Eta Projects

CONSULTING ENGINEERS…
AND MUCH MORE

COMPANY PROFILE

CONTENTS

ETA PROJECTS LTD

Eta Projects Ltd is an independent firm of Consulting Engineers, providing comprehensive Mechanical and Electrical services to design, manage and deliver your projects. We are specifically focused on sectors where Mechanical and Electrical services are critical to business, such as Healthcare, Telecommunications, Trading Floors and Printing.

Business continuity and sustainability is our key focus.

We deliver a personal service by building on relationships with our clients but yet maintaining impartiality and commerciality in our design approach. We undertake all our designs with our clients' long term strategic plans in mind. We apply strategic thinking throughout all our designs to ensure that each individual project is designed to complement the other and contribute holistically towards a long term infrastructure.

HOW WE WORK

Our Engineering team work closely with you to determine your business requirements and produce a bespoke Engineering solution to suit your exact needs. The focus is on excellence, energy reduction and value for money. Our approach enables you to "cherry pick" the precise service that you require of us, with the facility to extend this as further business objectives become apparent.

Eta Projects has a strong track record for the design, management and delivery of cost effective solutions, achieving extraordinary outcomes for our clients. The key to these successes has been the close and trusting relationships we have developed over the years. These have emerged when engaged in a fully collaborative working relationship.

We strive to establish strong professional working relationships at every opportunity with all our clients and professional teams. We foster mutual regard, respect and trust during any project, be it large or small. Every commission received by Eta Projects benefits from the personal involvement at Director level throughout its life from inception to completion.

We acknowledge that our success is down to our people, they are our most important asset and our performance is measured against their skill and experience. We are committed to our people to ensure they receive the appropriate level of training to meet their needs and ambitions, creating an atmosphere of continual improvement throughout the business.

OUR PROJECT APPROACH

EVALUATION	Through our initial consultation, we gain a full understanding and appreciation of your building services requirements. This enables us to advise the most cost-effective solution.
DIAGNOSIS	Primary research is undertaken, including site investigation towards building a detailed understanding of the existing site conditions.
ANALYSIS	With all information collated, a detailed analyses is undertaken of all site conditions.
SOLUTIONS	With a detailed knowledge and understanding of your building services, we develop practical solutions or make the necessary recommendations which will assist you to deliver your business objectives.
IMPLEMENTATION	We will work with you individually or as part of a team to ensure the most cost-effective implementation programme. Through on site monitoring activities, we provide resolutions to unforeseen problems.
COMMISSIONING & ACCEPTANCE	We conclude the final and most critical part of the project, by ensuring the systems are correctly commissioned through effective partnership with you, the client and Eta Projects in the final handover of a completed project.

OUR SERVICES

ETA IS STRUCTURED TO DELIVER FOUR DISTINCT BUSINESS STREAMS:

M&E CONSULTANCY

Eta Projects provide full Building Services Consultancy, which includes all aspects of your building services.

MANAGED SERVICES + HV/LV INFRASTRUCTURE

Eta Projects provide the complete Power Management Solution from Design, Implementation, Monitoring, Collection Energy Management and Safe Operation and Training for the complete project.

Eta Projects also specialise in the provision of electrical infrastructures, including High Voltage (HV) and Low Voltage (LV) Sub-Station Designs, Implementation and Commissioning.

AUTHORISING ENGINEER & TRAINING

Eta Projects, through their extensive experience of Hospital Services, provide, support, advice and guidance on technichal matters related to HTM 06-03 and HTM 06-02.

Eta Projects can provide Authorised Person (AP) and Competent Person (CP) Training courses for High Voltage (HV) and Low Voltage (LV) certification on customers' sites, to suit staff needs and availabilities.

METERING SOLUTIONS

Eta Projects provide Special Services including Power Monitoring and Trouble Shooting, to Harmonic Analysis and the supply and installation of bespoke permanent Power Monitoring Systems.

OUR SERVICES
BUSINESS STREAMS

ENGINEERING CONSULTANCY
MECHANICAL

Eta Projects has extensive experience in delivering high quality Mechanical and Public Health Services design. We can undertake the complete project planning or carry out single stage design to reflect specific client and project requirements.

Our Mechanical Services designs create environments that are comfortable for occupants, maintainable for servicing, economic for clients, and efficient with resources. Our Mechanical Engineers have considerable experience and bring this to all projects from conception to completion and handover. We strongly believe that services design must be developed in conjunction with client specific requirements, brief and budget. Thus, Eta Projects will dedicate time at the start of each project to fully understand the brief expectations.

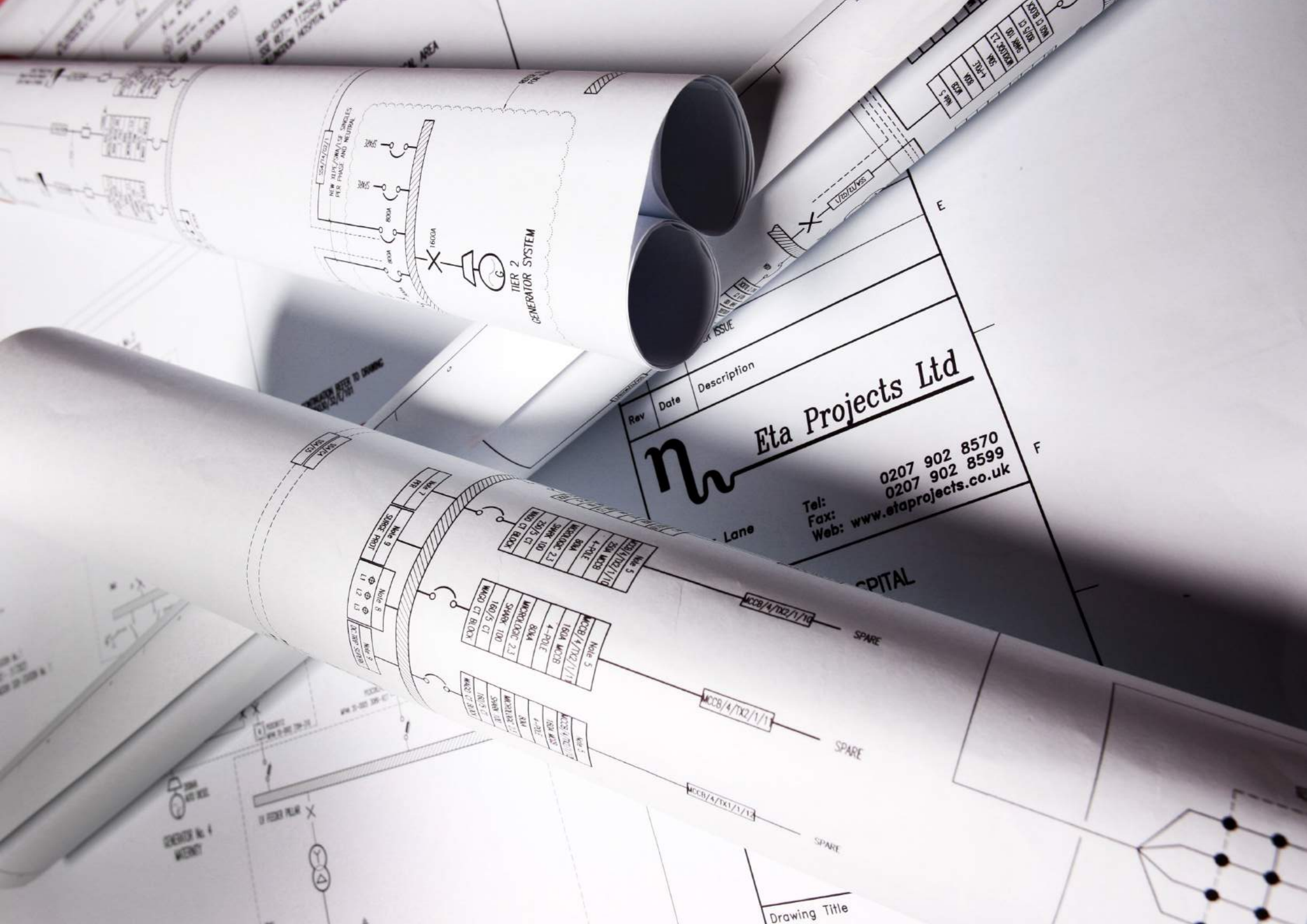
Our experience incorporates major plant replacements within fully operative buildings use, new installations and refurbishments have been appreciated by many of our clients. Eta Projects have the facility to carry out the design and construction monitoring of the Mechanical Engineering systems.

These systems are as follows:

- High Temp Hot Water (HTHW).
- Medium Temp Hot Water (MTHW).
- Low Temp Hot Water (LTHW).
- Steam.
- Central Chillers, Plant and Distribution.
- Air Conditioning and Comfort Cooling.
- BMS Control Systems.
- Boilers Plant.

The Mechanical services we offer are:

- Public Health Systems.
- Mechanical Systems Design.
- Condition Surveys/Feasibility.
- Full Maintenance Support.
- Health & Safety Compliance.
- M&E Maintenance Management.
- M&E Systems Project Management and Cost Control.


Rev
Date
Description
Eta Projects Ltd
Tel: 0207 902 8570
Fax: 0207 902 8599
Web: www.etaprojects.co.uk
TIER 2
GENERATOR SYSTEM
SPARE
SPARE
SPARE
Drawing Title

ENGINEERING CONSULTANCY
ELECTRICAL

Eta Projects has wide experience in all aspects of Electrical Services design. We undertake the complete project planning or carry out single stage design to reflect specific client and project requirements.

Our Electrical Services designs meet the stringent IET and HTM requirements that provide strong resilience against loss of supply. Our Electrical Engineers have considerable experience and bring this to all projects from conception to completion and handover.

Our experience incorporates HV/LV distribution replacements and refurbishment of the dependent Electrical Services for existing and new installations. Eta Projects have the facility to carry out the design and construction monitoring of the Electrical Engineering systems.

These systems are as follows:

- HV Distribution.
- LV Distribution.
- Discrimination Studies.
- Lighting Design.
- Emergency Lighting.
- Small Power Installations.
- Fire Alarm Systems.
- Access Control, Intruder Alarms.
- Voice/Data Wiring.
- Nurse Call.
- Attack Alarm.
- Lightning Protection.

The Electrical Services we offer are:

- Electrical Services Design.
- Full Maintenance Support.
- Health & Safety Compliance.
- M&E Maintenance Management.
- M&E Systems Project Management and Cost Control.


HSBC
PMG

MECHANICAL AND ELECTRICAL (M&E) BUILDING SERVICES

THE TOTAL PACKAGE

We specifically focus on sectors where Mechanical and Electrical (M&E) Services are critical to business. We often combine the expertise of both Mechanical and Electrical Engineering to provide our clients with the complete building services for these type of projects.

CLIENT COLLABORATION

We deliver a personal service by building on relationships with our clients but yet maintaining impartiality and commerciality in our design approach. We undertake all our designs with our clients' long term strategic plans in mind. We apply strategic thinking throughout all of our designs to ensure that each individual project is designed to complement the other and contribute holistically towards a long term infrastructure. We strongly believe that services design must be developed in conjunction with clients' specific requirements, brief and budget.

Thus, Eta Projects will dedicate time at the start of each project to fully understand the brief expectations.

UNIQUENESS

At Eta Projects we believe that we deliver a unique service towards our clients. We believe that we:

- Provide the complete building services.
- Provide an innovative approach to building challenges.
- Work in partnership to achieve common objectives.
- Often deliver projects above expectation of our clients.
- Provide clients with totally integrated solutions.
- Take full responsibility and ownership of projects.
- Operate transparent, open-book policy.


T10/ACB/2
Reset
Push OFF
Push ON
Masterpact
NW16 H2
Schneider Electric
AUTO CHANGEOVER INHIBIT
OFF
ON
ATS CONTROLLER KEYLOCK
OFF
ON
T10 GENERATOR INCOMING SUPPLY
SUPPLY ONLINE
PHASES HEALTHY
L1
L2
L3
SWITCHBOARD T10
METERING COMPARTMENT
DSE
Deep Sea Electronics
ATS 332
Nexus 1500
RESTRICTED EARTH FAULT RELAY
HV INTERTRIP RELAY
TRANSFORMER TEMP. TRIP RELAY
AREVA
T10 HV TRIP
T10 ACB TRIP
EPO RESET
T10 MAINS INCOMING SUPPLY
SUPPLY ONLINE
PHASES HEALTHY
L1
L2
L3
WARNING
OPERATING THIS TRIP BUTTON WILL TRIP THE FOLLOWING BREAKERS-
MAINS INCOMER ACB
GENERATOR INCOMER ACB
BUS-COUPLER ACB

METERING SOLUTIONS

Eta Projects provide a full comprehensive Power Quality and Energy Management Service using our in-house Energy Management Systems and fully trained Engineers.

Our Power Quality Analysers can detect any abnormality on the Electrical Supply, i.e. harmonic distortion. This facility enables us to provide a unique added value service to our clients.

IS YOUR BUILDING POWER CRITICAL AND EXPERIENCING POWER PROBLEMS?

If so, Eta Projects can help to diagnose the problem and implement a cost effective solution. Problems can be any one of the following:

- Voltage Interruptions/Disturbances.
- UPS Failures.
- Generator Problems.
- Failure of Power Factor Equipment.
- Transformer Overheating.
- Harmonic Problems.
- Transient Voltage Problems.
- Inadvertent Operation of Protective Devices.
- Cables Overheating for no apparent reason.

POWER MONITORING

Network your meters to provide real time data from your Power System in your facility.

This data could be valuable information to:

- Early Identifications of Power Problems.
- Prevent Harmonic Problems.
- Prevent Transformers, Conductors and Cables from Overheating.
- Increase Reliability and Productivity of your Power System.
- Manage Energy Costs.

Eta Projects has a proven track record in Power Quality Monitoring and resolving Power Problems using our own proprietary Power Analysers.

We provide:

- Installation of Advanced Power Analysers.
- Power Monitoring Software.
- Fully trained Engineers to interpret the information recorded.
- A Solution to any Power Problem before it adversely affects your Business.


DRIVES & PLC SYSTEMS
PLC HEALTHY
MODE 1
MODE 2
MODE 3
MODE 4
MODE 5
Eta Projects Ltd

AUTHORISING ENGINEERS

Eta Projects provides the professional role as Authorising Engineer for both High Voltage (HV) and Low Voltage (LV) Systems to enable compliance with the Department of Health, Health Technical Memorandums HTM06-03 and HTM06-02.

This service includes detailed auditing to enable the client to develop a future strategy plan.

We also prepare “Operational Procedure Manuals” for both HV and LV which every facility should have to demonstrate compliance with current requirements.

Attendance at meetings to specifically address Authorising Engineer related concerns.

ROLE AND DUTIES OF THE AUTHORISING ENGINEER

The Authorising Engineer undertakes the responsibility for implementing, administering and monitoring the application of guidance for the safe operation and management of Electrical Systems.

The Authorising Engineers roles include the following duties:

- Assess and recommend in writing sufficient Authorised Persons to provide the necessary cover for all Electrical Systems and installations for which management has responsibility.
- Define the exact extent of the systems and installations for which each Authorised Person is responsible and, where appropriate, any part of the system which is excluded from the Authorised Persons responsibilities.
- If necessary, recommend the suspension or cancellation of the appointment of an Authorised Person and withdraw their certificate of appointment.
- Maintain a register of all Authorised Persons.
- Ensure that candidates for appointment as Authorised Persons:
    - Satisfy the qualification requirements.
    - Satisfy the training and familiarisation requirements.
    - Demonstrate adequate knowledge of each system, installation and type of equipment, for which authorisation is sought, have satisfied the Authorising Engineer as to their competence and ability.

AS AUTHORISING ENGINEERS WE ALSO OFFER OTHER SUPPORTIVE TECHNICAL SERVICES

These Supportive Technical Services include, but are not limited to the following:

- Assistance with decision making for operational safety.
- Support of site Authorised Persons with safety documentation.
- Independent advice on queries.
- Provision of HV/LV Authorised Person for Project Work if no site Authorised Persons are available.
- Switchgear & Transformer Schedule.
- Discrimination Study.
- Condition Surveys.
- Power Quality Survey.
- Infra-Red Inspections and Reports.
- Partial Discharge Survey.
- Assistance with decision making on formation of site Health and Safety Policy.
- Incident Investigation.
- Cable Fault Location.
- Project and Repair Management.
- Annual Condition Survey and report of site UPS Systems in conjunction with site Authorised Persons.
- Attendance at meetings to specifically address Authorising Engineer related Concerns.


200m

ELECTRICAL TRAINING

We also prepare and deliver on site Electrical Training for Authorised Persons, Competent Persons, Engineers, Electricians and others with responsibilities for Electrical Systems (LV/HV).

The courses we provide are:

NHS TRAINING COURSES

- Introduction to Electrical Safety Systems
- Competent Person (LV) HTM 06-02
- Authorised Person (LV) HTM 06-02
- Authorised Person (LV) HTM 06-02 Refresher
- Authorised Person (HV) HTM 06-03
- Authorised Person (HV) HTM 06-03 Refresher
- Authorised Person NHS Estates Operations versus Projects

COMMERCIAL TRAINING COURSES

- Authorised Person (HV)
- Authorised Person (HV) Refresher
- Authorised Person (HV) JSP 375 MOD
- Authorised Person (HV) JSP 375 MOD Refresher

GENERAL TRAINING COURSES

- Fundamentals of Inspection and Testing of Electrical Installations
- 17th Edition Wiring Regulation Amendment Three update
- Substation Entry (HV)
- Electrical Distribution and Switchgear Site Familiarisation
- Generator Fundamentals Authorised Person (LV)
- UPS Training Course Authorised Person (LV)
- Direct Current (DC) Systems
- Electrical System Protection and Discrimination Studies
- First Aid
- Aeronautical Ground Lighting Authorised Person

These courses are provided by our Authorised Engineers and are site based. They include the HTM06-02/03 Healthcare Operation and Management of LV/HV Electrical Systems.


VCB76 RING FEEDER
TO SUB STATION C
OS29
Voltage Transformer
connected to this
panel
VT HV isolation behind this door
CONTROL SELECTOR
REMOTE
CIRCUIT BREAKER
CLOSE
MMLG01
ECLIPSE

HIGH VOLTAGE (HV) ELECTRICAL INFRASTRUCTURE

Eta Projects has an extensive experience and track record in the successful delivery of High Voltage (HV) Sub-Station and associated Switchroom upgrade and replacement projects.

The majority of projects relate to service where power is critical to business, such as Acute Care Hospitals and Telecommunications Data Centre sites.

Our team of highly skilled Engineers, add further value to clients' projects with two Chartered Engineers with decades of experience. We take full responsibility for design, protection, procurement, commissioning and acceptance of the complete installation with the client's involvement at all stages of the project.

HV ELECTRICAL INFRASTRUCTURE SERVICES:

- Strategy, Concept and Design.
- New Utility Supplies.
- Supply Utility Negotiations and Approvals.
- Wayleaves Agreements.
- Sub-Station Equipment Selection.
- Detail Design.
- Detailed Changeover Methodology.
- Tendering and Procurement.
- Performing HVAP & SAP Services on client's behalf.
- Testing and Commissioning.
- Acceptance and Handover.

BENEFITS OF HV ELECTRICAL INFRASTRUCTURE:

- Cost effective long term solution.
- Enables direct procurement with 15-25% savings.
- Resilient Solutions.
- Single Point of Contact.
- Cost Management.
- Full Commissioning & Acceptance.
- Principal Lead Designer.

LOW VOLTAGE (LV) ELECTRICAL INFRASTRUCTURE

Eta Projects has extensive experience in designing Electrical Distribution Systems to the highest level of resilience and to comply with the Uptime Institute Tier Classification White Paper.

Eta Projects also perform audits on Electrical Systems to identify inherent risks in design and identify Single Points of Failures (SPF's) which can be rectified before a critical power failure occurs. Eta Projects also specialise in UPS and generator system design.

Along our team of highly skilled Engineers, Eta Projects adds further value to clients' projects with two Chartered Engineers with decades of experience. Our core specialism is the upgrade and replacement of Electrical Distribution Systems in the 'Live' Operational environment.

We can realise savings of up to 25% by enabling our clients to implement direct procurement of distribution equipment, such as switchboards, UPS and generator systems. Eta projects take full responsibility for commissioning and final acceptance of equipment on behalf of our clients.

LV ELECTRICAL INFRASTRUCTURE SERVICES:

- Strategy, Concept and Design.
- Equipment Selection.
- Detail Design.
- Detailed Changeover Methodology.
- Tendering and Procurement.
- Performing HVAP & SAP Services on client's behalf.
- Testing and Commissioning.
- Acceptance and Handover.

BENEFITS OF LV ELECTRICAL INFRASTRUCTURE:

- Cost effective long term solution.
- Enables direct procurement with 15-25% savings.
- Resilient Solutions.
- Single Point of Contact.
- Cost Management.
- Full Commissioning & Acceptance.
- Principal Lead Designer.
- Detailed Design for Sub-Stations.

TELECOMMUNICATIONS

Eta Projects is emerging as a leader in the Managed Services industry. With our dedicated team, we undertake the design, project management and management of building services for our clients both nationwide and internationally. We have developed relationships with our clients through the highest levels of service and rapid response that is required in the Building Engineering industry.

We pride ourselves on our flexible approach, which can be tailored to suit your specific requirements and we are committed to provide innovative Engineering solutions within agreed timeframes.

SPECIALISED MANAGED SERVICES WE PROVIDE:

- Telecommunication Power Maintenance.
- Procurement of DC Systems.
- DC Systems Design and Build.
- Live DC System Upgrades.
- Critical Power Support.
- Customer Database.
- Co-location Implementation.
- Electrical Engineering.
- Power.
- UPS.
- Power Monitoring.
- Technical Support.

MANAGED SERVICES – DC SYSTEMS

Eta Projects has extensive experience in the design and delivery of resilient DC Solutions to support national and international telecommunication networks, where continuous Power and Environment are critical. We have a dedicated team of specialist DC Engineers to support our clients. Between them, this specialist team has over a hundred years' experience designing, installing and managing -48volt DC Power Systems on behalf of major international clients including BT, Singtel and other carriers.

Our Specialist Engineers are highly trained and experienced and can undertake the live change-over of DC Systems to ensure continuous business continuity of service.

Eta Projects provide complete design solutions which include:

- DC System Design and Implementation.
- DC System Integration.
- DC to Telco Equipment Alarm Interfacing.
- DC Battery Live Implementation.
- Customer Site Database Management.
- DC Cabling Implementation.
- AC Design and Implementation.
- Service Support.


Welcome to St Thomas' Hospital

OUR CLIENTS
AN OVERVIEW

EXAMPLES OF OUR WORK
CASE STUDIES

ENGINEERING CONSULTANCY
HEALTHCARE

ROYAL MARSDEN CHELSEA

2X1500KVA STANDBY GENERATORS

PROJECT DETAILS

Client	Royal Marsden Hospital
Consultant Engineer	Eta Projects Ltd
Architects	Ansil and Bailey
CDMC	WT Partnership
Value	£763,000.00
Timescale	6 months

DESCRIPTION

The project involved the design, tender and implementation of a complete new HV infrastructure for the Royal Marsden Hospital in Chelsea. The project included two new UKPN intake Sub-Stations, two new 1500kVA Standby Generators and inter-connectors between each Sub-Station to provide resilience, redundancy and maintainability.

OBJECTIVES

The Royal Marsden Hospital was supplied via two outdated and undersized UKPN Sub-Stations one of which was below ground level. The original 500kVA generator supported lift services only. The Hospital was undergoing major redevelopment works and lack of power was identified as a serious risk and major constraint to the development plans. Eta Projects were instructed by the Trust to develop a long-term infrastructure strategy for their High Voltage and Low Voltage Electrical Distribution.

DESIGN

Working within a Listed Building introduces design criteria specific to the building. This was addressed by close liaison with the project Architect and Listed Building planning officer to ensure that the requirements were met in full. Detailed load analysis was undertaken of the UKPN local network which involved major enhancement works to the external network to provide the necessary capacity to support the long term needs for the site. The project expanded into the detailed design for the provision of two new UKPN twin transformer substations supported by two 1500kVA generators.

CHARING CROSS HOSPITAL

MICROBIOLOGY RELOCATION

PROJECT DETAILS

Client	Imperial College Healthcare NHS Trust
Consultant Engineer	Eta Projects Ltd
Architects	Brunton Boobyer Partnership
Quantity Surveyor	WT Partnership
CDMC	WT Partnership
Value	£1,200,000.00
Timescale	9 months

DESCRIPTION

Imperial College Healthcare NHS Trust is rationalising the Pathology Department to Charing Cross Hospital. This involved the relocation of the Microbiology Departments from Hammersmith Hospital, St Mary's Hospital and Chelsea and Westminster Hospital to Charing Cross Hospital. The project involved the strip out of the existing redundant installation and the installation of new to suit the specific requirement of a Microbiology Department.

OBJECTIVES

To provide Mechanical and Electrical services to suit a new Microbiology Department. The existing ventilation and heating systems were utilised where possible and supplemented with new to ensure that the required space conditions were provided. A new Power Supply was provided to supplement the existing as the new area required a greater Electrical load on the system than presently provided. The new laboratory CAT III laboratories require a dedicated protected supply.

DESIGN

The design of the new Mechanical services included ventilation/ comfort cooling, steam/condensate, LTHW heating, chilled water domestic hot and cold water services, drainage, hot and cold rooms, pneumatic tube system, laboratory gases and safety cabinet exhaust systems. The Electrical services consisted of a new Power Supply, essential and nonessential power to the work areas, UPS for the CAT III area, lighting/emergency lighting, security, fire alarm, voice and data and Power Supplies to serve the Mechanical plant.

ST. THOMAS' HOSPITAL

ACOUSTIC LINING REPLACEMENT

PROJECT DETAILS

Client	Guy's & St Thomas' Hospital NHS Trust
Consultant Engineer	Eta Projects Ltd
Quantity Surveyor	Eta Projects Ltd
Project Manager	Eta Projects Ltd
CDMC	Roger Barnard Partnership
Value	£900,000.00
Timescale	12 months

DESCRIPTION

The existing 8 No air-handling units (4 No 3rd Floor North Wing and 4 No 5th Floor Lambeth Wing) are of the builders work type, built in situ and are approximately 30 years old. The enclosures have been lined with an acoustic material, which is now deteriorating and must be replaced. The project related to the removal of the existing acoustic lining and replacing with new to current standards.

OBJECTIVES

The project was too be carried out, whilst the building is fully occupied, with the replacement of the acoustic internal lining supplied to new current standards. The new installation was designed to ensure there were limited loss of ventilation to the building and no increase in building acoustic performance.

DESIGN

It was agreed with the client that the works would have to be carried out to a phased programme. The inherent design of the building ventilation systems, where all four units within a building are linked at each floor level ensures that when a unit is taken out of action, the areas although down on duty are still supplied with conditioned air. The complete phased works were carried out and completed within a 12 month programme.

ENGINEERING CONSULTANCY
COMMERCIAL

ROYAL BOTANICAL GARDENS

JODRELL LABORATORY BUILDING VENTILATION PLANT UPGRADE

PROJECT DETAILS

Client	Royal Botanical Gardens, Kew Gardens
Consultant Engineer	Eta Projects Ltd
Quantity Surveyor	Eta Projects Ltd
CDMC	EC Harris
Value	£600,000.00
Timescale	6 months

DESCRIPTION

The Jodrell Laboratory Building is located at Kew Gardens. The project related to the Mechanical and associated Electrical services associated with the replacement of existing laboratory ventilation air handling equipment, BMS and associated power.

OBJECTIVES

To develop a strategy to replace the existing ventilation 11№ air handling units with 2№ units. These units incorporated a duty/ standby fan arrangement to ensure security of supply in the event of a fan failure. The temperature control of the ventilation to the various areas was by terminal Variable Air Volume dampers that operate on the dictates of the fume cupboard extract units.

In addition space planning was critical as the existing installation did not allow suitable space for servicing and maintenance.

DESIGN

The project included for the provision of new more efficient replacement air handling equipment to provide fresh air to the existing laboratory building. New terminal VAV dampers within weatherproof enclosures where provided at roof level to provide supply air make-up ventilation throughout the building. New Low Temperature Hot Water (LTHW) heating distribution was provided to serve air handling equipment frost coils and the terminal re-heater batteries. New heat reclaim circuits were also provided.

A reduction in the number of air handling plant has resulted in a more efficient ventilation system with improved service and maintenance accessibility.

SPECIFIC DESIGN REQUIREMENTS

Due to the phasing (the existing plant was to remain operational until change-over to the new plant) an extension of the existing ventilation louvered plant screen was required. This enabled the new plant to be installed whilst the old plant was still operational and maintaining space conditions within the laboratories.

DEUTSCHE POSTBANK LONDON

CENTRAL CHILLER REPLACEMENT

PROJECT DETAILS

Client	Deutsche Postbank
Consultant Engineer	Eta Projects Ltd
Quantity Surveyor	Eta Projects Ltd
Project Manager	Eta Projects Ltd
CDMC	Roger Barnard Partnership
Value	£400,000.00
Timescale	5 months

DESCRIPTION

Deutsche Postbank chiller was of an age where reliability of supply was at serious risk. The building had serious issues with overheating during the summer months. The project involved the strip out of the existing Trane 300 kW air cooled chillers and associated pipe work, valves, insulation, controls, power/ electrics, etc. and the installation of new.

OBJECTIVES

To carry out a fast track replacement of the air cooled chiller during the winter months and ensure fully operational for the cooling season. Failure to maintain a reasonable temperature control within the building would result in serious management staff issues. The existing Electrical Supply was upgraded/ rationalised and to suit current requirements.

DESIGN

The design of the new system involved a New York 400 kW air cooled chillers. The existing chilled water pipe work was modified to suit the new installation. Space was at a premium and the chiller selection and location was of paramount importance, particularly for future servicing and maintenance. New chiller BMS control system was provided and interfaced with the existing building system. The Electrical services consisted of a new upgrade Power Supply.

GOETHE-INSTITUT LONDON

ACOUSTIC LINING REPLACEMENT

PROJECT DETAILS

Client	Goethe-Institut London
Consultant Engineer	Eta Projects Ltd
Architects	Blauel Architects
Quantity Surveyor	Blauel Architects
CDMC	AECOM
Value	£3,400,000.00
Timescale	14 months

DESCRIPTION

The Goethe-Institut London is the German cultural establishment to promote the Teaching, Arts and Literature of Germany to the rest of the world. The project involved the full building refurbishment of the structure and services within a Grade 2 Listed Building.

OBJECTIVES

To provide Mechanical, Electrical and Public Health services to suit the building requirements. The existing heating system central plant was utilised (plant provided from an earlier Eta Projects design). The Mechanical works involved heating, water services, comfort cooling, BMS controls, kitchen/restaurant facilities, etc. The Electrical services were upgraded to suit the new building layout. The Electrical works involved new Power Supply, new lighting, small power, fire alarm, security, voice and data, TV/satellite, etc.

DESIGN

Working within a Listed Building introduces design criteria specific to the building. This was addressed by close liaison with the project Architect and Listed Building planning officer to ensure that the requirements were met in full. Sympathetic selection of plant and materials, agreed with the client, i.e. sectional type radiators, cast iron external box section rainwater pipes, etc. complemented the building works. The lighting was supplied to ensure that the correct level of lighting for the teaching classrooms was achieved and still ensure a building complimentary installation. Specific attention was given to the design of the Library and support areas.

TELECOMMUNICATIONS

UK DATA CENTRE
UK4 FELTHAM
DC REPLACEMENT

PROJECT DETAILS

Client	Global Data Centre
Consultant Engineer	Eta Projects Ltd
Value	£352,000.00
Timescale	3 months

DESCRIPTION

The existing Nortel DC Systems were over 15 years old and by today's standards were large, complicated and inefficient. The systems had originally been intended to be used as true A & B DC System's supplying dual feeds to all equipment within the data centre. Over the years this had not been adhered too and many dual fed pieces of equipment had been connect to only one of the two systems, also there was some legacy equipment (mainly from third party users in the data centre) which had a single supply. All these supplies and the standby batteries were to be changed to two energy efficient new Eaton 240KW DC Systems without loss of service.

OBJECTIVES

Install the Eaton DC Systems and migrate the supplies/batteries from the old Nortel DC Systems over to them without any loss of service to customers, commission systems, Alarms and remote monitoring via the clients intranet.

DESIGN

It was agreed with the client for a staged approach to the installation of the new DC Systems. The first Eaton DC System was to be installed and all supplies/batteries migrated without loss of service, the first of the old systems was then to be de-commissioned and the second new Eaton DC System installed on its foot print. All services were changed over (again without any loss of service) and finally the last of the old systems was decommissioned and removed.

GLOBAL DATA CENTRE

CUSTOMER DC SYSTEM UPGRADE PROGRAM

PROJECT DETAILS

Client	Global Data Centre
Consultant Engineer	Eta Projects Ltd
Value	£324,500.00
Timescale	9 months

DESCRIPTION

Eta Projects was awarded the program to replace the existing obsolete Eltek SMPS175 DC Systems to the new Emerson Netsure 211 DC Power System. The new Emerson Netsure 211 System offered the client a more compact, efficient and powerful design as well as remote control and monitoring software. This project was given high profile by the client as there had been major incidents reported at various customer site locations resulting in:

- Repeated emergency measures taken to maintain services due to non-replaceable failed parts.
- Loss of service following complete failure of system.
- Systems overheating and on occasions the Eltek had caught fire.

OBJECTIVES

Arrange access to site. Replace the obsolete Eltek SMPS175 DC Power Systems with the new Emerson Netsure 211 DC Power System. Transfer all the telecommunications circuits and batteries from the Eltek system to the Emerson system without any loss of service to customers. Commission systems and complete an alarm test and cabinet inventory on completion.

PROCEDURE

The client was in agreement that Eta Projects adopt their proven non-service affecting “Live change out” procedure method on a site by site basis throughout this project. The new Emerson DC Systems would be installed adjacent to the existing Eltek DC System (where possible). All supplies migrated without loss of service. Alternative measures were adopted depending on the configuration or restriction of the cabinet. Redundant equipment to be removed from the cabinet and stored for disposal.

GLOBAL DATA CENTRE GERMANY

DC POWER PLANT UPGRADEREPLACEMENT

PROJECT DETAILS

Client	Global Data Centre
Consultant Engineer	Eta Projects Ltd
Value	£104,000
Timescale	4 Weeks

DESCRIPTION

The existing Eltek DC Power Plant was over 20 years old and past its manufactures recommended 'shelf life'. Due to the age of the Power Plant it had become unreliable, unmaintainable and difficult to source spare parts.

Eta Projects were awarded the contract to replace the Eltek with a more energy efficient system and transfer all load supplies and batteries with zero interruption to the customer.

Eta Projects installed a 95% energy efficient 200kW Eaton DC Power System.

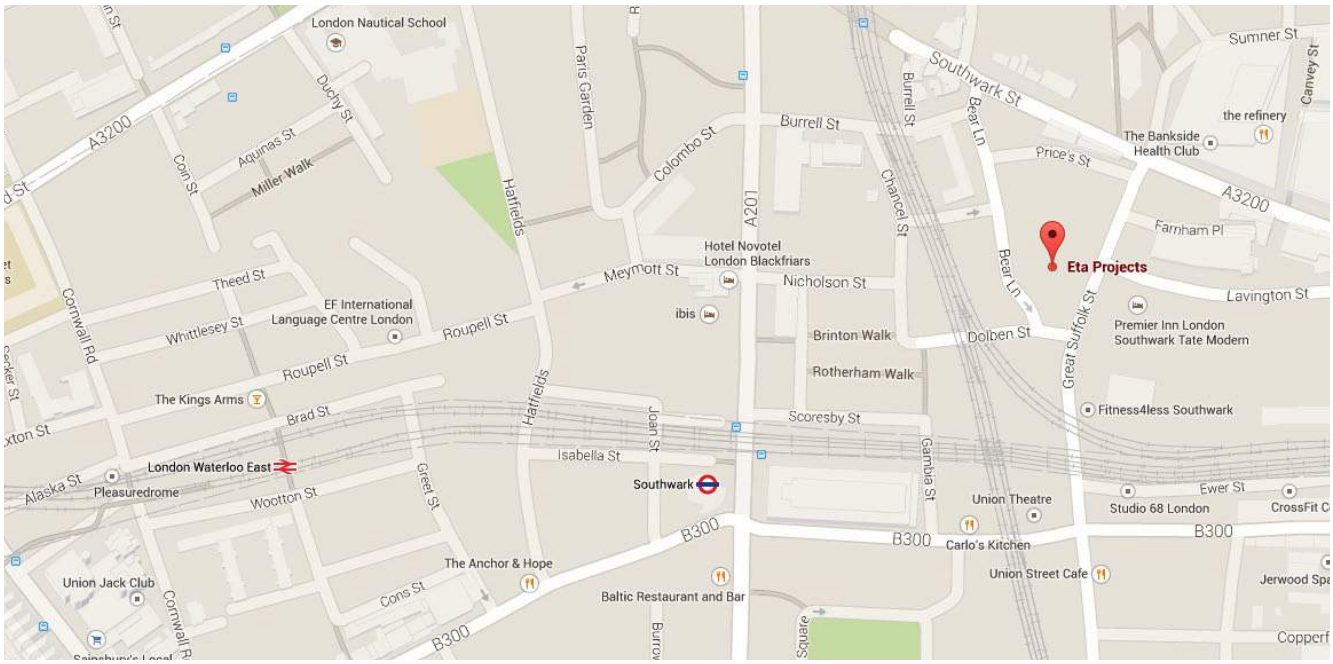
OBJECTIVES

Supply and install an energy efficient DC Power System with 200kW load capacity with the option to expand. Migrate all existing DC loads and batteries from existing redundant DC System with zero interruption to customer service. Commission the new system, alarms and remote monitoring via the customers intranet.

DESIGN

Eta Projects liaised with the DC Power Plant manufacturer to produce an energy efficient system that would meet the client's site specific requirements in terms of size, weight, load capacity, alarm configuration and remote monitoring.

Eta Projects produced an installation solution and program of works to complete the installation and migration of supplies and batteries from the redundant Eltek DC System. This innovative installation process ensured the customer had 8 hours battery autonomy of both systems for the durations of all works in the event of mains failure.



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