KNOWLEDGE PROPOSAL

Proposer Name and Organisation: Malcolm Wallace – CIBSE Data Centre Special Interest Group

Topic/ Title: “**Commissioning Data Centre Building Services- Standardising the Process”**

Date received:

1. Justification: Why is this guidance needed?

This guide is conceived to create a good practise process of commissioning. It would comprise extensive checklists of documentation, verifications, functional and integrated testing together with a briefer narrative to bring it all together and to discuss options where they exist.

Commissioning steps are typically defined by the owner with system inputs from manufacturers, and providing this basis of standardisation would be a valuable document to refer to for all.

Research is required across the industry bodies and various geographies to ensure what is already in place to avoid duplication and prevent plagiarising, and verify the full scope of this guidance.

1. Format: What format will the guidance take?

|  |  |
| --- | --- |
| [x]  | a traditional publication with words and diagrams to be produced for CIBSE’s Knowledge Delivery Platform, and in PDF |
| [ ]  | a data set |
| [ ]  | a digital tool or software application |
| [x]  | something else (please elaborate) Technical guidance and collaboration  |

1. Content: If guidance, please list proposed chapter and section headings. If a data set, digital tool, software application, or something else, please detail your proposed plan.

It’s envisaged this would be a (final) chapter in a potential CIBSE Data Centre Guide, but also available as a free-standing document.

1. Readership: Who is likely to read this guidance?

Of special interest to clients and stakeholders, as well as the whole commissioning team (installers, vendors, specialist and the commissioning engineer)

1. Authoring: Are authors in place? If so, please list them below.

No authors are currently in place. A small sub-committee taskforce to be sought to contribute from the DCIG and the CIBSE Commissioning group in particular.

1. Timescale: When would you expect to complete the project? Please provide a rough timeline.

Six to twelve months.

Fees: Will authors require funding? If so, how much?

Potentially yes, budget fee £2000.00

1. Landscape: Does any similar or complementary guidance exist, published by CIBSE or elsewhere?

Not known. A full/ global library search of existing publications is considered essential.

1. **Collaboration**: Are there any organisations that may wish to be involved in the production of this guidance? (For example: membership organisations, trade associations, contractors, consultants, government departments).

Not known.

1. Are there any organisations that may wish to sponsor the production financially?

Large organisations procuring data centres?

1. Categorisation: CIBSE has created a taxonomy of building services, the Knowledge Matrix. On the following pages, please tick the topics and sub-topics that will be covered in this project.

**Topic:**

[x]  Mechanical

[x]  Heating

[x]  Ventilation

[x]  Refrigeration and air conditioning

[x]  Extract/ exhaust systems

[x]  Smoke control

[x]  Pipeline distribution systems (natural gas, liquid fuels, medical gas, compressed air & vacuum)

[x]  Electrical

[x]  Extra low voltage

[x]  Low voltage

[x]  Medium voltage

[x]  High voltage

[x]  Local power generation & standby power

[x]  Earthing & bonding/ Lightning protection

[ ]  Communications

[ ]  Audio-visual

[ ]  Electric vehicle charging

[x]  Public Health

[x]  Water

[ ]  Drainage

[ ]  Gas

[x]  Lighting

[ ]  Daylight/ sunlight

[ ]  Electric lighting

[ ]  Lighting energy

[x]  Fire safety

[ ]  Fire life safety

[x]  Fire protection

[x]  Fire detection

[x]  Fire notification

[ ]  Building fabric

[ ]  Façades

[ ]  Access & maintenance

[x]  Transportation systems in buildings

[ ]  Lifts

[ ]  Escalators

[ ]  Moving walks

[ ]  Stairlifts and lifting platforms

[x]  Building intelligence

[x]  Controls

[x]  Smart buildings

[x]  Security

[x]  Physical security

[x]  Security systems (access control, surveillance, intruder alarm)

[ ]  Cyber security

[x]  Digital

[ ]  Building information modelling (BIM)

[x]  Digital engineering

[ ]  Digital construction

[x]  Sustainability & ESG

[ ]  Climate change mitigation

[ ]  Climate change adaptation

[ ]  Circular economy

[ ]  Biodiversity & natural capital

[ ]  Diversity & inclusion

[ ]  Social value

[x]  Health, wellbeing and safety

Structure:

[ ]  Introduction of project

[x]  Purpose (strategic/design context)

[ ]  Project management (inc info requirements)

[ ]  Drivers

[ ]  Commercial

[ ]  Contracts

[ ]  BIM

[ ]  Digital information management

[x]  Fundamentals

[ ]  Physics

[ ]  Design conditions/ data

[ ]  Calculations and methods

[ ]  Sustainability (key considerations)

[x]  Health, wellbeing and safety

[x]  Retrofit and refurbishment

[ ]  Condition surveying

[ ]  Modification/ adaptation

[x]  System selection

[ ]  Selection (regulations, best practice, finance, operational energy, whole-life carbon)

[ ]  Systems, plant, equipment (terminal equipment)

[ ]  Systems, plant, equipment (network level, central plant, distribution)

[x]  System design principles

[ ]  System sizing

[ ]  System design conditions/ data

[ ]  System sizing calculations

[ ]  Health, wellbeing and safety

[ ]  Modern methods of construction

[ ]  Access and maintenance

[x]  Construction

[x]  Installation

[ ]  Modern methods of construction

[ ]  Health, wellbeing and safety

[x]  Records (drawings, operation and maintenance)

[x]  Controls

[x]  Strategy

[x]  Controls as specified, installed and commissioned

[x]  Commissioning

[x]  Plans

[x]  Procedures

[x]  Operation

[x]  Facilities management

[x]  Training

[x]  Maintenance

[ ]  Health, wellbeing and safety

[ ]  Performance (energy, carbon, water)

[ ]  Performance (IEQ)

[ ]  End of life

[ ]  Reuse

[ ]  Repurpose

[ ]  Recycle

[ ]  Demolition

Building Type:

[ ]  **Residential**

[ ]  Single dwelling

[ ]  Multiple dwelling

[ ]  Non-residential

[ ]  Office

[ ]  Education

[ ]  Higher education

[ ]  Healthcare

[ ]  Retail

[ ]  Leisure

[ ]  Aviation

[ ]  Road and rail

[ ]  Government

[ ]  Industrial

[ ]  Logistics

[x]  Data centre

[ ]  Heritage

[ ]  Defence

[x]  Infrastructure

[ ]  Utilities

[ ]  Other

Intended Reader:

[x]  Owner

[x]  Occupier

[x]  Designer

[x]  Developer

[x]  Constructor

[x]  Installer

[x]  Commissioning engineer

[x]  Operator/ Facilities manager

[x]  Manufacturer

[x]  Apprentice

[x]  Student

[x]  Researcher

[x]  Expert witness

[ ]  Other - please specify: