LEHDING SERVICES DESIGN LTD

PROJECT REF: **L2171**

PROJECT TITLE: **CENTRE POINT, LINK BUILDING, W1**

CLIENT : **STREAT MARKETS LTD**

TITLE : **COMMON MECHANICAL, ELECTRICAL & SPRINKLER DESIGN PHASE CDM DOCUMENT**

1. Introduction

This project covers the installation of the mechanical, electrical and sprinkler services to restaurant, occupying Retail Unit 01 & 02, Link Building Centre Point, 101-103 New Oxford Street, London for Streat Markets Ltd.

This building currently offers retail space and is being refurbished to enhance these facilities and allow for restaurant use.

The building has numerous heritage features which must be preserved.

The building is a multi-storey / multi tenancy building. Streat Markets Ltd restaurant demise will occupy part of ground floor, mezzanine, Basement -1 and Basement -2 of the Link Building at Centre Point. Ground floor, Mezzanine will consist of Main Bar, numerous open Kitchen units and dining areas. Basement -1 will have a small Bar area and customer toilets, plant room and Kitchen Prep and wash-up areas. Basement -2 will contain staff welfare facilities and plant rooms as well as Office. The main entrance to the client's demise is on Ground Floor level 0.

Mechanical Services

The following is a description of the mechanical services that shall be installed by the Mechanical Contractor within Streat Markets Restaurant.

This project covers the installation of mechanical services to the Bar / Restaurant and back of house areas.
The services shall include the installation of new mechanical services installation as detailed on the drawings. The new mechanical services installation shall be complete in all aspects with distribution pipework throughout the building. The installation shall comprise of fresh air plant, condense water, heating, chilled water, plumbing, sanitary ware, soils & waste, gas and ventilation installations.

Condense water

2No valved and blanked condenser water loop (flow & return) connections via a plateheat exchanger, with a pressure drop of 15kPa and volume flow rate of 8.6l/s combined, will be provided by the landlord within the demise of the Unit.
The mechanical contractor shall supply, install and commission the necessary watercooled condensing units to satisfy the heating and cooling requirements within the demise. Space has been allocated within the demise equipment as indicated on the drawings. The mechanical contractor shall provide a circulating pump and pressurisation unit with expansion vessel on the secondary condenser water circuit from the Landlord plate heat exchanger to the tenant's water cooled condensers. The connection to the condenser water loop will enable the Retail Tenant to generate the required heating and cooling to suit their requirements. For cooling mode, maximum flow and return temperatures of 42/48°C provides a possible total heat rejection of 180kW.
For heating mode, minimum flow and return temperatures of 21/18°C provides heat input of 180kW, excluding additional heating capacity due to compressor heat rejection.

Heating

A complete new LPHW heating installation shall be provided by the mechanical contractor. This installation shall comprise of water cooled and air cooled heat pumps, for generation of LTHW, pumps, pressurisation unit and expansion vessel, all serving the heating requirements of the unit. The installation as indicated on the drawings will serve AHU heating coils, fan coil units and a water cylinder.
In addition, mechanical contractor shall supply and install electrical overdoor curtain as well as electrical perimeter heaters in the main dining area as indicated on the relevant drawings.

Chilled Water cooling

A complete new CHW installation shall be provided by the mechanical contractor. This installation shall comprise of a water cooled chiller and air cool heat pump, for generation of CHW, pumps, pressurisation unit and expansion vessel, all serving the cooling requirements of the unit. The installation as indicated on the drawings will serve AHU cooling coils and fan coil units.

Ventilation
A new ventilation installation shall be provided under this contract. The Landlord has provided ductwork connection at basement levels level dedicated for the kitchen extract facility. Louvres have been provided by the Landlord for general extract and fresh air provision for the unit.

The landlord will provide 2no dedicated Air Purification AHUs (Ecology Units)(extract only), together with associated extract ductwork. The Ecology Unit serving the Unit will be located within the landlord plant area at basement -2 level. The extract duct shall terminate (blanked off) within the demise of the Retail Unit for future connection by the Tenant.

Supply air handling units shall provide fresh air, heating and cooling to the restaurant area and kitchens.

The toilet extract facilities shall be provided with ductwork, twin fan and grilles, with the installation terminating in the general louvre provision provided by the Landlord.

Gas
The landlord will provide gas supply left blanked and capped within the demise of the Retail Unit for future connection by the Retail Tenant. Gas meters for each Retail Unit will be located within the main Gas Meter room at basement level. The mechanical contractor shall provide pipework, a gas solenoid valves arrangement as indicated on relevant drawings. This shall be interlocked with the supply AHUs and kitchen extract installation with signal to the fire alarm.

Plumbing
A builder's work sleeve will be installed by the landlord at the building perimeter, Earnshaw Street (Basement Level) to facilitate the installation of a future water main from the Thames Water main to the Retail Unit by the Retail Tenant.
This contract shall include for installation of a complete MWS system. The contractor shall liaise with Thames Water in respect of new water connection.
A new plumbing installation shall be provided serving all kitchen equipment, bar equipment and sanitary ware facilities incorporating hot water generation

Soils & Waste
A new above ground drainage facility shall be provided for all areas. A limited number of drainage points have been provided by the Landlord and the sanitary ware facilities shall connect to these facilities. The kitchen area will also be provided with a grease interceptor which will integrate into the kitchen equipment provided under catering contract.
The mechanical contractor shall install complete above ground drainage system to include drainage pumps, pipework, manholes and floor void pipework, kitchen floor gullies, etc. as indicated on relevant drawings.

Electrical
The new electrical services shall be complete in all aspects and shall include:

a. Mains power supply and distribution including switchgear and liaison/attendance with UKPN and utility service providers.
b. Sub-mains power distribution including switchgear
c. Small Power
d. IT Structured Wiring and telecoms
e. Lighting & Emergency lighting
f. Fire Alarm systems
g. Access controls
h. Mechanical services wiring and controls
i. Containment

Temporary Services
Temporary services to include fire alarm, task lighting and emergency lighting.

Power
The landlord has provided UK Power Networks supplies - 400A TPN supply located on Basement -1 and a 200A TPN supply located on Basement -2. New Main distribution boards shall be installed on Basement B-1 plantroom to supply sub distribution boards and BEMS panel which will be individually metered.
All electrical services will be installed new.

Lighting
A new lighting system will be installed to all areas. Front of House lighting design by specialist consultant Into Lighting Ltd. Emergency lighting will be provided throughout the premises to facilitate ease of movement in the event of mains or local circuit failure. The emergency lighting will be provided via integral led emergency lights and directional exit signs.

Fire Detection
A new open protocol wireless L1 classification fire detection system will be installed throughout the demise. The system will operate via breakglass units, smoke and heat detectors and sounders / beacons. The system shall be interfaced with the mechanical plant (a/c & ventilation) and the sprinkler system in addition to the landlord system.

Containment
Cable trays, basket, trunking and conduit will be installed throughout all areas of the premises to accommodate the cabling to all the electrical services. The containment systems will consist of surface mounted exposed, concealed in ceiling voids or run in floor voids. All containment to be LS0H or galvanised as relevant.

Data & Telephone & Wifi
A cat6 structured wiring system to be installed terminating in a comms cabinet located in the B-1 office.

Mechanical Plant & Controls Wiring
All small power, associated connections and controls wiring required for the entire mechanical installation to be installed. This shall include fans, controllers, pump, boilers etc supplied under the mechanical contract.

Earthing and Bonding
Earthing and bonding shall be provided to comply with the relevant British Standard and the requirements of the current IET Wiring Regulations (BS7671) 18th edition. This shall include, but not be limited to: Building steel work, ducting, piping, suspended ceiling grid etc.

2. Parties to the project

Client :-

STREAT MARKETS LTD

Planning Supervisor :-

GERALD EVE LLP

Engineering Consultants :-

PROJECT MANAGER	MORGAN CARR
ARCHITECT	MACAULAY SINCLAIR
STRUCTURAL ENGINEER	THOMASONS
M&E CONSULTANT	LEHDING SERVICES DESIGN

Resident Engineer :-

TBA

Principal Contractor :-

TBA

Other Contractors :-

TBA

3. Design Phase - Pre Tender Health & Safety Plan

3.1 Nature of Project

Fit out of a restaurant within a refurbished heritage building.

Project time scale as contract preliminaries.

3.2. Existing Environment

Surrounding land uses	-public highway,
Existing services	-refer to Utility Companies / Landlord drawings for details
Traffic systems	-adjacent to public highway
Existing structures	-vacant space
Ground conditions	-ground water close to surface

3.3. Existing Drawings

Available if required from site.

3.4. Design

Specific design codes and standards issued.

Current British and European Standards
Particular focus on BS7671.

Special considerations to be given to

a) materials handling and disposal

b) design of services requiring working at heights

c) safe maintenance.

d) sealing of penetrations through fire walls

e) Co-ordination of multiple services

f) Interaction of different services.

3.5. Construction material

Standard materials used on most construction sites

3.6. Site - wide elements

Will be detailed at site visit and project safety review.

3.7. Overlap with client undertaking

All work to be in accordance with Client standard and in compliance with project safety review findings.

3.8. Site Rules

All work to be in accordance with Client standard and in compliance with project safety review findings.

3.9. Liaison

All liaison with Client to be through appointed Resident Engineer.

Other works will take place in the area of this project. Conflict will be controlled by the Resident Engineer

HEALTH & SAFETY PLAN - DESIGN PHASE - BUILDING SERVICES

4. Design Phase - Pre Tender Health & Safety Plan – Site specific hazards

4.1 Consultation with all statutory bodies for existing services. The contractors shall contact all statutory authorities for indication of services in the area being worked in.
Existing statutory services drawings are provided for information only. Contractor to ensure accuracy with relevant bodies.
Some existing services drawings within the site demise exist and are provided for information only.

4.2 Delivery of materials to a site with minimal compounds and surrounded with public access. The contractor must ensure that deliveries are allocated specific time slots as agreed with the main contractor. All deliveries must be brought to the specific area of works immediately. The contractor shall be aware that the general public will be in the vicinity of the site at all times. The contractor shall cordon off specific areas for delivery vehicles and ensure deliveries are off loaded speedily. No vehicles may park outside the delivery period in the surrounding area of the Building.

4.3 Contractors shall be aware that they may be operating in a confined space. Adequate ventilation to be provided in line with industry guidelines.

4.4 Contractors shall evaluate the condition of the existing drainage system prior to connection. A full survey shall be conducted with photographic records of all services.

4.5 Risk of spread of fire - Fire stopping has been incorporated into the services installation contracts ensuring all holes are fire stopped. This is avoiding conflict with the main contractor as they may be un-aware of some hole penetrations.

4.6 Risk of damage - Crane equipment for off loading and lifting of plant shall be carefully coordinated. All equipment has been specified with suitable lifting lugs specifically for crane use. The contractor shall ensure when ordering all plant, that suitable lifting facilities are incorporated. Slings will not be accepted.

4.7 Maintaining all existing fire escape routes. The rear service yard is a means of fire escape for the adjacent activity areas. No materials are to be stored in these areas at any time. Temporary signage to be provided advising of escape routes as necessary. Clarification to be obtained from the architect.

4.8 Existing services within the Building to be retained for the duration of contract. Existing live services are to be retained as much as possible. Should services require removal the contractor shall notify the building operator of the requirement and arrange a suitable time for works to undertaken.

4.9 Hot works being carried out in an existing building. Potential of fire. The contractor shall obtain relevant permits for hot works being carried out. These shall be carried out with suitable fire retardant materials protecting the adjacent structure, services etc. Portable fire extinguishers shall be provided to the site by the contractor and must be available in the vicinity of hot works, at all times. The contractor shall ensure that all hot works are cold prior to leaving the site on any day.

4.10 Removal of existing services from the Building. The contractor shall ensure that redundant materials are removed from site at the end of each day. Contractors' staff shall take due care and attention for the removal of all materials as the building will be occupied in the area surrounding all works being carried out.

4.11 Logistics for deliveries to the site to be considered with other occupied areas. Care must also be taken of the external facade.

5. Design Phase - Pre Tender Health & Safety Plan – Site specific hazards

Job No: L							Page 1 of 1
Ref No.	Activity/ Element	Potential Hazards	Population At Risk	Risk Rating			Action
				L	S	R	
5.1	Fire Stopping	Risk of spread of fire	Installation contractors	M	H	M	Fire stopping has been incorporated into services installation contract to ensure all holes are fire stopped.
5.2	Lifting and loading by Crane	Falling objects	Installation contractors	M	H	M	Coordination between all services during crane lifting and off loading. Equipment to be specified with suitable lifting lugs. Use of slings not acceptable.
5.3	Hot Works	Fire. Burns.	Installation contractors	M	H	M	Hot works permit system to be in place Fire retardant materials to be used for protection of area. Portable fire extinguishers to be available in the vicinity at all times. All hot works area to be cold before contractor leaves site on any day.
5.E	Access to electrical plant	Install & Maintenance contractors	All	M	H	M	Area has controlled access. Adherence to landlord's isolation and work permit requirements.
5.6	Recessed conduits, cutting holes	Installation contractors	Installation contractors	M	H	M	Contractors' method statements. Dustless tracking techniques specified.
5.7	Hazardous materials – lamps, batteries	Install & Maintenance contractors	All	M	H	M	Contractors' method statements. Adherence to COSHH and Local Authority regulations.

Key: L = Likelihood (Low, Medium, High) S = Severity (Low, Medium, High) R = Risk (Likelihood x Severity)