

Australasian Health Facility Guidelines

Part F:

Project Implementation

Note:

Part F is and will continue to be NSW-specific. It may be used as a reference document by other jurisdictions but they should continue to reference their own guidelines for FFE and commissioning where available.

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INTRODUCTION AND GENERAL REQUIREMENTS

Preamble

500030 680 .1.00 The procurement and installation of furniture, fittings and equipment (FF&E) is an important activity in the establishment and ongoing operation of Health Care Facilities. The FF&E incorporated in a facility is determined by the nature of the services offered. It is important that the FF&E is carefully selected as it can have wide-ranging impacts upon facility design, Operational Management and associated costs.

This Facility Planning Guideline provides assistance to those who are involved in the procurement of FF&E including budgeting, selection and installation.

The NSW Health Department published DS-31 Guidelines for Furniture Fittings and Equipment Budgeting for Health Building Projects in 1992. This Guideline aimed to provide Health Planning Unit rates for costing of furniture, fittings and equipment for Health Care Facilities on a functional area basis. Over time, the rates contained within it have become obsolete. It is now common practice to apply a multiplier to reflect current costs.

Changes in healthcare environments, practices in health service delivery technology and equipment design have all impacted on FF&E requirements and consequent costs. As FF&E tends to be managed at a local level, consistent cost data across a range of facilities is difficult to obtain. However, the introduction of a database format in this revised Guideline permits rates to be updated as data becomes available.

It was also identified as being desirable to broaden the scope of the Guideline to include information on the process of procuring FF&E.

The successful procurement of the correct FF&E will enable the required Health Care Services to be delivered in an optimal environment, maximising successful client outcomes and operational efficiencies, whilst reducing risks such as occupational health and safety and infection control.

Description

501213 680 .2.00 This Guideline describes the process of procuring and installing furniture, fittings and equipment for a Health Care Facility, also called equipping. This process is relevant whether it is part of a capital works development or whether it is simply the provision of new equipment within an existing facility.

The Guideline is divided into four sections:

1. Introduction - outlining the scope and objectives of the Guideline;
2. Procurement - outlining the processes for identifying needs, selection, purchasing and installation of FF&E;
3. Costing - outlining the process of budgeting and costing FF&E at various stages of a project, together with a review of cost rates;
4. Standard FF&E Items - providing a list of standard FF&E items.

Objectives

500726 680 .3.00 The purpose of this Guideline is:

1. To offer a methodology for determining the furniture, fittings and equipment requirements for a Health Care Facility;

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2. To provide information and direction on the ordering of any additional FF&E that may be required and maximise the opportunities to gain efficiency;
3. To provide Cost Planners with Health Planning Unit (HPU) rates for costing furniture, fittings and equipment for Health Care Facilities on a functional area basis;
4. To assist with the standardisation of terminology and descriptions of FF&E items.

Scope

- 501214 680 .4.00 For capital works projects, this Guideline addresses procurement of FF&E following approval of the Project Definition Plan.

Operational Commissioning

- 501464 680 .5.00 Equipping is an integral part of the operational commissioning of new or refurbished facilities. As such, FF&E activities need to be incorporated into the Commissioning Plan. FF&E personnel form part of the Commissioning Team.

Refer to Operational Commissioning Guideline.

FF&E Groups

- 501465 680 .6.00 CLASSIFICATION OF FF&E

For NSW Health capital projects, FF&E is classified into four (4) groups:

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

Group 2 - Items supplied 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 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.

Group 4 - Consumable items purchased and installed by the client outside the capital budget. This category includes bed linens, foodstuffs and disposable supplies.

Glossary of Terms

- 501216 680 .7.00 Refer to Part B of these Guidelines for a comprehensive list of terms used. For the purposes of this Guideline, the following terms are defined:

- 501217 680 .8.00 Project Specifics: Items of a variable nature specifically costed for individual projects over and above the cost derived from pricing Functional Areas and Travel/Engineering Areas.

- 501218 680 .9.00 Health Planning Unit (HPU): All the rooms and spaces, including internal circulation, making up a particular health service department, which are necessary for that department to function.

References and Further Reading

- 501219 680 . 10.00 DS-31 Guidelines for Furniture, Fittings & Equipment Budgeting for Health Building Projects, NSW Health Department, 1992.
- 501220 680 . 11.00 Guideline on the Commissioning of Health Facilities, Draft, Queensland Health Department, 2003.
- 501221 680 . 12.00 Commissioning Hospital Buildings, King Edward's Hospital Fund, London, 1981.
- 500294 680 . 13.00 Capital Development Guidelines, 1-4, Hospital Project Planning Benchmarks, Department of Human Services, Victoria, 2003.

F,F & E PROCUREMENT

Activities

- 501222 680 . 14.00 The principal activities in the procurement of FF&E may be summarised as follows:
- + Planning;
 - + Resourcing;
 - + Scheduling;
 - + Selection;
 - + Purchasing;
 - + Receipt;
 - + Installation;
 - + Post Installation, including commissioning of equipment and training staff in its use.

Planning

- 501466 680 . 15.00 Generally, planning for the acquisition of furniture, fittings and equipment (FF&E) needs to be commenced early in the facility planning process and must be programmed.

This planning should take account of:

- + Time required for selection of FF&E, including consultation with staff, conducting risk assessments and equipment trial;
- + Time required for delivery of FF&E (including construction, assembly, shipping, etc);

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- + Need and capacity for temporary storage of FF&E during capital works;
- + Time required for installation, assembly on site, testing, etc;
- + Time for commissioning of FF&E to enable clinical use;
- + Implications of transfer of equipment from existing facilities;
- + Determining the value of FF&E (including impact of fluctuations in the exchange rate, life cycle costing, etc);
- + Potential for gaining volume discounts by aggregating FF&E items across NSW Health and bulk purchasing or leasing these items through networks on an AHS, Quadrangle or state wide basis.

501469 680 .16.00 COST PLANNING

The programming of FF&E procurement must be undertaken in close liaison with the Finance Department of the facility so that appropriate provision is made for future expenditure on FF&E. This may be spread over two or more years.

Resourcing

501471 680 .17.00 FF&E COORDINATOR

An FF&E Coordinator should be appointed to manage the procurement of FF&E. For Capital Works projects, the FF&E Coordinator is an integral member of the Commissioning Team and should:

- + Be involved in the planning discussions on equipment from the early design stages of a project. Preparatory work on the scheduling and selection of FF&E for a project commences as soon as Room Data Sheets are available.
- + Liaise with relevant personnel regarding detailed specification and selection of items required. These may include consideration of models, material and colours that are not determined at the time of preparation of Room Data Sheets.
- + Be responsible for following up deliveries and coordinating the receipt and temporary storage of items.
- + Ensure compliance with OHS legislation in selecting FF&E.

501473 680 .18.00 EXISTING PERSONNEL

Where possible, existing personnel should undertake FF&E procurement for capital projects and routine equipping activities. This ensures that:

- + Established procedures for approval, ordering, contract management and maintenance requirements are followed;
- + Personnel who will be responsible for the management and maintenance of the purchased FF&E once the Project Team leaves the site, are involved in the scheduling, ordering and receiving process.

501472 680 .19.00 MAJOR PROJECTS

For major projects, FF&E procurement activities may be undertaken by a number of different people. Planning and clinical personnel may be responsible for the scheduling, specification and selection of FF&E items.

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A Purchasing Officer may be appointed to manage the purchasing and receipt of FF&E.

Commissioning personnel may be responsible for installation and post installation activities.

501470 680 .20.00 MINOR PROJECTS

For minor capital projects and routine equipping activities, all activities will normally be undertaken by one person.

503040 680 .21.00 ADVISORY ORGANISATIONS

A number of organisations are available to assist with the procurement of FF&E. These include:

- + Peak Purchasing Council;
- + Area Purchasing Services or Product Evaluation Panels;
- + State Contract Control Board.

Refer to Purchasing section of this Guideline.

Scheduling

501474 680 .22.00 At early planning stages, FF&E Schedules shall be prepared, listing all FF&E required in the facility. These shall be developed and reviewed as the project develops.

500734 680 .23.00 TYPES OF SCHEDULES

The method of scheduling FF&E may vary depending on the resources available to the Health Service and the Project Team. Considerations in selecting a method include:

- + Consistency;
- + Coherence;
- + Compatibility with other systems in use.

Computerised systems facilitate the compilation of schedules. The various systems that can be considered include:

- + Spreadsheets (such as Microsoft Excel);
- + Database (such as Microsoft Access);
- + DOHRS Scheduling Package;
- + Proprietary software packages.

500736 680 .24.00 ASSET MANAGEMENT

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The FF&E schedule should be able to be readily incorporated into an asset management system. The system used for a facility may determine the method of scheduling adopted.

500732 680 .25.00 PRIMARY FF&E SCHEDULES

The Project Definition Plan (PDP) fully defines the functions of each room and includes Room Data Sheets that list the general FF&E requirements for each room. Following the approval of the PDP, designing can commence and a Primary Schedule of FF&E can be prepared. This schedule assumes all items are new until transfer items have been identified.

501475 680 .26.00 The Primary Schedule is not usually specific about actual pieces of equipment. Fixed equipment, which is installed by the contractor, will be specified in the construction contract documentation. This includes both Group 1 and Group 2 items.

Scheduling FF&E

501476 680 .27.00 When scheduling FF&E, the items should be considered on a room-by-room basis in the first instance. They should then transferred be to a combined list to identify any duplication of major items and to simplify the ordering and costing process.

Large equipment items with long lead times should also be identified. It may be appropriate to order this equipment in advance of the project program.

Scheduling

500737 680 .28.00 TRANSFER ITEMS

Once all items have been listed an evaluation should be undertaken of existing FF&E to identify suitable items for transfer. In many cases, substantial quantities of FF&E should be suitable for transfer. Criteria for assessing transfer suitability must include age, condition, and being fit for the purpose and environment in accordance with OHS legislation.

The project time frame needs to be considered as equipment can become obsolete or not be suitable for transfer at the time of commissioning due to the period between planning and actual commissioning.

Transfer items should be identified in the FF&E schedule. These will need to be regularly reviewed throughout the course of the project.

500733 680 .29.00 This process will identify any gaps between the equipment that is to be transferred and any additional equipment required for the new facility. Any deviations from these schedules or the purchase of replacement equipment will require approval by NSW Health.

501477 680 .30.00 DEVELOPMENT OF SCHEDULES

The equipment lists may need revision in the light of detailed examination of Operational Policies, and as the design progresses.

FF&E provided must be appropriate to the room's function and available space.

500735 680 .31.00 INFORMATION CATEGORIES TO BE INCLUDED IN THE SCHEDULES

The FF&E schedule that is agreed upon should have the facility to:

- + Provide each item with a unique number that denotes the Functional Unit and room number - this number can also be used to facilitate the ordering and accurate location of items in the new facility during commissioning eg SA.2.14 could denote the Staff Amenities, Room 2, Item 14;
- + List the item by type - bed, chair, table etc;
- + Include particulars of the supplier, model number, etc;
- + Include the cost per item and any other costs such as freight;
- + Identify whether the item is 'new' or a 'transfer';
- + Identify if the item is a Group 1, 2 or 3 item in accordance with the above definition;
- + Include columns for asset register number and depreciation rates, etc;
- + Be easy to understand for health service staff.

501478 680 .32.00 GROUP 2 ITEMS - CLIENT SUPPLIED, CONTRACTOR INSTALLED

It is often thought that detailed decisions on make, model and type of furniture and equipment can be deferred until late in the construction phase by classifying equipment as Group 2 or even Group 3 (client supply and install). However, consultants need to know equipment details in the design stage so that they can design for the heat load, weight, dimensions and services connections.

The advantage to the client of opting for Group 2 furniture and equipment is that consultants' fees and the contractor's overheads (based on total building cost) are minimised.

However, generally, it is more advantageous to minimise the use of Group 2 items because:

- + Responsibility for co-ordinating structure and services then clearly rests with the contractor;
- + Clients' problems associated with early purchase and consequent storage and insurance do not arise;
- + The contractor is responsible for early ordering or for structural and services adjustments if the specified model is superseded;
- + Responsibility for testing and commissioning rests with the contractor;
- + Equipment warranty periods commence from handover in conjunction with the defects liability period and not from the date of purchase (which may be well in advance of actual use);
- + As most fixed equipment is technical and/or expensive, the tendering/purchase process is likely to be taxing and time consuming for client staff.

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Scheduling

500739 680 .33.00 INITIAL COSTING OF THE F,F & E SCHEDULE

An initial costing of the FF&E Schedule should be undertaken as soon as it is formulated to ensure that it is within the FF&E budget allocation. Sources of information for such preliminary costings include:

- + Recent purchases by the Area Health Service;
- + Other similar recent Capital Projects;
- + Peak Purchasing Council database.

501479 680 .34.00 Indicative information on the cost of FF&E can be calculated on a cost per square metre rate using the cost rates contained in this Guideline. An escalation rate for the current year will need to be applied.

Individual major items costing more than \$250,000 should be identified separately as these can have a significant impact on an FF&E budget.

Reconciliation of expenses should be able to be reported either by department or by item.

501480 680 .35.00 CONTINGENCY SUM

In order to discourage over-provision in the schedules a financial contingency sum should be allowed to purchase equipment that is found to be necessary after the building is brought into use.

501481 680 .36.00 FUNDING SOURCES

Project funded items need to be identified separately from other funding sources.

Selection

503042 680 .37.00 INTRODUCTION

FF&E must be carefully selected to ensure fitness for purpose and that it meets criteria for infection control and OHS. This may require extensive market research.

Where possible, FF&E should be standardised throughout a facility.

501483 680 .38.00 FITNESS FOR PURPOSE

Selected items must be appropriate for the facility. Certain areas require special considerations eg Mental Health, Paediatrics, Aged Care (cognitive impairment). In these areas, standard fittings may be inappropriate and cause injury or offer patients the potential for self harm in Mental Health Units.

Refer also to Part C of these Guidelines.

501486 680 .39.00 COMPATABILITY WITH BUILDING FABRIC

FF&E components need to be selected it to suit building fabric and finishes eg wheel/castor specifications depend on floor coverings; patient hoists must fit

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properly under beds and baths, and through doorways.

Particular attention is required when equipping existing facilities.

Refer also to Part C of these Guidelines.

501485 680 .40.00 DESIGN

A specialist design consultant, appointed at an early planning stage, should select colour schemes, soft furnishings and the like. This selection should satisfy the criteria of function, durability, ease of cleaning and servicing, good appearance, and economic replacement at a later date.

501482 680 .41.00 OCCUPATIONAL HEALTH AND SAFETY

Refer to Part C of these Guidelines.

The OHS Act 2000 and OHS Regulation 2001 requires designers and manufacturers to eliminate or control risks in designing and manufacturing equipment. The equipment selection process needs to determine that this responsibility has been fulfilled by these key groups before FF&E is purchased.

The employer is also required to identify, assess and control risks associated with equipment relevant to the specific application and work environment in which it will be used.

This means that the FF&E procurement process should involve:

- + Consultation with OHS committee and potential end users;
- + Trial of equipment where possible;
- + Risk assessment of FF&E prior to purchase;
- + Seeking out of the experiences of other facilities with that type of FF&E.

Since legislation overrides the policy of organisations, purchasing from approved suppliers or from government contract can only apply to equipment, etc that has been assessed for occupational risks and selected on the basis of safety for the particular purpose and workplace.

501484 680 .42.00 INFECTION CONTROL

Refer to Part D of these Guidelines.

Infection Control personnel must be consulted with regard to the selection of FF&E.

Requirements for finishes of items may vary depending upon the location used eg fabric upholstery on chairs may not be permitted in clinical areas.

501487 680 .43.00 MAJOR EQUIPMENT ITEMS

The appropriate level of equipment for a facility will be determined by service and activity planning.

NSW Health has a role in the approval to purchase major electromedical items.

501488 680 .44.00 ELECTROMEDICAL EQUIPMENT

A range of specialised electromedical equipment needs careful assessment in relation to radiation issues (may require assessment by a Consulting Radiation Expert), engineering issues (load bearing of floors, airconditioning, uninterruptible or extra power supply etc), size issues (to enable gantry movement, bed movement and so on) and safety issues (for example MRI).

The requirements of the Radiation Control Act 1990 and Radiation Control Regulation 2003 must be complied with, including requirements for disclosure of information.

501468 680 .45.00 EXISTING FF&E ITEMS

Programmed routine maintenance and replacement (RMR) will continue during the project duration. This needs to be coordinated with project requirements.

Purchasing

500740 680 .46.00 IDENTIFYING SUPPLIERS

After the FF&E Schedule has been resolved, suppliers need to be identified. Sources for these include:

- + Contracts held by the Area Health Service;
- + State Contracts identified through the Peak Purchasing Council;
- + Calling for tenders from State Contract approved suppliers;
- + Suppliers not listed with State Contracts.

Calling for Tenders requires the preparation of a Performance Specification for the specific item. A proforma is attached for information. A current listing of typical State Contract suppliers can be obtained on CD-ROM from State Contracts. It is advisable to contact the local AHS Supply Manager who will be able to provide access to this information.

To purchase from suppliers not listed with State Contracts requires approval for an exemption from the NSW Department of Health. Details on the procedure to be followed to gain an exemption can be obtained from the Peak Purchasing Council. Every effort should be made to select items that are included in State Contracts to ensure that advantage is taken of evaluated products at a price that is assessed to be reasonable.

501489 680 .47.00 Notwithstanding the fact that a State Contract exists for a product, the product must be verified as being safe and fit for purpose in accordance with OHS legislation.

501490 680 .48.00 ALTERNATIVE PROCUREMENT OPTIONS

Alternative procurement options such as leasing should also be considered.

500741 680 .49.00 ORDERING THE FF&E

500741 680 .49.00

NSW Health policies and procedures for purchase and supply must be adhered to.

All Area Health Services have established purchasing procedures that have been developed to address the particular needs of the organisation. Wherever possible these tested methods should be used to purchase all the FF&E for the new facility. Using established procedures reduces the risk of incorrect ordering procedures being used and acts as an extra check against inappropriate procedures and processes being introduced that could result in substandard or inappropriate items being ordered and accepted.

Local procedures must fully address OHS legislative obligations.

Government Purchasing Policies and Processes

500745 680 .50.00 PEAK PURCHASING COUNCIL

The Peak Purchasing Council (PPC) is a business unit of NSW Health.

By using the services available through the PPC, Project Teams charged with the scheduling, costing and ordering of FF&E can gain opportunities to streamline the FF&E scheduling process and access potential cost saving opportunities.

The PPC was established to:

- + Facilitate the development and implementation of the most efficient and effective purchasing and materials management policies and practices for the NSW Health system;
- + Maximise the purchasing and materials management opportunities through cooperative efforts to achieve the greatest value for money benefits for their customers.

500746 680 .51.00 PORTFOLIO:

From these Terms of Reference, four portfolios were introduced and each has aims and objectives to move forward to achieve benefits for NSW Health:

- + Formulate the policies and procedures to be followed by NSW Health to ensure purchasing opportunities are maximised to the greatest benefit of the health system;
- + Provide advice to the State Contracts Control Board, particularly in relation to whole of health contracts;
- + Establish and monitor a Performance Agreement with NSW Supply Services;
- + Liaise with suppliers, industry groups and other State/Commonwealth Government Departments to ensure that NSW Health is kept abreast of requirements and developments in the purchasing and supply area.

500747 680 .52.00 INFORMATION AVAILABLE:

The following categories of information can be readily gained by contacting the PPC:

- + Current Health contracts for a full range of medical, food, equipment and

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- supplies;
- + Best practice issues;
- + Information technology;
- + Capital equipment;
- + Contract management;
- + Training and development opportunities;
- + Library facilities;
- + Product evaluation;
- + Information on gaining exemptions;
- + Internet Chatroom with other users;
- + Surplus asset database;
- + Bulk purchasing opportunities.

500748 680 .53.00 CONTACT DETAILS FOR PPC:

Mail Address: PO Box 28
NORTH RYDE NSW 1670

Street Address: Level 1, Wallace
Wurth (Administration) Bldg
Gladesville Macquarie Hospital,
Wicks Road
NORTH RYDE NSW 2113

Phone: (02) 9887 5490
Fax: (02) 9887 5497
Email: ppc@tpg.com.au
Web Site: <http://www.ppc.health.nsw.gov.au>

500729 680 .54.00 PRODUCT EVALUATION PANEL

Some Area Health Services have an Area Purchasing Service or Product Evaluation Panel who are charged with selecting FF&E that is efficient, effective, safe and suitable for the particular needs of the clinicians, patients/clients and the type and level of service being delivered. The Panel will also be aware of the State and Period contracts being utilized by the relevant Area Health Service.

The Panel will provide advice to the Project Team and review and sign off completed schedules

501502 680 .55.00 PURCHASING MANUAL

The Purchasing and Supply Manual for Area Health and Related Services provides detailed specifications for the procurement methods and delegations outlined below. The manual is available at http://internal.health.nsw.gov.au/audit/manuals/purch_supply.pdf

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Further information including local processes, procedures and delegations should be obtained from the relevant Area Health Service's Supply Services

To assist purchases a register and database of product evaluations is available on the PPC's website at www.ppc.health.nsw.gov.au/

501503 680 .56.00 PURCHASING FF&E FROM STATE CONTRACTS

Purchasing FF&E from State Contracts Control Board (SCCB) period contracts is mandatory where the required products are available on contracts. Exemptions can be sought if the facility has reasonable grounds for doing so, e.g. on the grounds of OHS or cost.

To find out if an item is 'on contract' refer to www.supply.dpws.nsw.gov.au/Home.htm.

501504 680 .57.00 FF&E NOT ON CONTRACT

If FF&E are not available on SCCB contracts then the Area Health Services must obtain the best value for money.

The Area Health Service must use the Health Peak Purchasing Council's (PPC) standard Health Quotation, Tender and Contract Conditions documents.

Procedures required for the purchase of 'Not in Contract' items are:

- + Up to \$1,500 - no quotes or tenders required;
- + Over \$1,500 to \$30,000 - one written proposal as a minimum;
- + Over \$30,000 to \$150,000 - three written quotations as a minimum;
- + Over \$150,000 - full tenders are required.

Note: some Area Health Services have adapted these purchasing thresholds so local procedures should be checked.

501986 680 .58.00 ENVIRONMENT PROTECTION AUTHORITY

The NSW Department of Environment and Conservation incorporating the Environment Protection Authority (EPA) was established in 2003. The EPA is responsible for licensing, registration and accreditation of facilities and equipment which may impact on the surrounding environment. This impacts on all equipment and users in areas including radiology, nuclear medicine, radiotherapy, dental, cardiology and pathology.

501987 680 .59.00 RADIATION CONTROL ACT 1990 (AS AMENDED)

This Act provides for the regulation and control of radioactive substances, radioactive sources and radiation apparatus.

501988 680 .60.00 RADIATION CONTROL REGULATION 2003

This regulation:

- + Deals with the licensing of persons to use certain radioactive substances and radiation apparatus;
- + Prescribes activities that may only be carried out by accredited radiation experts;
- + Sets fees in relation to licensing, registration, accreditation and approvals;
- + Regulates the disposal and transport of radiation apparatus and radioactive substances, and the discharge of radioactive substances;
- + Allows exemptions from certain provisions of the 'Radiation Control Act 1990' and the Regulation;
- + Prescribes certain radiation apparatus as apparatus that must be registered and sets out certain requirements in relation to such apparatus;
- + Prescribes offences under the Act and Regulation for which on-the-spot fines ('penalty notices') can be issued, and the amounts of those fines.

Receipt

501491 680 .61.00 PROGRAMMING

Liaison will be required with the contractor to identify dates for the delivery of specific items. This is particularly important with regard to items that the contractor is required to install that are being purchased by the client, ie Group 2 items.

Where possible, all items required for the proposed occupation date should be available and on site some 3 to 4 weeks prior. This allows for preparation of items for final placement, ensuring all mandatory checks have been carried out and a smooth coordinated installation.

Contingency plans need to be prepared to cover failure of suppliers to deliver on time or delayed completion of construction.

501492 680 .62.00 When timing the placement of orders make due allowance for possible delays in delivery. A firm procedure for following up all outstanding orders should be worked out and carried through.

501493 680 .63.00 RECEIPT OF FF&E

Arrangements must be made to see that goods are properly checked for both quality and quantity on delivery. 'Technical' equipment can be held in a separate room until inspected and certified correct by authorised personnel. Conditions for discounts for prompt payment should be adhered to.

501494 680 .64.00 CHECKING AND TAGGING

Adequate time frames should be built in to the ordering and receiving process to allow the appropriate checking and tagging of equipment by biomedical and electrical safety staff. Where relatively large volumes of this type of equipment is involved the available resources and time availability of such personnel must be taken into consideration.

501495 680 .65.00 GROUP 2 ITEMS

Group 2 items must be delivered to the contractor prior to the date required. This ensures that opportunities do not occur where the contractor can claim loss of time due to non-availability of items and further ensure there are no disputes as to actual receipt of goods. All items handed over to the contractor should be acknowledged by a written receipt from the Contractor's representative.

It should also be noted that the Warranty period for client supplied items generally commences at the date of delivery, not the date of occupation.

501499 680 .66.00 Delivery of furniture and equipment prior to the handing over of the main building can significantly reduce the period required to make the building operational. The fitting out stage is reduced. The load on the receiving personnel is spread and an opportunity is provided for all items to be labelled with their room number while in store.

Dangerous goods and other special items must be appropriately stored.

Access to the storage area, if this is in a new building and taken over in advance, and use of corridors and lifts must be planned and agreed with the contractor.

500743 680 .67.00 STORAGE

Strategies that should be considered to simplify the receipt, holding and installation of new equipment prior to occupation may include:

- + Identification of a secure holding area prior to the handover of the new facility. This may include constructing a temporary structure or hiring warehouse space.
- + Advanced handover of a section of the building for storage;
- + Staging the delivery of multiple items such as beds, desks and chairs to reduce the amount of storage space required;
- + Replacing outmoded equipment that will not be transferred with the new items prior to transfer;
- + Organising temporary storage areas to allow for progressive receipt and installation.

501498 680 .68.00 The warranty arrangements should be checked to ensure that such early possession doesn't limit or invalidate any contractual obligations.

501497 680 .69.00 DELAY IN RECEIPT

If it is intended to receive furniture and equipment directly into the new building, it may be necessary to ask suppliers to hold items, after they are ready for delivery and until the building has been handed over. The ability to do this is subject to agreement from suppliers.

Installation

503043 680 .70.00 INSTALLATION GENERALLY

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Correct placement and installation of FF&E items is critical to proper functioning of the facility. Any changes to the intended location must be carefully considered.

501500 680 .71.00 GROUPS 1 & 2

The contract should require the contractor to be responsible for checking quantity and quality and for safe storage and for correct installation.

501501 680 .72.00 SPECIALISED EQUIPMENT

Construction contracts should require attendance by the contractor for the installation of specialised equipment such as diagnostic imaging and radiotherapy equipment. If possible, an early handover of the departments concerned should be arranged. If this is done, the contract must make provision for terminal boxes to be ready for connection and for mechanical services to be available at the appropriate time.

Post Installation

503044 680 .73.00 TESTING

Certain equipment items may require testing and calibration following installation. Sufficient time needs to be programmed for this to occur prior to occupation.

500295 680 .74.00 COMMISSIONING EQUIPMENT AND TRAINING OF STAFF

Following installation a thorough commissioning and training program should be followed to suit the type of equipment. Refer Performance Specification Proforma at the end of this section.

503045 680 .75.00 MAINTENANCE

Equipment must be properly maintained to ensure correct functioning and safety, and to maximise its life. Implement maintenance procedures as appropriate.

500744 680 .76.00 DISPOSAL OF SURPLUS ITEMS

If surplus items have been identified, a strategy should be developed for disposal.

The Peak Purchasing Council will advertise surplus items on the Internet.

Special agreements and processes may be in place for disposal of major equipment items, eg electromedical.

COSTING

Objectives

501507 680 .77.00 The indicative cost rates for FF&E included in these Guidelines are intended to:

1. Provide a Guideline for Furniture, Fittings and Equipment budgeting (FF&E) for NSW public health facility building projects.

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Objectives

- 501508 680 .78.00 2. Establish rates at a minimum, rather than maximum, value.
- 501509 680 .79.00 3. Provide a schedule of HPU rates following analysis of a selection of projects both within NSW and other states with the following basis:
- + Level 1-6 service FF&E provision to be identified;
 - + 'Greenfield' site in the Sydney Metropolitan area;
 - + All FF&E items are new, not transferred from existing facilities.
- 501510 680 .80.00 4. Provide a basis for presenting cost data for future analysis.
- 501511 680 .81.00 5. Complement the Standards for Health Planning Unit Cost Rates document (DS-13) as published by NSW Health.
- 501512 680 .82.00 Note:
- It is emphasised that the guideline rates are intended to provide furniture, fittings and equipment budgets only at the initial planning stages of a project. More accurate estimates based on detailed furniture, fittings and equipment lists should be developed at the design development stage, in parallel with the normal capital cost planning process.

Cost Planning Stages

- 501513 680 .83.00 For description of Standard Cost Planning stages refer to Part B General Requirements in these Guidelines.

FF&E Rates

- 501514 680 .84.00 The following table of guideline rates/m² for each HPU or department sets out rates for Cost Plan A and/or B stage - for which an all inclusive rate is provided.
- A schedule of all major items of equipment proposed for a particular project is required to be included as part of the budget submission at this stage of the Planning Process.
- 501515 680 .85.00 The guideline rates cover Health Care Facilities providing services from Level 1 to Level 6.
- Rates prepared for the Victoria Department of Human Services have been used as the basis of this Guideline.
- 501517 680 .86.00 At Cost Plan C stage the equipment budget should be confirmed by means of a detailed furniture, fittings and equipment list derived from the Room Data Sheets (and co-ordinated with the Architect's design).

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FF&E Rates

501518 680 .87.00 The FF&E Rates published here are based on a June 2002 base date for all prices.

503046 680 .88.00 LOOSE FURNITURE EQUIPMENT & IT

Rates for costing of loose furniture, furnishings & IT equipment in the calculation of cost for projects are provided for each Functional Unit.

The rates include allowances for telephones, pagers, cleaning equipment, EDP workstations and some relevant specialist EDP software.

The rates exclude super-specialities (eg cardiothoracic surgery) or unusual specialities (eg apheresis, hyperbaric and reproductive biology).

Constraints in respect of specific Functional Units include:

- + Library rates assume a manual card index system. Add costs are applicable for computerised indexing and book security systems;
- + Information Technology rates are based on general furniture and equipment. Central IT and communications hardware and software are project specific items;
- + Medical Records rates are based on traditional manual paper storage. Optical disk based technology increases the m2 rate considerably but may eliminate archiving and most storage floor areas;
- + Medical Imaging rates are based on traditional film and do not include digital imaging (PACS) except where associated with specific modalities;
- + Security rates do not include CCTV;
- + Stores and Supply rates assume minimal mechanical materials handling equipment.

FF&E costs may vary from standard rates due to fluctuations in exchange rates and purchasing arrangements.

501519 680 .89.00 ADJUSTMENT OF RATES

It is recommended that adjustment of guideline rates should be by way of:

- a) Use of CPI rather than BPI.
- b) Ongoing analysis of future projects so as to take account of changes in policy, technology and the costs associated with these.

Project Specifics

501520 680 .90.00 The furniture, fittings and equipment budget guideline rates have been calculated for greenfield projects assuming normal operating policies.

503047 680 .91.00 Where specific major or unusual equipment is proposed for a project:

- + The major item(s) should be identified and costed as project specific item(s);
- + The relevant Functional Unit furniture and equipment rate(s) should be reduced to an appropriate administrative or clinical rate (to allow for general items).

501522 680 .92.00 It is recommended that the following be regarded as project specific items:

- + Window furnishings;
- + Artwork;
- + Information technology;
- + Communications (PABX, paging etc);
- + Furniture and equipment commissioning - tendering, receiving, storing, distributing cleaning, testing and pre-occupancy security.

501523 680 .93.00 In all cases project specific items of equipment should be listed separately on the budget submission.

Transfer Items

501524 680 .94.00 The furniture, fittings and equipment budget guideline rates have been calculated for greenfield projects where equipment is not transferred from existing facilities.

501525 680 .95.00 The impact of transferred items is very project specific. The value of transferred items varies across projects and across departments from 80% of the 'greenfield value' where most required furniture, fittings and equipment is to be transferred, to less than 10% where most required furniture, fittings and equipment is to be purchased.

501527 680 .96.00 At PDP stage the Health Service, in conjunction with Area staff, should evaluate whether existing equipment for each department is appropriate for transfer. The budget should then be adjusted accordingly after allowing for refurbishment and transfer costs.

501528 680 .97.00 All transferred items should be included in the detailed furniture, fittings and equipment lists prepared for Cost Plan C Stage

General Items

501529 680 .98.00 At Cost Plans A and B stages, a square metre rate should be included for window furnishings, artwork and the like.

501530 680 .99.00 At Cost Plan C and D stages, an allowance should be included for window furnishings, artwork and the like based on a measured or quoted estimate of the requirements.

501531 680 .100.00 MAINTENANCE

The cost of maintenance is generally excluded from the quoted rates and should be allowed for as an operating budget item.

Contingency Sum

- 501532 680 .101.00 At Cost Plan A and Cost Plan B stage, an allowance should be included for contingencies based on 5% of the tabulated equipment budget.
- 501533 680 .102.00 At Cost Plan C and Cost Plan D stage, an allowance should be included for contingencies based on 2% of the tabulated equipment budget.

FF&E / Building Budget Delineation

- 501534 680 .103.00 It is necessary to clearly define which fittings and equipment are included in the Building Cost and which are FF&E Costs, in order to clarify the responsibilities of the consultants and the users and to prevent duplication and oversights.

For budgeting purposes, at least through to Schematic Design, (Cost Plan C Stage), furniture, fittings and equipment should be classified as either Group 1 (ie Contractor to Supply and Install) or Group 3 (ie Client Supply and Install).

- 501535 680 .104.00 Adjustments as to who actually supplies and installs furniture and equipment can be made in the Design Development Stage (Cost Control Plan D). This may require consequential adjustments to Building Cost and furniture and equipment budgets.

- 501536 680 .105.00 FF&E items may be included as part of the Building Cost where they:
- + Require services connections or are required to be built in and fixed;
 - + Are mobile or loose, but are associated with items to be connected or built in to ensure compatibility eg bain-maries;
 - + Are interchangeable between groups, especially where building design may be affected eg storage, shelving or compactus.

STANDARD FF&E ITEMS

Standard FF&E Items and Requirements

- 503050 680 .106.00 Refer to Part C of these Guidelines for general requirements concerning fixtures and fittings that are fixed to, and part of, the building. These include considerations of ergonomics, human engineering, safety, security and infection control.

Requirements for particular FF&E items including workbenches, Staff Stations and Reception Counters are detailed.

- 501990 680 .108.00 A table has been appended to this Guideline that lists standard fittings and fixtures, and their generally applied group (classification 1, 2 or 3). These groups may vary for each facility, depending upon the procurement process and purchasing policies. Transfer items should be designated group 2 if they are to be installed in a new facility by the building contractor.

The database ID number corresponds to the ID number indicated on the Room Data Sheet.

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Use of standard descriptions in all project documentation avoids confusion and enables coordination between facility planning teams, the project design and construction team and the commissioning team.

APPENDICES (F,F&E)

Performance Specification Pro Forma

500749 680 .109.00 INTRODUCTION

In order to take advantage of a competitive tendering process in the ordering of FF&E, an Outcome Performance Specification can be developed which includes all the requirements of an item. This specification is then issued to approved suppliers for consideration and the submission of a quotation.

500750 680 .110.00 Developments of Outcome Performance Specifications are a responsibility usually addressed by the Product Evaluation Panel.

500751 680 .111.00 It is important to ensure that all attributes are included so that suppliers only provide quotations on suitable models and types.

500752 680 .112.00 OUTCOME PERFORMANCE SPECIFICATION PRO FORMA

Some or all of the following specifications may be required depending on the item:

A. SIZE

- + Dimensions;
- + High position/Low position;
- + Operating weight.

500753 680 .113.00 B. SPECIAL REQUIREMENTS

This should include all the features that are required to ensure the item can perform at the required standard, with minimal risk to users eg safety, ergonomics, adjustability, mobility, stability, colour, swing of doors.

500754 680 .114.00 C. FINISHES

The type of material used in the product and the finishes can be most important for maintenance and infection control reasons. Ensure that finishes required to be impervious, waterproof, washable etc to meet special needs are identified.

500755 680 .115.00 D. WATER SUPPLY

This is particularly important for items such as sanitisers, sterilisers etc.

500756 680 .116.00 E. POWER

Request information on any power supply conditions required for the equipment.

500757 680 .117.00 F. WASTE

Strict requirements of the EPA make it very important for Health Service Management to consider waste implications.

500758 680 .118.00 G. CONTROL SYSTEMS

The configuration and accessibility of any control systems required to ensure a work area is functional should be considered for all relevant equipment items.

500760 680 .119.00 H. COMMISSIONING AND CLIENT TRAINING

A thorough commissioning and training program should be specified to suit the type of equipment.

OHS legislation requires designers, manufacturers/suppliers to provide information on the safe use of equipment and any risks associated with that equipment.

Client training should:

- + Include safe operating procedures and work practices;
- + Be conducted over several sessions so that employees who work on night shift and weekends can attend;
- + Include all staff who will have some role with the equipment, eg nurses, cleaners, maintenance personnel, porters, volunteers.

Client training and education should be provided over at least two (2) sessions with the option to call trainers back to the site if required for further consultation. Preferably two persons should be designated as in house trainers to ensure continuity and consistency of training new staff.

A complete service manual should be provided that includes all operational, maintenance, safety and technical information as well as a contact list for service and operational issues. The manual should be easily accessible to staff on all shifts.

500761 680 .120.00 J. MAINTENANCE SERVICE CONTRACT

Tenderers should include the option of a fully quantified and explanatory Maintenance Service contract to suit the complexity and the value of the equipment. Advice should be sought on this matter from Asset Management within the Area Health Service. For major items of equipment eg X-ray machines, pathology processors, etc it may be appropriate to negotiate a 5 year maintenance agreement at the time of tendering for the main equipment. It may be substantially more costly to do so at a later date.

500762 680 .121.00 K. ASSOCIATED EQUIPMENT AND SUPPORT SYSTEMS

Tenderers should be requested to include a complete list of all supporting

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engineering or other systems, and consumable items that are required to commission and maintain any equipment. This may include compressors, water filtration systems, filters, back-up systems, chemicals, etc.

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INTRODUCTION

Preamble

501121 950 .1.00 This Guideline is based on the Guideline for the Commissioning of Health Facilities for the Queensland Health Department prepared by GHAAP at the University of NSW. The Queensland document has been substantially altered to suit NSW Health Department requirements.

501122 950 .2.00 This Commissioning Guideline has been prepared to assist the health facility capital planning and development of projects undertaken by NSW Health. It has been developed in line with other NSW Health Guidelines and will need to be read in conjunction with them. Refer to other sections of these Guidelines for further information regarding FF&E, Service Planning and Operational Policies.

It is expected that the principles described here will be useful for large and small projects, though the degree of structure and personnel involved will vary considerably.

Definitions

501132 950 .3.00 COMMISSIONING

There are two types of Commissioning:

- + Building Commissioning - completion for occupation by the contractor from a physical facility point of view such as successful running of all plant and equipment. This is managed by the Project Team.

- + Operational Commissioning - the preparation of a facility and its staff for commencement of operation such as equipping and familiarising of staff with facility operation. This is managed by the Commissioning Team.

This Guideline deals primarily with Operational Commissioning.

501657 950 .4.00 OCCUPATION

Occupation involves:

- + Preparation for the move at all management levels;
- + The physical move into the new facility;
- + Contingency plans for key items and emergency plans;
- + Defects and issues notification processes.

880026 950 .5.00 DECOMMISSIONING

Decommissioning is the process undertaken to secure vacated premises.

The process involves:

- + Isolating and capping all mechanical, electrical and plumbing services unless required for future use on the protection of the building;
- + Ensuring that all systems are protected by draining down and making secure;
- + Taking suitable measures to prevent the entry of birds, vermin, insects and vegetation;
- + Organising disposal of unwanted items in accordance with NSW Health policies;
- + Ensuring that all access points to the area are secured, and where necessary boarded-up, barring unauthorised entry.

Objectives

880004 950 .6.00 This document should enable planning teams to:

- + Understand the context within which the commissioning process takes place;
- + Describe the operations that will take place in every department or Unit and identify the staffing required, consistent with the recurrent budget and the business plan developed for the budget unit;
- + Describe the scope of the commissioning task and the time and activities to complete the commissioning process;
- + Describe the standards, procedures, systems and technologies to be used to achieve the commencement of operations;
- + Establish and identify ownership of the process with clear indications of roles

and responsibilities of team members;

- + Describe the time and activities to complete the commissioning process;
- + Identify the management control procedures for commissioning;
- + Identify and clarify the handover and post-project evaluation procedures;
- + Undertake risk assessment and the identification of potential hazards and the required strategies to eliminate or protect against these hazards during commissioning.

Commissioning and the Process of Planning

501145 950 .7.00 The main phases in the evolution of a new facility are: service planning, brief, design, construct, commission and operate.

Refer to Part B for further information regarding the NSW Process of Facility Planning (POFP).

501147 950 .8.00 There is considerable interaction between these phases which includes planning the way the building will operate. This involves extensive consultation between users and designers, and coordination between the Project Team and the Commissioning Team. Refer to the attached Bar Chart.

501124 950 .9.00 The first step in the planning process is preparation of the Service Plan. The Service Plan identifies the service requirements. This may result in the need to consider capital solutions to a particular service need. If so the Department will approve proceeding to the Procurement Feasibility Plan (PFP) and Project Definition Plan (PDP) phases. These describe the service-related operations and physical characteristics of the Health Care Facility, ie the project brief.

This planning is undertaken prior to commencement of commissioning and knowledge of this is essential for the Commissioning Officer. The planning documents are usually referenced in the Commissioning Plan.

The Project Team is responsible for the design and construction of the facility in accordance with the project brief, to suit the operational policies determined at the PDP stage.

The Commissioning Team should be established during the design stage of a project and should liaise with the Project Team to prepare for occupation and operation.

Following handover from the contractor, the Commissioning Team will manage the occupation and initial operation activities.

The Commissioning Team will also be involved in the formal evaluation of the facility after a period of occupation ie the Post Occupancy Evaluation.

Key Considerations

501123 950 .10.00 Key considerations in commissioning include the following issues:

- + The process of commissioning a facility relates not only to the management of time, costs, supplies, equipment and the quality of buildings, but also to the management of people, systems and organisations to ensure that the facility is utilised effectively, and patient, staff and visitor safety is maintained.

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- + Commissioning must be planned, considered and resourced as far in advance as possible, as a separate but integrated entity within the overall project;
- + Key personnel should be involved throughout the whole project if possible;
- + Appropriate resources in staff, time and support must be allocated;
- + The Commissioning Plan will be based on operational policies and the design solution;
- + Operational Policy reviews and project outcomes may require implementation of a change management strategy;
- + Commissioning requirements must be incorporated in the tender documents, for example decanting strategies and staged building works;
- + Development of an open/agreed Communication Plan and document control system is required. This plan will encompass the various reviews required through the planning and building phases that should be conducted to ensure that project is developed in accordance with the Project Definition Plan.
- + The success of a project results from the co-operation of the users and their investment in the different processes. The OHS Act 2000 requires consultation with personnel at all levels. Operational Commissioning should not be attempted without consultation and user involvement.

Commissioning Team

501148 950 .11.00 The Commissioning Team is a multidisciplinary team that will vary depending on the stage and size of the project. For small projects, commissioning is usually managed by one or two people, with specialist input as required. On complex projects, roles will be undertaken by separate personnel.

There are four key roles in the commissioning process:

- + Commissioning Coordinator;
- + FF&E Coordinator;
- + Commissioning Engineer;
- + Departmental Commissioning Facilitator.

The Commissioning Coordinator will develop a list of team members required, based on their experience and the input needed to commission the Health Care Facility. This team will come together very early and determine their individual roles, requirements and time frame.

The Commissioning Team must represent the interests of all users of a facility. They must be accessible and willing to listen.

Input is required with regard to:

- + Nursing needs and patient care;
- + Senior medical staff activities and interests;
- + Accepting the engineering services and implementing a planned preventative maintenance program;
- + Supply of furniture and equipment as well as consumable supplies;

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- + Design and project management to ensure close contact with the contractors and advise on progress of the building work;
- + Health Department policies, procedures and processes;
- + Administrative and secretarial assistance.

The core team members must have a good understanding of the project details and desired outcomes. It is essential that tasks are allocated to appropriate personnel and that they are adequately briefed.

The reporting structure for the Commissioning Team will follow those established for the project.

501150 950 .12.00 COMMISSIONING ROLES

COMMISSIONING COORDINATOR:

The major role in Operational Commissioning is that of the Commissioning Coordinator which covers two main areas of responsibility:

1. Management of the Overall Commissioning Process;
2. Management of the Operational Commissioning Activities.

On most projects, one person will be responsible for both these areas. On large projects, the areas of responsibility may be split between two or more people.

These responsibilities require attention to the following main tasks:

- 501151 950 .13.00
1. Management of the Overall Commissioning Process. The Commissioning Team will be required to:
 - + Prepare and implement the Commissioning Plan for all services in conjunction with the Health Care Facility management and NSW Health;
 - + Manage the commissioning process including convening and minuting meetings;
 - + Coordinate and provide support for the departmental commissioning processes;
 - + Provide advice in regard to, representation of, and communication with the facility's management regarding commissioning activities;
 - + Program staffing needs required at the time of commissioning;
 - + Determine and manage the commissioning budget.
 2. Manage the Operational Commissioning Activities:
 - + Establish the FF&E program;
 - + Identify OHS hazard, risk assessment and risk elimination or control as required by legislation;
 - + Determine Staff and manage relocation;
 - + Assist with activity management;
 - + Manage the Occupation Program - including confirmation that lead times are

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appropriate;

- + Define the defects liability period activities;
- + Establish staff training programs;
- + Determine Acceptance Criteria;
- + Ensure operational functioning of the facility;
- + Establish a feedback loop activity for QA;
- + Manage the preparation and sign off of the commissioning procedures.

503038 950 .14.00 Ideally this person should be involved in the project from its conception and have a clinical background. The Commissioning Coordinator will report directly, and have access to the facility's executive team. The Commissioning Coordinator is also the link between the Project Team and the Commissioning Team.

501152 950 .15.00 FF&E CO-ORDINATOR:

The FF&E Coordinator is usually a separate person to the Commissioning Coordinator, and should have purchasing experience.

The FF&E Co-ordinator will be required to:

- + Ensure that equipment specifications for the whole project are consistent with user group requirements;
- + Coordinate OHS assessments of new equipment in consultation with end users;
- + Establish lead times for delivery of major items, tendering requirements, responsibilities and contract arrangements;
- + Order FF&E and organising delivery, storage and installation;
- + Establish evaluation criteria for its acceptance;
- + Ensure consistency between what was planned for all spaces and what is ordered;
- + Ensure that any alternatives offered by the builder are reviewed against user evaluation criteria;
- + Ensure patient interface samples submitted by the builder are signed off;
- + Manage the provision of manuals and scheduling training for staff using the equipment.

The FF&E Coordinator reports to and is managed by the Commissioning Coordinator. Refer also to FF&E Guideline.

501153 950 .16.00 COMMISSIONING ENGINEER:

The role of the Commissioning Engineer is to become familiar with all the building services provided in the new facility.

The Engineer will then be required to:

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- + Carry out regular surveillance inspections in order to deal with issues or problems being experienced by other staff in critical or other areas;
- + Support the Commissioning Team in the occupation process;
- + Develop emergency policies and procedures for services for implementation upon occupation;
- + Plan for training and handover of plans and manuals etc;
- + Coordinate asset management documentation and processes for servicing, etc.

This role is usually undertaken by the Hospital Engineer.

501154 950 .17.00 DEPARTMENTAL COMMISSIONING FACILITATOR:

The role of the Departmental Commissioning Facilitator is usually undertaken at the departmental level. The Facilitator will be required to:

- + Develop a programme that will identify the duration of moves, establish interdependencies, identify dates of occupation and determine the duration of de-commissioning;
- + Establish departmental schedules for FF&E;
- + Prepare records for patient transfers;
- + Organise and arrange staff site inspections and plan staff training;
- + Prepare and monitor departmental activity check lists.

Commissioning Tasks

501140 950 .18.00 GENERAL TASKS

The main tasks in commissioning may be undertaken by one or more officers assigned with the delegated authority. Some of these tasks may be replicated from existing systems. They include to:

- + Establish the Commissioning Team - membership, roles, responsibilities and authorities, reporting;
- + Review the planning documents including the PDP, policies and procedures for the whole of service/facility as well as for the individual departments to determine, document and agree to the changes since sign-off and the processes for implementing the changes;
- + Develop a plan for the commissioning and occupation of the new building or areas;
- + Program the commissioning process for each main department or unit;
- + Manage equipment selection, trials, OHS assessment, procurement, delivery, storage, installation, testing, training and establish inventories - order times must be coordinated with the building programme to ensure that storage time is as short as possible, and that storage space is available;
- + Develop operational policies and procedures for the facility and groups of

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departments or functions, as a continuation of briefing and coordinated with services plans, so that all Commissioning personnel understand how the new facility is intended to function;

- + Determine job specifications and descriptions, and arrive at a detailed staff establishment;
- + Take over the building from the contractor, commence the maintenance program, effect insurances and establish security arrangements;
- + Ensure that the building contract has been carried out properly in accordance with the agreed design;
- + Participate in the process of defects identification and rectification;
- + Manage acceptance and operational testing of installations;
- + Work out documentation procedures, design and order stationery and processing equipment;
- + Obtain necessary licenses, certification and other statutory approvals and documentation;
- + Work out final details of supply systems and arrange supply and disposal contracts;
- + Develop emergency procedures for fire, explosion, disasters etc;
- + Prepare staff for occupation including orientation, recruitment and training;
- + Manage the process of occupation including relocation and decommissioning;
- + Organise and hold opening ceremony;
- + Start work, ie accept patients and initiate supporting services;
- + Monitor initial operation.

501144 950 .19.00 TASKS UNDERTAKEN JOINTLY WITH PROJECT TEAM

In coordination with the Design and Construction Team the Project Team is also required to:

- + Provide signage such as directional and information signs. Refer to Part C of these Guidelines;
- + Determine a system for Room Identification - this may be different from the one used during construction and may be altered to suit operational policies or asset management systems; this should be resolved early to assist with placing equipment and defects management;
- + Establish security systems including keying electronic access control systems (including lifts), CCTV systems, duress alarms, patient wandering systems and alarm management and responses;
- + Selection of interior design elements including artwork, fabrics, window treatment, privacy screens, paint colours, floor coverings, furniture types.

Commissioning Plan

501126 950 .20.00 INTRODUCTION

The Commissioning Plan provides a framework within which the process and activities of commissioning are determined.

These activities must be properly planned.

880011 950 .21.00 CONTENT

The Commissioning Plan should address the following:

- + Physical Activities Programme - the identification, sequence and duration of all activities required to bring a Health Care Facility into operation. It should include post-occupancy activities. It is closely linked to the building programme and must be regularly reviewed and updated;
- + The time line, milestones and critical path from this programme are the key information required throughout the operational commissioning process. In many cases contingencies are required if milestones are not met. Communication is essential;
- + Organisational & management structure - outlining the activities required to make the Health Care Facility operational, and responsibilities for planning and commissioning activities. Responsibilities and coordination processes are established;
- + Operational Policies - detailed policies and procedures for the facility as a whole and for each department as it is expected to operate at the date of occupation. Policies outlined in the PDP shall be reviewed;
- + Human Resources strategies - including staffing estimates; appointments; transfers; recruitment; deployment and training. It includes staff orientation, OHS and industrial relations issues;
- + Communication Plan - this should follow the project planning / commissioning team structure and include frequency, content and form of communications, contact lists and processes, external agencies and community liaison / profiling etc. There may be a number of sub-plans dependent on the target audience;
- + Furniture, Fittings and Equipment activities - includes trials, OHS assessments, user investigation, source of funding, capital budget allocations, scheduling, purchasing, commissioning, training & documentation;
- + Occupation activities - includes cleaning, testing, fitout, occupation by staff and patients, relocation activities, stocking and commencement of operations;
- + Decommissioning of previous facilities;
- + Budget allocations - addressing both capital and recurrent budgets. This will identify what will be purchased from which budget; an agreed allocation of funds from the capital budget for FF&E; the breakdown per various departments; organisational-wide budget allocations eg signage, window treatments, artworks, landscaping, contingency and cash flows;
- + Risk Management - identifying major potential risks, establish contingencies, identify what will be done to minimise the risk of disruption occurring and nominate possible actions for correction.

The extent of documentation will vary with the complexity of the project.

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Commissioning Program

501155 950 .22.00 Programming is fundamental to successful commissioning. This role shall be assigned to a member of the Commissioning Team. A specialist programmer may be appointed for complex projects.

501156 950 .23.00 PROGRAMMING CONSIDERATIONS

The team's first task is to determine what has to be done and in what time frame.

The commissioning program must be coordinated with the construction program. An accurate and detailed timetable is required showing the sequence of activities and the critical path.

The communication strategy for the Commissioning Team should be developed and implemented so that all members of the project and commissioning teams are informed of project requirements and work to the same timetable.

Program dates should be achievable and have sufficient contingencies to allow the facility to open on the planned date. Changes to the program must be identified and appropriate action taken.

Operational Policies and Procedures

501170 950 .24.00 DEFINITION

Refer to Part B of these Guidelines for a discussion of the Relationship of Operational Policies to the Facility Design Process.

Operational policies must be established for the whole facility.

Operational policies can be defined as a statement of the objectives and the principal functions for each department. They outline the eventual operational system for the department.

Operational policies will determine what equipment should be obtained, how each staff member will be deployed, and what standard of service will be provided to patients. Significantly, they will also affect the running costs of the facility, and will clarify managerial responsibility.

501161 950 .25.00 OPERATIONAL CHANGE

New developments provide the opportunity to introduce operational changes. This may vary from changes to development of new operational procedures in one department or unit to implementation of significant new management approaches.

There may be considerable resistance to this change from some existing personnel. Therefore change must be carefully planned, documented and its implementation managed.

501165 950 .26.00 REVIEW OF OPERATIONAL POLICIES

The Health Care Facility will have been designed and constructed to suit expected operational policies determined at the briefing stage.

The original assumptions about how a service was to be managed and function may have changed during subsequent stages. The commissioning team must document and review all of the operating expectations.

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Where possible, those personnel involved in the development of these policies should be involved as part of the commissioning team.

The implications of changes may require adjustment to construction, staffing or budgets.

Once a facility opens, there must be an embargo on physical changes to design for a period of 12 months, except where obvious errors or unacceptable risks are evident. After this period, a review of the effectiveness of operational systems can be undertaken.

880114 950 .27.00 WHOLE HOSPITAL POLICIES

Whole hospital policies are system wide policies that describe the operation of a facility as a whole. These are usually part of an overall Area approach, are multi-departmental concerns and usually require decisions from a management team having a wide representation.

These policies form the framework of the facility's organisation within which the working of each department can be defined. These include:

- + Facilities Management;
- + Supply services;
- + Catering;
- + Domestic service;
- + Laundry, linen and uniforms;
- + Public relations;
- + IT and communication systems;
- + Transport - both internal and external;
- + Personnel and human resources.

501179 950 .28.00 DEPARTMENTAL POLICIES

Departmental Policies include:

- + Philosophy of the service - eg the model of care, the functions and the relationship to standards;
- + Utilisation - services provided;
- + Design considerations;
- + Internal departmental flows - goods and people;
- + Applicability of whole hospital policies.

501180 950 .30.00 OCCUPATIONAL HEALTH AND SAFETY

Refer to Part C of these Guidelines.

The OHS Act has implications for the consultation processes undertaken during operational commissioning (including policy and procedure development).

Any OHS risks associated with commissioning or decommissioning, eg security, noise, dust control, asbestos removal, manual handling, must be identified, assessed, eliminated or controlled.

Documentation During Commissioning.

880123 950 .31.00 DOCUMENTING POLICY AND PROCEDURES MANUALS

The Operational Procedure and Policy Manuals will reflect best practice and should be consistent with the other facility documentation to become part of the Quality Assurance documentation. This will also ensure a commitment to using and maintaining the documents as changes in policy occur.

Good documentation enables procedures and policies to be consistently implemented over time and with changing personnel.

880124 950 .32.00 Procedures and policies should take into account that the physical arrangement of Health Care Facilities may not correspond to management structures. This may also impact on commissioning processes.

502234 950 .33.00 USING THE WORKING GROUPS

Policies and procedures should be developed in conjunction with working parties representing each department or Functional Unit. These policies and procedures may require endorsement by the Commissioning Team and senior management may need to determine matters of policy.

502235 950 .34.00 PROCEDURES MANUAL OUTLINE

A Procedures Manual should include:

- + A brief summary of the original (or revised) Operational Policy;
- + An outline of the main functions of the department, including where appropriate:
 - Services to be provided, including any specialised work;
 - Normal hours of work;
 - On-call and emergency arrangements;
 - Predicted workload and target standards;
 - Specialised items of equipment, where these have a large impact on the main functions of the department;
 - Services which will be provided by other facilities.
- + Organisational structure, including lines of accountability within the hospital as a whole as well as within the department;
- + Costed staffing structure;

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- Proposed grading and numbers of staff (managerial, supervisory and operational);
- Proposed deployment of staff over each shift;
- Other staff requirements.

Note: for large departments, it may be preferable to show the staffing structure as an appendix to the manual.

- + Budgetary arrangements; showing an outline of the main components of the department's budget;
- + Relationships with other departments;
- + Departmental information systems for collecting information about patients, staff or finance and the software systems to be used - generally whole of facility policies and include consideration of:
 - Use of Picture Archiving Communication System (PACS);
 - 'Paperless' approach;
 - Telecommunications;
 - Methods of staff and patient education;
 - Security of information;
 - Roles and responsibilities for staff using these information systems;
 - Training needs;
 - Management systems.

502226 950 .35.00 ISSUE OF MANUALS

Manuals should be published as the policies are developed. Additions and alterations will be inevitable as operational systems are never static.

880147 950 .36.00 USING THE MANUALS

A large number of manuals will be produced, representing a substantial investment in time and resources. These should cover all management and departmental systems.

These manuals will form the basis for training staff to operate the hospital as it has been planned.

They will include instructions for operating equipment, and health and safety procedures.

The Commissioning Team must program and manage production of the manuals. The implementation of these will impact on the efficiency of the hospital and the satisfaction of its staff and its first patients.

Staffing Strategies

501181 950 .37.00 ASSESSMENT OF REQUIREMENTS

The planning of new facilities and assessment of recurrent costs including staffing, is made at PFP and PDP stages. This is a considerable length of time ahead of actual occupation.

A review of this and assessment of staffing requirements at the occupation date needs to be undertaken as part of the Commissioning Plan.

In assessing the staffing establishment for a facility, it is important to consider the operational management structure as a whole and then look at staff deployment.

Calculations of staffing requirements should be as accurate as possible for the Commissioning review. This involves relating workload and patient dependencies to the actual numbers and categories of staff required compared with the funding available.

Different strategies will be required depending on the outcome of the staffing review. These may include issues of staff retention, recruitment, orientation and training.

501186 950 .38.00 CONSIDERATIONS

New staff recruitment and training, existing staff reorientation and in-service education should be undertaken well in advance of the intended occupation date.

Close liaison with counselling services and support for key staff in their working groups, will be essential to manage change.

A new development can lead to staff insecurity. The personnel policy must be determined as early as possible.

Staff must be kept informed on all aspects of a project and the effect of the project on them personally. This can be undertaken through discussions and news bulletins.

Adequate support for staff during operational change must be provided.

Issues of industrial relations, OHS and matters of redeployment and retraining must be addressed and resolved.

The recruitment of staff needs to consider:

- + Recruitment procedures required;
- + The availability of potential staff;
- + Time taken to fill positions.

Furniture, Fittings and Equipment

501190 950 .39.00 The equipping process is outlined in the separate Furniture, Fittings and Equipment Guideline.

Bringing the New Building into Use

501191 950 .40.00 PLANNING

Detailed commissioning plans must be developed for each department or area

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within a facility. The plans are developed in consultation with the end user managers and providers of support services. The plans will be based on the day-to-day activities, tasks and roles of all personnel involved in the department and required to bring it into operation.

The Commissioning Team and other relevant personnel should review the Commissioning Plan prior to occupation on a weekly or even daily basis. The occupation program must be committed to and signed off.

501192 950 .41.00 OCCUPATION

At occupation, all key supervisory staff should be appointed, initiated and instructed in the working methods to be adopted, then briefed on their implementation.

The progression from occupation to operation requires a considerable amount of planning and work. The time required will vary according to the size and nature of the facility. Sufficient time must be allowed for trial runs and overcoming inevitable challenges.

Operational managers should be aware of and involved in attending to items outstanding at handover.

Staffing strategies must be in place.

Furniture, fittings and equipment should be on site ready for placement.

Arrangements should be made for supply of consumables.

The facility must be cleaned to a standard fit for operation. This is usually a higher standard than the Builder's clean at handover.

Required testing of services and for contamination must be undertaken.

Public Relations

501197 950 .42.00 COMMUNICATIONS PLAN

Development of a new facility will generate a degree of interest in the community and among staff. Closure of existing facilities may create negative reactions. Provision of an effective Communications Plan and public relations strategy is an important part of the commissioning process. This may be managed by the Commissioning Co-ordinator or by specialist Public Relations personnel.

Communications with the staff is equally important. Staff are significant players in what is presented to the public. They should be routinely given correct information about the project, which is consistent with that being provided to the public. Site visits may be arranged.

501199 950 .43.00 STRATEGIES

The aim should be to build up local interest in the new project to a peak to coincide with opening day. Publicity may include suitable articles and photos published in the local and national press, talks to local societies and organisations, exhibitions of plans and models of the new buildings.

Public awareness can be stimulated by open days, held once equipment and furniture are in place. A descriptive leaflet or brochure can be produced describing the services to be offered to the community and how they should be accessed.

Publicity activities should be programmed to coincide with key milestones in a project such as:

- + The announcement of approval to proceed;
- + Turning of the first sod;
- + Topping out of the building;
- + The handover of the building;
- + The official opening.

Close contact should be made and maintained with interested professional bodies, local authority services, and local medical organisations. This may also help with staff recruitment. General practitioners should be encouraged to participate in activities of the facility. The help of voluntary services may also be enlisted. There will be a range of individuals, community service organisations and special interest groups that have direct involvement with the facility and they need to be kept informed of progress and changes of service. It is important to list these to ensure that a structured information flow is maintained.

Information being prepared and released must be correct and consistent. Policies for image, graphics, and the written style should be established. Contradictory or other negative information must be avoided. If there is doubt about some issue, or a choice is yet to be made, this should be made clear.

Where previously published information changes or is updated, this should also be publicised as widely as possible.

502326 950 .44.00 OPENING CEREMONY

The timing of the opening ceremony needs to be considered. Holding it prior to occupation of the facility allows the media, staff and visiting dignitaries to see the area without disrupting the operation of the Unit or privacy of the patients.

Timing the ceremony for after commencement of operations allows the guests and dignitaries to see the facility in operation and to meet patients. The date should be fixed well in advance, particularly if it is intended to invite a VIP to perform the ceremony.

An appropriate budget should be established, any special arrangements made and approvals obtained eg traffic changes such as road closures.

Risk Analysis and Management

501204 950 .45.00 GENERAL

Risk Management strategies should be included in both the Commissioning Plan and timetable. They should be developed in consultation with the project team, contractor, end users of the facility and other support personnel.

501205 950 .46.00 TYPES OF RISKS

Many health care organisations are concerned with the potential financial impact from risks associated with the development of a new facility. Documentation of a Risk Strategy should reflect the risk assessment developed at the preliminary

planning stages.

Consideration should have been given to the financial risks resulting from a 'poor investment' regarding the project as a whole, through the procedures involved in evaluation of the PFP. There is also an evaluation of the risks associated with poor contractor performance and claims related to such things as errors and omissions, delays etc, during the design and construction phases. These are covered using normal construction and project management procedures.

Commissioning risks include:

- + Cost over-runs for the commissioning itself;
- + Excessive budget allowances for recurrent costs after opening;
- + Legislative changes that impact on staffing or operations, public liabilities etc;
- + Failure in design, which might affect Occupational Health and Safety matters, patient safety etc;
- + Poorly developed Operational Procedures that lead to problems with infection control, patient safety etc.

502327 950 .47.00 MANAGING RISKS

The aim of the Risk Management Strategy is to identify the areas of potential risk and to prepare a plan of action for addressing these. Often the very act of doing this can prevent a risk being realised. The Strategy will be revised as new risks become evident and earlier risks eliminated. The Commissioning Team members should be aware of how to report potential risks and should be encouraged to report potential risks even if they are not likely to occur immediately.

Legal implications, which could arise from the proposed work practices for a facility, can be reduced by using the opportunity of a new development to review all policies and procedures and to use the Operational Procedures documentation to provide a basis for assessing risk. A 'legal audit' can provide a comprehensive assessment of risk.

OHS Regulation requires OHS hazard identification, risk assessment and risk elimination or control. Local actions such as conducting ergonomic evaluations of specific work spaces and simple corrections can reduce claims by staff for injury.

Post Occupancy Evaluation (POE)

501210 950 .48.00 GENERAL

Refer to separate Post Occupancy Evaluation Guideline.

Evaluation of the operation of the facility in relation to the original brief, the planning policies and the design helps identify both successes and deficiencies in the building and its operational systems and provides valuable feedback for future projects. A POE is not an exercise in fault finding. It is a recognition that many decisions have been made along the way to the completed facility with varying success.

501212 950 .49.00 OUTCOMES

A POE study should reveal:

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- + Deficiencies in the design that can be remedied fairly easily;
- + Where previously accepted design principles are giving trouble in practice;
- + Design features that have proved to be expensive in terms of running costs;
- + Where accepted design principles are working well.

502238 950 .50.00 USE OF RESULTS

The results of a POE will be used to:

- + Reassess the design principles and space provision proposed in the Health Facility Guidelines;
- + Identify issues that require further research or expert input;
- + Promote clearly successful solutions in future projects;
- + Avoid expensive errors or mistakes that compromise functionality or efficiency in capital works projects.

PLANNING

Operational Policies and Procedures

880115 950 .29.00 DEPARTMENTAL PROCEDURES

Departmental procedures describe the way an individual department will operate. The activities of one department may impact on other departments. This must be addressed in the procedures.

Successful implementation of procedures requires acceptance and commitment from all affected personnel. This can be achieved through consultation and involvement in their preparation.

APPENDICES

Sequence of Activities

503039 950 .

Glossary of Terms

880068 950 .51.00 The following section provides definitions for some key terms used in this Guideline.

ACTIVITIES PROGRAMME

Displays the complete time frame of the project and the relocations of the departments in a staged strategy.

This may also be displayed in the form of a Gantt Chart and identifies, in sequential order, the relocation of departments and the 'lead time' allocated.

COMMISSIONING

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The term used to describe the preparation of a building, plant, equipment and personnel to a state of readiness for occupation and operational use.

COMMISSIONING STRATEGY

Describes all the activities that must be planned for the complete process of commissioning.

DATE OF TRANSFER

The actual date that a department will move into the new building.

DECOMMISSIONING

The process undertaken to secure vacated premises.

COMMISSIONING LEAD TIME

The period of time required, between the handover of the building to the hospital by the Contractor, and the date of occupation.

OPERATIONAL STRATEGY

The term Operational Strategy has two components.

+ The Services Plan - describes the services to be provided on a State or area wide basis;

+ The Development Plan - describes the service related operations and capital characteristics of the facility.

DEFECTS LIABILITY PERIOD

Period of time from occupancy during which time faults / defects in the building or fixtures are identified, reported and repaired by the contractor.

PRACTICAL COMPLETION AND HANDOVER

The date of handover of the building or part of the building to the hospital by the contractor and from which point the defects liability period starts.

References and Further Reading

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Asset Management: Facility Condition Workbooks, Capital Works & Assets Management Branch, Asset Management Unit, Queensland Health, 1998.

Guideline on the Commissioning of Health Care Facilities for the Queensland Health Department, GHAAP, UNSW, 2003.

DS1 Process of Facility Planning Manual, Capital Works Branch, NSW Health Department, 1993.

Rebuilding Queensland, Performance Management and Organisational Development Branches, Queensland Health Department, 1997.

Operational Commissioning Strategy - A Manager's Guide, Health Facilities Note 06, NHS Estates, London, 1995.

References and Further Reading

- 880064 950 .52.00 Capital Works Guideline (1997) Capital Works & Assets Management Branch, Asset Management Unit, Queensland Health Department, Brisbane.
- Asset Management: Facility Condition Workbooks (1998) Capital Works & Assets Management Branch, Asset Management Unit, Queensland Health Department, Brisbane.
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- Rebuilding Queensland (1997) Performance Management and Organisational Development Branches, Queensland Health Department, Brisbane.
- Operational Commissioning Strategy - A Manager's Guide (1995) NHS Estates, Health Facilities Note 06, London, HMSO.

Checklists

- 880208 950 .53.00 A List of Activities for Inclusion in a Commissioning Plan is included as an attachment to this document.

Sequence of Activities

- 880153 950 .54.00 A Matrix outlining a sequence of activities for commissioning is attached to this document. It is a simplified version of a British approach to commissioning and sets out the timing and sequence of activities. It assumes a large project, with a high degree of complexity and a 2-3 year period of building construction. A phased handover of some facilities such as mechanical plant is incorporated.

The work involved is divided into seven 'streams':

1. Planning and building;
2. Management;
3. Equipping;
4. Staffing and training;
5. Operational methods;
6. Phasing;
7. Public relations.

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6mnth	Defects schedule Final completion	Evaluate commissioning programs	Equipment evaluation	Continuation courses	Evaluate operational policies	Wards opened progressively	Official opening (at least 8 weeks after 'T' day)	6mnth
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ACTIVITIES FOR INCLUSION IN A COMMISSIONING PLAN

A. MANAGEMENT AND PROGRAMMING

1. Prepare commissioning program.
2. Integrate with construction program.
3. Consider need for early availability of sections of the new building eg residential accommodation, supply centre, space for storage of equipment etc., in time to include instructions in the building contract.
4. Coordinate provision of off-site services.
5. Coordinate various commissioning 'streams':
 - 5.1 Operational procedures;
 - 5.2 Staffing;
 - 5.3 Equipping;
 - 5.4 Public relations;
 - 5.5 Engineering services;
 - 5.6 Opening ceremony;
 - 5.7 Cost control.
6. Prepare detailed timetable for movement of equipment, staff and patients into the new building and coordinate with associated activities.
7. Inaugurate supporting and primary services:
 - 7.1 Engineering;
 - 7.2 Cleaning;
 - 7.3 Supply and disposal;
 - 7.4 Catering;
 - 7.5 Clinical.
8. Trial runs.
9. Receive patients.

B. OPERATIONAL PROCEDURES

1. Discuss operational policies with project team:
 - 1.1 Clinical services;
 - 1.2 Hotel services;
 - 1.3 Engineering services.
2. Develop operational policies and prepare detailed operational procedures and methods of working.
3. Prepare procedure manuals for staff training, planned preventative maintenance etc.
4. Advise on selection of equipment.
5. Coordinate procedures with general practitioners and other local authority services as appropriate. Build up integrated hospital and domiciliary services.
6. Prepare initial cleaning program.
7. Induction of supervisory staff.
8. Inaugurate planned operational procedures.

C. STAFFING

1. Review provisional estimates with regard to revenue costs.
2. Prepare recruitment program.
3. Submit proposals to health authority.
4. Finalise appointment program.
5. Prepare training, reorientation and 'back to nursing' courses, in liaison with local authorities and organisations.
6. Consult with labour/industry and productivity departments and trade unions as necessary.
2. Appoint supervisory staff and arrange induction course.
3. Appoint and train other staff according to program.

D. EQUIPPING

1. Check preliminary equipment list and estimate cost.

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- 2.
3. Assess existing equipment available for transfer.
4. Revise list and specify new equipment to meet detailed operational procedures.
5. Conduct OHS Assessments of new equipment in consultation with potential end users representatives.
6. Consider means of variety reduction of equipment types and models.
7. Obtain comparative quotations for equipment types.
8. Select equipment types.
9. Submit proposals to health authority for approval.
10. Place equipment orders.
11. Receive, check, label and store equipment.
12. Arrange equipment maintenance contracts.
13. Arrange supplies contracts - types, quantities, delivery.
14. Distribute equipment to places of use.
15. Test equipment in position where necessary.
16. Prepare inventories of final equipment placements.

E. PUBLIC RELATIONS

1. Press reports, infrequent at first building up to maximum publicity for recruitment.
2. Arrange talks to local societies, schools etc.
3. Prepare descriptive brochure.
4. Staff recruitment drive.
5. Exhibition of plans and model.
6. Open days for public viewing.
7. Organise arrangements for group visits.
8. National and local press days.
9. Official opening (post-transfer of patients).

F. PROGRAMMED TRANSFER FROM OLD INTO NEW BUILDING

1. Finalise plans for phased handover, if any.
2. Programmed build-up of off-sited services.
3. Assess and program run-down of 'old' inpatients prior to move.
4. Program phased transfer, security requirements, and removal arrangements.
5. Assess need for additional (temporary) staff during phased transfer.
6. Review and program future use of vacated buildings.
7. Organise temporary communications to maintain services (if needed).
8. Assess need for suspension of outpatients clinics (1 day).
9. Transfer inpatients.
10. Resume normal service from new hospital.