

BUILDING INFORMATION MODELLING REQUIREMENTS (G168)

The Building Projects (BP) division in the Department for Infrastructure and Transport (DIT) has implemented the application of Building Information Modelling (BIM) for nominated projects outlined in the DIT Building Information Management Implementation Process (P042).

This document outlines the updated BP BIM project requirements for alignment to the concepts and principles described in *AS ISO 19650.1 Organization and digitization of information about buildings and civil engineering works, including building information modelling (BIM) — Information management using building information modelling*.

The BIM requirements noted in this document include core and project specific BIM requirements for BP capital works projects, based on the National Specification System of Australia [NATSPEC BIM - NATSPEC National BIM Guide](#) (NBG) aligned to AS ISO 19650.1 and 2.

The BIM Requirements will be referenced and included as an appendix to the DIT BP Exchange Information Requirements (EIR) and Core BIM Briefs included in the tender documents for both Lead Professional Service Contractors (LPSC) and Construction Contractors.

The terms, definitions and acronyms included in this document are based on NATSPEC National BIM Guide - Appendix A Glossary.

GENERAL BIM INFORMATION MODELLING REQUIREMENTS

1. Building Information Model

The BIM Model shall contain all geometry and physical characteristics necessary to define the design and construction works. All drawings, schedules and data required for assessment, review, tendering and construction shall be extractions from the project 3D BIM model.

Model geometry shall comply with the requirements of the current edition of the BIM Forum – Level of Development (LOD) Specification for the applicable LOD.

The BIM model shall include a full description of each element as part of the relevant specification and schedules including any data to be exported from the BIM Model.

2. Lead Professional Service Contractor Requirements

The LPSC shall follow the requirements detailed in this document for all 3D BIM related services.

The LPSC shall use BIM authoring software or discipline specialty 3D software. Models shall be created that include all geometry and physical characteristics needed to describe the design and construction works.

Software shall be capable of interfacing with all Discipline Professional Service Contractors (DPSC) BIM authored software.

In all cases, all geometric elements withing the 3D BIM model are to be modelled to a level that allows the team to accurately verify clearances, analyse conflicts/clashes and properly coordinate the work with all other aspects of the project to the accuracy specified in the BIM Forum - LOD Specification (current edition) relevant to the stage of the project.

3. Discipline Professional Service Contractor Requirements

Mechanical, electrical, hydraulic, fire protection and civil engineers (and other specialist consultants as required by the project) shall use BIM authoring software or discipline specialty 3D software. Models shall be created that include all geometry and physical characteristics needed to describe the design and construction works.

Software shall be capable of interfacing with all DPSC BIM authored software.

In all cases, all geometric elements withing the 3D BIM model are to be modelled to a level that allows the team to accurately verify clearances, analyse conflicts/clashes and properly coordinate the work with all other aspects of the project to the accuracy specified in the BIM Forum - LOD Specification (current edition) relevant to the stage of the project.

4. BIM Authoring Software

Building Projects support Open BIM and will consider other IFC compliant software products subject to their capabilities, features and benefits to the State.

BIM software applications may be used for collaboration, clash detection, analysis, specialty design, and other project needs subject to approval by Building Projects.

5. Common Data Environment (CDE) Collaboration Tools and IFC compliance

The LPSC is encouraged to use electronic project collaboration tools such as document management and file sharing sites, reviewing tools, project communication websites, web meetings, and video conferencing.

BIM Data to be supplemented with IFC2x3 or IFC4 and later versions as certified by BuildingSmart alliance [Industry Foundation Classes \(IFC\) - buildingSMART International](#) and deliver information in support of ISO19650 and the application of OpenBIM standards.

6. Model Design Quality

The LPSC shall establish and use in-house modelling quality control guidelines and exchange protocols in accordance with AS ISO 19650.2 Organization and digitization of information about buildings and civil engineering works, including building information modelling (BIM) - Information management using building information modelling, Part 2: Delivery phase of the assets and include them in the BEP.

This may include but is not limited to:

- Use of element and component objects.
- Maintenance of parametric linkages within the model at all times.
- All 2D Deliverables such as 2D details should be derived from, relate to, and be fully coordinated with the 3D model. Do not modify 2D deliverables which may contradict or conflict with the base 3D model set out or dimensions.
- All other documents should be submitted in compliance with contract requirements.
- Extraction of all drawing views from the BIM model (disconnected 2D files should not be used).
- Use of correct object definitions for modelling “generic” objects should not be used - it may look right but will not be right for scheduling, analysis, or interoperability with other software). Where ‘generic’ model category families are used they should be clearly noted and represent the design intent, satisfy the relevant Level of Model Development (LOD) and associated Information data to enable seamless transition to specific objects and ensure relevant data transfer.
- Practice of efficient and accurate modelling: i.e., eliminate object overlap, correctly close wall intersections etc. - the model needs to both look right and be right.
- Use of industry accepted, DIT or Lead Agency defined standards (i.e., AusHFGs for SA Health) for objects and spaces.
- Use of appropriate and interoperable viewing, checking and output file formats.
- Use of appropriate model checking tools to confirm the validity and accuracy of files and adherence to modelling standards before submission.
- Use of appropriate open standards and IFC compliant software.
- Where intelligent objects are not available, items to be modelled as a “generic object conforming closely in length, width, height, specified data and accurately located.

7. Objectives and Application

7.1 Design Phase (Part 1 Concept)

The LPSC may use any method to begin the design process using a BIM authored or 3D model(s) by the completion of the concept design phase. All information needed to describe the concept design shall be graphically or numerically included in and derived from these models.

The LPSC is encouraged to use analysis tools, static images and interactive 3D walkthroughs and flyovers (photorealistic quality) to describe the design concepts and in response to the ‘Principles of Good Design’ issued by the Office for Design + Architecture.

The LOD as detailed in the BIM Forum LOD specification describing the level of completeness to which a model element is developed with associated content requirements for this phase of the BIM model is as follows:

- LOD 100: The model element may be graphically represented in the model with a symbol or other generic representation but does not satisfy the requirements for LOD 200. Information related to the model element (i.e., cost per square meter, tonnage of HVAC, etc.) can be derived from other model elements.
- LOD 200: The model element is graphically represented within the model as a generic system, object, or assembly with approximate quantities, size, shape, location, and orientation. Non-graphic information may also be attached to the model element

Design Phase 3D Models to be developed to include.

- Overall building massing indicative of area, height, volume, location, and orientation to be modelled in 3D or represented by other object data.
- Modelled elements to enable suitable 'walk through' required to represent the design solution effectively and in some detail to the major stakeholders.
- Base 3D Model (Revit rvt, IFC) if developed, approved BEP and current BIM status report to be submitted as an appendix as part of the Concept Design review.
- If a 3D model is to be submitted as part of the Planning Submission refer to clause 13.16 *3D Adelaide Digital Model* for details of requirements for Metropolitan Adelaide.

7.2 Design Development Phase (Part 2A Design Development)

The LPSC shall develop a BIM model during the design development phase. Parametric links shall be maintained within the models to enable automatic generation of all plans, sections, elevations, custom details and schedules as well as 3D views.

The LOD describing the level of completeness to which a model element is developed with associated content requirements for this phase of the BIM model is as follows:

- LOD 200+: The model element is graphically represented within the model as a generic system, object, or assembly with approximate quantities, size, shape, location, and orientation. Non-graphic information may also be attached to the model element with approximate Model Geometry: model elements are modelled as generalised assemblies accurate in terms of quality, size, shape, location, and orientation.

It is anticipated that the design will be fully development with all major design decisions resolved and all building components described by the federated 3D Models at the completion of the Design Development 2A Phase.

7.3 Documentation Phase (Part 2B Documentation)

The LPSC shall continue development of their BIM model created in the design development phase.

The LOD describing the level of completeness to which a model element is developed with associated content requirements for this phase of the BIM model is as follows:

- LOD 300 Accurate Geometry: The quantity, size, shape, location, and orientation of the element as designed can be measured directly from the model without referring to non-modelled information such as notes or dimension callouts. The project origin is defined, and the element is located accurately with respect to the project origin.
- LOD 350 Accurate Geometry: (for Seismic IL3 and 4) Parts necessary for coordination of the element with nearby or attached elements are modelled. These parts will include such items as supports and connections required for Seismic IL4 assessment requirements for non-structural components (e.g., suspended ceilings) as required by the EIR requirements.
- Refer to DIT Seismic Suspended Ceilings Guide Note (G173) for drawings and documentation requirements.

At the completion of the 100% Documentation Phase the BIM federated 3D models shall contain all information needed to describe all the detailed documentation requirements and include the following;

- All grid and level notations and dimensions
- All modelled elements categorised by their component function with no 'generic' properties.
- Include all building levels, room/space and location referenced correctly across all models.
- Compound element layers with exact thickness (>5mm) and materials (walls, floors, ceilings roofs wall protections, insulation etc).
- Clearance zones for accessibility and paths for DDA compliance, access panels and maintenance access paths to all serviceable equipment in accordance with DIT guidenote Access for Maintenance – Plant and Equipment Located within Buildings and Structures (G189) and for any vehicle access and parking through any enclosed /covered space
- All general circulation and where the installation and maintenance of fixture and equipment have been located in a confined space. (i.e. sub floor, plenums etc). All confined spaces are to be clearly identified on the architectural models.
- Support for non-structural components (i.e. façade sun shading, screens, bulkheads, bracing etc.) to be modelled by the respective disciplines and coordinated in a federated model.
- Penetrations in structural or performance rated elements (fire, thermal, acoustic) greater than 100mm dia / width / length.
- Annotations will be reference tags, dimensions, and other element hosted labels and text used only where more detailed descriptions are required.
- All schedules will be derived from elements and their properties in the model, except where not possible due to parametric modelling constraints.
- All drawings will be derived from the elements and their properties from the model with limited use of import information. For detailed plan and section details (<1:20 drawing scale) 2D drawing overlay can be used to provide more detail but must be referenced to the overall modelled elements and grid set outs.

7.4 Construction Phase (Part 3 Construction)

The LPSC shall continue to update the BIM model with additional information from the Contractor as part of a Project Information Model (PIM).

The LOD describing the level of completeness to which a model element is developed with associated content requirements for this phase of the BIM model is as follows:

- LOD 300-350 Accurate Geometry: Parts necessary for coordination of the element with nearby or attached elements are modelled. These parts will include such items as supports and connections. The quantity, size, shape, location, and orientation of the element as designed can be measured directly from the model without referring to non-modelled information such as notes or dimension callouts.

The Construction Contractor shall further develop and manage the construction PIM to contain all required record and completion Documents collated during the Construction Phase:

- Shop Drawings from Subcontractors/ Fabricators (i.e. curtain walling, windows/doors building services etc.) based on the 3D federated models (IFC) into an approved BIM fabrication authoring tool for use as a reference to further develop shop drawings. Shop drawings to confirm onsite measurements and include all associate building tolerance and requirements for all fixtures and fittings.
- As-Built documents and other record documents to form the PIM to be submitted for review as part of the record documents as required by the DIT Completion Documents

8. Requirements for BIM 3D Modelling

The following BIM modelling requirements apply to all BIM 3D modelling and represent the core BIM requirements and current best practice in the creation of BIM 3D Models for each of the following disciplines.

8.1 Architectural

Model the following architectural elements to a level that defines the design intent and accurately represents the detailed design solution:

- Architectural base 3D BIM model to the relevant LOD as required by the BIM Forum LOD Specification latest current published version including all building elements such as internal walls, ceilings, doors, and windows inclusive of fire compartments (to be determined and provided by fire safety engineers) such as fire doors and walls.
- All dimensions to be derived from the base model for a complete full-dimensioned documentation set including all set out points and critical dimensions required for construction.
- Architectural site plan (also see section 8.7 Civil Engineering below).
- General paving and associated landscaped areas and other external elements typically included on site drawings to show the scope of site works.
- Existing conditions to the extent required to define the scope of the new works.
- Interior and exterior soffits, overhangs, and sun control elements.
- Floor, ceiling, and roof systems including appropriate structural and non-structural items listed below if not provided by the structural engineer and integrated into the architectural model for coordination and document generation as noted for some structural elements up to LOD100 in the BIM Forum LOD Specification latest version.
- Control and movement joints for exterior walls, parapets, facades, and curtain walls and interior walls, lining, partitions, ceilings, bulkheads, and soffits.
- Suspended ceiling systems, floor tiles and other horizontal elements 50mm or thicker (may be part of a composite element or assembly).
- Roof, floor, and ceiling slopes, if needed, should be modelled.
- Lift core, stairs, ramps including handrail and balustrades.
- Built-in joinery, shelving, and other fixed interior architectural elements.
- Built in furniture and equipment (i.e. workstations, fixed benches, and fixtures) included in the scope of the project and required to be integrated into the architectural model for coordination and document generation.
- Any required clearance zones for egress paths, DDA access, door swings, service space requirements and other operational clearances for equipment to be modelled and checked for conflicts with other elements.
- The 3D architectural BIM model and data to be utilized for third party software modelling and simulation (thermal simulation, energy calculations, natural and artificial lighting calculations, acoustic simulations etc.) to be incorporated into model elements for performance verification.

8.2 Structural Engineering

Model the following structural elements:

- Structural engineering base 3D steel framing model of both existing and new structural framing including secondary sub framing to support ceilings, bulkheads door and window openings.

- Foundations such as concrete slabs (including any rebates), footings and piers inclusive of approximate modelling to meet LOD 200 requirements.
- Framing such as steel columns, floor joists and steel beams (with correct shape size and fixings).
- Precast concrete elements (hollow core precast may be modelled as a slab)
- Suspended floors need to be modelled to show overall thickness of floor systems (individual framing members need not be modelled)
- Timber trusses (include webs for visual purposes)
- Load bearing walls (masonry, concrete, cold-formed steel, wood)
- Overall thickness of lightweight steel and timber stud walls.

8.3 Mechanical Systems

Model the following mechanical services:

- Mechanical services base 3D model including all mechanical equipment, fans, compressors, pipes, thermostats, and control sensors.
- Duct distribution system including supply, return, exhaust, relief, and outside air ductwork modelled to outside face dimension or duct insulation (whichever is greater).
- Diffusers, grilles, louvers, hoods, radiant panels, perimeter units, wall units.
- Pipes sized at and over 50mm outside diameter, include any insulation in model.
- Other operational clearance must be modelled as part of the Heating, Ventilation and Air-Conditioning (HVAC) equipment and checked for conflicts with other elements. Including all ceiling, wall and other access hatches required for maintenance of the air conditioning system.
- Dust extraction, electronic paint, and welding bay exhaust systems to technology workshop areas.

8.4 Electrical and Communications

Model the following electrical elements:

- Electrical and Communications services base 3D model including all electrical equipment, lights, power, data and telephone points and conduit trays.
- Transformers (external and internal) and other equipment relating to power supply.
- Main and distribution panels and switchgear including access clearances.
- Outlets, switches, junction boxes to be modelled to the extent only required for showing location.
- Clearance zones for access, service space requirements and other operational clearances must be modelled and checked for conflicts with other elements.
- Lighting to include all fixed internal and external lighting. Any data utilized in lighting simulation and modelling to be incorporated into model elements for performance verification.
- Coordinated power, data, communications connection points for other discipline services items.
- Any other electrical equipment required for conflict checking.

8.5 Hydraulic and Fire Protection

Model the following plumbing and fire protection elements:

- Hydraulic and fire services base 3D model including all hydraulic and fire equipment, sanitary fixtures, pipework, vents, fire equipment (sprinklers and hydrants), waste and vent pipes.

- Active fire protection systems including fire/ fire compartments, fire doors and walls, Hydraulic and Fire Protection smoke detectors and alarms.
- Piping sized at and over 30mm outside diameter, including any insulation.
- Roof and floor drains, sumps, grease arrestors, tanks, water treatments and other major items.
- Sanitary fixtures to include taps, sinks, toilet fixtures, water tanks, floor sinks.
- Coordinated water service and waste connection points for other discipline services items.
- Fire protection sprinkler lines, sprinkler heads, standpipes, hydrants, fire department connections, risers including valve clearances.
- Clearance zones for access, service space requirements, valve clearances and other operational clearances must be modelled as part of the plumbing and fire protection system and checked for conflicts with other elements.
- Data to be utilized for third party software modelling and simulation (energy calculations, acoustic simulations etc.) to be incorporated into model elements for performance verification.

8.6 Specialist Equipment

Model the following specialty consultant elements to correct size and location:

- Equipment provided or specified by specialist consultants (i.e., Vertical Transport)
- Connection points for power, data, communications, water service and waste, gas, steam, or other needed utilities.
- Extent of specialist consultant modelling shall be coordinated with the LPSC.
- Clearance zones for access, doors swings, service space requirements, controls and other operational clearance must be modelled as part of the equipment and checked for conflicts with other elements.

8.7 Civil Engineering

Model the following civil engineering elements:

- Civil engineering base 3D topographical model including all paved areas, retaining walls, stairs, and ramps.
- Landscaping elements are only required to be modelled to the extent required in the site works plan to show area of planting raised beds, parking islands, pools / ponds / other water features, terraces and other items not included elsewhere in the model.
- Stormwater management structures, pump stations, manholes and other major items that impact on the overall project understanding or which may become project design constraints. The model should include the site and surrounding areas that contribute to the site's draining system and any adjacent roadways.
- All items must be geo-referenced such that all elements can be viewed as an overlay in the BIM model on a Geographic Information System (GIS) correctly always positioned in the correct location.

8.8 Existing Conditions

The LPSCs shall model all existing conditions including topography (including geotechnical conditions) buildings, structures and utilities to provide a basis for the design of new work on site and include of all areas affected by the proposed new and refurbishment works. The extent of modelling beyond the affected areas and the information required will be determined based on project needs.

Existing building and services alignments and tolerances shall be verified with onsite measurement tools such as laser scanning to provide an accurate model of the existing building conditions.

8.9 Project Brief and Space Validation (Lead Agency Data Requirements Guidelines, Room Data sheets, Schedules of Accommodation)

The LPSC shall use the BIM authoring software (i.e. dRofus or other approved by DIT) for detailed Schedules of Accommodation, identifying all rooms proposed for the project including the area, number of and function of each room. The following shall be developed from the BIM model:

- Gross floor area and room area measured to the inside face of wall objects to Australasian Health Facility Guidelines (AusHFG).
- Room data information including net areas, material types and finishes and all fixtures, fittings and built ins.
- Lead Agencies may have additional data requirements such as SA Health “Completion Documents and Data Requirements” as identified in the Project Brief including:
 - Lead Agency Data Requirements Guidelines (Guidelines for SA Health Project Completion Requirements Final).
 - Project Completion Data Entry Template (PROJECT COMPLETION FORM (projectname)_blank Final.xlsm); and
 - User Manual for Data Entry Template (PC Data Entry Spreadsheet User Guide.pdf).

8.10 Clash Detection and Conflict Coordination

The LPSC is to use conflict checking (clash detection) software for the design development and documentation phase of the work in accordance with DIT Building Projects EIR document. The LPSC is to provide evidence and verify that all conflicts and clashes within the BIM 3D Models and associated schedules have been fully resolved and included as part of the written BIM report for 90% Documentation review at the completion of the Documentation Phase.

The objective of the clash resolution process is to produce a federated 3D BIM model with all outstanding clashes and coordination action issues resolved and completed at the completion of each project stage.

8.11 Energy Modelling and Analysis

The LPSCs are to use the BIM data and CDE for all relevant energy modelling information as a verification tool for the energy modelling and simulation software rather than manually creating the data separate to the BIM.

Building elements and building services need to be appropriately modelled as required for Energy simulation software to be used to analyse and model the thermal performance of building envelopes and HVAC systems, to verify their conformance with building energy standards and optimise them to reduce life cycle costs. Spaces, building elements and building services need to be appropriately modelled for this purpose.

8.12 Topographic and Property Line Surveying

Surveys shall be provided in electronic format and minimally include 3D topographic information including paving and retaining walls. The file(s) shall be in a format that allows for importing into the LPSC's BIM authoring software.

8.13 Acoustic Modelling

The LPSC is to supply the base 3D BIM model (rvt file) for use in acoustic performance analysis to verify the Design Standard for acoustic requirements and reverberation performance.

The CDE is expected to host all relevant acoustic data (internal noise sources, element reverberation, and element insulation) for acoustic modelling purposes for verification purposes including any third-party acoustic modelling and simulation which is undertaken for the project.

8.14 Planning/ Area Massing Modelling

For any feasibility and planning studies Massing Modelling shall indicate site capacity, general orientation, access points, and 3D functional relationships as part of preliminary investigations and planning.

8.15 Analysis and Checking Tools

The LPSC is encouraged to analyse the design using software that interacts with the model in order to refine daylighting, natural ventilation, acoustic separation, code issues and design issues.

The LPSC is encouraged to use quantity take-off features of the BIM and 3D tools coupled with unit costs to assist in construction cost control. The 3D BIM model to be provided in the required format and coding to enable use by the cost consultant estimating software.

When cost estimation is selected as a BIM use for the project, the appointed QS or pre-construction estimator should provide an input to the BEP to enable models to be developed in accordance with the requirements of the QS/estimator software requirements.

Unit rates and pricing from suppliers during schematic design development and documentation phase for specific elements (services etc.) are to be included in element data for ease of construction cost calculation.

8.16 3D Adelaide Digital Model and Planning Review Submissions

The LPSC may be required to submit a 3D digital model of the proposed building works to DIT to assist in the Design Review process at the development application stage for government projects within the Adelaide Metropolitan area.

Refer to New 3D Digital Model for Adelaide- Plan SA for modelling specification and requirements as outlined in the DIT Advisory Note- 3D Adelaide Digital Model Submissions SA Planning Portal.

8.17 Asset Management Requirements

In addition to the above BIM requirements there are also specific asset management requirements outlined in DIT Project Completion, Lead Agency Completion Documents and Across Government Facilities Management Agreements (AGFMA) information documents for the project completion phase.

9. Additional Project Specific BIM Requirements

In addition to the core BIM requirements outlined above, additional BIM requirements are required to be included in the BIM model when undertaking major large scale and complex projects which have additional project specific requirements.

The Project EIR will identify these additional project specific BIM applications to be included in the BIM Application Project Specific BIM Uses Table with reference to DIT BIM Requirements stated in this documents and the NATSPEC National BIM Guide, (NBG) and Appendix C- *BIM use & enabler descriptions* [NBG2022 Appendix C](#) describing these requirements in more detail.

CONTRACT REQUIREMENTS

10. BIM Project Reviews

The Department of Infrastructure and Transport (DIT) Building Projects directorate has a Project Review process for all major government building construction projects as outlined in Building Projects - Project Review (G29) available from BPIMS.

BIM Project Reviews are required to be included as part of the project review process as evidence of the completion of each project BIM deliverable at the completion of the following PIP phases in accordance with DIT project specific EIR document for each project over \$5M:

- Concept Design - (Part 1 Documentation phase – Concept Design)
- Design Development - (Part 2A Documentation phase – at 60% completion)
- Documentation - (Part 2B Documentation phase – at 90% completion)

11. Tender Documentation

The LPSC shall continue development of the BIM or 3D model(s) created in the design development phase. Parametric links are to be maintained within the respective models to enable automatic generation of all plans, sections, elevations, custom details, schedules and 3D views. All information needed to describe the implementation (construction) documents shall be graphically or alphanumerically included in and derived from these models only. Specifications are not required to be linked in the BIM.

With submittal of final documentation, the LPSC shall submit the final model(s) in native application's format and validated IFC. Any future changes to, or extractions from, the model(s) will be the responsibility of the party making the changes.

The LPSC shall make all submittals in accordance with the BEP.

All contract drawings to still comply with the guidenote Electronic Documentation Requirements (G65).

BIM Model Templates

DIT 3D model drawing sheets and templates must be used for all contract drawings. Download from [Buildings - Asset and Contract Documents - Department for Infrastructure and Transport - South Australia \(dit.sa.gov.au\)](https://www.dit.sa.gov.au/Buildings-Asset-and-Contract-Documents-Department-for-Infrastructure-and-Transport-South-Australia)

The preferred size of documents is A1 (B1, A2, A3, and A4 are also acceptable to suit project).

BIM Model Registration

3D BIM models are to include all contract drawings, which must be registered with Plan Services before tender submission. A DIT Drawing Number will be supplied and must be entered in the title block. The Plan Officer must be informed of any changes to DIT Drawing Numbers or Drawing Title after initial registration. Extra drawing numbers can be supplied on request, please inform the Plan Officer of numbers not used.

Save as

Ensure that the file is saved with the contract number as the file name (i.e. 2889-A-2024. and include discipline codes as stated in G65.

Tender Submission

Revit (.rvt) and IFC files are required on USB or other approved electronic document formats by DIT and include all registered drawings that form part of the contract documents.

Contract documentation requirements for tender will still require .dwg and .pdf files of all contract documents to be issued and should be derived from and match the sheet list included in the 3D BIM model.

Tender Phase

The LPSC shall update the 3D BIM model with all addenda, accepted alternates and/or value enhancement proposals.

12. Construction Phase

12.1 Record Documents

The LPSC and DPSCs shall update their respective 3D BIM model(s) into a 'federated 3D Model and include any project recorded changes, relevant instructions, changes and RFI responses during the construction phase based upon information provided by the Contractor /Managing Contractor.

The Contractor / Managing Contractor (C / MC) shall commutatively comply the record documents and maintain the full Project Information Model and all data and information required by DIT Project Completion Documents (G178), Completion Requirements for Building projects (G182) and Lead Agency Completion Requirements.

The Contractor / Managing Contractor is responsible for the management of the record documents and Project Information Model (PIM).

12.2 Practical Completion

In accordance with Building Projects Completion Requirements for Building Projects (G182) 14 days prior to the Date of Practical Completion (or the equivalent) of the construction contract (or separable portions), the LPSCs shall review the Contractor supplied Project Information BIM Model (rvt and IFC compliant file per discipline) including all rvt, pdf, dwg and files and associated data as part of the Completion Documents.

Following the LPSC's review of the full completion documents the Contractor is to include any required amendments or updates and issue to Lead Agency and Building Projects for final review.

12.3 Contract Completion and Handover

Upon final review by Lead Agency and DIT, the Contractor is to supply to the DIT Project Review Officer: dwg, rvt (if used) and pdf files of all Record Drawings for architectural, civil, structural and building services engineering disciplines. A full "federated" BIM model (PIM), with all reference drawings, is to be submitted in original authored software, IFC compliant and .rvt files as an Asset Information Model (AIM).

Reference Documents

The following related documents are available for download from the Building Project Information website

- DIT Exchange Information Requirements (EIR) (231)
- DIT Building Information Modelling-Core Brief (232)
- Completion Requirements for Building Projects (G182)
- Electronic Documents Requirements (G65)
- Project Review (G29)

National BIM Guide Documents are available from the NATSPEC Building Information Modelling Portal at [NATSPEC BIM - NATSPEC National BIM Guide](#)

Contact

For further information contact:

SUPERVISING ARCHITECT

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REVISION	CHANGE DESCRIPTION	DATE	PREPARED	REVIEWED	APPROVED
A v1	Draft for Review	30/07/2023	Ralph Hems		
B v2	Update to DIT Guidenote Template	09/11/2025	Ralph Hems		
C v3	Final Review	07/07/2026	Ralph Hems	CH/SR	