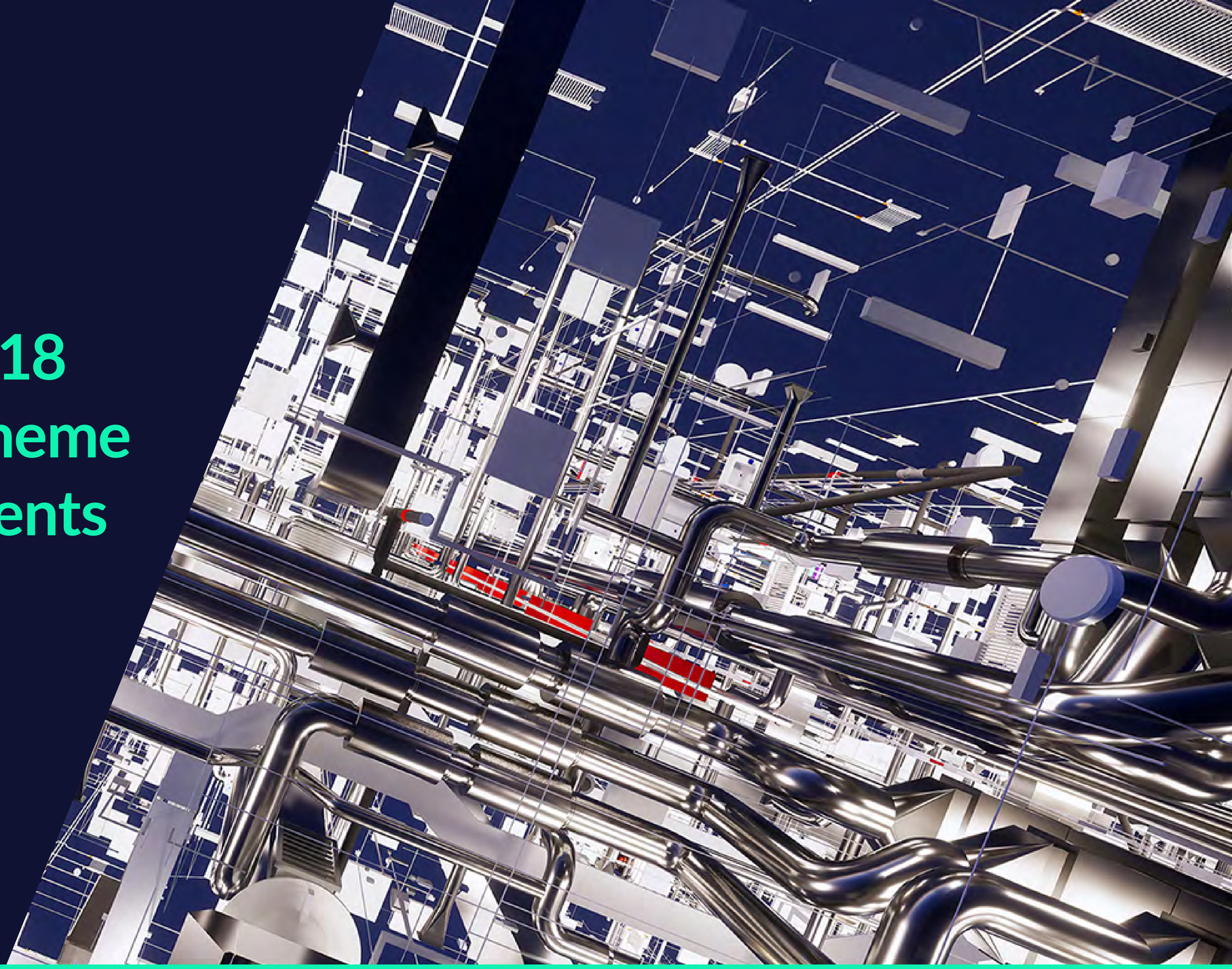
BUILDING INFORMATION MODELLING (BIM)

BIM Level 2 and ISO 19650-2:2018 Certification Scheme (BCS) Requirements



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Glossary

Abbreviations

AIM	Asset Information Model
AIR	Asset Information Requirements
BEP	BIM Execution Plan
BIM	Building Information Modelling
CDE	Common Data Environment
CDM	Construction, Design and Management Regulations
COBie	Construction Operation Building information exchange
DMS	Document Management System
EDMS	Electronic DMS
EIR	Exchange Information Requirements
IDP	Information delivery plan

IM	Information Management
MIDI	Master Information Document Index
LAP	Lead Appointed Party
MIDP	Master Information Delivery Plan
OIR	Organization Information Requirements
PIM	Project Information Model
PIP	Project Implementation Plan
PIR	Project Information Requirements
SIR	Security Information Requirements
SMP	Security Management Plan
TIDP	Task Information Delivery Plan

Terms and definitions

In this document, the following terms have the stated meanings:

Shall: Indicates a mandatory requirement

Should: Indicates a strong preference and is used to denote best practice or introduction of a new requirement, and

May: Indicates an option that is not mandatory

Assessment terminology:

Activity - 'identified piece of work that is required to be undertaken to complete a project (3.59) or programme (3.50)
Note 1 to entry: It may also be considered a work element.' ISO 9000, 3.3.11
Note - for Detailed Responsibility Matrix
<project management> smallest identified object of work in a project (3.4.2)
Note - for Information Delivery Plans

Appointment – 'agreed instruction for the provision of information (3.3.1) concerning works, goods or services.

Note 1 to entry: This term is used whether or not there is a formal appointment between the parties.' (ISO 19650-2, 3.2.2)

Assessment – objective and detailed evaluation of the BIM Provider to determine their capability following the Scheme criteria.

Best practice is a 'method that has been proven to work well and produce the best results, and is therefore recommended to be adopted as a model.' Note 1 to entry: A method described as a best practice has usually been tested over time and validated through repeated trials before being accepted as worthy of broad adoption. ISO 10014:2021, 3.5

BIM project – any project that includes producing information about an asset in the built environment. Note - a live BIM project is an appointment (whether written or not) where services are currently being provided.

BIM provider (BIM scheme service provider) – a company that meets requirements for BIM certification and is assessed as competent in conforming to the scheme requirements.

BIM ready – BIM Providers who can demonstrate that they have met the requirements of this document and the referenced standards in their Management Systems and have undertaken the Document Check stage. And do not currently have BIM projects against which they can demonstrate the implementation of those standards. LRQA can note these companies as BIM Ready. It is outside the formal certification process as it does not form part of the requirements of ISO 19650 and is in place only to assess a company's readiness for Certification.

BIM Scope – is the scope of the service delivery as defined by the whole of section 4

Capability – is the 'ability of an object to realise an output that will fulfil the requirements for that output.' ISO 9000, 3.6.12

Capability - 'measure of ability to perform and function.'

Certification – see Appendix 1 for details of the certification process and the arrangements for granting BIM Ready, BIM Level 2 or ISO 19650-2.

Certification Body – an organisation that assesses the competence of BIM Providers following the Scheme requirements.

Certification certificate – a certificate awarded to a BIM Provider management by the Certification Body for a scope(s) of work assessed under the Scheme

Certification period – Full certification validity is for a term of three years. Collaborative Framework - agreements including appointments and appointment documents (ISO 19650-2:2018; 5.4), Information protocols (ISO 19650-2:2018; 5.1.8), information standards, production methods and procedures, and resources that provide achievable planned delivery of information through defined an information management processes. These are many of the key items to enable a Common Data Environment (CDE)

Competence – is the 'ability to apply knowledge and skills to achieve intended results.' ISO 9000:2015, 3.10.4, or a combination of qualifications, training, knowledge, experience, aptitude, and fitness for the work.

LRQA note – the classification of competencies used should be the same as that for Model uses

Conformance/conformity – 'fulfilment of a requirement'. ISO 9001, 3.6.9. Therefore, a non-conformity is the non-fulfilment of a requirement, e.g. Scheme criteria or statutory regulatory requirements. These are either major, minor, or observations defined in section 1.3.

Criteria – 'set of policies, procedures or requirements". From Audit Criteria, 'set of policies, procedures or requirements used as a reference against which objective evidence is compared.' ISO 9000, 3.13.7

Deliverable – 'unique and verifiable, tangible or intangible outcome of a planned activity (3.2)' ISO 21506, 3.19

Information management solutions - 'should include the following:

- The necessary appointment conditions and amendments have been prepared and agreed upon
- The information management processes are in place
- The information delivery plan takes account of the delivery team's capacity
- The delivery team has the appropriate skills and competencies; and - the technology supports and enables the management of information according to this document. ISO 19650-1:2018; 10.1

'The delivery team should review the information management solution before any technical design, construction or asset management tasks start.
ISO 19650-1:2018; 10.1

Integrated management system -' the management system that integrates multiple aspects of an organization's systems and processes to one complete Framework, enabling an organization to meet the requirements of more than one management system standard.' (PAS 99:2012, 3.1)

Management system – 'set of interrelated or interacting elements of an organization to establish policies and objectives and processes to achieve those objectives'. (ISO 9000:2015, 3.5.3)

LRQA note – These management systems could cover (but are not limited to):

- Quality management systems
- Information security management systems
- Occupational Health and Safety Management
- IT Service Management
- Environmental management systems
- Management systems for records
- Knowledge management systems
- Collaborative business relationship management systems
- Business Continuity Management
- Asset management — Management systems

Model use – 'expected or intended project deliverables expected from generating, collaborating-on and linking 3D models to external databases' (BIM Dictionary, 2015)

Procedure – 'a specified way of carrying out a process or activity.' ISO 9000:2015, 3.4.5. Where there is documentation of specified procedures, such procedures shall be version controlled with each document's identifiable approver/authoriser. The resources used for documented procedures shall enable the information to be readily accessible by those working on associated activities.

Process – a set of interrelated or interacting activities that use inputs to deliver an intended result.' ISO 9000:2015, 3.4.1

Project (quality management) – 'unique process (3.4.1), consisting of a set of coordinated and controlled activities with start and finish dates, undertaken to achieve an objective (3.7.1) conforming to specific requirements (3.6.4), including the constraints of time, cost and resources' ISO 9000:2015,

Project (project management) – 'temporary endeavour to achieve one or more defined objectives' (ISO 21502:2020, 3.20)

Purpose - intention or objective for which something is done or created or for which something exists' (ISO 6707-4:2021, 3.6.7)

Resources – 'Activities are performed with the help of equipment, such as tools, hardware and software, machines, etc. Some of the project information relates to the resources in terms of specifications, validations, purchases, contracts, etc.' (BS ISO 22263:2008, 4.5)
Scheme – The general requirements for BIM providers as defined in this document.

Scheme criteria – The specific requirements defined in LRQA's Building Information Modelling Capability Certification scheme (BIMCCS) document.

Scheme owner – The Scheme is owned by LRQA Verification.

UKAS accredited - The part of the scheme that has ISO/IEC 17065:2012 accreditation for Certification to ISO 19650-2 by UKAS.

BIM terminology

Information Management supply chain:

Party - person or group

Third-party - ‘person or body that is recognized as being independent of the parties involved with the issues in question
Note 1 to entry: “Parties involved” are usually supplier (“first party”) and purchaser (“second party”).’ (ISO 6707-3, 3.4.30)

Appointed party – ‘provider of information concerning works, goods or services

Note 1 to entry: A lead appointed Party should be identified for each delivery team, but this can be the same organization as one of the task teams.

Note 2 to entry: This term is used whether or not there is a formal written appointment in place.’ (ISO 19650-1, 3.2.3)

Appointing party - ‘receiver of information concerning works, goods or services from a lead appointed Party

Note 1 to entry: In some countries the appointing Party can be termed client, owner or Employer but the appointing Party is not limited to these functions.

Note 2 to entry: This term is used whether or not there is a formal appointment between the parties.’. (ISO 19650-1, 3.2.4)

Appointed party (Lead) – An appointed Party directly appointed to the Appointing Party

Delivery team – ‘Lead appointed party and their appointed parties.’ ISO 19650-1, 3.2.7 Note - formerly Project Delivery Team

Project team – ‘appointing Party and all delivery teams’ ISO 19650-1, 3.1.2.1

Information Management Functions:

Asset information management - ‘Asset information management involves leadership in validating information supplied from each appointed Party and leadership in authorizing it for inclusion in the AIM. The function of asset information management should be assigned from the earliest stage of asset management.’ ISO 19650-1, 7.2

Project information management – ‘Project information management involves leadership in establishing the project’s information standard, the production methods and procedures, and the project’s CDE.’ ISO 19650-1, 7.3

Project (Task) information management – ‘Information management at a task team level is concerned both with the information associated with that task and with the requirement to coordinate information across multiple tasks.’
ISO 19650-1, 7.4

Task team – ‘Individuals assembled to perform a specific task.’ ISO 19650-1, 3.2.7
LR Note - the task as scoped by the TIDP
General terms:

BIM - Information management using building information modelling

BIM level 2 criteria – The *“Fundamental principles for Level 2 information modelling”* in PAS 1192-2:2013, pg. ix

Refer to Appendix 4 – BIM level 2 and BIM stage 2

BIM level 2 - as defined in “Fundamental principles for Level 2 information modelling” in PAS 1192-2:2013, pg. ix and Figure 1 and Table 1
Refer to Appendix 4 – BIM level 2 and BIM stage 2

BIM stage 2 - also identified as “BIM according to the ISO 19650 series”. Where manual and automated information management processes generate a federated information model, the information model includes all information containers delivered by task teams concerning an asset or a project.
Refer to Appendix 4 – BIM level 2 and BIM stage 2

BIM object - detailed information that defines a product and geometry that represents that product’s physical characteristics.

CDE – ‘agreed source of information for any given project or asset, for collecting, managing and disseminating each information container through a managed process.’ ISO 19650-1, 3.3.15

CDE solution - The CDE solution provides the technology to support the processes of CDE workflow. ISO 19650-1, 3.3.15

CDE workflow – ‘The CDE workflow describes the processes to be used for the function of the CDE solution’ ISO 19650-1, 3.3.15

Information Exchange – ‘act of satisfying an information requirement or part thereof (verb)’ ISO 19650-1, 3.3.7

Information management assignment matrix - An optional resource for an appointing party to help form an information management scope of services when appointing lead appointed parties or third parties to carry out all or part of the information management function. It typically, as a minimum, provides a summary of the activities of ISO 19650-2:2018.

Information protocol – ‘one of the resources that supports the implementation of information management using building information modelling’ If using UK Law, it is the ‘Information protocol to support BS EN ISO 19650-2 the delivery phase of assets’. It includes additional obligations relating to the delivery of information management using BIM

Key decision points – ‘Point in time during the life cycle when a decision crucial to the direction or viability of the asset is made. Note 1 to entry During a project, these generally align with project stages’ ISO 19650-1, 3.2.14. Work stages in the UK.

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Project implementation plan – ‘Statement relating to the suppliers’ IT and human resources capability to deliver the EIR (Employer’s Information Requirements). PAS 1192-2:2013, 3.34

Level of information need – a ‘framework which defines the extent and granularity of information.’ (ISO 19650-1:2018, 3.3.16)

Note 1 to entry: One purpose of defining the level of information need is to prevent delivery of too much information.’

Security information requirements – ‘the security information requirements detailing the information which shall be regarded as sensitive and the policies and processes for its creation, distribution, use, storage, disposal and destruction’ ISO 19650-5, 7.1.3 c),

Note - part of the Security Management Plan (SMP)

Security management plan – ‘plan which enables the agreed mitigation measures set out in the security strategy to be implemented in a consistent and holistic manner.’ ISO 19650-5.

Task - ‘set of activities normally under the responsibility of one agent’ (BS ISO 22263:2008, 4.4). The term “actor” is synonymous with the word “agent”. BS ISO 22263, 2.16

Definitions - Associated terminology

Change control - ‘<configuration management> activities for control of the output (3.7.5) after formal approval of its product configuration information (BS ISO 9000:2015, 3.3.10)

Configuration – ‘Interrelated functional and physical characteristics of a product or service defined in configuration information’ (BS ISO 10007:2017, 3.1).

Configuration audit - ‘audit performed in accordance with documented procedures to determine whether a product conforms to its requirements and product configuration information’ (BS ISO 10007:2003, 3.5)

Configuration baseline – ‘approved configuration information that establishes the characteristics of a product or service at a point in time that serves as reference for activities throughout the life cycle of the product or service’ (BS ISO 10007:2017, 3.2)

Configuration item – ‘Entity within a configuration that satisfies an end-use function.’ (BS ISO 10007:2017, 3.3)

Configuration information – ‘requirements for product or service design, realization, verification, operation and support.’ (BS ISO 10007:2017, 3.5)

Configuration management – ‘coordinated activities to direct and control configuration.’

Note 1 to entry: Configuration management generally concentrates on technical and organizational activities that establish and maintain control of a product or service and its product configuration information throughout the life cycle of the product.’ (BS ISO 9000:2015, 3.3.9)

Configuration management Plan - a plan that details the configuration management process and describes any project-specific documented information and the extent of their application during the life cycle of the product or service.

Configuration management process – a ‘process that includes configuration management planning, configuration identification, change control, configuration status accounting and configuration audit. (BS ISO 10007:2017)

Configuration object – ‘object within a configuration that satisfies an end-use function’ (BS ISO 9000:2015, 3.3.13)

LR note – Product, service, process, person, organization, system, or resource. BS ISO 9000:2015, 3.6.1)

Configuration status accounting – ‘Formalized recording and reporting of product configuration information, the status of proposed changes and the status of the implementation of approved changes.’ (BS ISO 10007:2017, 3.4)

Dispositioning authority - ‘Person or a group of persons assigned responsibility and authority to make decisions on the configuration.’

Relationship management plan (RMP) - ‘overview that defines the governance processes or references to them that defines how a particular relationship is managed and controlled’ ISO 44001:2017, 3.32

Introduction and purpose

This document aims to provide details for BIM Providers about the requirements they need to meet for LRQA BIM Level 2 and ISO 19650 Stage 2 under the Building Information Modelling Capability Certification scheme (BIMCCS) and the ISO 19650–2:2018 standard for the delivery phase and the ISO 19650–2:2020 for the operational phase of an asset.

The scheme retains the BIM level 2 scope for Certification as it remains a requirement of LRQA customers. LRQA plans to depreciate once it is no longer required. All current and future customers are encouraged to transition to 'BIM according to the ISO 19650 series'.

The UK BIM framework is the basis of the UK's implementation of 'BIM according to the ISO 19650 series' and is the Framework against the ISO 19650 are developing. Therefore, international customers can use it, and specific UK standards are removed and replaced with local standards and mandates.

Level 2 and Stage 2 certifications are independent, and Certification to one does not convey Certification to the other. LRQA can assess in parallel. ISO 19650-3:2020 is also included in the certification scope when required. However, they are certified separately, with only the ISO 19650-2 certification carrying the UKAS Accreditation Mark.

Currently, Standards under the Level 2 umbrella are transitioning to ISO standards, with several more to transition; as they are published, they are being incorporated into the LRQA UKAS accredited certification process.
LRQA has further developed a BIM certification process that certifies organisations involved throughout the Asset lifecycle as conforming with the ISO 19650 part 2 (and BIM level 2 criteria, (where appropriate), for the scope(s) of work as defined in section 4.

The certification scheme and its assessment process are from achieving the requirements for the delivery phase of assets or applying ISO 19650-2 within the context of Asset and Project management within Quality Management. Therefore, the Scheme fits this Model as best practice organisational implementation.

However, the benefits that Information Management using BIM can bring to asset delivery and operation are acknowledged globally, with many countries having produced their BIM mandates. The assessment process and principles defined in this document can be applied to all BIM project supply chain members, assuring the client (Appointing Party) and supply chain members of the capability of the BIM-certified organisation. Under the Information Buyer scope, it also assures suppliers that the client has sufficient capability to procure information management using BIM.

This guidance document describes the route to Certification and the assessment processes involved in achieving full Certification following a successful implementation audit for process compliance against a live BIM project.

Post-certification, LRQA establishes a three-year certification surveillance period programme to maintain the BIM Provider's capabilities, procedures, processes and competencies against those verified in the initial Certification.
An essential feature of the certification process is to assure that against the Certification award, the practices and procedures are consistently applied and maintained in the carrying out of work. Assessors regularly check supporting systems throughout the certification period.

In addition to specifying the technical requirements, this document outlines (Appendix A) the process for certifying BIM Providers. It includes what BIM providers shall do and the completed actions to maintain Certification.

3.1 Definitions of Major and Minor Non-Conformities.

3.1.1 Major non-conformities occur where there are:

- Objective evidence that demonstrates that an element from the scheme requirements has not been documented or implemented, or maintained
- Repetitive failures or multiple minor non-conformities in a single category
- The number of minor non-conformities gives rise to an unacceptable risk in the professional opinion of the assessor.
- Action not taken to close previously identified minor non-conformities within agreed timescales or to meet the milestone goals set at the time of Certification
- The BIM provider performs work outside the registered scope(s) defined in section 3.0 below.

3.1.2 Minor non-conformities occur where there are:

- Objective evidence that there is a weak element within the Information management process, a procedure, control or resource for the effective implementation and maintenance of the scheme requirements
- Isolated cases of non-conformance to procedures
- Limited shortfalls in established documented management and Health & Safety systems, and
- Failure to observe customer care protocols.

3.2 Other Finding Grading Definitions

3.2.1 Scopes for improvement (SFI) are issues raised when:

- The assessment identifies an aspect of the Service Providers operation where, whilst Scheme compliant, there is potential for improvement.

3.2.2 LRQA prompts (LRQAP) are observations made where:

- The assessment identifies a potential weakness the Certification Body may wish to thoroughly examine at their next assessment visit.
- The observation that the assessor believes the issue may give rise to a non-conformance in the future
- Insufficient information was able to be presented for the assessor to determination conformity
- The item/element of the scheme was not investigated due to time constraints and is for sampling before the recertification

3.2.3 No finding (NF) is where:

- The assessor has sampled an element, and there was no finding

3.3 Responsibilities

Certification demonstrates that a BIM provider has shown the capability, including the procedures, processes and competencies, to ensure consistent delivery of the certified scopes of work to the BIM scheme requirements following industry best practices and ISO 19650-2:2018 requirements.

An essential feature of the approval process is assurance that the BIM Provider consistently applies and maintains procedures and practices to those included in the Certification award. Continued verification is through an ongoing surveillance audit programme that checks work carried out throughout Certification and supports procedures.

3.3.1 BIM Service provider responsibilities
BIM Providers shall:

- Maintain an effective management structure to consistently deliver the certified scope of work to the scheme requirements
- Clearly define the scope of the services they provide
- Be proactive in monitoring the quality of their work without reliance on the Certification Body
- Arrange with the Certification Body for visits to be completed in accordance with the agreed surveillance programme
- ensure deficiencies identified by the Certification Body are closed out within agreed time scales
- Notify the Certification Body of the following:
  - changes to key personnel, including contact details
  - changes to ownership, and
  - rectify any defects notified by the certification body or a client; that is the BIM Provider's responsibility
  - where the assessor identifies poor performance, agreement to increase audit frequencies.

3.3.2 Compliance risk management
BIM Providers should establish a risk management process that evaluates ongoing risks. Failure to do this may affect their certification status. They should also incorporate Subcontracted aspects of their certified scopes of work into this process.

Examples of where risks to Certification can arise are:
- failure to manage risk from the use of external libraries
- inability to manage data security risks or inadequate checking of cloud certification providers
- failure to consider the additional risk for security concerns
- reliance on scheme certification as the sole indicator of consultants' and contractors' ongoing competence
- inadequate checking of sub-contracted scope activities or not ensuring adequate performance requirements and scheme competency requirements and delegated to others, and
- turnover, availability, and consistency of qualified and competent staff. Information delivery providers shall include a risk management procedure for information delivery.

3.3.3 Certification body responsibilities
In operating the Scheme, the Certification Body shall:
- conduct evaluations against the scheme requirements in a technically competent and objective manner
- adopt a pragmatic and objective approach to the maintenance of scheme standards
- plan audit visits that, over time, comprehensively cover the scope of Certification
- endeavour to respect BIM Provider's business constraints
- take action to investigate/suspend BIM Providers' who do not promptly' and respond and take the required action upon identification of a significant non-conformance
- maintain minimum assessor competency requirements, and
- ensure all information regarding the BIM Providers' commercial business interests is treated in confidence and not passed to any third party except to meet the direct requirements of the operation of the Scheme.

Certification (BIM) Scope

4.1 Service Provision

4.1.1 BIM-ready
Organizations that are Ready to use BIM on a project to BIM Level 2 or BIM according to the ISO 19650 series.

These organizations have undertaken a GAP analysis and Stage 1 Document Check.

4.1.2 BIM level 2
Organizations that are carrying out BIM and information services to BIM Level 2

Organizations have undertaken a Full Implementation Assessment (FIA) to BIM Level 2. This scope is depreciated and therefore only open to existing clients who shall transition to 'BIM according to the ISO 19650 series' at their recertification.

4.1.3 BIM, according to the ISO 19650 series
Organizations that are carrying out BIM and information services to BIM according to the ISO 19650 series Organizations that have successfully undertaken a Full Implementation Assessment (FIA), including the Stage 1-Document Check and Stage 2-Implementation Assessment

4.2 Standards Scope

The Standards scope differs as UKAS has accredited Certification schemes, only to the Scope of ISO 19650-2:2018. The Certification is, therefore, for Accredited or non-accredited status and indicated on the Certificate. The Standards scope is as follows.

4.2.1 UKAS accredited
'BIM according to the ISO 19650 series.'

ISO 19650-2 (Including the relevant parts of ISO 19650-5)
4.2.2 Non-UKAS Accredited
a. BIM Level 2
b. BIM according to the ISO 19650 series:
- ISO 19650-3 (which includes the relevant parts of ISO 19650-5)
- ISO 19650-4 – Not currently offered.
- ISO 19650-5 – Not currently offered as a standalone scope

4.3 Location of services that scope applies:

Where a BIM Provider has multiple office or project locations, LRQA can only give Certification to the assessed locations.

Alternatively, should the assessor have confidence that the BIM Provider's processes are robust and supported by a signed statement by a person with legal accountability. In that case, such a statement shall assure that all such offices, included under the certification umbrella, have adopted the same processes, procedures, and competencies of the office subject to assessment. Then Certification may be given to all defined locations with the agreement that all such locations are verified for compliance once, as a minimum, during the three-year surveillance visit programme, by the Information provider.

LRQA awards BIM Certification where the Information Delivery provider demonstrates conformance with the scheme requirements and ISO 19650-2:2018 process requirements.

4.4 Supply Chain Scope

LRQA awards Certification against three supply chain scopes

1. BIM Appointing Party
2. BIM Supplier Lead Appointed Party, and
3. BIM Supplier Appointed Party (Task Team)

Sections 3.1, 3.2 and 3.3. defines these scopes in more detail.
There can be cross-over between scopes, where a BIM provider passes part of the activities to a third party, or when the responsibility of the Appointing Party passes, accountable activities to Appointed Parties. The Certificate includes the extent of the BIM provider's involvement in the Information Management function (i.e., Asset, Project, and Task Information Management), where they are to be certified for multiple scopes,

4.4.1 Appointing party
The Appointing Party is an actor that undertakes Project and Asset Information procurement. This scope within the Project Team includes the definition within PAS 1192-2:2013 as Employer or Client organisations or individuals fulfilling the requirements of the Appointing Party in appointments or building contracts in the Delivery Phase. Section 1.2 above further clarifies the ISO 19650-2:2018 terms.

Examples:
- Client,
- 3rd Parties - Client's Agent,
- Employer's Representative
- Technical Advisor, IM or BIM Consultant
- Information Management
- Project Delivery Management

Certification (BIM) Scope

4.4.2 Lead appointed party
An actor that undertakes Project Information Supply rather than for the whole of the delivery phase. This scope as part of a delivery team includes the definition within PAS 1192-2:2013 as the supply chain (Information and Coordination Management), designers and main contractors fulfilling the requirements of a supplier, including Information Management as described in the activities of:

- Information Management
- Project Delivery Management
- Lead Designer

ISO 19650-2:2018 expresses these organizational roles as the Project Information Management Functions for appointments.

Examples:
- Design Lead (e.g., Architect, Structural Mechanical, Electrical, Plumbing engineers).
- Construction Lead (e.g., Main Contractor).

4.4.3 Appointed party
The Appointed Party is an actor that undertakes Task Information Supply. This scope as part of a task team includes formerly defined within PAS 1192-2:2013 as consultants, contractors and suppliers fulfilling the capabilities of a task team, including:

- Task Team Manager
- Task Information Manager
- Interface Manager
- Information Originator

ISO 19650-2:2018 expresses these organizational roles as the Task Information Management Functions for appointments.

Examples:
- Designer (e.g., Architect, Structural Mechanical, Electrical, Plumbing engineers)
- Engineering Consultancy and Design
- IM Originator/ Provider

Table 1 – Service provision

Service/Certification provided	Organization's Documentation	Documentation Utilised	Appointments underway	UKAS accredited	Certification
BIM Ready	In place	No	N/A	No	Website amber
BIM Level 2	In place	Yes	Yes	No	Full
ISO 19650-2	In place	Yes	Yes	Yes	Full
ISO 19650-3	In place	Yes	Yes	No	Under development
ISO 19650-4	In place	No	No	No	Under development
ISO 19650-5*	In place	Yes	Yes	No	Full

**Included through the scopes of certification for ISO 19650-2 and ISO 19650-3*

Structure and organisation

5.1 Senior management

All parties shall have a defined company structure with documented roles and responsibilities. Specifically, the following:

5.1.1 All parties should have a company Information Management or BIM policy.

5.1.2 All organizations should have a statement of the company's position in Information Management using BIM in the asset delivery lifecycle.

5.1.3 All parties shall clearly define the scope of the services provided, including Information Management using BIM.

5.1.4 All parties shall have a documented management structure with named roles and individuals internally/operationally and for specific functions assigned on projects areas of responsibility detailed on responsibility and management assignment matrices

5.1.5 All parties shall maintain documented levels of delegation and limits of responsibility.

5.1.6 All parties shall have a managed BIM awareness process for the company's personnel, including a training process where relevant.

5.1.7 All parties shall ensure they maintain relevant knowledge and experience for the delivery of their Information Management and BIM services

5.2 Quality Management

All parties shall manage their services concerning Quality Management as follows:

5.2.1 BIM providers should have an appropriate Quality Management System (QMS) or other Quality management process that covers the scopes of their Certification.

5.2.2 If a UKAS-accredited ISO 9001 certificate is provided, this assessment LRQA considers this section conforming as covered by the scope of the ISO 9001 certificate.

5.2.3 All parties should have a nominated person responsible for quality management

5.2.4 All parties shall establish and maintain Documented Information, or the resources listed in this document as summarised in Appendix B

5.3 Relationship management

All parties should be able to demonstrate examples of their roles, responsibilities and how they conduct relationship management including:

5.3.1 All parties should have a defined, understood and completed collaboration framework

5.3.2 All parties should have a defined Relationship Management Plan (RMP) understood by all staff.

5.3.3 All parties shall confirm and authorize information as contractual documentation, including information requirements

5.3.4 All parties shall define at an individual or generic role level all limits of authority and the extent of changes to the design that the parties can accept without the approval, authorization, and acceptance of a nominated competent person

5.4 Collaboration management

All parties shall ensure that the timely and compliant delivery of information at each of the information exchanges and key decision points (i.e., against the accepted programme), as follows:

5.4.1 Appointing Parties shall ensure a collaborative framework is set up between all parties and roles to ensure development, consistency, and integrity to produce the MIDP, EIRs, Delivery Teams' BEPs, and distributed CDE.

5.4.2 Lead Appointed Parties shall ensure the Delivery Team sets up an information management solution.

5.4.3 Lead Appointed Parties shall ensure roles are in place to ensure development, consistency, and integrity to produce the MIDP, EIRs, Delivery Team's BEP and distributed CDE.

5.4.4 All parties shall ensure the initial and ongoing confirmation of suppliers' capability to deliver the information requirements.

5.4.5 Lead Appointed Parties shall prepare the Master Information Delivery Plan (MIDP) and change control

5.4.6 Lead Appointed Parties should initiate a project or appointment induction meeting to confirm resource capability and availability.

5.4.7 Lead Appointed Parties shall ensure clarity of roles and responsibilities of the delivery team

5.4.8 All parties shall ensure the production of task information is using the project information standards, production methods, procedures, and agreed-to project software hardware and IT systems

5.5 Design management

Responsibility for the coordinated delivery of all design information shall be carried out as follows:

5.5.1 The Lead designer or lead constructor, as specified by the Appointing party, shall manage the design on the information model, including development, approvals, authorization, and acceptance using Configuration Management as section 7

5.5.2 The lead Appointed Party shall confirm the deliverables of the delivery team

5.5.3 The Appointing Party shall consider establishing a CDE strategy for the stated nature and ownership of the CDE solutions and Project CDE.

5.5.4 The Appointing Party and then the Lead Appointed Party should establish the methods and procedures for spatial coordination, e.g., federation strategy, origin and orientation, structural grid, and floor levels.

5.5.5 Appointed parties shall be accountable for the task-based design output

5.5.6 Appointed Parties should collaboratively negotiate concerning design coordination and space allocation if part of a task team.

5.6 Information Security, Information Policy, and Management
All parties shall manage their organization with appropriate Information Technology Security as follows:

5.6.1 BIM providers should have an appropriate Information Technology Security system that covers the scope of their Certification.

Note - LRQA considers an organisation conforming to this assessment section if covered by the scope of the Cyber Security Certificate. If an organization has an UKAS-accredited ISO 27001 Cyber Essentials Plus or Cyber

Essentials certification certificate, the assessor determines the certificate's appropriateness based on the organization's size and complexity.

5.6.2 All parties shall have adequate information security measures in place relevant to their scope and risk profile

5.6.3 All parties should have adequate information and communications technology policy relevant to their scope and risk profile, IT policies, strategies procedure, and ICT systems including:

- Acceptable use policy
- Data classification policy
- External and remote support details
- Third party risk policy
- Incident response plan
- Hardware replacement strategy
- Software licence strategy
- Disaster Recovery/Business continuity Systems and procedures
- Archiving systems and procedures (e.g., a regime for system backup)
- ICT Schedule listing ICT infrastructure and Operating systems and applications

Note - ISO/IEC 27001 certification, Cyber Essentials, or cyber essentials plus certification exempts BIM providers from much of the initial scope assessment for ICT, including information security under this scheme.

References

- ISO 9001:2015
- BS 7000-4:2003
- ISO 21500:2021
- ISO/IEC 27001:2017
- ISO 19650-2:2018
- ISO 44001:2017
- PAS 91:2013 Pre-qualification questionnaires and assessment
- ISO/IEC 27001:2017
- Cyber Essentials

Resources

- BIM Policy
- Documented Management Structure
- Information Delivery Strategy
- High-Level Responsibility Matrix
- Detailed Responsibility Matrix
- Information Management Scope of Services (optionally including the Information Management assignment matrix)
- Collaborative Framework
- Information Management Solution

Documented Information

- The scope of the quality management system
- Documented information necessary to support the operation of processes
- The quality policy
- The quality objectives

This documented information is subject to the requirements of (ISO 9001:2015, 7.5)

ICT Resources:

- ICT acceptable use policy
- Data classification policy
- External and remote support details
- ICT third party risk policy
- ICT Incident response plan
- ICT hardware replacement strategy
- ICT software licence strategy
- ICT Disaster Recovery/Business continuity Systems and procedures
- ICT Archiving systems and procedures
- ICT Schedule listing ICT infrastructure and Operating systems and applications

HR, training and competency

6.1 Defining the competency requirements

All parties shall ensure that people responsible for areas of work carried out under this Scheme are competent and satisfy general and scope-specific competency requirements for BIM and information management. Specifically, as part of their Management Systems. The following:

6.1.1 All parties shall consider a documented procedure detailing recruitment, selection, interview, and appointment criteria.

6.1.2 All parties shall consider maintaining Job descriptions detailing responsibilities and minimum training, experience, and qualification criteria

6.1.3 All parties shall consider detailing BIM and Information Management related responsibilities in all Job descriptions.

6.1.4 All parties shall consider issuing Job descriptions, including responsibilities and limits of authority to all staff, whose role materially contributes to the delivery of work directly related to the scope of Certification.

6.1.5 All parties shall consider establishing and implementing a documented process for determining competency including documenting minimum competency requirements comprising training, experience, and qualification for scope-specific and management positions.

6.1.6 All parties should ensure a suitably competent person assesses and documents the competency of persons performing roles for their set competencies.

6.1.7 All parties should undertake a review by a suitably competent person of ongoing competencies at least annually recording and documenting these competency reviews.

6.1.8 All parties should ensure that the minimum documented competencies are satisfied, and that staff are trained and qualified for their work. E.g., internal Quality Management audits.

6.2 Competency management

As part of their Management Systems, Lead Appointed Parties. Appointed Parties shall manage the competency of their people undertaking BIM and Information management services, including externally contracted parties, specifically as follows:

6.2.1 Lead Appointed Parties and Appointed Parties shall consider maintaining a competency matrix for the Information Management and BIM roles, which establishes and defines minimum competencies for each team grade and actual competencies held by named individuals.

6.2.2 Lead Appointed Parties and Appointed Parties shall consider establishing in implementing a competency evaluation process for their employees, underpinning the minimum competencies defined

6.2.3 Lead Appointed Parties and Appointed Parties shall consider undertaking a training programme in place which is adequate to close any competency gaps and evaluate training needs (including new starters);

6.2.4 Lead Appointed Parties and Appointed Parties shall consider ensuring any role holders who have yet to be assessed as fully competent to do a particular task are adequately supervised and supported

6.2.5 Lead Appointed Parties and Appointed Parties should have a process to keep personnel up to date with software and other BIM solutions-related upgrades and releases.

6.2.6 All parties shall consider summarising Role-specific competencies in a matrix related to role task requirements and detail the minimum requirements for each grade, showing the level of competence each performing that role—evidence confirming qualifications, training, experience, aptitude, and fitness.

6.2.7 Lead Appointed Parties and Appointed Parties shall consider implementing a documented competency evaluation process. They may be required to justify their minimum competency levels as defined within the matrix.

6.2.8 All parties should ensure that personnel who materially contribute to delivering any aspect of a BIM project receive appropriate training and development. It may be through formal training or structured job-based learning. Before undertaking new activities, depending on party personnel, receive adequate induction training.

6.2.9 All parties should ensure adequate consideration of medium-term resource requirements and development of training plans, including envisaged technological changes.

6.2.10 All parties should keep records of all training and qualifications.

6.2.11 All parties should ensure the BIM provider deals effectively with grievance and disciplinary issues and with minimal adverse impact on the business or employee relations.

6.2.12 All parties should ensure performance measures are in place which ensures that the quality of the administration service is satisfactory and complies with the requirements specified for the work.

Suggested requirements

- ISO 9001:2015
- ISO 44001:2017

Resources

Documented Procedures:

- BIM Policy and evidence of the capability to follow the BEP
  see Pre-qualification questionnaire assessment
- Recruitment Procedure
- Job Descriptions
- Competency evaluation process
- Competency matrices
- Training/supervisory/mentoring and assessment programmes
- Individual files that detail qualifications, training, and experience.
- Collaboration Framework
- Relationship Management Plan (RMP)
- Grievance procedures.

Configuration activities

BIM Providers shall have processes and procedures to address configuration management, unique identification, traceability and change control, following BS ISO 10007:2017 and ISO 19650-2:2018 needed to deliver the information model, including the technological and information management systems storing project and asset information, including the configuration Management Plan, the configuration Management process and verification and validation of the information model.

7.1 Configuration object

7.1.1 The Appointing Party's configuration object are the requirements for the product it requires.

7.1.2 A Lead Designer Lead Appointing Party's configuration object is for the design of the product it provides as captured through its Information Management and Information deliverables within the operation of the CDE

7.1.3 A Lead Constructor Lead Appointing Party's configuration is for is for the construction of the product it provides as captured through its Information Management and Information deliverables within the operation of the CDE

7.1.4 For all appointed parties it is the internal resources, services, processes, procedures, Information standards and production methods and procedures.

7.2 Configuration Management Planning

All parties shall have processes and procedures to define the requirements to produce a configuration management plan, including the following

7.2.1 All parties shall define the responsibilities and authorities, including the dispositioning authority (e.g., Quality and Information Management teams) for the configuration management process

7.2.2 All parties shall appoint, where applicable, competent persons to manage the interfaces (e.g., Interface Manager) of the information model they are responsible for producing and managing.

7.2.3 All parties shall include in their Configuration Management plan the configuration management process conforming to ISO 10007:2017 or equivalent, demonstrating appropriate controls over changes to the services (information model/supporting input) to produce project-specific documented information (external outputs-TIDP and Internal outputs) for the life cycle of their service.

7.3 Configuration management process

7.3.1 The Lead Appointed party shall have procedures that define the configuration management process and produce a plan (i.e. BEP, SMP and RM) which specifies roles and responsibilities for controlling and directing the works (i.e. Scope of Services, Information Management roles and assigned information management function) and information model production (SMPs).

7.3.2 The Lead Appointed party shall have business processes for information production for design and Design Management shall include the procedures and plan that define the configuration process.

7.3.3 All parties shall have adequate numbers of competent staff are to be engaged in directing and controlling configuration. The information model, including design, shall be revalidated following design changes or variations through a Change Control Process

7.4 Information model verification and validation

7.4.1 The Lead Designer whether they be the LAP or AP shall identify critical design criteria (Configuration Baseline) and check that this criterion is compatible with the EIRs

7.4.2 The Lead Designer, whether they be the LAP or AP shall ensure that designs (information model outputs) are tested, including the identification and resolution of uncoordinated elements (e.g., clashes and insufficient cross-referencing).

7.4.3 The Appointing Party shall ensure that a party defines a Coordination strategy for each stage of the Delivery Phase.

7.4.4 The Appointing Party shall ensure at each stage the measurement of the success and compatibility with the appointment's requirements and standards of the coordination strategy

7.5 Spatial coordination and cross-referencing

Appointed parties should undertake Clash avoidance/detection in a continuous process and apply throughout the BIM provider's services, including:

7.5.1 Appointed parties shall have a documented procedure for the management of spatial coordination.

7.5.2 Appointed Parties shall liaise with other task teams for interface management

7.5.3 Appointed parties shall have a documented procedure to resolve interface clashes

Configuration activities

7.6 Configuration

Configuration shall include items that satisfy the end use function, including:

7.6.1 All parties shall have a documented information management process including

7.6.2 All parties shall have a document management process, including maintenance of document file structures.

7.6.3 All parties shall keep records of non-appointment BIM-related documents and their retention

7.6.4 The Lead Appointed Party and Appointed Party shall have a change control process for relevant appointment delivery information, documents, and data, including communication with their Employer

7.6.5 All parties shall have a procedure for the management of external documents and standards to ensure they are still current

7.6.6 All parties shall have a procedure for the management of software to ensure they are still fit for the purpose

7.6.7 All parties shall have a procedure for introducing newly published relevant documents, standards, and software.

7.6.8 The Lead Appointed Party and Appointing Party shall have a process for ensuring checking, approval, and establishing a baseline before producing library object information provided by clients

7.6.9 All parties shall have a training system that accounts for configuration changes/variations and tolerance control with the cross-checking with appropriate standards

7.6.10 All parties shall have an audit and checking process in place.

7.6.11 All parties shall have adequate numbers of competent staff engaged in directing and controlling configuration and the revalidation of the design following any changes

7.6.12 The appointed party or Lead Appointed Party for the Construction phase shall have a configuration management verification of the information model, including all parts incorporated in the planned construction.

Standards

- ISO 9001:2015
- ISO 10007:2017
- ISO 19650-1:2018, 11.2
- ISO 19650-2:2018
- BS 7000-4:2013 Design Management

Resources

Documented Procedures:

- Configuration Management Process
- Configuration Management Plan
- Information Management Scope of Services
- Information Management Process
- Document Management Process
- Change control process
- EIR review process
- Organizational Information Standards
- Coordination Strategy
- Organizational Information production methods and procedures
- Clash tolerance Strategy
- Collaboration framework
- Client document management system

Information Management Process

- Organisation charts
- Process maps, process flow charts and process descriptions
- Procedures
- Approved supplier lists
- Strategic plans (BIM roadmap)
- Forms/templates

Legal issues, subcontracting and procurement

8.1 Supply chain integration

All parties shall endeavour to use the Project Information Protocol in projects and appointments, either in the delivery or operations phase, where the use of the ISO 19650 series of standards is required, including:

8.1.1 Appointing parties shall ensure the use of the Project Information Protocol

8.1.2 Appointing parties shall endeavour to use collaborative and integrated forms of contract and appointment for the delivery of the asset.

8.1.3 Lead Appointed Parties and Appointed parties shall be ready to engage in operating with collaborative and integrated forms of contracts and appointments.

8.2 Scope of BIM in appointments

All parties shall ensure that the appropriate information particulars are include in their appointments

8.2.1 Appointing parties shall integrate and include the following resources in their appointment of each delivery Team's Lead Appointed Party:

- The appointing party's EIR.
- The project's information standard
- The project's information protocol
- The delivery team's BEP; and
- The delivery team's MIDP

8.2.2 Lead Appointing parties shall integrate and include the following resources in their appointment of each appointing party in their Delivery Team:

- The lead appointed party's EIR
- The project's information standard
- The project's information protocol
- The delivery team's BEP
- The agreed TIDP

8.3 Information management services

All parties shall appropriately procure the Information Management Function, including:

8.3.1 All Parties shall ensure for of the Information Management Function they are accountable, all organizations and individuals they appoint are with an Information Management Scope of Services or equivalent conditions of engagement.

8.3.2 As part of the information Management scope of Services all parties should use an appropriate method to assign the information function throughout the supply chain such as the Information Management Assignment Matrix in Appendix A of ISO 19650-2.

8.4 Competencies and subcontracting

All parties shall have procedures to ensure the competency of suppliers, sub-contractors and their assigned staff who provide BIM services, including the following:

8.4.1 All Parties providing Information Management and BIM services should make use of standard BIM, IT, and resource assessment forms.

8.4.2 The Appointing Party and Lead Appointed Party shall Include assessment methods for selecting sub-contractors concerning BIM Provision services.

8.4.3 The level of assessment should reflect the criticality of the supplier/sub-contractor as determined by a risk-based approach. Where the procurement function identifies materials/services from only a single-source supplier, they should highlight within the Risk management process.

8.4.4 The Appointing Party and Lead Appointed Party shall detail the process for introducing new suppliers/sub-contractors and materials/goods suppliers onto an approved list.

8.4.5 All parties shall have an approval process for external providers used in BIM, and where services, e.g., structural engineering, are procured through a supplier,

8.4.6 Clients and Lead Appointing Parties should state to the supplier the minimum levels of competence required of the person(s) providing the service and should ensure that the stated minimum requirements are satisfied

8.4.7 All parties shall determine how its external providers are integrated into company policies and procedures and include a monitoring and audit process to ensure external providers maintain the required level of performance.

8.4.8 All parties should have documented procedures that detail the audit process to determine how they verify the ongoing suitability of existing suppliers/ sub-contractors.

8.5 Information authoring and BIM objects

8.5.1 Information authors (E.g., model authors, object providers) shall establish appropriate procurement processes regarding operating philosophies with the need to meet contract commitments.

8.5.2 All parties shall implement a documented approval and sign-off process for externally produced BIM Library Objects

Standards

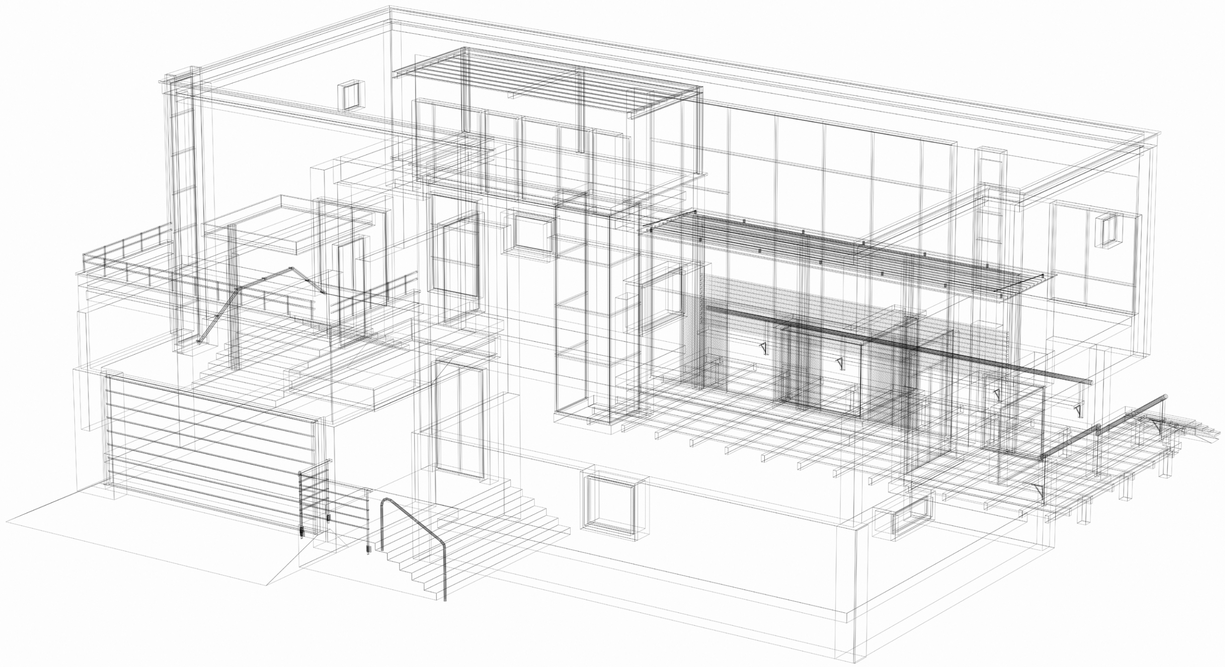
- ISO 9001:2015
- ISO 10007:2017
- PAS 91:2013
- ISO 19650-1:2018, 11.2
- ISO 44001:2017
- ISO 55001:2014
- UK BIM Framework

Resources
Documented Procedures:

- Configuration Management Plan (including Configuration Management Process)

Industry resources:

- Information protocol to support BS EN ISO 19650-2 the delivery phase of assets (Edition 1 2021)
- Information protocol to support BS EN ISO 19650-3 the operational phase of assets (UK BIM Edition 1 2021)
- Information Management Assignment Matrix
- Outline scope of services for the role of information management (First Edition 2013)
- PAS 91 Validation and verification
- CPIx Protocol – Team capability review (or updated equivalent)



Risk management

9.1 Building safety

All parties shall consider when managing risk for Information Management and BIM services relating to life safety:

9.1.1 Demonstrating or inputting into legal compliance for the gateway process of the Building Safety Act 2022

9.1.2 Maintaining or contributing to building and as-built information in a digital format

9.1.3 Training requirements for the provision and management of information

9.2 Risk recording

9.2.1 All parties shall establish and maintain procedures to identify and assess business, appointment/contract, Project, services, and activity risks

9.2.2 All parties shall ensure that the identification and implementation of necessary control measures are appropriate to the level of risk under consideration.

9.2.3 All parties should record and regularly review identified risks in a register. Where an appointment or project-specific risks are assessed separately from generic risks, the process should identify these risks. These can also be included in a generic risk register.

9.3 Risk identification methodology

BIM Service Provider's methodology for risk identification and assessment shall:

9.3.1 be defined concerning its scope, nature, and timing to ensure it is proactive rather than reactive.

9.3.2 include, where appropriate, the assessment of how risks change or can change over time

9.3.3 provide for the classification of risks

9.3.4 identify those risks that are to be avoided, eliminated, transferred, or controlled by management processes

9.3.5 identify risk escalation procedure, including the communication of risk controls within the company

9.3.6 include a management system for the identification of risks for more generic processes, people, equipment, or suppliers that are critical to the continuity of the business consistent with the scope of the BIM Provider

9.3.7 provide for the monitoring of required actions to ensure effectiveness and timeliness of implementation

9.3.8 ensure that the risks relating to the use of subcontractors and external consultants are identified, evaluated, and mitigated

9.3.9 ensure lessons learned from previous appointments are captured and used to inform the risk evaluation in the future, and

9.3.10 ensure that document risk-related information is up to date.

9.4 Integrated risk process

All parties shall have an integrated risk process which should include:

9.4.1 Performing a risk assessment before commencing information production, i.e. at the pre-appointment and the appointment award stage

9.4.2 Risks defined at the appointment award stage should be subject to periodic review and update throughout the appointment

9.4.3 A risk register that records the defined risks and the identified mitigation measures together with their target implementation dates and their subsequent closeout

9.4.4 Be subject to ongoing review

9.4.5 Use a standardised assessment framework

9.4.6 Provide for the classification of risks

Risk management

9.5 Risk assessment process output

The output of the risk assessment process and associated controls should be input into the following processes to mitigate risks:

9.5.1 The determination of the design, specification, procurement, transport, construction, inspection, and maintenance of products

9.5.2 Identification of adequate resources, including staffing levels and subcontractors, and

9.5.3 Identification of training needs and skills.

9.6 Risk management framework

The BIM Provider's overall risk management framework should conform to the following:

9.6.1 Communication of their risk mitigation measures to all appropriate personnel

9.6.2 Quantification and measurement of their risks

9.6.3 Routine reporting of risk

9.6.4 Have procedures to escalate risk-related issues to the Board level as necessary

9.6.5 Have processes to learn from unforeseen events and

9.6.6 Document and keep their risk-related information up to date.

Standards

- ISO 19650-1:2018
- ISO 19650-2:2018
- ISO 19650-5:2020
- ISO 31000:2018
- BS 8536-1:2015
- BS 8536-2:2015

Resources
Documented Procedures:

- Integrated Risk Procedure
- Risk Management Framework

Delivery phase process

10.1 Documented procedures

All Parties shall establish and maintain documented procedures for their Information Management and BIM processes.

10.2 Capability and competency

The BIM provider's capability shall cover the following scopes: (summarised as the ability to achieve BIM Stage 2 according to ISO 19650 in the Capability table in Appendix 2) and including:

10.2.1 All BIM scopes, competencies, controls, resources, and procedures shall be in place to satisfy the requirements of ISO 19650-2:2018 in an appointment.

10.2.2 All BIM scopes shall have the appropriate level of competencies and roles to fulfil the potential Scope of Services for Information Management, e.g., ISO 19650-2 Annexe A for the Information management assignment matrix and working to the information management functions.

10.3 Appointing party capabilities

The assessment of conformance has a particular focus on the following areas of the process considering the Appointing Party activities as may be applicable:

10.3.1 Determine whether a security Minded approach is needed.

10.3.2 establish any security-minded considerations, including the Security Management Plan (SMP) and the Security Information Requirements (SIR)

10.3.3 ensuring the setting up and management of a CDE solution and workflows

10.3.4 shall establish the Project Information Protocol or equivalent legal instrument and ensure inclusion in all delivery teams appointments

10.3.5 shall establish the Project Information Standards and production methods and procedures

10.3.6 shall capture their EIR, including the PIR.

10.3.7 should utilise the Plain Language Questions (PLQ) method within the Project Information Requirements (PIR) and include the requirements of BS8536-1

10.3.8 shall establish the Project's reference information and shared resources

10.3.9 shall define the extent of the Capability and Capacity review

10.3.10 shall establish and complete information Management Scopes of Services for each party they appoint

10.3.11 shall complete the LAP appointment

10.3.12 the ability to review and accept the information model

10.3.13 shall archive the information Model at Project closeout

10.3.14 procedure for recording and evaluating lessons learned

10.4 Lead appointing parties capabilities

The assessment of conformance has a particular focus on the following areas considering the Lead Appointed Party activities as may be applicable:

10.4.1 Have documented processes to satisfy the requirements of ISO 19650-5 where applicable, including working to the Security Management Plan (SMP) and the Security Information Requirements (SIR)

10.4.2 Ensuring the EIRs are received, sufficient, compiled and filtered for the appointed parties

10.4.3 undertaking information delivery planning, including the production of the Delivery team's BEP, MIDP, High-Level responsibility Matrix, and Detailed Responsibility Matrix

10.4.4 working to the Project Information standards and production methods and procedures

10.4.5 assessing the supply chain (e.g., the process defined in PAS 1192-2:2013 and the PIP (Note: not described in ISO 19650 parts 1 and 2)

10.4.6 establishing a Mobilization plan, and undertaking mobilization planning and mobilization

10.4.7 completing the AP's appointment

10.4.8 maintains capability and Competencies to fulfil the ISO 19650 -2 Annexe A. Note - In an organizational sense, the roles formerly detailed as the roles for Information management

- Project Delivery Management
- Soft Landings Champion
- Lead Designer
- Task Team Manager
- Task Information Manager
- Interface Manager
- Information Originator

10.4.9 establish and maintain documented processes for the verification and validation of BIM data (e.g.to, the IFC scheme and MVDs to meet the required purposes of information

Delivery phase process

10.5 Appointing parties capabilities

The assessment of conformance has a particular focus on the following areas considering the Appointed Party activities as may be applicable:

10.5.1 Plan for delivery of information to the requirements of EIRs through BEPs, TIDPs, High-Level and Detailed Responsibility Matrices

10.5.2 Assessment capability and capacity to deliver information to the EIR and the BEP, e.g., Cpix Supply chain forms (updated and to the UK BIM framework)

10.5.3 Contribution to the (Information delivery) risk management process

10.5.4 maintain documented processes include setting up and managing models and interface with a Project CDE, e.g., Information standards and production methods and procedures

10.5.5 establish and maintain documented processes to follow, Mobilization Plans

10.5.6 establish and maintain documented processes to produce supply chain information and feed up, including lower-tier information, e.g., Information standards and production methods and procedures
10.5.7 establish and maintain documented processes to produce TIDPs
10.5.8 maintain the competencies to fulfil all Task Information Management function requirements formerly defined as:

- Task Team Manager
- Task Information
- Manager, Interface Manager
- Information Originator

10.5.9 maintain sufficient competency and awareness of ISO 19650-5:2020

10.5.10 establish and maintain documented processes for the verification and validation of BIM data, e.g., Information standards and production methods and procedures

Requirements

- ISO 19650-2:2018
- BS 8536-1:2015
- BS 8536-2:2016
- ISO 19650-5:2020

Resources

Project Information Protocol
Scope of services for Information Management Functions
(ISO 19650-2, 5.1.1, 5.3.1)

Supplier Capability and Capacity:

- A Supplier IT assessment form
- A Supplier resource assessment form
- A Supply chain capability summary form

Documented Information:

BIM Policy and Capability (PAS 91:2013, Table 8)
EIR template or resource
Delivery Team's BEP template or resource
CDE specification and process
MIDP, TIDP procedure and templates.
Mobilisation Plan
Compilation of Master Information Delivery Index (MDI)
Information Management Assignment matrix

Process monitoring and improvement

11.1 Monitoring compliance

Through their Quality Management System (QMS), BIM providers shall monitor their compliance with technical and Scheme requirements, including:

11.1.1 an internal audit process

11.1.2 a regular and documented review process

11.1.3 a procedure for corrective and preventative actions, including evaluation, implementation, and effectiveness review, and

11.1.4 continuous improvement to its processes and procedures in suitability, adequacy, and effectiveness.

11.2 Process performance monitoring

Through their Quality Management Systems all parties shall:

11.2.1 establish measures as process performance indicators to demonstrate their processes are operating effectively.

11.2.2 The performance process indicator measures should be appropriate to the scale and complexity of the BIM Providers' operation.

11.2.3 The performance process indicator measures should include appropriate feedback on activities performed by suppliers where these have a material impact on the BIM Providers' activities or can cause risks or opportunities to the BIM Providers' reputation

11.2.4 Performance monitoring arrangements shall include activities where significant business or project risks have been identified

11.2.5 Key Performance Indicators (KPIs) for Information Management and BIM should be defined and regularly reviewed by those responsible for the services.

11.2.6 Performance trends should be routinely analysed, and whenever performance is not to specified levels, undertake a root cause analysis, and initiate an action plan

11.2.7 performance measures should include end-customer satisfaction and feedback.

11.2.8 BIM Service Providers shall have processes for identifying and, where appropriate, implementing opportunities for continually improving their processes and procedures. Improvement plans should target areas with the most significant potential benefits.

Requirements

- ISO 9001:2015
- ISO 19650-2:2018
- BS 8536-1:2015
- BS 8536-2:2016
- ISO 19650-5:2020

Resources

Quality Management System including the relevant items in this document.

Documented Information:

- The scope of the quality management system
- Documented information necessary to support the operation of processes
- The quality policy
- The quality objectives

This documented information is subject to the requirements of (ISO 9001:2015, 7.5)

Information Management Process (ISO 9001:2015, 4.4.2):

- Organisation charts
- Process maps, process flow charts and process descriptions
- Procedures
- Approved supplier lists
- Strategic plans (BIM roadmap)
- Forms/templates

Appendix A - certification management arrangement

Conformance with the requirements specified in this document enables BIM Providers to gain and maintain scheme certification. It provides guidance on how the scheme certification operates and the actions taken in the event of non-conformance with the scheme requirements.

LRQA issues the contractual terms and conditions against which the Scheme operates and is sent with the formal quotation to the BIM Provider following a completed application form.

A1.1 Certification process overview

Once LRQA has assessed that BIM Provider has satisfactorily performed the activities for the required Certification, they award a certification certificate recording the approved scope. At this stage, LRQA adds the BIM Provider's name and their certificated scope to the list on **lrqa.com.**

Once a BIM Provider achieves full Certification, the BIM Provider can display the quality mark associated with the Scheme.

A1.2 Approval process

The approval process (Validation and verification) has three key stages. These are:

a) Gap Analysis (before Certification application)
b) Documented information check
c) Assessment against a live BIM project leading to Certification

The scope of the service delivery and capability and competence of the organization should be recorded in standard Capability and Capacity Assessment forms, although the updated Cpix Assessment forms of bespoke forms can be used.

A gap analysis is usually undertaken to assist BIM providers in preparing for assessment, mainly those new to scheme certification or when a significant standards framework change occurs. A gap analysis is not a requirement, although strongly recommended by LRQA to aid with the ongoing implementation and continuous improvement of systems.

The Documented information check is undertaken to assist BIM providers with the potential adequacy of their procedures and documented information for delivering the intended results assessed in the Full Implementation Audit (FIA).

To complete the assessment process, BIM Providers need to secure work suitable for assessment as a live BIM project and the scope/s they seek Certification.

Following the Certification of the BIM provider, LRQA monitors the work and processes of the BIM Provider, utilising regular surveillance visits.

If the BIM Provider cannot demonstrate the application and implementation through a BIM project, then subject to having demonstrated the achievement of the requisite standard, LRQA may award BIM Ready status. Award of full BIM Certification is when verification against a BIM project is successful.

A1.3 Gap analysis

A gap analysis assists BIM Providers in preparing for assessment and examines the overall status of an applicant's capability to deliver BIM services to the requirement of ISO 19650-2:2018.

The gap analysis compares the BIM Provider's existing arrangements against the scheme requirements for ISO 19650-2:2018 conformance in appointments. It may include other related BIM standards as apply to the scope the BIM Provider undertakes.

For suppliers of information and information management services the analysis will be based upon the organizations...

The GAP analysis focuses primarily on high-level management system design. It is a walkthrough of the procedures, capability, competency, and risk processes and comprises discussions and interviews with key staff. It provides an independent view of areas where further development work may be necessary to meet certification requirements.

There is no requirement for a formal review of documentation or any form of verification during the gap analysis phase of the process.

Completing the gap analysis enables the assessor to estimate realistic timescales for the full implementation audit.

Should the gap analysis produce any potential significant deficiencies against the requirements of the Scheme, the BIM provider shall address these issues by completing LRQA's corrective action plan to the Auditor's satisfaction before arranging the Document check stage.

Where a BIM Provider has yet to recruit key BIM staff at the gap analysis stage, they shall demonstrate that their recruitment strategy and competency framework ensure that competent personnel are in position before commencing any work.

The gap analysis findings are reported verbally upon the completion of the visit. A documented report follows within ten working days of the gap analysis completion. The report has a standard format that defines the scope of the assessment, reports findings and the assessor's conclusions and recommendations regarding readiness for the next stage of the assessment. At this stage, potential providers may have their details added to the LRQA website as 'Under Assessment'.

A1.4 Documented information check

The Document Check (DC) is a formal check of documentation's availability and high-level content. It verifies that the documented information provided has the potential to achieve BIM according to ISO 19650 at the Full Implementation Audit (FIA) Stage.

The check includes the documented information identified in this document against the requirements of ISO 19650-2:2018 and extends into the mandatory ISO 9001:2015 documented information.

Should the Document Check (DC) produce any potential significant or deficiencies against the requirements of the Scheme, the BIM provider shall address these issues by completing LRQA's corrective action plan to the Auditor's satisfaction before the Stage 2 Implementation Audit.

The assessor reports the Document Check (DC) findings as part of the Full Implementation Assessment (FIA) report.

A1.5 Assessment against a project and appointment leading to certification

Award of Certification requires that LRQA further assesses capabilities, procedures, processes and competencies described and evaluated at the gap analysis and Document Check stages as fully implemented.

LRQA awards certification when a BIM provider demonstrates performing a live BIM project operating effectively.

Following a Document check and Corrective action plan concluding any deficiencies, the BIM provider shall supply a Corrective Action Plan to LRQA, to which the assessor agrees adequality resolves any deviancies.

The BIM Provider shall be fully prepared and ready for the assessment by the LRQA Assessor, ensuring the availability of all appropriate personnel, BIM-related documentation and BIM project activities for review. The BIM Provider shall arrange facilities and access to data/sites so that the assessor can evaluate all appropriate procedures, workflows and exchanges.

To achieve Certification for any of the requested scopes, the LRQA assessor witnesses and assesses those elements demonstrated by the BIM Provider (or managed by the BIM Provider). Where work covering the full range of the BIM scope is not available for assessment, LRQA cannot grant Certification until the assessment of the full scope.

If the assessor identifies significant deficiencies during this stage, these shall be addressed, closed out, and verified before Certification recommendation. Should minor deficiencies be identified, Certification may proceed, and non-conformance closeout reviewed during the first surveillance visit.

If major nonconformities are not resolved within 30 days a special audit may be required.

The assessor verbally reports the full assessment findings upon the visit's completion, and an updated and technically reviewed report follows within ten working days.

Subject to satisfactory performance throughout the certification process and the completion of the surveillance programme, full Certification to the Scheme remains valid for three years, and then there is a reassessment.

If the assessor cannot assess a live BIM project during the audit phase, then subject to no significant deficiencies identified, LRQA may award BIM Ready status. The Certification can uplift to full status when a live BIM project is available for assessment.

The Surveillance visit programme is agreed upon between the assessor and the BIM provider at the time of registration and spans the three-year registration validity period.

After completing a satisfactory assessment, the recommendation for Certification is made and confirmed via a technical review of the final report. The LRQA website is also updated to show certification status.

Upon acceptance of a surveillance programme, LRQA issues a certificate valid for the certification term. The Certificate remains the property of the LRQA, and the BIM provider shall return it at their request.

A1.6 Certification assessment fees

LRQA provides a proposal after BIM Providers submit a completed application form. Once LRQA receives confirmation of acceptance of the proposal, they complete a Request For Services (RFS). LRQA then issue it to the applicant for endorsement and return it to LRQA.

The RFS signed by the BIM Provider is the contract for the assessment, which may then progress at the earliest opportunity, subject to mutual availability.
After completing the appropriate evaluation stage, LRQA issues the invoice according to the extent of the assessment conducted according to the terms outlined in the RFS.

Note: Dependant on credit ratings, pre-payment may be required in some cases. If this is the case, LRQA notifies the BIM Provider.

A1.7 Monitoring of certified BIM providers

Following Certification, LRQA monitors conformance to the approved requirements through continuing evaluation in routine surveillance visits of the BIM Provider. LRQA also address reports of poor performance of the BIM Provider by client organisations.

Surveillance and any extra visits needed to investigate substantiated reports of poor performance are chargeable to the BIM Provider.

A1.8 Surveillance visits

LRQA verifies through surveillance visits and periodic reassessment that the BIM Provider has established, implemented, and maintained procedures, processes, and competencies that provide consistent quality of BIM service provision and conform to best practices.

LRQA applies a robust, consistent and transparent assessment regime that focuses on critical criteria to ensure that:

- A consistent level of competency for key project delivery roles is maintained
- Project risk management processes are comprehensive and dynamic, and
- Assigned parties have ownership of assigned tasks and schedules.

A1.9 Surveillance visit programme

The BIM management processes shall be subject to surveillance audit at least once per year during the three-year certification period, with the first surveillance visit held within six months (maximum) of the Certification award.

The basis of frequency of surveillance is:

- Number of BIM scopes held
- Levels of activity and number of operational bases
- BIM Provider's previous experience in this field
- Assessed performance
- Complaints, and
- Results of internal and external audits.

LRQA may, at its discretion and subject to reasonable notice, vary the interval between surveillance visits based upon the results of BIM Provider's audits. The assessor documents the findings of surveillance visits and records and highlights any deficiencies to the BIM Provider. They then agree to an appropriate timescale for the closeout of deficiencies.

Major nonconformities must be resolved within 30 days maximum and fewer if assessor consider the risk too high for 30 days to be appropriate.

A1.9 Surveillance visit arrangements

LRQA and the BIM Provider agree on arrangements for routine surveillance visits and adjust the surveillance schedule specified at the time of Certification if necessary.

If an organisation raises concerns regarding the performance of the certified BIM Provider, LRQA immediately arranges additional surveillance visits to investigate.

Following the investigation, the BIM Provider shall introduce immediate remedial action and cover the cost of the investigation.

LRQA provides the surveillance visit schedule to the certified BIM Provider annually.

When a BIM provider cancels a surveillance visit within the notice period, they incur an abortive visit charge.

A1.10 Non-compliance with surveillance

Should there be no live BIM projects available to be undertaken against the initial Certification, after one year, the full Certification is downgraded to BIM Ready status and reviewed annually or until the undertaking of a BIM Project. The BIM provider should notify LRQA of a live BIM project for surveillance assessment to reinstate full Certification.

A1.11 Surveillance visit payments

Following the Certification via a Request for Service (RFS), the three-year surveillance visit programme fee is immediately agreed upon and invoiced following each visit during the three-year term of Certification.

A1.12 Investigations and removal of certification

Certification shall be subject to cancellation or amendment by LRQA if the certified BIM Provider:

- Is found to have made false claims within the application for Certification, which LRQA considers impact its integrity and ongoing performance
- Fails to complete within the agreed timescales and to the satisfaction of LRQA required remedial action(s) identified during routine surveillance or any other investigation
- Becomes bankrupt or insolvent
- Performs consistently below the standard required or demonstrates an inability to continue to comply
- with the criteria set out in the scheme requirements
- Uses the Scheme, quality mark or logo, which, in the opinion of LRQA, is likely to bring the Scheme into disrepute, and
- Fails to plan for surveillance visits following the agreed programme.

A1.13 Investigations

LRQA are to investigate If an external party notifies them of unsatisfactory work or a failure to comply with the scheme requirements has occurred if the BIM Provider disputes the matter LRQA that unsatisfactory work.

Where the investigation identifies that the performance of the certified BIM Provider fails to conform with the scheme requirements at its own expense, it shall take the required remedial action within the timescale specified. LRQA are then to notify the complainant client organisation of the outcome of the investigation.

A1.14 Removal of certification

The certification body shall notify the BIM Provider in writing of the intention to cancel the Certification, detailing the reasons for its action. Unless the poor performance merits immediate action, the process is in two stages:

Firstly, LRQA notifies the certified BIM Provider that their Certification is being suspended and gives a limited time to address the identified issues, giving rise to the suspension.

Secondly, if the BIM Provider does not satisfactorily address the non-conformances during the time allowed and takes steps to prevent a reoccurrence, LRQA cancels the Certification. LRQA immediately updates the website to remove the Certification.

Once LRQA cancels Certification, re-certification is subject to a complete reassessment of the BIM Provider.

A1.15 Appeals, complaints and disputes concerning certification

If the BIM Provider wishes to object to action taken, including withdrawal of Certification. Then they shall, within 21 days of the notification issue, give notice in writing to LRQA of their objections, setting out the grounds for an appeal.

A panel assesses any such appeal within the certification body, independent of those members of the Certification Body associated with the original withdrawal action.

The review results are communicated to the BIM Provider in writing, clearly detailing the basis for the decision.

If the decision is not to the satisfaction of the BIM Provider, in that case, they can appeal to the Scheme Advisory Panel. The panel investigates the basis for the original certification withdrawal and the findings of the appeals review. The Scheme Advisory Panel shall be the final judge of all such appeals.

The BIM Provider and LRQA shall bear the costs associated with any appeal, regardless of the outcome.

Re-instatement of Certification is affected under the conditions prescribed by LRQA's review or the Scheme Advisory Panel, should the finding be that the certification withdrawal was not warranted.

Alternatively, if the appeals process finds the certification withdrawal the correct course of action, reinstatement of the BIM Provider entails a complete re-evaluation.

A1.16 Re-certification

LRQA undertake a reassessment at the end of the three-year certification term.

The scale of this reassessment considers the BIM Provider's performance during the Certification period. If the BIM Provider has performed satisfactorily over the certification period, their Certification is likely subject to a 'light touch' assessment. However, if the work carried out by the BIM Provider is limited, or if several audit reports identify significant deficiencies or a growing trend of minor deficiencies, a more in-depth reassessment is required.

LRQA recommend a GAP analysis should be undertaken if there is a major change in LRQA scheme requirements owing to a change in standards etc. e.g., PAS119202:2013 to ISO 19650-2:2018, or an organization's material change in Systems procedures and resources.

LRQA shall give the certified BIM Provider three months' notice of the expiry of their Certification.

Following the reassessment, the BIM Provider has a month to provide the necessary evidence to close out identified deficiencies. After this period, the Certification Body issues a report recommending re-certification. A decision maker completes a Technical Review of the finalised report before re-certification.

The BIM Provider is certified for three years more, having been satisfactorily re-assessed and a surveillance programme agreed upon

Appendix B - standards core standards

Standard	Title	BIM level 2	BIM stage 2
PAS 91:2013	Construction Prequalification Questionnaires.	✓	
PD 19650-0:2019	Transition Guidance to ISO 19650		✓*
ISO 19650-1:2018	Organisation and digitisation of information about buildings and civil engineering works, including building information modelling (BIM) – Information management using building information modelling Part 1: Concepts and principles		✓
BS1192:2007+A2:2013	Collaborative production of architectural, engineering and construction information. Code of practice	✓	
PAS 1192-2:2016	Specification for information management for the capital/delivery phase of construction projects using building information modelling	✓	
ISO 19650-2:2018	Organisation and digitisation of information about buildings and civil engineering works, including building information modelling (BIM) – Information management using building information modelling **Part 2: Delivery phase of the assets**		✓
ISO 19650-2:2018 incorporating corrigendum February 2021	Organisation and digitisation of information about buildings and civil engineering works, including building information modelling (BIM) – Information management using building information modelling **Part 2: Delivery phase of the assets**		✓
PAS 1192-3:2014	Specification for information management for the operational phase of assets using building information modelling.	✓	
ISO 19650-3:2020	Organisation and digitisation of information about buildings and civil engineering works, including building information modelling (BIM) - Information management using building information modelling **Part 3: Operational phase of assets**		✓
BS 1192-4:2014	Collaborative production of information. Fulfilling Employer's information exchange requirements using COBie. Code of practice.	✓	✓*
ISO 19650-5:2020	Organisation and digitisation of information about buildings and civil engineering works, including building information modelling (BIM)- Information management using building information modelling **Part 5: Security-minded approach to information management**		✓
PAS 1192-5:2015	Specification for security-minded building information modelling, digital built environments and smart asset management.	✓	
PAS 1192-6:2018	Specification for collaborative sharing and use of structured Health and Safety information using BIM	✓	✓*
BS 8536-1: 2015	Briefing for design and construction – **Part 1: Code of practice for facilities management (Buildings infrastructure).**	✓	✓*
BS 8536-2: 2016	Briefing for design and construction – **Part 2: Code of practice for asset management (Linear and geographical infrastructure).**	✓	✓*
BS 8541-1:2012	Library Objects for architecture, engineering, and construction. Identification and Classification – Code of practice.	✓	
BS 8541-2:2011	Library Objects for architecture, engineering, and construction - Recommended 2D symbols of building elements for use in building information modelling.	✓	

✓* For UK only

Associated standards

Standard	Title	BIM level 2	BIM stage 2	LRQA scheme
ISO 9001:2015	Quality management systems – Requirements	✓	✓	
ISO 21500:2021	Project, programme and portfolio management — Context and concepts	✓	✓	
ISO 55001:2014	Asset management — Management systems — Requirements	✓	✓	
ISO 31000:2018	Risk management — Guidelines			✓
ISO 10007:2015	Quality management systems - Guidelines for configuration management.	✓		✓
ISO 44001:2017	Collaborative business relationships management system			✓
BS 7000-4:2013	Design management systems - Guide to managing design in construction**.**	✓		✓
ISO 12006-2:2015	Building construction — Organization of information about construction works **Part 2: Framework for classification**	✓	✓	
ISO 13567-2:2017	Technical product documentation — Organisation and naming of layers for CAD **Part 2: Concepts, format and codes used in construction documentation**	✓	✓	
ISO/TS 12911:2012	Framework for building information modelling (BIM) guidance			✓
ISO 16739:2013	Industry Foundation Classes (IFC) for data sharing in the construction and facility management industries.			✓
ISO 29481:2010	Building information models. Information delivery manual Interaction framework			✓
ISO 12006-3:2007	Building construction. Organisation of information about construction works. Framework for object-oriented information.			✓

Other documents

Document	Title	BIM level 2	BIM stage 2
BIP 2207	Building information management. A standard framework and guide to BS 1192	✓*	
	CIC BIM Protocol	✓*	
	Information protocol to support BS EN ISO 19650-2 the delivery phase of assets		✓*
	Information protocol to support BS EN ISO 19650-3 the operational phase of assets		✓*
	CIC Best Practice Guide for Professional Indemnity Insurance when using BIM	✓*	
	CIC Outline Scope of Service for the Role of Information Management	✓*	
	EIR Core Contents and Guidance	✓*	
DpoW	NBS BIM Toolkit	✓*	✓*
CPix Protocol	CPix BIM Execution Plan	✓*	
CPix Protocol	CPix BIM Assessment Form	✓*	
CPix Protocol	CPix Supplier IT assessment form	✓*	
CPix Protocol	CPix Resource Assessment Form	✓*	

✓* For UK only

Appendix C - information management capability and competency scope

Document	Title	BIM level 2	BIM stage 2
Information Governance	Provide equal governance and rigour to maintain its own information as the information it procures, to ensure that it provides ongoing value and benefits to the client organisation. This will include the ability to share and exploit information and make information available for regulatory purposes.		
Security Minded Approach	Determine and, if needed, implement a security-minded approach	Follow a security-minded approach, if required.	Follow a security-minded approach, if required.
Documented Integrated Management System	Has documented integrated policies, systems, and procedures to achieve BIM Stage 2	Has documented integrated policies, systems, and procedures to achieve BIM Stage 2	Has documented integrated policies, systems, and procedures to achieve BIM Stage 2,
Information Management Function	Deliver and fulfil its information management function	Deliver and fulfil its information management function	Deliver and fulfil its information management function
Information requirements *Information Standards, Information Production Methods and procedures	Define Information Requirements concerning its assets and projects (OIR, PIR, AIR, SIR, EIR) and associated contractual resources*	Define Exchange Information Requirements (EIR) concerning the Delivery Team's and Task Team's appointments and associated contractual resources*	
	Procure, receive, assure, and store Information Requirements digitall	Receive, assure, and store Information Requirements digitally	Receive Exchange Information Requirements digitally
	Specify its Information Requirements and delivery within contractual documentation	Specify its Information Requirements and delivery within contractual documentation	
Information delivery		Lead the delivery team, including the delivery team resources and associated resources*, including High-level and Detailed responsibility matrices MIDP/TIDPs	
		Working on the Delivery Team's BIM Execution Plan (BEP) and associated resources*, including High-level and Detailed responsibility matrices MIDP/TIDPs	Working to a Delivery Team's BIM Execution Plan (BEP) and associated resources * including Detailed responsibility Matrices, TIDPs
		Deliver to contractually defined Information Requirements	Deliver to contractually defined Exchange Information Requirements
Collaborative working	Working with the CDE concept and application (Project and distributed CDE)	Working with the CDE concept and application (Project and distributed CDE)	Working with the CDE concept and application (Project and distributed CDE)
	Working collaboratively and efficiently, including with the CDE	Working collaboratively and efficiently, including with the CDE	Working collaboratively and efficiently, including with the CDE
Legal issues	Ensured procurement and contractual processes are to the appropriate regional/locale's specified standards (e.g., UK BIM Framework)	Ensured contractual processes are to the appropriate regional/locale's specified standards (e.g., UK BIM Framework)	Ensured contractual processes are to the appropriate regional/locale's specified standards (e.g., UK BIM Framework)
	Managed training for all people engaged in Information Management to achieve BIM stage 2	Managed training for all people engaged in Information Management to achieve BIM stage 2	Managed training for all people engaged in Information Management to achieve BIM stage 2
Training and Experience management	Demonstrated experience application of IM using BIM in the lifecycle of assets	Demonstrated experience in the application of IM using BIM in the delivery phase	Demonstrated experience in the application of IM using BIM in the delivery phase
Capability and Capacity process	Documented review criteria for the supply chains Capability and Capacity Review	Completed Capability and Capacity Assessments to Client's review criteria	Completed Capability and Capacity Assessments to Client's review criteria

Appendix D - documented information and appointment resources

Category	Document/resource name	Necessity assignment		
		Client*	LAP*	AP*
Quality Management	The scope of the quality management system	R	R	R
	The quality policy	R	R	R
	The quality objectives	R	R	R
	Information Management or BIM policy	M	M	M
	Documented information necessary to support the operation of processes (including the below)	M	M	M
	• Information Management Process	M	M	M
	• Organisational charts	M	M	M
	• Process maps, process flow charts and process descriptions	M	M	M
	• Information Management Procedures	M	M	M
	• Approved supplier lists, including supplier criticality listing	M	M	M
	Strategic plans (BIM roadmap)	R	R	R
	Forms/templates	M	M	M
	Recruitment Procedure	M	M	M
	Job Descriptions	M	M	M
	Competency evaluation process	M	M	M
	Training/supervisory/mentoring and assessment programmes	M	M	M
	Individual files detailing qualifications, training, and experience	M	M	M
	Grievance procedures	M	M	M
	Supplier approval procedure	M	M	R
	Risk Assessment procedure for supplier assessment	M	M	R
	Information Management Assignment Matrix	R	R	R
	BIM capability, IT and Resource assessment criteria	M	R	n/a
	Self-Assessment e.g., BIM capability, IT and Resource questionnaire completion	n/a	M	M
	BIM Policy	M	M	M
	BIM Competency matrices	M	M	M

Category	Document/resource name			
		Client*	LAP*	AP*
Configuration Management	Configuration Management Plan	R	R	R
	The Configuration Management Process	R	R	R
	Standard Coordination and cross-referencing strategy (inc Clash tolerance Strategy)	R	M	R
	Document management system (does not have to be a proprietary EDMS)	M	M	M
	Organizational Information Standards and Information Production Methods and Procedures	M	M	M
	Standard High Level Responsibly Matrix (HLRM)	R	M	R
	Standard Detailed Responsibility Matrix (DRM)	O	M	R
	Standard MIDP	O	M	M
	Standard TIDP	O	R	M
	Standard Project Information requirements (PIR)	M	M	R
	Standard Information Management Scope of Services	M	M	M
Risk Management	Risk Management process and procedure	M	M	M
	Integrated Risk Procedure	M	M	M
	Risk Management Framework	M	M	R
	Risk Register	M	M	M
	Risk Assessment procedure for supplier assessment	M	M	R
Collaborative Business Relationships	Collaboration Framework	M	R	R
	Information Management Solution	O	M	M
	Relationship Management Plan (RMP)	R	R	R
Appointment Resources (including for assessment in Case studies)	BIM Capability framework	M	M	M
	Organisational Information Requirements (OIR) template or resource	M	O	O
	Asset Information Requirements (AIR) template or resource	M	R	O
	Project Information Requirements (PIR) template or resource	M	R	R
	Security Management Plan (SMP) template or resource	M	O	O
	Security Information Requirements (SIR) template or resource	M	O	O
	Asset Information Standard	M	R	O
	Project Information Standard	M	M	M
	Project Information Production Methods and Procedures	M	M	M
	Reference information	M	M	M
	Shared Resources	M	M	M
	Project Information Protocol	M	R	O

Category	Document/resource name			
		Client*	LAP*	AP*
	Exchange Information Requirements (EIR) template or resource	M	R	O
	EIR review procedure	R	R	R
	Tender Response Requirements	M	R	O
	Tender Evaluation Criteria	M	R	O
	Delivery Team's BEP	R	M	M
	High-Level Responsibility Matrix	R	M	R
	Information Delivery Strategy	R	M	M
	Federation Strategy	O	M	M
	Schedule of software, hardware, and IT	O	M	M
	Mobilisation Plan	O	M	R
	Information Delivery Risk Register	n/a	M	R
	Detailed Responsibility Matrix	n/a	M	M
	LAP's EIRs	n/a	M	R
	Master Information Delivery Index (MDI)	R	O	O
	TIDP	n/a	M	M
	MIDP	n/a	M	R
	CDE specification and process	M	M	M
	Scope of services for Information Management Functions	M	M	M
	Information Management assignment matrix	O	O	O
	Supplier Information technology assessment form	n/a	M	M
	Supplier resource assessment form	n/a	M	M
	Supply chain capability summary form	n/a	M	n/a

About LRQA:

By bringing together unrivalled expertise in certification, brand assurance, cybersecurity, inspection and training, we've become a leading global assurance provider.

We're proud of our heritage, but it's who we are today that really matters, because that's what shapes how we partner with our clients tomorrow. By combining strong values, decades of experience in risk management and mitigation, and a keen focus on the future, we're here to support our clients as they build safer, more secure, more sustainable businesses.

From independent auditing, certification and training; to technical advisory services; to real-time assurance technology; to data-driven supply chain transformation, our innovative end-to-end solutions help our clients negotiate a rapidly changing risk landscape – making sure they're shaping their own future, rather than letting it shape them.

Get in touch

Visit **www.lrqa.com/sg** for more information, email **enquiries.sg@lrqa.com** or call **+65 69904500**

LRQA
460 Alexandra Road
mTower #15-01
Singapore 119963

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