Method Statement Template:
Monument Reinstallation, Medieval & Renaissance Galleries

CONTENTS

Method Statement:

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Object Name:	Object No:
The general method of rebuilding is to start from the bottom-most element and to work upwards. From an early stage most monument installations will therefore involve working at height from a scaffold tower. The installation process will be accompanied by photographic documentation and written reports to be incorporated within the V&A's documentation scheme.	

INSTALLATION SITE PRE-REQUISITES		
PERSONNEL Are adequate technical and conservation personnel allocated for each designated task? Will there be separate demands on personnel elsewhere?	Yes	No Comment:
BUILDING Have the wall and floor depth, stability and load bearing capacities been checked and engineered as appropriate before the monument re-build?	Yes	No Comment:
RECESSES Have any recesses to fabric of gallery been prepared according to submissions from sculpture conservation studio?	Yes	No Comment:
SERVICES Have all local plant and service conduits etc. been identified? Will they be affected if extra piercing of gallery fabric is required during installation?	Yes	No Comment:
PROTECTION Have all necessary protective measures to the fabric of the galleries been carried out, e.g. durable protection to mosaic floor/ adequate protection to cornice moulding where appropriate?	Yes	No Comment:
SCAFFOLD Is the appropriate scaffold erected? If steel, has contact been made with the scaffolders regarding a programme for adjustments? **Specify scaffold(s) in APPENDIX D.**	Yes	No Comment:
POWER Is there adequate power supply? Is the supply appropriate [110v] and is the cabling protected? Are there enough RCDs (circuit breakers) available for equipment (e.g. vacuum cleaner, lights, and extraction) that does not operate on 110V?	Yes	No Comment:
LIGHTING Is there sufficient general and spot lighting available?	Yes	No Comment:
OBJECT TRANSPORT/STORAGE Are pathways for object transport/storage clearly marked and well maintained?	Yes	No Comment:
HEALTH & SAFETY **FIRST-AID** Who in the working area is trained as a first-aider? Is adequate first aid equipment available at all times within a clearly indicated first aid station?	Yes	No Comment:

FIRE/EMERGENCY Are the appropriate number and type of fire extinguishers on site and the fire point designated? Do all personnel including contractors know the emergency procedures and exits?	Yes	No Comment:
CONTACTS Is a list of contacts clearly posted?	Yes	No Comment:
VENTILATION Is there sufficient dust and fume extraction available for use as required?	Yes	No Comment:
REFRESHMENT/REST Has a water point available to all staff been set up on site away from work areas and have rest arrangements been decided (the work plan should take account of individual and team requirements)?	Yes	No Comment:
CLEANING Is there a procedure in place for general cleaning and disposal of rubbish, including water area?	Yes	No Comment:

TASK PRE-REQUISITES	
H&S All persons involved (and visitors) are to wear the correct personal protective equipment (PPE)	dust mask, goggles, gloves, anti-vibration gloves, protective suit, ear defenders, steel-toe capped boots, helmet
TRAINING Is special training required Who on this team has not been trained?	**See APPENDIX C - EQUIPMENT/MATERIAL LIST**
SAFE SYSTEMS OF WORK: • Plan and prepare each stage of work. • Obtain the objects' weight and identify its load centre. • Check the load is secure and safe to handle/transport/lift. • Prepare the route and working area, with enough space provided for safe handling and working. • Check the scaffold staging levels are correct.	**ENSURE:** The appropriate numbers of competent personnel are assigned to each task. The risks are identified and understood by all involved and the relevant risk assessments have been read and signed. **See APPENDIX B - APPLICABLE RISK ASSESSMENTS.** A safe method of work is followed for each task.

RISKS TO PEOPLE FROM:	See APPENDIX B - APPLICABLE RISK ASSESSMENTS
Manual handling and lifting. Use of: handling equipment fork-lift trucks manual and electric hoists and gantry power and hand tools on and off scaffolds. Incorrect use of equipment/tools. Faulty equipment/tools. Working at height. Crushing/striking by objects/equipment. Dust inhalation. Fume inhalation. Solvents. Noise. Vibration. Repetitive Strain Injury (RSI). Poor working posture. De-hydration. Poor site management. Failure to wear PPE. Stress.	
RISKS TO OBJECT	
Breaks due to dropping (caused by lifting, manual handling, failed fastening, unbalanced load distribution on pallet truck/forklift).	Only trained professionals to use pallet trucks, forklift, and lifting equipment; consult with conservators for stability assessment of pieces; handle pieces as little as possible and with as much support underneath as possible.
Instable mounting due to weak static/fabric support.	If in doubt about fabric conditions consult with architects, engineers, building maintenance department before piercing walls; ensure that all action points of **INSTALLATION SITE PRE-REQUISITES, p. 2**, are taken care of.
Unstable mounting due to insufficient securing.	Make sure every piece has more than one securing point. Make sure the prefabricated mounts/supports are reliable. Embed brackets carefully with plaster, filling deep into the hole in the wall. Only use new steel fixings.
Scratching during handling.	Protect exposed surfaces with inert foam sheets/blankets. Insert inert foam sheets between stone and slings in fragile areas. Remove sharp tools from stage where handling is carried out. Cover moving stage with blankets.

Dust deposits from work in gallery.	Discuss times of work when dust is generated with contractors/other teams. Try to limit work to certain periods and discuss possible hoarding that prevents dust from spreading. Use extraction. After installation try to cover object or at least upward facing areas if possible (bear in mind they may need to be removed once the scaffold is no longer in place).
Damage from actions by other workers in the gallery (on ground or overhead).	Cordon off work area and object storage area. Keep pathways clear. Mark objects under cover as such.

ACTIVITIES

MOVEMENT

METHOD Transport of object parts to site by Technical Services and the preparation of parts by team for sitting in position by lifting directly into place or onto scaffold ready for final positioning. **REQUIRES** manual/mechanical handling of equipment/object parts. **INVOLVES** use of the following equipment/techniques: Levering with crowbars/timbers, sliding with/without Teflon® strips, lifting manually and by pallet-truck/hydraulic platform trolley, lifting using slings and fork-lift truck(s)/manual and electric chain hoists. Personnel should be competent and trained where necessary in the correct and safe operation of all equipment. Items should be stabilised and secured prior to handling using inert foam/wood blocks, wedges, and other appropriate materials. Each stage must be planned and the necessary equipment and materials prepared in advance. **SLINGS see APPENDIX A.**	Have the risk assessments for these activities been signed? **See APPENDIX B – APPLICABLE RISK ASSESSMENTS.**

FIXING

Object part is offered up to final position with appropriate support in place before final fixing. Supports include wooden boxes, battens, and wedges, along with an appropriate configuration of eyebolts and ratchet straps offering temporary secure support while all fixings are attached.	
Some stone elements will be partially inserted into prepared recesses. **See RECESSES, p.2.**	
Most stone elements will be tied back/supported to the wall or each other with prepared stainless steel (grade 316) fixings (cramps, pins, bespoke plates and brackets). These will be prepared on or off site using appropriate manual and electrically powered tools. The relevant site/workshop procedures, techniques, and H&S must be followed and employed when preparing fixings.	**See APPENDIX B – APPLICABLE RISK ASSESSMENTS** and relevant risk assessments of off-site workshops.

Once the stone has been made stable fixings can be installed appropriately into fixing holes prepared from either templates or, where the weight of the element is sufficiently low, by directly offering up the object. **REQUIRES** preparing holes for fixings and eyebolts using battery and mains powered rotary hammer drills, hammers, and chisels. **INVOLVES** drilling with masonry drill-bits and excavating-bits, manual excavating. Appropriate PPE must be worn and measures taken to reduce dust/noise (including scheduling of work).	Refer to **SERVICES, p.2** before drilling. **See APPENDIX B – APPLICABLE RISK ASSESSMENTS**.
Parts are secured in place until all fixing materials have cured. Sufficient time is left for setting/settling of larger load bearing parts before subsequent adding of load in installation of later parts. **REQUIRES** mixing of lime mortar, cement, plaster, cutting of block/brick/tile.	
FINAL WORK	
Further steps include pointing, cleaning of joints, painting in, and final dusting/clear up: risk involved: sharp tools.	**See APPENDIX B – APPLICABLE RISK ASSESSMENTS**.
Has appropriate plan for maintenance and clean up of working area/plant/equipment been established?	Detail:

APPENDIX A – USE OFSLINGS

Personnel must familiarise themselves with the operation of the electric/manual hoists and fork-lift trucks, be competent to operate them and be trained where required.

Position the load so that the hoist chains are vertical above it.

Choose slings of the appropriate length and safe working load. Length is measured around the sling not end to end, and the safe working load should be marked on a label or tag and is also denoted by colour. Attach slings to the load securely and minimise slack. Refer also to the load chart attached here (not provided in publication), or on the label/tag, for guidance when configuring slings. Check that slings have not crossed over each other under the load.

If required use additional slings, webbing, or ratchet-straps to tie-in slings to provide additional security when lifting (e.g. to aid stabilising the load). Do not use webbing/ratchet-straps for lifting as it is not their designed purpose and is unsafe. However, when tying-in ensure that the load will still be safely and securely lifted by the slings and that excessive force will not be transferred to the webbing/ratchet-straps.

Inert foam cubes may also be used to spread the slings' pressure over the load to aid stability.

When excessive pressure against the load would be exerted by the slings during lift a spreader-bar may be used to separate them provided that the slings will not then be performing beyond their limitations. The bar should ideally be one that is designed and manufactured for this purpose and its use must be carefully assessed.

The bar should be level.

The safe working load of a sling is affected by its lifting angle.

Using two hoists together is an alternative where possible.

Attach slings together by looping them through each other (refer to load chart) or by using D-rings or shackles of the correct safe working load.

Never use knots to join slings or shorten them – this will cause damage, leading to failure under load.

Attach slings to the hoist by the hook only, ensure that the load on the hook is at the correct point and the spring-clip closes easily. Use D-ring/shackle when there are too many slings to fit the hook. Attach slings to forks of fork-lifts at the correct point for the weight and lift height of the load.

Lift vertically and avoid side-pull across the beam. Remember that the trolley will move along the beam under load, so, for instance, if an object is being turned on a surface the trolley will move as it does so and the hoist will require careful operation to ensure that the load is safely controlled.

Pull the chains of a manual hoist smoothly and avoid jerking motions. Adopt an appropriate posture and pull without stressing the limbs or body.

If the chains become tangled carefully separate them. Do not drop heavy lengths of chain while still holding them as hands/fingers may become trapped and injured.

How the load is likely to behave when lifted should be assessed before it is completely raised – adjust accordingly.

The load can be rotated when suspended and possibly will spin freely if not steadied.

Lower the load onto sufficient support clear of the slings. If trapping the slings is unavoidable do not drag them out from under the load as this will damage them. Tilt the load manually or by using the hoist and/or crowbar/timber.

After detaching the hook from the slings position the hoist at the end of the beam and secure hook and chains so they do not pose a hazard.

APPENDIX B – APPLICABLE RISK ASSESSMENTS (The V&A conservation department maintains a Risk Assessment database, to which ID numbers and TITLE in this list refer to. These risk assessments are specific to a certain tool model. Brand names were removed for publication)		
ID	TITLE	
	Hand held electric drills: battery – mains 240v &110v	
	Manual Handling of large 110v rotary hammer in drilling/percussion mode	
	Reciprocating saw for cutting metal and wood	
	Oscillating hand-held plaster cutter	
	Angle grinder (for metal and stone), 115mm, 110v	
	Masonry heavy chisels and heavy mallets	
	Sharp edged tools: scalpels, wood, and stone carving chisels	
	Movement of large/heavy objects	
	Working at height moving heavy objects	
	Working on aluminium and steel scaffolds	
	Use of fork lift trucks	
	Use of hydraulic platform trolley	
	Use of manually operated chain hoists	
	Use of slings	
	Use of gantry	

APPENDIX C - EQUIPMENT / MATERIAL	
GENERAL SITE REQUIREMENTS: LAYOUT, PEOPLE, TRAINING	
	Answer: yes, no or quantities/requirements for job
SITE LAYOUT	
Space to layout pieces/operate fork-lift truck	
Floor preparation with plywood boards (18mm)	
Floor/cornice protection with	
Sockets/power supply	
PEOPLE	who/number
Conservators:	
Technicians:	
Contractors:	
Students:	

In the role of first aider: In the role of supply manager: In the role of H&S representative:	
BASIC SITE TOOLS/CONSUMABLES	
Tool cage (Separate list attached)	Ensure the cage contains all the listed equipment and materials
Shared Pallet of consumables (Separate list attached)	Re-stock pallet as supplies diminish
Bench/Trolley with vice	
TRAINING	show if training/instruction needed and by whom
Slinging	
Manual handling of heavy weights	
Scaffold tower building	
Sharpening tools	
Chemical awareness/handling	
Operation of el. hoist/manual hoist	
Operation of forklift	
Operation of power saw for metals	
Operation of stone cutter	
PPE	
First aid box	
All individuals to take personal responsibility to ensure they have all necessary PPE	
SPECIFIC EQUIPMENT AND MATERIAL NEEDS	
EQUIPMENT - HEAVY LIFT - LIST MINIMUM REQUIREMENT FOR JOB	
Steel scaffold	**detail in APPENDIX D – SCAFFOLD SPECIFICATIONS**
Aluminium scaffold tower	**detail in APPENDIX D – SCAFFOLD SPECIFICATIONS**
Electric hoist (500 kg/1000 kg safe working load)	
Hired forklift	
In-house forklift	
Pallet trucks	
Hydraulic platform trolley	
Side truck (with mesh sides)	
Pram (platform on wheels with push bar)	
Table trolley	
A-frame trolley	
Skates	
Lights	

ADDITIONAL CONSUMABLES - LIST MINIMUM REQUIREMENT FOR JOB	
Inert foam sheets 5mm, 25mm, 50mm	
Lengths of timber: (3 in x 2 in), (2 in x 2in), (2 in x 1 in)	
Dust extraction unit + combined dust & fume filters	
Fume extraction unit + filters	
Stainless steel Grade 316	
Casting plaster	
Lime, hydraulic NHL 3.5	
Cement	
Sand (please specify)	
Bricks	
Thermalite® blocks	
Acrylic resin for adhesion/consolidation	
Acetone	
Industrial Methylated Spirit IMS	
Scrim	
Earth pigments	
Acrylic paints	
Mineral paints	

APPENDIX D – SCAFFOLD SPECIFICATIONS

Detail scaffold type, dimensions, levels, hoist arrangements (add scaffold images from de-installation for reference):

APPENDIX E – HANDLING

Detail any object specific handling: