

Maritime and Coastguard Agency

TENDER PACK

ANCHOR COURT, KEEN RD, CARDIFF, CF24 5JW



Maritime and Coastguard Agency

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Anchor Court, Keen Rd, Cardiff, CF24 5JW

TYPE OF DOCUMENT: CONFIDENTIAL

PROJECT NO.: 70050786

OUR REF. NO.: REPORT 001

DATE: NOVEMBER 2019



Maritime and Coastguard Agency

TENDER PACK

Anchor Court, Keen Rd, Cardiff, CF24 5JW

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Tender Pack
Project No.: 70050786 | Our Ref No.: Report 001
Maritime and Coastguard Agency



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APPENDICES

APPENDIX A PRE-CONSTRUCTION INFORMATION

Tender Pack Project No.: 70050786 | Our Ref No.: Report 001 **Maritime and Coastguard Agency** WSP November 2019



ACTIVITY SCHEDULES 1.

Tender Pack **WSP** Project No.: 70050786 | Our Ref No.: Report 001

Maritime and Coastguard Agency November 2019





	MCA CARDIFF OFFICE REFURBISHMENT				
	ACTIVITY SCHEDULE				
A	GENERAL CONDITIONS	Qty	Unit	Rate (£)	£
A.1	This Activity Schedule is to be read strictly in conjunction with any suppliers specifications. Any discrepancies should be reported to the PM.	Note	-	11410 (2)	
A.1	Please note that dimensions/quantities as shown in this document are only approximate and should be checked on site by the Contractor. Any discrepancies should be reported to the PM.	Note			
	In pricing these works, it is deemed that tenderers have visited site. Tenderers must price each item listed in this document, where the price quoted is the total cost of completing that element of work and inclusive of all enabling, installation and making good works, unless otherwise defined. The materials provided and installed must be those specified by the supplier. The Contractor must confirm, to the PM, the lead in times regarding the following materials and all products associated				
A.2	with: - Kitchen (units and services) - Floor Coverings - Doors - Blinds - M&E This information is required within this tender document, for consideration by the PM and employer and dates must be	Note			
	confirmed during the pre-start meeting.				
A.3	The Contractor is to price each item separately.	Note			
A.4	The Contractor is to include in his price for all associated works inferred or implied, to comply with good working practice.	Note			
A.5	Nothing contained within the activity schedule is intended to invalidate any British Standard or Performance Certificate. Unless otherwise agreed with the PM, British Standards and Agreement Certificates shall prevail - the Contractor shall	Note			
A.6	draw to the attention of the PM any discrepancies. The drawings are intended as a guide only. All measurements / dimensions to be obtained from site including with due regard to fixing tolerances. The contractor is to follow the kitchen requirements as described by Howdens, the kitchen set up on the construction plan is indicative only.	Note			
	All queries to be directed to and a response given by the PM prior to works commencing on site.				
A.7	All works are to be in accordance with the relevant parts of this schedule. The Contractor is deemed to have read and become familiar with areas of the works prior to starting on site.	Note			
A.8	The Contractor is to limit his area of operation, at any given time, to those areas associated with the works in hand, at that stage in the works programme. NOTE - The Contractor will be required is to supply more labour to the project in order to meet the completion date at no additional charge, if works fall behind programme or poor weather conditions are experienced.	Note			
A.9	Unless stated within the description for a particular item of work, all works are required to be carried out within normal working hours. Normal working hours are 8:30am and 5:00pm. Works outside normal hours and at the weekends are to be carried out by prior arrangement with the PM.	Note			
A.10	Where noisy work is to be carried out, prior planning and agreement should be coordinated with the PM to ensure disruption on site is kept to an absolute minimum. No noisy work shall be carried out outside the times permitted. The Contractor is to obtain details of such permitted times before works commence, as the building houses other tenants / businesses who must not be disturbed.	Note			
A.11	Where there is conflict or duplication between the requirements of the supplier information and the schedule of works then the Contractor should seek guidance from the PM.	Note			
A.12	The Contractor is to take on the role of the Principal Contractor in accordance with the CDM Regulations 2015. The Contractor must submit a copy of the Construction Phase Plan at least one week prior to the commencement of the works, containing all necessary risk assessments and method statements for the safe execution of the works.	Note			
	The Contractor must provide welfare facilities. Space will be provided for the Contractor's site office, arrangements to be confirmed during the contractors open day.				
A.13	The Contractor should allow for providing all necessary guarding barriers, notices, warning signs, hazard tape and PPE as necessary for the safe execution of the works to be detailed more fully within the Contractor's Construction Phase Plan.	1	Item		
	Any internal areas that are to be used by the Contractor must be maintained and cleaned to a proper and reasonable standard. The Contractor shall also undertake a thorough deep clean of all areas accessed and used during the programme of works. Rubbish Removal				
A.14	Contractor to include for removing all rubbish debris and waste arising from the works and site and for disposing of to a suitable Local Authority registered tip. This should include for all skip and waste disposal charges and all associated parking permits. A copy of all waste disposal certificates should be given to the PM following completion of the works.	1	Item		
	Asbestos				
A.15	The contractor is to review the Asbestos Refurbishment Report. The Contractor is to satisfy themselves that the prescribed works will not affect any ACM's, if present.	1	Item		
	Pre-ordering of materials and equipment				
A.16	Contractor to allow to pre-order all necessary equipment and materials and arrange for its availability when needed in accordance with the activity schedule in connection with all works.	Note			





	Services			
A.17	The Contractor shall be responsible if required, for ensuring that the electricity, gas and water supplies are inspected, tested and made safe by suitably qualified professionals, i.e. NICEIC Approved Electrical Contractor and Gas Safe Registered gas engineer before associated works commence. The Contractor is to provide test certificates and describe the works that were undertaken to achieve the above. The Contractor shall be responsible for all necessary artificial lighting and power for the correct execution of the works and may be required to pay for all electricity consumed. The Contractor shall also ensure that all supplies of artificial lighting and power are terminated following completion of the works informing the PM in writing with copies of all relevant termination notices to the appropriate Electricity Board. The Contractor shall be responsible for ensuring that all aerials, cables, pipes and / or fittings (e.g. B.T. cables, satellite television dishes, signage and any other services not mentioned) are removed / repositioned as necessary.	1	Item	
	Where works affect any such fixtures to or supplying other properties, which could be affected by the works, should also be repositioned and / or protected as required by the other occupiers. Any aerials, cables, pipes and / or fittings so repositioned shall be refitted to their original position on completion of the relevant works. The Contractor shall coordinate with all relevant suppliers of services regarding all necessary disconnection and re-			
	connection of services, data supplies relating to works. Also allow for all costs associated.			
A.18	Schedule of condition The Contractor will provide a schedule of condition with internal and external photos of the site, to be agreed prior to starting any works on the site. Schedule to include all areas of the site and building that may be accessed by the Contractor during works. This is to be agreed at the pre start meeting.	1	Item	
	<u>Co-ordination of works</u> The Contractor is to review the Health and Safety Information and Operation and Maintenance manuals held by the			
A.19	client.	Note		
	The Contractor must programme all works to achieve completion within the designated Contract Period. The Contractor is to provide a detailed bar chart programme in MS Project and pdf version, clearly showing the activities to be undertaken and identifying the tasks on the critical path, within 5 working days of request. Initial Draft Programme, in Gantt chart form, including all lead-in times to be provided with Tender Return Documents.			
	The Contractor must ensure that if any work site herras fencing and site access is used that it is made secure at the end of each day.			
A.20	Skips must be the enclosed lockable type and should be kept a safe distance from the building. Ideally within the site compound area, if one is provided.	1	Item	
	Where materials are specified by Manufacturer's name, a full set of the Manufacturer's instructions are to be retained on site and it is the Principal Contractor's responsibility to ensure that these are strictly observed at all times. Bring to the attention of the PM any discrepancy between the specification and any instructions that are contrary to the Manufacturer's recommendations.			
	Interim payments will be certified in accordance with the contract, on a percentage basis of works completed in relation to the Contract Data.			
	Principal Contractor to allow for management and co-ordination of all other contractors.			
	The Contractor is to allow for detailed phasing and co-ordination on site, the works shall be undertaken to all areas and consultation must be taken between the building occupier and the contractor so the works programme does not impact on the general MCA operation. The works are to be phased in accordance with the areas detailed in the construction plan.			
A.21	The contractor must guarantee that power and data services remain live to critical MCA equipment including, but not limited to, the FMS and Bunkers systems at all times. A phased handover is required to ensure continuity of service, the contractor is to allow for staff to remain in Phase 2 area until the new furniture is installed (separate contract) allowing them to migrate across – this is expected to take between 2 – 5 days.		Item	
	Note- The phasing plan is an indicative only and based on the client's requirements to ensure the site will remain operational and staff can remain on site during the course of the works. The contractor is to provide a proposal as part of their tender.			
A.22	Contractor to allow for a temporary partition between the two phased areas. Circa 5m. Partition to be substantial enough to prevent dust and noise disturbance.	1	Item	
A.23	The contractor must ensure a full time working foreman is on-site for the full duration of the works to effectively programme labour and resources and receive instructions from the CA/PM.	1	Item	Note
	Day Rates - Labour			
	The Contractor is to confirm hourly labour rates. These rates are applicable for 90 days following receipt of this tender by WSP for analysis. These items are not to be included within the tender submission sum and are only for reference where extra works are required;	Note		
A.22	Carpenter Painter and Decorator	1	hr hr	
	Plumber	1	hr	
	Electrician	1	hr	
	Labourer OH&P	1	hr	
	Prices submitted within this schedule should be inclusive of all overheads, profit and preliminaries associated with			
A.24	undertaking the works. The contractor is to indicate their percentage allowance for OH&P in the NEC Contract Data Part 2 for information and to assist with calculating Compensation Events in the event of unforeseen works.	Note		
	The works will be undertaken in accordance with the NEC3 Engineering and Construction Contract, Option A.			
]	SECTION A TOTAL			





В	SECURITY AND PROTECTION				
	Provide and maintain all necessary protection, barriers, warning signs etc. around the works.				
	Provide and maintain adequate protection to surfaces and surrounding areas of the works that are to be retained, and reinstated to original condition upon completion. The Contractor is to ensure that areas are clean and tidy at the start and end of each working day.				
B.1	Ensure that all building materials and waste arising from the site are stored appropriately within the boundaries of the site compound. The Contractor is to ensure that all materials or waste is stored securely. Ensure that all waste is removed from site on a weekly basis.	1	Item		
	Existing road and other surfaces including soft landscaping, must be carefully worked around. All damage is to be reinstated to original condition.				
	Maintain suitable security internally to prevent unauthorised access to the building and works area on completion of the works each day. Access to be agreed and approved with the PM at the pre-start meeting.				
	SECTION B TOTAL				
С	OFFICE Clear all existing furniture and loose items and cart away from site including the roller storage units and metal window				
C.1	To locations illustrated on the demolition plan, strip out existing partitioning and cart away materials from site including	20	Item		
C.2	all associated doors and joinery. Contractor to allow to make good damaged areas.	20	lm		
	Reception Desk and Screen				
C.3	Remove section of wall between reception and waiting room to take circa 1 sqm glazed screen as seen on the construction drawing. Supply and fit glazed opening of circa 1 sqm. Screen to be 13.5mm laminated security glass with timber frame. Provide access void of circa 250mm between glazing and worktop.	1	Item		
C.4	Timber frame to be decorated using a high quality latex primer followed by 2 coats of Dulux Trade High gloss - colour to be confirmed.	1	Item		
C.5	Worktop in waiting room and reception area to be at 760mm from floor level. Worktop on either side of opening to be Howdens 38 mm square edged finished black laminate worktop with connection bolts, joint compound and edging, installed in accordance with the manufacturer's recommendations and requirements. For worktop requirements please contact Darran Chapman on 02920 461368 - darranchapman.cardiff@howdens.com	1	Item		
	<u>General</u>				
C.6	Remove all floor coverings and take back down to existing floor panel inline with the programmed phases of work. All adhesive residue is to be taken back and floor to be left smooth and level, ready for new floor coverings.	575	sqm		
C.7	Supply and lay Milliken Light Trails/Dusk DSK11 Titanium carpet tiles throughout office area, allowing for all necessary and associated products - adhesive etc. To be fitted inline with manufactures instructions.	520	sqm		
C.8	Remove existing window blinds and make good reveals. Install new Louvolite Slimline vertical blinds in Unilux Performance Blackout Fabric or equivalent, colour Powder Blue.	33	nr		
C.9	To areas where walls are removed, allow to renew suspended ceiling grids. Tiles to match existing.	10	sqm		
C.10	Allow for new sections of suspended ceiling grid and tiles within exam rooms and opposite corridor as per construction plan. Tiles to match existing.	45	sqm		
C.11	Where new partitioning has been installed, supply and fit timber skirtings 120mm in height to match existing. Contractor to allow for stripping out and replacing skirtings where damaged and install new where missing. These are to be fully primed and decorated. Ensure these are securely fixed in place and mastic sealed back to the plasterwork prior to decoration. Ensure all joints are finished to a good quality. Corners to be mitre joints.	25	lm		
C.12	In locations where new partitioning is installed, construct a new stud partition using Gypliner 70mm system as manufactured by Gyproc. Install with head and sole frame members together with studs at centres as manufacturer's recommendations. Line out for door openings as detailed in the Gyproc instructions leaving ready for new door linings. Install a 12.5mm Gyproc plasterboard either side of a 70mm steel stud, 50mm mineral fibre insulation in the cavity as a solid bat fixed to studs. All new partitions are to travel above the suspended ceiling and terminate at the underside of the floor slab to create a minimum 30 minute fire barrier within the ceiling void.	12	lm		
C.14	New partition wall surrounding the deck exam rooms is to be constructed using Gypliner 70mm system. Install with head and sole frame members together with studs at centres as manufacturer's recommendations. Install a 12.5mm Gyproc Soundbloc plasterboard either side of a 70mm steel stud, 50mm mineral fibre insulation in the cavity as a solid bat fixed to studs to achieve a Rw 42dB. All new partitions are to travel above the suspended ceiling and terminate at the underside of the floor slab to create a minimum 30 minute fire barrier within the ceiling void.	5	lm		
C.15	Allow for acoustic batts to achieve a Rw 42dB, above all ceilings and floors, along the line of new and existing walls surrounding the exams rooms.	12	lm		
C.16	In all locations where new partitioning is installed and in area where repairs have / are required, fill joints, scrim and skim with 3-5mm thick coat of Gyproc Thistle Multi-Finish plaster. Allow to supply and fix jointing tape and angle beads as required prior to applying a plaster finish including base coats.	65	sqm		
C.17	Supply and fit all doors as noted on the construction plan drawing. Doors to be solid core oak veneered finish, but prior to ordering match with the veneer of the existing doors, contractor is responsible for taking measurements of all openings on site. Allow for 838mm wide doors. Doors are to be FD30S and vision panels are to be designed in line with Approved Document M to provide one long glazed area. Allow for all necessary ironmongery including but not limited to hinges, kick plates, door stops, handles, key lock with thumb turn on inner side and overhead door closers.	4	nr		
C.18	All new and previously decorated surfaces are to be adequately prepared and made good in order to receive decoration. All walls and partitions are to be decorated using 2nr coats of vinyl silk emulsion paint - colour to be Dulux Trade white.	350	sqm		
C.19	All joinery / architraves is to be decorated using high quality latex primer followed by 2 coats of Dulux Trade High gloss - colour to be confirmed	170	lm		
C.20	Supply and fit emergency exit signs above all new door locations.	4	nr		
<u> </u>	SECTION C TOTAL			l .	





D	KITCHEN			
D.1	Remove all kitchen fittings including, but not limited to cupboards, worktops, sinks, taps, splashbacks, wall mounted items and cart away waste,	1	Item	
D.2	Remove all floor coverings and take back down to floor panels. All adhesive residue is to be taken back and floor to be left smooth and level ready for new floor coverings.	55	sqm	
D.3	Install Altro Reliance 25 Safety flooring system to Kitchen and lunch area as per construction plan. To be installed with 150mm coved upstands to perimeters. Including for edge trims, adhesive, all welded joints, thresholds and coved formers etc. Colour - midnight D25421.	55	sqm	
D.4	Supply and fit Metro Bevel Edged tiles, laid on long edge in brickwork pattern to areas above kitchen worktops to form a 5 course splashback. Colour to be white. Allow for all edge and corner trims, adhesive and grout required to achieve the specification. Grout to be white. Allow for coordination with the M&E contractors regarding the correct position of services - faceplates, vents etc.	4	sqm	
D.5	Supply and fit a Howden's kitchen to the existing footprint as existing. The kitchen is to be from Howden's Glendevon Gloss Selection, including cushion close drawers and doors and integrated fridges. Include to supply and fit all necessary cornices, pelmets, plinths and panels to complete kitchen installation. Door carcasses to be white. Supply and fit brushed steel effect bow handles to all cupboards and drawers, installed in accordance with the manufacturer's recommendations and requirements. For kitchen requirements please contact Darran Chapman on 02920 461368 - darranchapman.cardiff@howdens.com	1	Item	
D.6	Include to supply and fit 38 mm square edged finished black laminate worktop with connection bolts, joint compound and edging, installed in accordance with the manufacturer's recommendations and requirements.	1	Item	
D.7	Install Sandringham Select Inset Single Bowl Sink to location shown on construction plan. To include installation of associated pipework to existing water supply.	1	Item	
D.8	Install Cerasprint Sink Mixer tap to sink.	1	Item	
	Contractor to allow for the removal of the hot water zip tap, safe storage and refitting into new kitchen.			
D.9	Contractor to provide price for supply and fit of new 5 litre, 2.2kw, hot water zip hydroboil 305552 wall mounted boiler if existing is found to be at the end of its life cycle. Note: this is not to be included in initial pricing schedule. £	1	Item	
	SECTION D TOTAL			
E	ELECTRICAL WORKS			
E.1	The Contractor is to provide a cost for all electrical works detailed in the electrical drawings. Contractor to submit a price for the systems specified including but not limited to, fire alarm and security, lighting and emergency lighting and small power.	1	Item	
	SECTION E TOTAL			
F	MECHANICAL WORKS			
F.1	The Contractor is to provide a cost for all mechanical works detailed in the mechanical drawings. Contractor to submit a price for the systems specified including, but not limited to the air conditioning system and the ventilation system.	1	Item	
	SECTION F TOTAL			
G	HANDOVER AND COMPLETION			
G.1	Upon completion, the Contractor is to clear away all debris from the site, clean all floors where internal works were undertaken and generally leave the premises internally and externally in a clean and tidy condition ready for use by the tenant and to the satisfaction of the PM.	1	Item	
G.2	Prior to the presentation of the site as 'Complete', the Principal Contractor must provide all Test Certificates (plus any applied documents), the Health and Safety file (to include residual risks, consultants used, Contractors used etc. as per the PD) and any as built drawings to the PM.	1	Item	
G.3	Contractor to include for compilation of O&M Manuals in the form of hard copy and electronic.	1	Item	
	SECTION G TOTAL			
Н	CONTINGENCY			
H.1	Contingency at 10% of total contract sum	1	Item	
	SECTION H TOTAL			

LLECTION PAGE – Schedule of Work/Activity Schedule	ſ		
Description			
Section A - GENERAL CONDITIONS			
Section B - SECURITY AND PROTECTION			
Section C - OFFICE			
Section D - KITCHEN			
Section E - ELECTRICAL WORKS			
Section F - MECHANICAL WORKS			
Section G - HANDOVER AND COMPLETION			
SUB TOTAL			
Section H - CONTINGENCY			
TOTAL PRICE			

ELECTRICAL SCHEDULE OF WORKS

The electrical contractor shall read this document in conjunction with all electrical and relevant drawings. The electrical contractor shall visit the premises prior to the tendering to ensure they are fully conversant with all necessary work and shall make sure allowance in the final tender figure for the conditions which exist on site.

REFERENCE	ITEM	COST
E1	General Requirements	
E1.1	Installation drawings	£
E1.2	Record drawings	£
E1.3	O&M manuals	£
E1.4	Client demonstration and instructions	£
E1.5	Site supervision and other preliminaries	£
	Section E1 Sub Total Carried Forward to Summary	£
E2	Provisional Sums	
E2.1	Items identified by contractor	£
	Section E2 Sub Total Carried Forward to Summary	£
E3	Distribution & Small Power Incl Data and Communications	
E3.1	Installation of new distribution board	£
E3.2	Existing floor boxes and associated busbar fed from adjacent building to be re-supplied from new distribution board.	£
E3.3	All sockets in floor boxes affected by the works shall be protected with new type B RCBO's.	£
E3.4	New floor boxes to be installed, consisting of 2no twin sockets complete with RCD protection and 2no twin data outlets. Allow to re-position busbars accordingly.	£
E3.5	Electrical contractor to allow to install galvanised steel secondary containment where necessary. New cables for data and small power shall utilise existing containment wherever possible.	£
E3.6	Electrical contractor to ensure the server cabinets remain active during the works to maintain business continuity. Contractor to allow temporary supplies to facilitate this.	£
E3.7	Electrical contractor to allow to replace all existing data cables (including existing wireless access points) with cat6 cables. contractor to allow to verify if the existing floor boxes are suitable. if they are not deemed acceptable contractor shall allow to replace all existing floor boxes with new.	£
E3.8	Electrical contractor to verify if there is sufficient spare capacity on existing data containment and allow to replace and increase if necessary.	£
E3.9	Electrical contractor to make allowance for out of hours works where activities will disrupt services to MCA business activity.	£

E3.10	Testing and commissioning	£
	Section E3 Sub Total Carried Forward to Summary	£
E4	Lighting and Emergency Lighting	
E4.1	Existing luminaires to be retained and re-positioned/ co-ordinated with new architectural layout.	£
E4.2	New lighting controls to be installed and integrated into the existing lighting controls system. Liaise with Zumtobel lighting to verify the operation of the existing lighting controls system.	£
E4.3	New Emergency lighting to be installed	£
E4.4	Testing and commissioning prior to handover	£
E4.5	Testing and commissioning post occupancy	£
	Section E4 Sub Total Carried Forward to Summary	£
E5	Fire Alarm System	
E5.1	Existing fire alarm equipment and associated accessories to be retained and re-positioned.	£
E5.2	New fire alarm equipment to be installed. Existing sufficient spare capacity on the fire alarm panel shall be verified. Existing fire alarm loop to be modified.	£
E5.3	Testing and commissioning	£
	Section E5 Sub Total Carried Forward to Summary	£
E6	Security Installations	
E6.1	Existing security equipment and associated accessories to be retained and re-positioned.	£
E6.2	Testing and commissioning	£
	Section E6 Sub Total Carried Forward to Summary	£
E7	Other, please state	
E7.1		£
E7.2		£
E7.3		£
	Section E7 Sub Total Carried Forward to Summary	£

SUMMARY		
E1	General Requirements	£
E2	Provisional Sums	£
E3	Distribution & Small Power Incl Data and Communications	£
E4	Lighting and Emergency Lighting	£
E5	Fire Alarm System	£
E6	Security System	£
E7	Other, Please State	£
	Total	£

REFERENCE	ITEM	COST
	MECHANICAL SCHEDULE OF WORKS	
M1	Miscellaneous	
M1.1	Installation drawings	£
M1.2	Record drawings	£
M1.3	O&M manuals	£
M1.4	Client demonstration and instructions	£
M1.5	Site supervision and other preliminaries	£
	Section M1 Sub Total Carried Forward to Summary	£
		-
M2	Provisional Sums	
M2.1	Items identified by contractor	£
	Section M2 Sub Total Carried Forward to Summary	£
		-
M3	Heating & Cooling Systems	
M3.1	VRF Services Strip-out	£
M3.2	VRF Services Installation of two fan coil units	£
M3.3	Testing and commissioning of new services and cleaning and re- commissioning of existing services	£
	Section M3 Sub Total Carried Forward to Summary	£
		-

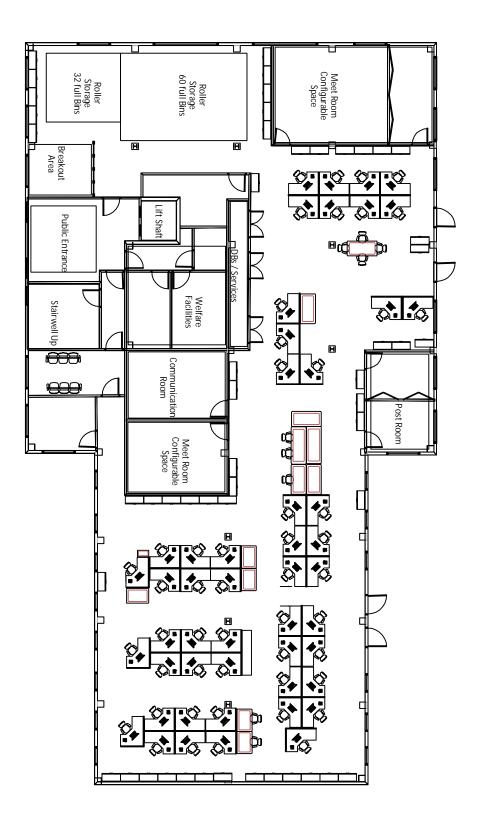
M4	Ventilation	
M4.1	Mechanical Ventilation Services adjustments	£
M4.2	Testing, cleaning and re-commissioning	£
	Section M4 Sub Total Carried Forward to Summary	£
		-
M5	Controls Systems	
M5.1	Updates to Building Management System	£
M5.2	Testing and re-commissioning	£
	Section M9 Sub Total Carried Forward to Summary	£
		-
M6	Other, please state	
M6.1		£
M6.2		£
M6.3		£
	Section M11 Sub Total Carried Forward to Summary	£

SUMMARY		
M1	Miscellaneous	£
M2	Provisional Sums	£
M3	Heating & Cooling Systems	£
M4	Ventilation	£
M5	Controls Systems	£
M6	Other	£
	Total	£



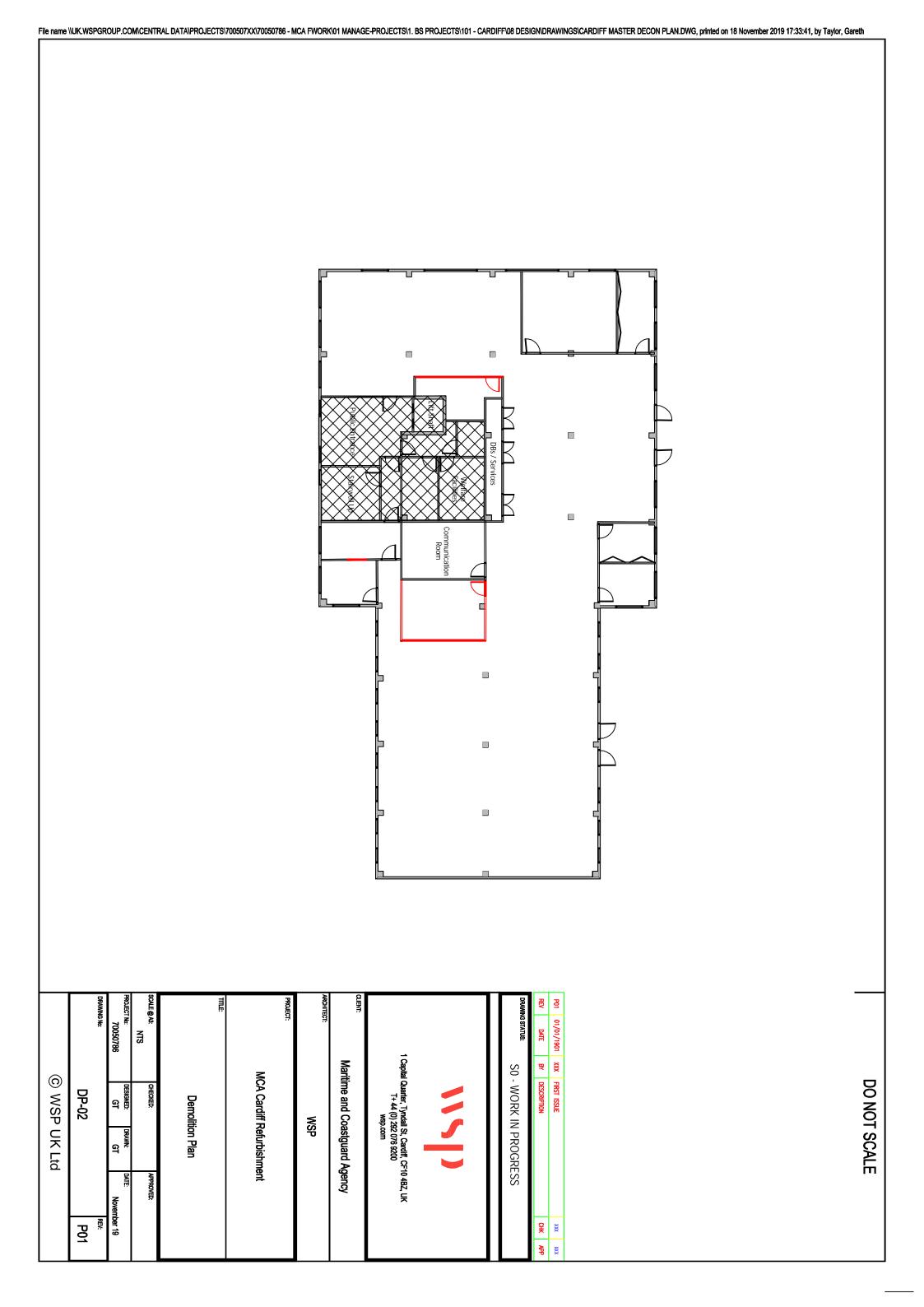
CONSTRUCTION DRAWINGS 2.

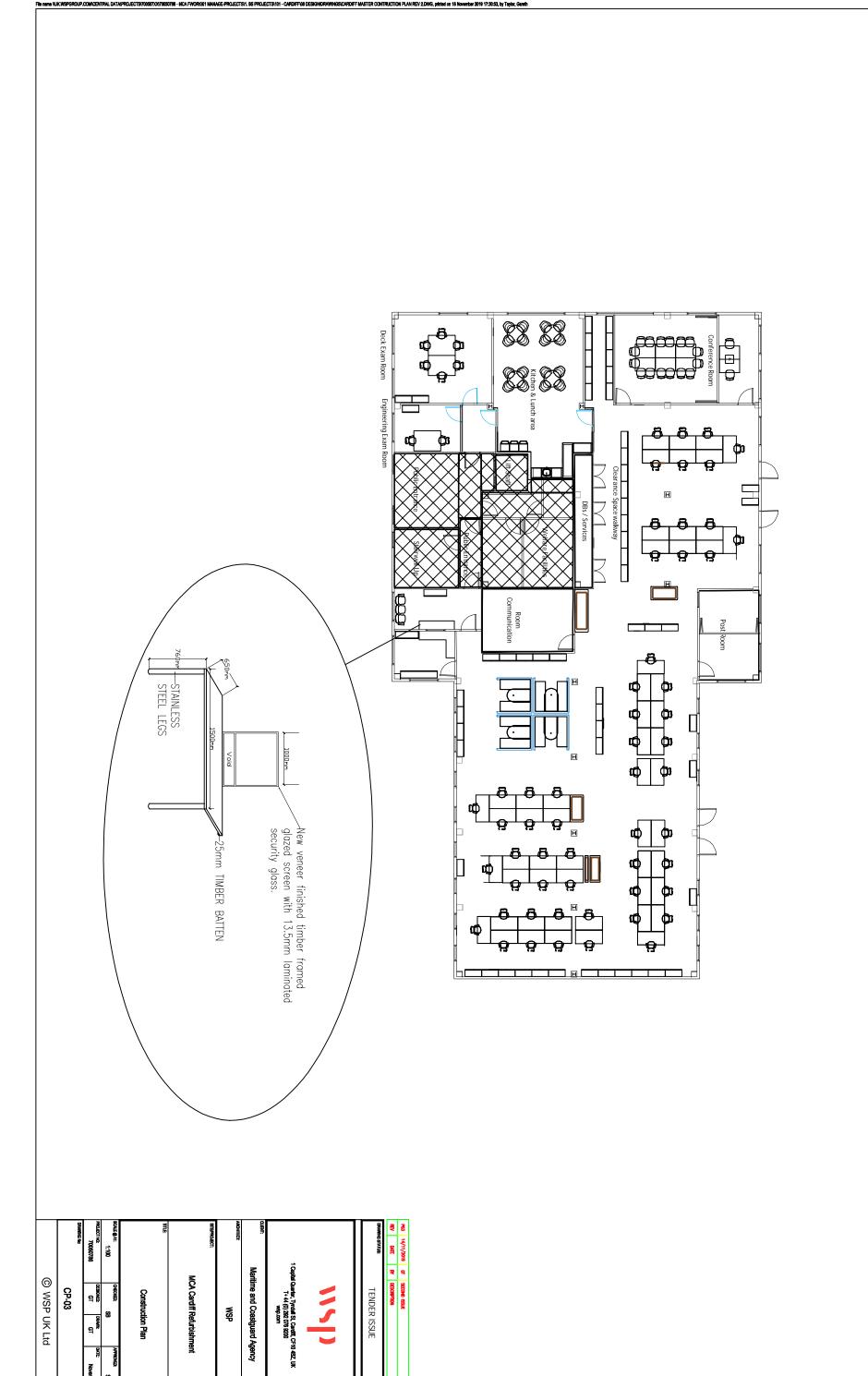
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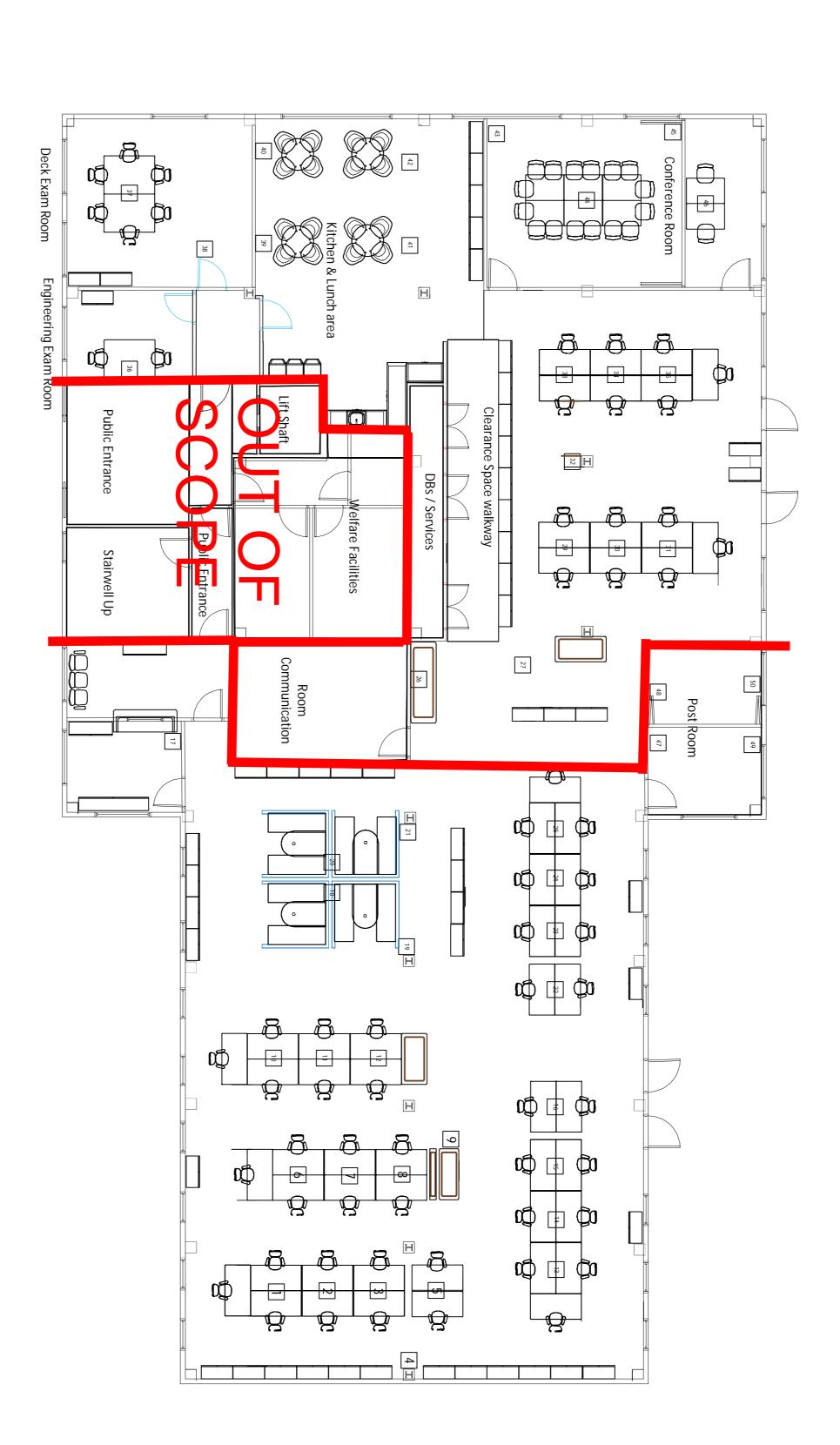




CHK 66

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Phase 1



Phase 2

DO NOT SCALE

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© WSP UK Ltd	PHASING PLAN	DESIGNED: GT	ا _د	PHASING PLAN	MCA Cardiff Refurbishment		WSP	Maritime and Coastguard Agency	1 Capital Quarter, Tyndall St, Cardiff, CF10 4BZ, UK T+ 44 (0) 292 076 9200 wsp.com		S0 - WORK IN PROGRESS	DESCRIPTION	FIRST ISSUE
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File name \\UK.WSPGROUP.COM\CENTRAL DATA\PROJECTS\700507XX\70050786 - MCA FWORK\01 MANAGE-PROJECTS\1. BS PROJECTS\101 - CARDIFF\08 DESIGN\DRAWINGS\CARDIFF MASTER CONTRUCTION PLAN REV 2.DWG, printed on 17 October 2019 13:42:22, by Taylor, Gareth



ELECTRICAL DRAWINGS 3.

Tender Pack **WSP** Project No.: 70050786 | Our Ref No.: Report 001

Maritime and Coastguard Agency November 2019

THIS IS NOT AN INSTALLATION DRAWING.

4. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
5. AT TIME OF ISSUE AS BUILT / CONSTRUCTION DRAWINGS OF EXIS 2. REFER TO ARCHITECTURAL LAYOUTS FOR BUILDING DIMENSIONAL INFORMATION.
3. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITE THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS, SERVICES AND ENGINEERS DRAWINGS.

5 AT TIME OF ISSUE AS BUILT / CONSTRUCTION DRAWINGS OF EXISTING MISERVICES HAVE NOT BEEN PROVIDED. EXISTING SERVICES SHOWN ARE BAPREVIOUS REFURBISHMENT DESIGN DRAWINGS AND ARE THEREFORE ONLY INDICATIVE OF EQUIPMENT LOCATIONS. ACTUAL LOCATIONS MAY DIFFER. BASED

THE CONTRACTOR SHALL ALLOW FOR MAKING GOOD ANY FINISHES DISTURBED PART OF THE REMOVING OF REDUNDANT SERVICES. ALL EXISITING SERVICES TO BE RETAINED SHALL BE ADEQUATELY PROTECTED DURING THE WORKS. AS

8. DIMENSIONS ARE NOT TO BE SCALED FROM THIS DRAWING 9. THIS DRAWING IS INDICATIVE ONLY AND IS NOT TO BE US THIS DRAWING IS INDICATIVE ONLY AND IS NOT TO BE USED AS A WORKING DRAWING.

10.THE DRAWING SHOWS THE IN 11.THE FINAL CO-ORDINATION OF SERVICES WITH EACH OTHER, SPECIALIST SUB-CONTRACTORS AND BUILDING STRUCTURE IS THE RESPONSIBILITY OF THE BUILDING SERVICES CONTRACTOR. G DOES NOT INDICATE THE PRECISE POSITION OF SERVICES AND INTENDED LOCATIONS OF BUILDING SERVICES.

12.THE POSITIONS

13.THE CONTRACTOR SHALL ENSURE THAT OTHER AREAS OF THE BUILDING REMAIN OPERATIONAL THROUGHOUT THESE WORKS WHERE POSSIBLE. E POSITIONS OF ALL ELECTRICAL EQUIPMENT, CONNECTION POINTS AND CESSORIES AS SHOWN ON THE DRAWING ARE APPROXIMATE AND FOR GUIDANCE THE PREPERATION OF THE TENDER.

14.ANY SHUTDOWNS ARE TO BE AGREED WITH PROPERTY MANAGEMENT AND CLIENT.
15.THE ELECTRICAL CONTRACTOR SHALL IF HE SO WISHES OFFER ALTERNATIVES TO
THE MATERIALS SPECIFIED PROVIDING THE ALTERNATIVE IS DEEMED EQUAL AND
APPROVED BY THE ELECTRICAL ENGINEER. 16.THE ELECTRICAL CONTRACTOR SHALL ENSURE THAT A VISIT TO THE PREMISES IS UNDERTAKEN PRIOR TO THE TENDERING TO ENSURE THAT THEY ARE FULLY CONVERSANT WITH ALL NECESSARY WORK AND SHALL MAKE SURE ALLOWANCES IN THE FINAL TENDER FIGURE FOR THE CONDITIONS WHICH EXIST ON SITE.

> 18.THE ELECTRICAL CONTRACTOR SHALL ENSURE DISTRIBUTION BOARDS AND ANY OTHER ASSOC 17.THE ELECTRICAL CONTRACTOR SHALL ALLOW FOR THE TESTING OF THE PROPOSED ELECTRICAL SERVICES AS SHOWN ON THE TENDER DRAWINGS. RE THAT ALL ISOLATORS, OCIATED EQUIPMENT ARE CLEARLY

19.THE ELECTRICAL CONTRACTOR SHALL INSTAL OUTLET BOXES, CONTAINMENT, CABLING AS INSTALLERS. REQUIRED BY THE CONDUITS, SPECIALIST

20. D. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FINAL CONNECTIONS OF EQUIPMENT AND SHALL PROVIDE RELEVANT CERTIFICATION ON COMPLETION OF THE WORKS TO FULLY COMPLY WITH REQUIRED BRITISH STANDARDS.

9

21. THE ELECTRICAL CONTRACTOR SHALL VERIFY ALL CIRCUIT REFERENCES & PHASING PRIOR TO WORKS COMMENCING.

23. ALL LOW VOLTAGE CABLING SHALL BE SEGREGATED FROM MAINS VOLTAGE CABLING AT ALL TIMES. THE ELECTRICAL CONTRACTOR SHALL BE ELECTRICAL A CURRENT MEMBER OF THE NICEIC.

25. ALL CEILING MOUNTED EQUIPMENT TO BE RE-INSTATED ON THE NEW CEILING.

26. ALL CABLES TO BE LSF TYPE. WORKS ASSOCIATED WITH THE ELECTRIC WORK HOLES ABOVE 25mm SHALL BE CONTRACTOR SHALL ALLOW FOR ALL NECESSARY BUILDERS) WITH THE ELECTRICAL INSTALLATION BELOW 25mm. BUILDERS VE 25mm SHALL BE UNDERTAKEN BY THE MAIN CONTRACTOR. ISOLATED, MADE SAFE, REMOVED AND

> 9 5 SUITABLE MEASURES SHALL BE INTRODUCED DURING THE PERIOD IN WHICH THE FIRE ALARM IS NOT IN OPERATION.
>
> THE CABLES FOR THE FIRE DETECTION AND ALARM SYSTEMS SHALL BE AS PER THE EXISTING INSTALLATION.

> > DO NOT SCALE

THE FIRE ALARM SYSTEM SHOULD BE TESTED BY A FIRE ALARM SPECIALIST TO ENSURE THAT IT IS FUNCTIONING CORRECTLY AND ANY DEFECTS OR MAINTENANCE ISSUES RECTIFIED PRIOR TO OCCUPATION.

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SCOPE OF WORKS

FIRE ALARM & SECURITY

ALL EXISTING FIRE ALARM EQUIPMENT AND ACESSORIES TO BE RETAINED AND RE-POSITIONED AS DETAILED ON THE PROPOSED FIRE ALARM & SECURITY LAYOUT DRAWING. ACCESS CONTROL EGRESS BUTTON, GREEN BREAK GLASS AND CLOCKING IN PLANEL TO BE ISOLATED, MADE SAFE, DISCONNECTED AND RE-POSITIONED AS SHOWN ON THE FIRE ALARM & SECURITY LAYOUT DRAWING. NEW SMOKE DETECTORS SHALL BE INSTALLED AS DETAILED ON THE FIRE ALARM & SECURITY LAYOUT DRAWING. THE CONTRACTOR SHALL VERIFY IF THERE IS SUFFICIENT SPARE CAPACITY ON THE EXISTING FIRE ALARM PANEL AND ALLOW TO MODIFY THE EXISTING LOOP.

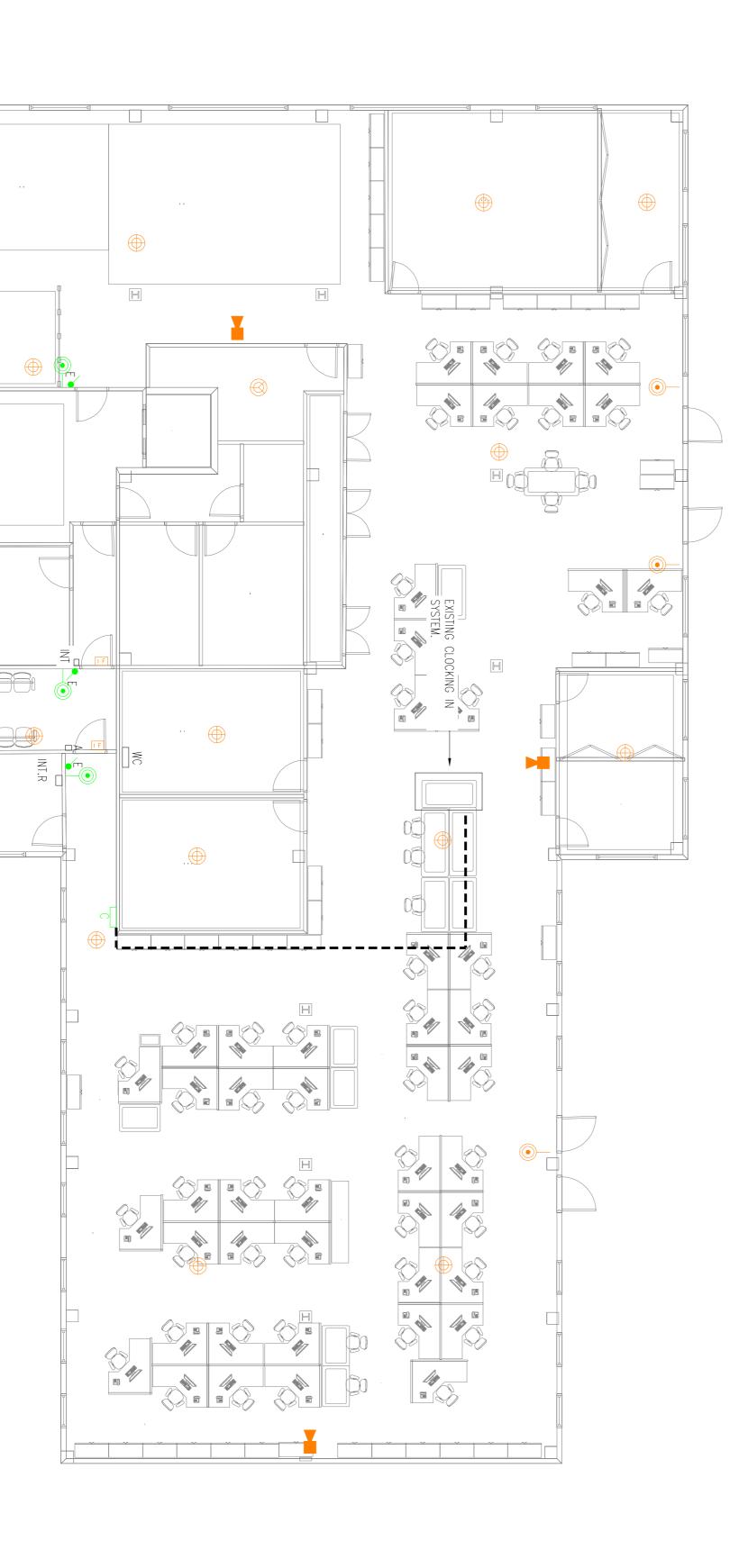
ALARM & SECURITY NOTES

THE AUTOMATIC FIRE DETECTION AND ALARM SYSTEM SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH BS 5839.

2. FIRE ALARM DEVICE LOCATIONS ARE INDICATIVE. FINAL LOCATIONS SHALL CO-ORDINATED BY FIRE ALARM SPECIALIST.

ALARM CONTRACTOR. APPOIN COMMIT NTED. THE DESIGN ALONG WITH ISSIONING SHALL BE CARRIED OUT BY

THE CONTRACTOR SHALL ALLOW FOR THE MODIFICATION OF THE EXISTING FIRE ALARM SYSTEM AS SHOWN ON THE TENDER DRAWINGS.



EXISTING ALARM & SECURITY LEGEND

EXISTING BREAK GLASS MANUAL CALL POINT.

EXISTING HEAT DETECTOR/SOUNDER DEVICE. EXISTING SMOKE DETECTOR.

EXISTING EXISTING FIRE ALARM PANEL. EXISTING FIRE ALARM INTERFACE FOR DOOR RELEASE. GREEN BREAK GLASS FOR ACCESS CONTROL.

ᆿ $\square >$ • [EXISTING EXISTING STAFF ACCESS SWIPE CARD POINT. ACCESS CONTROL EGRESS BUTTON.

EXISTING EXISTING UNDERFLOOR DATA CABLE LINK FROM CLOCKING . TO HEAD END PC. INTERCOM HANDSETS (x2) IN RECEPTION. VISITOR PUSH BUZZER INTERCOM SYST Ē.

NT.R

EXISTING CLOCKING IN PANEL. DISABLED ALARM PANEL.

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EXISTING VISITOR INTERCOM STAFF PASSCODE ACCESS.

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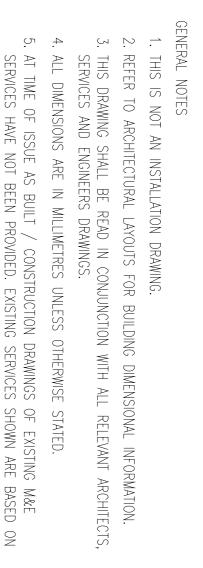
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CARDIFF MARINE OFFICE REFURBISHMENT WSP

ELECTRICAL SERVICES
EXISTING FIRE ALARM & SECURITY LAYOUT

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5. AT TIME OF ISSUE AS BUILT SERVICES HAVE NOT BEEN F PREVIOUS REFURBISHMENT LI ALL EXISITING SERVICES TO BE RETAINED SHALL BE DURING THE WORKS. ILT / CONSTRUCTION DRAWINGS OF EXISTING M&E NOT PROVIDED. EXISTING SERVICES SHOWN ARE BASED DESIGN DRAWINGS AND ARE THEREFORE ONLY LOCATIONS. ACTUAL LOCATIONS MAY DIFFER. ADEQUATELY PROTECTED 9

THE CONTRACTOR SHALL ALLOW FOR MAKING GOOD ANY FINISHES DISTURBED PART OF THE REMOVING OF REDUNDANT SERVICES.

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DIMENSIONS ARE NOT TO BE SCALED FROM THIS DRAWING. DRAWING IS INDICATIVE ONLY AND IS NOT TO BE USED AS A WORKING

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10.THE DRAWING SHOWS THE IN 11.THE VAL CO-ORDINATION OF SERVICES WITH EACH OTHER, SPECIALIST ONTRACTORS AND BUILDING STRUCTURE IS THE RESPONSIBILITY OF SERVICES CONTRACTOR. G DOES NOT INDICATE THE PRECISE POSITION OF SERVICES AND INTENDED LOCATIONS OF BUILDING SERVICES. OF THE

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FIRE ALARM & SECURITY NO

1. THE AUTOMATIC FIRE D

Sal

ALL CABLES TO BE LSF TYPE.

3. A FIRE ALARM SPECIALIST SHALL BE APPOINTED. THE DESIGN ALONG WITH SUPPLY, INSTALLATION, TESTING AND COMMISSIONING SHALL BE CARRIED OUT BY THE SPECIALIST FIRE ALARM CONTRACTOR.

THE CONTRACTOR SHALL ALLOW FOR THE MODIFICATION OF THE EXISTING FIRE ALARM SYSTEM AS SHOWN ON THE TENDER DRAWINGS.

2. FIRE ALARM DEVICE LOCATIONS ARE INDICATIVE. FINAL LOCATIONS SHALL BE CO-ORDINATED BY FIRE ALARM SPECIALIST.

THE AUTOMATIC FIRE DETECTION AND ALARM SYSTEM SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH BS 5839.

16.THE ELECTRICAL CONTRACTOR SHALL ENSURE THAT A VISIT TO THE PREMISES IS UNDERTAKEN PRIOR TO THE TENDERING TO ENSURE THAT THEY ARE FULLY CONVERSANT WITH ALL NECESSARY WORK AND SHALL MAKE SURE ALLOWANCES IN THE FINAL TENDER FIGURE FOR THE CONDITIONS WHICH EXIST ON SITE.

18.THE ELECTRICAL CONTRACTOR SHALL ENSURE THAT ALL ISOLATORS,
DISTRIBUTION BOARDS AND ANY OTHER ASSOCIATED EQUIPMENT ARE CLEARLY 17.THE ELECTRICAL CONTRACTOR SHALL ALLOW FOR THE TESTING OF THE PROPOSED ELECTRICAL SERVICES AS SHOWN ON THE TENDER DRAWINGS.

19.THE ELECTRICAL CONTRACTOR SHALL INSTALL ALL NECESSARY CONDUITS, OUTLET BOXES, CONTAINMENT, CABLING AS REQUIRED BY THE SPECIALIST INSTALLERS.

20.). THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FINAL CONNECTIONS OF EQUIPMENT AND SHALL PROVIDE RELEVANT CERTIFICATION ON COMPLETION OF THE WORKS TO FULLY COMPLY WITH REQUIRED BRITISH STANDARDS.

22. THE ELECTRICAL CONTRACTOR SHALL BE A CURRENT MEMBER OF THE NICEIC. 21. THE ELECTRICAL CONTRACTOR SHALL VERIFY ALL CIRCUIT REFERENCES & PHASING PRIOR TO WORKS COMMENCING. CABLING SHALL BE SEGREGATED FROM MAINS VOLTAGE

25. ALL CEILING MOUNTED EQUIPMENT TO BE ISOLATED, MADE SAFE, REMOVED AND RE-INSTATED ON THE NEW CEILING. WORKS ASSOCIATED WITH WORK HOLES ABOVE 25 CABLING AT ALL TIMES. TRACTOR SHALL ALLOW FOR ALL NECESSARY BUILDERS TH THE ELECTRICAL INSTALLATION BELOW 25mm. BUILDERS 5mm SHALL BE UNDERTAKEN BY THE MAIN CONTRACTOR.

5. SUITABLE MEASURES SHALL BE INTRODUCED DURING THE PERIOD IN WHICH THE FIRE ALARM IS NOT IN OPERATION.

DO NOT SCALE

THE CABLES FOR THE FIRE DETECTION AND ALARM SYSTEMS SHALL BE AS PER THE EXISTING INSTALLATION.

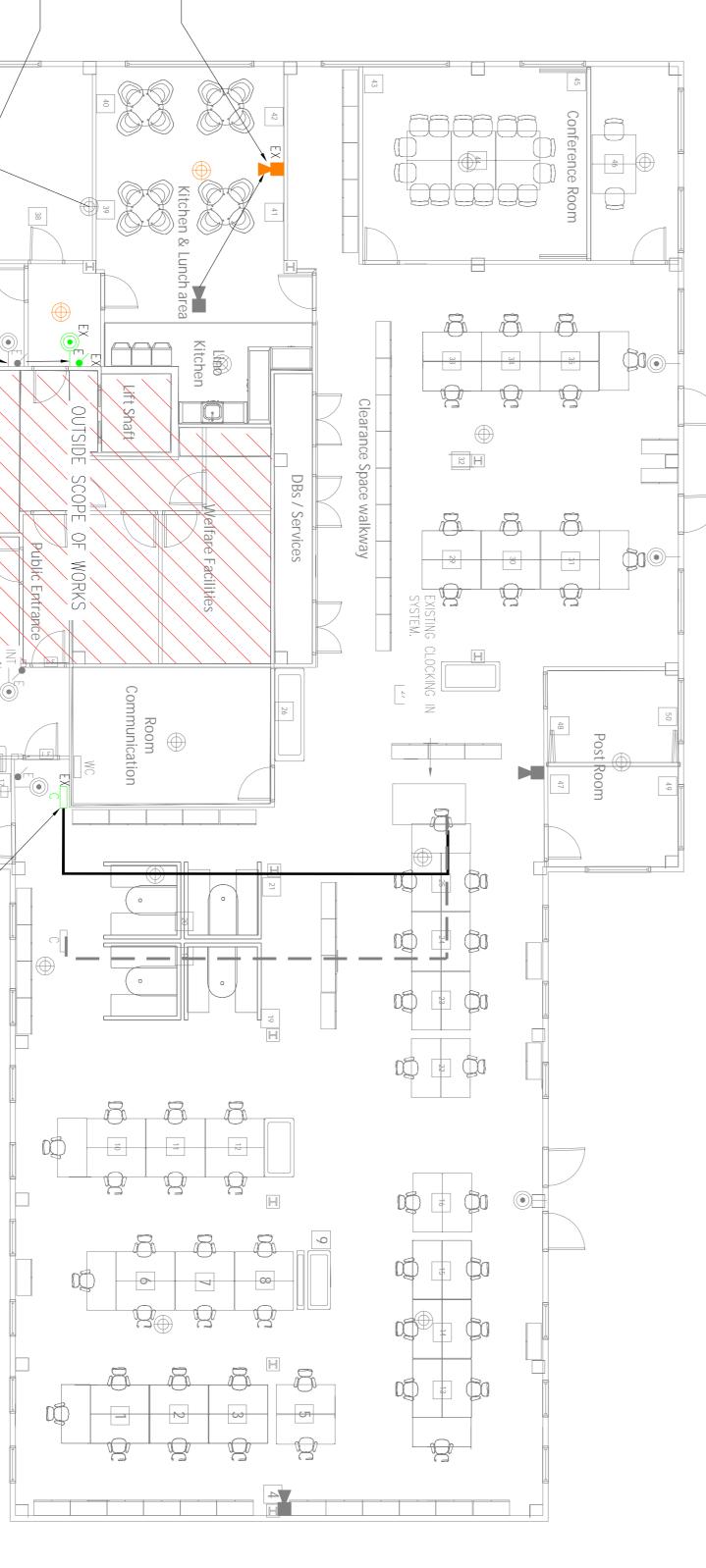
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THE FIRE ALARM SYSTEM SHOULD BE TESTED BY A FIRE ALARM SPECIALIST TO ENSURE THAT IT IS FUNCTIONING CORRECTLY AND ANY DEFECTS OR MAINTENANCE ISSUES RECTIFIED PRIOR TO OCCUPATION.

SCOPE OF WORKS

FIRE ALARM & SECURITY

ALL EXISTING FIRE ALARM EQUIPMENT AND ACESSORIES TO BE RETAINED AND RE-POSITIONED AS DETAILED ON THE PROPOSED FIRE ALARM & SECURITY LAYOUT DRAWING. ACCESS CONTROL EGRESS BUTTON, GREEN BREAK GLASS AND CLOCKING IN PLANEL TO BE ISOLATED, MADE SAFE, DISCONNECTED AND RE-POSITIONED AS SHOWN ON THE FIRE ALARM & SECURITY LAYOUT DRAWING. NEW SMOKE DETECTORS SHALL BE INSTALLED AS DETAILED ON THE FIRE ALARM & SECURITY LAYOUT DRAWING. THE CONTRACTOR SHALL VERIFY IF THERE IS SUFFICIENT SPARE CAPACITY ON THE EXISTING FIRE ALARM PANEL AND ALLOW TO MODIFY THE EXISTING LOOP.



EXISTING FIRE ALARM & SECURITY LEGEND

- EXISTING FIRE ALARM BREAK GLASS MANUAL CALL POINT.
- EXISTING FIRE ALARM SMOKE DETECTOR.
- EXISTING FIRE ALARM SOUNDER. EXISTING FIRE ALARM HEAT DETECTOR/SOUNDER DEVICE.
- EXISTING EXISTING FIRE ALARM PANEL ACCESS CONTROL GREEN BREAK GLASS.

EXISTING FIRE ALARM INTERFACE FOR DOOR RELEASE

- $\square \triangleright$ EXISTING STAFF ACCESS SWIPE CARD POINT. ACCESS CONTROL EGRESS BUTTON.
- NT.R EXISTING VISITOR PUSH BUZZER INTERCOM SYSTEM.

EXISTING

INTERCOM HANDSETS (x2) IN RECEPTION.

- EXISTING UNDERFLOOR DATA CABLE LINK FROM CLOCKING IN PANEL TO HEAD END PC.
- EXISTING DISABLED ALARM PANEL EXISTING CLOCKING IN PANEL.
- PROPOSED BREAK GLASS MANUAL CALL POINT.

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SMOKE DETECTOR TO BE ISOLATED, MADE SAFE, DISCONNECTED AND RE-POSITIONED

ACCESS CONTROL BREAK GLASS AND EGRESS BUTTON TO BE ISOLATED, MADE SAFE, DISCONNECTED AND TO RE-POSITIONED.

EXISTING VISITOR INTERCOM STAFF PASSCODE ACCESS.

FIRE ALARM SOUNDER TO BE ISOLATED, MADE SAFE, DISCONNECTED AND RE—POSITIONED.

- PROPOSED FIRE ALARM SOUNDER. PROPOSED SMOKE DETECTOR.
- PROPOSED ACCESS CONTROL EGRESS BUTTON. PROPOSED ACCESS CONTROL GREEN BREAK GLASS.

PROPOSED CLOCKING IN PANEL.

CLOCKING IN PANEL TO BE ISOLATED, MADE SAFE, DISCONNECTED AND RE—POSITIONED. EXISTING UNDERFLOOR DATA CABLE LINK TO BE RE—ROUTED.

DENOTES EXISTING.

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		Capita	1 Capital Quarter, Tyndall St, Cardiff, CF10 4BZ, UK T+ 44 (0) 292 076 9200 wsp.com		

CLIENT:	MARITIME & COASTGUARD AGENCY
ARCHITECT:	WSP
SITE/PROJECT:	
	CARDIFF MARINE OFFICE REFURBISHMENT
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PR	ELECTRICAL SERVICES PROPOSED FIRE ALARM & SECURITY LAYOUT

)101 REV	R-E-670	2-Z1-00-DR-E-6701	0786-WSP-Z1-00-DR-E-670101
DATE: October 19	DRAWN: ZD	DESIGNED:	PROJECT NO: 70050786
APPROVED:	MH	CHECKED:	SCALE @ A1: 1 : 100 mm

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. ALL EXISITING DURING THE W THE CONTRACTOR SHALL ALLOW FOR MAKING GOOD ANY FINISHES DISTURBED PART OF THE REMOVING OF REDUNDANT SERVICES. G SERVICES TO BE RETAINED SHALL BE ADEQUATELY PROTECTED WORKS.

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10.THE DR. SHOWS 11.THE 12.THE POSITIONS FINAL CO-ORDINATION OF SERVICONTRACTORS AND BUILDING SING SERVICES CONTRACTOR. G DOES NOT INDICATE THE SERVICES WITH EACH OTHER, SPECIALIST ING STRUCTURE IS THE RESPONSIBILITY (BUILDING E POSITION OF SERVICES SERVICES. 읶

PRECISE

14.ANY 15.THE THE 13.THE CONTRACTOR SHALL ENSURE OPERATIONAL THROUGHOUT THESE SHUTDOWNS ARE TO BE AGREED WITH PROPERTY MANAGEMENT AND CLIENT. ELECTRICAL CONTRACTOR SHALL IF HE SO WISHES OFFER ALTERNATIVES TO MATERIALS SPECIFIED PROVIDING THE ALTERNATIVE IS DEEMED EQUAL AND POSITIONS OF ALL ELECTRICAL EQU SSORIES AS SHOWN ON THE DRAW E PREPERATION OF THE TENDER. BY THE ELECTRICAL NSURE THAT OTHER AREAS OF THE BUILDING REMAIN THESE WORKS WHERE POSSIBLE. AL EQUIPMENT,

DRAWING ARE CONNECTION POINTS AND APPROXIMATE AND FOR GUIDANCE

16.THE ELECTRICAL CONTRACTOR
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CONVERSANT WITH ALL NECES RICAL CONTRACTOR SHALL ENSURE THAT A VISIT TO THE IN PRIOR TO THE TENDERING TO ENSURE THAT THEY ARE NOT WITH ALL NECESSARY WORK AND SHALL MAKE SURE A TENDER FIGURE FOR THE CONDITIONS WHICH EXIST ON ON SITE. E PREMISES IS

> 18.THE ELECTRICAL CONTRACTOR SHALL ENSURE THAT ALL ISOLATORS,
> DISTRIBUTION BOARDS AND ANY OTHER ASSOCIATED EQUIPMENT ARE CLEARLY 17.THE ELECTRICAL CONTRACTOR SHA PROPOSED ELECTRICAL SERVICES / L ALLOW FOR THE TESTING OF THE S SHOWN ON THE TENDER DRAWINGS.

CONTAINMENT, CABLING AS REQUIRED BY THE SPECIALIST

19.THE ELECTRICAL OUTLET BOXES, (INSTALLERS

20. THE ELECTRICAL CONTRACTOR S CONNECTIONS OF EQUIPMENT AND COMPLETION OF THE WORKS TO F STANDARDS. CAL CONTRACTOR SHA OF EQUIPMENT AND S THE WORKS TO FU HALL BE RESPONSIBLE FOR ALL FINAL
SHALL PROVIDE RELEVANT CERTIFICATION ON
ULLY COMPLY WITH REQUIRED BRITISH

21. THE ELECTRICAL (
PHASING PRIOR TO . CONTRACTOR SHA VERIFY ALL CIRCUIT REFERENCES

23. ALL LOW VOLTAGE CABLING SHAI CABLING AT ALL TIMES. 22. THE ELECTRICAL CONTRACTOR SHALL BE A CURRENT MEMBER OF L BE SEGREGATED FROM MAINS VOLTAGE THE NICEIC.

25. ALL CEILING MOUNTED EQUIPMENT TO BE ISOLATED, MADE SAFE, REMOVED AND RE-INSTATED ON THE NEW CEILING. ALL CABLES TO BE S ASSOCIATE CONTRACTOR SHALL ALLOW FOR ALL NECESSARY BUILDERS) WITH THE ELECTRICAL INSTALLATION BELOW 25mm. BUILDERS /E 25mm SHALL BE UNDERTAKEN BY THE MAIN CONTRACTOR.

SMALL POWER NOTES

2 WHERE ACCESSORIES / ALL WORKS TO BE CARRIED OUT S ARE INSTALLEI LED WITHIN FIRE COMPARTMENT WALL, PROVIDED. N ACCORDANCE WITH BS7671

ALL ACCESSORIES SHALL BE BUILDING REGULATIONS PART M COMPIANT. LSF SING E DEVICE. ВE D FROM THE NEW DISTRIBUTION BOARD (DB3A) (6491B) AND PROTECTED VIA 20A 30mA RCBO

<u>ب</u>

ALL NEW ELECTRICAL ACCESSORIES ACCESSORIES TO BE LABELLED TO BE FULLY CO-ORDINATED ON SITE WITH WITH A CIRCUIT REFERENCE

EXISTING EQUIPMENT AND ARCHITECTURAL DESK LAYOUT PLAN.

ALL NEW DATA OUTLETS TO BE DERIVED FROM THE EXISTING DATA CAB.

CONTRACTOR TO VERIFY SUFFICIENT CAPACITY.

SCOPE OF WORKS

DISTRIBUTION & SMALL POWER

ELECTRICAL SERVICES; INCLUDING BUT NOT LIMITED TO, LIGHTING & EMERGENC LIGHTING, SMALL POWER, FIRE ALARM AND SECURITY SHALL BE RETAINED AND TO SUITE NEW ARCHITECTURAL LAYOUT. MODIFED

В

NEW FLOOR BOXES SHALL BE INSTALLED (CONSISTING OF 2 TWIN SOCKET COMPLETE WITH RCD PROTECTION AND 2 TWIN DATA OUTLET) AS DETAILED ON THE PROPOSED SMALL POWER DRAWING. THE NEW CIRCUITS SHALL BE SUPPLIED VIA THE EXISTING BUSBAR AND PROTECTED VIA NEW 32a TPE B MCBS. A MAXIMUM OF 4 FLOOR BOXES PER CIRCUIT/ TAP OFF. THE CONTRACTOR SHALL ALLOW TO VERIFY SUFFICIENT CAPACITY ON THE EXISTING BUSBARS. THE CONTRACTOR TO ALLOW TO RE-POSITION BUSBARS ACCORDINGLY.

THE EXISTING FLOOR BOXES SHALL BE ISOLATED, MADE SAFE, DISCONNECTED AND RE-POSITIONED IN A SUITABLE LOCATION TO BE CO-ORDINATED WITH THE NEW

NEW CABLES FOR DATA AND SMALL POWER SHALL UTILISE EXISTING CONTAINMENT WHEREVER POSSIBLE. CONTRACTOR TO VERIFY SUFFICIENT CAPACITY AND ALLOW TO TO STALL GALVANISED STEEL SECONDARY CONTAINMENT WHERE NECESSARY. ARCHITECTURAL DESK LAYOUT, AS DET DRAWING. ALL SOCKETS WITHIN FLOOR REPLACED WITH RCD TYPE SOCKETS.

AILED ON THE PROPOSED SMALL POWER BOXES AFFECTED BY THE WORKS SHALL BE

THE WORKS TO M. SUPPLIES TO FACI

THE SERVER CABINETS REMAIN ACTIVE DURING ONTINUITY. CONTRACTOR TO ALLOW TEMPORARY

WORKS SHALL CONSIST OF THE REFURBISHMENT OF THE MCA OFFICE.

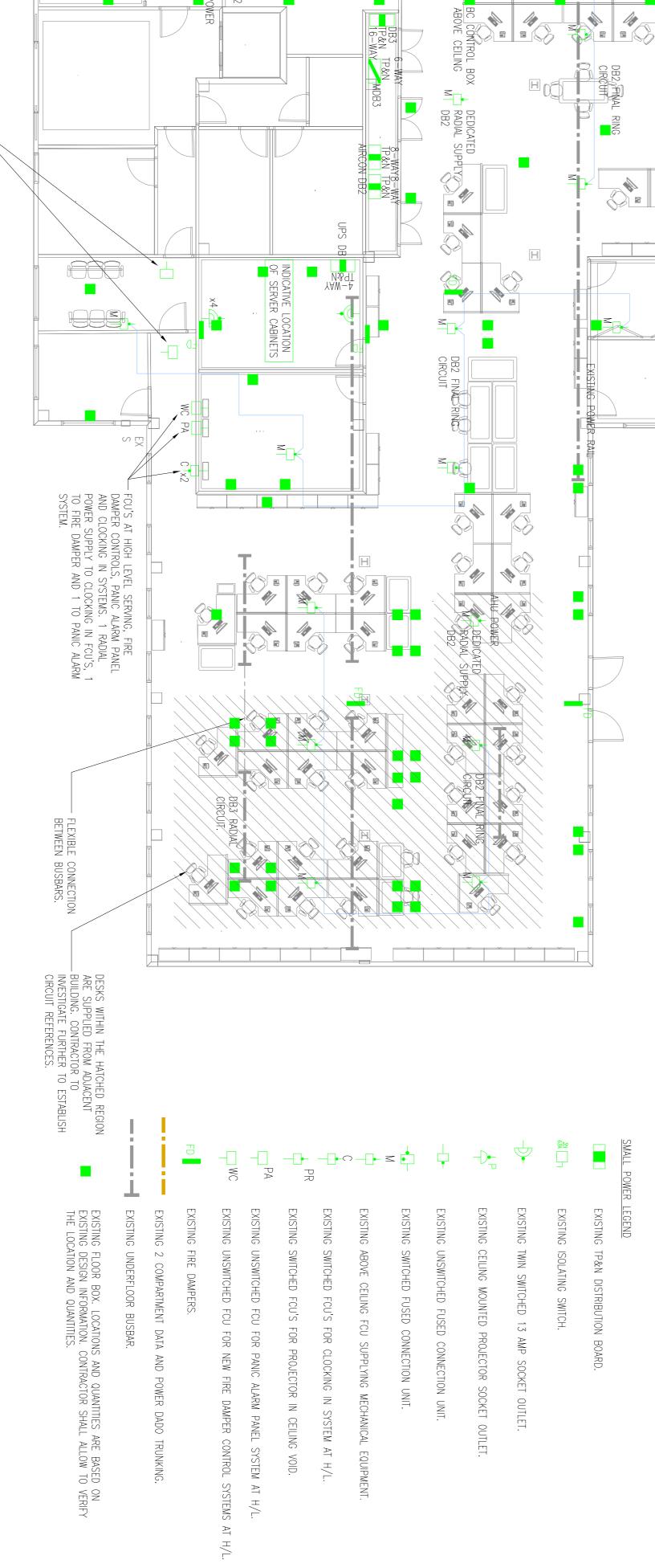
THE EXISTING MAIN LV PANEL (MDB3) AND ASSOCIATED DISTRIBUTION BOARDS (DB3, AIR CON DB, DB2 AND UPS DB) SHALL BE RETAINED. A NEW 8-WAY 100A TP&N DISTRIBUTION BOARD (DB3A) SHALL BE INSTALLED WITHIN THE EXISTING ELECTRICAL RISER, FED FROM MDB3 VIA 4C 25mm2 & 16mm2 CPC XLPE/SWA/LSF CABLE AND PROTECTED VIA NEW 100A MCCB.

THE EXISTING FLOOR BOXES AND ASSOCIATED BUSBAR FED FROM DB1 IN THE ADJACENT BUILDING (AS DETAILED ON THE EXISTING SMALL POWER LAYOUT DRAWING), SHALL BE ISOLATED, MADE SAFE, DISCONNECTED AND RESUPPLIED FROM THE NEW 8-WAY DISTRIBUTION BOARD (DB3A). ALL SOCKETS WITHIN FLOOR BOXES AFFECTED BY THE WORKS SHALL BE REPLACED WITH RCD TYPE SOCKETS. THE EXISTING BUSBARS SHALL BE PROTECTED VIA NEW 32A TYPE B MCBS. THE CONTRACTOR SHALL UNDERTAKE A FULL INTRUSIVE SURVEY AND ALLOW TO UNDERTAKE THE NECESSARY WORKS TO RE-SUPPLY ANY OTHER FLOOR BOXES NOT IDENTIFIED ON THE PROPOSED SMALL POWER DRAWING.

ELECTRICAL CONTRACTOR TO ALLOW TO REPLACE ALL EXISTING DATA CABLES (INCLUDING EXISTING WIRELESS ACCESS POINTS) WITH CAT6 CABLES. CONTRACTOR TO ALLOW TO VERIFY IF THE EXISTING FLOOR BOXES ARE SUITABLE. IF THEY ARE NOT DEEMED ACCEPTABLE CONTRACTOR SHALL ALLOW TO REPLACE ALL EXISTING FLOOR BOXES WITH NEW.

LECTRICAL CONTRACTOR TO VERIFY IF THERE IS SUFFICIENT SPARE CAPACITY ON XISTING DATA CONTAINMENT AND ALLOW TO REPLACE AND INCREASE IF NECESSARY.

ECTRICAL CONTRACTOR TO MAKE AL OWANCE FOR OUT OF HOURS WORKS WHERE MCA BUSINESS ACTIVITY.



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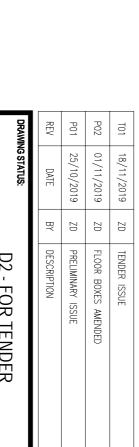
UNSWITCHED CONNECTION CEILING FOR SYSTEMS.

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APP	CHK	DESCRIPTION	BY	DATE
<u> </u>	ИW	PRELIMINARY ISSUE	ZD	25/10/2019
<u> </u>	ИW	FLOOR BOXES AMENDED	ZD	01/11/2019
<u> </u>	ТW	TENDER ISSUE	ZD	18/11/2019

/2019	ZD	TENDER ISSUE	ИW	<u></u>
/2019	ZD	FLOOR BOXES AMENDED	ИМ	<u></u>
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φ.		D2 - FOR TENDER		

CARDIFF MARINE OFFICE REFURBISHMENT	SITEPROJECT:
WSP	ARCHITECT:
MARITIME & COASTGUARD AGENCY	CLIENT:
1 Capital Quarter, Tyndall St, Cardiff, CF10 4BZ, UK T+ 44 (0) 292 076 9200 wsp.com	

JECT NO: 70050786

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DRAWN: ZD

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ELECTRICAL SERVICES
EXISTING SMALL POWER LAYOUT

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- THE CONTRACTOR SHALL ALLOW FOR MAKING GOOD ANY FINISHES DISTURBED PART OF THE REMOVING OF REDUNDANT SERVICES. ARE NOT TO BE SCALED FROM THIS DRAWING

AS

DRAWING IS INDICATIVE ONLY AND IS NOT TO BE USED AS A WORKING

POSITION OF

SERVICES

10.THE

- G DOES NOT INDICATE THE PRECISE INTENDED LOCATIONS OF BUILDING ORDINATION OF NATION OF SERVICES WITH EACH OTHER, SPECIALIST AND BUILDING STRUCTURE IS THE RESPONSIBILITY (CONTRACTOR. SERVICES. 9
- MHH M POSITIONS ASSESSORIES AS POSITIONS OF ALL EL SSORIES AS SHOWN OF T E PREPERATION OF T . ELECTRICAL EQ VN ON THE DRAV DF THE TENDER. AL EQUIPMENT, DRAWING ARE CONNECTION POINTS AND APPROXIMATE AND FOR GUIDANCE
- .THE CONTRACTOR SHALL ENSURE THAT OTHER AREAS OF THE BUILDING OPERATIONAL THROUGHOUT THESE WORKS WHERE POSSIBLE. SHUTDOWNS ARE TO BE AGREED WITH PROPERTY MANAGEMENT AND CLIENT. ELECTRICAL CONTRACTOR SHALL IF HE SO WISHES OFFER ALTERNATIVES TO MATERIALS SPECIFIED PROVIDING THE ALTERNATIVE IS DEEMED EQUAL AND BY THE ELECTRICAL ENGINEER.
- 16.THE ELECTRICAL CONTRACTOR SHALL ENSURE THAT A VISIT TO THE PREMISES IS UNDERTAKEN PRIOR TO THE TENDERING TO ENSURE THAT THEY ARE FULLY CONVERSANT WITH ALL NECESSARY WORK AND SHALL MAKE SURE ALLOWANCES I THE FINAL TENDER FIGURE FOR THE CONDITIONS WHICH EXIST ON SITE.

- 18.THE ELECTRICAL CONT DISTRIBUTION BOARDS 17.THE ELECTRICAL CONTRACTOR SHALL PROPOSED ELECTRICAL SERVICES AS CONTRA TRACTOR SHALL EN ALLOW FOR THE TESTING OF THE SHOWN ON THE TENDER DRAWINGS.
- 19.THE ELECTRICAL OUTLET BOXES, (CONTAINMENT, CABLIN INSTALL ALL NECESSARY CONDUITS, IG AS REQUIRED BY THE SPECIALIST
- 20.
- 20. THE ELECTRICAL CONTRACTOR S CONNECTIONS OF EQUIPMENT AND COMPLETION OF THE WORKS TO STANDARDS. CAL CONTRACTOR SHALL BE OF EQUIPMENT AND SHALL IF THE WORKS TO FULLY C BE RESPONSIBLE FOR ALL FINAL LL PROVIDE RELEVANT CERTIFICATION ON COMPLY WITH REQUIRED BRITISH
- 21. THE ELECTRICAL (
 PHASING PRIOR TO VERIFY ALL CIRCUIT REFERENCES &
- CONTRACTOR SHALL
 OWNERS COMMENCIN BE A CURRENT MEMBER OF THE NICEIC.
- 23. ALL LOW VOLTAGE CABLING AT ALL TIMES. THE ELECTRICAL CONTRACTOR SHALL E SEGREGATED FROM MAINS VOLTAGE
- S ASSOCIATEI CONTRACTOR SHALL

 O WITH THE ELECTRI _ ALLOW FOR ALL NECESSARY BUILDERS ICAL INSTALLATION BELOW 25mm. BUILDERS _ UNDERTAKEN BY THE MAIN CONTRACTOR.
- 25. ALL CEILING MOUNTED EC ALL CABLES TO BE LSF EQUIPMENT CEILING. TO BE ISOLATED, MADE SAFE, REMOVED AND
- POWER NOTES
- ALL WORKS TO BE CARRIED OUT IN WHERE ACCESSORIES ARE INSTALLED WITHIN FIRE COMPARTMENT WALL, INTUMESCENT INSERTS SHALL BE PROVIDED. ACCORDANCE WITH BS7671.
- 3. ALL ACCESSORIES SHALL BH. BE BUILDING)M THE NEW DISTRIBUTION BOARD (DB3A) IB) AND PROTECTED VIA 20A 30mA RCBO REGULATIONS PART M COMPIANT.
- ALL NEW ELECTRICAL ACCESSORIES TO BE LABELLED TO BE FULLY CO-ORDINATED ON SITE WITH WITH A CIRCUIT REFERENCE

DEVICE

ENSURE THAT ALL ISOLATORS, R ASSOCIATED EQUIPMENT ARE CLEARLY

DISTRIBUTION & SMALL POWER

JRKS IV W.... ES TO FACILITATE

REPLACE ALL EXISTING DATA CABLES

POINTS) WITH CAT6 CABLES. CONTRACTOR TO BOXES ARE SUITABLE. IF THEY ARE NOT ALLOW TO REPLACE ALL EXISTING FLOOR

I SERVER CABINETS REMAIN ACTIVE DURING TO ALLOW TEMPORARY

THE WORKS SHALL CONSIST OF THE REFURBISHMENT OF THE MCA OFFICE. ALL ELECTRICAL SERVICES; INCLUDING BUT NOT LIMITED TO, LIGHTING & EMERGENCY LIGHTING, SMALL POWER, FIRE ALARM AND SECURITY SHALL BE RETAINED AND MODIFED TO SUITE NEW ARCHITECTURAL LAYOUT.

THE EXISTING MAIN LY PANEL (MDB3) AND ASSOCIATED DISTRIBUTION BOARDS (DB3, AIR CON DB, DB2 AND UPS DB) SHALL BE RETAINED. A NEW 8-WAY 100A TP&N DISTRIBUTION BOARD (DB3A) SHALL BE INSTALLED WITHIN THE EXISTING ELECTRICAL RISER, FED FROM MDB3 VIA 4C 25mm2 & 16mm2 CPC XLPE/SWA/LSF CABLE AND PROTECTED VIA NEW 100A MCCB.

CONTRACTOR TO MAKE ALLOW

NCE FOR OUT OF HOURS WORKS WHERE A BUSINESS ACTIVITY.

E IS SUFFICIENT SPARE CAPACITY ON REPLACE AND INCREASE IF NECESSARY

84

NEW FLOOR BOXES SHALL BE INSTALLED (CONSISTING OF 2 TWIN SOCKET COMPLETE WITH RCD PROTECTION AND 2 TWIN DATA OUTLET) AS DETAILED ON THE PROPOSED SMALL POWER DRAWING. THE NEW CIRCUITS SHALL BE SUPPLIED VIA THE EXISTING BUSBAR AND PROTECTED VIA NEW 32a TPE B MCBS. A MAXIMUM OF 4 FLOOR BOXES PER CIRCUIT/ TAP OFF. THE CONTRACTOR SHALL ALLOW TO VERIFY SUFFICIENT CAPACITY ON THE EXISTING BUSBARS. THE CONTRACTOR TO ALLOW TO RE-POSITION BUSBARS ACCORDINGLY.

EXISTING EQUIPMENT AND ARCHITECTURAL DESK LAYOUT PLAN.

ALL NEW DATA OUTLETS TO BE DERIVED FROM THE EXISTING DATA CAB.

CONTRACTOR TO VERIFY SUFFICIENT CAPACITY.

ARCHITECTURAL DESK LAYOUT, AS DETAILED ON THE PROPOSED SMALL POWER DRAWING. ALL SOCKETS WITHIN FLOOR BOXES AFFECTED BY THE WORKS SHALL BE REPLACED WITH RCD TYPE SOCKETS.

DO NOT SCALE

NEW CABLES FOR DATA AND SMALL POWER SHALL UTILISE EXISTING CONTAINMENT WHEREVER POSSIBLE. CONTRACTOR TO VERIFY SUFFICIENT CAPACITY AND ALLOW TO INSTALL GALVANISED STEEL SECONDARY CONTAINMENT WHERE NECESSARY.

SCOPE OF WORKS

THE EXISTING FLOOR BOXES AND ASSOCIATED BUSBAR FED FROM DB1 IN THE ADJACENT BUILDING (AS DETAILED ON THE EXISTING SMALL POWER LAYOUT DRAWING), SHALL BE ISOLATED, MADE SAFE, DISCONNECTED AND RESUPPLIED FROM THE NEW 8-WAY DISTRIBUTION BOARD (DB3A). ALL SOCKETS WITHIN FLOOR BOXES AFFECTED BY THE WORKS SHALL BE REPLACED WITH RCD TYPE SOCKETS. THE EXISTING BUSBARS SHALL BE PROTECTED VIA NEW 32A TYPE B MCBS. THE CONTRACTOR SHALL UNDERTAKE A FULL INTRUSIVE SURVEY AND ALLOW TO UNDERTAKE THE NECESSARY WORKS TO RE—SUPPLY ANY OTHER FLOOR BOXES NOT IDENTIFIED ON THE PROPOSED SMALL POWER DRAWING.

THE EXISTING FLOOR BOXES SHALL BE ISOLATED, MADE SAFE, DISCONNECTED AND RE-POSITIONED IN A SUITABLE LOCATION TO BE CO-ORDINATED WITH THE NEW

SMALL POWER LEGEND

- EXISTING TP&N DISTRIBUTION BOARD.
- EXISTING TP&N LV SWITCHBOARD.
- 3N 63A EXISTING ISOLATING SWITCH.
- \$ EXISTING TWIN SWITCHED 13 AMP SOCKET OUTLET.
- CEILING MOUNTED PROJECTOR SOCKET OUTLET.
- UNSWITCHED FUSED CONNECTION UNIT.

- EXISTING SWITCHED FUSED CONNECTION UNIT.
- ABOVE CEILING FCU S UPPLYING MECHANICAL EQUIPMENT.
- SWITCHED FCU'S FOR SWITCHED FCU'S FOR CLOCKING IN SYSTEM AT H/L.

EXISTING UNSWITCHED FCU FOR NEW FIRE DAMPER CONTROL SYSTEMS AT H/L. UNSWITCHED FOU FOR PANIC ALARM PANEL SYSTEM AT H/L.

- PA

EXISTING

PROJECTOR IN CEILING VOID.

EXISTING FIRE DAMPERS.

FD

- EXISTING UNDERFLOOR BUSBAR 2 COMPARTMENT DATA AND POWER DADO TRUNKING.
- EXISTING FLOOR BOX. LOCATIONS AND QUANTITIES ARE BASED ON EXISTING DESIGN INFORMATION. CONTRACTOR SHALL ALLOW TO VERIFY THE LOCATION, QUANTITIES AND SOURCE OF SUPPLY.

SOCIATED
HATCHED
SUPPLIED
UILDING
IPMENT
ATED, MADE
D AND
NEW

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2.5mm2 CPC D PROTECTED V B MCB.

Public Entrand

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WORKS

Engimeerings Exam Room

S SWITCHED FUSED, I UNIT TO BE ISOLATED,— AND RE—POSITIONED AS

'EX' ADJACENT THE FLOOR BOXES DENOTES EXISTING FLOOR BOX.

 $\stackrel{\square}{ imes}$

FLEXIBLE CONNECTION BETWEEN BUSBARS.

EXISTING FLOOR BOX TO BE ISOLATED, MADE SAFE, DISCONNECTED AND RE-POSITIONED AS SHOWN. ALL SOCKETS WITHIN FLOOR BOXES AFFECTED BY THE WORKS SHALL BE REPLACED WITH RCD TYPE SOCKETS.

BOARD (DB3A). THE BHALL UNDERTAKE A SHRVEY AND ALLOW E THE NECESSARY -SUPPLY ANY OTHER NOT IDENTIFIED ON ABOVE, INCLUDING

NEW SWITCH FUSED CONNECTION UNIT INSTALLED WITHIN CEILING VOID FOR MECHANICAL EQUIPMENT. NEW FLOOR BOX CONTAINING & 2NO TWIN DATA OUTLET. 2NO TWIN SOCKET OUTLET C/W RCD

2019 ZD FLOOR BOXES AMENDED MH	<u>±</u>
2019 ZD PRELIMINARY ISSUE MH	==
BY DESCRIPTION CHK	₹ An
D2 - FOR TENDER	

11/2019	ZD	FLOOR BOXES AMENDED	¥
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MARITIME & COASTGUARD AGENCY

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MARINE CARDIFF OFFICE REFURBISHMENT		WSP

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REFER TO ARCHITECTURAL LAYOUTS FOR BUILDING DIMENSIONAL INFORMATION.

ALL DIMENSIONS ARE THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS, SERVICES AND ENGINEERS DRAWINGS. IN MILLIMETRES UNLESS OTHERWISE

ALL EXISITING SERVICES TO BE RETAINED SHALL BE ADEQUATELY PROTECTED DURING THE WORKS. AT TIME OF ISSUE AS BUILT / CONSTRUCTION DRAWINGS OF EXISTING SERVICES HAVE NOT BEEN PROVIDED. EXISTING SERVICES SHOWN ARE PREVIOUS REFURBISHMENT DESIGN DRAWINGS AND ARE THEREFORE ON INDICATIVE OF EQUIPMENT LOCATIONS. ACTUAL LOCATIONS MAY DIFFER. 9

DIMENSIONS ARE NOT TO BE SCALED FROM THIS DRAWING CONTRACTOR SHALL ALLOW FOR MAKING GOOD ANY FINISHES DISTURBED OF THE REMOVING OF REDUNDANT SERVICES.

AS

THIS DRAWING IS INDICATIVE ONLY AND IS NOT TO BE USED AS A WORKING DRAWING.

10.THE DRAWING SHOWS THE IN 11.THE FINAL CO-ORDINATION OF SERVICES WITH EACH OTHER, SPECIALIST SUB-CONTRACTORS AND BUILDING STRUCTURE IS THE RESPONSIBILITY (BUILDING SERVICES CONTRACTOR. G DOES NOT INDICATE THE INTENDED LOCATIONS OF I HE PRECISE S POSITION OF SERVICES SERVICES. 9

14.ANY SHUTDOWNS ARE TO BE AGREED WITH PROPERTY MANAGEMENT AND CLIENT.
15.THE ELECTRICAL CONTRACTOR SHALL IF HE SO WISHES OFFER ALTERNATIVES TO THE MATERIALS SPECIFIED PROVIDING THE ALTERNATIVE IS DEEMED EQUAL AND APPROVED BY THE ELECTRICAL ENGINEER. 13.THE CONTRACTOR SHALL ENSURE THAT OTHER AREAS OF THE BUILDING OPERATIONAL THROUGHOUT THESE WORKS WHERE POSSIBLE. 12.THE POSITIONS OF ALL ELECTRICAL EQUIPMENT, CONNECTION POINTS AND ACCESSORIES AS SHOWN ON THE DRAWING ARE APPROXIMATE AND FOR GUIDANCE IN THE PREPERATION OF THE TENDER. REMAIN $\overline{0}$

16.THE ELECTRICAL CONTRACTOR SHALL ENSURE THAT A VISIT TO THE PRE UNDERTAKEN PRIOR TO THE TENDERING TO ENSURE THAT THEY ARE FU CONVERSANT WITH ALL NECESSARY WORK AND SHALL MAKE SURE ALLOWED THE FINAL TENDER FIGURE FOR THE CONDITIONS WHICH EXIST ON SITE. PREMISES IS DWANCES IN

BΕ

2 WAY SWITCHING CONTROLS CONFERENCE LIGHTING ON BOTH SIDES OF PARTITION.

18.THE ELECTRICAL CONTRACTOR SHALL ENSURE THAT ALL ISOLATORS,
DISTRIBUTION BOARDS AND ANY OTHER ASSOCIATED EQUIPMENT ARE CLEARLY
LABELLED. 17.THE ELECTRICAL CONTRACTOR SHALL ALLOW FOR THE TESTING OF THE PROPOSED ELECTRICAL SERVICES AS SHOWN ON THE TENDER DRAWINGS.

19.THE ELECTRICAL CONTRACTOR SHALL INSTALL ALL NECESSARY CONDUITS, OUTLET BOXES, CONTAINMENT, CABLING AS REQUIRED BY THE SPECIALIST INSTALLERS.

20.

. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FINAL CONNECTIONS OF EQUIPMENT AND SHALL PROVIDE RELEVANT CERTIFICATION ON COMPLETION OF THE WORKS TO FULLY COMPLY WITH REQUIRED BRITISH STANDARDS. VERIFY ALL CIRCUIT REFERENCES &

21. THE ELECTRICAL CONTRACTOR SHALL V PHASING PRIOR TO WORKS COMMENCING THE ELECTRICAL L LOW VOLTAGE CA CONTRACTOR SHALL BE A CURRE CABLING SHALL BE SEGREGATED FROM MAINS VOLTAGE NT MEMBER OF THE NICEIC.

25. ALL CEILING MOUNTED EQUIPMENT TO BE ISOLATED, MADE SAFE, REMOVED AND RE-INSTATED ON THE NEW CEILING. WORKS ASSOCIATED WITH THE ELECTRICAL INSTALLAT WORK HOLES ABOVE 25mm SHALL BE UNDERTAKEN ALL CABLES TO BE LSF ELECTRICAL ALLOW FOR DR ALL NECESSARY BUILDERS LLATION BELOW 25mm. BUILDERS KEN BY THE MAIN CONTRACTOR.

LIGHTING & EMERGENCY LIGHTING NOTES

ALL EXISTING LUMINAIRES SHALL BE RETAINED UNLESS OTHERWISE NOTED ON THE DRAWING AND CO-ORDINATED WITH NEW ARCHITECTURAL LAYOUT. WORKS TO BE BARRIED OUT IN ACCORDANCE WITH BS 7671.

<u>ب</u> EXISTING SMALL POWER & LIGHTING CIRCUITS SHALL TO SUIT THE NEW LAYOUT, UNLESS OTHERWISE STATE THE CONTRACTOR SHALL ALLOW TO TEST, CLEAN, RE-LAMP AND REPAIR/REPLACE ALL EXISTING LUMINAIRES THAT ARE NOT FULLY FUNCTIONAL. . BE RETAINED & MODIFIED .

5 CONTRACTOR TO ENAGE ZUMTOBEL LIGHTING TO RE-PROGRAME LIGHTING CONTROLS TO SUIT NEW ARCHITECTURAL LAYOUT (CONTACT JOSH DUPRES).

THE CONTRACTOR SHALL ALLOW TO CLEAN AND RE-LAMP ALL EXISTING LUMINAIRES.

DO NOT SCALE

7. EXISTING SMALL POWER & LIGHTING CIRCUITS SHALL BE RETAINED & MODIFIED TO SUIT THE NEW LAYOUT, UNLESS OTHERWISE STATED.

8. ESCAPE LUMINAIRES SHALL BE FULLY CO-ORDINATED WITH THE ARCHITECT AND BUILDING CONTROL PRIOR TO INSTALLATION.

THE ROUTINE TESTING OF THE EMERGENCY LIGHTING SHALL BE UNDERTAKEN AS PER THE EXISTING METHOD.

9

OF WORKS

LIGHTING & EMERGENCY LIGHTING

ALL EXISTING LUMINAIRES TO BE RETAINED AND RE—POSITIONED/ CO—ORDINATED WITH NEW ARCHITECTURAL LAYOUT UNLESS OTHERWISE STATED ON THE PROPOSED LIGHTING LAYOUT DRAWING. NEW LIGHTING CONTROLS TO BE INSTALLED AS DETAILED ON THE PROPOSED LIGHTING LAYOUT DRAWING AND INTEGRATED INTO THE EXISTING LIGHTING CONTROLS SYSTEM. THE CONTRACTOR SHALL LIAISE WITH ZUMTOBEL LIGHTING TO VERIFY THE OPERATION OF THE EXISTING LIGHTING CONTROLS SYSTEM.

D4CH (2), D4CA(9), 4 EXIT CROUP (1) MDB3 323 PIR D D ZUMTOBEL DIMLIGHT
CONTROL MODULES (x3)
+ SB128 EMERGENCY
LIGHTING MODULES LIGHTING MUDDELL TO LOCATED IN RISER. TO INSTALLED AT PHASE 1. DB3 RADIAL \triangleright P P \triangleright \triangleright (1)
 >
 \triangleright PR (W) P \bigcirc (P) \bigcirc (>) A E PIR \triangleright PR P A MODULE MODULE Þ D 'LAST MAN SWITCH' TO OVERRIDE AUTOMATIC OFFICE LIGHTING CONTROLS:
D4CH(1), D4CH (2), D2CH(1) OFFICE LUMINAIRES CONTROLLED IN GROUPS BY PIR'S. CLE SWITCH GROUP 1 P A (P) • PIR PPR PIR PIR A P DB338ABIAL CROUT BZ RADIAL CIRCUIT P \triangleright D <u>D2CH (1)</u> D2CH (1), GROUP <u>D4CH (1)</u> D4CH (1), GROUP D4CH (1), GROUP D4CH DALI LIGHTING CONTROLS REFERENCE D2CH (1), GROUP D4CH (1), GROUP

DB3 RADIAL

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D

 \triangleright

SWITCH 2

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D

P

CIRCUIT

 \triangleright

A

A

 \triangleright

D

P

P

 \triangleright

H

(A)

LIGHTING LEGEND

 \triangleright EXISTING 600 x 600 ZUMTOBEL LUMINAIRE.

AS ABOVE WITH INTEGRAL LED EMERGENCY.

 \bigcirc EXISTING ZUMTOBEL DOWNLIGH TER.

EXISTING STAND-ALONE ZUMTOBEL EMERGENCY LUMINAIRE.

EXISTING PASSIVE INFRA RED DETECTOR.

EXISTING 2 WAY LIGHT SWITCH.

LIX3 EXISTING ILLUMINATED EXIT SIGN

EXISTING

EXISTING LIGHTING ZONE GROL

(B) ZUMTOBEL DOWNLIGHTER.

ZUMTOBEL LINEAR SURFACE MOUNTED LUMINARE.

• —

EXISTING DAYLIGHT SENSOR CONNECTED TO DALI LIGHTING CONTROLS.

PIR

2 WAY SWITCH WITH SCENE SETTING

D2 - FOR TENDER

115|

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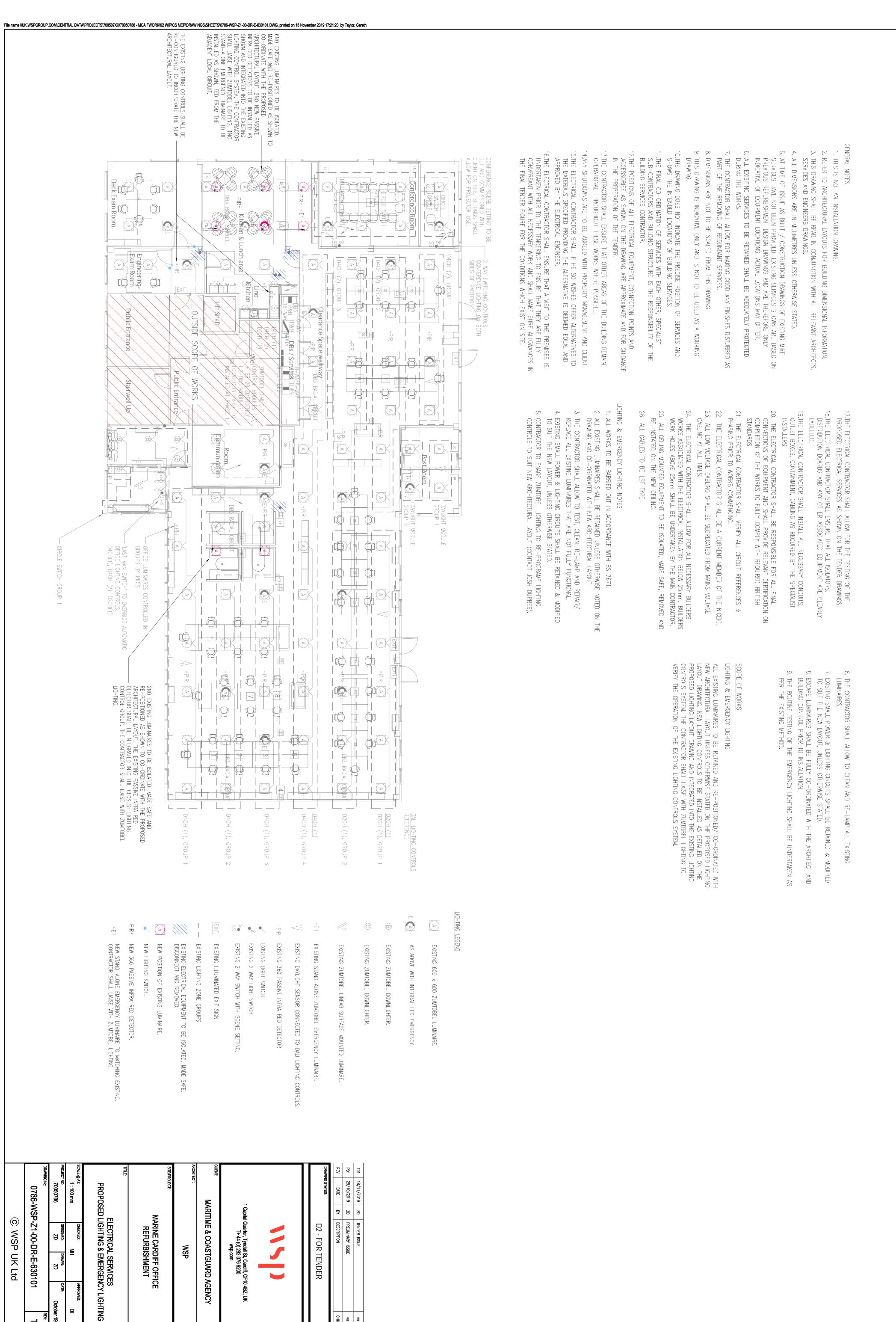
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CARDIFF MARINE OFFICE REFURBISHMENT

ELECTRICAL SERVICES
EXISTING LIGHTING & EMERGENCY LIGHTING LAYOUT

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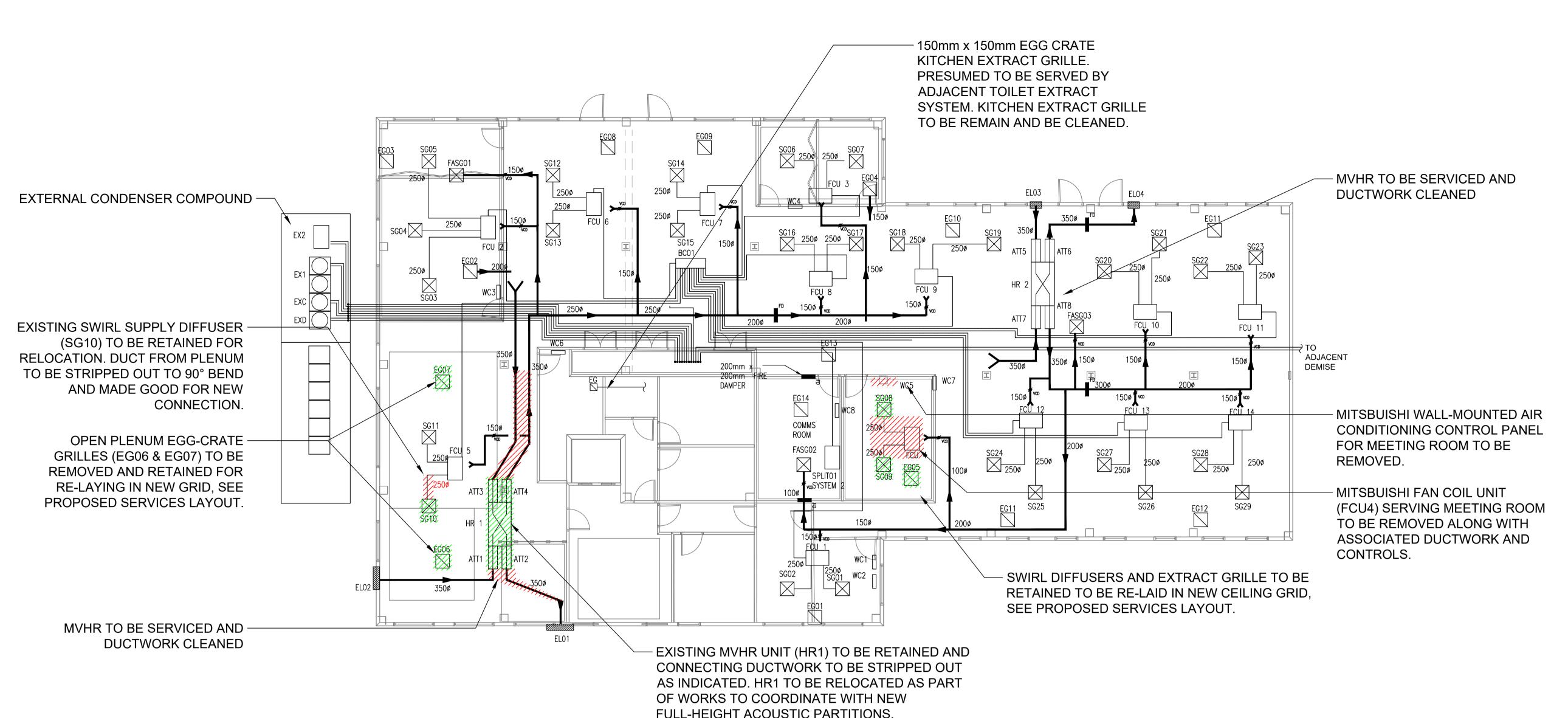
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MECHANICAL DRAWINGS 4.



AIR CONDITIONING SYSTEM

THE EXISTING SYSTEM IS A MITSUBISHI VRF AIR CONDITIONING SYSTEM PROVING SPACE HEATING AND COOLING. THERE ARE 14no. CEILING MOUNTED CHASSIS FAN COIL UNITS (FCU) EACH DUCTED TO CEILING MOUNTED SWIRL DIFFUSERS. MOST FCUs ARE LINKED TO A CENTRAL CONTROLLER WITH SOME HAVING DIRECT ROOM CONTROLLERS.

IT IS CURRENTLY ASSUMED THAT THE EXISTING VRF AIR CONDITIONING SYSTEM IS IN GOOD WORKING ORDER WITH OVER 5 YEARS LEFT OF ITS EXPECTED EFFECTIVE WORKING LIFE.

IT HAS BEEN IDENTIFIED THAT THE EXISTING BC BOX HAS 16 PORTS AVAILABLE FOR CONNECTION TO FCUs. AS IT STANDS, 14no. OF THESE CONNECTIONS HAVE BEEN USED LEAVING 2no. SPARE CONNECTIONS FOR NEW FCUs.

THE PROPOSED NEW SERVICES INCLUDE REPLACING THE FAN COIL UNIT OVER THE MEETING ROOM WITH A MODEL TO MATCH THE OTHER OPEN PLAN OFFICE FAN COIL UNITS. THIS ALLOWS THE EXISTING SYSTEM TO COPE WITH THE ADDITION OF 2no. NEW FCUs TO THE NEW ROOMS, AS INDICATED ON THE PROPOSED SERVICES LAYOUT. THIS INFORMATION IS BASED ON EXISTING MAINTENANCE RECORDS AND MITSUBISHI RECORD INFORMATION AND SHALL BE CONFIRMED BY THE AIR CONDITIONING SPECIALIST.

THE MECHANICAL CONTRACTOR SHALL EMPLOY AN AIR CONDITIONING SPECIALIST TO ASSESS THE CONDITION OF THE OUTDOOR CONDENSING UNITS TO PROVE THAT THEY ARE IN GOOD WORKING ORDER AND HAVE A SATISFACTORY REMAINING WORKING LIFE.

AS PART OF THE WORKS, THE PARTIONING AROUND THE MEETING ROOM SHALL BE REMOVED. THEREFORE THE MITSBUISHI AIR CONDITIONING CONTROL PANEL FOR MEETING ROOM SHALL BE REMOVED.
ALL DUCTWORK WITHIN THE TENANTS DEMISE TO BE CLEANED.

THE MECHANICAL SERVICES CONTRACTOR SHALL ALLOW FOR MAKING GOOD ANY FINISHES DISTURBED AS PART OF THE REMOVING OF REDUNDANT SERVICES.

THE MECHANICAL SERVICES CONTRACTOR SHALL ENSURE THAT OTHER AREAS OF THE BUILDING REMAIN OPERATIONAL THROUGHOUT THESE WORKS WHERE POSSIBLE.

HEATING SYSTEM

THE EXISTING PERIMETER RADIATORS ARE NOT INCLUDED AS PART OF THE OCCUPYING TENANTS DEMISE AND ARE TO BE RETAINED AND PROTECTED DURING THE WORKS. THEY HAVE BEEN REPORTED AS NOT OPERATIONAL AND ARE NOT REQUIRED FOR SPACE HEATING.

VENTILATION

THE FRESH AIR VENTILATION FOR THE DEMISE IS VIA 2NO. CEILING MOUNTED NUAIRE MVHRs (MECHANICAL VENTILATION WITH HEAT RECOVERY). THEY SUPPLY AIR TO THE FCUs AND EXTRACT FROM THE CEILING VOID VIA OPEN PLENUM EGG-CRATE GRILLES.

THE MECHANICAL CONTRACTOR SHALL SERVICE THE MVHRs AND REPLACE FILTERS AS NECESSARY AND AS RECOMMENDED BY THE MANUFCATURER. THE MECHANICAL CONTRACTOR SHALL ALSO INVESTIGATE THE OVERALL CONDITION OF THE MVHRs AND ASSESS THEIR SUITABILITY FOR CONTINUED SERVICE.

ALL DUCTWORK WITHIN THE TENANTS DEMISE TO BE CLEANED.

EXTERNAL INTAKE AND EXHAUST LOUVRES ARE TO BE CLEANED AND INSECT MESH REPLACED IF REQUIRED.

DOMESTIC WATER SERVICES

DOMESTIC WATER SERVICES TO KITCHEN SHALL REMAIN AND BE PROTECTED DURING THE WORKS TO THE KITCHEN.

THE DRINKING WATER FOUNTAIN ADJACENT TO THE RISER CUPBOARDS SHALL BE RETAINED AND UTILISED DURING THE WORKS. THE UNIT WILL NEED TO BE MOVED AND RE-CONNECTED FOR EACH PHASE OF WORKS.

ABOVE GROUND DRAINAGE

ABOVE GROUND DRAINAGE TO KITCHEN SHALL REMAIN AND BE PROTECTED DURING THE WORKS TO THE KITCHEN.

DO NOT SCALE

GENERAL NOTES:

- THIS IS NOT AN INSTALLATION DRAWING.
 THIS DRAWING IS TO BE READ IN
 CONJUNCTION WITH ALL ARCHITECTURAL,
 OTHER MECHANICAL, ELECTRICAL AND PUBLIC
 HEALTH SERVICES DRAWINGS, STRUCTURAL
 AND CIVIL ENGINEERS DRAWINGS AND ALL
 SPECIFICATION DOCUMENTS.
- DO NOT SCALE FROM THIS DRAWING.
 REFER TO ARCHITECTURAL LAYOUTS FOR BUILDING DIMENSIONAL INFORMATION.
- 5. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
- 6. THE FINAL CO-ORDINATION OF SERVICES WITH EACH OTHER, SPECIALIST SUB-CONTRACTORS AND BUILDING STRUCTURE IS THE RESPONSIBILITY OF THE BUILDING SERVICES CONTRACTOR.
- 7. AT TIME OF ISSUE AS BUILT /
 CONSTRUCTION DRAWINGS OF EXISTING M&E
 SERVICES HAVE NOT BEEN PROVIDED.
 EXISTING SERVICES SHOWN ARE BASED ON
 PREVIOUS REFURBISHMENT DESIGN
 DRAWINGS AND ARE THEREFORE ONLY
 INDICATIVE OF EQUIPMENT LOCATIONS.
 ACTUAL LOCATIONS MAY DIFFER.
 8. THE CONTRACTOR SHALL ALLOW FOR
- PART OF THE REMOVING OF REDUNDANT SERVICES.

 9. THE CONTRACTOR SHALL ENSURE THAT OTHER AREAS OF THE BUILDING REMAIN OPERATIONAL THROUGHOUT THESE WORKS

MAKING GOOD ANY FINISHES DISTURBED AS

10. ANY SHUTDOWNS ARE TO BE AGREED WITH PROPERTY MANAGEMENT AND CLIENT11. THE CONTRACTOR SHALL MAKE AN ALLOWANCE FOR OUT OF HOURS WORKS.

WHERE POSSIBLE

OPEN PLENUM
EXTRACT GRILLES

SWIRL AIR DIFFUSER
SUPPLY GRILLE.

VOLUME CONTROL DAMPER

FCU FAN COIL UNIT

FUSIBLE LINK FIRE
DAMPER

EXTERNAL LOUVRE

NEW PARTITIONS

SERVICES TO BE REMOVED

REMOVED PARTITIONS

SERVICES TO BE RELOCATED

NEW SERVICES

EXISTING SERVICES TO BE

RETAINED

To1 18/11/2019 JM TENDER ISSUE

 T01
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WSP NECT:

MCA FRAMEWORK

EXISTING MECHANICAL SERVICES

SCALE @ A1:

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PROJECT NO:
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DRAWN:
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October 19

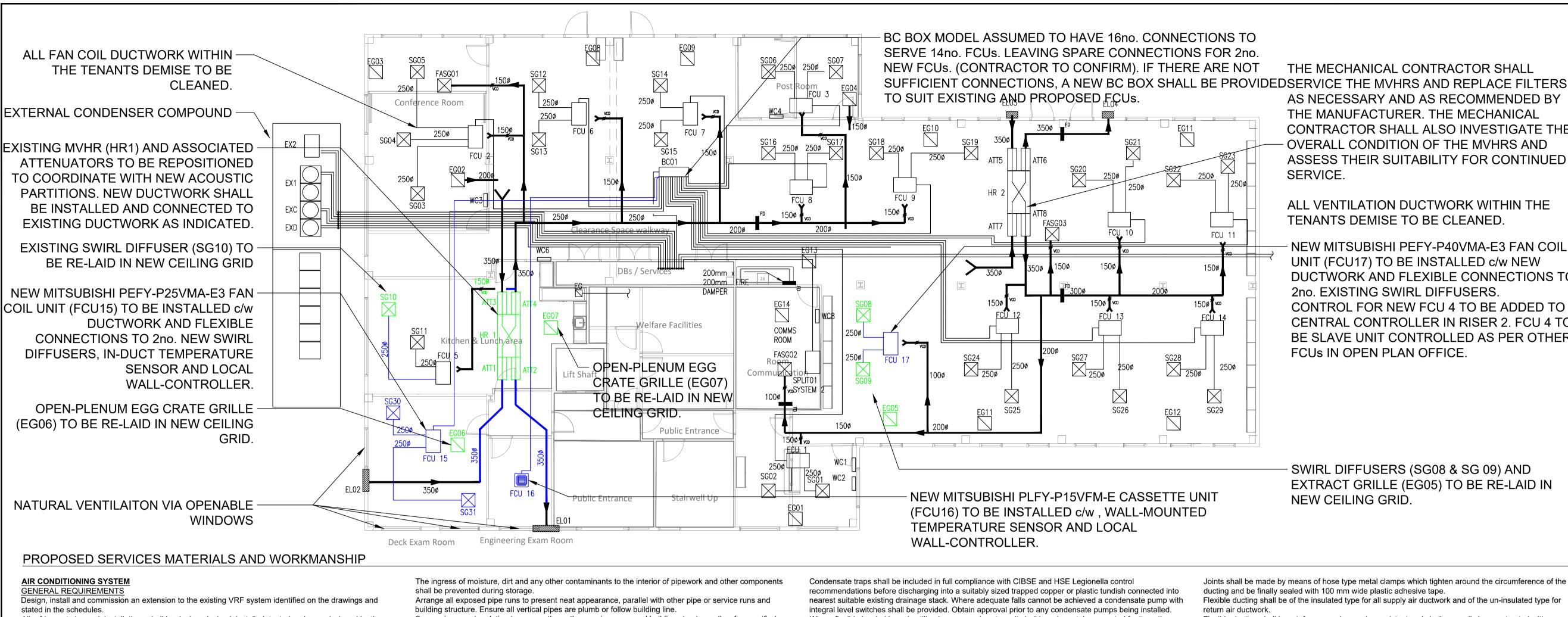
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THE MECHANICAL CONTRACTOR SHALL AS NECESSARY AND AS RECOMMENDED BY THE MANUFACTURER. THE MECHANICAL CONTRACTOR SHALL ALSO INVESTIGATE THE OVERALL CONDITION OF THE MVHRS AND ASSESS THEIR SUITABILITY FOR CONTINUED

ALL VENTILATION DUCTWORK WITHIN THE TENANTS DEMISE TO BE CLEANED.

NEW MITSUBISHI PEFY-P40VMA-E3 FAN COI UNIT (FCU17) TO BE INSTALLED c/w NEW DUCTWORK AND FLEXIBLE CONNECTIONS TO 2no. EXISTING SWIRL DIFFUSERS. CONTROL FOR NEW FCU 4 TO BE ADDED TO CENTRAL CONTROLLER IN RISER 2. FCU 4 TO BE SLAVE UNIT CONTROLLED AS PER OTHER FCUs IN OPEN PLAN OFFICE.

SWIRL DIFFUSERS (SG08 & SG 09) AND EXTRACT GRILLE (EG05) TO BE RE-LAID IN **NEW CEILING GRID.**

All refrigerant pipework installations shall be designed, sized, installed, tested and commissioned by the installer in accordance with all relevant british standards, codes of practice and F-gas regulations. All companies and individuals handling refrigerants are required to hold full F-gas certification. All refrigeration, air conditioning and heat pump systems must comply fully with the guidelines specified in

BS EN 378 and the F-gas regulations. Submit a compliance statement to the CA prior to the commencement of the works that the requirements of BS EN 378 and the F gas regulations have been complied with for the systems to be installed. For the systems to be installed, submit the following to the CA prior to commencement of the works the

following: Calculations for each system installed, and all associated spaces, for the 'critical concentration level'

of refrigerant if it were all to leak into an occupied space in accordance with BS EN 378. Details of the refrigerant gas leak detection systems to be installed as required by BS EN 378 and the

F-gas regulations. Prior to the installation identify the minimum liquid line length, number of bends, vertical lift and horizontal runs. Agree final routes of refrigerant lines and positioning of components with the CA prior to commencing the works. Once the pipework selection and routes are agreed the installer shall undertake a compliance check with respect safety standards and regulations and submit a statement of compliance to the CA.

Install all equipment in accordance with the manufacturer's recommendations. Design, supply, install and commission all necessary refrigerant gas leak detection systems as required by BS EN 378 and the f-gas regulations

All VRF products and equipment must be clearly labelled in accordance with regulations and standards. systems containing F-gas refrigerants must be fitted with a label clearly stating the type and quantity of HFC refrigerant used.

Evaporator units shall be selected to avoid low 'off coil' temperatures and shall have air distribution through diffusers designed to avoid the 'dumping' of cold air.

Take precautions to prevent the discharge of refrigerant gases to atmosphere. All electrical works shall be in accordance with BS 7671.

Electromagnetic compatibility shielding must be applied where appropriate to ensure the security of the system electronic communications. Ensure that power lines and communication cables are correctly installed, labelled, connected and tested prior to commissioning.

On completion of commissioning provide all necessary documentation as stated elsewhere and in accordance with all necessary regulations and standards for these systems. The system refrigerant charge shall be recorded on the outdoor unit label and in the F-Gas logbook for each

Design, size, supply, install, test and commission all interconnecting refrigeration pipework as required on

REFRIGERANT PIPEWORK

the scheme drawings. The installation shall be executed by competent qualified/certified refrigerant operators fully experienced in the type of work being carried out. Installation companies shall hold a current F-Gas Certificate and their operatives shall also hold F-Gas training qualifications and be registered on the F-Gas database. Submit evidence of F-Gas certification to the CA prior to commencement of the works. The installation shall be in accordance with BS EN 378, F-Gas Regulations and the Institute of Refrigeration's latest guidance and Code of Practice, as well as specific manufacturers' instructions for pipework installation. Copper tube shall be suitable for the operating pressures that will occur throughout the system. Copper tubes for refrigerant pipework shall comply with BS EN 12735 and shall be suitable for the refrigerant and oil used. Pipework shall be dry, completely free from scale and internally degreased. The number of joints shall be kept to a minimum and the longest possible lengths of copper pipe shall be utilized where possible. Refrigeration pipework joints shall be brazed or silver soldered. Joints shall be kept to the absolute minimum. Formed bends shall be used in preference to fittings.

Flared or screwed joints shall only be used with the approval of the CA.

The CA will place a strong emphasis on the standard of brazing and the associated quality control procedures in order that the required standards are achieved in all cases. Brazing and bronze welding shall be executed by competent qualified/certified operators fully experienced in

the type and size of work being carried out. Brazers shall hold a valid certificate of competency issued by an approved body. Brazers without valid certificates and those without relevant brazing work experience within the preceding three months shall undertake an approved competency test, witnessed and certified by an approved body. Submit a copy of current certificates for all brazers for examination by the CA before any works are commenced.

Copper joints shall be silver soldered, brazed or bronze welded to suit the operating temperature and pressure and shall comply with BS EN 14324. In addition, the recommendations of the HVCA and Copper

Development Association shall be adhered to. Appropriate installation tools must be utilized at all times.

The ends of the pipework shall be cleaned and reamed out to the original internal diameter before brazing. Dry nitrogen shall be passed continuously through the pipework at minimal pressure and at an adequate velocity during brazing or soldering to eliminate internal oxidation. All excess solder and flux shall be

removed on completion of joints. Piping and other components which have been prepared and are not to be used immediately shall be capped and sealed. During installation no component or length of tubing shall be left un-blanked longer than necessary for installation.

Space pipe runs in relation to one another, other services runs and building structure, allow for specified

thickness of thermal insulation and ensure adequate space for access to pipe joints, etc. On completion of all site joints but immediately before connecting to the system components, high pressure nitrogen shall be flushed through the pipe.

Provision should be made for the Employers maintenance staff to be able to conduct thorough leak tests, so joints in void spaces should be avoided.

Pipework insulation shall be closed cell nitrile rubber preformed flexible sections and shall be CFC free with a fire performance rating of Class 0. The thickness of insulation shall be to BS 5422. Where the indicate thickness stated in BS 5422 is not a commercial size, the nearest larger commercially available thickness shall be provided. Wrap fittings and valves with same insulation as pipework.

Insulate the entire length of pipework and avoid contact between copper and galvanising of support tray. Include expansion joints if required to accommodate expansion and contraction. Cold bridging is to be

Discharge pipes likely to cause burns to personnel shall be shielded and safety labels provided. After completion, the refrigerant pipework shall be subjected to pressure and leakage testing in accordance with BS EN 378.

After installation of pipework and prior to sealing of insulation joints and starting of equipment, pipework should be pressure tested, held for 24 hours and checked for leaks, vacuumed/dehydrated and held for 12 hours (minimum).

Refrigerant charge weight shall be calculated, to the actual installed length of pipework in accordance with the manufacturer's recommendations. The charging shall be carried out with an appropriate charging station and by qualified operatives. The total calculated refrigerant charge must be compared to the actual charge and the total noted. If there are any significant differences these shall be investigated and actioned. The refrigerant charge within the system must be recorded and weighed-in in accordance with the calculated charge. If auto-charging functions be available these should be used if possible. Accurate records must be kept in accordance with the F-Gas Regulations and to assist with any work that is carried out on

site during the system working life. Refrigerant pipework shall be adequately supported with maximum support spacing as follows: 1. Pipe nominal bore 15 to 20 (mm) - Spacing 1.0 (m)

Where the pipework cannot be adequately supported at the spacing indicated directly from the building structure, continuous proprietary channel, angle or tray support systems shall be provided. Pipework shall be supported using sheradised steel clips with a rubber or plastic sleeve to prevent chafing or vibration. For refrigeration copper pipework 15 to 28 mm diameter support on continuous plastic -coated cable tray. The arrangement of pipework and support shall be agreed with the CA before commencement of the Works The fixing and/or supports shall not allow any vibration to be transmitted to the structure.

All pipework shall be labeled with a reference number or other identification relating to the respective condensing unit served. Identification shall be at 3m intervals and be clearly visible. Electrical cables shall not be fixed to refrigerant pipework.

FAN COIL UNITS

Units to be complete with acoustically lined inlet plenum/ acoustically lined flexible ductwork to outlet grille. Units shall be selected to achieve the duties at low to medium speed of operation The electrical components and installation of the units to comply with bs 76715high efficiency motors shall

be supplied as stated elsewhere Filters shall comprise one section and designed for side/underside withdrawal.

Units to be complete with condensate tray fitted with 15mm plain tail copper connection. condensate trays to be provided under control valve assembly. condensate trays shall be designed to fully discharge all water and not allow stagnant water to remain in the tray.

All coils to be factory tested to 15 bar and shall be suitable for an operating pressure up to 10 bar Each coil to be fitted with manual radiator key pattern air vent and key operated drain cock. Motors shall have power factors at full load running conditions that are equivalent or better than that

required by the electricity supply authority The controls shall be compatible with the bms system. The manufacturer shall check control valve size according to coil pressure drop and flow rate to achieve

accurate control. agree with ca prior to ordering All control valves and controls shall be installed, pre-wired and tested at the factory. All insulation shall be class o fire rating.

Flexible ductwork form discharge spigots shall be acoustically lined with a minimum length of 1000 mm. All units shall not exceed a supply to room temperature differential of 10°c

All units shall comply with the requirements of the building regulations All units are required to be integrated with existing system and controls.

CONDENSATE PIPEWORK

Connections to a condensate drainage system shall be provided to discharge water from the fan coils into the above ground drainage system. Gravity condense pipe-work shall be laid to fall at a gradient of not less than 1 in 100. All condensate pipe-work shall be treated to prevent surface condensation. All condensate pipe-work from evaporator units shall discharge into the foul water drainage stacks via an approved trap arrangement. The condensate drain shall be run in rigid plastic pipework adequately fixed from soffit to a suitable fall. Minimum sizes shall allow for adequate discharge.

Where flexible braded hose is utilised on pumped systems it shall be adequately supported for its entire length and comply with the comfort conditioning and pump manufacturer's recommendations. No condensate pipe work will be allowed to distribute directly above data communications or UPS rooms. All condensate pipework shall be provided with sealed and locked joints.

VENTILATION

GENERAL REQUIREMENTS

B&ES specifications;

• DW144 Specification for sheet metal ductwork low, medium and high pressure/velocity air systems DW/143 A Practical guide to ductwork leakage testing

DW/145 Guide to good Practice for the installation of fire and smoke dampers

DW/154 Specification for plastic ductwork

 DW/172 Specification for kitchen ventilation systems DW/191 Guide to good Practice: Glass Fibre Ductwork

TR/19 Guide to good Practice: Internal cleanliness of ventilation systems

Copies of the relevant documents shall be kept on site at all times. The approval of the CA shall be obtained prior to commencement of the works where other forms of construction or jointing are proposed and where there is any deviation from the B&ES specification

Sizes of ductwork indicated are clear internal dimensions. Where applicable make allowance for internal

All components shall be installed in accordance with manufacturer's recommendations. Electrical bonding terminals shall be provided as necessary to ensure electrical continuity in accordance with BS 7671 (latest edition of the IEE Wiring Regulations).

Ductwork shall be true in section, correctly aligned, rigid and free from movement, independently supported and free from all contact with the building structure. Ensure that there are no sharp edges or corners on cut edges on ductwork, flanges and supports. Raw

edges on ductwork, formed seams, welds and rivets shall be painted with two coats of zinc rich paint at works and again after erection. The installer shall be responsible for obtaining all site dimensions and the preparation of drawings.

Any deviation from the routes indicated on the drawings shall be subject to the approval of the CA. Materials of accessories/components shall be compatible with the ductwork in which they are incorporated and the finishes shall comply with any special requirements. Casing losses of accessories/components shall also be compatible.

Full technical details of all accessories/components to be provided within ductwork systems shall be submitted to the CA for approval.

The installer shall be responsible for notifying Building Control for all necessary inspections and obtaining all approvals for all ductwork sections or systems. Any section of ductwork causing noise due to poor construction shall be removed, corrected and reinstated

at no expense to the contract. Ensure that long runs of air ducts incorporate the necessary provision for absorbing movement due to expansion or contraction resulting from thermal change.

During installation the installer shall ensure that dust and debris are prevented from entering the ductwork system and that the installation is clean prior to commissioning. Commissioning shall not commence until the cleanliness of the ductwork system has been inspected and certified. Submit a report to the CA demonstrating cleanliness of the ductwork system prior to commencement of commissioning. Ductwork, fabricated sections and all associated equipment shall be suitable for manual handling in a safe manner where manual handling is unavoidable.

FLEXIBLE DUCTING

Flexible ducting shall be provided for connections between ductwork, terminal units, diffusers and where indicated on the drawings. All flexible ducts shall comply with BS 476, BS9999, BS9991, BS EN 15423, the Building Regulations and to

the requirements of the local Building Control regarding the spread of fire and smoke and reaction to fire Flexible ducting shall not pass through resisting walls or cavity barriers.

Flexible ducting shall comply with the latest editions of DW144, BS EN 13180. BS 15727. CIBSE TM43. the Building Regulations and the local Building Control requirements.

Flexible ducting shall not restrict airflow within the ductwork system, nor should the joint be used to correct x and y alignment of the ducts either side. Ensure that flexible ductwork does not become kinked or flattened. Flexible ducting shall be kept as short as possible and shall be supported rigidly to prevent movement due to air flow. All bends in flexible ducting shall be carefully formed to prevent puncturing on the inside radii with consequent increase in pressure drop. Maximum lengths shall be 1.0 metre and all ducting shall be adequately supported to prevent oscillation and

Steel wire helical reinforcement in flexible ducts is to be carried over the spigots of grilles and diffusers and connections to these items are to be painted matt black for the visible depth. Changes of direction shall be of long radius and no kinking or flattening of ducting will be allowed.

Joints shall be made by means of hose type metal clamps which tighten around the circumference of the ducting and be finally sealed with 100 mm wide plastic adhesive tape. Flexible ducting shall be of the insulated type for all supply air ductwork and of the un-insulated type for

Flexible ducting shall be rot, fungus and corrosion resistant and shall generally be constructed with a woven fibreglass coated with neoprene inner lining, galvanised steel helical spring and a woven fibre-glass impregnated and coated with neoprene outer cover retaining a neoprene impregnated reinforcement cord. On supply air ductwork where the surrounding air dew point temperature is below the supply air temperature an additional 25 mm of mineral fibre flexible insulation shall be provided with a suitable vapour barrier. The dimensions and mechanical requirements of flexible ducts shall comply with BS EN 13180.

GRILLES & DIFFUSERS

Grilles, diffusers and louvres shall be provided to handle the required air quantities as stated elsewhere whilst meeting the specified design criteria in respect of noise and comfort.

The acoustic performance of all diffusers, grilles and other terminal devices shall be in accordance with BS EN ISO 5135 or any other approved standard. Prior to the equipment being ordered, the installer shall verify the selection data.

The final layout shall be subject to agreement with the Architect. The installer shall allow for detailed locations being adjusted suiting final setting out of ceilings, floors and walls. The installer shall liaise with the manufacturer to ensure compatibility and co-ordination between the

grille/diffuser and ceiling support system. The installer shall provide a method statement to the CA outlining the final fixing methods and details of all grilles, diffusers and louvres prior to installation.

Wherever indicated the room noise level rating shall not be exceeded with the system operating at its maximum duty and taking into account all accumulative effects of the diffusers, area served, and noise regenerated by regulating/balancing dampers immediately behind the diffuser or grille to provide the correct

air volume flow rate Diffusers shall be draught free, shall provide rapid mixing of primary and re-circulation air to ensure that the design air movement and room temperature gradient is not exceeded. In this respect the maximum velocity at 1.5 m height shall not exceed 0.26 m/s and the room temperature

gradient shall not exceed 2 °C from floor to normal office ceiling height unless otherwise stated. The PMV shall be in the range +0.5/-0.5 with a PPD of less than 15%. Air diffuser pressure drops shall be selected at a minimum to ensure that the Noise Rating of the diffuser is

Grilles, diffusers and louvres shall be provided to an approved finish and sample charts and samples shall be provided for approval. Duct mounted grilles and diffusers shall be fitted with volume control regulators, adjustable from the unit

face unless otherwise indicated. Grilles and diffusers visible in rooms shall be secured by concealed fixings wherever possible. Mitres, end caps and corners shall be welded in such a manner as does not show on the surface. The

diffuser or grille face shall have the joint filled and finished so that it does not shoe. The joint shall remain concealed after the finish has been applied. Visible grilles and diffusers shall be secured by concealed fixings wherever possible. Units shall be capable CLIENT: of being easily cleaned by having faces readily accessible or by removable centre cores as indicated.

All grilles and diffusers shall be provided with a neoprene or other sealing strip to provide a permanent seal against the adjacent surface and as a means of absorbing variations in the surface. Ceiling diffusers shall be selected to provide adequate air distribution and mixing with room air outside the occupied space. Baffle plates shall be provided as necessary or as indicated to avoid local obstruction. Unless otherwise indicated in the schedules or on the drawings each diffuser shall be provided with an air

flow rate controller and a means of altering the discharge air flow pattern. All controllers shall be adjustable SITE/PROJECT: from the front of the diffuser. Diffusers with ducted connections shall be provided with plenum boxes selected and fabricated by the diffuser manufacturer to match the output of the diffuser. Construction shall be as stated elsewhere. Each

plenum shall be sealed to the back of the diffusers. Where a diffuser is directly connected to a stub duct which has a straight length of less than two equivalent

diameters, an equalising deflector shall be used. Circular diffusers, with adjustable air flow pattern, shall have the cone retained by a screwed spindle fitted with upper and lower stop pins or other approved method. Plenum boxes shall be provided as indicated and shall be to the same ductwork specification as the

connecting ductwork and fitted with round inlets with flexible connections and iris type balancing dampers unless otherwise stated

Where connected to insulated ductwork the plenum box shall be insulated to the same standard as the connecting ductwork.

Outlets from plenum boxes shall suit the diffuser neck connection.

The dimensions of the plenum box shall be as recommended by the diffuser manufacturers and shall be of adequate dimensions to ensure correct diffuser performance in terms of noise level, throw and pressure Where appropriate plenum boxes shall be provided with galvanised steel perforated plates to achieve equal DRAWING NO.

air distribution and pressure drop across the whole face of connecting grilles or diffusers. The details of all plenum boxes shall be submitted to the CA for approval prior to ordering Where plenum boxes are fitted with an opposed blade damper, dampers shall not be required on the neck of the diffuser being served.

DO NOT SCALE

GENERAL NOTES:

1. THIS IS NOT AN INSTALLATION DRAWING. 2. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL ARCHITECTURAL OTHER MECHANICAL, ELECTRICAL AND PUBLIC HEALTH SERVICES DRAWINGS, STRUCTURAL AND CIVIL ENGINEERS DRAWINGS AND ALL SPECIFICATION DOCUMENTS.

3. DO NOT SCALE FROM THIS DRAWING. REFER TO ARCHITECTURAL LAYOUTS FOR BUILDING DIMENSIONAL INFORMATION 5. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.

6. THE FINAL CO-ORDINATION OF SERVICES WITH EACH OTHER, SPECIALIST SUB-CONTRACTORS AND BUILDING STRUCTURE IS THE RESPONSIBILITY OF THE BUILDING SERVICES CONTRACTOR.

7. AT TIME OF ISSUE AS BUILT / CONSTRUCTION DRAWINGS OF EXISTING M&E SERVICES HAVE NOT BEEN PROVIDED. EXISTING SERVICES SHOWN ARE BASED ON PREVIOUS REFURBISHMENT DESIGN DRAWINGS AND ARE THEREFORE ONLY INDICATIVE OF EQUIPMENT LOCATIONS. ACTUAL LOCATIONS MAY DIFFER. 8. THE CONTRACTOR SHALL ALLOW FOR MAKING GOOD ANY FINISHES DISTURBED AS

SERVICES. 9. THE CONTRACTOR SHALL ENSURE THAT OTHER AREAS OF THE BUILDING REMAIN OPERATIONAL THROUGHOUT THESE WORKS

PART OF THE REMOVING OF REDUNDANT

WHERE POSSIBLE. 10. ANY SHUTDOWNS ARE TO BE AGREED WITH PROPERTY MANAGEMENT AND CLIENT

OPEN PLENUM EXTRACT GRILLES SWIRL AIR DIFFUSER SUPPLY GRILLE. **VOLUME CONTROL DAMPER** FCU **FAN COIL UNIT** FUSIBLE LINK FIRE DAMPER **EXTERNAL LOUVRE**

<u>LEGEND</u>

REMOVED PARTITIONS **NEW PARTITIONS**

SERVICES TO BE REMOVED SERVICES TO BE RELOCATED

NEW SERVICES EXISTING SERVICES TO BE

RETAINED

T01 | 18/11/2019 | JM | TENDER ISSUE GS DATE BY DESCRIPTION CHK APF **S2 - FOR INFORMATION**

1 Capital Quarter, Tyndall St, Cardiff, CF10 4BZ, UK T+ 44 (0) 292 076 9200 wsp.com

MARITIME & COASTGUARD AGENCY

WSP

MCA FRAMEWORK

PROPOSED MECHANICAL SERVICES

70050786 October 19

T01

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Appendix A

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PRE-CONSTRUCTION INFORMATION



MCA Cardiff

PRE-CONSTRUCTION INFORMATION PACK

The Maritime and Coastguard Agency

NOVEMBER 2019 CONFIDENTIAL



MCA Cardiff

PRE-CONSTRUCTION INFORMATION PACK

The Maritime and Coastguard Agency

PRE-CONSTRUCTION INFORMATION (TENDER) CONFIDENTIAL

PROJECT NO. 70050786-101

DATE: NOVEMBER 2019

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QUALITY CONTROL

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PRE-CONSTRUCTION INFORMATION PACK Project No.: 70050786-101

MCA Cardiff



1 INTRODUCTION

This Pre-Construction Health and Safety Information Pack has been prepared in accordance with the Construction (Design and Management) Regulations 2015. It is a document which will eventually be developed into the Construction Phase (Health and Safety) Plan by the Contractor on single Contractor projects or the Contractor appointed as the Principal Contractor for projects with more than one Contractor. Initially, it will be used to collate and summarise the information provided by the Client for use by the designers and Contractors appointed, or being considered for appointment, on the project. All those involved with the pre-construction phase have a statutory duty to comply with it and to provide the Principal Designer with any information they have which is required to keep the pack up to date.

It is the intention of the Client that the project is designed and constructed in such a way that the risks to the health and safety of all persons engaged in its construction, future use, cleaning and maintenance or using a structure designed as a workplace are eliminated or reduced to an acceptable level.

This Information Pack is to provide information only and does not form part of the Contract. The full scope of the Works, the duration of the contract and the obligations of the Contractor, shall be ascertained by reference to the Contract documents read as a whole.



2 IDENTIFICATION OF ROLES

Please refer to Section 9 for contact details.

2.1 CLIENT

The Maritime and Coastguard Agency is the Client as defined under the Construction (Design and Management) Regulations 2015.

2.2 PRINCIPAL DESIGNER

The Principal Designer is WSP UK Limited.

2.3 PRINCIPAL CONTRACTOR

The Principal Contractor will be named following the tender period.

The duties of the Principal Contractor are set out in Construction (Design and Management) Regulations 2015. [Note that this includes preparation of the Construction Phase (Health and Safety) Plan, prior to the commencement of works on site].

2.4 CONTRACTOR

The Principal Contractor shall be responsible for the implementation of all safety management measures necessary for the execution of the work, and for the management of all Contractors on the site. All Contractors shall comply with the Construction Phase (Health and Safety) Plan, and with all relevant legislation, regulations or codes of practice.

2.5 DESIGNER

Under the CDM Regulations, a Designer is anybody who either prepares a design or arranges for a person under his/her control to prepare a design. Whilst designers have been appointed, a Contractor may also be a designer under this definition, and therefore Regulations 9 and 10 will apply to them in the same way as it does to the architect, engineer, etc.



3 DESCRIPTION OF PROJECT

The detail below is provided to assist the Contractor but should be treated as preliminary information and not categorical.

3.1 INTRODUCTION AND BACKGROUND

The Client is The Maritime and Coastguard Agency and it is their intention to undertake a refurbishment of the office space at MCA Cardiff.

3.2 NATURE AND SCOPE OF THE WORK TO BE CARRIED OUT

This contract comprises the demolition and erection of non-structural walls, renewal of fabric finishes, a new kitchen and M&E works.

3.3 LOCATION OF PROJECT AND EXTENT OF SITE

Site Address: MCA Cardiff, Anchor Court (South), Keen Rd, Cardiff, CF24 5JW.

MCA Cardiff predominantly comprises an office space on the ground floor containing a large, open plan office with smaller meeting rooms and a kitchen.

3.4 EXISTING ENVIRONMENT, SURROUNDING LAND AND ITS USE

The existing environment of the site, surrounding land and its use may have an impact on the safety of workers on the site, or on others in the area surrounding the site.

3.4.1 ADJACENT PREMISES

The following list shows typical types of premises and their use around this construction site. This information must be considered when control measures are formulated for construction works, i.e. will the residents cause a hazard? Is a particular group of residents more at risk due to the construction works than others? Control measures required must be recorded in the method statements or safe systems of work documentation:

- Premier Inn Hotel, Cardiff City South
- Yolk Recruitment (Second Floor, Anchor Court South)
- Estyn (First Floor, Anchor Court South)
- Action for Hearing (Anchor Court North)

Note: If there are any construction sites of any nature adjacent to or on the site the Principal Contractor is obliged by the Regulations to consult and liaise with the managers and workforce of those sites.

3.4.2 EXISTING STRUCTURES

Comprises generally purpose built office building over ground and two upper floors. The north and south entrances benefit from an intercom service and designated receptions with lift access to the upper floors. The office specification comprises the following:- Air conditioning - Suspended ceilings with recessed lighting- Carpeted raised access floors - Passenger lift- Kitchen facilities.



3.4.3 EXISTING MATERIALS STORED ON SITE THAT MAY PRESENT A HAZARD

No hazardous materials have been specifically mentioned to WSP UK Limited. As the building is mainly used as offices, it is assumed that the only hazardous materials that may be encountered would be chemicals in storerooms used for cleaning together with any fuels or lubricants for site vehicles, within the plant room. The site is served with a piped mains gas supply.

3.4.4 GROUND CONDITIONS / CONTAMINATION

The Asbestos Register/Management Plan will be made available for inspection. Should the Contractor encounter what is believed to be asbestos the Project Manager/Contract Administrator must be notified immediately, under the Control of Asbestos at Work Regulations 2012.

3.4.5 EXISTING UTILITIES

The term 'utility' means all underground services such as electricity, gas, water, stormwater drain, foul sewer and telecommunication services. Buried utilities are widespread and it shall be assumed that they are present unless and until proven otherwise. However, there shouldn't be a requirement to undertake any excavations during this project.

The exact location and depth of utilities must be verified using appropriate methods, prior to ground penetration by mechanical means at any location.

The location and depth of known existing utilities may be shown on the project utility drawings but are not limited to these drawings. Copies of these record drawings are to be provided to those needing them. It should be noted that the locations shown on the drawings may not be accurate and will always require on-site verification.

Prior to commencing works on site it shall be the responsibility of the Principal Contractor to satisfy himself that all utilities on site have been located, identified and marked, and disconnected or diverted as required, prior to commencing work in the particular area in question.

The Contractors will record details of all changes that have been carried out during diversionary/installation works, details of any additional utilities not shown on the drawings, and of actual locations of utilities if different to that shown. This information shall be forwarded to the utility owner and to the designer to be compiled as part of the 'as-built' drawings.

3.5 PROJECT PROGRAM, TIMESCALES AND PHASING

Proposed lead-in time (weeks): 4 weeks

Date of Possession of the Site: 13th January 2020

Envisaged Commencement Date: 13th January 2020

Project Programme Length: 10 Weeks

Envisaged Completion Date: 20th March 2020 Initial Notification to the HSE: November 2019

The above timescale is as envisaged prior to tender but may be subject to change prior to the award of the contract. The Principal Contractor shall confirm that the Works and associated phasing can



be achieved within their actual programmed timescale, without prejudice to health and safety aspects of the contract.

3.6 SITE ACCESS, COMPOUND, AND STORAGE

3.6.1 SITE COMPOUND

The locations of the site compound, area for materials storage and welfare facilities shall be arranged by the Principal Contractor and detailed in the Construction Phase (Health and Safety) Plan. The location of such will be conformed at the site open day on the 25th November 2020.

It is a requirement that the contractor will provide his own entirely separate facilities for welfare, car parking and site offices with material storage. It is given that the minimum standard of fencing will be 2.40m high Heras fencing.

3.6.2 SITE ACCESS

The Principal Contractor shall determine details of safe access and egress including traversing the site, avoiding risk to others. Also, refer to Section 7 Traffic Management.

3.6.3 STORAGE AND DISTRIBUTION OF MATERIALS

Materials, plant and equipment shall be stored with due regard to the risks posed to pedestrians, vehicle traffic and site personnel. Where the risk of interference is high, compounds shall be constructed to provide a secure enclosure.

Only the minimum quantity of hazardous substances will be permitted to be stored on-site in properly constructed and labelled containers so as to reduce potential environmental impacts and possible harm. Appropriate methods of containment for accidental leakage shall be implemented (e.g. bunding of oil storage). Materials and spoil storage areas shall be detailed in the traffic management plan.

3.6.4 TEMPORARY SERVICES/WELFARE FACILITIES

The Principal Contractor shall provide and maintain appropriate welfare facilities. Details shall be provided in the Construction Phase (Health and Safety) Plan.



4 INTERFACES

The Principal Contractor shall, both prior to and during the work activities, identify any issues where other parties may interface with the work activity. Co-operative measures will be introduced to ensure that such interfaces do not import risk.

The following interfaces have been identified.

Reference No	Description	Comment
Local Authority	Cardiff County Council	029 2087 2087
Water Authority	Welsh Water	0800 052 0145
Gas Authority	Wales and West Utilities	0800 111 999
Electrical Supply Authority	Western Power	0800 6783 105
Communications Authority	BT Openreach	0800 023 2023
Fire Authority	South Wales Fire and Rescue Service	01443 232000

Please refer to Section 9.4 for contact details.

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5

EXISTING DRAWINGS AND REPORTS

Document/Drawing Title
WSP Schedule of Works
Construction Plan
Demolition Plan
Existing Plan
Phasing Plan
Proposed Fire Alarm and Security Layout
Existing Fire Alarm and Security Layout
Proposed Small Power Layout
Existing Small Power Layout
Proposed Lighting and Emergency Lighting Layout
Existing Lighting and Emergency Lighting Layout
Existing Mechanical Services
Proposed Mechanical Services



6 RESTRICTIONS AFFECTING THE PROJECT

There are many restrictions that may affect the Works on this project, some of which may only exist during phases of the work. The Contractors shall identify all restrictions and the details of methods of work required to avoid conflict with them shall be recorded in the Construction Phase (Health and Safety) Plan.

6.1 POTENTIAL RESTRICTIONS

The following is a non-exhaustive list of potential restrictions that may occur. Restrictions relevant to the Works shall be identified during the risk assessment process.

- Hours of work e.g. constraints of noisy works during 8.30am 5.00pm
- Maintenance of vehicular (including emergency services) routings and pedestrian access;
- Programme e.g. windows for closure of road/utility/canal etc.;
- Environmental issues e.g. to do with construction processes required; contaminated land or materials to be removed;
- Hot works may be restricted due to adjacent premises. This should be reflected in the hot works permit system used on the site.

6.2 IDENTIFIED RESTRICTIONS

The following restrictions have been identified, and apply to this contract:

6.2.1 RESTRICTIONS ON ACCESS

The site will be occupied for a duration of the works, so access is restricted due to traffic safety and management requirements see Section 7 herein.

6.2.2 RESTRICTIONS ON THE WORK SITE

Prior to commencing works on-site, it shall be the responsibility of the Principal Contractor to satisfy him/herself that all utilities on site have been located, identified, disconnected, and diverted as required, prior to commencing work in the area. For further details, refer to Section 3.4.5 above.

6.2.3 RESTRICTIONS ON WORKING HOURS

Normal working hours will be as set out in the contract documents.

Works shall comply with the conditions and restrictions contained within the directions issued from time to time by the associated local authorities, together with any additional restrictions contained within the contract document or advised by the Client.

6.2.4 ENVIRONMENTAL IMPACTS

The Contractor shall use his best endeavours to reduce potentially adverse environmental impacts so far as reasonably practicable. Actions to achieve this shall include:

- Minimising noise, dust and vibration from work activities;
- Minimising waste and re-using materials where practicable;
- Minimising the effect of disturbance on mature trees;
- Segregation and controlled disposal of special waste;
- Appropriate standards of behaviour by on-site personnel;

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- Minimising mud on the highway;
- Other environmental impacts that are identified throughout the works shall be assessed by the Contractor for the adequacy of controls as they arise.

6.2.5 NOISE/DUST/VIBRATION

The Contractor shall ensure noise/dust/vibrations are kept to a minimum. The Principal Contractor shall determine the methods and processes of monitoring and control. This shall be detailed in the Construction Phase (Health and Safety) Plan.

Noise emissions on-site shall comply with BS 5228 Noise Control on Construction Sites. The Principal Contractor is to ensure that overall noise levels are maintained at an acceptable level.



7 TRAFFIC MANAGEMENT

The Principal Contractor is to draw up and propose a traffic management plan to control all vehicle movements on site including times of deliveries and collections, routes, places to deliver or collect debris (load and un-load) after reviewing the client's concerns. Some detail is noted below but should not be taken as complete being subject to alteration or addition.

- A traffic management plan to ensure safe movements and interaction between vehicles and pedestrians, both on and adjacent to the site shall be complied with by the Contractor. It shall cover all expected work activities, delivery and storage areas, and it shall be expanded and/or amended to cover new or altered activities as they arise.
- The Principal Contractor shall produce a detailed traffic management plan required for this work in accordance with the contract document for inclusion in the Construction Phase (Health and Safety) Plan.
- The traffic management plan shall also provide for the requirement that the entrances and roads are kept clean and clear of obstructions, and prevent the spillage or deposit of clay, rubble or other debris on the entrance and other roads throughout the contract period. Wheel washing facilities will be required.
- The Principal Contractor shall be responsible for the design and implementation of all traffic safety management arrangements within the site and any affected areas outside of the site. He shall also be responsible for all associated consultations and for obtaining the necessary approvals for the arrangements.
- It is the Principal Contractor's responsibility to ensure that the traffic management plan is acceptable to the Client.

Specific requirements are as follows:

- Max site speed limit on access roads and site once off the public highway will be 5mph.
- All movements of vehicles on access roads and site will be accompanied by a banksman.
- All delivery and collection drivers will phone the on-site managers prior to arrival to ensure that they are met.
- Provision of full site signage with site speeds, directions and contacts to be provided which are to commence at the junction of the access road.

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8 SITE WIDE ELEMENTS

The following health and safety issues relate to the site-wide elements for which control measures are required by the Principal Contractor.

8.1 SITE WELFARE FACILITIES

The Principal Contractor shall provide in accordance with the CDM Regulations Schedule 2. These shall be maintained and upgraded as necessary throughout the duration of the contract.

8.2 CO-ORDINATION OF TRAFFIC/PEDESTRIANS

The Principal Contractor shall ensure that pedestrians and traffic are segregated so far as reasonably practicable on the site.

8.3 SITE ACCESS/EGRESS POINTS

The Principal Contractor is responsible for controlling access and egress to the site.

8.4 REMOVAL OF DEBRIS/RUBBLE ETC

The Principal Contractor shall arrange for regular removal of rubbish to authorised tips.

The contractor must provide a "spotter" when removing rubbish and furniture from the building through the public entrance to control pedestrian traffic.

8.5 EMERGENCY VEHICLE ACCESS

Access will be required to adjacent properties at all times.

8.6 STORAGE AREA

The Principal Contractor shall arrange for safe storage of all materials on the site.

8.7 DELIVERY AND POSITIONING OF PLANT, EQUIPMENT, AND MATERIALS

The Principal Contractor is responsible for planning and organising the positioning and movement of plant, equipment and materials across the site.

8.8 IDENTIFICATION AND REMOVAL OF ANY HAZARDOUS MATERIAL

Known hazards are described in this document, but other hazards may arise during the works. The Principal Contractor shall assume that all unknown materials discovered are potentially hazardous, and seek advice before continuing. The Principal Contractor is responsible for arranging the safe removal and disposal of all such materials.



9 COMMUNICATION

Ongoing communication between all parties is a key element to maintaining safety. Any information that is relevant to other parties should be shared. If in doubt, tell all other parties.

The Principal Contractor shall arrange meetings at regular intervals (as appropriate to the stage of the works) to discuss issues that affect safety. Any (major) design changes should be discussed at these meetings.

9.1 CONCERNS

Current concerns in relation to health, safety or welfare shall be communicated directly between the Contractors and the Principal Contractor/Site Safety Manager. Ongoing concerns will be communicated through the site meetings.

9.2 AUDIT OF PROCESSES

The Principal Contractor will undertake planned site safety inspections to supplement those undertaken by the Contractor's personnel. The frequency and timing of inspections will be determined by the level and nature of work activity.

Inspections shall include a sample audit of standards of safety management processes undertaken by the Principal Contractor in compliance with this plan.

9.3 SITE INSPECTIONS

The Principal Contractor is responsible for conducting site inspections to ensure that safe working practices are maintained. Records shall be kept of the inspections.

An agreed schedule of inspections shall be included in the Construction Phase (Health and Safety) Plan.

9.4 CONTACT LIST

Role	Duty Holder	Contact Person	Position	Contact Details
Client	The Maritime Coastguard Agency	Linda Eden	S&ITP Estates, Project Support	0797 6808 769 linda.eden@mcga.gov.uk
Principal Designer	WSP UK Limited	Gareth Taylor	Project Manager / Contract Administrator	02920 769 159 Gareth.taylor@wsp.com
Principal Contractor	To be Appointed			



9.5 ADDITIONAL PROJECT CONTACTS

Role	Contact Person	Position	Contact Details
Kitchen Designer	Darran Chapman	Technical Sales Manager	02920 461 368 Darranchapman.cardiff @howdens.com

9.6 RECORDS

When requested, the Principal Contractor shall provide, or make available for inspection any information regarding health, safety or welfare on the project. Such information may include:

- Accident/incident statistics and normalizing data;
- Accident/incident reports;
- Site safety reports;
- Method statements;
- Details on the implementation of the Construction Phase (Health and Safety) Plan;
- HSE communications.

9.7 DISPLAY OF NOTICES

The following list gives the Principal Designer's recommendations for notices to be displayed prominently in the site offices:

- Notification to the HSE F10 (rev) form (mandatory to display);
- The major accident/emergency plan;
- Emergency procedures and contact numbers;
- The site rules;
- Hazard warning signs;
- Access restriction signs/pedestrian and traffic routing.

9.8 RE-DESIGN WORK, NEW DESIGN WORK

The Principal Contractor shall inform the Principal Designer of any proposed re-design or new elements of design required before that work package commences.



10 HEALTH & SAFETY FILES

10.1 DEVELOPED HEALTH AND SAFETY FILE FOR THIS PROJECT

Throughout the pre-construction phase of the project, the Principal Designer will commence the Health and Safety File, all Contractors and designers are responsible for ensuring that all their relevant information for the Health and Safety File is prepared and handed over to the Principal Designer for inclusion in the File. Similarly, the Principal Contractor shall forward any relevant information he possesses to the Principal Designer for inclusion in the Health and Safety File. The Principal Designer will pass the completed Health and Safety File to the Client at completion of the project. However, if the Principal Designer's appointment ends before the project completion he will pass the partially completed file to the Principal Contractor and the Principal Contractor will be responsible for completion of the File and its onward transmission to the Client.

Information contained in the file needs to include that which will assist persons carrying out construction work on the structure at any time after completion of the current project and could include:

- Drawings, calculations and plans used and produced throughout the demolition and construction process along with the design criteria;
- General details of the construction methods and materials used;
- Details of the structure's equipment and maintenance facilities;
- Maintenance procedures and requirements for the structure;
- Details of the location and nature of utilities/services and their maintenance/isolation, including emergency and fire-fighting systems, equipment, routes, procedures etc.;
- Details of hazardous substances and safety data sheets;
- Load bearing details retaining walls, piling, floors, walls, trusses and thrust blocks etc.;
- Foundations, crane bases, etc.;
- Archaeological data relating to health and safety issues.

All information shall be provided both in hard copy and electronically (e.g. CD ROM or DVD). Initial "red line" drawings will be accepted provided these are legible and will be replaced by CAD drawings within a reasonable timescale. Drawings at A3 size are preferable and must be legible.

The electronic format must utilise common packages such as Microsoft Word and Excel (but not Access). Drawings and other scanned documents shall be in pdf format, and not in any CAD format (e.g. DWG).



11 EMERGENCY ARRANGEMENTS

11.1 FIRST AID

A first aid box must be provided in the main site office, and at all mobile sites.

The Principal Contractor will be responsible for ensuring that the contents are replaced as necessary.

The name of the First Aiders and the location of the first aid box are to be posted in the mess room/canteen.

First Aid, Fire Fighting and Emergency Arrangements

The Principal Contractor shall assess the site to determine the first aid and firefighting requirements.

11.2 EMERGENCY ASSISTANCE

The following are suggestions for telephone numbers and action plans to be displayed on the site notice board:

- Emergency telephone numbers;
- Major accident emergency plan;
- Major fire/explosion emergency plan;
- On discovering a fire follow the fire safety procedure found in the appendices of the tender pack.

11.3 REPORTING OF ACCIDENTS AND DANGEROUS OCCURRENCES

Accident reporting arrangements between the Principal Contractor, the HSE and Client are to be developed and included in the Construction Phase (Health and Safety) Plan.

All accidents MUST be reported to the Principal Contractor for inclusion in the accident book. Any RIDDOR (Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013) reportable accidents/dangerous occurrences will be investigated and a report submitted to the Health and Safety Executive by the Principal Contractor, as required.

The Contractor shall ensure that all current legislation with particular reference to the Health & Safety at Work etc. Act 1974 is implemented in spirit as well as the letter of the law.



12 SPECIFIC SITE RULES

Establish and display clear rules and procedures for all visitors to the site. The Principal Contractor will be required to provide detailed site rules within the Construction Phase (Health and Safety) Plan in addition to those specified by the client, based on his own judgement of the project. These should include:

- Training & Site induction;
- Accident reporting;
- Personal protective equipment;
- Permits to Work.

12.1 CLIENT SITE RULES

The following rules will be incorporated by the Principal Contractor into the Construction Phase (Health and Safety) Plan (a copy of which shall be kept on-site at all times):

- Tools, materials etc. are not to be left unattended;
- All waste must be stored in covered skips. No waste is to be burned on the site;
- The playing of radios, personal CD players etc. will not be permitted;
- Smoking will only be allowed in designated areas;
- There will be no horseplay;
- Safety helmets and safety boots will be worn at all times together with fluorescent and logo identification clothing.



13 THE DESIGN

13.1 CONSTRUCTION AND HAZARDOUS MATERIALS

13.1.1 SUBSTANCES HAZARDOUS TO HEALTH – DURING CONSTRUCTION

The Principal Contractor shall continually monitor the project and ensure that substances hazardous to health are identified, along with the appropriate control measures.

Material safety data sheets shall be obtained for all substances hazardous to health in use as part of this project. All Contractors shall ensure the method of work, storage and disposal of this material are compatible with the requirements stated in the datasheet, and industry best practice. A method statement shall be prepared, used and kept for the materials/substances in use.

Substances Hazardous to Health – during the use of building or future maintenance/construction work

The Principal Contractor shall ensure that material safety data sheets are obtained for all substances hazardous to health, which are to be installed or are discovered in the structure as part of this project, for inclusion in the Health and Safety File.

Potential Substances and Materials that may be present

The following list is a non-exhaustive list of substances and materials that may be present:

- Sharps:
- Hazardous substances (dusts, solvents, gases, acids, alkalis, etc.);
- Biological agents;
- Contaminated watercourse or soil.

13.2 CONSTRUCTION RISK MANAGEMENT

It is the policy of the client to attach the greatest importance to health and safety of all persons employed on the project, and directly affected by the works. The project will be constructed, so far as is reasonably practicable, in such a way that the risk to health and safety of all persons engaged in, or affected by its construction, use, maintenance and demolition are eliminated or reduced to an acceptable level under current health and safety legislation and good practice.

Method statements must be developed by the Principal Contractor and Contractors to manage and control hazards identified, see section 13.4 for those identified to date. The Principal Contractor and Contractors must carry out additional risk assessments and develop method statements as necessary throughout the duration of the project. The resultant method statements or safe systems of work should be documented.

The method statement provided must:

- Inform the reader of the task and the associated risks;
- Inform the reader of what precautions are to be taken when faced with those risks;
- Inform the reader of who will provide those precautions;
- Inform the reader of the necessary plant, materials and equipment that must be utilised.

It is important that unplanned situations or activities that have not been previously assessed, but that may give rise to risk, are assessed before work is started.



13.3 **CONSTRUCTION RISKS - SUMMARY**

The following is a summary of the type of risk activity associated with this project.

- Work at height
- Handling large pre-fabricated elements
- Hot works

The following health and safety issues have not yet been resolved and control measures are required from the Principal Contractor/Contractor.

- Working around utility services equipment
- Interface with the public/unauthorised access
- Objects/materials falling
- Location of compound and access for contractors.
- Location of contractors parking
- Agreement of segregated routes for construction operatives, materials and debris across the site



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