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BUILDING AND CONSTRUCTION PRODUCTIVITY PARTNERSHIP
building value

# Appendix B- NZCIC PHASES WITH BIM USES AND TASKS

The following sets out the core BIM activities aligned to the New Zealand Construction Industry Council (NZCIC) Design and Documentation Guidelines and should be read in conjunction with them. The requirements described here for each phase are those required on a BIM-based project in addition to those set out in the guidelines.

| **OVERALL PHASES** | **PRE DESIGN** | **DESIGN** | | | | **CONSTRUCT** | **OPERATE** |
|---|---|---|---|---|---|---|---|
| **CIC DESIGN PHASES** | | **CONCEPT DESIGN** | **PRELIMINARY DESIGN** | **DEVELOPED DESIGN** | **DETAILED DESIGN** | **CONSTRUCTION DESIGN** | |
| **BIM USES** | | | | | | | |
| Existing Conditions Modelling | | | | | | | |
| Cost Estimation | | | | | | | |
| Phase Planning (4D Modelling) | | | | | | | |
| Spatial Programming | | | | | | | |
| Site Analysis | | | | | | | |
| Design Reviews | | | | | | | |
| Design Authoring | | | | | | | |
| Engineering Analysis | | | | | | | |
| Sustainability (Green Star /NABERS) Evaluation | | | | | | | |
| Code Validation | | | | | | | |
| 3D Coordination | | | | | | | |
| Site Utilisation Planning | | | | | | | |
| Construction System Design | | | | | | | |
| Digital Fabrication | | | | | | | |
| 3D Control and Planning | | | | | | | |
| Record Modelling | | | | | | | |
| Asset Management | | | | | | | |
| Building (Preventative) Maintenance Scheduling | | | | | | | |
| Building System Analysis | | | | | | | |
| Space Management and Tracking | | | | | | | |
| Disaster Planning | | | | | | | |
| **BIM DELIVERABLES** | | • BIM kick-off meeting.<br>• Initial model sharing with design team for strategic analysis and options appraisal.<br>• Identify key model elements (e.g, prefabricated components) and create concept level parametric objects for all primary elements.<br>• Enable design team access to BIM data.<br>• Depending on Project BIM Brief: BIM data used for environmental performance and area analysis. | • Create preliminary level parametric objects for all secondary model elements.<br>• Agree extent of performance specified (D&C) work.<br>• Depending on Project BIM Brief: BIM data used for environmental performance and area analysis. | • Data sharing for design coordination, technical analysis and addition of specification data, including data links between models.<br>• Integration/ development of generic/bespoke design components.<br>• Depending on Project BIM Brief: BIM data used for environmental performance and area analysis.<br>• Depending on Project BIM Brief: 4D and/or 5D assessment. | • Data sharing for design coordination, technical analysis and addition of specification data, including data links between models.<br>• Integration/ development of generic/bespoke design components.<br>• Depending on Project BIM Brief: BIM data used for environmental performance and area analysis.<br>• Depending on Project BIM Brief: 4D and/or 5D assessment.<br>• Enable access to model by tenderers. | • Depending on Project BIM Brief: export data for building control analysis.<br>• Data sharing for conclusion of design coordination and detailed analysis with subcontractors.<br>• Detailed modelling, integration and analysis.<br>• Create production level parametric objects for all major elements (where appropriate information exists, this may be based on tier 2 suppliers' information).<br>• Link specification to the model.<br>• Final review and sign-off of model.<br>• Enable access to model by specialist subcontractors and/ or specialists.<br>• Integration of subcontractor performance specified (D&C) work model information into BIM data.<br>• Depending on Project BIM Brief: review construction sequencing (4D) with contractor.<br>• Depending on Project BIM Brief: site plant and equipment incorporated in model.<br>• All Facilities Management information including commissioning reports, operation and maintenance manuals, warranties, product data, and contact details for manufacturers, suppliers and contractors. | |

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