed off. Its poultice action draws out paint and stain from the pores of the surface or the grain of the wood, which are then left completely free of paint by the washing. Because no scraping is necessary it is thus possible to completely remove paint even from ornate work without any damage.

METHOD OF USE:

[A] CARRY OUT A TEST ON A SMALL AREA FIRST. A test will ensure that Kling-Strip is the correct paint-remover for the job (see also "COMPATIBILITY " below), help you to work out how much you need, how thickly it needs to be applied and how long you need to leave it to work:

- Apply a 3"- 4" square (75-100mm) patch of Kling-Strip.
- Apply the product at least 3/8" (10mm) thick on one side of the patch and taper the thickness off to nothing on the other side. This will give you an indication of how thickly you will need to apply it when you come to do the actual job.
- Stick some thin polythene (clingfilm, plastic bag, bin liner etc.) to the patch and leave to work, then follow on from [C] below.

N.B. To calculate the quantity required: each mm of thickness of Kling-Strip= 1 litre per sq.m.
e.g. If tests show that Kling-Strip needs to be applied 5mm thick, 5 x 1 litre = 5 litres per.sq.m

[B] APPLYING KLING-STRIP:
Using a small trowel, flat-blade scraper, or any suitable spreading tool, apply Kling-Strip 3mm to 6mm thick - even thicker on very thick paint layers. The thicker the paint layer, the longer Kling-Strip needs to work and the thicker it must therefore be applied. If applied too thinly, it will simply dry out before it has time to work.

Stick some thin polythene (clingfilm, plasticbag, bin liner etc.) to the applied Kling-Strip to keep it moist. For bannisters, glazing bars etc. apply the Kling-Strip directly to the polythene; the coated polythene can then be picked up and applied to the bannister, making application very quick and easy.

[C] LEAVING THE KLING-STRIP TO WORK: It is important to allow Kling-Strip sufficient time to dissolve the paint. Anything from 15 minutes to several days. The thicker the paint layer, the longer it will take. One application can dissolve a very thick paint layer if given enough time to do so. Thin paint layers will only need 2 or 3 hours; many paint layers can be dissolved overnight. For very thick paint, leave for 2 days or longer. For plaster cornices etc., leave for at least 5 days. Very thick paint layers, particularly in the crevices of a detailed surface, will need further application(s).

P.T.O.

Kling-Strip will not work in temperatures near freezing and will dry out too quickly in direct sunlight or at high ambient temperatures.

[D] REMOVING KLING-STRIP AND WASHING OFF THE DISSOLVED PAINT: Remove the bulk of the Kling-Strip and dissolved paint, taking care not to scratch or damage the surface. The residue is then simply washed from the surface with a scrubbing brush, sponge and water, or a pressure-washer if the situation allows. A pump-up garden spray is also useful if washing down by hand. For plaster cornices etc., having removed the bulk of the Kling-Strip, allow the residue to dry - which will cause it to shrink slightly - then brush off and carefully pick out, before gently washing to finish off.

N.B. Our **VACWASH** pressure-washer/vacuum cleaner attachment makes it possible to use a pressure washer in areas where the spray and runoff from a normal pressure-washer lance would be unacceptable.

COVERAGE: 3 to 6 litres per square metre, depending on the thickness of paint, profile of surface etc.
N.B. To calculate the quantity required: each mm of thickness of Kling-Strip= 1 litre per sq.m.
e.g. If tests show that Kling-Strip needs to be applied 5mm thick, 5 x 1 litre = 5 litres per.sq.m

COMPATABILITY: A test must always be carried out to ensure that there is no adverse reaction with the substrate or adjacent materials. Do not use on veneers. May soften gesso and similar oil-bound plaster decoration. May darken some wood surfaces, particularly teak and mahogany. May leave a "water mark" on timber surfaces if not applied to whole area. Avoid contact with aluminium. Details of compatibility of any specific material are available on request.
N.B. our 'A' & 'B' WOODBLEACH is very effective for lightening the colour of most timbers.

REPAINTING: If the surface is to be repainted, it should be washed down very thoroughly and then allowed to dry out completely. If any efflorescence then occurs, this must be brushed off and the surface thoroughly rinsed again. Timber and brick surfaces may be neutralised by sponging with NEUTRALISER N-20 (see price list) or a solution of vinegar and allowed to dry thoroughly afterwards. No painting should be done until it is certain that the surface is completely dry and that efflorescence will not re-occur. Use an alkali-resistant primer.

STORAGE: Store in a cool place. The product is non-flammable and will not support combustion. Do not expose to frost.

HEALTH, SAFETY & FIRST AID:
Suitable protective clothing must be worn when handling or using the product.
For full health and safety information see Material Data Sheet.
IN CASE OF CONTACT WITH SKIN: Kling-Strip does not burn immediately on contact with the skin, but splashes on the skin should be washed off immediately with plenty of water. Splashes and spillages on absorbent clothing should similarly be removed and washed out immediately.
IN CASE OF CONTACT WITH EYES. Flush the eye immediately with copious quantities of water. Ensure the eyelid lid is open and water is bathing the eye. Continue flushing for at least 15 minutes and seek medical attention.
INHALATION: N/A. (The product is non-volatile and does not give off any fumes).
INGESTION: If swallowed, give plenty of water to drink and seek immediate medical treatment. Do NOT induce vomiting. Do NOT give an unconscious person anything to drink.
** Keep out of reach of children & animals
** Causes burns. Contains Sodium Hydroxide.
** Wear rubber or pvc gloves and eye/face protection.
** In case of accident or if you feel unwell, seek medical advice immediately.

For full health and safety information see Material Safety Data Sheet.

DATASHEET
NHL 3.5
(Chaux LC**** Pure)
Main Data and Application Recommendations

***Product specification**: Pure and Natural Hydraulic Lime (NHL). Contains no additives.*
Conforms to European Norms (EN 459) and French Norm NFP 15.311

Strength factor: 3.5 (Moderately hydraulic)
Residue @ 0.09 mm: 6.5%
Density (volumetric weight) : typical 650gr / litre
Available (free) lime after slaking $Ca(OH)_2$*: 25% +*

***Packing**: 25kg. Bags*

Whiteness index: 72
Surface cover (cm^2pergram): 9000
Expansion : < 1mm
Residue of quick lime after slaking: < 1%
***Shelf life**: 8-12 months kept sealed and dry*

MORTARS	**Compressive strength N/mm²**				**Elasticity Moduli (Mpa)**		
MIX RATIO	**EN459***	**1 : 2**	**1 : 2.5**	**1 : 3**	**1 : 2**	**1 : 2.5**	**1 : 3**
7 DAYS		0.75	0.57	0.53			
28 DAYS	3.5*	1.88	1.47	1.34	9010	9000	8070
6 MONTHS		7.1	5.34	3.94	15260	13501	12450
12 MONTHS		7.5	5.90	3.90	15280	13620	13150
24 MONTHS		8.63	6.00	3.97	17480	13785	13670
Consumption for $1m^3$ of mortar Kg. +/- 10%		305	244	216			

* Incoming European Norm EN 459 (mortar ratio 1:1.3 with ISO 679 Sand)

Mixing: can be mixed in cement mixers.

Application by spray gun: possible. Please consult us.

Working temperatures: not below 5ºC or above 30ºC. Make sure that high suction materials are thoroughly dampened before application. Avoid rapid drying due to high temperatures or strong winds by curing with a light water mist several times a day if necessary. See *"Protecting NHL Mortars"*.

SUITABLE FOR LATH WORK / LIME CONCRETE/INJECTION/GROUTING see relevant sheets.

Reworking: possible within 12 hours.

DATASHEET
NHL 3.5
(Chaux LC**** Pure)
Main Data and Application Recommendations

Mortar composition:MASONRY/POINTING/ CAPPING/ BEDDING/ ASHLAR

Binder: sand ratio: from 1:1.5 to 1:3 depending on the support/background conditions, the size of the joint and the fineness of the sand. Always use well graded sands (3 - 4mm down to 75 microns).
See also "*Applications & Good Working Practices – Sands for NHL mortars*".

RENDERING

A. Scratch coat	(3-5mm)	1 VOLUME OF NHL 3.5 : 1.5 VOLUMES OF SAND – Cast on.
B. Undercoat	(15-20mm)	1 VOLUME OF NHL 3.5 : 2 VOLUMES OF SAND*
C. Finishing	(5-10mm)	1 VOLUME OF NHL 3.5 : 2.5 VOLUMES OF SAND

With very fine sands possibly containing clays the binder content may have to be reduced.

***At this dosage the consumption is approx. 0.35kg. of NHL 3.5 per m^2 for each mm thickness.*

Please also refer to "*Applications & Good Working Practices - NHL Renders.*"

Health and Safety

Manufacturer:	CESA (Chaux et Enduits de St. Astier) 24110 St. Astier. France

General information:	NHL products do not contain any dangerous substances or toxic products.

Identification:	
Commercial designation	Natural Hydraulic Limes (NHL 2, NHL 3.5 and NHL 5) manufactured according to the French Standard NF P 15-311
Types of use	Rendering, plastering, pointing and masonry mortars, grouting

Chemical nature of the products	Result of burning at 900º-1000º C of a siliceous limestone composed of calcium carbonate, silica and some presence of alumina and traces of other elements.

Physical properties	
Physical state	Light gray to white powders
Solubility in water	Dissolution is accompanied by the immediate precipitation of the formed hydrates
pH value	12-13 in water solution
Melting point	> 1000ºC
Flashing point	Not applicable
Combustion point	Not applicable
Bulk density	from 0.500- 0.700kg. per liter @ 20ºC
Specific gravity	2.4 to 2.7 g/cm^3 @ 20ºC

Storage and handling	
Precautions	Do not inhale or ingest. Protect eyes and skin
Storage	In bags or silos. Do not expose to air or rain
Dangerous decomposition	None
Personal protective measures	Wear adequate protective clothing to avoid prolonged contact with the mortar. To avoid dust contact with eyes and possible inhalation wear glasses and mask especially in areas not properly ventilated

Health and Safety

Medical information	Particles, if inhaled, can irritate the upper respiratory track. Avoid contact with eyes. Irritation and even injury can occur. When mixed with water, the paste obtained is highly alkaline. It can dry the skin and mucous membranes in the event of prolonged contact. If present, chromates can be dissolved by water and this could cause allergic skin reactions in some hypersensitive individuals when exposed by lengthy and repeated contact.

First Aid measures	
Prevention	Avoid all prolonged contact with the skin. Avoid inhalation or contact with eyes.
Treatment	If the eyes have been in contact with the powder or products that contain it, clean with fresh water applied in abundance. If irritation persist obtain medical assistance. At all times rinse skin after contact Use protective creams against allergic symptoms. If inhalation has occurred go into fresh air. If irritation persist seek medical advice.

Environment Protection	Handle in ventilated areas and prevent dust diffusion Accidental spillage: recover powder. Dump small quantities as non-hazardous waste. After hardening, the lime or its products are definitively combined and insoluble. No further precautions necessary.

Special indications	Respect the hygiene and safety rules specified by the trade. The basic components of Natural Hydraulic Lime are common natural materials.

Statutory information	
Danger symbol	Xi Irritant
Principal component	Lime
R phrases	R 63/37/38 irritant for the eyes, respiratory ways and skin R 41 risk of severe eye injuries.
S phrases	S 2 store away from children. S 24/25 avoid contact with skin and eyes. S 26 in case of contact with the eyes wash immediately with clean water and contact a specialist. S 37 wear appropriate gloves S 39 wear eyes and face protection

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Flashing point	Not applicable
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Precautions	Do not inhale or ingest. Protect eyes and skin
Storage	In bags or silos. Do not expose to air or rain
Dangerous decomposition	None
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