
**JUBILEE DAY SURGERY CENTRE (JDSC)
THEATRES CHILLER REPLACEMENT
SPECIFICATION**

CONTENTS

1.0 INTRODUCTION

- 1.1 SITE DESCRIPTION
- 1.2 CONDITIONS OF CONTRACT

2.0 SCOPE OF WORKS

- 2.1 DESCRIPTION
- 2.2 STRIP OUT WORKS
- 2.3 EXISITING COOLING
- 2.4 PROPOSED COOLING
- 2.5 PROPOSED ELECTRICAL SERVICES
- 2.6 SITE SURVERY
- 2.7 CONTROLS

3.0 GENERAL CONDITIONS

- 3.1 GENERAL STANDARDS
- 3.2 CONSTRUCTION (DESIGN & MANAGEMENT) REGULATIONS 2015
- 3.3 HEALTH AND SAFETY FILE
- 3.4 ASBESTOS
- 3.5 WORKING DRAWINGS
- 3.6 AS FITTED DRAWINGS
- 3.7 CONTINUITY OF WORKS
- 3.8 NOISE AND VIBRATION
- 3.9 COMMISSONING
- 3.10 TRAINING
- 3.11 OPERATING INSTRUCTIONS
- 3.12 OPERATION AND MAINTENANCE MANUALS
- 3.13 HANDOVER
- 3.14 REMOVAL OF REDUNDANT EQUIPMENT

4.0 TESTING AND COMMISSIONING

- 4.1 COMMISSIONING AND TESTING REPORT
- 4.2 OPERATION OF PLANT DURING COMMISSIONING AND INSTRUCTION

5.0 TENDER SUMMARY

PLEASE NOTE THE PRELIMINARIES AND INSTALLATION COSTS HAVE BEEN ATTACHED FOR YOUR COMPLETION AS PART OF THE PRICING SCHEDULE LOCATED WITHIN THE COMMERCIAL ENVELOPE ON THE E-TENDERING PORTAL

**THE SCHEDULE OF ALTERNATIVES HAVE ALSO BEEN ATTACHED WITHIN THE
COMMERCIAL ENVELOPE FOR YOUR COMPLETION**

5.1 DELIVERY PERIODS OF PLANTS AND EQUIPMENT

(TO BE COMPLETED FOUND IN GENERAL ATTACHMENTS)

5.2 SITE AERIAL PHOTOGRAPHIC HIGHLIGHTING CHILLER LOCATION

5.3 APPENDIX

1.0 Introduction

This project specification should be read in conjunction with ITT document which can be found in the general attachments.

The Contractor shall use as the basis of their tender, the materials and equipment specified within this document. The Contractor may offer alternatives to those scheduled, provided these are equal and approved (by the engineer), the quality is not compromised and a cost saving over the specified items can be demonstrated. Any alternatives offered are to be separately and clearly identified within the tender return. All equipment and installations are to comply with the requirements of the relevant health technical memorandum (HTMS).

To meet the Chiller requirements for the three theatres and general area. All assumptions made in the preparation of the estimates/tender must be provided within the tender return form.

The particular specification is divided into six sections:

1. Introduction
2. Scope of Works
3. General Conditions
4. Standards Materials and Workmanship
5. Tender Summary
6. Equipment Schedules

1.1 Site Description

This project is for the replacement of the existing chiller located on the ground floor compound area adjacent to the Jubilee Day Surgery Centre (JDSC) and serving air handling units (AHUs) as listed below:

- a) Theatres 1,2, & 3 and General Area AHU

The tendering contractors are advised to visit site before tendering to inspect the existing installations relevant to the works and ascertain the nature of the site, access, local conditions and any restrictions likely to affect the execution of the contract works.

The site is located at:

Countess of Chester Hospital NHS Foundation Trust

Countess of Chester Health Park

Liverpool Road

Chester

A site visit can be arranged for Monday 15th January or Tuesday 16th January at a time to be confirmed with Barry Ollerhead in the Estates department. Please can suppliers confirm their availability through the e-procurement portal no later than Friday 12th January, 1.00pm if they are intending to submit a bid.

Suppliers are strongly advised to visit the site in advance before submitting their tender. Suppliers submitting a tender without visiting site do so at their own risk. The Countess of Chester NHS Foundation Trust will not accept any post tender price increases resulting from circumstances that a reasonable supplier would have discovered had a site visit taken place.

1.2 Conditions of Contract

The form and conditions of the contract are those as recommended by the Institution of Mechanical Engineers, Institution of Electrical Engineers and the Association of Consulting Engineers Model Form MF/1 (2014 Edition) Rev 6, including all amendments as detailed both the general conditions and special conditions.

The conditions comprise:

- Definitions and Interpretations
- General Conditions of Contract
- Special Conditions
- Particular Conditions, Comprising
- Technical Specification
- Technical Standards
- Priced Tender Return

The essential MF/1 Contract Conditions are as below:

- Client – Countess of Chester Hospital NHS Foundation Trust
- Contract Start Date – TBC
- Contract Period – As indicated in the programme
- Changes in costs – clause 6.1 is applicable
- Bond or Guarantee – Clause 6.1 is applicable
- Import Permits, Licences and Duties – Clause 11.3 not applicable
- Purchasers lifting equipment – clause 11.5 not applicable
- Power etc. for tests on site – clause 11.7 the purchaser is to provide fuel and electricity only free of charge
- Special loads – clause 21.2 section 25 omitted
- Extraordinary traffic claims – clause 21.3 second sentence omitted
- Delayed payment – clause 40.4 omitted
- Exclusive remedies – clause 44.4 omitted

2.0 Scope of Works

2.1 Description

The replacement works involves the removal and replacement of the existing packaged air chiller unit with one new packaged air cooled chiller, the works also include all associated electrical works as detailed in this specification and electrical drawings.

The plant serves the following air handling plant:

- 3 No air handling units (AHUs) and general air conditioning

These upgrade works shall cover the following existing plant items:

- a) Replacement of existing 100KW packaged air cooled chiller unit (trane) with integrated circulation pumps and buffer vessel/expansion tank.
- b) Modifications to existing control system and addition of new control wiring where necessary
- c) Electrical services in connection with new replacement plant

Note the new chiller unit sized according the loads **100KW**

The contractor shall be responsible for ensuring that all plant and equipment can be installed, in particular with regards to access, carnage, manual handling and installation.

Note all carnage operations are to be undertaken outside normal weekday working hours and will need to be co-ordinated with the trusts estates department and end users.

It is intended that in general, the existing CHW distribution pipework and electrical installations shall be retained and reused (unless otherwise stated).

The contractor shall allow for replacing existing valves, gauges and pipeline mounted ancillary control equipment associated with the removal and replacement of new plant and equipment.

2.2 Strip out Works

The mechanical installations required in this project include for all draining, isolation and stripping out of existing services where necessary to allow the replacement works to be undertaken. All equipment and materials stripped out shall be removed from site and disposed of in a safe and environmental manner to be approved by the trust.

The contractor shall remove the following existing plant and equipment

- A) 100KW Packaged air cooled chiller unit (trane)
- B) Pipework where required to facilitate the replacement works
- C) The electrical supply cable from the existing switchgear location to the chiller shall be disconnected and removed to facilitate the installation of the new chiller supply cable, the existing containment shall be retained and re-used

2.3 Existing Cooling

The existing 100KW trane chiller located on the compound area in JDSC was originally installed in 2002 to provide cooling to four existing AHUs. These AHUs serve the following areas:

Theatres 1, 2, 3 and general air conditioning

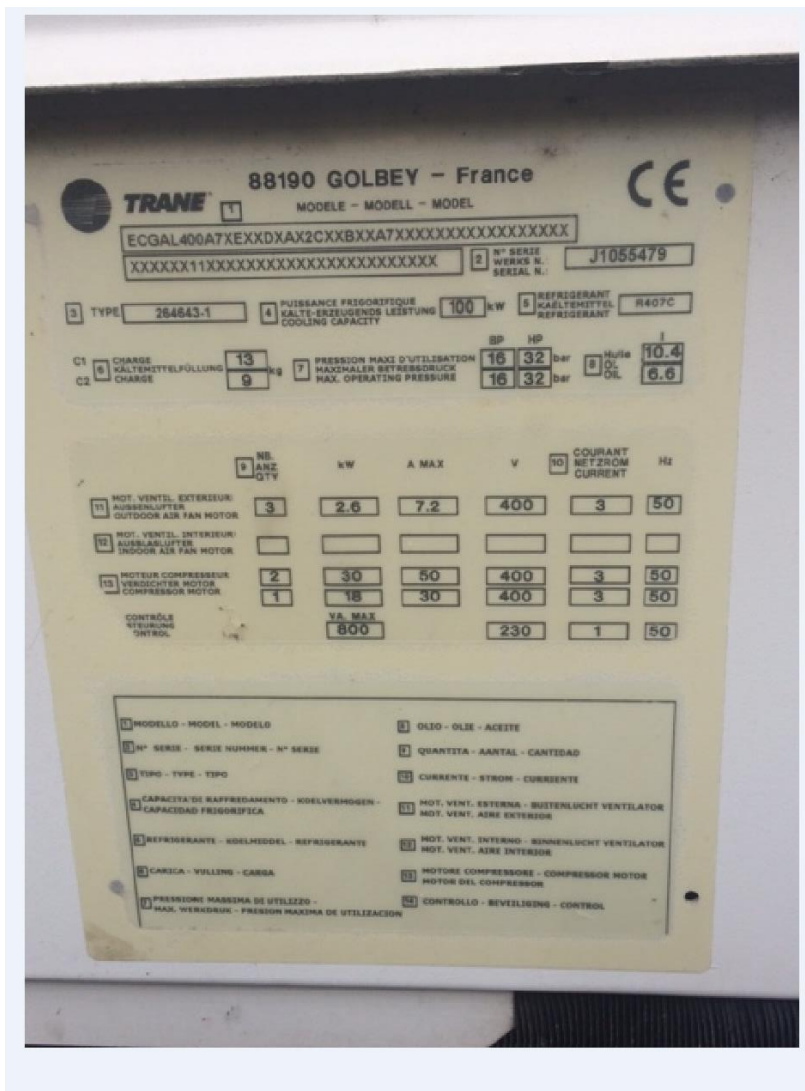
2.4 Proposed Cooling

The contractor shall supply and install one new packaged air cooled chiller unit in the existing compound area in JDSC. The new unit is a replacement for the existing chiller.

A photograph has been provided below of the existing chiller unit, the chiller can also be observed from attending a site visit.

Existing Chiller (Trane)





In JDSC the new unit is for a replacement for the existing chiller.

2.5 Proposed Electrical Services

The electrical works shall comprise the installation of a new submain cable from the existing switchgear location to the new chiller and associated containment. The contractor shall include for an electrical installation specialist to be engaged to undertake the works.

The electrical works shall comprise:

- A) New Power Supply Cable
- B) Additional Containment to the external chiller area
- C) Earthing and Bonding
- D) Labelling
- E) Testing and Commissioning

2.6 Site Survey

The contractor shall carry out a site survey during the tender period to familiarise themselves with the operation of the existing building and infrastructure services and assess how the new works may be implemented.

A detailed survey of the existing chilled water distribution pipework shall be required to confirm exact pipework diameters. The new chiller distribution pumps shall be selected based on existing system pressure loss calculations. No additional costs will be accepted due to failure to fulfil this requirement. The survey shall be by prior arrangement with the Estates Department.

2.7 Controls

The new chiller shall be reconnected and recommissioned on a like for like basis to match the existing installation and unit operation to enable minimal alteration of the cooling system installation operation accordingly.

3.0 General Conditions

3.1 General Standards

The per the standards listed below; where new standards are introduced or existing standards revised during the contract, the contractor shall pro-actively notify any new requirements and the likely effects in a timely manner. Proposed changes may then be jointly agreed prior to installation and implementation. This list is indicative but not exhaustive and best practice will be used at all times.

The scheme shall comply with all aspects of the Building Regulations and Planning Permission:

- A) Building Regulations
- B) Energy Performance Building Directive
- C) Hospital Building Notes and Health Notes (where applicable)
- D) Health Technical Memoranda
- E) NHS Model Engineering Specification
- F) NHS Encode (where applicable)
- G) 17th Edition of the IEE Regulations for Electrical Installations (BS7671)
- H) HSE Approved Code of Practice & Guidance
- I) CIBSE Guides
- J) BCGA Codes of Practice
- K) Relevant HVCA Design
- L) Electrical Safety, Quality and Continuity Regulations 2002
- M) Health & Safety Executive, Legal Series 8
- N) The Clean Air Act
- O) The Control of Pollution Act
- P) Requirements of the Local Fire Officer

- Q) Health & Safety at Work Act
- R) Construction (Design and Management) Regulations
- S) Relevant British Standards and Codes of Practice
- T) Building Services Research and Information Association Code of Practices
- U) All pipework shall be installed to the HVCA pipework specification TR10
- V) Equipment shall be installed in accordance with manufacturers recommendations

3.2 Construction (Design & Management) Regulations 2015

These works are to be covered by the CDM Regulations. The contractor shall ensure that he is fully conversant with the requirements of the regulations and that he will comply fully with them. A Principal Designer is to be appointed by the client and the contractor shall include for working with the Principal Designer to deliver the project as Principal Contractor.

3.3 Health and Safety File

Three copies of the Health and Safety file are required, one hard copy bound in standard lever arch file/s and two copies on a CD rom saved in PDF format with documents prepared in standard Microsoft office software and drawings prepared in AutoCAD 2006 format.

It is a requirement of the CDM 2015 regulations that the principal contractor implements an effective management system in which the requisite information is provided.

This information should be provided in a timely manner for inclusion in the project health and safety file. This file should include where appropriate:

- A) A brief description of the work carried out
- B) Residential hazards and how they have been dealt with (e.g. surveys or other information concerning hazards such as asbestos, contaminated other land, underground or hidden services)
- C) Hazards associated with materials used in the project (e.g. hazardous substances, lead paint or chemical coatings which should not be damaged or removed)
- D) Information required for the safe removal or dismantling of installed plant or equipment (e.g. lifting arrangements)
- E) Health and safety information about the installed plant or equipment for cleaning or maintaining the structures:
 - A) The nature, location and marking of significant services
 - B) Information and as built-drawings of the structure, its plant and equipment

3.4 Asbestos

Prior to the commencement of the works on site, the contractor shall obtain notification from the client on the status of asbestos within all areas incorporated within this contract.

However, even with the publication of the status of asbestos in the building, the contractor shall take all the normal precautions where there is a possibility that asbestos may still exist. If materials of a suspicious nature are discovered then the contractor must follow the procedures laid down in the preliminaries.

The contractor shall stop work in the area where the material was found and immediately inform the trust engineer or a trust representative. The contractor shall only return to work in the area, upon receipt of written clearance from the relevant client representative.

3.5 Working Drawings

Working drawings shall be provided to the engineer for approval in design principle. All on-site modifications to the tender design shall be detailed within the working drawing for approval prior to the installation. All installation, fixing details and builders work details shall remain the responsibility of the main contractor.

3.6 As Fitted Drawings

The contractor shall include for provision of “as installed” drawings to reflect the alterations carried out under this contract. The “as installed” drawings shall be modifications of the tender package, working drawings or new drawings as necessary.

The contractor shall provide “as installed” drawing for the client for the new installation.

The drawings shall be submitted in AutoCAD2006 format as a minimum

3.7 Continuity of Works

The contractor shall allow in his tender for carrying out the work in such sections as may be required. Complete continuity of work cannot be guaranteed, although every assistance will be given to the contractor to enable him to carry out the work on a continuous basis.

No extra costs will be permitted, if it is necessary for the contractor to leave the site due to non-delivery of materials to areas of the building not being ready for him.

3.8 Noise and Vibration

The contractor shall pay particular attention to noise isolation to ensure isolation for plant and pipework from the building where it might cause nuisance to the occupants of the building.

Additional spring anti-vibration mounts shall be provided for the chiller in order to eliminate vibration transmission to the building structure and surrounding area.

3.9 Commissioning

The contractor shall fully commission the new installation in accordance with the CIBSE Commissioning Codes, with full commissioning reports submitted to the engineer for approval.

The contractor shall ensure that the packaged air cooled chiller unit is installed, commissioned and maintained by qualified technical personnel in accordance with national regulations and/or relevant local requirements, as necessary, to enable the satisfactory operation of the systems upon completion of the works.

The engineer shall be notified five days in advance, of the start of commissioning.

All major equipment shall be commissioned by the respective manufacturer

3.10 Training

The contractor shall include for employer representative training for the control and maintenance of all new mechanical services.

3.11 Operating Instructions

The contractor shall provide operating instructions to the client. Which shall be approved by the client prior to issue.

3.12 Operation and Maintenance Manuals

The operation and maintenance manual is required by the building operator to allow safe operating of the equipment and systems. The approved operation and maintenance manual shall be provided prior to the formal handover of the works. Failure to provide a suitable and approved document may delay the date of practical completion.

3.13 Handover

The contractor shall also demonstrate and provide training in the operation of the systems to the building operators.

The contractor shall allow two days for attendance of suitably qualified personnel to provide this service. The contractor shall remain responsible for the operation of the plant until the date of handover at the end of the defects liability period.

3.14 Removal of Redundant Equipment

The contractor shall include for the safe removal of all redundant equipment arising from the new installation as detailed within this specification and on the accompanying drawings.

The contractor shall invite the client's representative to identify any items of equipment which are to be retained for possible use elsewhere.

The contractor shall notify the client's representative when equipment has been removed and is awaiting collection.

4.0 Testing and Commissioning

4.1 Commissioning and Testing Report

A commissioning report shall be prepared for the chiller service, which shall include all measurements taken during commissioning together with details of all factors that affect the performance of each system.

All commissioning reports shall be witnessed by the trusts engineer.

4.2 Operation of Plant during Commissioning and Instruction

The plant shall be operated and maintained in accordance with the manufacturer recommendations throughout the commissioning period until the plant is handed over to the employer.

The plant shall be operated and maintained by correctly trained staff and any repairs or replacements that may be found necessary shall be made good prior to handover.

The contractor shall include within the tender a period for instruction of the trust staff including the attendance of personnel from specialist manufacturers and contractors.

5.0 Tender Summary

5.1 Delivery Periods of Plant and Equipment

Please complete and attach in the e-tendering portal in general attachments

The contractor shall insert the delivery period of plant and materials to demonstrate acceptability of the proposed contract programme.

ITEM	MANUFACTURER	DELIVERY

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5.2 Preliminary Programme/Timescales

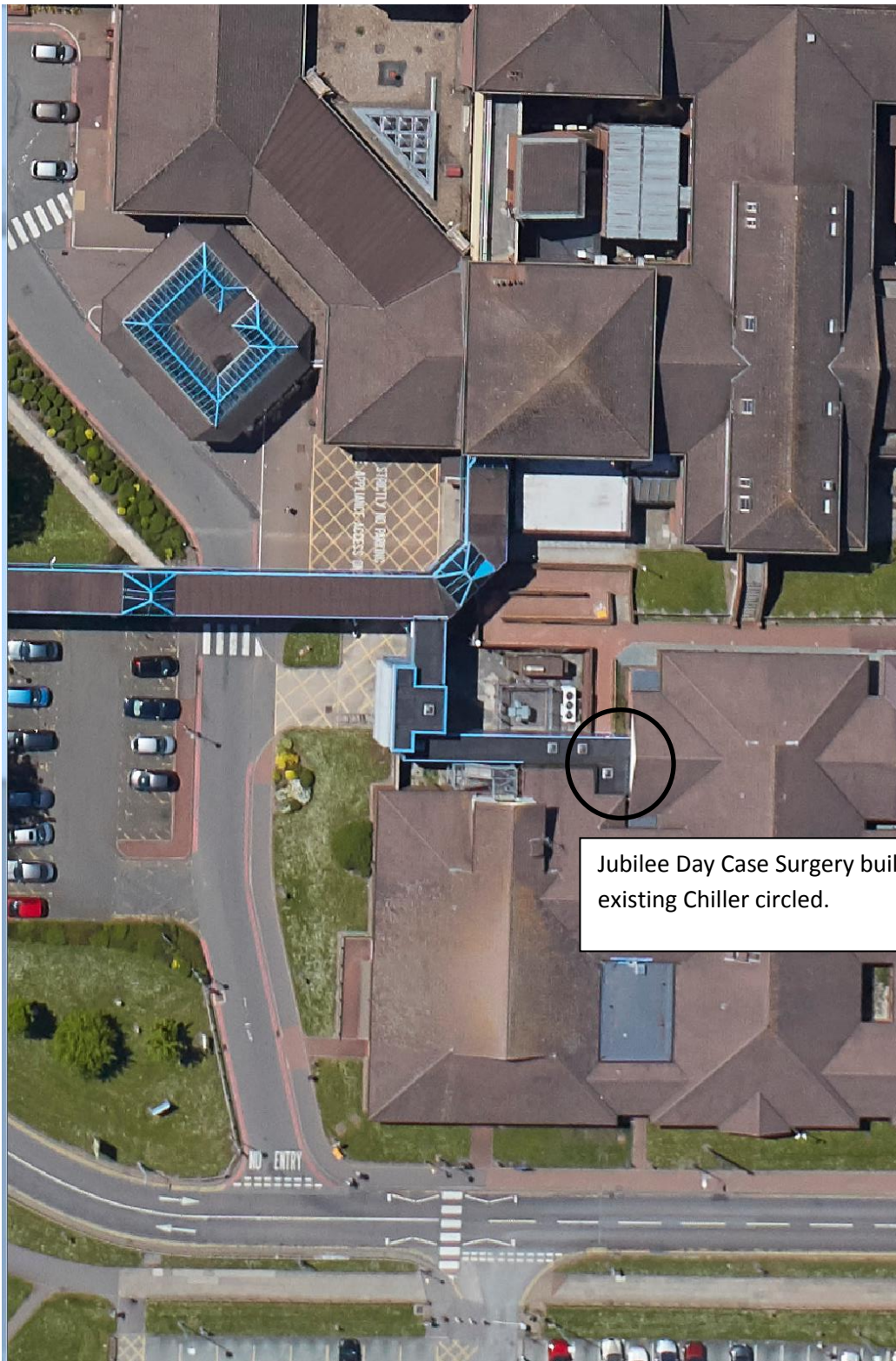
This is also replicated within the ITT document

<u>Task</u>	<u>Indicative Date</u>
Issue Invitation to Tender	8 th January 2018
Site Visits	15 th & 16 th January 2018
Deadline for questions from Tenderers on Invitation to Tender	29 th January 1.00pm
Deadline for Tender Responses	5 ^h February 1.00pm
Evaluation of Tender Responses	W/C 5 th February
Contractor Appointment	12 th February 2018
Start-up meeting	W/C 19 th February 2018
Commencement of Delivery	26 th February 2018 (10 weeks)
Date of possession (contract period 13 weeks)	TBC
Start of maintenance defects (12 months)	TBC
End of defects liability	TBC

Note: all dates are preliminary/to be confirmed depending on contractors proposals/programme

The contract period shall be 10 calendar weeks. (Note: any deviation from this period needs to be clearly defined as part of the contractors tender

Site Aerial Photographic Highlighting Chiller Location



Appendix

- The engineer – clause 1.1m the Engineer is Barry Ollerhead
- Performance tests
- Precedence of documents – clause 4.1 will be as contained in the COCH contract
- Labour materials and transport – clause 6.2 shall not apply
- Delay in completion – clause 34.1 the percentage to be paid, deducted for each week of delay, to the completion of the whole of the works, shall be 2%. The maximum percentage deduction shall not exceed 25%
- Defects liability period – clause 36.1 shall not be extended beyond 12 months
- Payment by instalments – clause 39.1 the contractor is entitled to monthly payments in respect of the value of the work executed on site only, retention shall be 5%; half of the amount retained within 30 days after presentation of the taking-over certificate, the balance of the amount retained shall be paid within 30 days after presentation of the final certificate of payment.
- Time for application – clause 39.2 applications for interim payment certificates shall be made on or after the 25th day of each month
- Final date for payment – clause 39.5 the final dates is 30 days after the due date
- Delayed payment – clause 40.4 omitted
- Delayed payment – 40.6 advance payment does not apply
- Allowance for profit on claims – clause 4.1.2 percentage to be added is 5%
- Limitation of contractors liability – clause 44.3 £5,000,000.00
- Third party insurance – clause 47.4 £5,000,000.00
- Arbitration – clause 52.1 the arbitration rules to be agreed
- Adjudication – clause 52.4 the adjudication rules to be agreed
- Applicable Law – clause 53.1 the substantive law of the contract is the law of England and Wales