



PROJECT COST PLANNING & MANAGEMENT GUIDELINE

Guideline for Consultants and Stakeholders and client State Government Departments and Agencies

Purpose and Application

This guideline contains information specifically written to assist cost consultants in preparing and reporting on project costs for Building Management and Works (BMW) managed non-residential building projects.

The cost plan pro formas provide a consistent reporting format and shall be used when presenting cost plans and estimates for review, analysis, evaluation and key performance measurement.

They also provide background and guidance to project stakeholders to understand the BMW requirements for cost planning and cost management of projects.

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1 PROJECT COST PLANNING AND MANAGEMENT GUIDELINE

1.1 Key Messages

In 2014 Cabinet approved a revised version of the State Government's Strategic Asset Management Framework (SAMF). The SAMF provides policies and guidelines to improve asset investment planning and management across the State public sector. SAMF facilitates quality advice and decision-making within agencies, including the development and review of investment proposals to the Government.

The implementation of SAMF is **mandatory** for all public sector bodies, per Public Sector Commissioner's Circular 2014-03.

For the SAMF to be effective when applied to Building Management and Works' (BMW) non-residential building and infrastructure projects, it requires reliable cost planning, estimating and control during all project phases.

The practice of planning, estimating and controlling costs is an integral part of every BMW project and a key to success. The reliability of capital cost estimates at every stage of each project's lifecycle is critical for responsible project, program and financial management.

1.2 Application

This Project Cost Planning Guideline (the Guideline) forms part of the BMW Cost Management Services Panel arrangement, as well as being a key tool for BMW cost management appointments. The Guideline contains information specifically written to assist cost consultants in preparing and reporting on project costs for BMW managed non-residential building and infrastructure projects.

The cost plan pro formas (refer Section 10) provide a consistent reporting format and are to be used when presenting cost plans and estimates for review, analysis, evaluation and key performance measurement.

Completed cost estimates establish for BMW and client agencies the affordability of a proposed project and, if accepted as affordable, set a realistic cost limit for the project. The cost limit is the maximum expenditure that the project sponsor is prepared to make in relation to the completed project, which will be managed by the BMW Project Manager and the project team. Overall this reduces the risk of cost / budget variations occurring.

The Guideline must be read in conjunction with the Agency Specific Variations in Section 11.

1.3 Responsibilities

In accord with the Cost Management Services Panel, a Cost Management consultant shall be engaged directly by a BMW project (or planning) manager should a cost estimate be required, and not as a sub-consultant.

The independence and professional competence of the Cost Management consultant is vital for accurately delivering projects for the State Government with risk minimised and managed.

Ensuring the independence of the Cost Management consultant provides a level of due diligence on a project and the parties involved in delivering the project.

1.4 Government Policies

Other State Government and BMW policies may provide additional direction on and influence aspects of cost planning. It is important that cost consultants, project managers and other stakeholders are familiar with the relevant policies and they are appropriately incorporated into practice.

2 OVERVIEW

2.1 Background

In line with the Strategic Asset Management Framework (SAMF) cost plans are utilised by agencies as part of State Government funding applications and State Treasury budget processes. Some terminology in the pro formas has been varied from the Australian Institute of Quantity Surveyors (AIQS) templates to reflect State Treasury terminology and current BMW methodology.

2.2 Australian Institute of Quantity Surveyors

BMW acknowledges the key role played by the Australian Institute of Quantity Surveyors, their members and their publications in BMW Cost Management and the BMW Project Cost Planning Guideline.

BMW endorses the use of *Australian Standard Method of Measurement of Building Works*, 6th edition, March 2016, published by Australian Institute of Quantity Surveyors & Master Builders Australia. It is a requirement that all Bills of Quantities be developed using this methodology.

The Method of Measurement of Building Areas, Definitions of Elements, Elemental Units of Measurement, and selected other information are derived from the *Australian Cost Management Manual*, Volume 1, 2nd Edition, 2013, published by Australian Institute of Quantity Surveyors.

Additional volumes of the Australian Cost Management Manual (ACMM) published by AIQS with beneficial references include:

- ACMM, Volume 2 Elemental and Sub-elemental definitions, 2006.
- ACMM, Volume 3, Life Cycle Costing, 2007.
- ACMM, Volume 4, Evaluation of Sustainable Development, 2007.
- ACMM, Volume 5, Feasibility Study Guidelines, 2006.
- ACMM, Volume 6, Guidelines for Cost Planning Consultant Services, 2008.

2.3 BMW Pro forma Cost Plan

The current BMW Pro forma Cost Plan is illustrated in Section 10. This pro forma has been developed over a period of time to align to BMW's policies, processes and systems. Consultation on the format has also been undertaken with client agencies, AIQS and other stakeholders. This pro forma may be revised and reissued by BMW Asset Planning from time to time.

It is a requirement that cost plans be submitted in the current BMW Pro forma format. Advice on completing these cost plans, or any other information on cost management that may be required, is readily available through the BMW Asset Planning Branch.

2.4 Goods & Services Tax (GST)

The individual cost components in the cost plans are to be listed as GST exclusive. A separate line item at the end of the cost plan form has been provided for the overall GST component.

2.5 BMW Project Stages

BMW projects have requirements for cost planning at various project stages as confirmed by the BMW Project Manager. These include but are not limited to:

- Asset Planning, including feasibility studies, master planning studies, Application for Concept Approval (ACA) and Business Cases;
- Project Definition Plan (PDP), including Life Cycle Cost Analysis;
- Schematic Design (SD);
- Design Development (DD);
- Contract Documentation (ConDocs);
- Tender including Pre-Tender Estimate (PTE), and Construction Tender & Award;
- Contract Administration, including Practical Completion, Transition & Commissioning, and Final Completion;
- Post Construction, including Post Occupancy Evaluation (POE), lessons learnt, maintenance, refurbishment, and upgrades.

The level of detail and accuracy will depend on the project stage, the requirements of the BMW Project Manager, the requirements of the client agency and the service requirements detailed in the current BMW Cost Management Services Panel.

2.6 Maintaining Currency of Cost Plans

Cost managers are to ensure that a consistent approach is maintained and that the current BMW pro forma cost plan is being utilised, along with the current BMW endorsed Standard Method of Measurement of Building Works, and the current requirements of the State Government's Strategic Asset Management Framework (SAMF).

Costings should reflect the latest cost data and design detail available.

3 DEFINITIONS

3.1 Background

This section provides relevant definitions, abbreviations and terms that do not directly appear in the BMW Proforma Cost Plan.

Section 4 provides the definitions and applications of the components of the BMW Proforma Cost Plan.

3.2 Definitions / Abbreviations

Term / Abbreviation	Definition
ABCB	Australian Building Codes Board A Council of Australian Government (COAG) standards writing body that is responsible for the development of the NCC, comprised of the BCA and the PCA. http://www.abcb.gov.au/ABCB/The-Board
ACMM	Australian Cost Management Manual, published by the Australian Institute of Quantity Surveyors, consisting of six volumes.
Agency Contact	The name of the primary contact person from the client agency / department responsible for the project.
AHFG	Australasian Health Facility Guidelines as published by the Australasian Health Infrastructure Alliance.
AIQS	Australian Institute of Quantity Surveyors
ANZSMM 2018	Australian and New Zealand Standard Method of Measurement 2018, essentially being ASMM6 adopted for use in New Zealand.
ASMM6	<i>Australian Standard Method of Measurement of Building Works</i> , 6 th edition, March 2016, published by Australian Institute of Quantity Surveyors & Master Builders Australia

Term / Abbreviation	Definition
BCA	<p>Building Code of Australia.</p> <p>Comprising Volumes One and Two of the National Construction Code.</p> <p>(http://www.abcb.gov.au/Resources/Publications/NCC/NCC-2016-Complete-Series)</p>
BCI	<p>Building Cost Index.</p> <p>BMW currently maintains a building cost database consisting of tender prices (including elemental prices) for typical government buildings. This database is used to produce the BMW Building Cost Index (BCI) which shows long-term fluctuations in general building costs in the non-residential State Government building sector and provides a forecast of future cost expectations.</p> <p>When formulating a project budget the cost escalation that may occur prior to the tender date must be considered. Escalation calculations should allow for price increases that are likely to be incurred by the head contractor, sub-contractors and suppliers. These anticipated increases in cost should be built into the project budget and used when preparing budget submissions for funding approval.</p> <p>The Building Cost Index numbers provide a method of calculating and capturing the cost escalation of prices.</p> <p>Alternative cost indexes are available, for example:</p> <ul style="list-style-type: none"> • Australian Bureau of Statistics, Producer Prices Index, Australia, Cat. No. 6427.0, Table 17. Output of the Construction industries, subdivision and class index numbers, Index Number 3020 Non-residential building construction Western Australia, Series ID A2333763W. • AIQS Construction Cost Index Forecast (CCIF) Perth, Western Australia.

Term / Abbreviation	Definition
BCITF Levy	<p>Building and Construction Industry Training Fund Levy. This levy is applied to all residential, commercial and civil engineering projects undertaken in Western Australia where the total value of construction is more than \$20,000. The rate as at 1st September 2017 is 0.2% of the construction cost including GST.</p> <p>Paid directly by the builder to the Building and Construction Industry Training Fund. Not listed separately on the cost plan as it is included in the construction cost.</p> <p>The training levy applies to all works, irrespective of the requirement of a building permit. A permit authority cannot issue a building permit without evidence of the levy having been paid.</p>
BIM	<p>Building Information Model (BIM) (Product): An object-based digital representation of the physical and functional characteristics of a facility. The Building Information Model serves as a shared knowledge resource for information about a facility, forming a reliable basis for decisions during its lifecycle from inception onward.</p> <p>Building Information Modelling (BIM) (Process): A collection of defined model uses, workflows, and modelling methods used to achieve specific, repeatable, and reliable information results from the model. Modelling methods affect the quality of the information generated from the model. When and why a model is used and shared impacts the effective and efficient use of BIM for desired project outcomes and decision support.</p> <p><i>(BIM Glossary Version 1 (BIM! What is it?), August 2012, Australian Institute of Architects and Consult Australia).</i></p>
BMW	<p>Building Management and Works, a part of the Department of Finance providing a range of services to deliver the State Government's non-residential building program and manage the State Government's risk in the delivery of the non-residential building program.</p>

Term / Abbreviation	Definition
CAHS	Child and Adolescent Health Service is a State Government statutory authority under the <i>Health Services Act 2016 (WA)</i> and established under <i>Health Services (Health Service Providers) Order 2016 (WA)</i> .
Circulation	The spaces provided within a functional area to link together individual rooms or spaces. Areas occupied by internal walls and columns are considered part of circulation (<i>Australian Cost Management Manual, Volume 1, 2nd Edition, 2013, AIQS</i>).
Contingency	<p>Generally defined as, sums allocated within a budget or cost plan to cover the cost of unplanned activities or risks that are necessary to deliver project outcomes and require additional funds. Contingency is not intended for changes to project scope outside the business case for which the investment was approved (<i>Contingency Management Guidebook, Guidelines for optimising capital investment funding, February 2014, Infrastructure NSW</i>).</p> <p>Also refer to specific definitions and applications of:</p> <ul style="list-style-type: none"> • Planning Contingency in Section 4.22 • Design Contingency in Section 4.23 • Construction Contingency in Section 4.24
DAP	Development Assessments Panels (<i>Department of Planning, Lands and Heritage / Western Australian Planning Commission</i>)
DD	<p>Design Development</p> <p>The phase of the design process in which the general relationships represented in the schematic design phase are resolved in more detail. During this phase the dimensions of all major elements are defined and forms of construction finalised. (<i>NATSPEC National BIM Guide, Construction Information Systems Limited, 2016</i>)</p>
Element	An element is defined as being a portion of a project that fulfils a particular purpose irrespective of construction and / or specification (eg, External Walls, Air Conditioning, and Communications). (<i>Australian Cost Management Manual, Volume 1, 2nd Edition, 2013, AIQS</i>).

Term / Abbreviation	Definition
EMHS	East Metropolitan Health Service is a State Government statutory authority under the <i>Health Services Act 2016 (WA)</i> and established under <i>Health Services (Health Service Providers) Order 2016 (WA)</i> .
Engineering Areas	All engineering spaces, eg. Main vertical service ducts, electrical switch cupboards, tank rooms, air conditioning plant rooms and the like except “Central Energy” plant rooms areas. (<i>Australian Cost Management Manual, Volume 1, 2nd Edition, 2013, AIQS</i>).
ESD	<p>Ecologically Sustainable Development</p> <p>Using, conserving and enhancing the community's resources so that ecological processes, on which life depends, are maintained, and the total quality of life, now and in the future, can be increased. (<i>National Strategy for Ecologically Sustainable Development, 1992, prepared by the Ecologically Sustainable Development Steering Committee, and endorsed by the Council of Australian Governments (COAG) December, 1992</i>).</p> <p>Also known as Environmentally Sustainable Development, Environmentally Sustainable Design and Ecologically Sustainable Design.</p>
FF&E	Furniture, Fixtures & Equipment.
Functional Area	Any group of accommodation that has a common work function within a particular type of building. It includes all circulation necessary within that area. eg. Hospitals – EMERGENCY (Department), Technical Colleges – MUSIC (School of). (<i>Australian Cost Management Manual, Volume 1, 2nd Edition, 2013, AIQS</i>).
Gateway Review	<p>A project assurance methodology designed to support the effective development, planning, management and delivery of major projects and programs. Gateway Reviews are managed by the Department of Finance.</p> <p>Refer to Premier’s Circular 2016/05 for additional information at www.dpc.wa.gov.au/guidelinesandpolicies/premierscirculars/</p>

Term / Abbreviation	Definition
Government Building Training Policy	Effective 1 October 2015 the Government has replaced the Priority Start Building Policy (PSBP) with the new Government Building Training Policy (GBT Policy). From 1 October 2015, head contractors will be responsible for meeting a 'target training rate' rather than a pre-set number of apprentices as stipulated under the former policy. This means that for external cost managers engaged for cost planning of capital works projects a budget provision under the former PSBP is no longer required.
GST	Goods and Services Tax
HSS	Health Support Services is a State Government statutory authority under the <i>Health Services Act 2016</i> (WA) and established under <i>Health Services (Health Service Providers) Order 2016</i> (WA).
MBA	Master Builders Australia
NCC	<p>National Construction Code</p> <p>The complete series of the National Construction Code 2016 contains Volumes One, Two, Three, The Guide and the Consolidated Performance Requirements.</p> <p>The series is a uniform set of technical provisions for the design and construction of buildings and other structures throughout Australia, which allows for variations in climate and geological or geographic conditions.</p> <p>Incorporates the Building Code of Australia and the Plumbing Code of Australia.</p> <p>Issued by Australian Building Codes Board (ABCB)</p> <p>http://www.abcb.gov.au/Resources/Publications/NCC/NCC-2016-Complete-Series</p>
NMHS	North Metropolitan Health Service is a State Government statutory authority under the <i>Health Services Act 2016</i> (WA) and established under <i>Health Services (Health Service Providers) Order 2016</i> (WA).

Term / Abbreviation	Definition
PACMAN	Project and Contract Management system used by BMW to assist with the transparent management and administration of their projects and contracts
PCA	<p>Plumbing Code of Australia</p> <p>Comprising Volume Three of the National Construction Code.</p> <p>(http://www.abcb.gov.au/Resources/Publications/NCC/NCC-2016-Complete-Series)</p>
PDP	<p>Project Definition Plan</p> <p>The PDP further clarifies the asset design concept and controls potential material variations to the scope, cost, schedule and risk parameters that were approved by Cabinet based on the business case.</p> <p>The plan also identifies ways to address project delivery risks that may arise, for example, from the geotechnical conditions at the site where a facility is to be refurbished or constructed.</p> <p>(http://www.treasury.wa.gov.au/Treasury/Strategic_Asset_Management/Investment_Proposals/)</p>
Permit Authority	<p>A permit authority is the organisation that grants all the permits that are required under the building approval system. It ensures that all statutory requirements for the lodgement of a permit application are met, and that the paperwork is complete. It also has responsibility for keeping building records and providing building information to the Building Commission. The Minister for Commerce has approved BMW to be a Permit Authority for government works. (<i>Guide to the New Permit Approval Process</i>, BMW, 2015)</p>
PSB	Primary School Brief

Term / Abbreviation	Definition
SAMF	<p>Strategic Asset Management Framework</p> <p>The SAMF was developed by the Department of Treasury in consultation with the Department of Finance and is <u>required</u> to be implemented by all public sector bodies.</p> <p>The main objectives of the SAMF are to:</p> <ul style="list-style-type: none"> • integrate the Government’s asset management policies and make them more accessible; and • strengthen links between planning asset requirements and implementing asset investment decisions. <p>Under the SAMF, public sector bodies must ensure that their asset planning is integrated with their corporate planning and that assets are well managed throughout their life cycle with an emphasis on the effective maintenance of existing assets.</p> <p>Public sector bodies must ensure that their asset portfolio is assessed regularly against strategic requirements and that any assets that are under-performing or surplus to operating requirements are disposed of efficiently.</p> <p>(Public Sector Commissioner’s Circular 2014-03)</p> <p>Refer http://www.treasury.wa.gov.au/samf/ and https://publicsector.wa.gov.au/publications-resources/instructions-standards-and-circulars/public-sector-commissioners-circulars</p>
SD	<p>Schematic Design</p> <p>The phase of the design process in which the general arrangement of the project, including indicative room sizes and layout, overall form of the building/s and its/their relationship to the site, is determined. (<i>NATSPEC National BIM Guide</i>, Construction Information Systems Limited, 2016)</p>
SMHS	<p>South Metropolitan Health Service is a State Government statutory authority under the <i>Health Services Act 2016</i> (WA) and established under <i>Health Services (Health Service Providers) Order 2016</i> (WA).</p>
SOA	<p>Schedule of Accommodation</p>
SSPG	<p>Secondary School Planning Guide</p>

Term / Abbreviation	Definition
Sub-element	Sub-elements are part of an element and each sub-element is physically and dimensionally independent and separable in monetary terms. (<i>Australian Cost Management Manual</i> , Volume 1, 2nd Edition, 2013, AIQS).
Travel	The space provided to allow access to or movement between functional areas. No internal walls are included in travel except where separating two adjacent travel and/or engineering areas (<i>Australian Cost Management Manual</i> , Volume 1, 2nd Edition, 2013, AIQS).
WACHS	WA Country Health Service is a State Government statutory authority under the <i>Health Services Act 2016 (WA)</i> and established under <i>Health Services (Health Service Providers) Order 2016 (WA)</i> .

4 KEY COMPONENTS OF THE PROFORMA COST PLAN

4.1 Background

This section provides a walk through of each of the key components of the Pro forma Cost Plan (refer Section 10), including definitions and applications of each component.

4.2 Cost Plan Base Date

The Cost Plan Base Date is the date at which the rates used in the cost plan are current. This date is used together with the Tender Date and BCI to estimate the impact of inflation on the project costs. This date may be earlier than the Cost Plan Issued On date.

4.3 Building Cost Index (Base)

This is the Building Cost Index (BCI) number as at the Cost Plan Base Date.

4.4 Cost Plan Version No.

All cost plans are to include version control through the Cost Plan Version Number and Cost Plan Issued On date.

The suggested format for version numbers is in the format 1.0, 1.1, 2.0 with the first number representing a major change or release and the second number representing a minor change or correction.

4.5 Cost Plan Issued On

All cost plans are to include version control through the Cost Plan Issued On date and Cost Plan Version Number.

The Cost Plan Issued On date is the date on which the cost plan was issued or released to the BMW Project Manager and / or Project Control Group. It should not be confused with the Cost Plan Date which may or may not be different.

4.6 Prepared by

The name of the individual Cost Manager (or primary contact person) and their firm responsible for the preparation of the cost plan.

4.7 BMW Project Manager

The name of the individual BMW Project Manager (or BMW Project Director) responsible for the management of the project on behalf of BMW.

4.8 Client Agency

The name of the client agency / department with ownership / sponsorship of the project.

4.9 Project Phase / Type

The Project Phase or Project Type is to be included for all cost plans. Cost Managers need to refer to their BMW Project Manager to obtain the description to be used. Examples that may be used include but are not limited to: Feasibility Study, Master Planning Study, Business Case, Project Definition Plan, Schematic Design, Design Development, and Contract Documentation. Also refer to Section 2.5.

4.10 Project Risk Level

The current level of Project Risk may be included in this section if required. Cost Managers need to consult with their BMW Project Manager to determine if this section is required to be used and to obtain the current project risk rating.

4.11 Project Title

The Project Title, together with the Location, must accurately and succinctly describe the project and the option being costed.

4.12 Location

Generally this section will simply include the locality or suburb. When greater clarity is required and to avoid any confusion between project options include the full street address.

4.13 Buildings (From Single Building Cost Plans)

This section of the Cost Plan is intended to cover the amount required for the construction of the physical asset, excluding other associated project costs that are accounted for elsewhere within the Cost Plan. It lists the building cost total, Gross Floor Area (GFA) and Average GFA Rate from each of the Single Building Cost Plans.

4.14 External Works

This includes the elements of:

- CE Centralised Energy Systems
- AR Alterations and Renovations
- XP Site Preparation
- XR Roads, Footpaths and Paved Areas
- XN Boundary Walls, Fencing and Gates

- XB Outbuildings and Covered Ways
- XL Landscaping and Improvements

Full definitions of these elements can be found in Section 6.

This estimate is a provision that can be significantly influenced by the topography of the preferred site. It includes the activities needed to make the site suitable for construction, and eventual occupation.

4.15 External Services

This includes the elements of:

- XK External Stormwater Drainage
- XD External Sewer Drainage
- XW External Water Supply
- XG External Gas
- XF External Fire Protection
- XE External Electric Light and Power
- XC External Communications
- XS External Special Services

Full definitions of these elements can be found in Section 6.

This estimate is a provision for the elements listed above that will be required within the site boundaries.

4.16 Sub-Division Works and Services

This includes the elements of:

- XR Roads, Footpaths and Paved Areas
- XK External Stormwater Drainage
- XD External Sewer Drainage
- XW External Water Supply
- XG External Gas
- XE External Electric Light and Power
- XC External Communications

Full definitions of these elements can be found in Section 6.

This provision allows for all works required outside of the project site boundary. This may be applicable to projects that are to be provided in developing areas where existing sub-divisional services are not yet available, or are to form part of the project's contribution to the local area.

Likewise, a project located in a well-established area may still need to amend existing services such as road layouts, traffic lights, pedestrian crossings, footpaths, access bridges, access points to public transport and service upgrades or extensions

(particularly sewerage extensions) beyond the project site boundaries. Included in this description will be financial contributions to associated projects.

4.17 External Alterations and Renovations

This made up of the element XX External Alterations and Renovations. A definition of this element can be found in Section 6.

4.18 Proportion of Preliminaries

This includes a proportion of the element PR Preliminaries. A definition of this element can be found in Section 6.

4.19 Total Construction Cost – Perth Prices

The Perth Prices cost of all buildings including their proportion of preliminaries and all alterations, works and services external to the buildings including their proportion of preliminaries but excluding contingencies, headworks and statutory charges, building act compliance, percent for public art, land acquisition, native title compensation, loose furniture and equipment, special provisions, agency managed costs and all costs in connection with design, documentation, supervision and project management.

4.20 Regional Loading

This allowance is expressed as a percentage of the Total Construction Cost - Perth Prices Subtotal and is added to take account of regional factors such as the cost of transporting materials and labour and/or the loss of competition that can occur in isolated areas or site-specific issues. It is to be shown as a separate amount in the cost plans up to the Project Definition Plan (PDP) phase.

For the Schematic Design (SD) phase onwards the regional loading may continue to be shown as a separate amount or included in the rates with estimates prepared as at the location of the project. The selection of which will be determined by the BMW Project Manager in consultation with the Agency.

How to apply (up to PDP phase):

$$\begin{array}{r}
 \text{Total Construction Cost – Perth Prices Subtotal} \\
 \times \text{ Regional Loading \%} \\
 = \text{Regional Loading \$}
 \end{array}$$

4.21 Total Construction Cost

The local (site specific) cost of all buildings including their proportion of preliminaries and all alterations, works and services external to the buildings including their proportion of preliminaries but excluding contingencies, headworks and statutory charges, building act compliance, percent for public art, land acquisition, native title compensation, loose furniture and equipment, special provisions, agency managed costs and all costs in connection with design, documentation, supervision and project management.

How to apply:

$$\begin{array}{r}
 \text{Total Construction Cost – Perth Prices Subtotal} \\
 + \text{ Regional Loading \$} \\
 = \text{ Total Construction Cost \$}
 \end{array}$$

4.22 Planning Contingency

The Planning Contingency is an allowance to cover the risk of not being able to design the spatial relationships and achieve the desired Functional Area and Travel / Engineering allowances (*Australian Cost Management Manual*, Volume 1, 2nd Edition, 2013, Australian Institute of Quantity Surveyors).

This contingency is to be set at 5% for planning projects / evaluation phase, and is usually reduced to zero by the Schematic Design stage. Note: How any residual Planning Contingency remaining at Schematic Design stage can be used will require negotiation between the Agency and Department of Treasury.

How to apply:

$$\begin{array}{r}
 \text{Total Construction Cost \$} \\
 \times \text{ Planning Contingency \%} \\
 = \text{ Planning Contingency \$}
 \end{array}$$

4.23 Design Contingency

The Design Contingency is an allowance to cover the risk of the estimator / cost planner not adequately foreseeing the correct design or the complexity of the design. The amount of the Design Contingency will depend on the amount of detail available. (*Australian Cost Management Manual*, Volume 1, 2nd Edition, 2013, Australian Institute of Quantity Surveyors).

This contingency is to be set at 10% for planning projects / evaluation phase, and is usually reduced to zero by the Construction Documentation stage. Note: How any residual Design Contingency remaining at Construction Documentation stage can be used will require negotiation between the Agency and Department of Treasury.

How to apply:

$$\begin{aligned} & \text{Total Construction Cost \$} \\ \times & \text{ Design Contingency \%} \\ = & \text{ Design Contingency \$} \end{aligned}$$

4.24 Construction Contingency

The Construction Contingency is an allowance to cover the risk of variations and unforeseen items encountered during construction (*Australian Cost Management Manual*, Volume 1, 2nd Edition, 2013, Australian Institute of Quantity Surveyors).

This contingency is not to be used for changes in scope, and is to be set at 10% for planning projects / evaluation phase. Note: How any residual Construction Contingency remaining at Practical Completion stage can be used will require negotiation between the Agency and Department of Treasury

How to apply:

$$\begin{aligned} & \text{Total Construction Cost \$} \\ \times & \text{ Construction Contingency \%} \\ = & \text{ Construction Contingency \$} \end{aligned}$$

4.25 Headworks and Statutory Charges

This consists of charges made by Utilities, Government Departments, Authorities or other Agencies on the project.

Such charges may include but are not limited to water, electricity, gas, environment approvals, DAP, local government developer contributions and the like.

These will be advised by the Professional Consultants on a project by project basis.

Note that DAP fees are the only DA (Development Application) fees that will be applicable. DAPs are mandatory for projects over \$10m (or \$20m in City of Perth) where a DA is required. This will affect projects within the Metropolitan, Peel and Bunbury Region Schemes in respect to DAP fees

Note the exclusions of Building Act compliance, Building and Construction Industry Training Fund Levy, Government Building Training Policy compliance and GST.

4.26 Building Act Compliance

Estimates the cost of approvals and permits required by the *Building Act 2011* (WA) and *Building Regulations 2012* (WA). This legislation sets building standards, requires approvals and permits to build, demolish or occupy buildings, and sets out special processes for work on boundaries with other land.

Generally the total percentage fees for cost plans are from 0.5% to 0.7%.

Specifically as at the 1st July 2017 the fees are:

Building Permit Application Fee	0.09% of the construction cost including GST, but not less than \$97.70
Demolition Permit Application Fee	\$97.70 for each storey of the building
Building Services Levy	0.137% of the construction cost including GST, but not less than \$61.65
Occupancy Permit Fee	\$97.70

How to apply:

Total Construction Cost \$
 + Planning Contingency \$
 + Design Contingency \$
 + Construction Contingency \$
 = Sub-total \$
 x Building Act Compliance %
 = **Building Act Compliance \$**

4.27 Percent for Public Art

Generally at the Planning Stage a full 1% of the estimated total construction cost will be allowed subject to any project peculiarities. The final percentage allowed for a project will be determined with the Agency by the BMW Project Manager at the PDP Phase.

The State Government's Percent for Art Scheme encourages art in the built environment by using a percentage of a development's overall budget to commission public artworks. The Scheme is administered jointly by the Department of Local Government, Sport and Cultural Industries (previously Department of Culture and the Arts) and the Department of Finance's Building Management and Works (BMW).

New Government buildings and major additions identified from the State Government's Capital Works Program with an estimated total building cost in excess of \$2 million must include a Percent for Art component of up to 1% of the estimated total construction cost. This includes refurbishment works as well as new construction.

The Percent for Art Scheme uses an allocation of up to one percent of the estimated total cost of these projects to commission public artworks from Western Australian artists. All associated costs of commissioning and installing the public artwork are met within the commissioning agency's total budget. Projects below \$2 million may incorporate a Percent for Art component at the discretion of the Commissioning Agency. Typically public art projects range from \$20,000 to \$400,000 in value but there are also major projects with larger budgets.

Refer to the *BMW Percent for Art Flow Chart* (iFind Document #110) for a guide to past Percent for Art Budgets, at <http://ifind.finance.wa.gov.au/knowledge-centre/Works Documents/Percent-for-Art-Flow-Chart.doc>

Refer to "*The Western Australian State Government Percent for Art Scheme Guidelines*" for the specific processes and requirements, at:

Department of Finance:

https://www.finance.wa.gov.au/cms/Building_Management_and_Works/New_Buildings/Percent_for_Art.aspx

Department of Local Government, Sport and Cultural Industries:

<http://www.dca.wa.gov.au/DevelopingArtsandCulture/publicart/percent-for-art-scheme/>

For further information on percent for public art please contact the BMW Arts Program Manager:

Telephone(08) 6551 2213

Email PercentForArt@finance.wa.gov.au

How to apply:

Total Construction Cost \$
 + Planning Contingency \$
 + Design Contingency \$
 + Construction Contingency \$
 = Sub-total \$
 x Percent for Public Art %
 = **Percent for Public Art \$**

4.28 Land Acquisition & Native Title Compensation

Where applicable the costs of acquiring land are to be included. These costs should include but are not limited to title survey and plan drafting; purchase, settlement and transfer (for negotiated acquisitions); and compensation (for compulsory acquisitions). These costs should be limited to those directly associated with the acquisition. Cost items such as site works and external services (for example) are captured elsewhere.

Specialist advice should be obtained early in the project including any estimation for Native Title Compensation. The Client Agency or BMW Project Manager will manage the process and procedures for obtaining this advice from relevant State and / or Federal Government agencies, including Department of Premier and Cabinet - Land, Approvals and Native Title Unit and / or National Native Title Tribunal.

Generally claims for Native Title Compensation can be made by a registered native title body corporate. Claimants seek compensation from the Commonwealth, or the relevant State or Territory, for acts that have extinguished or impaired the native title rights and interests of the group (*About native title claims*, 2016, National Native Title Tribunal).

For further information refer to the websites of Department of Premier and Cabinet - Land, Approvals and Native Title Unit at www.dpc.wa.gov.au/lantu or National Native Title Tribunal at www.nntt.gov.au

Note: Aboriginal Heritage surveys that do not relate Land Acquisition and / or Native Title Compensation should not be included in this item and should be listed under Other Costs – Special Provisions.

4.29 Loose Furniture and Equipment (also known as Furniture, Fixtures & Equipment (FF&E))

This includes all fixtures, fittings and equipment wall, floor or ceiling mounted that are not integral to the fabric of the building. This estimate must include an allowance for all specialist and general equipment that is to be included in the capital acquisition project. These items might include office furniture, signage, specialist medical or training equipment etc, that all contribute to the intended function of the completed asset.

How to apply:

	Total Construction Cost \$
+	Planning Contingency \$
+	Design Contingency \$
+	Construction Contingency \$
=	Sub-total \$
x	Loose Furniture and Equipment %
=	Loose Furniture and Equipment \$

4.30 Other Costs – Special Provisions

This section of the cost plan allows for the identification and estimation of any extraordinary or other items, that the BMW Project Manager or a client agency may wish to highlight through the inclusion of a separate or special provision, that are not covered elsewhere.

4.31 Commissioning, Relocations Costs and Disbursements

This includes cost items such as but not limited to those associated with operational commissioning, and relocating / moving in of staff, FF&E and agency customers. Examples of the costs incurred for this item are clinical cleaning of operating theatres, records management, staff training and orientation, community opening day, removalists, and waste management.

4.32 Computing Equipment and Services

This includes the cost of provision of ICT (information and communications technology) equipment and services to the buildings / completed asset. Items already included within the Total Construction Cost should not be restated.

Projects will need to consider the State Government's GovNext-ICT Program in developing requirements and estimates for any project. For more information on this

program refer to the Office of the Government Chief Information Officer, www.gcio.wa.gov.au

How to apply:

$$\begin{aligned}
 & \text{Total Construction Cost \$} \\
 + & \text{ Planning Contingency \$} \\
 + & \text{ Design Contingency \$} \\
 + & \text{ Construction Contingency \$} \\
 = & \text{ Sub-total \$} \\
 \times & \text{ Computing Equipment and Services \%} \\
 = & \text{ **Computing Equipment and Services \$**}
 \end{aligned}$$

4.33 Professional Fees – Perth Prices

Professional fees are fees paid to external professional service providers for ensuring the smooth and correct progression of a project, including its planning, design, structural suitability and cost control. The fees can include services provided by but not limited to the following professionals: architects, quantity surveyors, structural engineers, mechanical engineers, electrical engineers, civil engineers, hydraulic engineers, project managers, planners, traffic management, environmental, etc.

As a guide only, professional fees are typically in the range of 12% to 14%. However some Perth metropolitan projects may be low as 9% depending on current market conditions and results of competitive tendering. Professional fees will also be influenced by current BMW Panel Contract rates for applicable projects.

How to apply:

$$\begin{aligned}
 & \text{Total Construction Cost – Perth Prices Subtotal \$} \\
 + & \text{ (Total Construction Cost – Perth Prices Subtotal \$ } \times \text{ Planning Contingency \%)} \\
 + & \text{ (Total Construction Cost – Perth Prices Subtotal \$ } \times \text{ Design Contingency \%)} \\
 + & \text{ (Total Construction Cost – Perth Prices Subtotal \$ } \times \text{ Construction Contingency \%)} \\
 + & \text{ Headworks and Statutory Charges}
 \end{aligned}$$

- + (Total Construction Cost – Perth Prices Subtotal \$ x Building Act Compliance %)
- + (Total Construction Cost – Perth Prices Subtotal \$ x Percent for Public Art %)
- + (Total Construction Cost – Perth Prices Subtotal \$ x Loose Furniture and Equipment (BMW Managed) %)
- + Other Costs - Special Provisions (BMW Managed)
- + Commissioning, Relocation Costs and Disbursements (BMW Managed)
- + (Total Construction Cost – Perth Prices Subtotal \$ x Computing Equipment and Services (BMW Managed) %)
- = Sub-total \$
- x Professional Fees - Perth Prices %
- = **Professional Fees - Perth Prices \$**

4.34 Professional Fees – Disbursements

Professional Fees – Disbursements is an estimate to cover the additional costs of travel, meals and accommodation for site visits for regional projects. Disbursements for travel, meals and accommodation are only applicable for projects outside the Perth metropolitan area, outside the Peel region, or located greater than 80km from the consultants office. Generally disbursements will not be applicable for locally based professionals for regional projects. Refer to the applicable BMW professional consultants panel arrangement for the latest terms and conditions.

As a guide only, the additional costs of disbursements for site visits for regional projects is typically in the range of 12% to 14% of the Regionally Loading dollar value of the project, depending on the location. Note that any change in demand and market conditions for professional services in the particular regional location, or a change in the supply of travel/accommodation options to regional locations, will generally result in a change in the guide rates.

Actual claims for Professional Fees – Disbursements must be in accordance with the current BMW Cost Management Services Panel. Reasonableness of claims can be tested against the current Australian Taxation Office reasonable travel and overtime meal allowance expense amounts taxation determination. In the 2017/18 financial year this was ATO TD 2017/19.

How to apply:

$$\begin{aligned}
 & \text{Regional Loading \$} \\
 & (\text{Regional Loading \$} \times \text{Planning Contingency \%}) \\
 & (\text{Regional Loading \$} \times \text{Design Contingency \%}) \\
 & (\text{Regional Loading \$} \times \text{Construction Contingency \%}) \\
 & (\text{Regional Loading \$} \times \text{Building Act Compliance \%}) \\
 + & (\text{Regional Loading \$} \times \text{Percent for Public Art \%}) \\
 + & (\text{Regional Loading \$} \times \text{Loose Furniture and Equipment (BMW} \\
 & \text{Managed) \%}) \\
 + & (\text{Regional Loading \$} \times \text{Computing Equipment and Services} \\
 & \text{(BMW Managed) \%}) \\
 = & \text{Sub-total \$} \\
 \times & \text{Professional Fees - Disbursements \%} \\
 = & \text{Professional Fees - Disbursements \$}
 \end{aligned}$$

4.35 Total Net Project Cost (at Current Prices)

Total Net Project Cost (at Current Prices) is the sum of Total Construction Cost and BMW Managed Costs. It is the calculation immediately prior to the application of Escalation to Tender, and therefore excludes Escalation to Tender, BMW Management Fees, and Client Agency Managed Costs.

4.36 Escalation to Tender

Escalation to Tender refers to the anticipated increase, over a defined period, in the cost of a project. Building cost increases usually occur as a result of market forces, and reflect increases in the cost of labour / materials and higher levels of construction activity.

How to apply:

$$\begin{aligned}
 & \text{BCI Index Number at Tender Date} \\
 \div & \text{BCI Index Number at Cost Plan Date} \\
 = & \text{raw number}
 \end{aligned}$$

$$\begin{aligned}
 & - 1 \\
 & = \text{Escalation to Tender \%} \\
 & \times \text{Total Net Project Cost (at Current Prices)} \\
 & = \text{Escalation to Tender \$}
 \end{aligned}$$

4.37 Escalation to Tender - BCI

This is the forecast or estimated Building Cost Index (BCI) number as at the Tender Date.

4.38 Escalation to Tender - Tender Date

The date that a project is estimated to be released for public tender on Tenders WA. Date to be advised by BMW Project Manager in consultation with agency representatives. The estimated tender date is confirmed during the Project Definition Plan phase.

4.39 Escalated Net Project Cost

This is the total dollar amount of the project that relates to activities that will be managed by BMW on behalf of the client agency, excluding all activities undertaken by BMW and any BMW costs for managing capital works projects.

How to apply:

$$\begin{aligned}
 & \text{Total Net Project Cost (at Current Prices) \$} \\
 & + \text{Escalation to Tender \$} \\
 & = \text{Estimated Net Project Cost \$}
 \end{aligned}$$

4.40 BMW Management Fees

For capital works projects commenced on or after 1 July 2016 BMW has changed the way it charges client agencies for managing capital works projects. The new arrangements are consistent with best practice and are designed to reflect BMW's actual costs. They take into account requests from agencies for greater transparency.

The new charging arrangements comprise two components:

- a project management fee, based on the actual time BMW project managers spend on the project; and
- a project support fee, based on a percentage rate applied to the value of the project. It covers BMW's costs to provide the systems, technical and policy

support essential to manage projects in general and in accordance with government requirements.

The BMW project management fee is based on the number of hours the BMW project manager spends working on the project, and will not be affected by a change in the project value.

A change in the project cost will affect the BMW project support fee, which is based on the project expenditure.

At the commencement of a project, the BMW Project Manager will provide agencies and cost managers with a fee estimate. At key milestones BMW will review and update the estimate to ensure it remains accurate. Under these new arrangements the charges are not fixed.

Any projects that commenced before 1 July 2016 will continue under the previous arrangements.

4.41 Estimated BMW Project Total Cost

This is the total dollar amount of the project that relates to activities that will be managed by BMW on behalf of the client agency. This includes any cost that will impact on any aspect of the project as managed by BMW and includes but is not limited to the construction contract, Building Act compliance / approvals, and BMW engaged professional services.

How to apply:

$$\begin{array}{r}
 \text{Estimated Net Project Cost \$} \\
 + \text{ BMW Management Fees \$} \\
 = \text{ Estimated BMW Project Total Cost \$}
 \end{array}$$

4.42 Client Agency Managed Costs (not managed by BMW)

Client Agency Managed Costs consists of the project costs that are not managed by BMW. These costs do not impact on any aspect of the project as managed by BMW, this includes but is not limited to the construction contract, Building Act compliance / approvals, and BMW engaged professional services.

4.43 Estimated Gross Project (Commitment) Total Cost

This is the total dollar amount that the State Government budgeting process has allocated to the sponsoring agency for commitment to the project.

4.44 Cash Flows

The Project Cost Plan Template includes three cash flow estimates, being the Estimated Gross Project (Commitment) Total Cost (also known as Total Cost), Total Cost excluding the BMW Management Fee, and the BMW Management Fee. All the cash flows are to be calculated excluding GST and are annual financial year cash flows based on a 1st July to 30th June reporting period.

Cash flows must reflect when the expenditure is anticipated to be accrued and not when paid. For example for the value of work done (VOWD) during June, the cost is recorded against June, not a later month when the payment certification and payment is likely to occur.

4.45 Assumptions

Any assumptions made by the Cost Manager in preparing the Cost Plan shall be documented and attached to the Cost Plan for review and concurrence by the BMW Project Manager and Project Control Group. The assumptions are to also include any specific inclusions and exclusions. As an example this may be presented as a schedule to the cost plan listing all drawings, specifications, reports and the like used in the preparation of the cost plan.

4.46 Rounding

Unless advised otherwise by the BMW Project Manager cost plans, including line items, are to be shown rounded to the nearest \$500.

4.47 Ecologically Sustainable Development (ESD) Initiatives

Any Ecologically Sustainable Development (ESD) initiatives are to be allowed for in the GFA rate and not listed as a separate line item.

5 METHOD OF MEASUREMENT OF BUILDING AREAS (AIQS)

5.1 Background

BMW is using the Method of Measurement of Building Areas taken from Appendix A, Part 2 of *Australian Cost Management Manual*, Volume 1, 2nd Edition, 2013, published by Australian Institute of Quantity Surveyors, Sydney, NSW.

5.2 Gross Floor Area (GFA)

The sum of the “Fully Enclosed Covered Area” and “Unenclosed Covered Area” as defined.

Unit of Measurement: Square Metre (m²).

5.3 Fully Enclosed Covered Area (FECA)

The sum of all such areas at all building floor levels, including basements (except unexcavated portions), floored roof spaces and attics, garages, penthouses, enclosed porches and attached enclosed covered ways alongside buildings, equipment rooms, lift shafts, vertical ducts, staircases and any other fully enclosed spaces and usable areas of the building, computed by measuring from the normal inside face of exterior walls, but ignoring any projections such as plinths, columns, piers and the like which project from the normal inside face of exterior walls.

It shall not include open courts, light wells, connecting or isolated covered ways and net open areas of upper portions of rooms, lobbies, halls, interstitial spaces and the like, which extend through the storey being computed.

Unit of Measurement: Square Metre (m²).

5.4 Unenclosed Covered Area (UCA)

The sum of all such areas at all building floor levels, including roofed balconies, open verandas, porches and porticos, attached open covered ways alongside buildings, undercrofts and usable space under buildings, unenclosed access galleries (including ground floor) and any other trafficable covered areas of the building which are not totally enclosed by full height walls, computed by measuring the areas between the enclosing walls or balustrade (i.e. from the inside face of the UCA excluding the wall or balustrade thickness). When the covering element (i.e. roof or upper floor) is supported by columns, is cantilevered or is suspended, or any combination of these, the measurements shall be taken to the edge of the paving or to the edge of the cover, whichever is the lesser.

UCA shall not include eaves overhangs, sun shading, awnings and the like where these do not relate to clearly defined trafficable covered areas, nor shall it include connecting or isolated covered ways (element XB).

Unit of Measurement: Square Metre (m²).

5.5 Usable Floor Area (UFA)

The sum of the floor areas measured at floor level from the general inside face of walls of all interior spaces related to the primary function of the building. This will normally be computed by calculating the “Fully Enclosed Covered Area” (FECA) and deducting all of the following areas supplementary to the primary function of the building:

Deductions:

(a) Common Use Areas

All floored areas in the building for circulation and standard facilities provided for the common use of occupiers, tenants and/or the public such as lobbies and foyers to entrances, stairways and lifts, stairways, landings and fire escapes, verandahs and balconies, corridors and passages, toilet and rest room areas, cloak and locker areas, cleaner's rooms including stores and cupboards, tea making and similar amenities areas.

(b) Service Areas

All areas set aside for building plant supplying services and facilities common to the building for the use of occupants, tenants and/or public, such as mechanical plant and equipment rooms, electrical equipment and switchrooms, tank rooms, lift motor rooms, meter cupboards, telecommunication switchrooms, refuse collection areas, loading bays and all car parks including access ways thereto.

(c) Non-habitable Areas

All non-habitable building space such as that occupied by internal columns and other structural supports, internal walls and permanent partitions, lift shafts, service ducts and the like.

Unit of Measurement: Square Metre (m²).

6 DEFINITIONS OF ELEMENTS (AIQS)

6.1 Background

BMW is using the Definitions of Elements taken from Appendix A, Part 3 of *Australian Cost Management Manual*, Volume 1, 2nd Edition, 2013, published by Australian Institute of Quantity Surveyors, Sydney, NSW.

6.2 Preliminaries

PR	<p>Preliminaries</p> <p>It INCLUDES preliminary items as defined in Section 2 of the Australian Standard Method of Measurement of Building Works, where ascertainable.</p>
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6.3 Substructure

SB	<p>Substructure - The structurally sound and watertight base upon which to build.</p> <p>It INCLUDES basement and foundation excavations; piers, piles, pedestals, beams and strip footings; foundation walls; drop aprons; hardcore filling; work slabs and damp-proofing or other membranes; floor structures; subsoil drainage; ducts, pits, bases and service tunnels; entrance steps, ramps and their finishes; steps and ramps in the one floor level; structural screeds and toppings; covered swimming pools; all other work up to, but excluding the lowest floor finish.</p> <p>It EXCLUDES "Site Preparation" (XP); basement walls (EW); columns above tops of bases (CL, EW, NW); "Floor Finishes (FF); all non-structural work associated with the internal services.</p>
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6.4 Superstructure

<p>CL</p>	<p>Columns (Framed Buildings) - The upright supports to upper floors and roof forming part of a framed structure.</p> <p>It INCLUDES internal and external columns from tops of columns to bases; column casings; all protective non-decorative coatings.</p> <p>It EXCLUDES portal frames (RF); columns to non-framed (load bearing) structures (EW, NW); columns supporting awnings and attached covered ways (RF); columns supporting exposed attached external stairs (SC); all finishes (EW, WF).</p> <p><i>Note: Columns below lowest floor finish (eg. in filled areas) are included in this element because of the impracticability of splitting a column into two elements.</i></p>
<p>UF</p>	<p>Upper Floors - Floor structures above that at the lowest level.</p> <p>It includes all beams; concrete, precast and in-situ floors; waffle slab and filler block floors; metal floors; computer floors; timber framed floors; structural screeds and toppings; concealed insulation; balconies; overhangs and sunhoods integral with floors; steps and ramps in the one floor level; all protective non-decorative coatings.</p> <p>It EXCLUDES landings and ramps between floor levels (SC); balcony balustrades (EW); internal and external finishes (SC, EW, FF, CF).</p>
<p>SC</p>	<p>Staircase - The structural connections between two or more nominal floor levels or to roof, plant rooms and motor rooms together with associated finishes.</p> <p>It INCLUDES landings; ramps between floor levels; fire escapes; supporting framework; access ladders; spiral staircases; tread, riser, string and soffit finishes; balustrades and handrails.</p> <p>It EXCLUDES steps and ramps at changes in the one floor level (SB, UF); ground level entrance steps (SB); lifts and escalators (TS).</p>

RF	<p>Roof - To provide a structurally sound and watertight covering over the building.</p> <p>It INCLUDES portal frames; roof construction; gable and other walls in roof spaces; parapet walls and roof balustrades; thermal insulation roof lights and dormers with their sun screenings; eaves, verges and fascias; rainwater goods; internal storm water drainage runs; awnings and open lean-to roofs; all protective non-decorative coatings.</p> <p>It EXCLUDES rainwater goods to balconies and other unenclosed floor areas (UF); all non-structural work associated with the internal services; independent roofs to exposed attached external stairs (SC).</p>
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6.5 External Fabric and Finishes

EW	<p>External Walls - The vertical enclosure around the building other than “Windows” and “External Doors” from “Substructure” to “Roof”.</p> <p>It INCLUDES structural walls; basement walls and tanking above lowest floor finish; spandrel, curtain and window walls; external shop fronts; glazed screen walls; columns and isolated piers to non-framed (load bearing) structures; gallery and balcony walls and balustrades; solar screen walls; plant room air flow screens; all insulation to external walls; all external finishes to all columns, slab edges, beams, projecting overhangs and walls; lintels and flashings at openings; ring beams and stiffening beams not integral with floor, ceiling or roof slabs.</p> <p>It EXCLUDES all internal finishes to external walls (except screens and the like) and columns (WF); sills, thresholds and linings (WW, ED); walls in “Roof” (RF) and “Substructure (SB) and all doors (ED); sun protection to windows (WW) and sunhoods integral with floors (UF); fire places, hearths, flues and stacks (SH, SS); beams integral with slabs (UF, RF).</p>
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WW	<p>Windows - Opening in “External Walls” to provide light and ventilation.</p> <p>It INCLUDES flyscreens; louvres, guard grilles; remote control gear; sun protection to windows; curtains, blinds, track and pelmets, window sills and linings; hardware; decoration.</p> <p>It EXCLUDES lintels and flashings (EW); special blackout facilities (SE); roof lights and dormers (RF); window walls and glazed screens (EW); sunhoods integral with floors (UF); solar screen walls (EW); window cleaning equipment (SE).</p> <p><i>Note: Includes hardware and decorations, glazing and infill panels within window frames.</i></p> <p><i>Clerestory windows occurring in external walls to clerestories are included in this element.</i></p>
ED	<p>External Doors - The access ways into the building both for pedestrians and vehicles.</p> <p>It INCLUDES frames; linings; glazing; architraves; hardware; panels and highlights over; flydoors; roller shutters; garage doors; fire doors; grille and chain wire doors; gates; service cupboard doors and thresholds; decoration.</p> <p>It EXCLUDES frames forming an integral part of the wire mesh or glazed screen walls (EW); lintels and flashings (EW); under floor access doors (SB); framing and glazing to sidelights to doors with or without highlights (EW).</p>

6.6 Internal Fabric

NW	<p>Internal Walls - Permanent division of internal spaces into separate rooms or to enclose duct and other non-usable areas.</p> <p>It INCLUDES walls; internal columns and isolated piers to non-framed (load bearing) structures; lintels, damp courses and bearing strips; stiffening beams not integral with floor, ceiling or roof slabs; part height solid walls glazed over to ceiling; unducted air-flow grilles; fire walls and smoke screens.</p> <p>It EXCLUDES “Internal Screens and Borrowed Light” (NS); wall finishes (WF); works in “Roof” (RF) and “Substructure” (SB); part height solid walls (NS); fireplaces, hearths, flues and stacks (SH, SS); beams integral with slabs (UF, RF).</p> <p><i>Note: Part height solid walls are screens (by definition) and included in element NS.</i></p>
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<p>NS</p>	<p>Internal Screens and Borrowed Lights - To screen off or temporarily divide internal spaces into separate compartments and to allow the transfer of light through “Internal Walls”.</p> <p>It INCLUDES proprietary type office partitioning; glazed screens; internal shop fronts; fold away and operable walls; overhead frameworks and supporting beams; chain wire and grille screens; toilet partitions and screen walls; borrowed lights; balustrades and rails not associated with staircases; all finishes and decorations.</p> <p>It EXCLUDES all doors (ND); counters and wall hatches (FT).</p>
<p>ND</p>	<p>Internal Doors - Passage ways through “Internal Walls” internal screens and partitions and to provide access to service cupboards and ducts.</p> <p>It INCLUDES frames; linings; glazing; architraves; pelmets; hardware and door grilles; chain wire and grille doors; toilet doors; cell and strong room doors; fire doors; roller shutters; service cupboard doors; duct access panels; fanlights and panels over and linings to blank openings; decoration.</p> <p>It EXCLUDES frames forming integral parts of demountable, wire mesh or glazed screens, etc (NS); lintels (NW); framing and glazing to sidelights to doors (NS).</p>

6.7 Internal Finishes

Note: Re – Finishes Generally:

Where a finish incorporates a special type of formwork, only that cost, which is extra over the cost of rough formwork is to be included in the finish. The rough formwork cost is part of the structure.

<p>WF</p>	<p>Wall Finishes - To finish and decorate all interior faces of “Columns”, “External Walls” and “Internal Walls”.</p> <p>It INCLUDES finishes to internal faces of external walls and columns; acoustic wall linings; extra costs involved for face bricks, face and coloured blocks and off form concrete; splashbacks, dados and regulation wall vents.</p> <p>It EXCLUDES finishes to “Internal Screens and Borrowed Lights” (NS); skirtings (FF) and cornices (CF); all external finishes to external walls and columns (EW); finishes to both sides of external screens (EW); all protective non-decorative coatings.</p> <p><i>Note: Finishes to “Internal Screens and Borrowed Lights” (NS) are included in that element.</i></p> <p><i>Finishes to internal faces of external screens, etc are included with the relevant sub-elements in “External Walls” (EW).</i></p>
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<p>FF</p>	<p>Floor Finishes - To provide a satisfactory finish to “Upper Floors” and “Substructure” for walking on.</p> <p>It INCLUDES all preparatory work and finishing; balcony floor finishes; skirtings; screeds; timber floor finishes; dividing strips; mats and matwells; duct and pit cover; carpeting used as a permanent floor finish; timber and other finishes to concrete floors; finishes to steps in the one floor level.</p> <p>It EXCLUDES structural screeds and toppings (SB, UF); landing and stair finishes (SC); trafficable roof covering (RF); timber framed floors (UF, SB); finishes to external thresholds (ED); door sills (ED, ND).</p> <p><i>Note: Element includes all floor finishes to areas measured in the “Gross Floor Area” (GFA).</i></p>
<p>CF</p>	<p>Ceiling Finishes - To finish and decorate all internal soffits of “Upper Floors” and “Roof” over rooms and external soffits over unenclosed covered areas.</p> <p>It INCLUDES preparatory work; suspended false ceilings; proprietary suspended ceiling systems; acoustic ceiling linings; extra costs involved for off form concrete; linings to roof lights; ceiling manholes; framing to bulkheads and cornices.</p> <p>It EXCLUDES eaves soffits (RF); stair and landing soffits (SC); ceiling joists where not suspended (UF, RF); soffits of projecting overhangs (EW); all protective non-decorative coatings (UF, SC, RF); air conditioning grilles (AC).</p>

6.8 Fittings

<p>FT</p>	<p>Fitments - To fit out the building with built-up fitments and fixed items included in the main contract.</p> <p>It INCLUDES benches; cupboards; shelving; racks; seats; counters; chalkboards; notice boards, signs and name plates; coat rails and hooks; mirrors; wall hatches; daises and stages.</p> <p>It EXCLUDES loose furniture and furnishings (YY); curtains and blinds (WW); “Special Equipment” (SE); “Internal Screens and Borrowed Lights” (NS).</p>
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SE	<p>Special Equipment - To provide items of equipment of unitary, commercially available type and/or of a type not covered by other elements.</p> <p>It INCLUDES window cleaning, gymnasium, mortuary and photographic equipment; audio-visual aids; laboratory, laundry, kitchen and central sterile services department (C.S.S.D) type equipment; dental and workshop equipment; boiling water units; sink heaters; laboratory stills; special blackout facilities; bed pan washers; linen and refuse disposal equipment; refrigerators and refrigerated drinking water coolers; incinerators; sanitary macerators; circulating fans; all cold, hot, gas and other valves and cocks, controls, electric wiring and piping integral with this equipment; specified Builders work in connection with this equipment.</p> <p>It EXCLUDES cool rooms and process cooling, incineration plant of custom design of built-up type, and other "Special Services" (SS) or "External Special Services" (XS); loose equipment not covered in the main contract (YY); fire fighting equipment (FP); "Sanitary Fixtures" (SF); refrigeration plant associated with air conditioning (AC).</p>
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6.9 Services

SF	<p>Sanitary Fixtures - To fit out the building with normal fixtures connected to the soil and waste plumbing systems and all associated ancillaries.</p> <p>It INCLUDES W.C. suites; urinals; basins; sinks and tubs; troughs and runnels; drinking fountains; slop hoppers; showers; hobs; shower curtains and trays; terminals outlets integral with fixtures; flusherette valves; soap and toilet paper holders; towel rails and hand driers.</p> <p>It EXCLUDES sanitary macerators, bed pan washers, kitchen, laundry and sterilising equipment and refrigerated drinking water coolers (SE); sanitary incinerators (SS); floor wastes and all loose traps (PD); terminal outlets not integral with fixtures (WS).</p>
PD	<p>Sanitary Plumbing - The disposal of all waste and soiled water from fixtures and equipment out to the external face of external walls.</p> <p>It INCLUDES stacks and vents; all loose traps; floor wastes; internal sewer drainage runs, pumps and ejectors; acid resisting pipes and drains; box ducting and paintwork.</p> <p>It EXCLUDES rainwater disposal systems (RF); incinerator flues (SE, SS, XS); duct access panels (ND).</p>

<p>WS</p>	<p>Water Supply - Systems to supply water from point of building entry to the points of consumption. The water may be at ambient temperature, heated or cooled and may be treated by clarification, filtration, softening, demineralisation, distillation, desalination or other means. The water may be supplied from town mains, bores, rivers, lakes, rainwater tanks, centralised energy systems or other sources.</p> <p>It INCLUDES storage tanks; pumps; water treatment plants; water heaters and coolers; reticulation pipework including pipeline components; terminal outlets not integral with fixtures and/or equipment; controls other than those associated with water consuming items of equipment; box ducting; insulation; sheathing; painting and identification; building and electrical work forming part of the Contract for water supply.</p> <p>It EXCLUDES meters, extensions and connections to town mains or other sources (XW); self-contained unitary equipment such as boiling water units, sink heaters and laboratory stills (SE).</p>
<p>GS</p>	<p>Gas Services - To supply town, natural, simulated natural and liquified petroleum gas from point of building entry to points of consumption. The gas may be supplied from town mains, storage cylinders, bulk storage tanks or other sources.</p> <p>It INCLUDES portable gas cylinders; booster compressors; manifolds and regulators; box ducting, painting and identification; building and electrical work forming part of the gas services element; reticulation pipework and pipeline components; terminal outlets not integral with fixtures and/or equipment; gas detection systems.</p> <p>It EXCLUDES outlet cocks integral with appliances (SE); hot water heaters (SE, WS); space heaters (SH) and other like equipment; meters and extensions and connections to town mains or other sources (XG).</p> <p><i>Note: Gas appliances forming part of an air conditioning, space heating water supply system or other system should be included under the appropriate element.</i></p> <p><i>Gas controls, valves, regulators and other pipelines components directly associated with gas fired equipment should be included under the element appropriate to the gas fired equipment.</i></p>

<p>SH</p>	<p>Space Heating - To heat the interior of buildings by means of convection, radiation or any other form of heating.</p> <p>It INCLUDES unitary heaters; reticulated steam, hot water or hot oil systems; warm air systems; electric floor or ceiling heating systems; fireplaces, hearths and associated work in chimney stacks; boiler plant installed within the heated building and servicing only element (SH) in that building; insulation and painting; controls and associated electrical work.</p> <p>It EXCLUDES any system which also provides air cooling (“Air Conditioning” (AC) or “Evaporative Cooling” (EC).</p> <p><i>Note: Boiler plant and pipe reticulation located outside the building served and serving multiple buildings, or serving other elements such as AC or WS to be included under “Centralised Energy Systems” (CE).</i></p> <p><i>Gas storage and reticulation systems to be included under “External Gas” (XG) if located outside the building served or if serving other elements, or “Gas Service” (GS) if located within the building served, otherwise to be included in SH.</i></p> <p><i>Electric cabling terminates at junction with “Electric Light and Power” (LP).</i></p> <p><i>Controls and electric wiring integral with equipment items to be included with those items.</i></p>
<p>VE</p>	<p>Ventilation - To ventilate buildings by means of supply and/or exhaust systems.</p> <p>It INCLUDES mechanical ventilators; non-mechanical roof ventilators; supply and/or exhaust fans; ducted systems; exhaust hoods; ducting, plant, controls and associated electrical work.</p> <p>It EXCLUDES any system, which also involves heating (SH); “Air-conditioning” (AC); “Evaporative Cooling” (EC); circulating fans (SE); regulation wall vents (WF); door grilles (ND); plant room air flow screens (EW); louvered windows (WW).</p> <p><i>Note: Dust extraction to be included under “Special Services” (SS).</i></p> <p><i>Electric cabling terminates at junction with “Electric Light and Power” (LP).</i></p>

<p>EC</p>	<p>Evaporative Cooling - To cool air within a building by evaporative processes; the system can include ancillary heating.</p> <p>It INCLUDES evaporative coolers, rock bed regenerative systems and ancillary heating devices; ducting, insulation, painting and associated electrical work.</p> <p>It EXCLUDES door grilles (ND); “Air Conditioning” (AC); systems which heat (SH) and/or ventilate (VE) only.</p> <p><i>Note: Air relief grilles in doors and walls to be included under respective building element.</i></p> <p><i>Electric cabling terminates at junction with “Electric Light and Power” (LP).</i></p>
<p>AC</p>	<p>Air-Conditioning - To maintain and control temperature, humidity and quality of air within predetermined limits within buildings.</p> <p>It INCLUDES package air conditioners; systems for cooling only; ductwork, plant, controls and associated electrical work; air conditioning grilles.</p> <p>It EXCLUDES door grilles (ND) and systems which heat (SH) and/or ventilate (VE) only; special cool rooms (SS); special hot rooms (SS); “Evaporative Cooling” (EC).</p>
<p>FP</p>	<p>Fire Protection - To detect and/or extinguish fires.</p> <p>It INCLUDES sprinklers and other automatic extinguishing systems; fire indicator board; manual and automatic fire alarm installations; fire fighting equipment; hydrant installations and hose reels and cupboards; hand appliances.</p> <p>It EXCLUDES fire doors (ED, ND); fire proofing (CL, UF, RF, WF, CF, etc).</p>
<p>LP</p>	<p>Electric Light and Power - To provide all light and power and emergency light and power from and including main distribution board to and including power outlets and light fittings.</p> <p>It INCLUDES main distribution board; sub-mains and distribution boards; emergency lighting systems; power sub-mains to mechanical equipment and sub-mains and/or sub-circuits to other equipment and/or final sub-circuits.</p> <p>It EXCLUDES other electrical installations listed under other elements such as “Special Services” (SS); “Communications” (CM) and “Centralised Energy Systems” (CE).</p> <p>*Where the main switchboard supplies only building, it shall be considered as a main distribution board.</p>

<p>CM</p>	<p>Communications - To provide audio and video communication within a building.</p> <p>It INCLUDES the following systems - Telecom telephone, internal telephone, public address, call, emergency warning and intercommunication, personal paging, clock and/or bell, TV antenna and closed circuit TV.</p> <p>It EXCLUDES document hoists and conveyor system (TS); cables between buildings (XC).</p> <p><i>Note: Document hoists and conveyor system to be included in TS. cables between buildings (XC).</i></p> <p><i>PABX telephone systems installed and funded separately from the building contract should be included under YY "Other Items".</i></p>
<p>TS</p>	<p>Transportation Systems - To transport personnel and/or goods from floor to floor or area to area.</p> <p>It INCLUDES all lifts, hoists and conveyor systems; escalators; all associated equipment and work other than structural building work.</p> <p>It EXCLUDES such items as walls to shafts and lift wells and machine rooms (EW, WW).</p>
<p>SS</p>	<p>Special Services - To provide services or installations not covered by other elements.</p> <p>It INCLUDES monitoring systems; cool rooms and process cooling; special conditioned rooms; staircase pressurisation systems; compressed air; medical and industrial gas systems; dust extraction systems; security systems; lightning protection; stage lighting and theatre equipment; reticulated soap dispenser systems; laundry, heat and water reclaim systems and the like.</p> <p>It EXCLUDES equipment items (SE); communication services (CM).</p>

6.10 Centralised Energy Systems

CE

Centralised Energy Systems - To produce and supply steam, heating, hot water, chilled water and/or other cooling or heating media and/or site generated electrical energy to a number of buildings and/or to multiple energy consuming elements.

It **INCLUDES** the piping reticulation within central plant room or plant house and up to branch off-takes to energy consuming functional elements; sections of the main piping reticulation running to, within or through buildings served; cabling within the central plant room or house and all work which forms part of the energy system element; buildings to house such plant, service tunnels, ducts and/or conduits.

It **EXCLUDES** emergency generating plant and cabling from central switchboard to other buildings (XE).

Note: Interfaces between element CE and other elements are those points where branches serve single elemental systems or where branches leave common mains within buildings to serve single elemental systems.

Centralised Energy Systems may range from very large boiler and/or chiller and/or electrical generating plants serving large and complex sites such as airports, major hospitals, universities or colleges to small boiler installations supplying energy to say space heating and domestic hot water systems in relatively small single buildings such as school classroom blocks, pavilion type hospital wards and so on.

Where energy generators supply the whole of their production to one functional system only and are contained within the alignment of the building served they are to be considered as part of that functional system.

Engineering systems serving the central plant room or plant house are to be included under appropriate elements for the building housing the centralised energy plant.

6.11 Alterations

AR	<p>Alterations and Renovations - To alter or renovate any existing building including works to the substructure, finishes, fittings and internal services.</p> <p>It INCLUDES work in connecting a new building to an existing; redecorations; refitting out and all mechanical and electrical services in connection therewith; underpinning to existing buildings for alteration works.</p> <p>It EXCLUDES complete demolitions of existing buildings, site clearance and removal of any paving, fences and outbuildings (XP); alterations and renovations to external services and site works (XX); any work involved in connecting new services to old in existing buildings (XW, XG, XE, etc)</p>
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6.12 Site Works

XP	<p>Site Preparation - All basic work necessary prior to proceeding with buildings and external works.</p> <p>It INCLUDES demolitions; site clearance; general levelling and filling; hoardings; retaining walls; removal of any paving, fences, trees and services; temporary diversions of services; underpinning to adjacent buildings.</p> <p>It EXCLUDES alterations and permanent diversion of services (XX); alterations to buildings (AR) and existing site works (XX); any work involved in permanent connections of new services to existing (XW, XG, XE, etc)</p>
XR	<p>Roads Footpaths and Paved Areas - Trafficable areas between and around buildings (outside “Fully Enclosed Covered Areas” and “Unenclosed Covered Areas” as defined, outbuildings, etc) for vehicles and pedestrians.</p> <p>It INCLUDES car parks; playgrounds; kerbs; crossovers; bollards; steps and associated balustrades; weed poisoning.</p> <p>It EXCLUDES uncovered bridge links (XB); sports pitches, lawns, site landscaping and improvements (XL); cut and fill (XP).</p>
XN	<p>Boundary Walls, Fencing and Gates - To enclose or define the extent of the site.</p> <p>It INCLUDES all walls, fences and gates at the site boundary.</p> <p>It EXCLUDES all walls, fences and gates that subdivide the site (XL); all retaining walls (XP).</p>

XB	<p>Outbuilding and Covered Ways - To provide small buildings supplementary to the main buildings(s) and covered areas or bridge links for pedestrian or vehicular site circulation.</p> <p>It INCLUDES detached covered ways not alongside buildings; garages; bicycle sheds; incinerator buildings; residential and gatekeepers cottages; garbage shelters; workshops; chapels; stores; sheds; stair blocks; all electrical, mechanical and other services in connection therewith.</p> <p>It EXCLUDES attached covered ways alongside buildings; boiler and plant houses (CE); water towers (XW); gas meter (XG) and water meter (XW) shelters; pump houses (XW), substations (XE) and similar engineering services buildings.</p>
XL	<p>Landscaping and Improvements - To improve the appearance of the site and provide incidental site facilities for the use of the occupants.</p> <p>It INCLUDES grassing and turfing; garden plots and planting; trees, screen, dwarf, play and entrance walls; seats; fountains; petrol bowsers (pumps) and tanks; sculptures; flagpoles; signs and notices; cricket nets and basketball posts; sports pitches and goal posts; open air swimming pools.</p> <p>It EXCLUDES paving (XR); site clearance (XP); “Boundary Walls, Fencing and Gates” (XN); walls required to retain the site (XP).</p>

6.13 External Services

XK	<p>External Stormwater Drainage - To dispose of rain and surface water from the site.</p> <p>It INCLUDES pipe runs from the external face of buildings; inspection pits; sumps; road gullies; culverts; box drains; grated trenches; runs from pools and fountains; outfalls and head walls; agricultural and sub-soil drains; connections to existing runs and pits.</p> <p>It EXCLUDES pipe runs, pits, etc. under buildings from internal downpipes (RF); road gutters (XR); temporary drainage as site preparation (XP); diversions to existing runs (XX).</p>
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<p>XD</p>	<p>External Sewer Drainage - To dispose of soil and waste water from the site.</p> <p>It INCLUDES pipe runs from the external face of buildings; grease gullies; inspection pits and manholes; acid resisting and special drains; dilution pits; petrol and plaster arrestors; septic tanks; collection and holding wells; absorption trenches; transpiration areas; pumps and ejectors; connections to existing runs, pits and mains.</p> <p>It EXCLUDES pipe runs, pits, etc beneath buildings (PD); diversions to existing runs (XX).</p>
<p>XW</p>	<p>External Water Supply - Systems to supply water up to the external faces of new buildings and up to other major consuming points such as swimming pools, fountains, artificial ponds, irrigation and ground watering outlets. The water may be at ambient temperature, heated or cooled and may be treated by clarification, filtration, softening, demineralisation, distillation, desalination or other means. The water may be supplied from town mains, bores, rivers, lakes, rainwater tanks, centralised energy systems or other sources.</p> <p>It INCLUDES storage tanks; water towers; pumps; water treatment plants; water heaters and coolers; reticulation pipework including pipeline components; terminal outlets not integral with fixtures and/or equipment; insulation; sheathing; painting and identification; meters and meter enclosures included under the contract; water bores; irrigation and ground watering systems; building and electrical work forming part of this element.</p> <p>It EXCLUDES diversion to existing runs (XX).</p>
<p>XG</p>	<p>External Gas - To supply town, natural, simulated natural and liquified petroleum gas up the external faces of new buildings and other consuming points. The gas may be supplied from town mains, storage cylinders, bulk storage tanks or other sources.</p> <p>It INCLUDES storage cylinders and tanks, meters and regulators forming part of the contract; meter enclosures; reticulation pipework and pipeline components; building and electrical work forming part of the external gas supply Contract.</p> <p>It EXCLUDES diversions to existing runs (XX).</p>

<p>XF</p>	<p>External Fire Protection - To supply fire hydrant and gas or vapourising agent runs up to external faces of new buildings, external sprinkler systems, and for site connections and connection of fire detection systems between buildings. Also to detect and/or extinguish fires in fixed plant or equipment located in the open air.</p> <p>It INCLUDES standby and booster pumps; pipe runs; storage and reticulation of gas and vaporising agents; hydrant points; overhead and underground cables and fire detection systems.</p> <p>It EXCLUDES trenches for cabling (XE).</p>
<p>XE</p>	<p>External Electric Light and Power - To supply electric power to main distribution boards of buildings and to provide lighting and power to external site areas.</p> <p>It INCLUDES connections to source of power supply; consumers mains; substation equipment; emergency generating plant; main switchboard, under-ground and overhead cables; pylons and all trenches for cabling; street and area lighting; illuminated signs and building flood lighting.</p> <p>It EXCLUDES communications cables (XC); work to existing electrical work (XX).</p> <p><i>Note: Communications cables to be included in XC.</i></p> <p><i>Fire Alarm cables to be included in XF.</i></p> <p><i>* Where the main switchboard supplies only one building, it shall be considered as a main distribution board and included in LP.</i></p>
<p>XC</p>	<p>External Communications - To provide external communication cables to terminating frames of buildings and to provide communication systems between buildings and to external site areas.</p> <p>It INCLUDES Telecom Australia work; underground and overhead cables; pylons; connections to existing cables; external speakers; hooters; clocks; bells; closed circuit T.V.; community antenna systems.</p> <p>It EXCLUDES trenches for cabling (XE).</p>
<p>XS</p>	<p>External Special Services - To provide external service or installations not included in other elements.</p> <p>It INCLUDES external connections to items included in “Special Services” (SS); service tunnels, ducts and conduits in connection with external reticulation of Services elements; dust extraction plant; incineration plant; bulk storage for medical and industrial gases.</p>

6.14 External Alterations

XX	<p>External Alterations and Renovations - To alter or renovate any existing site works and external services.</p> <p>It INCLUDES resurfacing paved and grassed areas; renovating outbuildings; renewing fencing and gates; permanent diversion of drainage, cold water and other external service runs.</p> <p>It EXCLUDES renovating existing buildings (AR).</p>
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6.15 Special Provisions

YY-PF	<p>Special Provisions - Items not included in the Net Project Cost but which need to be included to make up the Gross Project Cost.</p> <p><i>Note: These items must be estimated by the project Cost Planner in consultation with the Client and the Project Manager.</i></p>
ET	<p>Escalation to Tender - An appropriate allowance for future cost increases from the date of estimate to the anticipated tender date.</p>

7 ELEMENTAL UNITS OF MEASUREMENT (AIQS)

7.1 Background

BMW is using the Elemental Units of Measurement taken from Appendix A, Part 4 of *Australian Cost Management Manual*, Volume 1, 2nd Edition, 2013, published by Australian Institute of Quantity Surveyors, Sydney, NSW.

7.2 Unit Rate

The Unit Rate for an element is derived by dividing the quantity of the element into the total cost of the element.

7.3 Standard List of Elemental Units

The standard list of elemental units of measurement is as follows:

Code	Element	Unit	Measurement
SB	Substructure	m ²	Area of building at lowest floor level measured over external walls and including full measurement of Unenclosed Covered Area.
CL	Columns (Framed Buildings)	m ²	Total supported area, i.e. elemental measurements UF + SC + RF.
UF	Upper Floors	m ²	Total area of upper floors measured to extremities of slab areas including balconies and incorporated sunhoods with deduction for staircases (but not for steps in the one floor level).
SC	Staircases	m ²	Measurement on plan (landings and flights) measured once at each upper floor level served.
RF	Roof	m ²	Plane of soffit (i.e. plan of ceiling) measured to the extremities of overhangs over fascias, parapets, etc.
EW	External Walls	m ²	Area of external walls of the building measured on the general inside face of the wall from the lowest floor finish to the highest ceiling level with deductions for WW and ED element quantities.
WW	Windows	m ²	Areas to be calculated from window sizes.

Code	Element	Unit	Measurement
ED	External Doors	m ²	Areas to be calculated from door sizes. Area of door plus area of panels and highlights over. Where sidelights occur the whole except only doors is measured and treated as glazed screens in EW.
NW	Internal Walls	m ²	Areas are exclusive of doors etc.
ND	Internal Doors	m ²	Area of doors.
WF	Wall Finishes	m ²	WF = 2/NW + EW (less the measurement of any glazed or self-finished areas occurring in curtain or screen wall sub-elements).
FF	Floor Finishes	m ²	
CF	Ceiling Finishes	m ²	CF = net area of ceilings to all floor areas of the building measured in the plane of the ceiling (excluding returns to sides beams etc).
FT	Fitments	m ²	
SE	Special Equipment	m ²	
SF	Sanitary Fixtures	No.	Number of sanitary fixtures.
PD	Sanitary Plumbing	N/A	
WS	Water Supply	N/A	
GS	Gas Service	N/A	
SH	Space Heating	m ²	Treated Area
VE	Ventilation	m ²	Treated Area
EC	Evaporative Cooling	m ²	Treated Area
AC	Air Conditioning	m ²	Treated Area
FP	Fire Protection	N/A	

Code	Element	Unit	Measurement
LP	Electric Light and Power	N/A	
CM	Communications	N/A	
TS	Transportation Systems	N/A	
SS	Special Services	N/A	
AR	Alterations and Renovations	N/A	
XP	Site Preparation	m ²	Treated Area
XR	Roads, Footpaths and Paved Areas	m ²	Treated Area
XN	Boundary Walls, Fencing and Gates	m	Total Length of Fencing and walls
XB	Outbuildings and Covered Ways	m ²	FECA plus UCA of structures not included in the main GFA
XL	Landscape and Improvements	m ²	Treated Area
XK	External Stormwater Drainage	None	
XD	External Sewer Drainage	None	
XW	External Water Supply	None	
XG	External Gas	None	
XF	External Fire Protection	None	

Code	Element	Unit	Measurement
XE	External Electric Light and Power	None	
XC	External Communications	None	
XS	External Special Services	None	
XX	External Alterations and Renovations	None	
YY	External Special Provisions	None	

N/A = Not Applicable. An appropriate quantity may be given for these elements if deemed necessary.

8 RESERVED

This Section is reserved for future use.

9 RESERVED

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10 APPENDIX 1: BMW PROFORMA COST PLAN

BMW PROJECT CAPITAL COST PLAN																																																																							
<p>A. Fill in each of the boxes or write "n/a" if the element is not applicable</p> <p>B. Elemental Costs include relevant contingencies, locality costs, market conditions and escalation during construction</p> <p>C. All Elemental Costs are exclusive of GST</p> <p style="text-align: right; font-size: small;">Template Version 2018-1.1</p>																																																																							
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<p>Is there an asset disposal associated with this project? No <input checked="" type="checkbox"/> Yes <input type="checkbox"/></p> <p>(if so, please include a separate anticipated revenue cashflow information.)</p>																																																																							

PROJECT COST PLANNING AND MANAGEMENT GUIDELINE

PROJECT COST PLAN SUMMARY				
A. Fill in each of the boxes or write "n/a" if the element is not applicable				
B. Elemental Costs including relevant contingencies, locality costs*, market conditions and escalation during construction				
C. All Elemental Costs are exclusive of GST				
<small>Template Version 2018-1.1</small>				
Prepared by		Cost Plan Base Date		
BMW Project Manager		Building Cost Index	1.00	
Client Agency		Cost Plan Version No.		
Project Phase / Type		Cost Plan issued on		
Project Risk Level				
PROJECT TITLE				
Location				
BUILDINGS				
(From Single Building Cost Plans)				
	GFA	GFA Rate	Elemental Cost	
1			\$	-
2			\$	-
3				
4				
5				
Total GFA and Building Cost			\$	-
Code	AIQS Element			
CE	Centralised Energy Systems		Insert N/A	
AR	Alterations and Renovations		Insert N/A	
XP	Site Preparation		Insert N/A	
XR	Roads, Footpaths and Paved Areas		Insert N/A	
XN	Boundary Walls, Fencing and Gates		Insert N/A	
XB	Outbuildings and Covered Ways - Carports		Insert N/A	
XL	Landscaping and Improvements		Insert N/A	
External Works Subtotal (CE to XL)			Insert N/A	
XK	External Stormwater Drainage		Insert N/A	
XD	External Sewer Drainage		Insert N/A	
XW	External Water Supply		Insert N/A	
XG	External Gas		Insert N/A	
XF	External Fire Protection		Insert N/A	
XE	External Electric Light and Power		Insert N/A	
XC	External Communications		Insert N/A	
XS	External Special Services		Insert N/A	
External Services Subtotal (XK to XS)			Insert N/A	
XR	Roads, Footpaths and Paved Areas		Insert N/A	
XK	External Stormwater Drainage		Insert N/A	
XD	External Sewer Drainage		Insert N/A	
XW	External Water Supply		Insert N/A	
XG	External Gas		Insert N/A	
XE	External Electric Light and Power		Insert N/A	
XC	External Communications		Insert N/A	
Sub-Division Works and Services Subtotal (XR to XC)			Insert N/A	
XX	External Alterations and Renovations		Insert N/A	
PR	Proportion of Preliminaries		Insert N/A	
TOTAL CONSTRUCTION COST - PERTH PRICES SUBTOTAL			Insert N/A	
REGIONAL LOADING (% figure acceptable Evaluation Phase only)				
TOTAL CONSTRUCTION COST			Insert N/A	
BMW Managed Costs				
YY	Planning Contingency		5.00%	
YY	Design Contingency		10.00%	
YY	Construction Contingency		10.00%	
YY	Headworks and Statutory Charges		Item	
YY	Building Act Compliance		0.50%	
YY	Percent for Public Art		1.00%	
LC	Land Acquisition & Native Title Compensation (if applicable & BMW Managed)		Item	
FE	Loose Furniture and Equipment (BMW Managed)		10.00%	
YYS	Other Costs - Special Provisions (BMW Managed)		Item	
YYS	Commissioning, Relocation Costs and Disbursements (BMW Managed)		Item	
YYS	Computing Equipment and Services (BMW Managed)		4.00%	
PF	Professional Fees - Perth Prices		12.00%	
PF	Professional Fees - Disbursements		12.00%	
TOTAL NET PROJECT COST (at Current Prices)				
ET	Escalation to Tender	Tender Date		
		BCI	1.15	
ESCALATED NET PROJECT COST				
BMW	BMW Management Fees		5.00%	
ESTIMATED BMW PROJECT TOTAL COST				
Client Agency Managed Costs (NOT managed by BMW)				
YYS	Special Client Agency Provisions		Item	
YYS	Client Agency Project Director / Professional Fees		1.20%	
YYS	Client Agency Administration Fees		3.00%	
YYS	Client Agency Commissioning, Relocation and Disbursements		1.00%	
YYS	Client Agency Land Costs & Native Title Comp. (if applicable & Agency Managed)		Item	
YYS	Client Agency Loose Furniture and Equipment		10.00%	
YYS	Client Agency Computing Equipment and Services		4.00%	
YYS	Client Agency Site Master Planning		Item	
YYS	Other Special Client Agency Provisions		Item	
YYS	Total Client Agency Managed Costs (NOT managed by BMW)			
ESTIMATED GROSS PROJECT (COMMITMENT) TOTAL COST				
GOODS and SERVICES TAX				

SINGLE BUILDING COST PLAN					
					Template Version 2018-1.1
Prepared by				Cost Plan Base Date	
BMW Project Manager				Building Cost Index	1.00
Client Agency				Cost Plan Version No.	
Project Phase / Type				Cost Plan issued on	
Building Risk Level					
Building					
Number of Storeys		Fully Enclosed Covered Area			
Location		Unenclosed Covered Area			
Functional Unit		Gross Floor Area (GFA)			
Function Quantity		Usable Floor Area			
Code	AIQS Element	Elemental Quantity	Elemental Rate	GFA Rate	Elemental Cost
SB	Substructure		Insert N/A	Insert N/A	
CL	Columns		Insert N/A	Insert N/A	
UF	Upper Floors		Insert N/A	Insert N/A	
SC	Staircases		Insert N/A	Insert N/A	
RF	Roof		Insert N/A	Insert N/A	
EW	External Walls		Insert N/A	Insert N/A	
WW	Windows		Insert N/A	Insert N/A	
ED	External Doors		Insert N/A	Insert N/A	
NW	Internal Walls		Insert N/A	Insert N/A	
NS	Internal Screens and Borrowed Lights		Insert N/A	Insert N/A	
ND	Internal Doors		Insert N/A	Insert N/A	
Superstructure Subtotal (CL to ND)				Insert N/A	
WF	Wall Finishes		Insert N/A	Insert N/A	
FF	Floor Finishes		Insert N/A	Insert N/A	
CF	Ceiling Finishes		Insert N/A	Insert N/A	
Finishes Subtotal (WF to CF)				Insert N/A	
FT	Fitments		Insert N/A	Insert N/A	
SE	Special Equipment			Insert N/A	
Fittings Subtotal (FT & SE)				Insert N/A	
SF	Sanitary Fixtures			Insert N/A	
PD	Sanitary Plumbing		Insert N/A	Insert N/A	
WS	Water Supply			Insert N/A	
GS	Gas Service		Insert N/A	Insert N/A	
SH	Space Heating		Insert N/A	Insert N/A	
VE	Ventilation		Insert N/A	Insert N/A	
EC	Evaporative Cooling		Insert N/A	Insert N/A	
AC	Air Conditioning		Insert N/A	Insert N/A	
FP	Fire Protection		Insert N/A	Insert N/A	
LP	Light and Power		Insert N/A	Insert N/A	
CM	Communications		Insert N/A	Insert N/A	
CM	Transportation Systems			Insert N/A	
TS	Special Services			Insert N/A	
SS	Special Services			Insert N/A	
Services Subtotal (SF to SS)				Insert N/A	
PR	Proportion of Preliminaries			Insert N/A	
BUILDING COST TOTAL				Insert N/A	

11 APPENDIX 2: AGENCY SPECIFIC VARIATIONS

11.1 Background

This appendix provides information for Cost Managers on Agency Specific Variations that have been agreed to by BMW.

When directed by the BMW Project Manager they are to be applied by Cost Managers to Project Cost Planning for the specific agency's projects.

Cost Managers and Agencies are to refer to the BMW Project Manager for any project specific cost planning advice.

Cost Managers are to bring to the attention of the BMW Project Manager significant inconsistencies between the Agency Specific Variations and accepted cost management standards.

Unless otherwise specified the method of applying the Agency Specific Variations (eg contingencies, percentage allocation for costs, etc) does not change.

11.2 Australasian Health Facility Guidelines (AHFG) Circulation Allowance Guidance for Health Projects

The following guidance is applicable to **any** health or health related project and is current as at the date stated.

Before using any of the allowances provided below check for updates and revisions at: www.healthfacilityguidelines.com.au

Australasian Health Facility Guidelines (AHFG) Revision 5.0 (published 1st March 2016) in Part C gives the following guidance: *“Clearly circulation percentages will vary as a result of the configuration of the unit, including the use of a racetrack arrangement or double loaded corridors. Schedules of Accommodation provided within each HPU should be consulted for more detailed and accurate allowances. The actual spatial allocation will depend on the role delineation of the service, the re-use of existing buildings and the skill of the individual designer. The provision of appropriate areas for circulation requirements will be tested during the preliminary design phases. Both under and over provision of circulation space should be avoided.”*

AHFG do not provide circulation allowance guidance for Health Planning Unit Functional Zones which typically have project specific requirements.

AHFG in Part B Health Planning Units (HPU) lists the following discounted circulation allowances as guidance:

AHFG Health Planning Unit <i>(Revision Number and published date)</i>	Functional Zone	Discounted Circulation Allowance
Administration Unit (0120) <i>(Revision 5.0 published 01 March 2016)</i>	Support Areas	25% - 30%
	Offices	25% - 30%
	Workstations	25% - 30%
	Meeting Rooms	25% - 30%
Mental Health – Overarching Guideline (0131) <i>(Revision 1 published 14 March 2018)</i>	---	---

AHFG Health Planning Unit <i>(Revision Number and published date)</i>	Functional Zone	Discounted Circulation Allowance
Child and Adolescent Mental Health Unit (0132) <i>(Revision 7.0 published 21 December 2016)</i>	Entry / Reception / Waiting	32%
	Assessment / Meeting Rooms	32%
	Bedrooms	32%
	Inpatient Unit – Activity and Recreation Areas	32%
	Clinical Support Areas	32%
	Staff Areas - Offices and Amenities	25%
Psychiatric Emergency Care Centre PECC (0133) <i>(Revision 6.0 published 21 December 2016)</i>	Entry / Assessment Areas	32%
	Consumer Areas	32%
	Clinical Support Areas	32%
	Staff Areas – Offices and Amenities	32%
Adult Acute Mental Health Inpatient Unit (0134) <i>(Revision 6.0 published 01 March 2016)</i>	Main Entry / Reception	---
	General / Open Zone	32%
	High Dependency Zone	32%
	Secure Entry Zone	32%
	Shared Clinical Support Areas	32%
	Staff Offices & Amenities (Determined by Staff Establishment)	20% - 25%
Older Persons Acute Mental Health Unit (0135) <i>(Revision 2.0 published 01 March 2016)</i>	Entry / Reception	32%
	Consumer / Patient Area – 8 Bed Cluster	32%
	High Dependency Unit - 4 Bedded	32%
	Clinical Support Areas	32%

AHFG Health Planning Unit <i>(Revision Number and published date)</i>	Functional Zone	Discounted Circulation Allowance
Non Acute Inpatient Mental Health Unit (0136) <i>(Revision 2.0 published 01 March 2016)</i>	Main Entry / Reception	32%
	Secure Entry Zone	32%
	Consumer / Patient Area (20 Bed Unit)	32%
	Low Stimulus Area - Optional	32%
	Clinical Support	32%
Mental Health Intensive Care Unit (0137) <i>(Revision 2.0 published 01 March 2016)</i>	Main Entry / Reception	32%
	Consumer Area	32%
	Low Stimulus Area	32%
	Clinical Support	32%
	Secure Entry Zone	32%
Allied Health Therapy Unit (0140) <i>(Revision 6.0 published 01 March 2016)</i>	Entry / Reception	30%
	Assessment / Treatment Areas – Physiotherapy	30% - 32%
	Assessment / Treatment Areas – Occupational Therapy	30%
	Assessment / Treatment Areas – Speech Pathology	30% - 32%
	Assessment / Treatment Areas – Other Allied Health	30% - 32%
	Support Areas	25%
	Staff Areas – Offices and Amenities	20%
	Other Areas - Hydrotherapy	20%

AHFG Health Planning Unit <i>(Revision Number and published date)</i>	Functional Zone	Discounted Circulation Allowance
Ambulatory Care Unit (0155) <i>(Revision 6.0 published 01 March 2016)</i>	Entry / Reception / Waiting	32%
	Patient Areas	32%
	Clinical Support	32%
	Staff Areas	32%
Cardiac Investigation Unit (0170) <i>(Revision 2.0 published 01 March 2016)</i>	Entry / Reception	32%
	Diagnostic Areas	32%
	Cardiac Catheter Laboratory	35%
Sterilizing Services Unit (0190) <i>(Revision 6.0 published 18 May 2016)</i>	Sterilizing Services Unit - Entry	20%
	Sterilizing Services Unit - Processing Areas	20%
	Sterilizing Services Unit - Support Areas	20%
	Sterilizing Services Unit - Staff Areas	20%
	Endoscopy Reprocessing Unit	20%
Health Information Unit (0240) <i>(Revision 6.0 published 01 March 2016)</i>	Entry / Reception / Waiting Areas	15%
	Assembly / Sorting / Scanning	15%
	File Store	15%
	Staff Offices	15%
	Staff Amenities	15%
Community Health (0255) <i>(Revision 6.0 published 01 March 2016)</i>	Main Entrance and Waiting Areas	25% - 32%
	Patient Areas	25% - 32%
	Clinical Support Areas	25% - 32%

AHFG Health Planning Unit <i>(Revision Number and published date)</i>	Functional Zone	Discounted Circulation Allowance
	Specialist Areas – Pharmacotherapy Unit	25% - 32%
	Staff Areas	25%
	Service Entry / Exit	25% - 32%
Cardiac Care Unit (0260) <i>(Revision 7.0 published 14 March 2018)</i>	Patient Areas	38%
	Clinical Support Areas	38%
	Staff Areas – Office Space and Amenities	38%
Day Surgery / Procedure Unit (0270) <i>(Revision 6.0 published 29 June 2016)</i>	Entry / Reception / Waiting	25%
	Patient Preparation and Holding Area	35%
	Operating / Procedure Rooms	35%
	Recovery Areas	35%
	Clinical Support	35%
	Staff Areas	15%
Oral Health Unit (0280) <i>(Revision 6.0 published 01 March 2016)</i>	Entry / Reception / Waiting	25% - 35%
	Treatment Areas	25% - 35%
	Support Areas	25% - 35%
	Staff Areas	25% - 35%
Emergency Unit (0300) <i>(Revision 6.0 published 01 March 2016)</i>	Entry / Reception	30%
	Triage / Reception	30%
	Treatment Cluster	40%
	Support Areas	30%

AHFG Health Planning Unit <i>(Revision Number and published date)</i>	Functional Zone	Discounted Circulation Allowance
	Short Stay Unit	30%
	Staff Areas	30%
Medical Assessment Unit (0330) <i>(Revision 2.0 published 01 March 2016)</i>	---	---
Inpatient Accommodation Unit (0340) <i>(Revision 6.0 published 05 April 2018)</i>	Patient Areas	32%
	Support Areas	32%
	Staff Areas – Offices and Amenities	32%
	Shared Areas	32%
Multipurpose Service Unit (0350) <i>(Revision 7.0 published 01 March 2016)</i>	Entry / Reception	32%
	Primary / Ambulatory Care Zone	32%
	Treatment and Imaging Zone	32%
	Inpatient Zone (4 Beds)	32%
	Residential Zone (12 Beds)	32%
	Clinical Support Zone	32%
	Support Zone and Mortuary	32%
Intensive Care – General (0360) <i>(Revision 6.0 published 01 March 2016)</i>	Entry / Reception	25%
	Patient Areas	40%
	Staff Areas	25%
	Support Areas – Clinical and Non Clinical	25%

AHFG Health Planning Unit <i>(Revision Number and published date)</i>	Functional Zone	Discounted Circulation Allowance
Intensive Care Unit – Neonatal Special Care Nursery (0390) <i>(Revision 6.0 published 01 March 2016)</i>	Entry / Reception Area	25%
	Inpatient Areas	25%
	Clinical Support	40%
	Family Support Areas	25%
	Staff Offices and Amenities	25%
Front of House Unit (0430) <i>(Revision 6.0 published 21 December 2016)</i>	Main Entrance	25%
	Public Amenities	25%
	Retail Space	---
	Multi-Faith Space	15%
	Admissions Unit	25%
Medical Imaging Unit (0440) <i>(Revision 6.0 published 01 March 2016)</i>	Entry / Reception / Clerical	35%
	Support Areas	35%
	General X-ray & Fluoroscopy (Screening)	35%
	Ultrasound & Mammography	35%
	Angiography / DSA	35%
	CT Scanning	35%
	MRI	35%
	Patient Holding / Recovery	35%
	Staff Offices and Reporting	35%
	Staff Areas	35%

AHFG Health Planning Unit <i>(Revision Number and published date)</i>	Functional Zone	Discounted Circulation Allowance
Hospital Mortuary Autopsy Unit (0490) <i>(Revision 6.0 published 01 March 2016)</i>	Entry Lobby / Administration / Exit Lobby	20%
	Body Holding	20%
	Waiting / Viewing	20%
	Mortuary – One Room Autopsy Unit	20%
Nuclear Medicine / PET Unit (0500) <i>(Revision 6.0 published 23 May 2016)</i>	Entry / Reception	15%
	Waiting – Dosed	15%
	Imaging Areas – Nuclear Medicine	35%
	Imaging Areas – PET Scanning	35%
	Patient Holding / Recovery	35%
	Clinical Support – General	35%
	Staff Areas	25%
	Cyclotron and Radiopharmaceutical Science Laboratory	---
Maternity Unit (0510) <i>(Revision 7.0 published 18 May 2017)</i>	Entry / Reception / Waiting	15%
	Assessment / Early Pregnancy Unit	32%
	Day Stay Unit	32%
	Birth Unit	35%
	Inpatient Unit – Antenatal / Postnatal	35%
	Staff Areas and Amenities	25%
Operating Unit (0520) <i>(Revision 6.0 published 05 July 2018)</i>	Entry / Reception / Waiting Area	30%
	Preoperative Holding Area	40%
	Operating Room Area	40%

AHFG Health Planning Unit <i>(Revision Number and published date)</i>	Functional Zone	Discounted Circulation Allowance
	Clinical Support Areas	40%
	Recovery Area	40%
	Staff Areas - Amenities	40%
	Staff Areas – Office and Support Space	25%
Paediatric / Adolescent Unit (0540) <i>(Revision 6.0 published 07 June 2016)</i>	Entry / Reception / Waiting	32%
	Ambulatory Care	32%
	Inpatient Areas	32%
	Inpatient Areas – Child Specific Space	32% - 35%
	Inpatient Areas - Adolescent Specific Space	32% - 35%
	Clinical Support Areas	32% - 35%
	Staff Areas	20% - 30%
Pathology Unit (0550) <i>(Revision 6.0 published 01 March 2016)</i>	Specimen Collection	32%
	Specimen Collection / Processing	32%
	Laboratories	32%
	Support Areas	32%
	Staff Areas	25%
Pharmacy Unit (0560) <i>(Revision 6.0 published 01 March 2016)</i>	Entry / Reception / Waiting	---
	After – Hours Drug Store	---
	Assembly / Dispensing and Preparation	20% - 25%
	Aseptic Manufacturing	25%

AHFG Health Planning Unit <i>(Revision Number and published date)</i>	Functional Zone	Discounted Circulation Allowance
	Goods Receipt / Bulk Store / Drug Store Area	20% - 25%
	Staff Areas	20% - 25%
Radiation Oncology Unit (0600) <i>(Revision 6.0 published 01 March 2016)</i>	Entry / Reception / Waiting	30%
	Outpatient Clinics	30%
	Patient Areas – Planning and Treatment	30%
	Mould Room / Appliance Fabrication	30%
	Planning Areas	35%
	Treatment – Bunkers	35%
	Treatment – Brachytherapy Suite	35%
	Patient Holding and Recovery	30%
	Clinical Support Areas	30%
	Staff Offices and Amenities	25%
Rehabilitation Inpatient Unit (0610) <i>(Revision 3.0 published 14 March 2018)</i>	Inpatient Areas – Bed Rooms	38%
	Inpatient Areas – Shared	38%
	Clinical Support	38%
	Staff Areas – Office Space and Amenities	25%
	Therapy Space	30%
Renal Dialysis Unit (0620) <i>(Revision 6.0 published 24 May 2016)</i>	Entry / Reception / Waiting	30%
	Treatment Area	35%
	Support Areas	25%

AHFG Health Planning Unit <i>(Revision Number and published date)</i>	Functional Zone	Discounted Circulation Allowance
	Staff Areas	25%

11.3 Department of Education

The following agency specific variations apply to Project Cost Planning for Department of Education.

11.3.1 Background

The Primary School Brief and Secondary School Planning Guide specifies the requirements for new schools. Refer to the latest versions at:

http://www.finance.wa.gov.au/cms/Building_Management_and_Works/Primary_School_Brief/Primary_School_Brief.aspx

Please note that both publications have separate logins and passwords, and the passwords expire periodically. To obtain a login or reset passwords, please send a request to the relevant email address:

primary.school.brief@finance.wa.gov.au

secondary.school.planning.guide@finance.wa.gov.au

11.3.2 Circulation

The Schedules of Accommodation in the Primary School Brief and Secondary School Planning Guide contain details of the specific circulation allowances by building type.

11.4 Department of Justice (Attorney General Services)

The following agency specific variations apply to Project Cost Planning for Department of Justice (Attorney General Services).

11.4.1 General

The Courts Standard Design Brief specifies the generic requirements of a Courthouse. Refer to the latest version at:

http://www.courts.dotag.wa.gov.au/files/courts_design_brief.pdf

11.4.2 Circulation

Courthouse designs require unique and specific requirements for circulation. Refer to the Courts Standard Design Brief for guidance.

11.4.3 Travel

Courthouse designs require unique and specific requirements for travel. Refer to the Courts Standard Design Brief for guidance.

11.5 WA Country Health Service, Department of Health

The following agency specific variations apply to Project Cost Planning for WA Country Health Service.

11.5.1 Client (WACHS) Project Direction / Professional Fees

WACHS Project Cost Planning will generally include a Client Project Direction / Professional Fees allowance of 1.2% to 1.5% of the Estimated BMW Project Total Cost, with adjustments made on a project by project basis.

Client (WACHS) Project Direction is for the ongoing WACHS project direction services that are anticipated to be required through to, and including, the construction phase.

Client (WACHS) Professional Fees includes all of the early planning work undertaken by WACHS, for example: development of service plans, development of concept briefs and business case development.

How to apply:

$$\begin{aligned} & \text{Estimated BMW Project Total Cost \$} \\ \times & \text{ Client (WACHS) Project Direction / Professional Fees \%} \\ = & \text{ Client (WACHS) Project Direction / Professional Fees \$} \end{aligned}$$

11.5.2 Client (WACHS) Administration Fees

WACHS Project Cost Planning will generally include a Client Administration Fees allowance of 3% of the Estimated BMW Project Total Cost. The allowance is to cover project officer/s's salary and on-costs, staff travel costs, client team administration, procurement officers, finance officers, etc. These costs are for the duration of the project and for a period after handover to WACHS.

How to apply:

$$\begin{aligned} & \text{Estimated BMW Project Total Cost \$} \\ \times & \text{ Client (WACHS) Administration Fees \%} \\ = & \text{ Client (WACHS) Administration Fees \$} \end{aligned}$$

11.5.3 Client (WACHS) Operational Commissioning, Relocation & Disbursements

WACHS Project Cost Planning will generally include a Client Operational Commissioning, Relocation & Disbursements allowance of a minimum of 1%.

This allowance may be a percentage of the Estimated BMW Project Total Cost or a calculated estimate. The allowance is to cover costs for marketing and

communications, rented alternative premises (if relocation is required during construction/staging), removalists, clinical cleaning and general cleaners, handymen for assembling of furniture / equipment, temporary staffing (clinical / support services / maintenance) and to assist with the transition as required. The allowance may include decommissioning of redundant facilities, but will not include any demolition works.

How to apply:

$$\begin{aligned}
 & \text{Estimated BMW Project Total Cost \$} \\
 \times & \text{ Client (WACHS) Commissioning, Relocation and Disbursements \%} \\
 = & \text{ Client (WACHS) Commissioning, Relocation and Disbursements \$}
 \end{aligned}$$

11.5.4 Planning Contingency

Generally WACHS Project Cost Planning will not include a Planning Contingency due to the planning processes undertaken for all projects. This may be adjusted in circumstances when discussed and agreed by BMW and WACHS.

Note: When a Planning Contingency is not included, project governance will manage scope of a project to contain the estimated total cost until completion of Schematic Design. The BMW endorsement of a Business Case will include a condition to effect this.

For how to apply refer to Section 4.22.

11.5.5 Design Contingency

WACHS Project Cost Planning will generally include a Design Contingency of 5%.

Note: When a Design Contingency is reduced below 10%, project governance will manage scope of a project to contain the estimated total cost until completion of Contract Documentation (ConDocs). The BMW endorsement of a Business Case will include a condition to effect this.

For how to apply refer to Section 4.23.

11.5.6 Construction Contingency

WACHS Project Cost Planning will generally include a Construction Contingency of 5% for new build and 7.5% for refurbishment/fit-out.

For how to apply refer to Section 4.24.

11.5.7 Public Art

Refer to Section 4.27.

11.5.8 Loose Furniture and Equipment (also known as Furniture, Fixtures & Equipment (FF&E))

WACHS Project Cost Planning will generally include an allowance of 10% for Furniture, Fixtures & Equipment (FF&E). Generally this is to be inclusive of any freight (delivered to site) and storage (pre and post delivery) costs, however can be reviewed on a project by project basis where, for example, transferring a large percentage of furniture and equipment from an existing facility.

FF&E can be defined as any item of furniture, fixtures, or other equipment that have no permanent connection to the structure of a building or utilities.

FF&E is classified into four groups, based on AHFG Revision 5.0 (published 1st March 2016) Part F, as follows:

Group 1 - items supplied and fixed by the contractor. These are included in the construction contract;

Group 2 - items supplied (funded and delivered) by the client and fixed by the contractor. These include items that are transferred but require installation by the contractor, or where the client chooses to buy a piece of equipment and give it to the contractor for installation;

Group 2 will be split into installation and other costs. With installation appearing as part of the BMW Estimated Total Cost and all other costs appearing as part of the Client Agency Managed Costs (NOT managed by BMW). The installation of these items forms part of the Construction Contract. An itemised list of individual items to be installed is to be provided to the BMW Project Manager for inclusion in the relevant stage documentation.

Group 3 - items supplied and installed by the client. These include all moveable items that can easily be transferred or installed by staff and major items of electromedical equipment that are purchased from the project budget, but are installed and commissioned by a third party; and

Group 4 - consumable items purchased and installed by the client outside the capital budget. This category includes bed linens, foodstuffs and disposable supplies. As these items are generally operational costs and not capital items they should not appear on the cost plan.

Group 3 and Group 4 items are managed by WACHS and are outside the management and scope of the contractor, consultants and BMW.

How to apply:

Group 1 These items will appear as part of the BMW Estimated Total Cost as they form part of the Construction Contract.

An itemised list of individual items is to be provided to the BMW Project Manager for inclusion in the relevant stage documentation.

Group 2 These items will be split into installation and other costs.

With installation appearing as part of the BMW Estimated Total Cost and all other costs appearing as part of the Client Agency Managed Costs (NOT managed by BMW).

The installation of these items forms part of the Construction Contract.

An itemised list of individual items to be installed is to be provided to the BMW Project Manager for inclusion in the relevant stage documentation.

Group 3 These items are supplied, managed and installed by WACHS and are outside the management and scope of the contractor, consultants and BMW.

Any items in this group are to be shown as part of the Client Agency Managed Costs (NOT managed by BMW).

Group 4 These items are supplied by WACHS and are outside the management and scope of the contractor, consultants and BMW.

Any items in this group are typically operational costs and will not be shown on the cost plan.

Refer also to Section 4.29 for general application of FF&E allocations.

11.5.9 Major Medical Equipment

Any individual items or suite of items of medical equipment costing more than \$200,000 are to be listed under Major Medical Equipment and not included as part of Furniture, Fixtures & Equipment (FF&E). An example is cardiac monitoring systems.

Any Major Medical Equipment that is funded from an operational expenditure equipment replacement programme is not included in capital cost planning.

When Major Medical Equipment is transferred from an existing facility into a new building and a clear understanding cannot be ascertained of how the equipment is to be integrated into the new building fabric / engineering services an allowance should be included to mitigate the cost risk.

11.5.10 ICT (Information, Communication & Technology) Costs

This is an allowance made in the cost plan for the communications platforms, applications to meet Whole of Health standards and site specific ICT requirements for service delivery as per the WACHS ICT Facility Classification Specification.

These costs will be managed by WACHS and the WACHS ICT Matrix should be developed by Schematic Design stage and be used in lieu of a percentage. Where this is not possible the allowance to be included for ICT is 2.5% for both brownfield and greenfield sites with any adjustments in consultation with WACHS regional ICT.

WACHS will provide the BMW Project Manager with the current version of the WACHS ICT Facility Classification Specification at the commencement of each project for distribution to the project consultants.

For how to apply refer to Section 4.32. Note that when using a predetermined sum substitute this amount in lieu of the percentage calculated amount.

11.5.11 Professional Fees

Refer to Sections 4.33 and 4.34.

Also note that whilst the Professional Fees (excluding disbursements) are based on the Perth price, the regional loading when applied provides a reasonable estimate of the disbursements that will be incurred due to the particular location.

11.5.12 Circulation

Refer to the AIQS definition of Circulation in Section 3.

Refer to the AHFG guidance for Circulation in Section 11.2.

11.5.13 Engineering Areas

Refer to the AIQS definition of Engineering Areas in Section 3.

For additional guidance in calculating allowances for Engineering Areas refer to the latest Australasian Health Facility Guidelines (AHFG) at: www.healthfacilityguidelines.com.au

As an example the AHFG Revision 5.0 (published 1st March 2016) in Part C gives the following guidance: *“The target of 10-12.5% applied to Gross Departmental Areas may be used for a typical one to three storey hospital building.”*

Clarification note on AHFG target percentages: A higher percentage is necessary for more complex and larger scale projects. For example, projects that may include the installation of a central energy plant such as Albany, Busselton & Karratha. Typically these larger and more complex projects have had a combined travel and engineering allowance of 35%.

11.5.14 Travel

Refer to the AIQS definition of Travel in Section 3.

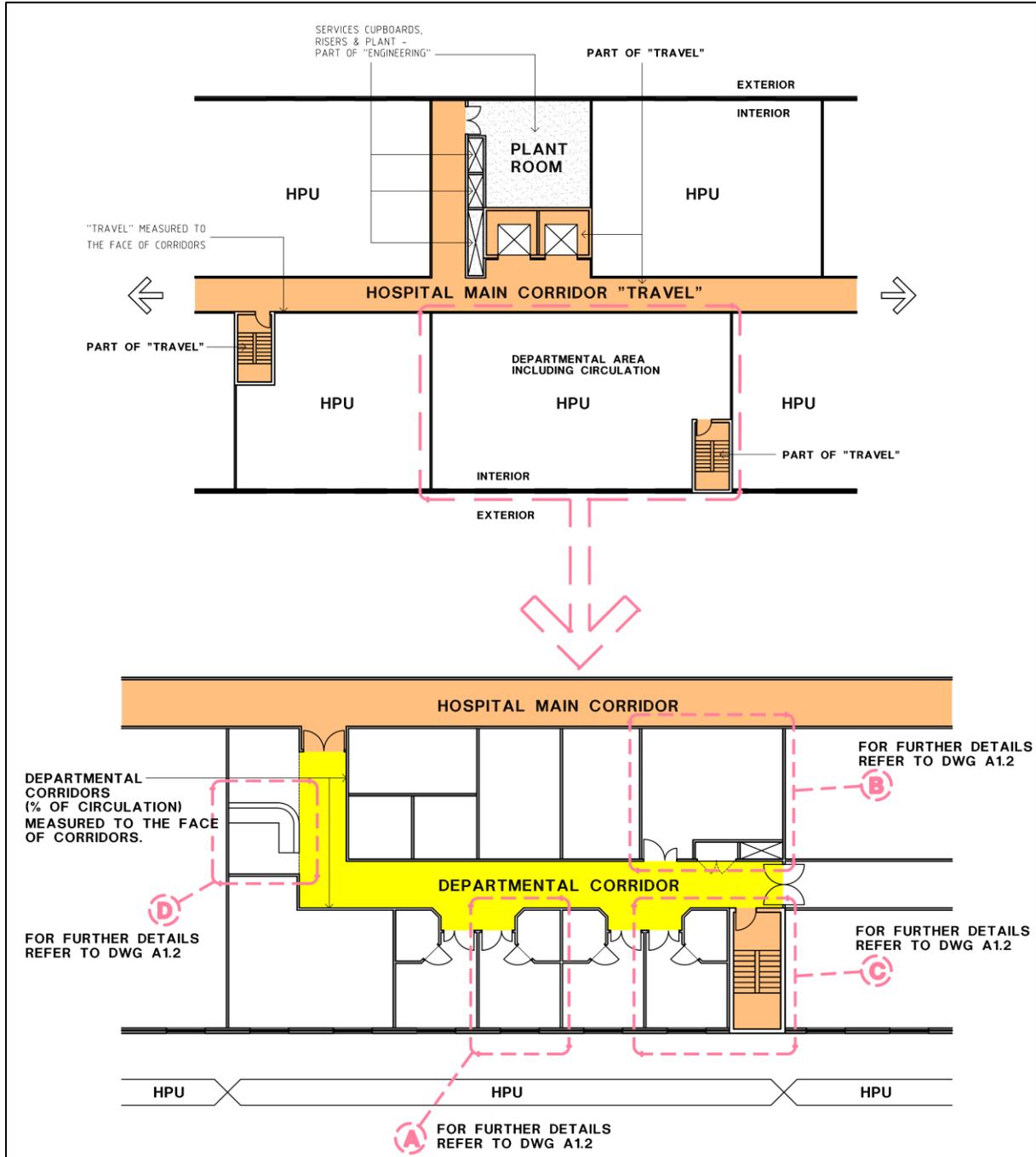
For additional guidance in calculating allowances for Travel refer to the latest Australasian Health Facility Guidelines (AHFG) at: www.healthfacilityguidelines.com.au

As an example the AHFG Revision 5.0 (published 1st March 2016) in Part C gives the following guidance: *“Travel represents arterial corridors that connect HPUs. Travel is required to allow passage from one HPU to another without going through the internal corridors of another unit. A target of 10-12.5% is appropriate for travel in a hospital of one to three storeys.”*

Clarification note on AHFG target percentages: A higher percentage is necessary for more complex and larger scale projects. For example, projects that may include the installation of a central energy plant such as Albany, Busselton & Karratha. Typically these larger and more complex projects have had a combined travel and engineering allowance of 35%.

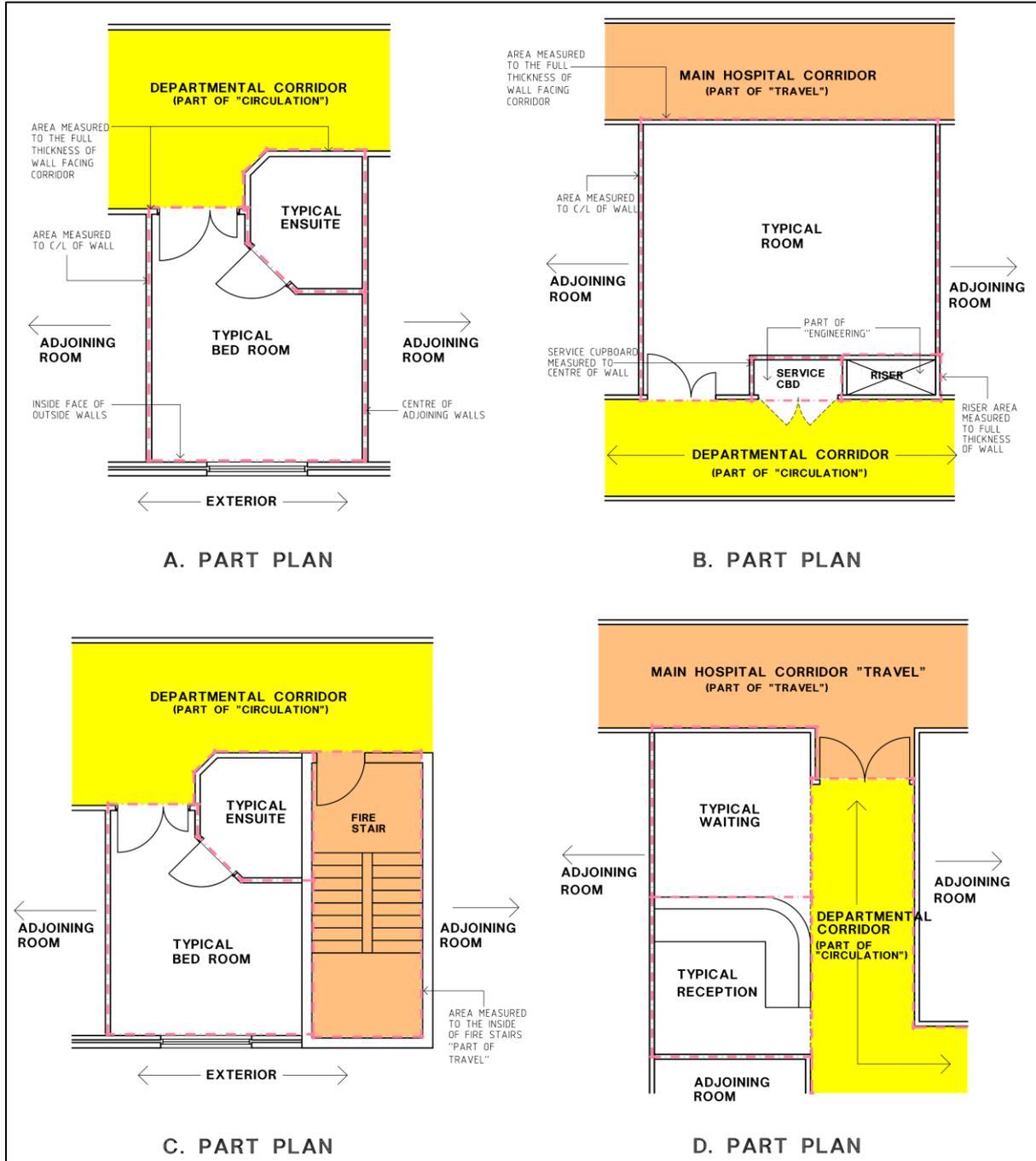
11.5.16 Area Measurement Methodology – Illustrative Example

For the circulation, travel and engineering areas the *Design Guidelines for Hospitals and Day Procedure Centres*, Department of Human Services, Victoria¹ provide the following illustrative examples.



¹ Drawings A1.1 & A1.2 (reproduced from DHS Victoria, 2004, *Design Guidelines for Hospitals and Day Procedure Centres*, Department of Human Services, Victoria).

DWG A1.1 (Drawing reproduced from DHS Victoria, 2004, Design Guidelines for Hospitals and Day Procedure Centres, Department of Human Services, Victoria)



DWG A1.2 (Drawing reproduced from DHS Victoria, 2004, Design Guidelines for Hospitals and Day Procedure Centres, Department of Human Services, Victoria)

12 DOCUMENT CONTROL

TRIM Reference: 02955440

Document Number: 979

12.1 Build Status:

Version	Date	Author	Reason	Sections
V3.1	29/08/2018	Brad Buckland	Final – AHFG & WACHS revisions	All
V3.0	28/08/2017	Brad Buckland with Greg Harris & Anita Taseska	Final	All
V2.01- V2.12	2016-2017	Brad Buckland with Greg Harris & Anita Taseska	Iterative drafts – Major Revision	All
V1.0 to 1.4	Various	Various	Previously issued July 2004 to October 2015	

12.2 Amendments in this Release:

Section Title	Section Number	Amendment Summary
All	All	Revisions for AHFG and WACHS

13 DOCUMENT APPROVAL

This document was endorsed and approved for use on 3 September 2018:

Tony Halberg

Tony Halberg

A/General Manager

Asset Advisory



BMW Project Cost Planning and Management Guideline BMW Cost Plan Template / Pro Forma

CHANGE PROPOSAL FORM

The team in BMW Asset Advisory develops, reviews and maintains the BMW Project Cost Planning and Management Guideline and BMW Cost Plan Template/Pro Forma. The team has implemented a formal change process and undertakes reviews each year. The reviews are aimed at ensuring the Guideline and template/pro forma remain consistent with BMW endorsed practices and contain up to date references.

Please send your completed form to AskAssetAdvisory@finance.wa.gov.au attached to an email marked "Project Cost Planning / Management Change Proposal". Please attach a separate word document showing your suggestions in 'Track Changes' where your proposal is too long or complex for this form. Supporting documents can be attached when available.

Proposal originator details (Please complete all details).

Name:

Position:

Agency (if applicable):

Phone:

Email Address:

Does the proposed change refer to the:

BMW Project Cost Planning and Management Guideline, and / or

BMW Cost Plan Template/Pro Forma,

and what are the specific clause/template references?

Details of Proposed Change

For changes longer than a paragraph, please include the clause as a separate Annex, providing the proposed new text and showing deletions from the existing text in 'Track Changes'.

Reason for proposed change and likely impact

Other Relevant Information (details of any impact on other BMW documents, BMW endorsed documents or other stakeholder opinions already obtained)

Attachments (List of any attached supporting documentation or supporting references):