

Project information requirements

Building information modelling

HIQ-GDE-00014

Copyright

Queensland Health Project information requirements – Building information modelling

HIQ-GDE-00014

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An electronic version of this document is available at <https://www.health.qld.gov.au/system-governance/health-infrastructure/resources/building-information-modelling> or for the [Queensland Health Design Collaboration Site](#).

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Terms

Term	Definition
Alphanumerical information	Structured Information expressed using characters, digits and symbols or tokens. May be attached or linked to geometry. Further described in ISO 7817-1:2024.
Appointed party	A provider of information for the project, including services and typically has a lead party such as an architect or managing contractor.
Asset Information Model (AIM)	Information model relating to the operational stage. As per AS ISO 19650.
Asset Information Requirements (AIR)	Information requirements in relation to the operation of the asset. As per AS ISO 19650.
BIM Execution Plan (BEP)	A detailed plan, created from the Queensland Health BEP template, that documents the use of Building Information Modelling (BIM) on a project. It outlines who is responsible for each aspect of the BIM process, when in the process they are responsible for it, and how they will execute Queensland Health requirements as specified in the Project Information Requirements (PIR) and Capital Infrastructure Requirements (CIR).
BEP template	The standard Queensland Health BEP template is to be used by delivery teams. Refers to Design BEP (DBEP) and Construction BEP (CBEP).
Building Information Modelling (BIM)	The use of a shared digital representation of a built asset to facilitate design, construction and operation processes to form a reliable basis for decisions.
Building Information Models (BIM/s)	Means all models that any contributing party (or its sub-contractors) is required to produce and deliver in accordance with the BEP, PIR and CIR.
BIM manager	A delivery team provided resources to manage the BIM and asset information creation processes on the project.
Capital works	The planning, design, construction and delivery of new assets or significant upgrades to existing infrastructure, typically funded through a capital investment program. In the context of Queensland Health, capital works include healthcare facilities and associated infrastructure delivered to meet service needs.
Common Data Environment (CDE)	Cloud-based collaboration software to host design files, with an integration into BIM authoring software and other software.
Delivery team	A collection of appointed parties contributing to the capital works project, the composition of which may change according to the project requirements and schedule, but typically comprises design consultants, contractors and sub-contractors, as per AS ISO 19650. For the purposes of this document, the delivery team excludes Queensland Health and its internal project managers as its representatives.

Term	Definition
Exchange Information Requirements (EIR)	Queensland Health requirements to enable the exchange of information from the Project Information Model (PIM) to the AIM. In this instance, the EIR is combined with the PIR to reduce the number of documents to be reviewed by the delivery team.
Federated model	An assembly of discipline/trade BIM/s combined for uses such as coordination, collaboration, and exchange with the appointing party.
Geometrical information	Structured Information, such as geometry-based Computer Aided Design (CAD) or BIM models. Further described in ISO 7817-1:2024.
Key decision	A business decision that Queensland Health values, which can be made using information created by the delivery team.
Level of Development (LOD)	The degree to which the element's geometry and attached information have been progressed, and the degree to which delivery team members may rely on the information when using the model. Queensland Health doesn't specify the LOD requirements per stage; however, if the delivery team wishes to use an LOD framework, the 2024 LOD specification published by the United States of America (USA) BIMForum shall be used as a guiding reference.
Level of information	The specific data associated with the individual objects within the BIM.
Level of information need (LOIN)	The 'level of information need' provides methods for describing information to be exchanged according to the EIR and namely the PIR, as per AS ISO 7817.1:2024.
Laser scanning	The process of capturing digital information about the shape of an object with equipment that uses a laser to measure the distance between itself and the object, resulting in a point cloud.
Massing model	An early volumetric model useful for understanding bulk and scale, areas of floor plates and departmental layouts and adjacencies.
Model Content Plan (MCP)	A Quantity Surveyor (QS) developed document that defines the modelling requirements (units of measure, codification) for the delivery team to enable the QS to perform cost estimating from BIM.
Model element	An individual component within a BIM (e.g., wall, floor, nurse call device, room, diffuser, column, etc.).
Model element author	A person responsible for creating an element (object) in the BIM environment.
openBIM	A universal approach to the collaborative design, realisation and operation of buildings based on open standards and workflows.
Photogrammetry	The process of extracting 3D information from photos or video to convert into digital models or point clouds.
Project brief	Queensland Health requirements for a specific project.
Project Information Model (PIM)	The information model relating to the delivery stage. The PIM consists of documentation, alphanumeric information and geometrical information of the project, typically using BIM, CAD and Geographic Information System (GIS). As per AS ISO 19650.

Term	Definition
Project Information Requirements (PIR)	Queensland Health information requirements and exchange processes to enable the creation and management of the PIM to support the ongoing AIM (this document).
Project manager	A Queensland Health assigned resource to ensure the delivery team complies with the PIR and BEP, enabling the creation of the PIM and AIM. The project manager's responsibility is to manage the scope, time, cost, quality, resources, communications, and risk aspects of the project.
Space planning platform	Queensland Health use dRofus as their space planning tool, integrated with BIM. dRofus is used with a Health Infrastructure Queensland template for clinical planning, Furniture, Fixtures and Equipment (FF+E) management, and asset data consolidation and quality control, amongst other functions.

Acronyms

Abbreviated terms	Definition
3D	Three-dimensional digital model
ACC	Autodesk Construction Cloud
AusHFG	Australasian Health Facility Guidelines
AIM	Asset Information Model
AIR	Asset Information Requirements
BIM	Building Information Modelling
BIM/s	Building Information Models
BEP	BIM Execution Plan (refers to DBEP and CBEP)
CAD	Computer Aided Design/Drafting
CBEP	Construction BIM Execution Plan
CDE	Common Data Environment
CIR	Capital Infrastructure Requirements
CMMS	Computer Maintenance Management System
DBEP	Design BIM Execution Plan
dMP	dRofus Management Plan
FF+E	Furniture, Fixtures and Equipment
FLOC	Functional Location Code
HHS	Hospital and Health Service
HIQ	Health Infrastructure Queensland
IFC	Industry Foundation Classes
LoD	Level of Development
MCP	Model Content Plan
MME	Major Medical Equipment
PIM	Project Information Model
PIR	Project Information Requirements
PSM	Permanent Survey Marker
QL-A	Quality level A (sub-surface infrastructure)
QL-B	Quality level B (sub-surface infrastructure)
RDS	Room Data Sheets
SiD	Safety in Design
SoA	Schedule of Accommodation

1 Introduction

Through the Capital Infrastructure Requirements (CIR), Queensland Health has, for over a decade, requested the use of Building Information Modelling (BIM) on selected projects. This is in recognition of the benefits that BIM processes and technologies bring to the design, construction, and ultimately operational management of Queensland Health facilities.

In November 2018, the Queensland Government, through the Department of State Development, Manufacturing, Infrastructure and Planning, released the first version of the Digital Enablement for Queensland Infrastructure – Principles for BIM Implementation¹. The principles apply to Queensland Health and those involved in any part of the lifecycle of new major construction assets, including planning, procurement, design, contract management, construction, operation, or maintenance of the assets.

Scope

The PIR applies to all employees, contractors and consultants within and working for Queensland Health (Department of Health and Hospital and Health Services). Hospital and Health Services (HHS) may have additional requirements to this document (to be added as an appendix).

Relation to other documents

This document and its requirements are to be read in conjunction with the CIR and delivered in accordance with the mandatory elements along with the supporting Policies and standards. See section 4.15.

The Queensland Health BIM Framework is a collection of multiple guidelines and supporting templates (for example BIM Execution Plan templates, Asset data uploader templates, etc.). This Project Information Requirements (PIR) document is the leading guideline.

The BIM framework shall be applied to the design, delivery and asset management of all new major construction projects and those involving significant alterations, extensions, renovations and repurposing of existing assets.

To support the implementation of the Queensland Government principles for BIM, Queensland Health has developed this document, which:

- supports the existing CIR
- defines Queensland Health's required uses of BIM by the delivery team and identifies the information required by the delivery team at specific project stages
- is aligned with the international standard for information management using BIM – AS ISO 19650 and the *Queensland Digital Enablement Policy*.

This revised version of the PIR incorporates the Exchange Information Requirements (EIR), and the relevant subset of Asset Information Requirements (AIR), reducing the number of documents and enhancing the understanding of the required BIM framework.

As Queensland Health's information needs evolve, it is anticipated that this document will be updated.



Figure 1: Understanding of the information requirements continual improvement cycle

¹ <https://www.statedevelopment.qld.gov.au/industry/infrastructure/infrastructure-planning-and-policy/building-information-modelling>

1.1 Document structure

The document is divided into commercial, management, and technical sections in alignment with AS ISO 19650.

Sections	2 – Commercial	3 – Management	4 – Technical
Audience	Project owner/director, senior delivery team staff, managing contractor	Project manager, BIM manager, discipline/trade leads, managing contractor and sub-contractors	BIM authors and technical delivery personnel

Table 1: Project Information Requirements document structure

The management section is further split into the logical project delivery stages. In this way, appointed parties can work through the project delivery stages, understanding the specific BIM requirements for each discipline, for the given stage.

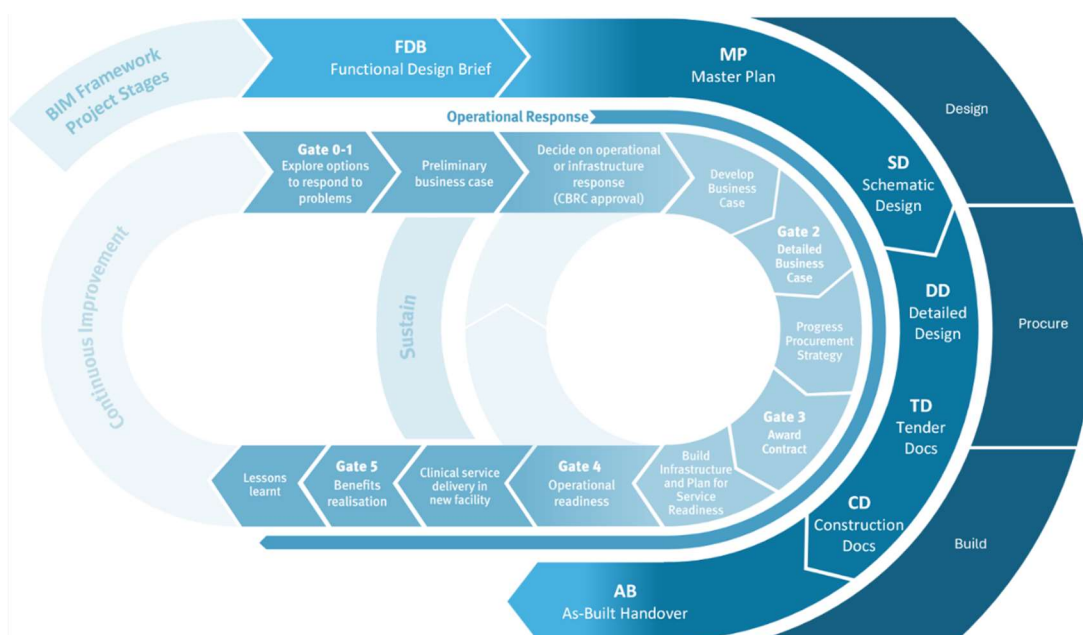


Figure 2: Queensland Health project stages (outer arrows)

This document articulates how information shall be structured, managed, and delivered by each appointed party contracted by Queensland Health, contributing to a Project Information Model (PIM) during the design and construction stages (see Figure 2).

The project stages referenced in this document align with the Queensland Health BIM framework and may not correspond directly to the contract stages used in the delivery team’s appointment. Where terminology differs, it is the responsibility of the delivery team to map their contract stages to the project stages outlined in this document and seek approval from the Health Infrastructure Queensland (HIQ) project director. Information delivery milestones include HIQ Design Assurance Review submissions, which may occur before a completed milestone.

Work with the HIQ project director to confirm all stages and dates for each contract.

1.2 Projects requiring building information modelling

Understanding that not all Queensland Health delivery teams are at the same level of BIM maturity, the following capital works project BIM tiers (explained in Table 2: BIM objectives) have been defined:

- BIM tier 1 – project value of more than \$50 million.
- BIM tier 2 – project value between \$20 million and \$50 million.
- BIM tier 3 – under \$20 million and multi-level car parks.

The Queensland Health project director will confirm the BIM tier for the project. It is important that the tendering parties confirm the BIM tier with Queensland Health before attempting to respond to the PIR through their BIM Execution Plan (BEP)—see section 3.1 Building information modelling execution plans.

BIM tier 3 projects of low complexity can apply a ‘BIM light’ approach with a reduced scope. This requires a written exemption by the HIQ BIM/Digital asset lead and the responsible HHS.

1.3 Queensland Health building information modelling objectives

The objective of this PIR is to detail the Queensland Health BIM exchange and information requirements, to be read in conjunction with the CIR. Queensland Health intends to utilise BIM/s as part of the broader PIM. For clarity, the PIM is defined as the information needed to design and construct the facility.

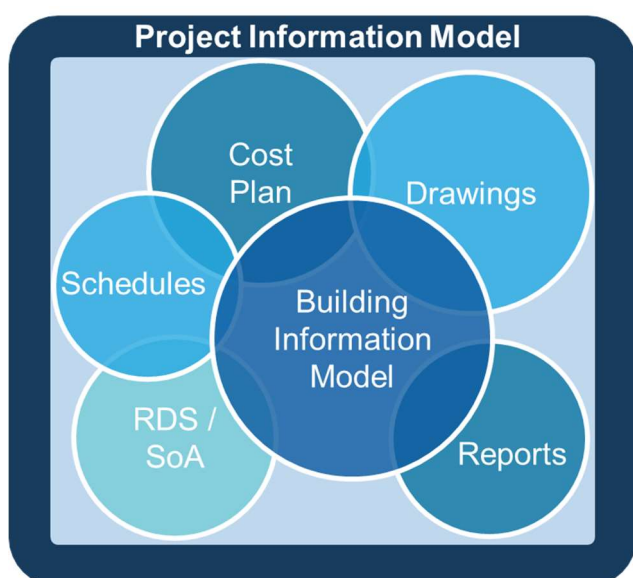


Figure 3: Project information Model

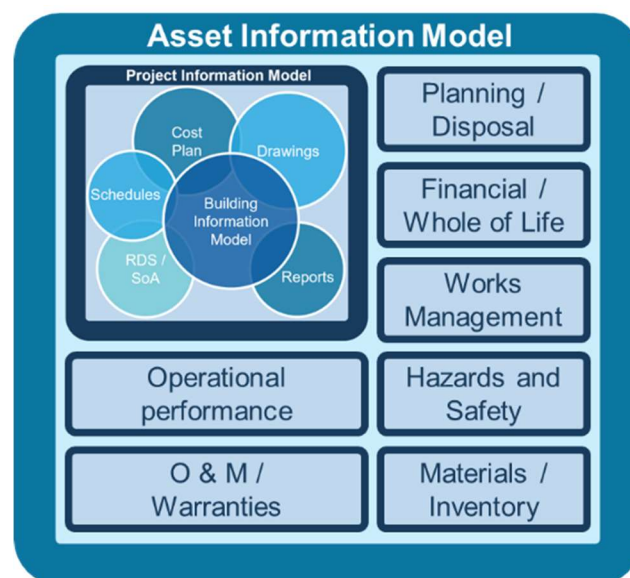


Figure 4: Asset information model
(which includes elements of the project information model)

BIM is just one element of the PIM, along with other elements such as the cost plan, drawings, reports, schedules, Room Data Sheets (RDS) and Schedule of Accommodation (SoA) (see Figure 3).

This approach supports the HHS in the ongoing use of the Asset Information Model (AIM) (see Figure 4). For clarity, the AIM is defined as the information used to operate and maintain the facility. The PIM shall be developed to assist the HHS’s longer-term AIM needs and strategies, as described in AS ISO 19650, ISO 55000, and other relevant standards. The BIM/s shall be leveraged when upgrades of the asset are required. It is

therefore important that BIM is scalable and delivered in native and an openBIM format (Industry Foundation Classes (IFC)) at handover to enable enhancement over time.

Table 2: BIM objectives, outlines Queensland Health's key BIM priorities. Follow the objective's hyperlink (section number in brackets) to read detailed breakdowns of each objective in Section 2 Commercial.

Queensland Health building information modelling objectives and deliverables

No	BIM objective	Deliverables/Required uses of BIM appointed parties	BIM tiers
1	BIM/Digital asset information is procured and incorporated into project delivery (Section 2.1 Integrating building information modelling into project delivery).	From the earliest outset, a BIM Execution Plan (BEP) is to be created, based on PIR and CIR. The BEP is administered and updated by the delivery team's BIM manager.	ALL
2	Improving collaboration, coordination and capacity (Section 2.2 Improving collaboration, coordination and capacity).	Discipline/trade BIM/s are to be combined into a federated model and used for collaboration, and as a primary decision-making tool for coordination.	ALL
3	Platform agnostic – use of openBIM formats (Sections 2.3 Interoperability, 2.5 Improved data structuring and information coordination).	Both native formats and IFC are contractual deliverables at handover/as-built stage.	ALL
4	Structured and gradual development of BIM to provide an as-built dataset (section 2.4 Developing models to create an as-built dataset).	Continual development of the planning and design BIM/s to support the construction/as-built BIM/s, and any associated information requirements.	ALL
5	Improved data structuring and information coordination (Section 2.5 Improved data structuring and information coordination).	Schedule of Accommodation (SoA), drawings, schedules, Australasian Health Facility Guidelines (AusHFG) and HHS asset coding to be coordinated and linked to BIM.	ALL
6	Benefits realisation is measured and tracked (Section 2.6 Tracking and measuring benefits realisation).	BIM benefits realisation is discussed and reported at milestone deliverables by the delivery team using the Queensland Health BIM metrics for projects.xlsx	ALL

No	BIM objective	Deliverables/Required uses of BIM appointed parties	BIM tiers
7	Clearer design and construction comprehension (Section 2.7 Clear design and construction comprehension).	The delivery team shall leverage BIM visualisation tools (3D collaboration tools that may be supplemented with virtual reality/augmented reality) to inform stakeholders of design/constructability solutions.	ALL
8	Enhanced space planning (Section 2.8 Space planning platform).	The space planning platform (dRofus) shall be integrated with the BIM/s and used to manage functional briefing, validate SoA, room, FF+E, and asset data.	Tier 1 + 2 only
9	Workplace Health and Safety in BIM (Section 2.9 Health and safety considerations in building information modelling).	Identified Safety in Design (SiD) risks must be navigable within the federated model to improve understanding and minimise or eliminate these risks.	Tier 1 + 2 only
10	Quantity surveying from BIM (Section 2.10 Quantity surveying from building information modelling).	The Quantity Surveyor (QS) or cost estimator is to use design BIM/s to inform the cost planning activities, including whole-of-life costs.	Tier 1 + 2 only
11	BIM to be used for operational planning and staging (Section 2.11 Building information modelling in operational planning and staging).	The delivery team is to leverage BIM for operational planning, decanting and staging, and construction planning.	Tier 1 only

Table 2: BIM objectives

2 Commercial

From 1 July 2019, BIM is required on all Queensland Health capital delivery projects delivered by Health Infrastructure Queensland (HIQ).

Queensland Health requires the BIM framework to be actively implemented and managed as part of the project procurement and delivery processes.

As Queensland Health uses many procurement methods, a one-size-fits-all approach to developing BIM and the corresponding BIM Execution Plan (BEP) cannot be achieved. However, the BEP shall start to be developed and documented as part of the preliminary business case stage before completing the functional design brief.

Where the procurement method results in a single party responsible for design and construction delivery (e.g., design and construct, early contractor involvement, etc.), the Design BEP (DBEP) and the Construction BEP (CBEP) shall be combined by the delivery team BIM manager into a single consolidated BEP. Where design and construction are procured separately, standalone DBEP and CBEP documents shall be used. All BEPs must clearly identify responsibilities, stage-specific deliverables and any changes in scope or detail as the project progresses. The development of the BEPs is further described in Section 3.1 Building information modelling execution plans.

Capability and information management principles

Queensland Health requires the delivery team to adhere to and demonstrate the following:

- a) Information shall be collaboratively developed, shared, and managed, using a Common Data Environment (CDE) or a centralised approach to information management.
- b) Object-based design and construction models (referred to as BIM/s) shall be created to satisfy the PIR, driving efficiency and predictability throughout the project. BIM/s shall be scalable, interoperable between appointed parties and a federated model shall be available for review using model reviewing software.
- c) 2D documentation, schedules and visualisations shall be produced from relevant BIM/s. Any proposed use of CAD (e.g., typical 2D details) shall be documented in the BEP and approved by the Queensland Health project director.
- d) The delivery team shall nominate a dedicated BIM manager for design and again for construction, who will manage the BIM processes for the project.
- e) A dRofus (space planning) lead must be provided by the delivery team throughout all project stages, for BIM tier 1 and 2 projects. This may be the same resource as the BIM manager or may be a separate resource.
- f) The responsibility for the production, development and implementation of the BEP lies with the delivery team and shall be managed by the delivery team BIM manager. The delivery team shall ensure that the contents of the BEP are collaboratively developed with their supply chain, as each party is appointed. The BIM approach must be documented in the relevant Queensland Health BEP template (or combined DBEP and CBEP templates), with each appointed party agreeing to the approach as they are appointed. The CBEP shall build on the information within the DBEP to ensure consistency across the project.
- g) Capability, capacity, and competence of the delivery team to meet the PIR shall be demonstrated in the BEP. If there are any requirements of the PIR that cannot be met due to capability or technical reasons, these shall be clearly stated in the returnable pre-contract BEP section; amendments to PIR. This requirement also applies to any sections of the BEP templates proposed to be struck out or modified. Post-

award, these items shall be addressed and negotiated before final acceptance of the BEP as a contractually binding document.

Permitted uses of building information modelling

Queensland Health recognises that information created on each capital project has a significant benefit to the overall operational stages of the facility/asset managers ((HHS Building, Engineering and Maintenance (BEMS) manager)). Queensland Health acknowledges that information will be created by many discrete appointed parties, each with specific responsibilities during the process of design and construction. Of significant note, information created by any single appointed party can be used by other appointed parties for decision-making.

Both the DBEP and CBEP shall state the allowable uses of the discipline or trade-centric information (e.g., costing, coordination, information delivery) during, and at the end, of specific milestones. These uses shall cover those defined in the PIR and the project brief.

Note: The delivery team BEP and BIM/s are contractually binding documents.

Reviewing deliverables against information requirements

Queensland Health has an obligation to report on BIM implementation progress to the Department of State Development, Infrastructure and Planning, to advance the Queensland public sector and industry adoption of BIM.

Now that the implementation of BIM into Queensland Health is 'business as usual' and has been developed to include the detailed information requirements and transfer schemas to the HHS Computer Maintenance Management System (CMMS), the progressive review of asset information is key to improving data quality at handover.

Any BIM/s produced by the delivery team during design and construction shall be reviewed for compliance with the PIR and, where applicable, shall be verified against the dRofus database for consistency at milestones or on a periodic basis. The objective is to enhance the collective capability of the Queensland Health supply chain by utilising BIM as a process to improve information management practices.

All Queensland Health building information modelling projects

For BIM tier 1, 2, and 3 projects, BIM/s shall be created to include all existing and proposed building, civil and site geometry of the affected capital works. The BIM/s shall contain geometrical information (the physical characteristics) and alphanumeric information, see Section 4.14 Information requirements (HHS critical asset information) needed to describe the design and construction works.

Documentation (2D drawings and schedules) required for assessment, design review and construction shall be generated as extractions from the discipline/trade BIM/s and/or space planning platform. All schedules and reports shall be produced from synchronised data sources, ensuring alignment between the BIM/s and the space planning platform. No drawings shall be created in 2D, isolated from the BIM/s, without prior written approval from Queensland Health.

Building and infrastructure systems shall be geometrically modelled to facilitate verification of access clearances, analysis of conflicts/clashes and coordination of the work with other aspects of the project, including surrounding existing conditions.

2.1 Integrating building information modelling into project delivery

The use of BIM, as defined in this PIR, on projects as outlined in Section 1.2 Projects requiring building information modelling, is mandatory and contractual. All Queensland Health BIM projects shall have a documented BEP for both design and construction. Information management is a critical element of BIM, especially when using external data sources such as a space planning platform. The delivery team shall appoint a BIM manager (for both design and construction) to oversee the creation of discipline and trade-centric BIM files, create and administer the BEP, manage the CDE, undertake coordination and clash detection, and ensure compliance with this PIR document.

A Queensland Health project manager (or representative) shall review the information created in BIM by the delivery team at defined stages.

2.2 Improving collaboration, coordination and capacity

The discipline/trade-centric BIM/s for the project shall be aggregated to form a federated model by the delivery team's BIM manager. The federated model shall be used as the primary coordination and decision-making tool, improving common understanding within the delivery team and Queensland Health. The objective is to leverage the federated model over traditional 2D drawings, focusing effort on geometric coordination, data creation and collaboration, rather than using 2D drawings for coordination. BIM shall be used for stakeholder consultation (user groups) and all deliverables.

2.3 Interoperability

Queensland Health does not specify the BIM authoring software to be used by the delivery team on the project. However, the information generated by the software shall be interoperable between the delivery team's chosen BIM systems using an openBIM² approach. The discipline and trade-centric BIM/s (in IFC format) shall be federated to form a holistic view of the project (federated model). The chosen BIM software shall have IFC 4 (or later) export and import functionality. IFC format deliverables are to include Queensland Health custom property sets, and are required at major milestones, along with the native BIM authoring files.

2.4 Developing models to create an as-built dataset

The BIM/s created for the project shall gradually increase in geometric accuracy and embedded data throughout design and construction, aligned to Queensland Health project stages (see Figure 2: Queensland Health project stages (outer arrows)). Queensland Health does not use Level of Development (LOD) to measure this progression but recognises that the industry uses these terms. The BIM framework has commenced transitioning towards more granular definitions using 'Level of information need' but it is appreciated that this will be a gradual transition requiring further input from Queensland Health. In the meantime, the following LOD bands shall provide guidance:

- a) Master planning, minimum LOD 100.
- b) Schematic design, minimum LOD 200.
- c) Detailed design, LOD 200 to LOD 300.
- d) Construction documentation, minimum LOD 300.
- e) Handover of as-built to LOD 500 (maximum LOD 300 and site verified).

² <https://www.buildingsmart.org/about/openbim/>

Queensland Health requires the BIM/s being created to meet the requirements and uses of the CIR, the PIR, including the embedded asset-related information requirements and any project-specific requirements. This includes any requirements for asset data transfer into the HHS CMMS, as-built documentation (drawings, Operation and Maintenance manuals, specifications, schedules, warranties, etc.) and the native BIM authoring files, including IFC format BIM/s at project completion.

A key element of any Queensland Health project is the SoA. The BIM environment shall be linked to the SoA by using an external space planning platform as described in Section 2.8 Space planning platform. For BIM tier 3 projects where dRofus isn't used, this shall be managed natively in BIM, with the processes of cross-checking the designed solution (from BIM) against the briefed requirements clearly documented in the BEP.

2.5 Improved data structuring and information coordination

At the project outset, it is important to consider and agree on the critical data structures, asset classification and information requirements of the end-users, the facility managers (HHS BEMS manager) or another nominated HHS representative, that may be beyond the requirements specified in this PIR. Workshops shall be held from the early stages of design onwards, with HHS facilities managers to determine all project-specific needs. This includes consistent naming, identifiers, drawing numbering, etc., which shall be agreed between appointed parties, the HHS and the Health Infrastructure Queensland project manager and documented in the BEP. The minimum 'Level of information need' is documented in Section 4 Technical.

The BIM/s produced shall be integrated with information from other sources, such as the cost plan, SoA, AusHFG coding and standard components. Scheduling of elements (rooms, doors, windows, FF+E) shall be undertaken in BIM or bi-directionally linked to the space planning platform. Regardless, this information shall be coordinated between systems. Drawings shall be derived from the discipline/trade-centric models, post-coordination with other discipline/trade models.

2.6 Tracking and measuring benefits realisation

As BIM is now a standard delivery mechanism for Queensland Health projects, the benefits realised in the use of BIM shall be identified early, analysed, and planned for appropriately. Determining the relevant BIM benefits realisation metrics for each project shall occur from the earliest outset. This shall include the strategic outcomes, measurable benefits, when the benefits will be realised and who ultimately will benefit.

Ongoing monitoring and reporting using the Queensland Health BIM metrics for projects.xlsx tool shall be completed by the delivery team's BIM manager, consolidating all responses from their appointed parties, and by the Queensland Health project management. This way, all parties have a say in how the benefits will be measured throughout project stages (schematic design, detailed design, construction documentation and construction), and these shall be reported to Queensland Health by the completion of each project stage, via governance processes.

2.7 Clear design and construction comprehension

BIM shall be used to convey the project's design intent and constructability more clearly to Queensland Health and other relevant parties. The use of BIM and 3D helps reduce misunderstandings or confusion about proposed design/construction solutions. Whether aiding user group sign-off, ensuring better client understanding, briefing sub-contractors, or reviewing the design or construction staging, BIM shall be considered as a means of producing clearer, more engaging visual aids. This may include the use of the federated model, static images, animations, interactive walk-throughs, immersive virtual reality and/or augmented reality.

QR codes shall be provided on drawings to link to the immersive technology delivered by the project team.

Additional requirements for BIM tier 1 and 2 projects

In addition to the above Queensland Health requirements for BIM on all projects, the following objectives apply to all BIM tier 1 and 2 projects.

2.8 Space planning platform

The space planning platform, dRofus, shall be used on all Queensland Health BIM tier 1 and 2 projects, with the provided HIQ dRofus standard project template database, to manage functional briefing requirements and support discrepancy checking between briefed and designed outcomes. dRofus shall serve as the central source of truth for validating room, asset, FF+E, and related data.

The use of dRofus provides HIQ with a way to gather data that can be used for FF+E planning and validation, benchmarking of projects across HIQ, SoA management and validation, assistance with commissioning, and management of asset data.

dRofus must be integrated with the BIM/s to ensure alignment between briefing datasets and modelled information. Refer to the dRofus management plan Part A, for specification requirements, and Part B, for delivery response.

Project-specific implementation and responsibilities shall be defined in the dRofus management plan, as outlined in Section 3.3 Existing conditions modelling.

2.9 Health and safety considerations in building information modelling

The use of BIM greatly improves a common understanding in relation to health and safety issues. The *Queensland Work Health and Safety Act 2011*³ requires that a Safety in Design (SiD) risk register be created and maintained during delivery and construction. For BIM tier 1 and 2 projects, this SiD risk register shall be linked to the federated model, highlighting areas or specific equipment of concern. The federated model shall be used not only to identify, assess and track SiD, but to support other safety assessments and operational workshops. This may be as simple as identifying health and safety issues in issue tracking software or using health and safety indicators containing register identification information in the federated model.

2.10 Quantity surveying from building information modelling

Cost planning and management are fundamental parts of any project. It is therefore crucial that the Quantity Surveyor (QS) can input as early as possible into the BIM processes. It is imperative to ensure that discipline/trade BIM/s are set up with proper geometric tolerances, units of measure, and contain key information required by the QS for effective cost planning.

For BIM tier 1 and 2 projects, a Model Content Plan (MCP)⁴ is preferred and allows the QS needs (e.g. units of measure, QS classification) to be articulated to the delivery team. The QS shall work with appointed parties to ensure they understand what information from BIM is to be used by the QS and at which stage this information

<https://www.legislation.qld.gov.au/view/html/inforce/current/act-2011-018>

⁴https://bim.natspec.org/images/Article_files/Resources/Partner_documents/ANZIQS_2018_BIM_Best_Practice_SoftCopy_FINAL.pdf

is needed. This process enables the QS to manage the BIM expectations efficiently, ensuring the QS can confidently use the BIM/s being produced for quantity surveying and costing purposes.

For BIM tier 3 projects only, the QS requirements of the BIM/s can be included in the BEP rather than a separate MCP.

For BIM tier 1 and 2 projects, the linkage between the SoA, BIM and cost plan must be demonstrable using a common classification schema.

Additional requirements for BIM tier 1 and 2 projects

In addition to the above Queensland Health requirements for BIM, the following objectives also apply to all BIM tier 1 projects.

2.11 Building information modelling in operational planning and staging

Most Queensland Health projects incorporate refurbishments and expansions to existing facilities. This requires careful planning for project delivery, operational staging, decanting and construction staging to minimise disruptions. High-level planning, staging, and diagrammatically showing this through design options in BIM is critical for stakeholder consultation and improving understanding of the proposed construction works.

For BIM tier 1 projects, it is a requirement that the delivery team use BIM for operational staging and decanting purposes to convey the intent more clearly to all stakeholders.

3 Management

This section outlines the management of the project deliverables and the required approaches to BIM by the delivery team. Each project stage contains what is required to be actioned by the delivery team, including any key BIM deliverables and information requirements.

3.1 Building information modelling execution plans

As changes during project delivery are inevitable, such as new delivery team members joining the project, the BEP shall be revised by the BIM manager when any new appointed party joins the project and/or before each new project stage commences (see Figure 5).

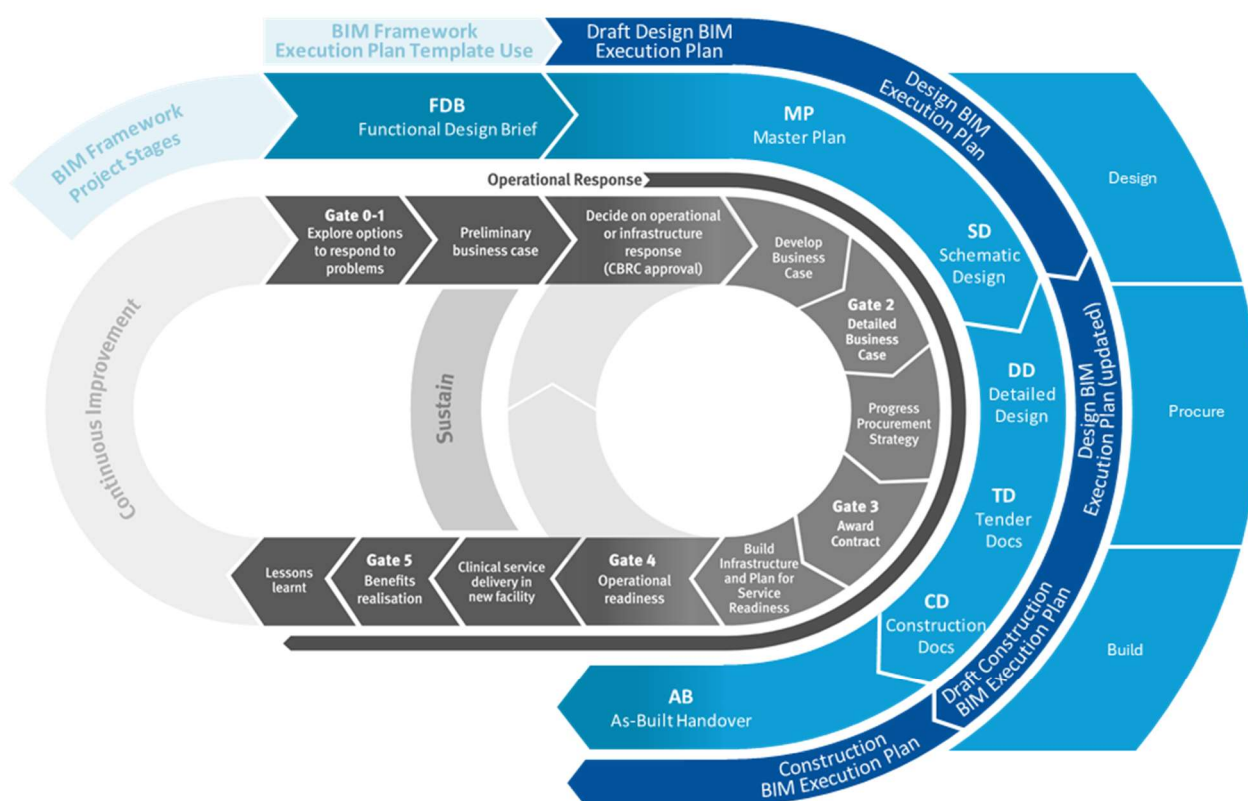


Figure 5: BIM documents (outer circle) aligned to the capital infrastructure delivery lifecycle

Once agreement between appointed parties has occurred, Queensland Health must be advised of the BEP updates and be provided with the opportunity to review the BEP at the following points:

- When a newly appointed party joins (or leaves) the delivery team.
- Prior to the start of any major project stage (schematic design, detailed design, construction documentation, etc.).
- When a change (client, design, or contractor/vendor-initiated) occurs that has a material impact on the previously agreed time, cost and/or information deliverables.

Tendering parties shall demonstrate compliance with this PIR through the creation of the project-specific BEP, first for design and then for construction, created in the Queensland Health BEP Word templates (see Figure 6). This shall be achieved by:

- a) using the Queensland Health BEP Word templates (DBEP and CBEP) to create a BEP included as part of their tender, for use by Queensland Health as part of the assessment criteria for the delivery team award
- b) the finalisation of the DBEP and/or CBEP within 45 days post-award (for known stages the delivery team is appointed for).

The BEP shall cover all BIM-related design tasks, construction uses of BIM and ultimately handover of asset information. The delivery team's appointed BIM manager shall manage the BEPs with input from all appointed parties.

The appointed parties and Queensland Health must agree to the processes and requirements defined in the dRofus management plan, as it shall be contractually binding.



Figure 6: BIM execution plan templates connecting the BIM requirements and deliverables

When authoring the BEP, the following Queensland Health documents must be applied and used (as seen in Figure 6):

1. CIR.
2. Queensland Health Uniclass 2015 Guidelines.
3. Project Information Requirements.
4. dRofus Management Plan Section A.
5. Queensland Health asset equipment lists.
6. Queensland Health BIM shared parameters.
7. Queensland Health project schedules (Revit).
8. dRofus Management Plan Section B.

9. Design BIM Execution Plan template.
10. Construction BIM Execution Plan template.
11. Discipline/trade and federated BIM/s deliverables.
12. Queensland Health IFC export mapping.
13. Queensland Health BIM metrics for projects.xlsx.
14. Queensland Health BIM data uploader template.xlsx.
15. Queensland Health sustainability spreadsheet.xlsx.
16. AusHFG guidelines.
17. Current Australian building and construction legislation, codes and standards.

Any DBEP amendments must occur prior to the delivery team progressing to the next design stage, which includes:

- master plan
- project definition plan
- schematic design
- detailed design
- tender/construction documentation.

Any CBEP amendments will occur prior to the delivery team progressing to the next construction stage, which includes:

- construction administration
- commissioning and handover
- project closure.

Benefits realisation metrics shall be recorded and tracked throughout the course of the project, at each of the above project stages in the **Queensland Health BIM metrics for projects.xlsx** template, thus informing the benefits realisation during project finalisation.

3.1.1 Plan development: design

For all projects, the design BIM manager shall create a DBEP from the Queensland Health DBEP Word template as part of their tender submission. The design BIM manager shall be responsible for updating the DBEP when material changes to the project occur. The DBEP shall be based on the requirements defined in the PIR and shall reference the relevant sections from this document. This will enable all parties to understand whether the BIM requirements and uses have been met for specific project stages.

3.1.2 Plan development: construction

At the contractor tendering stage, the tendering contractors shall create a CBEP using the Queensland Health CBEP Word template. The CBEP shall be based on the previously developed DBEP and reference the relevant PIR sections. The pre-award CBEP shall be included as part of the contractor's tender submission. If the contractor has additional requirements for the use of BIM, beyond the Queensland Health PIR, these shall be clearly identified in the CBEP (e.g., work packages planning, sub-trade progress payments, etc). These items may require further negotiation with any existing appointed parties.

3.1.3 Plan development: combined

Depending on procurement, a single combined BEP consisting of elements from both the DBEP and CBEP may be more appropriate than separate documents. The provided templates are intended to be merged or have sections moved between them as required. The resulting BEP must be a reflection of the lead appointed party's scope (covering all relevant project stages) and must describe their approach for delivering BIM in response to the requirements of this PIR.

3.2 dRofus management plan

The delivery team shall allocate a dRofus lead, responsible for managing the space planning platform, dRofus, throughout all project stages. Additionally, each discipline shall nominate a dRofus discipline lead, who shall collaborate with the dRofus lead to ensure accurate data across all briefed elements, including rooms, FF+E, assets and systems are captured in the dRofus project database.

The dRofus lead shall author the dRofus management plan using the provided Queensland Health dRofus management plan template in MS Word. This plan shall describe, at a minimum:

- how the dRofus will be used across each stage
- the integration approach with BIM/s
- roles and responsibilities
- the frequency and method of data validation, including discrepancy workflows between the dRofus and BIM/s
- database management, including room and item creation and administration processes
- reporting creation.

The dRofus management plan shall be maintained and updated as the project progresses, ensuring alignment with stages, stakeholder engagement and data handover requirements.

The appointed parties and Queensland Health must agree to the processes and requirements defined in the dRofus management plan, as it shall be contractually binding.

3.3 Existing conditions modelling

All appointed parties shall verify with Queensland Health the availability of any previous as-built BIM/s and/or drawings prior to undertaking work in any of the early design stages.

Existing drawings, surveys and any BIM/s (if available) shall be obtained and site-checked for accuracy by the delivery team. Existing critical assets, as defined by the HHS (as per their records), shall be modelled and incorporated into the federated model. These asset locations shall be agreed prior to modelling and verified using traditional survey or laser scanning. Laser scans (point clouds) should be considered, facilitating the capture and verification of existing conditions through modelling.

The extent of modelling beyond the affected areas and the required level of critical asset information shall be determined and agreed based on the cost, timeliness, HHS and project needs. These requirements shall be discussed and agreed upon during the project kick-off meeting and shall be documented in the BEP.

BIM requirements by project stages

The delivery team shall coordinate with the Queensland Health project director to confirm deliverable submission timeframes in advance of each milestone. BIM/s must be provided with sufficient time to allow for external auditing, feedback and any required rectification to be completed before the milestone date.

3.4 Functional design brief



To ensure the project is developed with specific HHS needs in mind, collaboration with the ultimate facility managers (HHS BEMS manager) or another nominated HHS representative for the project should be sought during the functional design brief stage, determining any additional asset information management effort required beyond the minimum information requirements already defined in Section 4.14 Information requirements. This also includes confirming existing numbering and naming protocols in use at the site (e.g. building levels, system numbering, etc.).

The information sourced during the strategic assessment (functional requirements, existing conditions, easements, topography, orientation, etc.) shall be collated and validated for currency to be leveraged in future stages, including the development of the BIM/s.

At this stage, dRofus shall support the strategic functional design brief and strategic infrastructure assessment by providing a centralised location for early SoA development, enabling future validation against the BIM/s.

The benefits realisation shall be populated for this stage, in close consultation with the HHS and the Department of Health, using the **Queensland Health BIM metrics for projects.xlsx** template.

3.4.1 BIM tier 1 and 2 projects

- a) The QS shall work with the delivery team to collaboratively develop the MCP.
- b) The dRofus management plan shall be developed and actioned.

3.4.2 Functional design brief building information modelling deliverables

No.	Deliverable	Description
1	Updated DBEP	Post-award, the draft (pre-award) DBEP is to be updated based on this PIR and further scope discussions with the Department of Health and the HHS.
2	Queensland Health BIM metrics for projects.xlsx	The BIM metrics spreadsheet shall be populated for this stage by the delivery team and Queensland Health.
3	Updated dRofus management plan	Post-award, the draft (pre-award) dMP is to be updated based on this PIR and further scope discussions with the Department of Health and the HHS.

No.	Deliverable	Description
4	Schedule of Accommodation	Approved SoA to import into dRofus (if not established in dRofus rooms module).

Table 3: Functional design brief BIM deliverables

3.5 Masterplan



The delivery team’s appointed BIM manager and any appointed delivery team members shall revise the proposed approach to BIM in the DBEP, for the project stages they are engaged for. The approach to information management and the CDE must be documented in the DBEP and complemented with a proposed information container diagram, highlighting discipline/trade models that constitute the federated model, cost plan, SoA, RDS, etc.

A masterplan massing model shall be generated in a BIM-authoring tool throughout the masterplan stage, enabling continuity from the masterplan to schematic design. General arrangement drawings and visualisations shall be produced from BIM at this stage. Departmental functional relationships and adjacency diagrams, and the whole of hospital departmental relationships, shall be refined at this stage. Refer to the dRofus management plan for requirements.

The design intent BIM/s shall be developed to a level of completeness whereby model elements are represented within the BIM/s as at least generic placeholders or conceptual representations, indicating approximate size, shape and location.

The space planning platform shall continue to be used to structure and track early SoA development and adjacency requirements.

The BIM benefits realisation shall be documented for this stage by the design BIM manager, in close consultation with the HHS and the Department of Health using Queensland Health BIM metrics for **Queensland Health BIM metrics for projects.xlsx**.

3.5.1 BIM tier 1 and 2 projects

- a) The QS shall have a defined MCP, and all engaged delivery team parties shall be developing the BIM/s to enable area-based costing by the QS.
- b) Refer to the dRofus management plan for space planning and related requirements.

3.5.2 BIM tier 1 projects only

- a) High-level operational planning and staging diagrams shall be produced from the massing model, aiding stakeholder understanding of the proposed works.

3.5.3 Masterplan building information modelling deliverables

No.	Deliverable	Description
1	Updated DBEP	The DBEP is to be updated based on this PIR and further scope discussions with the Department of Health and the HHS.

No.	Deliverable	Description
2	Masterplan BIM	Masterplan massing model delivered in native formats (if multiple models are being used, please share as transmittal package, e.g. eTransmit).
3	Queensland Health BIM metrics for projects.xlsx	The BIM metrics spreadsheet shall be populated for this stage by both the delivery team and Queensland Health.
4	Updated dRofus management plan	The dRofus management plan is to be updated based on this PIR and further scope discussions with the Department of Health and the HHS.
5	Schedule of Accommodation	Updated and approved SoA (if not established in dRofus rooms module).

Table 4: Masterplan BIM deliverables

3.6 Schematic design



Before schematic design proceeds, a DBEP must be defined and in place. A nominated BIM manager shall be assigned to the project by the delivery team. The development of the schematic design will be refined and documented in BIM. The BEP shall form part of the detailed business case and schematic design deliverables.

The delivery team shall use BIM during the schematic design stage. The delivery team is responsible for enabling, creating, and progressively delivering information that increases in detail (both geometrical and alphanumeric information) from design through construction. This shall be managed by the delivery team BIM manager.

The building set out, orientation, preliminary building grid and floor-to-floor heights (including allocation of space for services) shall be confirmed at this stage.

The various schematic designs (options) shall be undertaken using BIM. The rooms within the schematic design BIM/s will provide area analysis that shall be linked to the dRofus project database, which includes the functional design brief and SoA, as well as links to the initial cost plan. All existing conditions and survey information shall condition constraints.

Circulation areas (footpaths, walkways, ramps, stairs, vertical transportation, etc.) shall be modelled. Travel distance routes (both horizontal and vertical) shall be modelled to validate that distances have been kept to a minimum. Unenclosed covered areas must be represented with geometry containing alphanumeric information.

From this stage, discrepancy checking between briefed and designed SoA and RDS requirements will take place, comparing the dRofus project database and the BIM/s. Both the dRofus project database and the BIM/s shall be used to facilitate user group consultation and visualisation.

The following apply to this design stage and **onwards**:

- a) Demonstrate that the requirements of this PIR and the project brief are documented within the BEP and that the BIM/s being produced comply with these requirements.
- b) Modelled elements shall represent discrete systems, objects or assemblies that are individually identifiable and selectable at the component level. The use of grouped or repurposed foundational elements (e.g. walls, slabs, beams) to represent distinct modelled components is not permitted.

- c) Before the end-of-stage submission, all rooms and FF+E (for BIM tier 1 and 2 projects, refer to the dRofus management plan for a detailed list) must be uniquely represented (type counts are not acceptable) so the objects related to each instance shall be physically placed in their actual project locations within the BIM/s by each relevant discipline/trade. This requirement ensures that quantification, space coordination, services integration and adjacency relationships can be appropriately validated.
- d) All modelled elements shall be developed and categorised to support reliable quantity extraction. The QS will review models at each stage to confirm suitability for quantity take-off.
- e) A federated model, in an agreed format, built from IFC format trade/discipline BIM/s shall be submitted to Queensland Health as defined by the project milestone delivery schedules.
- f) When 2D drawings are required, these shall be derived from the BIM. Documentation and data cannot be created using separate 2D processes or detached data. Any drawings (e.g. typical details) that are developed outside of BIM shall be clearly identified in the BEP and approved by Queensland Health prior to implementation.
- g) Asset data for building and spaces asset tiers shall be populated as defined in Section 4.14 Information requirements.
- h) All FF+E shall be identified in BIM and RDS, populated with the appropriate data as defined in Section 4.14 Information requirements.
- i) Technologies such as virtual and augmented reality can be beneficial aids to support drawings and the RDS and should be used at this and following stages to support user group engagement and gain final user group sign-off.
- j) All model elements will be populated with the specified alphanumeric information as described in Section 4.14 Information requirements.
- k) All new maintainable assets shall be attributed with the specified asset data for systems and all equipment asset tiers, before being extracted into the provided **Queensland Health BIM data uploader template.xlsx**, as defined in Section 4.14 Information requirements.

The design intent BIM/s shall be developed to a level of completeness whereby model elements are graphically represented within the model as at least a generic system, object or assembly in terms of approximate quantity, size, shape, location, and orientation. alphanumeric information, as specified in Section 4.14 Information requirements shall also be attached to model elements.

The BIM benefits realisation shall be documented for this stage by the design BIM manager, in close consultation with the HHS and the Department of Health using Queensland Health BIM metrics for **Queensland Health BIM metrics for projects.xlsx**.

3.6.1 BIM tier 1 and 2 projects

- a) The approach linking SiD, WHS risks to the federated model shall be defined at this stage, supporting risk management.
- b) Areas derived from the briefed SoA shall be linked to design departmental areas in BIM and in the dRofus project database, in accordance with the dRofus management plan.
- c) All assets and FF+E shall be identified in BIM and RDS, populated with the appropriate data as defined in Section 4.14 Information requirements and in the dRofus project database in accordance with the dRofus management plan.
- d) Model elements as defined in the MCP shall be used to inform the cost plan.

3.6.2 BIM tier 1 projects only

- a) Further developed and detailed operational planning and staging diagrams shall be produced from the BIM, aiding stakeholder understanding of the proposed works.

3.6.3 Schematic design building information modelling deliverables

No	Deliverables	Description
1	Updated DBEP	The DBEP is to be updated based on this PIR and further scope discussions with the Department of Health and the HHS.
2	Schematic design BIM/s	Separate discipline models shall be submitted at each project stage in both native and IFC formats, along with a coordinated federated model built from IFC format trade/discipline BIM/s, delivered in the agreed format, fortnightly (if multiple models are being used, please share as transmittal package, e.g. eTransmit).
3	Asset data extracts	All specified asset data for building and space asset tiers shall be extracted into the provided Queensland Health BIM data uploader template.xlsx, as defined in Section 4.14 Information requirements.
4	Queensland Health BIM metrics for projects.xlsx	The BIM metrics spreadsheet shall be populated for this stage by both the delivery team and Queensland Health.
5	Updated dRofus management plan	The dRofus management plan is to be updated based on this PIR and further scope discussions with the Department of Health and the HHS.
6	Schedule of Accommodation	Updated and approved SoA (if not established in dRofus rooms module).

Table 5: Schematic design BIM deliverables

3.7 Detailed design



The delivery team shall continue to use BIM during the detailed design stage, building on the requirements of schematic design. The following apply to this design stage and **onwards**:

- A federated model of the civil, structural, mechanical, electrical, fire, security and hydraulic model (plus any other discipline models) with the architectural model will occur during this design stage by the delivery team BIM manager for review by the project manager.
- Using an IFC-compatible BIM coordination tool, prepare a clash detection report that will be reviewed and actioned by all design team parties. The discipline/trade BIM/s must be made available in both native and IFC format.
- All modelled elements shall contain Uniclass data as defined in Section 4.15 Legislation and supporting documents. The design intent BIM/s shall be developed to a level of completeness whereby model elements are graphically represented within the model as a system, object or assembly with approximate quantity,

size, shape, location and orientation. Some elements may reflect specific design intent, while others remain indicative. Alphanumerical information shall also be attached to the model elements.

The BIM benefits realisation shall be documented for this stage by the design BIM manager, in close consultation with the HHS and the Department of Health, using **Queensland Health BIM metrics for projects.xlsx**.

The federated model, based on the discipline/trade IFC BIM/s, will be independently audited by a Queensland Health representative against this PIR, the DBEP, and other relevant Queensland Health requirements for project delivery. Any errors or omissions will need to be remedied by the originating authors, managed by the design BIM manager.

3.7.1 BIM tier 1 and 2 projects

- a) SiD, WHS risks shall be documented and navigable in the federated model for ease of tracking and review.
- b) During detailed development, detailed elemental costing by the QS, associated with the BIM and whole of life costing, is required.
- c) SoA link to rooms/spaces in BIM and in the dRofus project database shall be maintained and further developed with appointed parties.
- d) All assets and FF+E shall be identified in BIM and RDS, populated with the appropriate data as defined in section 0 and in the dRofus project database in accordance with the dRofus management plan.
- e) dRofus project database reporting, including SoA, RDS, FF+E Lists, quality assurance exports and RLS derived from the linked BIM/s referencing data from the dRofus project database.

3.7.2 BIM tier 1 projects only

- a) Detailed operational planning, such as the detailed decanting options, shall be undertaken using the BIM/s prior to completion of tender documentation.

3.7.3 Detailed design building information modelling deliverables

No.	Deliverable	Description
1	Updated DBEP	The DBEP is to be updated at each project stage to capture changes to workflows or deliverables as agreed by the delivery team and Queensland Health.
2	Detailed design BIM/s	Separate discipline models shall be submitted at each project stage in both native and IFC formats, along with a coordinated federated model built from IFC format trade/discipline BIM/s, delivered in the agreed format, fortnightly (if multiple models are being used, please share as transmittal package, e.g. eTransmit).
3	Asset data extracts	All specified asset data for building, space, system and all equipment asset tiers shall be extracted into the provided Queensland Health BIM data uploader template.xlsx, as defined in section 0.

No.	Deliverable	Description
4	Queensland Health BIM metrics for projects.xlsx	The BIM metrics spreadsheet shall be populated for this stage by both the delivery team and Queensland Health.
5	Sustainability spreadsheet	A summary of embodied carbon data for all applicable elements, including material quantities, emission factor categories, EPD references, and calculated greenhouse gas emissions, as defined in Section 4.14 Information requirements.
6	Updated dRofus Management Plan	The dRofus management plan is to be updated based on this PIR and further scope discussions with the Department of Health and the HHS.
7	Schedule of Accommodation	Updated and approved SoA (if not established in dRofus rooms module).

Table 6: Detailed design BIM deliverables

3.8 Tender documentation



BIM/s and other information containers, such as the cost plan, SoA and RDS, will be further developed during this stage to greater geometrical and alphanumeric precision, informing the investment decision by Queensland Health and ultimately tender documentation. The federated model shall be supplied to prospective tenderers for uses defined in this PIR and the DBEP, supporting the traditional 2D documentation.

The DBEP must be updated at the beginning of this project stage, by the design BIM manager, to reflect the modelling approaches, systems, and actual processes employed by the delivery team for all design stages prior to construction.

As part of the contractor's tender, a draft CBEP (based on the updated DBEP) shall be developed and submitted as part of the tender deliverables. Post-award, the successful contractor shall have in place a Construction BIM manager, which may or may not be the design BIM manager. Handover of BIM/s from design to construction must occur, i.e. IFC format and native BIM format for each design BIM.

The extent of any retained delivery team, sub-contractors, fabricators and suppliers developing models for construction shall be agreed between Queensland Health and the preferred contractor to fulfil the requirements of the project.

The BIM benefits realisation shall be documented for this stage at this time, by the design BIM manager, in close consultation with the HHS and the Department of Health, using **Queensland Health BIM metrics for projects.xlsx**.

The federated model, based on the discipline/trade IFC BIM/s, will be independently audited by a Queensland Health representative against this PIR, the DBEP, and other relevant Queensland Health requirements for project delivery. Any errors or omissions will need to be remedied by the originating authors and managed by the design BIM manager before Issued for construction documentation is achieved.

3.8.1 BIM tier 1 and 2 projects

- a) SiD, WHS risks shall be documented and navigable in the federated model for ease of tracking and review.
- b) Detailed elemental costing associated with the BIM and whole of life costing is required prior to completion of tender documentation.
- c) SoA link to rooms/spaces in BIM and in the dRofus project database shall be maintained and consolidated with appointed parties consolidated following any deviation resolution.
- d) All assets and FF+E shall be identified in BIM and RDS, populated with the appropriate data as defined in Section 0 and in the dRofus project database in accordance with the dRofus management plan.
- e) dRofus project database reporting including SoA, RDS, FF+E lists, quality assurance exports and RLS derived from the linked BIM/s referencing data from the dRofus project database.

3.8.2 BIM tier 1 projects only

- a) Detailed operational planning, such as the detailed decanting options, shall be undertaken using the BIM/s prior to completion of tender documentation.

3.8.3 Building information modelling deliverables for tender documentation

No.	Deliverable	Description
1	Updated DBEP	The DBEP is to be updated at each project stage to capture changes to workflows or deliverables as agreed by the delivery team and Queensland Health.
2	Tender BIM/s	Separate discipline models shall be submitted at each project stage in both native and IFC formats, along with a coordinated federated model built from IFC format trade/discipline BIM/s, delivered in the agreed format, fortnightly (if multiple models are being used, please share as transmittal package, e.g., eTransmit).
3	Asset data extracts	All specified asset data for building, space, system and all equipment asset tiers shall be extracted into the provided Queensland Health BIM data uploader template.xlsx, as defined in Section 4.14 Information requirements.
4	Schedule of Accommodation	Updated and approved SoA.

Table 7: Tender documentation BIM deliverables

3.9 Construction documentation



Discipline BIM/s and other information containers, such as the cost plan, SoA, RDS, drawings, schedules, and associated specifications, will be further developed during this stage to a greater geometrical and alphanumerical precision, suitable for construction use, i.e., Issued for construction documentation, specifications, and schedules.

The delivery team's BIM manager will undertake a detailed coordination review on the federated model and all discipline outputs (BIM/s, drawings, schedules, specifications), ensuring there are minimal geometric coordination issues prior to the construction award.

The design intent BIM/s shall be developed to a level of completeness whereby model elements are graphically represented within the model as at least a specific system, object or assembly in terms of quantity, size, shape, location and orientation. Alphanumerical information shall also be attached to the model elements.

The BIM benefits realisation shall be documented for this stage at this time, by the design BIM manager, in close consultation with the HHS and the Department of Health, using **Queensland Health BIM metrics for projects.xlsx**.

The federated model, based on the discipline/trade IFC BIM/s, will be independently audited by a Queensland Health representative against this PIR, the DBEP, and other relevant Queensland Health requirements for project delivery. Any errors or omissions will need to be remedied by the originating authors and managed by the design BIM manager.

3.9.1 BIM tier 1 and 2 projects

- a) SiD, WHS risks shall be documented and navigable in the federated model for ease of tracking and review.
- b) Detailed elemental costing associated with the BIM and whole-of-life costing is required prior to completion of Issued for construction documentation.
- c) SoA link to rooms/spaces in BIM and in the dRofus project database shall be maintained and consolidated with appointed parties following any deviation resolution.
- d) All assets and FF+E shall be identified in BIM and RDS, populated with the appropriate data as defined in Section 4.14 Information requirements and in the dRofus project database in accordance with the dRofus management plan.
- e) dRofus project database reporting including SoA, RDS, FF+E lists, quality assurance exports and RLS derived from the linked BIM/s referencing data from the dRofus project database.

3.9.2 Tier, one projects only

- a) Detailed operational planning, such as the detailed decanting options, shall be undertaken using the BIM/s prior to completion of construction documentation.

3.9.3 Construction documentation building information modelling deliverables

No	Deliverable	Description
1	Construction documentation BIM/s	Separate discipline models shall be submitted at each project stage in both native and IFC formats, along with a coordinated federated model built from IFC format trade/discipline BIM/s, delivered in the agreed format, fortnightly (if multiple models are being used, please share as transmittal package, e.g., eTransmit).
2	Asset data extracts	All specified asset data for building, space, system and all equipment asset tiers shall be extracted into the provided Queensland Health BIM data uploader template.xlsx, as defined in Section 4.14 Information requirements.
3	Updated dRofus management plan	The dRofus management plan is to be updated based on this PIR and further scope discussions with the Department of Health and the HHS.
4	Schedule of Accommodation	Updated and approved SoA.

Table 8: Construction documentation BIM deliverables

3.10 Construction



Prior to construction commencing, the CBEP shall be updated by the appointed construction BIM manager, documenting the approach of transferring the PIM to the AIM, supporting the commissioning and handover plan as described in the CIR Volume 4: Engineering and infrastructure – Section 4.1: Principles.

From this stage, the contractor is responsible for delivering BIM/s meeting that meet the requirements of the PIR, including those defined in earlier project stages.

Where BIM/s from earlier stages are not available, incomplete, or non-compliant with the DBEP, the contractor must ensure that these requirements are fulfilled during this stage and incorporated into the final information deliverables.

As-constructed redline mark-ups shall be incorporated into the design and construction BIM/s to produce an as-built BIM of the project at handover.

Project-specific critical asset data, beyond that defined in Section 4.14 Information requirements, and the transfer processes shall be confirmed with the HHS facilities managers (HHS BEMS manager) or another nominated HHS representative at this stage. Testing of transferring design and future construction asset data from the PIM to the AIM shall occur to improve asset data handover, prior to commissioning and construction

completion. The majority of asset data shall be transferred using the provided **Queensland Health BIM data uploader template.xlsx** as defined in section 0.

Sub-contractors may prepare shop drawing models in other 3D CAD software packages, rather than BIM. These shop drawing models must be integrated into the federated model for coordination purposes.

The BIM benefits realisation shall be documented for this stage at this time, by the construction BIM manager, in close consultation with the HHS and the Department of Health, using **Queensland Health BIM metrics for projects.xlsx**.

The federated model, based on the discipline/trade IFC BIM/s, will be independently audited by a Queensland Health representative against this PIR, the DBEP, and other relevant Queensland Health requirements for project delivery. Any errors or omissions will need to be remedied by the originating authors and managed by the construction BIM manager.

3.10.1 BIM tier 1 and 2 projects

- a) Safety in construction, WHS risks shall be finalised and navigable in the federated model.
- b) SoA link to rooms/spaces in BIM and in the dRofus project database shall be maintained and consolidated with appointed parties following any deviation resolution.
- c) All assets and FF+E shall be maintained in BIM and RDS, populated with the appropriate data as defined in Section 4.14 Information requirements and in the dRofus project database in accordance with the dRofus management plan.
- d) HIQ format dRofus project database reporting including SoA, RDS, FF+E Lists, quality assurance exports and RLS derived from the linked BIM/s referencing data from the dRofus project database.
- e) HIQ format handover and commissioning dRofus project database reporting including **Queensland Health BIM data uploader template** export, deliveries and commissioning report, delivery schedule and warranty and maintenance exports.

3.10.2 Building information modelling deliverables in construction

No.	Deliverable	Description
1	Updated CBEP	Post-award, the draft (pre-award CBEP is to be updated based on this PIR, the existing DBEP and further scope discussions with the Department of Health and the HHS.
2	Construction BIM/s	Separate discipline models shall be submitted at each project stage in both native and IFC formats, along with a coordinated federated model built from IFC format trade/discipline BIM/s, delivered in the agreed format, fortnightly (if multiple models are being used, please share as transmittal package, e.g., eTransmit).
3	Asset data extracts	All specified asset data for building, space, system and all equipment asset tiers shall be extracted into the provided Queensland Health BIM data uploader template.xlsx, as defined in Section 4.14 Information requirements.

No.	Deliverable	Description
4	Queensland Health BIM metrics for projects.xlsx	The BIM metrics spreadsheet shall be populated for this stage by both the delivery team and Queensland Health.
5	Updated dRofus management plan	The dRofus management plan is to be updated based on this PIR and further scope discussions with the Department of Health and the HHS.

Table 9: Construction BIM deliverables

3.11 As-built



Before construction begins, an as-built model verification process shall be defined in the CBEP. This may consist of a measured approach using laser scanning, or a visually verified approach using photogrammetry, 360 photos, or photos.

The final updated trade and discipline as-built BIM/s shall be provided to the Queensland Health project manager and the facilities managers (HHS BEMS manager) or another nominated HHS representative in both native and IFC formats. A federated model, built from IFC format trade/discipline BIM/s, delivered in the agreed format (as agreed per project) of the as-built project, containing the Queensland Health custom property sets defined in Section 4.11 Industry foundation classes.

Any associated as-built 2D documentation, including (but not limited to) the building users guide, drawings indicating the location of test points, test reports, operations and maintenance manuals, etc., shall be provided in a searchable digital vector format.

The final critical asset data transfer of information from the PIM to the AIM will occur at this stage, in line with the asset information management requirements (see Section 4.14 Information requirements and any additional HHS-specific requirements).

The as-built BIM/s shall be developed to a level of completeness whereby model elements are graphically represented within the model as a specific system, object or assembly with verified quantity, size, shape, location and orientation, based on field-validated conditions. Alphanumerical data shall be updated to reflect the actual installed components.

The as-built BIM/s shall only contain elements in their final built status, any obsolete, redundant or outdated elements must be removed (for example design options, identical elements in various LOD levels, etc).

The agreed BIM benefit realisation items for construction shall be tracked and reported on by the construction BIM manager to Queensland Health project management during the as-built and handover.

The federated model, based on the discipline/trade IFC BIM/s, will be independently audited by a Queensland Health representative against this PIR, the DBEP, and other relevant Queensland Health requirements for project delivery. Any errors or omissions will need to be remedied by the originating authors and managed by the construction BIM manager.

3.11.1 As-built building information modelling deliverables

No.	Deliverable	Description
1	As-built BIM/s	Separate discipline models shall be submitted at each project stage in both native and IFC formats, along with a coordinated federated model built from IFC format trade/discipline BIM/s, delivered in the agreed format (if multiple models are being used, please share as transmittal package, e.g., eTransmit).
2	Asset data extracts	All specified asset data for building, space, system and all equipment asset tiers shall be extracted into the provided Queensland Health BIM data uploader template.xlsx, as defined in Section 4.14 Information requirements.
3	Queensland Health BIM metrics for projects.xlsx	The BIM metrics spreadsheet shall be populated for this stage by both the delivery team and Queensland Health.
4	Sustainability spreadsheet	A summary of embodied carbon data for all applicable elements, including material quantities, emission factor categories, EPD references, and calculated greenhouse gas emissions, as defined in Section 4.14 Information requirements.

Table 10: As built BIM deliverables

3.12 Benefits realisation – project closure



The targeted benefits realisation results shall be reported again at this time, in close consultation with the HHS and the Department of Health, to provide feedback on future refinements. These results shall encompass the implementation of BIM on the project, e.g. coordination issues resolved before construction, reduced number of ‘Requests for information’, improved user group sign-off process, and enhanced coordination of information deliverables (cost, SoA, briefed versus design outcomes).

These findings will inform future revisions to Queensland Health PIR and BEP Word templates.

4 Technical

The following section outlines the technical BIM requirements for the delivery team. This will be used to assist in the development of the BEP, MCP, software selections, coordination and collaboration processes and related matters.

4.1 Building information modelling execution plan requirements

The appointed parties shall appoint a BIM manager to collaboratively develop, prepare and manage the BEP and BIM/s for the project at both design and construction stages. The Queensland Health BEP templates shall be used, referencing the relevant sections of this PIR for ease of tender assessment by Queensland Health. The following shall be addressed:

- a) Project information (relevant HHS, facility name, project address/location, geographic location including (GDA, AHD) project summary/description).
- b) Project stages (including modelling existing assets) and nominated start/end dates (schedule of BIM activities including milestones and submittals).
- c) Specify relevant industry and agree HHS asset data with the HHS asset/facilities manager (classification, nomenclature, etc.), which will be used in the execution of BIM for the project.
- d) Objectives and goals are aligned to Queensland Health PIR, with specific benefits realisation metrics defined.
- e) Specific uses of BIM aligned to this PIR for Queensland Health and nominate any contractor or design uses of BIM not available to Queensland Health.
- f) Identify the entire delivery team, including all appointed parties, including proposed parties not yet appointed (contractor, steel fabricator, etc.).
- g) Responsibility matrix (roles and responsibilities).
- h) Processes of communicating to Queensland Health (both HIQ and HHS) the design, reviews and user group/stakeholder sign off.
- i) Communication and collaboration strategies between the delivery team (including contractor), the BIM manager and the Queensland Health project manager.
- j) Information delivery plan (what data will be authored, at what stage and in which system) and any classification/asset data structures to be used.
- k) Model development requirements (if LOD is used, a LOD Matrix).
- l) Level of information requirements, such as critical asset-related information (noted in Section 4.14 Information requirements).
- m) File, asset coding, room and naming conventions (nomenclature).
- n) Plan for file sharing, suitability of the information, storage and retrieval, and data security (CDE).
- o) Required elements, processes and management techniques required for coordination tasks.
- p) Methodology for quality assurance and validation of BIM files, project wide.
- q) Software selections, file format, file exchange requirements.

4.2 Roles and responsibilities

The pre-contract BEP shall define the delivery team's proposed BIM roles and responsibilities for each discipline and trade for the proposed stages for which they are engaged. The BEP will outline how these roles facilitate the coordination and delivery of the project in BIM, thereby meeting the PIR. Each discipline/trade must allow for a

nominated model manager to coordinate the development of, and quality assure, the discipline/trade-specific BIM. Depending on the project scale, the model manager could be a separate role or on smaller projects, this role could be fulfilled by a senior model element author. The delivery team shall carefully consider the following roles and responsibilities as they relate to BIM:

- a) BIM manager (separate or combined design and construction roles) for the lead appointed party.
- b) Discipline/trade model managers (BIM leads) for each appointed party.
- c) Model element authors (modellers and information authors) for each appointed party.
- d) dRofus lead for the lead appointed party.
- e) dRofus discipline leads (discipline/trade-specific leads) for each appointed party.
- f) Quantity Surveyor (QS).

The DBEP and CBEP shall define the delivery team by way of a table that provides the following information:

- defined role
- company
- name
- contact details (email and phone number).

The lead appointed party shall nominate an overall resource, the BIM manager, for the design and construction stages. Two different individuals may be required to fulfil this role, supporting the proposed procurement method, one for design and one for construction, or this may be the same individual in the case of design and construct. Regardless, there shall always be an allocated resource undertaking the BIM management role on the project on behalf of the delivery team, and sufficient handover time is allowed if the resource changes.

Pre-contract, the BIM manager must complete Appendix A of the BEP, demonstrating their experience and capability. This appendix shall be removed in the post-award BEP.

The BIM manager shall oversee and report on the BIM and information management process to the Queensland Health project manager, ensuring that appointed parties conform to the content of the BEP. The following conditions apply:

- g) Any replacement of the BIM manager shall be advised to the nominated Queensland Health representative within 10 days.
- h) If the resource changes, the nominated handover time shall be documented, and prior approval shall be sought from Queensland Health.
- i) The BIM management experience of the resource shall be provided within appendix A of the BEP template (pre-award version only, removed post-award), stating the years, projects, experience, technical and communication abilities.
- j) The nominated allocation of time this resource will spend per week, by stage, by deliverable on BIM and information management-related tasks.

4.3 Communication and meetings

The delivery team shall allow enough time for meetings to discuss any issues with BIM, deliverables and information management, which shall be incorporated into traditional design and construction review meetings. Timeframes for these meetings shall be indicated in the pre-award BEP and agreed on post-award. As a minimum, Queensland Health anticipates the requirements listed in Table 11: Meetings.

Meeting	Detail
dRofus project initiation meeting	Meeting between the HIQ BIM/ Digital asset lead, the HIQ PD/PM, HIQ FF+E officer, delivery team BIM and dRofus leads to discuss the setup of the dRofus project database.
BIM execution planning	Two weeks after contract award, a review cycle begins until each party agrees with its contents. Final BEP is required a maximum of 45 days post-award. Revisions only as additional stakeholders become involved with the project and as needed at each project stage, after Queensland Health approval.
SiD workshop	As per the project delivery schedule.
3D coordination / clash resolution	As a minimum, this shall take place fortnightly and prior to each project milestone from the end of schematic design onwards until handover.
3D design review meetings	It is expected that the graphical models (and associated data) will be used throughout delivery team meetings in accordance with the project delivery schedule.
AIR planning	An allowance of at least two meetings per project stage for the Queensland Health project manager (PM), HHS FM (BEMS manager) or another nominated HHS representative, delivery team BIM manager and PMs to discuss any project-specific and/or additional asset/information requirements.

Table 11: Meetings

4.4 Information containers

A high-level information delivery plan shall be produced by the delivery team that identifies the information containers (BIM, cost planning, SoA, FFE register, documentation types, etc.) that constitute the PIM. The objective is to establish where information will reside and how this information will be consolidated to form an overall PIM for the project. The delivery team can then determine what information should exist in BIM and what information should exist externally in another data source, such as a space planning platform, Issue tracking environment, costing or other database tools.

This must be documented in the BEPs by way of a diagram explaining the information containers and the relationships between these containers. The BEPs are broken down into project stages and then subsequent discipline/trades within those stages, enabling understanding of what information will be contained in the relevant discipline-specific information containers at any point during delivery.

4.5 Project location and set out

The BIM manager shall ensure that the project's coordinate system is established relative to a registered Permanent Survey Mark (PSM), as identified and validated by the surveyor. This connection must be used to define a consistent space reference system for all project models.

The BIM manager is responsible for creating a master coordinates file that captures the project's geodetic and local positioning data. All delivery team members must reference this file to position their models accurately and

consistently. This file shall serve as the sole source for establishing project location, orientation and shared coordinates across all authoring environments.

The BEP must document the required space attributes in Figure 12 . These attributes must reflect the certified survey data provided and demonstrate how the model coordinate system aligns with the PSM.

Model authors using Revit must ensure the project base point reflects a meaningful, measurable relationship to the PSM.

Note: the values shown in Table 12: Model geographic location for illustrative purposes only.

Attribute	Details
Geodetic datum	GDA2020
Projection/CRS	MGA Zone 56, EPSG:7856
Height datum	AHD71
Permanent Survey Marker (PSM) (or equivalent known survey point)	Name: Survey benchmark Peg 123456 N/S (Y): 6,964,309.670 E/W (X): 500,135.910 Elevation (Z): 10.450
Project base point (e.g. local grid intersection)	Location: Grid intersection A-1 N/S (Y): 6,964,322.880 E/W (X): 500,140.730 Elevation (Z): 0.000
Project location description	25km Northwest of Brisbane CBD
Model rotation	37.56 deg clockwise angle to true north
Coordinate units (m or mm)	m

Table 12: Model geographic location

4.6 Model federation

The delivery team BIM manager shall combine all discipline/trade BIM/s into a single federated model. This federated model shall form the basis for all design reviews and shall remain aligned with project progress. No individual trade/discipline BIM/s shall include more than one building, and shall typically consist of a single discipline only, with the split of BIM/s to be proposed in the BEP. Before construction commences, the BIM manager must engage with the HHS PM and/or BEMS manager to determine the optimal split for BIM/s at handover (e.g. BIM/s structured by asset class or building level, etc.).

Similarly, the structure for federated models must be proposed, using diagrams, in the BEP. Larger projects may require multiple federated models to manage project zones or separable portions. It is expected that the federated model shall be used internally by the delivery team to coordinate and, as such, should be well

organised with useful views and ease of navigation a paramount consideration, relevant to the specific project needs.

At a minimum, the BIM manager shall submit to Queensland Health a project-wide federated model, built from IFC format trade/discipline BIM/s, delivered in the agreed format (as agreed per project) every two weeks (uploaded to the agreed CDE), and at formal milestones for review. These federated models will be used by the project team for decision-making and purposes, including progress tracking, data validation against this PIR, general scope compliance, and operational reviews.

4.7 Coordination

Design and construction coordination reviews shall be carried out regularly by the delivery team as required to satisfy the project stage requirements and to minimise project risk. As a minimum, this shall take place fortnightly from the end of schematic design onwards.

Each appointed party shall undertake coordination of their own modelled elements as part of their quality assurance processes, before sharing information with the broader delivery team.

The delivery team BIM manager shall then use the federated model and focus on significant hard clashes, construction tolerances and safe working/maintenance zones. Issue tracking software shall be used to track and close-out design and coordination issues, rather than just identifying clashes in a static report.

The pre-award BEP shall identify details of the coordination process including:

- a) Proposed software to be used for model federation and clash detection/management.
- b) Responsibilities and accountabilities, including timeframes for resolution of identified coordination issues.
- c) The coordination priorities and overall management process.
- d) Tolerance strategy.
- e) Outputs (e.g. coordination issues report, dashboarding, etc.).
- f) Providing evidence of progress to the nominated Queensland Health representative.

4.8 Quality control

The delivery team shall provide evidence to their BIM manager and the Queensland Health project manager that activities identified in this PIR and BEP are taking place (e.g. design reviews, RDS, scheduling, linkage to SoA, population of asset data, etc.). The BEP shall detail model and data quality control, consideration shall be given to:

- a) quality assurance/control procedures
- b) software used to support quality control procedures
- c) retaining data integrity/accuracy in BIM and highlighting the integrations with cost planning, construction staging/sequencing, SoA, space planning and resulting 2D drawing and schedule outputs.

4.9 Software

Queensland Health does not stipulate the BIM authoring tools used by the delivery team and they are encouraged to use whichever BIM authoring tools are best suited to their discipline or trade practices. Information created in their chosen platform shall be interoperable with other BIM authoring, the space planning platform (dRofus), and collaboration tools. Agreement between appointed parties on the chosen software and any interoperability testing shall be performed prior to the first deliverable being issued to Queensland Health.

At a minimum, the chosen tools shall support buildingSMART IFC 4, for both import and export.

4.10 Software version update policy

Versioning of software shall be managed by the delivery team's BIM manager throughout the project delivery stages. Any software version update(s) shall be agreed with the delivery team across all disciplines/trades prior to updating. Once agreed, Queensland Health will review the timings of the upgrade. Only at this stage shall the BIM/s be upgraded, if approved.

It is recommended that the timing of any updates shall align with the end/start of project milestone dates to avoid disruption to the delivery team deliverables.

4.11 Industry foundation classes

From schematic design onwards, BIM/s shall be provided to Queensland Health in both native and IFC formats. Native formats provide a method for future works and model maintenance; however, IFC is the mandated openBIM format. All models shall be exported as buildingSMART IFC 4 (or later) format. It is recognised that buildingSMART certification for this standard is not yet commonplace.

All BIM/s must be synchronised with dRofus before exporting to IFC.

In addition to other project and BIM deliverables, a federated model built from IFC format trade/discipline BIM/s is required at each project stage from schematic design onwards. All IFC BIM/s shall be exported from native BIM authoring tools with the custom Queensland Health BIM shared parameters mapped to the Queensland Health QH_Information custom property set. This conveniently gathers all Queensland Health BIM shared parameters on their relevant tab. Refer to Queensland Health IFC export mapping for example mapping. The mapping should also remove the QH_ prefix from all parameter names. The property sets retain the QH_ prefix.

Refer to the **attributes by grouping** tab in the **Queensland Health asset equipment lists** to identify the appropriate IFC schema entity (e.g. IfcSite, IfcBuilding, etc.) to which each parameter shall be mapped.

All IFC exports shall meet the following minimum requirements applicable to each stage:

- a) All IFCs shall be exported using the following Model View Definitions (MVD):

MVD by project stages	All other stages	As-built only
IFC 4	Reference view	Design transfer view

Table 13: IFC Model View Definition (MVD) requirements by project stage

- b) Every element must have an appropriate IFC assigned and, where applicable, a predefined type attributed.
- c) Element type data 'name' must match the 'type name' used in the project documentation.
- d) All parameters applicable to the stage milestone must be fully populated, ensuring no empty or placeholder values.
- e) The Coordinate Reference System (CRS) data must be fully populated and included in the export (refer to section 4.5 Project location and set out).
- f) All exports shall exclude redundant or irrelevant data, including unused attributes, placeholder geometry, and temporary elements.
- g) Base quantities shall be included in all exports.
- h) If provided by Queensland Health, the delivery team must use any export mapping/configuration files.

- i) In future, a more integrated approach may be taken to better align Queensland Health BIM shared parameters with the native properties of the IFC schema.

4.12 Common data environment

There is a potential misconception that the Common Data Environment (CDE) is more about technology and less about workflows. Fundamentally, workflows are developed first, and solutions are selected to support and facilitate them. It may also be misunderstood that single technology solutions dominate project information management. This is not the case; the appointing party, lead appointed parties, and appointed parties may each have their own CDE solutions that comprise the project CDE.

The CDE serves as the central digital hub where internal and external stakeholders collect, manage and share all approved project data in a secure, controlled environment.

Queensland Health can provide access to several primary CDE solutions:

- a) Aconex—used for milestone deliverables and formal project correspondence.
- b) Autodesk Construction Cloud (ACC)—used for sharing BIM/s fortnightly, including geometrical and specified alphanumeric information.
- c) dRofus (space planning platform)—used for structured and semi-structured data management about spaces, items, and assets.

These platforms support consistent, secure and efficient information exchange. Delivery teams may also use supplementary solutions for model collaboration, issue tracking, or other purposes, provided these environments and associated data are hosted in Australia.

4.12.1 Aconex

Queensland Health typically provides Aconex for use by the broader project team. The delivery team shall consult with the relevant HHS to confirm project-specific access arrangements and any standards or protocols governing the use of Aconex throughout the project lifecycle.

4.12.2 Autodesk construction cloud

Queensland Health provides an Autodesk Construction Cloud (ACC) project for sharing BIM/s fortnightly and submitting milestone BIM/s. If the delivery team operates its own ACC environment for internal Work-in-Progress (WiP) and shared collaboration, that environment must be hosted on Autodesk's Australian servers. The 'bridge' function can be used to share relevant folders and files with Queensland Health, where required.

The HIQ BIM/ digital asset lead coordinates access to Queensland Health's ACC environment. delivery team members arrange their own licences. External parties are not able to invite new users; access requests shall be directed to the HHS for approval by the Queensland Health ACC administrator.

4.12.3 dRofus

Queensland Health provides a dRofus standard project template, which is established by the HIQ project director and HIQ BIM/ digital asset lead prior to project commencement. A dRofus project database is then developed from the template for all BIM tier 1 and 2 projects. The dRofus project database hosts all spatial planning information for the project including bi-directional links with BIM throughout the project lifecycle.

Before editing permissions are given to appointed parties, a kick-off meeting must be scheduled by the HIQ project director to discuss standards, workflows and communication within the project team. Attendance of the nominated dRofus lead (lead consultant/managing contractor), the HIQ FF+E team, the HIQ ICT team, the HHS project team (clinical planning and FF+E lead) and the HIQ BIM/digital asset lead is required.

External parties are not able to invite new users; access requests shall be directed to the dRofus lead for approval by the HIQ BIM/ digital asset lead.

4.13 Common data environment workflows

Delivery teams may operate their own internal Common Data Environment (CDE) for their WiP information; however, BIM/s are to be shared securely and in a structured manner with Queensland Health’s ACC environment fortnightly during each stage, and as part of each milestone submission.

The delivery team BIM manager ensures that all WIP models transmitted to the shared folder within the CDE replace the previously issued model, ensuring model names remain consistent.

The BIM manager shall document the project’s information management workflows in the BEP, including technology and CDE workflow diagrams, information management processes aligned with AS ISO 19650-1, and security considerations and user management processes for each platform.

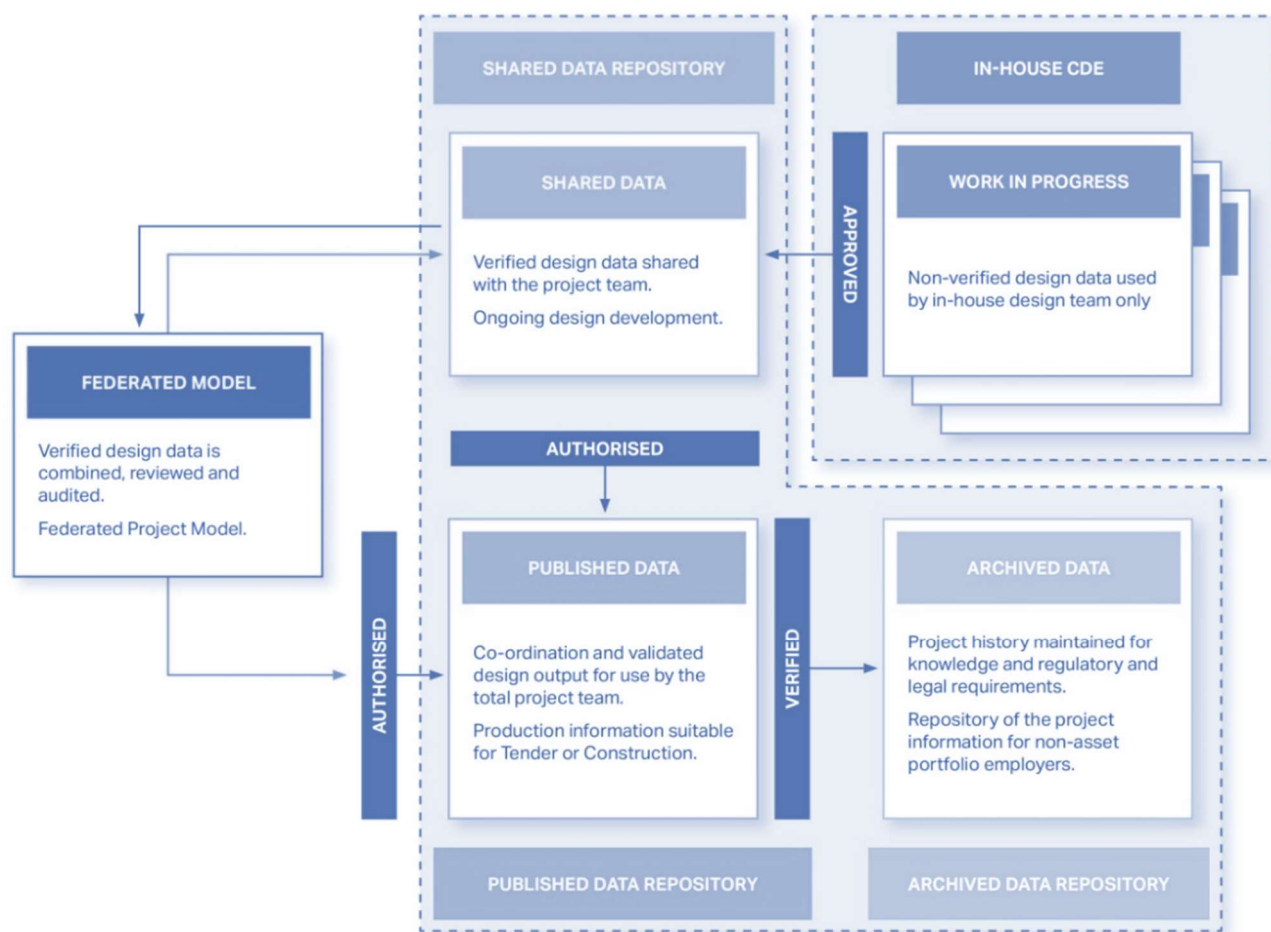


Figure 7: Typical common data environment workflow

4.14 Information requirements

Queensland Health adopts the AS ISO 19650 concept of ‘Level of information need’, which uses a framework for describing the information exchanged between the lead appointed party and the appointing party. The Level of information need identifies the amount of geometrical information, alphanumeric information, and documentation required to address a specific purpose at a specified project stage, or an agreed date or frequency.

Geometrical information must be sufficiently detailed and accurate to enable the prescribed BIM uses (e.g. coordination, production of drawings, etc.), without containing overly detailed components that would impact the operational performance of the BIM/s. Final handover BIM/s shall not exceed LOD 350 in geometrical detail unless agreed in writing with Queensland Health.

This section focuses on the alphanumerical (non-geometric) component of the 'Level of information need', specifically the structured data that must be attributed to modelled elements within the BIM/s.

These structured information requirements support key project outcomes, including design validation, procurement, commissioning and handover and are essential throughout all stages of delivery, not only at completion. By delivering the right data at the right time, the requirements support the broader Queensland Health BIM objectives described in Section 1.3 Queensland Health building information modelling objectives.

In this context, the term 'asset' refers broadly to any modelled item requiring structured information to support project delivery or ongoing operation. Asset-related information requirements are not limited to maintainable equipment and systems but reflect the full scope of data needed to meet both project and operational needs.

The requirements in this section align with Queensland Health's SAP S/4HANA asset database. While these represent the minimum expectations of HIQ, it is important to note that individual HHSs may utilise other CMMS platforms and may require additional project-specific information.

The minimum information requirements in this section form the compulsory asset information deliverables for Queensland Health. Before detailed design, the delivery team shall consult with the asset or facilities manager (HHS BEMS manager) to determine and agree on any additional asset-related information needs to support local CMMS integration. In parallel, the team must confirm how critical information will be transposed from the Project Information Model (PIM) to the Asset Information Model (AIM) before physical construction begins, ensuring alignment with handover expectations.

Collaboration with the HHS facilities manager or another nominated HHS representative is essential to ensure project-specific data requirements are captured early. This includes items such as approved manufacturers, mandatory service providers, space naming conventions and level codes.

4.14.1 Asset grouping

Assets are model elements that require tracking and maintenance throughout their operation. To clarify which modelled elements require structured asset information, Queensland Health has defined a set of asset groups for use with the BIM framework, which are used in conjunction with asset equipment lists.

These groups reflect how Queensland Health organises its assets in the BIM framework, identifying which modelled items are considered assets, what information is needed for these assets (using attribute groups—see Section 4.14 Information requirements), and supporting structured data delivery for lifecycle use and reporting.

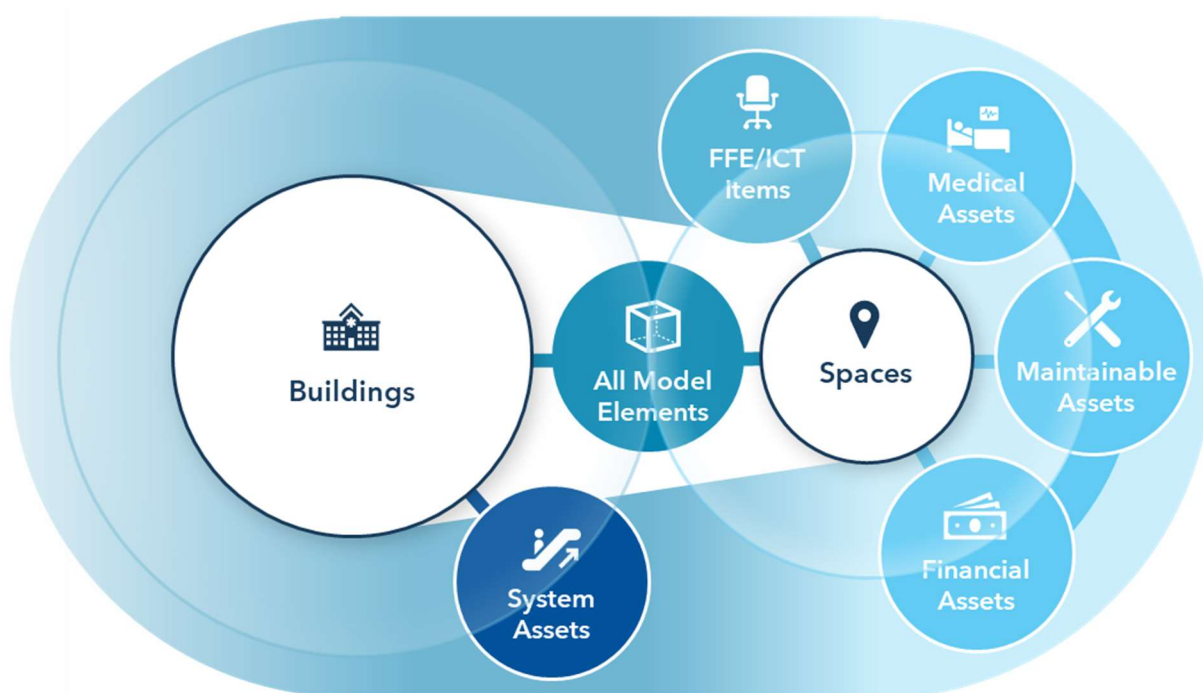


Figure 8: Queensland Health asset grouping

The asset groups are illustrated in Figure 8, with an example shown in Figure 9, and defined as follows:

- a) **Building**—represents the whole building/model only (not individual components).
- b) **Spaces**—all rooms and enclosed spaces in the project. Spaces are required wherever an asset is located and must fully encapsulate it. For example, roof-mounted solar panel PVs need to have a room bounding them.
- c) **Systems**—all systems included in the systems list tab of the Queensland Health asset equipment lists spreadsheet must be considered system assets.
- d) **All model elements**—all model elements in every BIM/s aren't treated as assets, but they do require a minimum level of attribution (see section 4.14 Information requirements). Additional attributes are required for every asset group that a model element belongs to.
- e) **FF+E/ICT Items**—all items defined in the Queensland Health Item Control Schedule, in the dRofus management plan, or included in the AusHFG standard components shall be considered FF+E/ICT. Some FF+E may also be maintainable assets, some may not.
- f) **Maintainable assets**—all items listed on the assets list tabs in the Queensland Health asset equipment lists spreadsheet shall be considered assets.
- g) **Financial assets**—a maintainable asset with a cost >\$5000 shall also be considered a financial asset. Determined in collaboration with the HHS.
- h) **Medical assets**—a maintainable asset in the Queensland Health asset equipment lists spreadsheet where QH_IsMedicalEquipment column = Y, on the assets list tab shall also be considered a medical asset; confirmed with the HHS.
Major Medical Equipment (MME) is identified by a Y in the QH_IsMME column.

Some items may belong to more than one asset group. In such cases, information applicable to all relevant asset groups must be populated. For example, a blood refrigerator is a maintainable asset, a medical asset, an FF+E/ICT item and often a financial asset; as such, data requirements for all of these groups are applicable. This is in addition to the attributes applicable to all model elements.

1	A	B	C	D	E	P
1		Additional Asset information can be revealed by clicking the '+' icon above column P	Attribute Group			
2		QH_AssetName	Asset Core Data	Asset Product Data	Asset Operational Data	QH_IsMedicalEquipment
3		ASSETS LIST				
154		AHU Coils	Y	Y	Y	
155		Condensers (Air Conditioning)	Y	Y	Y	
156		Dampers; Air Conditioning	Y			
157		Duct Heaters	Y	Y		
158		Filters; Electrostatic	Y	Y		
159		Energy Recovery Ventilator (ERV)	Y	Y		
160		Fan Coil Unit	Y	Y	Y	
161		FCU Coils	Y	Y		

Figure 9: An extract from the Queensland Health asset equipment lists, asset list sheet

All model elements require minimum attribution, as described in the following section.

4.14.2 Attributes

The alphanumeric information requirements are detailed in the Queensland Health asset equipment lists spreadsheet, specifically in the **attributes by grouping** tab (see Figure 10 for an example extract).

The tab lists all Queensland Health BIM attributes and describes how they must be applied to the BIM/s through the use of attribute groups (see 0) that work in conjunction with the asset groups. For each attribute, the following is prescribed:

- Standardised attribute names.
- Attribute grouping (described in detail in Section 4.14 Information requirements).
- Description, syntax and usage examples.
- Authoring configuration and IFC mapping.
- Authoring location and responsibility.
- Required population by project stage.
- Reference or source guidance.

In the Queensland Health asset equipment lists spreadsheet, columns have been grouped and minimised to present the important information at a glance. Use the + buttons in the top row of each sheet to expand the columns, enabling the visibility of supporting information.

All attributes must follow the Queensland Health naming convention, using the QH_ prefix to maintain consistency across disciplines and tools, improve searchability within BIM authoring environments and enable reliable mapping to open formats such as IFC (refer to Section 4.11 Industry foundation classes). Queensland Health provides preconfigured shared parameters for use in an Autodesk Revit 2024 project template, supported via the following project-specific resources:

- Queensland Health BIM Shared Parameters_v3.txt
- Queensland Health dR SPF_v3.txt
- Queensland Health Project Schedules (Revit)_2024_v3.rvt

If these are not compatible with the delivery team's BIM authoring platform, the parameters must be configured manually using the Queensland Health asset equipment lists spreadsheet, **attributes by grouping** tab, as a specification.

QH BIM Parameter	Attribute Grouping	Description	Example	Data Type	Type / Instance	Project Status Due									
	Buildings Space All Elements	FFE/IC Systems	Asset Core Data Asset Product Data Asset Operational Data			SD	DD	TN	CD	CO	AB				
(default) System Description		M		Systems only. Meaningful description of System in the model	Communication system that en	char (255)	Type								
(default) Classification.Uniclass.Ss.Number		M		Systems only. Uniclass Systems (Ss) table code - minimum of Level 3 (Section)	Se_75_50_11_57	char (18)	Type								
(default) Classification.Uniclass.Ss.Description		M		Systems only. Uniclass Systems (Ss) table title - minimum of Level 3 (Section)	Nurse call systems	char (60)	Type								
QH_IsSystem		M		Systems only. Is this a System Asset? (Includes all items on Queensland Health)	TRUE/FALSE	boolean	Type								
QH_AssetName		M	M	Assets or Systems. Item/Sub-Code Description in S4/HANA. This is the initial c	Extinguisher, Carbon Dioxide	char (40)	Type								
QH_dRofusItemName		M	M	dRofus Item Name default	Fire Extinguisher - 9kg Carbon	char (60)	Type								
QH_AssetClass		M	M	Assets or Systems. QH asset class code for S4/HANA	FFFE	char (4)	Type								
QH_ObjectType		M	M	Assets or Systems. QH object type code used in S4/HANA	2530	char (4)	Type								
QH_AssetAttributes		C	C	Assets or Systems. QH asset attribute code for S4/HANA. Conditional (populate	FPCD	char (4)	Type								
QH_MaintenancePlant		M	M	Assets or Systems. QH maintenance plant code used in S4/HANA	2105	char (4)	Instance								
QH_ServiceLife		M	M	Assets or Systems. The expected or designed service life in years	15	integer (3)	Type								
QH_IsFinancial		M	M	Assets or Systems. Is the acquisition cost for this asset over \$5K? If true, tick	TH TRUE/FALSE	boolean	Type								
QH_AcquisitionDate		C	C	Assets or Systems. Mandatory for Financial Assets only (over \$5K). Date of acq	dd/mm/yyyy	date	Instance								
QH_AcquisitionValue		C	C	Assets or Systems. Mandatory for Financial Assets only (over \$5K). Purchase	pr 4308.76	decimal (2 places)	Instance								
QH_AcquisitionCurrency		C	C	Assets or Systems. Mandatory for Financial Assets only (over \$5K). Currency	of AUD	char (3)	Type								

Figure 10: An extract from the Queensland Health asset equipment lists, attribute by grouping sheet

Mandatory parameters must always be populated. Conditional parameters must be populated where applicable (e.g. where a value exists or is relevant—refer to the description).

The **data creation** column identifies the platform where each parameter is expected to be authored:

- Model**—authored in the BIM/s (and synchronised with dRofus).
- dRofus**—authored in dRofus (and synchronised with the BIM/s).
- Autopopulated**—auto-filled in the Queensland Health BIM data uploader (section 4.15 Legislation and) via an Excel lookup.
- Either**—can be authored in either the BIM/s or dRofus and synchronised in both.

In BIM tier 3 projects, or if dRofus is not used, 'dRofus' must be replaced by 'model'.

Queensland Health recognises that during delivery, it may not be practical for project teams to store data in model environments. As such, it is up to the delivery team to determine and document in the BEP how they intend to distribute, collate, and verify required asset data.

The **populated by** column defines who is responsible for authoring each parameter. This may include discipline-specific roles or general labels such as All disciplines/trades.

4.14.3 Attribute groups

Attribute groups logically group related parameters, such as identification data, product specifications, operational information, or classifications, to streamline data delivery.

The **attributes by grouping** tab in the Queensland Health asset equipment lists identifies which parameters are required for each attribute group. These attribute groups are then applied to model elements based on their inclusion in one or more 'asset groups', as defined in Section 4.14 Information requirements.

The following sections define each attribute group (columns E-L in the **attributes by grouping** tab) and provide specific guidance for implementation. This section must be read in conjunction with the Queensland Health asset equipment lists.

4.14.3.1 Buildings

The buildings attribute group indicates all attributes that must be applied to the **building asset group**. This information is required at the whole building/model level only (e.g., once per BIM/s). This is typically populated for the file in the project information section, depending on the BIM authoring tool used.

4.14.3.2 Spaces

The spaces attribute group applies to all rooms and spaces as described in the **Rooms/spaces asset group**. Room information must be populated in the architectural BIM/s and shall be copied into all other discipline/trade BIM/s through a room to spaces workflow, inheriting the architecturally set values for the consistent use of room/space identifiers. Typically, building services spaces continue above room ceilings (e.g. top of structural slab to underside of slab above), unless separate plenum spaces are needed. In this case, the authoring party of the spaces must work with the architect to correctly identify and incorporate the spaces and identifying data into the federated model. This process shall be documented in the BEP.

4.14.3.3 All elements

This attribute group applies to all model elements in all BIM/s, regardless of whether they are classified as assets. These attributes ensure that all geometry in any model can be clearly identified, classified, and evaluated for project-wide reporting, including embodied carbon, compliance, and model validation.

The all-elements attributes apply to all modelled geometry, including architectural, structural, civil, and services elements. They form the minimum data requirement of any component placed in the model, even if not included in the asset equipment lists.

Refer to the attributes by grouping tab of the Queensland Health asset equipment list to identify which parameters in this group are Mandatory (M) or Conditional (C). The description column provides further clarification on when a conditional parameter must be applied.

Sustainability requirements

Government agencies, including Queensland Health, are increasingly encouraged to report on sustainability performance across capital works. This includes quantifying the embodied carbon from construction materials and tracking emissions.

The BIM framework must support structured data capture for elements made from concrete, steel, aluminium, or glass, using the following parameters:

- a) **QH_EmissionFactorMaterialCategory** must be populated using the [NABERS National Material Emission Factors database](#)
- b) **QH_EPDRegistrationNumber** must be sourced from the Environmental Product Declarations (EPD) list within the NABERS registry (if available).

Additionally, the version and publication date of the NABERS emission factors database and EPD list used must be documented in the BEP.

A sustainability spreadsheet incorporating this information is required at key milestones per Section 4.15 Legislation and 0.

4.14.3.4 Furniture, fixture and equipment/Information and communication technology

The attributes in the FF+E/ICT attribute group apply to all items in the **FF+E/ICT Items** asset grouping. This information is required at the element level.

While structured FF+E/ICT data is not required for handover, accurate attribution is essential for design validation, coordination, and procurement.

4.14.3.5 Systems

Systems attributes apply to all items listed in the **systems** asset grouping. This information is required at the system level only, however, each component of a system must report the name and description of the system it belongs to.

4.14.3.6 Asset core data

Asset core data attributes apply to all items in the **maintainable assets** grouping. This asset grouping includes everything on the assets list tab of the Queensland Health asset equipment lists. This information is required at the element level and is in addition to the all-elements attribution.

4.14.3.7 Asset product data

Asset product data attributes apply to certain maintainable assets, indicated by a **Y** in the **asset product data** column of the Queensland Health asset equipment lists, asset list tab. This information is required at the element level and is in addition to the all-elements and asset core data attribution.

4.14.3.8 Asset operational data

Asset operational data attributes apply to a small subset of maintainable assets where operational context (e.g. maintenance or service planning) requires additional information. These are indicated by a **Y** in the **asset operational data** column of the Queensland Health asset equipment lists, asset list tab. This information is required at the element level and is in addition to the all-elements, asset core data, and asset operational data attribution.

4.14.4 Classification

4.14.4.1 Uniclass

All model elements shall be attributed with a valid Uniclass product (Pr) code and title. This requirement applies to all individual model elements, including those that are combined to form systems. Where elements are grouped or functionally integrated into a system, that system shall also be attributed with the appropriate Uniclass system (Ss) code and title.

The Uniclass code formatting is summarised in Table 14: Uniclass code format. Unless otherwise specified in the Queensland Health asset equipment lists, all codes shall be provided to a minimum of level 3 (section), e.g. Xx_00_00_00 for all model elements in the BIM/s. Uniclass codes for assets shall be a minimum of level 4 (object) or as provided in the Queensland Health asset equipment lists.

The version and date of each Uniclass table (both Pr and Ss) used must be recorded in the BEP, and for BIM tier 1 and 2 projects, must also align with the Uniclass table version applied in the dRofus database.

Queensland Health's use of Uniclass does not exclude the future implementation of complementary classification systems, such as the Virtual Buildings Information System⁵. Further information about the implementation of Uniclass is presented in the *Queensland Health Uniclass 2015 Guidelines*.

Uniclass level	Code format
Table	Xx
Group	Xx_00
Sub-group	Xx_00_00
Section	Xx_00_00_00

⁵ <https://vbis.com.au/>

Uniclass level	Code format
Object	Xx_00_00_00_00

Table 14: Uniclass code format

If Revit is your chosen authoring tool, then it is recommended to use the Autodesk interoperability tools to apply classifications.

4.14.5 Functional location codes

Knowledge of the spatial location of all assets and FF+E is important for Queensland Health to effectively manage them. Functional Location Codes (FLOC) are unique identifiers used for this purpose across all of Queensland Health. FLOCs must be HHS approved. Consult the Queensland Health project manager for FLOCs. See Figure 11 below for an extract showing a breakdown of the FLOCs.

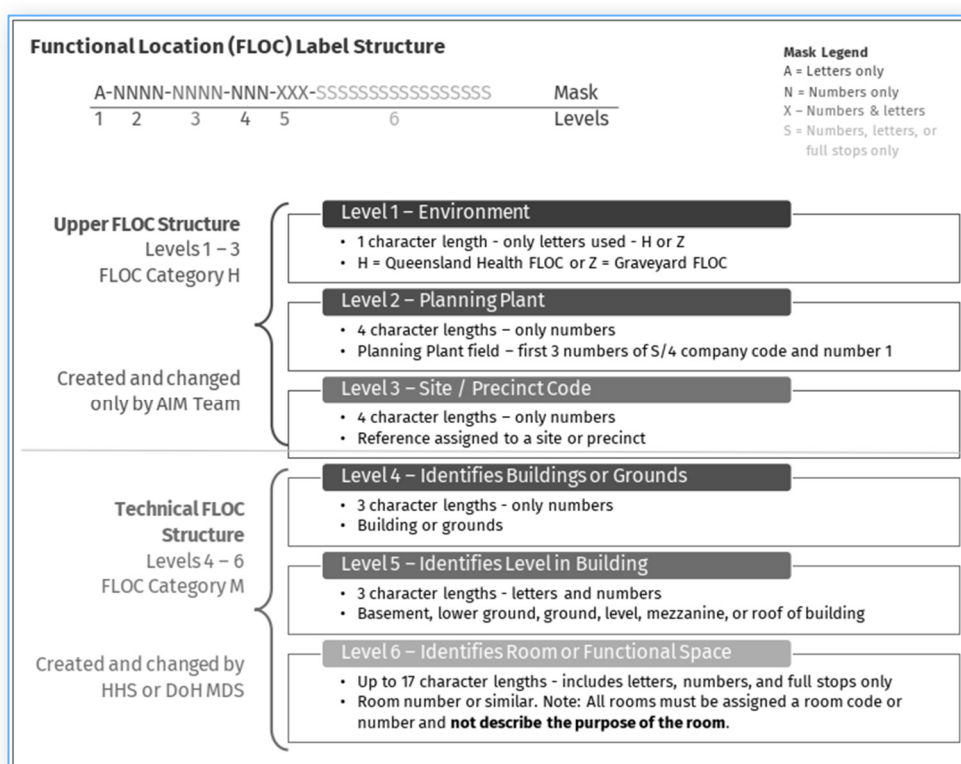


Figure 11: Functional location naming

4.14.6 Room codes

Before FLOCs are assigned to spaces/rooms, a standardised room code shall be used during design in the BIM authoring tool's default room number parameter, using the following naming convention.

Parameter	Building	Delimiter	Level	Delimiter	Room	Suffix
(default) Room number	<BXX>	<.>	<LXX>	<.>	<XXX>	<S>

Parameter	Building	Delimiter	Level	Delimiter	Room	Suffix
Example	B08	.	L05	.	101	A

Table 15: Room numbering naming convention

<BXX>: Building code, the letter , followed by two digits, numerical

<LXX>: Level code, the letter <L>, followed by two digits, numerical

<XXX>: Room code, three digits, numerical

<S>: Suffix (if applicable), one digit, alphabetical

Example: Room 101A, on Level 5, in Building 8, would have a room code of **B08.L05.101A**.

4.14.7 Queensland Health populated data

The Queensland Health project manager or delegated representative is responsible for populating specific attributes before handover to the relevant HHS or to the AMU. These fields (coloured orange and marked with QH–HHS in the grey band—similar to those shown in the image below) can be found in the **Queensland Health BIM data uploader template.xlsx**.

Room (Required Condition)	Cost Centre	CoCd
Required Condition	Cost Centre	Cost Code
Assets or Systems. Queensland Health Populated Field. Refer to CAS condition assessment documents. Rating of S1-5	Queensland Health Populated Field. QH cost centre	Queensland Health Populated Field. QH cost code
S4HANA-Create-Equipment-Data-Collection-Template	S4HANA-Create-Equipment-Data-Collection-Template	S4HANA-Create-Equipment-Data-Collection-Template
QH-HHS	QH-HHS	QH-HHS
M	M	M
QH Field only	QH Field only	QH Field only

Figure 12: Queensland Health populated data

This data is not required in BIM. The delivery team does not enter this data – Queensland Health populates it in the Queensland Health BIM data uploader template.xlsx before uploading to S/4HANA.

4.14.8 Building information modelling data uploader

All populated asset data is to be exported at each project stage from SD onwards and provided to Queensland Health in the **Queensland Health BIM data uploader template.xlsx**.

The data uploader from each discipline is to be consolidated into a single document by the delivery team BIM manager before delivery at each project stage.

This data is used to ensure suitable testing and compliance checks can be undertaken throughout project delivery and that the final handover will be fully compatible with Queensland Health’s SAP platform (software used to manage assets) and individual HHS needs.

The **Queensland Health BIM data uploader template.xlsx** has sheets structured to align with the asset grouping, with one sheet for each asset group (medical, maintainable and financial assets are combined into the assets sheet). Only the relevant parameter columns are present on each sheet, meaning all cells should be populated for each row (except for non-applicable conditional values). This makes it easier for the delivery team to export schedules from their BIM authoring tool after synchronising with dRofus or exporting directly from dRofus (for BIM tier 1 and 2 projects). This should streamline the workflow if filters and data have been correctly populated.

Figure 13: An example of the systems sheet in the BIM data uploader template

Note that in the BIM data uploader, some fields in the assets and systems sheets will be automatically populated from lookups based on other data. These fields are greyed and cannot be edited. The correct spelling of the asset entered into the QH_AssetName field is critical for accurate auto-population.

4.14.9 Sustainability spreadsheet

Queensland Health requires a simple sustainability spreadsheet to be submitted at detailed design and as-built milestones. For more information, refer to Section 4.14 Information requirements. Keep it concise, no more than **six columns** containing the following information:

Column	Field	Content
A	Element description	Free-form text identifying each relevant element (concrete/steel/aluminium/glass) e.g. Structural steel columns
B	NABERS material category	Use QH_EmissionFactorMaterialCategory value e.g. Structural steel
C	EPD Reg. number	Use QH_EPDRegistrationNumber value (if available) e.g. EPD-STEEL-456

Column	Field	Content
D	Emission factor (kg CO ₂ -e per unit)	Use the value from the EPD if provided; otherwise, use the default from the NABERS emission factors database e.g. 1.37 kg CO ₂ /kg
E	Quantity (kg or m ³)	Quantity of the material, using the same unit as the emission factors (e.g., m ³ for concrete) e.g. 5,000 kg
F	Total GHG (kg CO ₂ -e)	Emission factor (column D) × Quantity (column E) e.g. 6,850

Table 16: Sustainability spreadsheet requirements

4.14.10 Subsurface utility information

The contractor shall classify all existing and constructed subsurface utilities as per AS 5488.1:2022 classification of subsurface utility information standard. All new subsurface infrastructure requires a minimum of Quality Level A (QL-A), with existing subsurface utilities meeting a minimum of Quality Level B (QL-B), unless approved otherwise by Queensland Health.

The relevant AS 5488 attributes shall be applied, including asset type, asset sub type, asset owner, size, material, absolute spatial position, and quality level at a minimum (refer to AS5488 for selection lists). These are separate from the specified alphanumeric information but must be captured for both existing and new subsurface utilities located in the works.

4.15 Legislation and supporting documents

Several sources of information will need to be provided by Queensland Health, so delivery teams have the data required to successfully deliver BIM. This includes documents, such as the:

- Financial and Performance Management Standard 2019
- Capital Infrastructure project delivery policy (QH-POL-374:2023)
- Design and documentation stage standard (QH-IMP-374-4:2023)
- Capital infrastructure programs and projects policy
- Digital enablement for Queensland infrastructure policy
- Queensland Governments Digital Enablement for Queensland Infrastructure - Principles for BIM Implementation (2018)
- Queensland Health Capital Infrastructure Requirements
- Queensland Health dRofus Management Plan (and template).

4.15.1 Resources and templates

- Design BIM Execution Plan (BEP) Template
- Construction BIM Execution Plan (BEP) Template
- HIQ dRofus Management Plan template
- Queensland Health Uniclass 2015 Guidelines

- Queensland Health Asset Equipment Lists
- Queensland Health BIM Shared Parameters
- Queensland Health Project Schedules (Revit)
- Queensland Health IFC Export Mapping tool
- Queensland Health BIM metrics for projects.xlsx
- Queensland Health BIM Data Uploader Template.xlsx
- Queensland Health Sustainability Spreadsheet.xlsx
- Australasian Health Facility Guidelines.

Other data, such as building level naming and codes for FLOC needs are to be provided by the HHS through the Project Director.

If this information isn't forthcoming please contact: HIQDesignInnovationandAssurance@health.qld.gov.au

5 Approval and implementation

Guideline custodian	Guideline contact details	Approval date	Approver
Senior Director, Design, Innovation and Assurance, Health Infrastructure Queensland	HIQDesignInnovationandAssurance@health.qld.gov.au	03 June 2026	Deputy Director-General, Health Infrastructure Queensland

Version control

Edition	Author	Version description	Release date	Approved for release by
1.0	Capital and Asset Services branch	First public release	July 2019	Deputy Director-General, Corporate Services division
2.0	Health Capital division	Asset information requirements updated	October 2022	Deputy Director-General, Health Capital Division
3.0	Health Infrastructure Queensland	Asset information requirements and implementation of software platforms updated	June 2026	Deputy Director-General, Health Infrastructure Queensland