

Estates Development & Projects

Record Document Process Guidelines

Guidance for the Project Team

(To be read in conjunction with the latest revisions of the Building Fabric and Mechanical & Electrical O&M Technical Guidelines)

REVISION 1.2

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Revision History

Revision Number	Revision Date	Summary of Changes
Rev 1	February 2016	
Rev 1.1	March 2017	<ul style="list-style-type: none"> • Updated 4.07 Draft Manuals Review Process • Updated 3.0 Responsibilities • Updated 5.0 Asset Register Schedule • Updated 6.0 Fire Strategy information • Updated 7.0 Additional BFM Literature • Updated appendices • Asset Register process updated
Rev 1.2	Nov 2017	<ul style="list-style-type: none"> • Revised Asset Register process

Approvals

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Contents

1. [Introduction](#)
2. [Record Documents as a deliverable](#)
3. [Responsibilities](#)
4. [Process:](#)
 - 4.01 [Document Reference number](#)
 - 4.02 [Technical Author Appointment](#)
 - 4.03 [Record Document Strategy Meeting](#)
 - 4.04 [Record Document Strategy Meeting Agenda](#)
 - 4.05 [Strategy Meeting Follow-up](#)
 - 4.06 [Content, Reporting & Tracking](#)
 - 4.07 [Draft Manuals Review Process](#)
 - 4.08 [Instructions for Commenting](#)
 - 4.09 [Composition Review](#)
5. [Asset Register](#)
6. [Fire Safety Information](#)
7. [Additional Building Fabric Manual Literature](#)
8. [drawings](#)
9. [delivery](#)
10. [Contacts](#)

[Appendix i:](#) Record Document Process Flow Chart

[Appendix ii:](#) Sample Strategy Meeting agenda

[Appendix iii:](#) Typical example of Tracker

[Appendix iv:](#) Asset Information requirements

[Appendix v:](#) Sample Issue Memo

1. Introduction

A record document is evidence of a transaction carried out as part of business activities. In the context of a construction project, record documents are required as evidence of works carried out and delivered as a result of the completed project.

Construction project record documents include but are not limited to:

- As built / As Installed drawings and models
- Building Fabric Manual
- Health and Safety File
- Mechanical Services Manual
- Electrical Services Manual
- BEMS Manual
- Fire Safety Information
- Asset Register
- *Project Filing*¹

This document is to provide guidance to anyone working on a construction project on the Record Documents (O&Ms) procedure. For a specific breakdown on the required format and content of the O&Ms, refer to the separate documents:

- RM07 Production Guidelines for the Building Fabric Manual (incorporating Health & Safety File)
- RM08 Production Guidelines for the Operating and Maintenance Manuals

Refer to [Appendix \(i\)](#) of this document for a summary flowchart of the Record Document process.

2. Record Documents as a deliverable.

Issue of Record Documents, **produced to Imperial College standards**, is a required deliverable of a construction project. Completion will not be granted until the documents have been approved by the College and issued formally by the Principal Contractor.

In the event of post-completion works, an agreement will need to be made between the Project Manager, Principal Contractor and Records & Archives Officer (Projects) on delivery of outstanding works' documentation, so as not to adversely affect completion of the O&Ms – this could be an update to the manual issued at completion or issue of an addendum document – and must be confirmed at the Handover meeting.

¹ Delivery of Project Filing is the responsibility of the Project Manager and will not be covered in this document. Refer instead to the Project Process Map and the Records Management Policy

3. Responsibilities

The **Contractor**² is responsible for:

- Ensuring that the documents produced (manuals and drawings) are an accurate record of the completed works.
- Providing all relevant literature and drawings, as produced by themselves, their sub-contractors, consultants and relevant College departments to the Technical Author for record document production.
- Production of a Record Documents Tracking tool and program; and reporting updates at project team meetings.
- Completion of Asset Register, including obtaining asset codes from Estates Facilities and labelling of plant.
- Issuing completed Asset Register to the Technical Author for inclusion with the O&Ms.
- Coordinating delivery of all completed O&Ms and as-built drawings to the Records & Archives Officer (Projects) for onward distribution.

The **Technical Author** is appointed by the Contractor to:

- Collate literature, text and drawings issued by the Contractor for the production of record documents to Imperial College guidelines.
- Receive H&S literature from Principal Designer and Asset Register from the Principal Contractor for incorporation into manuals.
- Attend O&M strategy meetings where requested by the Contractor.
- *Recipient of O&M strategy meeting minutes if unable to attend.*
- Escalate of non-delivery of information/reviews to the Project Manager.
- Produce and update a tracker of review comments, to report back to Contractor and ensure all comments are addressed.
- Ensure O&Ms have been reviewed by all parties before release of final documents.
- Arrange for delivery of all record documents to the Records & Archives Officer (Projects) following sign off by Project Manager.

The **Project Manager**:

- Organises the Record Document Strategy Meeting.
- Ensures that the agreed process is adhered to for the duration of the project.
- Carries out early stage review of initial draft document
- Carries out final technical review of contents to ensure the documents are an accurate record of works carried out.
- Authorises delivery of record documents to the Records & Archives Officer (Projects).
- Ensuring all record documents have been issued to the College's requirements before giving Completion.

The **Principal Designer** is responsible for:

- Production of the Health & Safety File as per CDM15 regulations³ and clients' requirements for incorporating within the building fabric manual.
- Liaising with the Contractor and Technical Author to ensure the Building Fabric manual includes the Health & Safety information.

² The Contractor would in most cases be the Main Contractor but according to the nature of the work may be instead an M&E Contractor.

³ If the Principal Designer is novated to the Contractor's team, the Health & Safety File shall be incorporated within the O&Ms

- Ensuring the inclusion of Fire Strategy statement and drawing(s).
- Completion of the Health & Safety and Design pro-formas for inclusion in the Operating & Maintenance Manuals.

The **Records & Archives Officer (Projects)** is responsible for:

- Providing guidance on the production of O&Ms.
- Chairing the Record Document Strategy Meeting.
- Assigning Document Reference numbers.
- Carrying out a final Composition Review of the O&Ms.
- Taking delivery of all completed record documentation for onward issue.
- Distribution of Issue Memo to confirm receipt of record documents.

The **CAD Manager** is responsible for:

- Checking sample drawings at Stage 3 and Stage 5 to ensure compliance with the College CAD Strategy.
- Provide guidance on meeting the CAD Strategy requirements.

The **nominated reviewers**⁴ are responsible for:

- Reviewing the draft documents.
- Reporting back to Technical Author with comments within the agreed timescale.⁵

4. Process

To ensure a timely and accurate handover of record documents, the production of record documents should follow this process:

4.01 Document Reference number

Upon receipt of the F10, the Records & Archives Officer (Projects) will register the project on the Health & Safety file database, assigning the works with a Document Reference number(s) for the O&Ms. If notification to the HSE is not required, the CDM Notification document will trigger the process in place of the F10.

The Document Reference number is building and phase specific and is to be displayed on all volumes of the relevant O&Ms with the project number.

If a project is completed in several phases and/or in multiple buildings, separate Document Reference numbers will be assigned for each area of the works, requiring separate sets of record documents. This will be agreed in the Record Document Strategy Meeting.

⁴ Nominated Reviewers of the O&Ms are agreed at the Record Document Strategy Meeting and named on the sign-off form.

⁵ Review procedure as agreed in the Record Document Strategy Meeting

4.02 Technical Author Appointment

The Contractor must appoint a Technical Author from the Imperial College approved list of suppliers, obtained from the Imperial College Category Manager (Construction) or from <http://www.imperial.ac.uk/estates-projects/approved-suppliers/>. Technical Authors will provide a standard level of service which ensures a focused and proactive approach to the production of the manuals.

The Project Manager and Records & Archives Officer (Projects) must be notified of the selection. If it is agreed that the scope of works does not warrant the appointment of a Technical Author, the Contractor must instead produce the record documents in accordance with the Building Fabric and O&M production guidelines (*RM07* and *RM08*).

This must be agreed and minuted in the Record Document Strategy Meeting; any change to this agreement should be addressed to the Project Manager and Records & Archives Officer.

The Technical Author should also report on a regular basis directly to the Project Manager and Principal Designer, advising them of any potential problems or shortcomings associated with meeting the programme key dates.

4.03 Record Document Strategy Meeting

The Project Manager is to set up a Record Document Strategy Meeting after the Technical Author has been appointed by the Contractor. The following attendees must be invited:

- Project Manager
- Contractor (Site Supervisor and nominated Information Manager/Document Controller)
- Imperial College Records & Archives Officer (Projects)
- Imperial College Maintenance Manager for the project area
- Imperial College Building Manager for the project area
- Principal Designer
- Lead Designers from relevant disciplines (must receive minutes if unable to attend)
- Imperial College Fire Officer/Security Officer/Controls Engineer etc. where applicable to the nature of the project.
- Technical Author, where requested by the Contractor (must receive minutes if unable to attend)
- Imperial College CAD Manager (must receive minutes if unable to attend)
- Imperial College Engineering Manager (must receive minutes if unable to attend)
- Minute taker (minutes and distribution list to be agreed at the meeting)
- Minutes also to be issued to the Estates Projects' Head of Health & Safety.

4.04 Record Document Strategy Meeting Agenda

The Records & Archives Officer will chair the meeting and the following items are to be addressed. Refer to [Appendix \(ii\)](#) for Agenda template.

- Introductions
- Physical format of manuals, to include agreements on: phased projects, multiple locations, scope of M&E works, specialist manuals.
- Quantity of copies (hard/electronic)

- Standard contents. This will go on to form the Record Documents Tracking tool to be produced and updated by the Contractor and includes schedule of Manufacturers Literature
- CAD Strategy / Record Drawings
- Room Numbering
- Asset Register
- Fire Safety strategy
- Structural information
- Other items for inclusion: for example: final waste management report, planning consents, warranties, building control, certificates, asbestos report.
- Sign off/Review: agree nominated technical reviewers (design team and end users), agreed deadlines, review method. The Building Manager must be responsible for review/sign-off of the Building Fabric Manual and the Maintenance Manager responsible for reviewing the Mechanical and Electrical records.
- Additional requirements, for example a separate Health and Safety File, Building Log book, Occupational Room data sheets.

4.05 Strategy Meeting Follow-up

The Records & Archives Officer (Projects) will distribute the meeting minutes to the attendance list, accompanied by a cover email confirming the project number, document reference number, agreed project title and names of O&M reviewers.

The items agreed at the meeting form the scope of works for the Technical Author. For complex projects, a follow up meeting may be required with the Technical Author present.

4.06 Content, Reporting and Tracking

Following the Record Document Strategy Meeting, the Principal Contractor will produce a tracking tool to report on the progress of the record documents. This will also include the drawings' CAD check (refer to [section 8.0](#) for further details)

The tracker will include a schedule of Manufacturers literature and drawings to be obtained from the Sub-contractors, along with progress of drawings' production and draft O&M's sign-off procedure. An example of a typical tracker can be viewed in [Appendix \(vi\)](#).

Refer to the separate guideline documents *RM07 Production Guidelines for Building Fabric Manuals* and *RM08 Production Guidelines for Operating and Maintenance Manuals* for a full outline of the required contents.

Reporting and tracking of record documents' progress will be included on the agenda of project handover meetings.

4.07 Draft Manuals Review Process

Draft copies of the manuals are to be issued in accordance with the Project Handover Plan and Contractor's program to allow sufficient time for approval prior to final issue. Unless otherwise specified, the drafts will be distributed in electronic format.

For larger projects it may be more practical to review sub-contractor packages in phases throughout the project, which would be decided at the Strategy Meeting.

The initial document for early stage review will contain only certain project information compiled at this stage, which should include items such as:

- Scope and location of works
- Project Directory
- Schedules of literature and certificates
- Schedules of drawings (drawing registers)

Items such as literature, drawings or certificates themselves may not yet be available or to be issued for comment under separate cover.

The purpose of the draft at this stage is to ensure that the manual is being set out correctly, that key project information is correct and evidences that information for the other sections is in the process of compilation. This draft should be reviewed by the Project Manager, Contractor and Supervisors to ensure the documentation accurately reflects the works carried out.

The first complete draft will be issued by the Technical Author to the reviewers agreed at the Record Document Strategy Meeting at the agreed date prior to completion. This draft should include finalised literature and drawings, with notification of any commissioning certificates for insertion at completion. This review must also ensure any changes made to the scope of works since the first draft have been updated and incorporated.

Any comments on missing, incomplete or inaccurate information should be addressed to the Technical Author to report back to the Contractor. The Technical Author is to compile a tracker of comments, which will be updated when comments are addressed. A copy of the tracker, when completed, should be issued with the completed manuals as a record that the content has been reviewed to the satisfaction of all parties concerned.

Following any final corrections and all parties are satisfied with the content, the Project Manager should carry out a final technical review, following which a fully hyperlinked final draft is sent to the Records & Archives Officer (Projects) to carry out the Composition Review. Refer to Section 4.09 for a summary of elements comprising the Composition Review.

Refer also to [Section 8.0](#) of this document for drawings' review procedure and [Section 3.0](#) for an outline of individual responsibilities.

4.08 Instructions for Commenting

The following guidelines should be observed when making comments on the information provided at draft stage:

- It is essential that the text in the draft copy is correct. Additional comments made at final issue due to lack of appraisal of the draft may result in additional costs being charged by the affected party and/or delayed final issue of the documents.
- Comments need to be made in a clear and concise manner, specifically indicating what is required.

- Comments should be issued in the form of a snagging list, detailing the Section, page or item number as appropriate
- The format of the manual must be in accordance with the Imperial College specification, therefore the comments should at this stage be concerned with technical accuracy of the content. If however this is not the case, then the matter must be reported to the Project Manager at the earliest opportunity.
- Suggestions regarding changes to the standard specification for record documents must be approved in a meeting with the Records & Archives Officer (Projects), Estates Projects Head of Health & Safety, Maintenance Manager and the Project Manager before they can be incorporated. **If format, layout or standard content changes have not been agreed, they will be rejected at the final Composition Review.**

To avoid delay in completion, consultants need to promptly respond with their comments/completed forms. The Technical Author is to escalate any delay in the production process to the Project Manager, which will then be addressed at the project team meeting.

4.09 Composition Review

The composition review is carried out on the final draft hyperlinked pdf version of the manual by the Records & Archives Officer (Projects) after the technical content has been reviewed and signed off.

This review only checks the following:

- Project Number
- Project Name
- Document Reference Number
- Hyperlinks
- Adherence to Guidelines
- Structure and clarity of document.
- Any specific items or exceptions agreed at the Strategy Meeting have been addressed.
- Whether the drawings have been checked/approved for CAD compliance.

Although this review does not cover the technical content, which should have been verified and approved by this stage, any items addressed in the Strategy Meeting which have not been incorporated will be referred back to the Project Manager for clarification.

This completes the review process and must take place before the manuals are produced in their final version on the CD and hard copy.

The Records & Archives Officer (Projects) does not need to review the manuals at any earlier draft stage unless there is a query on the format and layout of the files.

5. Asset Register

The Contractor is to deliver to the Technical Author a register of newly installed maintainable Mechanical and Electrical Assets. The Asset Register production process is as follows:

- During Stage 2 (Design) the Project Manager obtains a list of current assets in the works area from Estates Facilities Customer Service Centre.
- The Services Engineer updates the template with the assets which are to remain on site, those which are to be located elsewhere and those which are to be removed.
- The spreadsheet must include the Project number, project name, location of works (building/floor level) and project completion date.
- Estates Facilities' approved contractor Spie (who utilise the services of Oxhey Hall) will be appointed directly by the College via the Project Manager to survey the assets and apply labelling to installed plant. The Contractor will allow the surveyors to access the works' area prior to completion to undertake the asset surveying and labelling works. Using their knowledge of the installed assets, the contractor will assist by identifying their locations to ensure all assets are captured in the survey.
- Oxhey Hall will issue a final version of the register to the project manager. This will be sent to the Contractor for issue to the Technical Author for inclusion with the O&Ms.

This process applies to any project where mechanical or electrical assets are removed, updated or installed. For minor works projects, where the M&E information is incorporated with the Building Fabric manual, the asset register should form a part of this file and the above process is to be followed.

Refer to the Estates Facilities asset register flowchart at <http://www.imperial.ac.uk/estates-facilities/buildings/procedures/assets/> for full details on this process.

6. Fire Safety information

All fire safety information is required to comply with Building Regulation 38 and as outlined in Appendix G of Approved Document B. The Contractor is responsible for providing this information as part of the project completion record documents.

The format/scope of this should be confirmed at the Record Document strategy meeting. For complete new build projects a full fire safety manual conforming to the above building regulation should be produced and issued to the Fire Officer (via the Records & Archives Officer Projects as part of the record document process)

For refurbishment projects, fire alarm information would generally be included in the Electrical O&Ms (note that a new fire alarm panel install requires its own manual) and fire safety information would be included in the building fabric manual. This information could include, for example:

- Fire strategy drawing and statement*
- Compartmentalisation drawings

The exact scope of this information would be appropriate to the nature of works, in accordance with legislative requirements.

Section 4 of the Building Fabric manual will include a section detailing where the appropriate information is located. It is intended that the Fire officer, upon receipt of confirmation of O&Ms being issued, can extract this information to update their building records.

*where no current Fire Strategy drawing exists, the Contractor should produce a new drawing outlining the fire strategy of the works area. This should be delivered as an as-built drawing in line with the College CAD strategy

7. Additional Building Fabric Manual Literature

In addition to the manufacturing and construction literature expected to form a record of the works carried out, the following items may also be required for the building fabric manual, in accordance with the nature of the project:

- Planning Consents
- Asbestos Reports
- Waste Management final report
- F10 Notification to the HSE
- Consent to Commence Work
- Imperial College specialist works (if installed/carried out during the contract period)
- Building Control Certificate

These should be agreed at the Record Document Strategy meeting Refer to *Production Guidelines for the Building Fabric Manual (incorporating Health & Safety File) RM07 rev 10* for full details of expected literature for the manual.

The Principal Contractor is responsible for transferring these documents to the Technical Author to include within the O&Ms.

8. Drawings

All drawings are to be issued as final As-built status and produced to the College CAD strategy. Refer to the Estates Projects & Development website <http://www.imperial.ac.uk/estates-projects/space-management/cad-strategy/> for the latest version. Training/guidance is available from the Imperial College CAD Manager.

The drawing approval process is as follows:

- Room Numbering is to be allocated at Stage 3 (Design) by the Space Auditor and is to be correctly recorded on all drawings from this stage.
- The Design Team send sample CAD drawings to cadcompliance@imperial.ac.uk, at Stage 3, for the CAD Manager to check on compliance with the College CAD strategy, including approved room numbering. The email MUST include the project number in the heading.
- The College CAD strategy is to be applied to all drawings from this stage onwards.
- Towards the end of Stage 5 (Construction), the Contractor sends sample final **As-built** drawings to cadcompliance@imperial.ac.uk (the email MUST include the project number in the heading), for the CAD Manager approve before record documents can be accepted.
- Drawings to be issued in dwg, pdf and hard copy formats, in the quantity specified in the guidelines; or as agreed and minuted in the Strategy Meeting.

- Hard copy drawings are to be printed to the size specified on the scale, folded down to A4 for insertion into the manuals.

The CAD strategy applies to all drawings – architectural, structural, mechanical, electrical, etc – which form a part of the fabric of the building and may be needed for alterations or renovations in the future.

Some manufacturers' component drawings and information, supplied in *Section 9 Manufacturer's literature* of the Building Fabric Manual, may not require CAD compliance. This is to be agreed at the Record Document Strategy Meeting. The Records & Archives Officer (Projects) must be included in this decision, to confirm what drawings are needed for the Estates Archive.

A schedule of drawings and their agreed formats is to be distributed after the O&M strategy meeting and will form part of the Record Documents' Tracker.

9. Delivery

The Project Manager is ensure all record documents to be delivered to the Records & Archives Officer (Projects) for onward delivery to the agreed recipients.

The documents will be accompanied by the completed sign-off form or the completed Comments Tracker and a letter from the Principal Contractor stating that the files have been completed according to Imperial College requirements and are an accurate record of works completed.

The Records & Archives Officer (Projects) will check the received records comply with that agreed at the Composition Review and send an Issue Memo to confirm delivery. The distribution list consists of the Building Manager, Maintenance Manager, Project Manager, Contractor and Construction Safety Manager and other interested parties within Imperial College.

Following receipt of Issue Memos for all agreed O&Ms, the Project Manager can issue the Completion certificate.

In the event of absence of the Records & Archives Officer (Projects), a copy of the completed sign-off sheet and a cover letter from the Contractor with signed confirmation of delivery of the complete set of documents will also enable Completion.

The College will not take delivery of partially completed/not signed off record documents.⁶

⁶ A procedure for post-completion works needs to be agreed at a meeting in advance of completion, so as not to delay the issue of record documents.

10. Contacts

For further information please contact the following:

Record Documents: Records & Archives Officer (Projects).
Alyson Brewer a.brewer@imperial.ac.uk +44(0)20 7594 6483

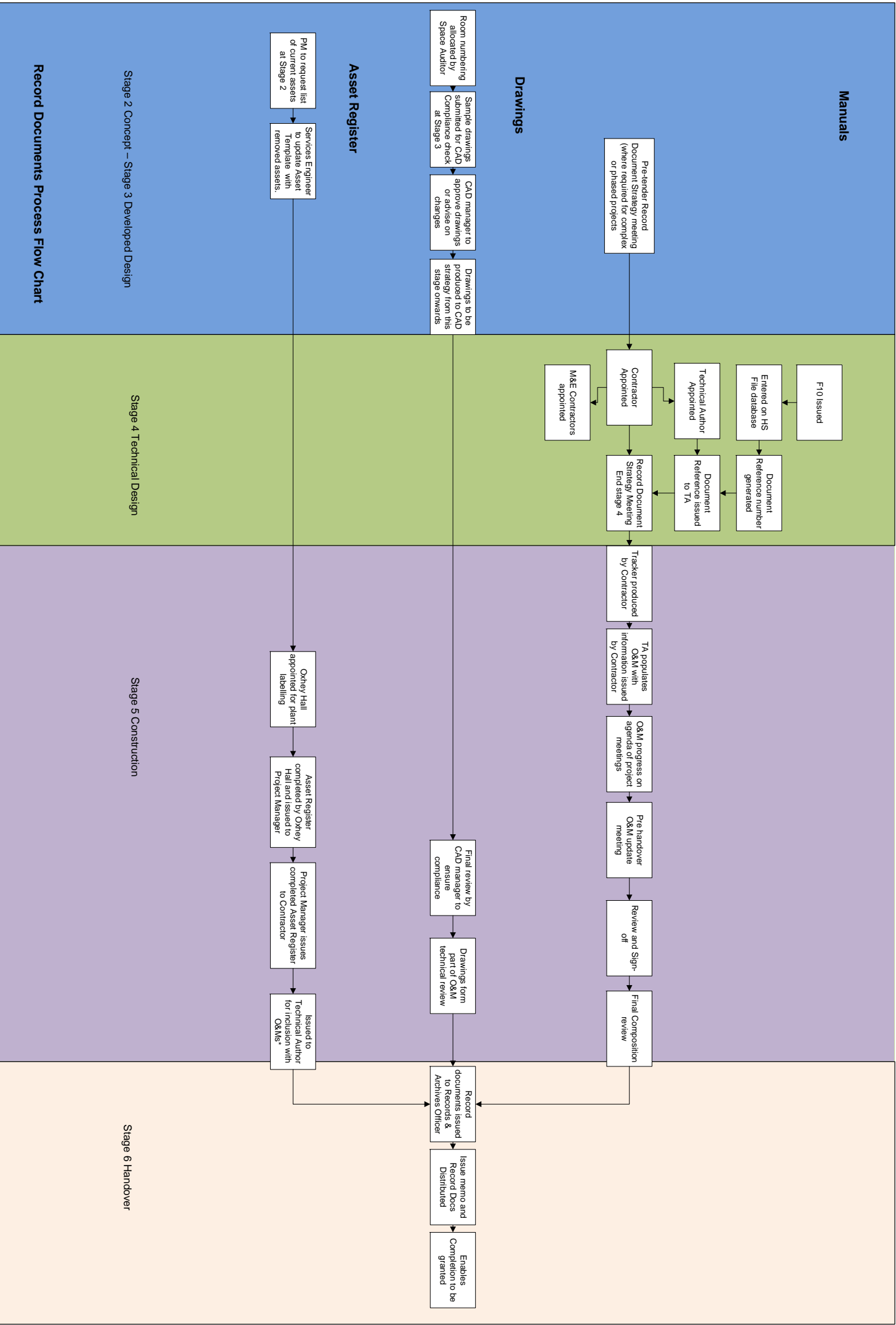
Drawings: CAD Manager.
Julie Neville j.neville@imperial.ac.uk +44(0)20 7594 8896
Sample drawings for Room Numbering and CAD check to: cadcompliance@imperial.ac.uk

Health & Safety Information: Estates Projects Head of Health & Safety.
Denis Murphy d.murphy@imperial.ac.uk +44(0)20 7594 9626

Asset Registers: Estates Facilities Customer Service Centre.
efcsc@imperial.ac.uk +44 (0)20 7594 8000

Appendix i: Record Document Process flow chart.

Refer to following page



*where agreed by Project Manager, the asset register may be issued separately to avoid delay in issue of Contractor's record documentation

Appendix ii: sample Record Document Strategy Meeting agenda

Refer to following page.

comment		
5	Room Numbering	
comment		
6	Standard Contents, including schedule for Manufacturer's literature	
comment		
7	Structural information requirements	
comment		
8	Asset Register	
comment		
9	Fire Safety Strategy	
comment		
10	Other items for inclusion <ul style="list-style-type: none"> • Final SWMP report • Planning • Warranties • Building control • Other 	
comment		
11	Separate H&S file and / or Building Log Book (large or new build projects)	
comment		
12	Sign off and review: <ul style="list-style-type: none"> • whom • agreed deadlines • review method 	
comment		
13	Any other items	
comment		

Appendix iii: typical example of Tracker

Refer to following page

O&M Tracker

Project Name:		Project No:		ICZZ1701		Project Completion Date		Fri 29/05/15		Report Date:		Wed 12/08/15		
Work section	Contractor	Draft issued to Contractor (Enter dates)	Contractor Review and issue to consults / ICL / TA	Consults / ICL Review and Return to Contractor	Contractor returns to Technical Author for amendments	Principal Designer Review and Return to Contractor	Technical Author amends and issues to PM	PM Final review and comment	FLOAT (working days)	Contractor assembles final DRAFT	Contractor issues final draft pdf to Imperial College Archiver Officer (Projects) - (projects)	Imperial College Archiver Officer (Projects) - composition review.	Final Changes by Contractor	Contractor issues FINAL to ICL Archive
Activity days		3	3	5	2	5	2	2		3	2	2	2	2
Mechanical Manual	contractor name	Current Production Stage:- Awaiting info for draft Draft in Production Draft Issued, Awaiting Comments Comments Received, Awaiting Answers Finals in Production Manuals Issued Action/Info Needed from (this will change as job progresses):- Yes Services Contractor No Main Contractor No CD/MC No Client												29/05/2015
Electrical Manual	contractor name	Current Production Stage:- Awaiting info for draft Draft in Production Draft Issued, Awaiting Comments Comments Received, Awaiting Answers Finals in Production Manuals Issued Action/Info Needed from (this will change as job progresses):- Yes Services Contractor No Main Contractor No CD/MC No Client												Fri 29/05/15
BMS	contractor name	Mon 13/04/15	Thu 16/04/15	Thu 23/04/15	Mon 27/04/15	Mon 04/05/15	Wed 06/05/15	Fri 08/05/15	7.00	Mon 18/05/15	Thu 21/05/15	Mon 25/05/15	Wed 27/05/15	Fri 29/05/15
Building Fabric Manual (examples provided for the purpose of this sample document)														
Facade and Glazing, fire exit door	contractor name	Fri 24/04/15	Wed 29/04/15	Wed 06/05/15	Fri 08/05/15	Fri 15/05/15	Tue 19/05/15	Thu 21/05/15	4.00	Mon 18/05/15	Thu 21/05/15	Mon 18/05/15	Mon 18/05/15	Mon 18/05/15
Glazed doors and screens, fire rated, partitions	contractor name	Fri 10/04/15	Thu 16/04/15	Thu 23/04/15	Mon 27/04/15	Mon 04/05/15	Wed 06/05/15	Fri 08/05/15	7.00	Mon 18/05/15	Fri 08/05/15	Mon 18/05/15	Mon 18/05/15	Mon 18/05/15
Folding doors	contractor name	Fri 10/04/15	Thu 16/04/15	Thu 23/04/15	Mon 27/04/15	Mon 04/05/15	Wed 06/05/15	Fri 08/05/15	7.00	Mon 18/05/15	Fri 08/05/15	Mon 18/05/15	Mon 18/05/15	Mon 18/05/15
Folding door steelwork	contractor name	Wed 15/04/15	Mon 20/04/15	Mon 27/04/15	Wed 29/04/15	Wed 06/05/15	Fri 08/05/15	Tue 12/05/15	5.00	Mon 18/05/15	Tue 12/05/15	Mon 18/05/15	Mon 18/05/15	Mon 18/05/15
Decorations	contractor name	Fri 10/04/15	Thu 16/04/15	Thu 23/04/15	Mon 27/04/15	Mon 04/05/15	Wed 06/05/15	Fri 08/05/15	7.00	Mon 18/05/15	Fri 08/05/15	Mon 18/05/15	Mon 18/05/15	Mon 18/05/15
Floor finishes	contractor name	Fri 17/04/15	Wed 22/04/15	Wed 29/04/15	Fri 01/05/15	Fri 08/05/15	Tue 12/05/15	Thu 14/05/15	3.00	Mon 18/05/15	Thu 14/05/15	Mon 18/05/15	Mon 18/05/15	Mon 18/05/15
Ceilings	contractor name	Wed 15/04/15	Thu 16/04/15	Thu 23/04/15	Mon 27/04/15	Mon 04/05/15	Wed 06/05/15	Fri 08/05/15	7.00	Mon 18/05/15	Fri 08/05/15	Mon 18/05/15	Mon 18/05/15	Mon 18/05/15
Ironmongery	contractor name	Wed 15/04/15	Mon 20/04/15	Mon 27/04/15	Wed 29/04/15	Wed 06/05/15	Fri 08/05/15	Tue 12/05/15	5.00	Mon 18/05/15	Tue 12/05/15	Mon 18/05/15	Mon 18/05/15	Mon 18/05/15
Wall panelling from WC Fields	contractor name	Mon 06/04/15	Thu 16/04/15	Thu 23/04/15	Mon 27/04/15	Mon 04/05/15	Wed 06/05/15	Fri 08/05/15	7.00	Mon 18/05/15	Fri 08/05/15	Mon 18/05/15	Mon 18/05/15	Mon 18/05/15
Stud Walls, Plasterboard and miscellaneous builders items	contractor name	Fri 17/04/15	Wed 22/04/15	Wed 29/04/15	Fri 01/05/15	Fri 08/05/15	Tue 12/05/15	Thu 14/05/15	3.00	Mon 18/05/15	Thu 14/05/15	Mon 18/05/15	Mon 18/05/15	Mon 18/05/15
Tea point and sinks (including cleaners)	contractor name	Fri 17/04/15	Wed 22/04/15	Wed 29/04/15	Fri 01/05/15	Fri 08/05/15	Tue 12/05/15	Thu 14/05/15	3.00	Mon 18/05/15	Thu 14/05/15	Mon 18/05/15	Mon 18/05/15	Mon 18/05/15
Granite Slabs	contractor name	Fri 17/04/15	Thu 16/04/15	Thu 23/04/15	Mon 27/04/15	Mon 04/05/15	Wed 06/05/15	Fri 08/05/15	7.00	Mon 18/05/15	Fri 08/05/15	Mon 18/05/15	Mon 18/05/15	Mon 18/05/15
Glass wipe board	contractor name	Wed 15/04/15	Thu 16/04/15	Thu 23/04/15	Mon 27/04/15	Mon 04/05/15	Wed 06/05/15	Fri 08/05/15	7.00	Mon 18/05/15	Fri 08/05/15	Mon 18/05/15	Mon 18/05/15	Mon 18/05/15
Fire stopping and intumescent coatings	contractor name	Wed 15/04/15	Thu 16/04/15	Thu 23/04/15	Mon 27/04/15	Mon 04/05/15	Wed 06/05/15	Fri 08/05/15	7.00	Mon 18/05/15	Fri 08/05/15	Mon 18/05/15	Mon 18/05/15	Mon 18/05/15
GDO AHU external Steelwork	contractor name	Fri 17/04/15	Wed 22/04/15	Wed 29/04/15	Fri 01/05/15	Fri 08/05/15	Tue 12/05/15	Thu 14/05/15	3.00	Mon 18/05/15	Thu 14/05/15	Mon 18/05/15	Mon 18/05/15	Mon 18/05/15

Appendix iv: Asset Information Requirements

Refer to following pages

Element Specific O&M Information Requirements

Asset Information Requirements Matrix | Ref: EIR-ICL-XX-XX-SP-K-0012 | Revision: v3 | Date: 28.11.16

Asset Description	O&M Sections Against Asset (at LOI 3 Verified)											
Assets	Description of Installation	Plant Data	Stocked Spares	Specialist Tools and Equipment	Manufacturers Literature	Record Drawing	Certificates and Commissioning Information	Associated BMS and Controls	Health and Safety (inc. Access Arrangement)	Access Control	Ironmongery (Powered Devices)	Fire and Fire Rating
Automatic Plant Fire Interfaces						X	X	X				
AHU	X	X	X	X	X	X	X	X	X			
Air Compressor Dryers	X	X			X	X	X	X	X			
Air Cooled Condenser		X			X	X	X	X	X			
Asbestos									X			
Aspirating System		X			X	X	X	X	X			
Atomising Humidifier	X	X	X	X	X	X	X	X	X			
Audio/Video Door Entry Intercom System	X	X	X	X	X	X	X			X		
Auto Changeover Panel	X	X	X		X	X	X	X	X			
BMS Main Control Panel	X	X		X	X	X	X	X				
Boiler	X	X	X	X	X	X	X	X	X			X
Brise Solei / Powered Awnings	X	X	X	X	X	X	X	X	X			
Car Park Automatic Number Plate Recognition System	X	X	X	X	X	X	X	X	X	X		
Car Park Barriers	X	X	X	X	X	X	X		X	X	X	X
Car Park/Street Lighting	X	X	X	X	X	X	X	X	X	X		X
Card/Code and Digital Access Control System	X	X	X	X	X	X	X		X	X	X	X
Ceilings	X	X	X	X	X				X			X
Chilled Water (CHW)		X			X	X	X	X				
Chilled Beams	X	X	X	X	X	X	X	X				
Chilled Water Plate Heat Exchanger	X	X	X	X	X	X	X	X				
Chiller	X	X	X	X	X	X	X	X	X			X
Closed Circuit Television Systems CCTV	X	X	X	X	X	X	X				X	
Cold Room Condensing Unit	X	X	X	X	X	X	X	X	X			
Cold Room Evaporator	X	X	X	X	X	X	X	X	X			
Cold Water Tank	X	X		X	X	X	X	X	X			
Combined Heat and Power Unit (CHP)	X	X	X	X	X	X	X	X	X			X
Compressed Air		X			X	X	X	X	X			
Condensate Cylinder	X	X		X	X	X	X	X	X			
Control Inverters	X	X	X	X	X	X	X	X	X			
Control Panel Electrical/MCC/MCP	X	X	X	X	X	X	X	X	X			X
Cooling Coil	X	X		X	X	X	X	X				
Cooling Tower	X	X	X	X	X	X	X	X	X			X
Cradle	X	X	X	X	X	X	X		X			
Deaerator (Hot Water)	X	X	X	X	X	X	X	X	X			
Dehumidifier	X	X	X	X	X	X	X	X	X			X
Deluge System	X	X	X	X	X	X	X	X	X			
Detection System												
Dimmer Control Panel	X	X	X	X	X	X	X	X	X	X		X
Disabled Refuge Intercom System	X	X	X	X	X	X	X		X			X
Disabled Toilet Alarm	X	X	X	X	X	X	X		X			
Distribution Board	X	X	X	X	X	X	X		X			
Door	X			X	X	X			X	X	X	X
Door Holding Device	X				X	X						

Ground Source Heat Pump	X	X	X	X	X	X	X	X	X			X
Heat Recovery Ventilation System	X	X	X	X	X	X	X	X	X			X
Heating Coil	X	X	X	X	X	X	X	X	X			
Hoists	X	X	X	X	X	X	X	X				
Humidifier Unit	X	X	X	X	X	X	X	X	X			
Hydraulic Oil Tank	X	X	X	X	X	X	X	X	X			X
Indirect and Direct Cylinder/ Calorifier	X	X	X	X	X	X	X	X	X			X
Induction Unit	X				X	X						
Infrared and Ultrasonic Sensors	X				X	X						
Internal Fire Doors	X				X	X						
Kitchen Extraction Canopy	X	X			X	X	X	X	X			
Kitchen Grease Filters and Ductwork	X	X			X	X	X	X	X			
Lifting Equipment (Fixed)	X	X			X	X	X		X			
Lighting	X				X	X	X					
Lighting Control System	X	X		X	X	X	X	X				
Lightning Protection Systems	X	X			X	X	X		X			
Local Gas Fired Heater (Inc Radiant Tube Systems + Gas Fired	X	X			X	X	X	X	X			
Local Gas Fired Water Heater	X	X			X	X	X	X	X			
Low Grade Heat Recovery (LGHR)	X				X	X	X					
Low Temperature Hot Water (LTHW)	X				X	X	X					
LV Switch Panel	X	X		X	X	X	X		X			
Mains Fed Sprinklers System	X				X	X	X		X			
Mechanical Pneumatic Controls	X	X			X	X	X	X	X			
Mechanical Security Locks	X				X	X						
Medium Temperature Hot Water (MTHW)	X	X			X	X	X		X			
Multi Split System Indoor Unit	X	X			X	X	X	X	X			
Multi Split System Outdoor Unit (Condenser)	X	X			X	X	X	X	X			
Multipoint Gas Fired Water Heater	X	X			X	X	X	X	X			
Non Potable Water Tank	X	X			X	X	X	X	X			
Oil / Water Separator	X	X			X	X	X		X			
Oil Fired Space Heater	X	X			X	X	X	X	X			
Oxygen System	X	X			X	X	X	X	X			
Packaged Air conditioning System	X	X			X	X	X	X	X			
Packaged Cold Water Booster Set	X	X			X	X	X	X	X			
Passenger Lift - Hydraulic	X	X			X	X	X		X			
Passenger Lift - Traction	X	X			X	X	X		X			
Permanently Installed Access and Equipment (Including Fall A	X	X			X	X	X		X			
Permanently Installed Edge Protection	X	X			X	X	X		X			
Personal Attack and Intruder Alarm System	X				X	X	X					
Petrol/Oil Interceptor	X	X			X	X	X		X			
Photovoltaic Panel	X	X			X	X	X	X	X			
Plastic Storage Tank	X	X			X	X	X	X	X			
Plate Heat Exchanger	X	X			X	X	X	X	X			
PORKKA cold stores	X	X			X	X	X	X	X			
Portable Audio Induction and Hearing Loop System	X				X	X	X					
Potable Water Tank	X	X			X	X	X	X	X			
Power Converter Devices	X	X			X	X	X		X			
Power Factor Correction (PFC)	X	X			X	X	X		X			
Powered Gate	X	X			X	X	X		X			
Pressure Vessel	X	X			X	X	X		X			
Pressurisation Unit (Cooling)	X	X			X	X	X	X	X			
Pressurisation Unit (Heating)	X	X			X	X	X	X	X			
Pressurised Gas Fuel Tank	X	X			X	X	X	X	X			
Process Hot Water (PHW)	X	X			X	X	X	X	X			
Public Address/Intercom System	X	X			X	X	X					
Pump (Chilled Water Circulating)	X	X			X	X	X	X	X			
Pump (Condenser Water Circulating)	X	X			X	X	X	X	X			
Pump (DHW)	X	X			X	X	X	X	X			
Pump (Fuel Transfer)	X	X			X	X	X	X	X			
Pump (Heating Circulating)	X	X			X	X	X	X	X			
Pump (Various)	X	X			X	X	X	X	X			
Pumped Drainage System	X	X			X	X	X	X	X			
Rain Water Filter	X	X			X	X	X		X			

Recouperator	x	x			x	x	x	x	x			
Refrigerant Monitoring Panel	x	x			x	x	x	x	x			
Remote Condensing Unit	x	x			x	x	x	x	x			
Security Systems (Intruder Alarms, Communication and Interd	x	x			x	x	x					
Security and Building Guarding System	x	x			x	x						
Service Lift (Including Dumb Waiters)	x	x			x	x	x		x			
Sewage Ejector, Pumped Waste System and Sundry Pump	x	x			x	x	x	x	x			
Sewage Macerator	x	x			x	x	x	x	x			
Shower Installation	x	x			x	x			x			
Smoke Extract System	x	x			x	x	x		x			
Smoke Ventilators (Motorised)	x	x			x	x	x		x			
Solar Panels	x	x			x	x	x		x			
Sonic Bird Deterrent Systems	x	x			x	x	x		x			
Split System Indoor Unit	x	x			x	x	x	x	x			
Split System Outdoor Unit (Condenser)	x	x			x	x	x	x	x			
Sprinkler Air Compressor	x	x			x	x	x	x	x			
Sprinkler Systems Fire Pumps and Control Valves	x	x			x	x	x	x	x			
Steam Boiler	x	x			x	x	x	x	x			
Sump Pump	x	x			x	x	x	x	x			
Switch Gear	x	x			x	x	x		x			
Synchronisation Panel	x	x			x	x	x		x			
Traffic Control System (Traffic Lights etc)	x	x			x	x	x					
Traffic Hydraulic Ramp (Traffic Calming Systems)	x	x			x	x	x		x			
Trend Interface Panel	x	x			x	x	x	x	x			
Turnstile	x	x			x	x						
UPS Batteries	x	x			x	x	x	x	x			
UPS Unit (Large/Special Systems) Equipment Above 10KVA Ra	x	x			x	x	x	x	x			
UPS Unit (Small Systems) Equipment From 2KVA to 10KVA Ra	x	x			x	x	x	x	x			
VAV With Terminal Reheat	x	x			x	x	x	x	x			
VAV Without Terminal Reheat	x	x			x	x	x	x	x			
Voltage Optimisation Unit	x	x			x	x	x		x			
VRF System Ceiling Mounted Unit	x	x			x	x	x	x	x			
VRF System Concealed Ducted Unit	x	x			x	x	x	x	x			
VRF System Floor Mounted Unit	x	x			x	x	x	x	x			
VRF System Outdoor Unit	x	x			x	x	x	x	x			
VRF System Under Ceiling Unit	x	x			x	x	x	x	x			
VRF System Wall Mounted Unit	x	x			x	x	x	x	x			
Walls	x	x			x							x
Waste Disposal Unit	x	x			x	x	x		x			
Water Booster	x	x			x	x	x	x	x			
Water Cooler	x	x			x	x						
Water Filter (in Line)	x	x			x	x	x	x	x			
Water Isolation	x	x			x	x						
Water Softener	x	x			x	x	x	x	x			
Water Source Heat Pump	x	x			x	x	x	x	x			
Water Tank	x	x			x	x	x	x	x			
Water Treatment (Various)	x	x			x	x						
Wheel Chair lift / Stair lift	x	x			x	x	x		x			
Wind Turbine	x	x			x	x	x	x	x			

Appendix v: sample Issue Memo

**Imperial College
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Alyson Brewer
Archives Officer (Projects)

MEMO

To:- [REDACTED] – Building Manager

From:- Archives Officer (Projects)

CC:- [REDACTED] – Project Manager
[REDACTED] – Maintenance Manager
[REDACTED] – Head of Health & Safety, Estates Development & Projects
[REDACTED] – Principal Designer
[REDACTED] – Main Contractor

Date: *insert date of issue*

Project No:- *insert project number*
insert project name and building, insert document reference number

Re – Building Fabric Manual, Mechanical & Electrical Manuals. Final Issue

Dear *insert name of recipient*

The following documents, associated with the above project, have been issued to you on *insert date of issue*

1. Building Fabric Manual and Record Drawings – CD copy
 2. Mechanical Services Manual and Record Drawings – CD copy
 3. Electrical Services Manual and Record Drawings – CD copy
 4. Building Log Book – Hard copy (electronic version also included on Building Fabric CD)
- To be edited as applicable*

The O&Ms are also available to view on Pythagoras Document Manager.
The Estates Archive has also been issued with a full set of the O&Ms in hard copy and CD copy.

Best Regards,
Alyson Brewer
Archives Officer (Projects)

Imperial College of Science, Technology and Medicine