

# **NATSPEC BIM Reference Schedule**

# NATSPEC BIM REFERENCE SCHEDULE

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### 1.1 Acceptable References

The following standards are acceptable references that can be substituted for the generic titles included in the *NATSPEC National BIM Guide*. The short title of the document is included in the table. Refer to **1.2 Reference Details** for the full description.

The first listing for each title should be taken as the most appropriate for Australian projects. The listings that follow are alternatives that can be considered when working in other markets.

All references are to be the most current at the time the *Project BIM Brief* is completed. The edition or version is to be recorded therein. This should be updated in the BIM Management Plan (BMP) to the current edition or version at the time it is signed off by the project BIM Team.

When selecting standards for items not listed in the *NATSPEC BIM Reference Schedule*, preference should be given to existing national standards. Where no national standards are available for a particular item, preference should be given to existing international standards. If appropriate existing standards cannot be identified, standards should be formulated by the project BIM Team and approved by the client at project inception.

| Generic title   | Reference to be substituted                                  | Comments   |
|---|--|--|
| <b>BIM Modelling Standard</b>                         | <i>Australian and New Zealand Revit Standards (ANZRS)</i>    | Although written for Revit users, it includes many 'best practice' guidelines that are 'platform neutral' such as naming conventions which could be adapted by users of other applications.  |
|   | <i>AEC (UK) BIM Standard</i>                                 | A generic standard. A version of the document for Revit users is also available.   |
| <b>CAD/Drawing Standard</b>                           | <i>US National CAD Standard</i>                              |  |
|   | <i>ISO 13567</i>   | For CAD layer naming only. Modified version incorporated in US National CAD Standards.   |
|   | <i>AS 1100</i>   | For 2D drawing only.   |
| <b>Clash Detection Colour Coding Standard</b>         | <i>VA BIM Guide 'Trade colors for Clash Detection'</i>       | See <b>1.3 Clash Detection Colours</b> in this document for an excerpt from the <i>VA BIM Guide</i> .  |
| <b>Collaborative Information Management Standard</b>  | <i>BS 1192</i>   |  |
|   | <i>BIP 2207</i>  | A companion guide to BS 1192.  |
| <b>Construction Information Classification System</b> | <i>Omniclass</i>   | This description is used in the <i>NATSPEC National BIM Guide</i> for all the Tables of the system other than the Element and Work Results Tables. Adopting a different standard will require many references including all those in the <i>NATSPEC BIM Object / Element Matrix</i> to be amended. |
|   | <i>Uniclass</i>  | For projects using British practices. Note comments above.   |
| <b>Element Classification System</b>                  | <i>Uniformat</i>   | As Uniformat is the basis for Omniclass Table 21, the comments on Omniclass above apply.   |
|   | <i>ACMM elements for cost management</i>                     | Codings based on this system could be used for organizing quantity surveying and costing data on an elemental basis but attempting to use it as a direct substitute for <i>Uniformat</i> would require significant amendments to other references and software applications.                       |
|   | <i>Uniclass Table 19 and BCIS elements for cost analysis</i> | The comments above apply.  |

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| Generic title                             | Reference to be substituted                         | Comments  |
|---|---|---|
| <b>Work Results Classification System</b> | NATSPEC   | Adopting this standard will require the <i>Masterformat</i> references in the <i>NATSPEC BIM Object / Element Matrix</i> to be amended.       |
|   | <i>Masterformat</i>                                 | Forms the basis for Omniclass Table 22. Adopting this standard will require no amendments to the <i>NATSPEC BIM Object / Element Matrix</i> . |
|   | <i>Coordinated Building Information (CBI) (NZ)</i>  | The comments for NATSPEC apply.   |
|   | <i>Uniclass Table J (CAWS) and Table K (CESMM3)</i> | The comments for NATSPEC apply.   |

## 1.2 Reference details

Details of the references listed in the previous table.

| Reference designation                    | Title  | Edition/Version                 | Publisher (Including link to download or order standard.)   |
|--|--|---------------------------------|---|
| <i>ACMM elements for cost management</i> | <i>The Australian Cost Management Manual (ACMM) Volume 1 – Cost Planning and Cost Analysis</i><br><i>Volume 2 – Sub-element - Definition</i> | 2002 (Vol. 1)<br>2001 (Vol. 2)  | Australian Institute of Quantity Surveyors (AIQS)<br><a href="http://www.aiqs.com.au">www.aiqs.com.au</a>   |
| <i>AEC (UK) BIM Standard</i>             | <i>AEC (UK) BIM Standard</i>   | 2009                            | The AEC (UK) CAD & BIM Standards Committee<br><a href="http://aecuk.wordpress.com">aecuk.wordpress.com</a>  |
| ANZRS                                    | <i>Australian and New Zealand Revit Standards</i>  | 2011                            | ANZRS Committee<br><a href="http://www.anzrs.org">www.anzrs.org</a>   |
| AS 1100                                  | <i>AS 1100 Technical drawing – Parts 101, 201, 301, 401, 501</i>   | Various                         | SAI Global<br><a href="http://infostore.saiglobal.com">infostore.saiglobal.com</a>  |
| <i>BCIS elements for cost analysis</i>   | <i>Standard Form of Cost Analysis (SFCA): Principles, Instructions and Definitions</i>   | 2008                            | Building Cost Information Service (BCIS)<br><a href="http://www.bcis.co.uk">www.bcis.co.uk</a>  |
| <i>BIP 2207</i>                          | <i>Building Information management - A Standard Framework and guide to BS 1192.</i>  | 2010                            | British Standards Institution<br><a href="http://www.bsigroup.com">www.bsigroup.com</a><br>Also available from CPIC.  |
| <i>BS 1192</i>                           | <i>Collaborative production of architectural, engineering and construction information - Code of practice</i>                                | 2007                            | British Standards Institution<br><a href="http://www.bsigroup.com">www.bsigroup.com</a><br>Also available from SAI Global.  |
| CAWS                                     | <i>Common Arrangement of Work Sections for Building Works (CAWS)</i>   | 1998                            | Construction Project Information Committee (CPIC)<br><a href="http://www.cpic.org.uk">www.cpic.org.uk</a>   |
| <i>CBI (NZ)</i>                          | <i>Coordinated Building Information (CBI) New Zealand (NZ) worksection classification system</i>   | 2011                            | Construction Information Limited (CIL)<br><a href="http://www.masterspec.co.nz">www.masterspec.co.nz</a>  |
| <i>CESMM3</i>                            | <i>Civil Engineering Standard Method of Measurement</i>  | 3 <sup>rd</sup> Edition<br>1991 | Chartered Institute of Building<br><a href="http://www.constructionbooksdirect.com">www.constructionbooksdirect.com</a>   |
| <i>ISO 13567</i>                         | <i>Technical product documentation – Organization and naming of layers for CAD – Parts 1, 2, 3</i>   | Various                         | International Organisation for Standardization<br><a href="http://www.iso.org">www.iso.org</a><br>Also available from SAI Global.   |
| <i>Masterformat</i>                      | <i>MasterFormat – Master List of Numbers and Titles for the Construction Industry</i>  | 2011                            | Construction Specifications Institute (CSI) and Construction Specifications Canada (CSC)<br><a href="http://www.csinet.org/">www.csinet.org/</a> & <a href="http://www.csc-dcc.ca">www.csc-dcc.ca</a> |
| NATSPEC                                  | <i>National Building Specification worksection classification system</i>   | 2011                            | Construction Information Systems (CIS)<br><a href="http://www.natspec.com.au">www.natspec.com.au</a>  |

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| Reference designation           | Title   | Edition/Version | Publisher (Including link to download or order standard.)   |
|---------------------------------|---|-----------------|---|
| <i>Omniclass</i>                | <i>Omniclass Construction Classification System</i>                                       | Various         | Secretariat for the Omniclass Development Committee<br><a href="http://www.omniclass.org">www.omniclass.org</a>   |
| <i>Uniclass</i>                 | <i>Uniclass: Unified Classification for the Construction Industry</i>                     | 2009            | Construction Project Information Committee (CPIC)<br><a href="http://www.cpic.org.uk">www.cpic.org.uk</a>   |
| <i>Uniformat</i>                | <i>UniFormat – A uniform Classification System of Construction Systems and Assemblies</i> | 2010            | Construction Specifications Institute (CSI) and Construction Specifications Canada (CSC)<br><a href="http://www.csinet.org/">www.csinet.org/</a> & <a href="http://www.csc-dcc.ca">www.csc-dcc.ca</a> |
| <i>US National CAD Standard</i> | <i>United States National CAD Standard (NCS)</i>  | V5<br>2011      | National Institute of Building Sciences (NIBS)<br><a href="http://www.nationalcadstandard.org">www.nationalcadstandard.org</a><br>Also available from CSI   |

### 1.3 Clash Detection Colours

The following is an excerpt from *Clause 7.9 Clash Detection/Coordination* of the *VA BIM Guide*:

#### Trade colors for Clash Detection

|                            |              |
|----------------------------|--------------|
| Architecture:              | White        |
| Structural Steel:          | Maroon       |
| Concrete:                  | Gray         |
| HVAC Equipment:            | Gold         |
| HVAC Supply Duct/Diffuser: | Blue         |
| HVAC Return Duct/Diffuser: | Magenta      |
| HVAC Pipe:                 | Gold         |
| Electrical Equipment:      | Dark Yellow  |
| Electrical Conduits:       | Light Yellow |
| Communication Conduit:     | Light Blue   |
| Electrical Cable Tray:     | Dark Orange  |
| Electrical Lighting:       | Yellow       |
| Plumbing Water:            | Cyan         |
| Plumbing Sewer:            | Magenta      |
| Plumbing Storm Drain:      | Green        |
| Fire Protection:           | Red          |
| Pneumatic Tube:            | Dark Green   |
| Equipment (Medical):       | Light Green  |
| Medical Gas:               | Light Green  |
| Security Systems:          | Orange       |
| Fire Alarm:                | Fuchsia      |

### 1.4 Other Documents

A number of documents that may assist the planning of BIM projects and the development of project BIM standards can be found at [www.natspec.com.au](http://www.natspec.com.au).

Click on the 'NATSPEC BIM' logo to go to the NATSPEC BIM Portal website.

Click on 'Weblinks' in the Main Menu in the top left hand corner of the homepage.

If you have any suggestions for other documents you think others will find useful, please send them to [bim@natspec.com.au](mailto:bim@natspec.com.au).