



DESIGN RISK MANAGEMENT SCHEDULE					KEY FOR FEEDBACK ITEMS					Date of Issue : 30/07/19
CLIENT : National Museums Liverpool - Merseyside Maritime Museum PROJECT NAME : Sea Galleries DUTY HOLDERS : NML, Principal Designer, Designers, Principal Contractor & Contractor CONTRACTOR : TBC						Action has been addressed	 Issue No : 5406 / 00			
						Response to action becoming urgent				
						Recently added hazards				
						Mitigation item to be proposed				
						Design item to be reviewed				
Item	Project Stage	Project Phase	Description	Date	Feedback Required By	Design consideration	Mitigation	Residual Risk	Health & Safety proposal to mitigation residual risk	
1	Design	Pre-Enabling works	Asbestos	30/07/2019	NML	Presence of Asbestos & potential to be affected by reason of the works.	Demolition & Refurbishment Survey for inclusion in Pre-Tender Information Pack.	Remaining ACM's	Update asbestos management plan and undertake annual inspection / updates.	
2	Design	Main Gallery Spaces	Fixing of setwork structures to building fabric	30/07/2019	NML / Designers / Contractor	Ensuring all setwork structures are securley fixed back to the fabric of the building (floors and walls)	Secure fixing detail designed showing how the setwork structures are to be mechanically fixed to the building fabric			
3	Design	Main Gallery Spaces	Fixing of free standing setwork structures	30/07/2019	NML / Desingers / Contractors	As these setwork structures will not be located by solid wall structures need to consider how these will be secureloy fixed to prevent toppling over or movement	Secure fixing detail showing how the structures will be fixed to the floors. Possible detail of also weighting the strctures down.			
4	Design	Main Gallery Spaces	Relocating of the existing glass cases that are currently on site for when the works commence	30/07/2019	NML / Contractors	These cases will need to be relocated from there current locations where the works are to take place. Need to agree a safe area for staorage and method of moving due to a live operational museum space	Relocation to be carried out out of hours. Cases that need to remain on site for the duration of the works are to be fully protected	Relocation back to the gallery space on completion of the works	Relocation to be carried out out of hours	
5	Design	Main Gallery Spaces	Electrical and AHU containment cupboards. Potential fire hazard from the these areas as the existing cupboards are not fire rated	30/07/2019	NML	Enusre the cupbaords are minimum 30min fire rated protected, including structure and doors	NML to action these works prior to the main contract being award and deal with this internally	Damage and defective elements	Ongoing mainatenance and checks of the doors and ironmongery	
6	Design	Main Gallery Spaces	Existing Doors between each gallery space and fire evaculation routes	30/07/2019	NML	Confirmation required if these doors (5no.) or fire rated doors and screens. Min 30min fire rated protection required.	Confirmation to be provided or these doors to be replaced to ensure min fire rating is provided	Damage and defective elements	Ongoing mainatenance and checks of the doors and ironmongery	
7	Design	Main Gallery Spaces	Forming the setwork structures that abut up to the main central staicase balustrades/handrails	30/07/2019	NML / Designers / Contractor	Look to form the actual setwork walls that will also act as part of the hoarding. Once up these can remain in place for the full duration of the works and will not be needed to be altered again. Minimises the risk of working over and around the staircase openings more than required.	All works done out of hours when the full hoarding is being erected and finished off prior to the main works starting.	Possibility of the walls being damged during the actual works or by members of the public	Provide a protection sheet that can easily be removed on completion	
8	Design	Main Gallery Spaces	Accessibility	30/07/2019	Access Consultant Designer	Appropriate design measures are adopted to ensure statutory compliance with Equality act for accessibility	Setwork design does not hinder the free flowing access requirements around the gallery space	None	None	
9	Design	Main Gallery Spaces	Alterations to existing and new electrical services	30/07/2019	Designers / KGA Partnership / Contractors	High level access to services or equipment for maintenace - Working at height to access voids - working at height, confirmed spaces, requirements for maintenance.	Containment designed to incorporate easy access for maintenance	Working at height - Alterations, additions or omissions of electrical, AV etc cabling at high level in containment	RAM's for high level work as part of annual maintenance	
10	Design	Main Gallery Spaces	Alterations to existing ventilation systems	30/07/2019	NML	High level access to services or equipment for maintenace - Working at height to access voids - working at height, confirmed spaces, requirements for maintenance.	Exisiting equipment	Testing & Maintaining	Annual term maintenance	
11	Design	Main Gallery Spaces	Glazing Safety	30/07/2019	Designers / NML	Existing glazed doors - Accidental collison with clear glass doors	Design for the glass cases shall be strictly in accordance with Part N & K of the building regulations.	Use of manifestations, lighting, rails, and or hold open devices to doors	Manufacturers annual maintenance requirements. NML FM team / term contractor	
12	Design	Main Gallery Spaces	Security	30/07/2019	NML	Security measures	NML have confirmed security measures. Design meets NML requirements and in-house security team to ensure management of CCTV and fob access	Maintaining systems	NML FM team to undertake term contractor work annually.	
13	Design	Main Gallery Spaces	Lighting Design	30/07/2019	KGA / Contractor	Lighting levels appropriate and sympathetic to gallery space and artefacts. Allow safe navigation through the gallery spaces	Lighting designed & specified.	Work at height	RAM's NML FM team	
14	Design	Main Gallery Spaces	Glass cases	30/07/2019	NML / Designers	Impact with glass cases and potential for breakage or damage to artefacts	Designs for the glass cases shall be strictly in accordance with Part N & K of the building regulations.	Use of manifestations, rails etc		
15	Design	Main Gallery Spaces	High level light fittings	30/07/2019	NML / Designers	Access at height for maintenace	Use of access equipment by trained NML FM team members. NML staff will not work at height.	Work at height	RAM's NML FM team	
16	Construction	Main Gallery Spaces	Fire Strategy - Means of Escape	30/07/2019	Contractor / NML	Temporary measures during the course of the construction works.	MOE requirements detailed in pre-construction health & safety plan. NML to agree temporary fire strategy requirements day to day with Contractor.	None		
17	Construction	Main Gallery Spaces	Alteration to fire alarm systems	30/07/2019	NML	Ensuring retained fire alarm system & provisions for MOE, emergency lighting etc for contractors is sufficient	Included within specification & design for the building works.	Contractor to adopt H&S measures within the construction phase	Testing and statutory compliance. NML FM Team.	

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18	Construction	Main Gallery Spaces	Egress Access for removal of materials via loading bay / goods lift	30/07/2019	NML / Contractor	Interface between staff areas / circulation & Museums use of the goods lift	Procedures agreed with NML site team. Annoytated site plan agreed for access to site, interfaces with NML site and use of stairs, loading bay and goods lift.		
19	Construction	Main Gallery Spaces	Adequate lighting for safe working practice	30/07/2019	Contractor	Provision of temporary lighting systems, task lighting etc	Included within specification & design for the enabling package.	Contractor to adopt H&S measures within the construction phase	None
20	Construction	Main Gallery Spaces	Site Establishment	30/07/2019	NML / Contractor	Adequate spaces sufficiently compounded within the proposed compound area	Included within the procurement documentation for the enabling package	Contractor to adopt H&S measures within the construction phase	
21	Construction	Main Gallery Spaces	Museum & Construction site interface	30/07/2019	Contractor	Interface between site works and Museum staff working in adjacent areas/rooms or using shared circulation spaces	Included within the procurement documentation for the enabling package	Contractor to adopt H&S measures within the construction phase	
22	Construction	Main Gallery Spaces	Dust Control - Interface between work areas and public areas are adequately protected in respect of dust	30/07/2019	Contractor	Sealing of work areas & air monitoring of adjacent Galleries, offices and general circulation spaces for dust.	Included within the procurement documentation for the enabling package	Contractor to adopt H&S measures within the construction phase	
23	Construction	Main Gallery Spaces	Dust Control - Ventilation systems	30/07/2019	Contractor	Alterations works to ventilation systems. Methodology for sealing vents / grilles in an air tight manner to prevent migration of dust through the ventilation system	Included within the procurement documentation for the enabling package	Contractor to adopt H&S measures within the construction phase	
24	Construction	Main Gallery Spaces	Dust Control	30/07/2019	Contractor	General Builders work.	Builders to seal all apertures, door ways not in use etc. To be signed off on site with NML as work progresses.	Contractor to adopt H&S measures within the construction phase	
25	Construction	Main Gallery Spaces	Safe working environment - Lighting	30/07/2019	Contractor	On removal of existing lighting infrastructure that a temporary lighting system be retained to maintain a safe working environment	M&E / Contractor to consider temporary lighting design for the enabling / fit out works.	Included as part of the enabling package of works	
26	Construction	Main Gallery Spaces	Safe working environment - Fire Evacuation	30/07/2019	Contractor	Emergency exits are kept clear through the construction phases and are adequately sign posted	Proposals from contractor to maintain adequate for fire evacuation	See Construction Phase Health & Safety Plan	
27	Construction	Main Gallery Spaces	Management & Coordination - Fire Evacuation	30/07/2019	NML / Contractor	Fire evacuation from the building will include Museums staff & visitors and contractors. To agree a strategy of management a& coordination whilst the project is on site.	Agree proposals and seek approvals from building control to strategy and management controls		
28	Construction	Main Gallery Spaces	Exhibitions - NML & External	30/07/2019	NML / Contractor	To consider the impact of construction works on NML & Museum spaces	To be discussed further.		