80 GENERAL REQUIREMENTS

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PLANNING

General

80 .2.00 This section sets out the parameters required by NSW Health to guide the planning of Health Care Facilities.

It covers the service, policy and operational issues to be considered for all projects. It then looks at basic principles for good design that will result in appropriately planned facilities, fit for purpose and adaptable in the future.

The target audience for this part ranges from clinicians and managers with little or no capital project experience, through novice designers to experienced planners, managers and clinicians.

For experienced project teams, this section may be used as a reference point or checklist against which to compare or assess project design solutions.

Service Planning

80 .3.00 These Guidelines are a resource to assist in the planning, design and construction of Health Care Facilities. The information provided places the capital planning process within a framework that depends on prior and thorough service planning.

80 .4.00 A clearly defined Service Plan, model of care, outline of community requirements and Operational Policies must be developed and approved in accordance with appropriate delegations before embarking on the capital planning process.

These Guidelines require that all parties involved in the Facility Planning Process have responsibility for ensuring that Health Care Facilities are planned and designed in a way that minimises asset management and maintenance costs, maximises efficiencies, and provides a safe work environment.

Sharing of space, equipment and staff, wherever possible, are practical steps towards reduction of excessive asset costs. This approach is promoted throughout these

Guidelines.

Recurrent Costs

80 .5.00 Departmental policy requires that recurrent costs of new Facility Proposals are fully analysed and estimated at feasibility and project definition stages in the Planning Process, and then progressively refined as the project proceeds. It is critical that client groups and designers ensure that future facilities are sized to provide only those services for which recurrent funds will be available under the Department's future funding and resource allocation projections.

80 .6.00 Prior to embarking on the capital planning process, contact should be made with the NSW Health personnel who can provide information on recurrent costs.

80 .7.00 Facility design and construction should take due consideration of the cost of maintenance as part of the overall lifecycle costs of the Facility.

Refer to NSW Health TS11 - Engineering Services Guidelines.

80 .8.00 Facility design and construction should take due consideration of capital charging policy.

80 .9.00 For every project, a Financial Impact Statement should be prepared that sets out the current format for an operating budget. This format should be completed and attached to PFP and PDP submissions. When embarking on a capital project contact should be made with the NSW Department of Health to ensure the most current and appropriate method of reporting an operating budget is being used.

80 .10.00 Examples of planning and design decisions that may impact on operating costs include:

+ The potential to reduce staffing through the co location of clusters;

+ Clustering of areas to allow sharing of common spaces;

+ The impact on maintenance costs of:

  - the extent of glazing;

  - use of low maintenance equipment and building fabric/finishes utilising prefinished materials;

  - protection of finishes;

  - accessibility of in-ceiling services;

+ The selection of Furniture, Fittings and Equipment that are low maintenance and hence incur lower recurrent costs.

+ The additional lighting cost that may result from a design that does not offer opportunities for natural lighting.

+ Costs resulting from common law (negligence) and Workers Compensation claims for injuries to patients, staff and visitors if facility design does not support safety;

+ Designs that increase staffing needs due to impact on Operational Policies, such as the increased need for porters if small store rooms necessitate more frequent deliveries of consumables.

Occupational Health and Safety

80 .11.00 The Occupational Health and Safety Act 2000 requires employers to ensure that the workplace including premises, work environment and plant (equipment) is safe and without risk to the health of employees and others. NSW Health is committed to a high standard of workplace safety and minimising risk in the public health care system, by the provision of a safe and secure environment for patients, staff, contractors and visitors.

The physical environment includes the infrastructure of the Facility plus the building services and operational systems to support that physical infrastructure.

Note that the definition of 'plant' in OHS legislation includes any machinery, equipment or appliance and could be viewed to include furniture, fittings and equipment.

Employers are also required by the OHS Act 2000 to consult with employees on OHS and welfare matters. This includes consulting with employees when changes that may affect the health, safety or welfare of employees are proposed to premises or plant.

The OHS Regulation 2001 requires employers to identify hazards, assess risks arising from those hazards, and eliminate or control those risks. The project team, in consultation with employees, must therefore aim to identify, assess and eliminate/control any risks associated with the design of a Facility and proposed FF&E prior to finalisation of the plans. This is consistent with the OHS Act requirements (as outlined above) to provide safe premises and plant.

Consultation must also occur during risk assessment and when decisions are being made on how to eliminate/control risks. In effect this means that consultation with employees must occur prior to and during the course of planning new premises or refurbishments, and prior to the purchase of FF&E.

The design stage is a critical phase where it is possible to design out potential OHS problems that would affect both staff and patients. In the hierarchy of controls, this rates as the highest and most effective level of OHS risk prevention. By taking a risk management approach in the design of buildings, infrastructure and systems, a safe environment can be created and recurrent costs minimised.

Refer to Part C for further information.

80 .12.00 The latest version of the following documents should be referred to in the design of a Facility:

+ NSW Health Design Series Safety and Security Guidelines (DS 36);

+ "Protecting People and Property - NSW Health Policy and Guidelines for Security Risk Management in Health Facilities" Circular 2003/92, NSW Health Department, December, 2003 - referred to as the PPP Manual throughout these Guidelines. This is available from: http://internal.health.nsw.gov.au/audit/manuals/protecting_people_property.pdf.

+ Zero Tolerance: Response to Violence in the NSW Health Workplace Policy and Framework Guidelines July 2003, Circular 2003/48, NSW Health Department.

+ Workplace Health and Safety - a Better Practice Guide Circular 2001/22, NSW Health Department.

+ "Designing Workplaces for Safer Handling of Patients/Residents: Guidelines for the Design of Health and Aged Care Facilities", Vic WorkCover, 1999.

This list of documents is not exhaustive and it may be necessary to refer to other relevant documents in addition to these.

Access

80 .13.00 In line with the NSW Disability Services Act 1993 and the NSW Disability Policy Framework, planning and design teams are to ensure that Health Care Facilities

provided to the community are suitable for people with disabilities. Access needs of people with a wide range of disabilities should be identified and those needs addressed in all capital works projects.

The NSW Health Design Series (DS32) Improved Access for Health Care Facilities should be referenced; however it does not override the Australian Standards or the Building Code of Australia nor relieve users of their obligation in ensuring fitness for purpose in the planning and design of Health Care Facilities.

Refer also to the Federal Disability Discrimination Act (DDA). As noted in Part A of these Guidelines, it may be prudent to employ a disability specialist to assist with compliance, and this may also be required by some local authorities.

Infection Control

80 .14.00 Infection control requirements and policies have a direct impact on facility design and should be reviewed by planning and design teams at the commencement of planning for capital works programs. Infection control consultation prior to construction, renovation, commissioning or demolition work is essential to ensure that infection risks are identified and appropriate measures put in place to reduce such risks.

The involvement of infection control professionals and the incorporation of infection control principles in building and refurbishment projects ensures that relevant issues in the design and layout of Health Care Facilities have been considered, and incorporated into building plans. In addition, infection risks related to construction can be identified and managed.

Consultation with infection control personnel ensures that Health Care Facilities are designed to minimise infection risks. Issues that require infection control input include: air handling system design, negative pressure rooms, design of interior surfaces and storage areas to facilitate cleaning, patient accommodation and Waiting Area design, work flow issues, transportation routes, and the number and location of hand basins.

The NSW Health Circular No: 2002/45 Infection Control Policy available at: www.health.nsw.gov.au or from the Better Health Centre on (02) 9816 0452 should be referred to when reading this document.

Refer to Part D of these Guidelines.

Environmentally Sustainable Design

80 .15.00 The NSW Government is committed to the principles of environmentally sustainable design in observance of a commitment to meet ecological obligations with regard to resource use, water consumption, energy conservation and waste management. Every effort should be made in public capital works projects to reduce the cost of energy, water usage and to eliminate pollutants in our environment, especially greenhouse gases, but without compromising patient and staff safety and comfort.

A capital project provides an ideal opportunity to address these issues and to include design features, equipment choices and operational practices that eliminate previously unacceptable practices.

The Environmental Performance for Buildings Reports are to be completed for the Predesign, Design, Construction and Operation stages and submitted to NSW Health. The Environmental Performance Guide for Buildings is available from www.asset.gov.com.au/EnvironmentGuide.

Engineering Services/Standards

80 .16.00 Refer to TS11 for compliance and technical requirements for the design and installation of engineering services in new and refurbished premises.

TS11 does not override the requirements of the Building Code of Australia nor the Australian Standards.

Information Technology / Communications

80 .17.00 Most capital projects will have an Information and Communications Technology/Information Management component. This could include upgrading existing hardware, installing a new information management system and associated change management processes.

Information Communications Technology infrastructure projects that are part of a building project should refer to TS11 (Engineering Services).

It is recommended that all proposals for funding of Information and Communications Technology be discussed with the Department of Health prior to formal submission. Processes for formal submission will depend upon the type and scale of the proposal.

The following principles apply:

+ Information Technology proposals must be consistent with the State IM&T Strategy;

+ Proposals are expected to comply with the NSW Health Enterprise Architecture and relevant technical standards as appropriate to the project;

+ IM&T/ICT project proposals should also state strategic alignment, benefits realisation, risk and quality management, and economic justification for the expected outcomes. The level of detail needs to be appropriate for the scale and type of project;

+ Proposals requiring state capital funding should be submitted to NSW Health. It is essential that the proposals be in accordance with the Shared Corporate Services Strategy as managed by NSW Health. The process for funding for Information and Communications Technology Proposals for 2004/05 is outlined in Treasury Circular TC 03/10.

80 .18.00 Health information developments and investments included in capital works projects have to be aligned with the NSW Health Information Policy and support current clinical practices.

The development or extension of information infrastructure within capital works projects should resource the following references:

+ NSW Health Information Policy, 2nd Ed, 2001.

+ Information Management and Technology Education, Training and Development Strategy 2002.

Standards & Codes

80 .19.00 The following list of Australian Standards is provided for reference purposes and covers those most commonly used by designers for health-related projects.

Refer to Standards Australia for information regarding these and other Standards that may be relevant to a particular project. Standards Australia also produces handbooks and guides on various topics and subjects. The web address for further information is www.standards.com.au.

Although generally desirable, compliance with Standards and Codes is not mandatory unless cross-referenced by the BCA or by other statutory legislation.

In other situations, compliance with Standards, Codes, Guides or Handbooks is not required unless specifically noted by these Guidelines:

+ AS1158.3 & series - Road Lighting.

+ AS 1288 Glass in buildings - Selection and installation.

+ AS 1367 Multiple Outlet Distribution Systems - Sound and Vision.

+ AS 1428 Design for Access and Mobility
Part 1 - General Requirements for Access-Buildings.

+ AS 1668 SAA Mechanical Ventilation and Air Conditioning Code
Part 1 - Fire Precautions in Buildings with Air-Handling Systems

Part 2 - Ventilation Requirements.

+ AS 1670 Automatic Fire Detection and Alarm Systems - System Design Installation and Commissioning.

+ AS 1680 Code of Practice for Interior Lighting and the Visual Environment.

+ AS 1765 Code of Practice for Artificial Lighting for Clinical Observation.

+ AS 2107 Acoustics - Recommended Design Sound Levels and Reverberation Times for Building Interiors.

+ AS 2120 Rules for Suction Systems for Medical Use in Hospitals.

+ AS 2293 Emergency and Evacuation Lighting in Building
Part 1 Design and Installation
Part 2 Inspection and Maintenance

+ AS 2500 Guide to the Safe Use of Electricity in Patient Areas.

+ AS 2896 Medical Gas Systems - Installation and Testing of Non-Flammable Medical Gas Pipeline Systems.

+ AS 3000 SAA Wiring Rules.

+ AS 3003 Electrical Installations - Patient Treatment Areas of Hospitals and Medical and Dental Practices.

+ AS 3009 Electrical Installations - Emergency Power Supplies in Hospitals.

+ AS 3666 Air-Handling and Water Systems of Buildings - Microbial Control.

+ AS4145.2-1993/Amat 1- 1996 Locksets - Mechanical Locksets for doors in buildings.

+ AS4332 The Storage and Handling of Gas in Cylinders.

+ AS4485.1 & 2 Security for Healthcare Facilities.

Fixtures & Fittings

80 .20.00 The health system has significant purchasing power and the purchase of fittings and fixtures should be carried out in accordance with the Purchasing and Supply Manual for Public Health Organisations.

Refer to the FF&E section of these Guidelines for further information.

Cost and Area Benchmarks

80 .21.00 NSW Health can provide benchmarks for area and capital cost rates for capital projects. The Department can also provide advice on ways to enhance functionality in the development of the design of specific units.

Capital Planning Process

80 .22.00 Planning of Health Care Facilities within NSW must comply with 'The NSW Health Process of Facility Planning' as set out in 'DS1: Process of Facility Planning'.

80 .23.00 NSW Health requires that all Area Health Services have an Asset Strategic Planning process in place to ensure that capital assets (being buildings and equipment) support the delivery of health services and do not use unnecessarily excessive amounts of finite resources in their management.

In order to plan for the future and monitor the efficiency of current physical assets NSW Health has a process that is applied to capital planning. This process and its stages are described in the following text.

Capital Planning Process

80 .24.00 THE PROCESS OF FACILITY PLANNING

Preliminary Stage: Asset Strategic Planning

This is a planning process that is undertaken on an Area Health Service wide basis to identify the future service needs of the population and the standard of assets required to deliver those services.

Gaps in the matching of services to assets may result in a non-asset solution such as service integration or revision or an asset solution such as an upgrade of an existing Facility or a new Facility.

80 .25.00 Stage One : Procurement Feasibility Plan (PFP)

Confirmation should be received from NSW Health as to whether a PFP is required for a project. The PFP examines all feasible options for resolving the services delivery issues that have prompted a review of the project.

These options may be capital eg build a new building or refurbish an existing building, or non-capital eg provide a new service, relocate the existing service(s), change the manner in which services are delivered or amalgamate with an existing service.

All feasible options are subjected to a Value Management Study and an Economic Appraisal to determine their costs and benefits. The PFP concludes by recommending a preferred option for development that is considered the most efficient and effective to meet the project objectives.

If the preferred option is a capital solution, it is this approved option that will form the basis of Stage Two - The Project Definition Plan.

80 .26.00 Stage Two: Project Definition Plan (PDP)

This plan describes all the elements of the project starting with the population to be served, the services to be provided (from the approved Service Plan) and the capital option that will be developed. The PDP is prepared with the assistance of a Program Director/Manager, Project Manager, Facility Planner, the AHS planning team, representatives of major stakeholder groups including Clinicians, Consumers, Architects, Engineers and other consultants.

80 .27.00 Stage Three: Detailed Documentation

Includes all the detailed plans and tender specifications for the project that will control the construction of the project.

80 .28.00 Stage Four: Implementation

This stage commences with the letting of the tender and ends when the building is finished and handed over to the Health Service for occupation. Commissioning is the name given to the process of moving into the new Facility and making it operational. Refer to Operational Commissioning section of these Guidelines.

80 .29.00 Stage Five: Evaluation

It is important that the good and poor elements of any capital project are identified to benefit future projects. A Post Occupancy Evaluation (POE) is undertaken 12 months after the building is occupied.

The purpose of the POE is to assess elements of the project including the processes followed during the planning, the functionality and service issues. The outcomes of POEs inform the development and review of specific Health Facility Guidelines.

Refer to NSW Health POE Guideline for further information.

Cost Planning Stages

80 .30.00 The purpose of the Standard Cost Planning Guidelines is to provide a framework for the uniform preparation and presentation of Cost Plans for all NSW Health Department projects.

80 .31.00 Cost Plans will be prepared at the following stages of a project in accordance with NSW Health Process of Facility Planning:

+ Cost Plan A - Procurement Feasibility Plan (PFP);

+ Cost Plan B - Procurement Definition Plan (PDP);

+ Cost Plan C1 - Scheme Design;

+ Cost Plan C2 - Design Development;

+ Cost Plan D - Contract Documentation (Pre-Tender Estimate).

Cost Plans are to be prepared generally in accordance with the Australian Cost Control Manuals (ACCM) previously the NPWC manuals.

80 .32.00 The method of measurement for elemental and trade quantities shall generally be in accordance with NSW Department of Commerce Abbreviated Method of Measurement.

Allowances for contingencies, travel and engineering shall be in accordance with NSW Health TS-13 Cost Benchmarking Guidelines for Health Care Buildings.

All Cost Plans shall include functional area cost analyses for inclusion in the NSW Health Cost Benchmarking Database.

Economic Appraisal Process

80 .33.00 As part of the PFP process and Economic Appraisal is required. An economic appraisal study (EAS) is an analysis of the costs and benefits of each option outlined in the PFP in accordance with Treasury Guidelines.

For this study, a Cost Effective Analysis (CEA) is applied, as the main benefits are not able to be realistically measurable in monetary terms alone. The EAS is not the only factor to consider when selecting the preferred option.

Other factors such as social impact, quality of health services, available resources and funding, should also be considered.

The parameters for the study include:

+ Use of a 20 year analysis period;

+ 7% discount with sensitivity testing using 4% and 10% rates;

+ The outcome of the analysis must be expressed in terms of Net Present Value (NPV).

Natural Disaster

80 .34.00 All hospital facilities should be capable of continued operation during and after a natural disaster, except in instances where a facility sustains primary impact. This means that special design consideration is needed to protect essential services such as emergency power generation, heating systems, water (if applicable), etc.

Typical problems such as disruption to public utilities including water supply, sewer mains or energy supplies, may affect the operation of on-site services; however, the responsibility for maintaining these public utilities lies with others.

Appropriate construction detailing and structural provision shall be made to protect

occupants and to ensure continuity of essential services in areas where there is a history of earthquakes, cyclones, flooding, bushfires or other natural disasters.

80 .35.00 Facilities shall be designed and constructed to withstand the force assumptions of AS1170 Part 4 - Minimum design loads on structures - Earthquake loads.

In cyclonic areas, special attention shall be given, not only to protection against the effects of the direct force of wind (structural detailing, special cladding fixings, cyclonic glazing etc), but also against such things as wind generated projectiles (trees, cladding, fencing etc) and localised flooding.

80 .36.00 Clause 46 of the Rural Fires Regulation 2002 requires facilities to be constructed in accordance with the Guideline 'Planning For Bushfire Protection', 2002, NSW Rural Fire Service.

Adequate fire break separation is the first line of defence from bushfires. Construction to AS 3959 Level 1 may be required as a second line of defence.

80 .37.00 Where appropriate, consideration should be given to effective long range communications systems, which do not rely on ground lines to function.

In addition, communication within a facility should not be vulnerable in a disaster situation ie between wards, departments and support services.

Consultation with the State Emergency Service is recommended to ensure arrangements are in place for emergency long range communications assistance in the event of emergency situations or a major disaster.

Operational Policies

80 .38.00 OVERVIEW

Operational Policies are a major factor in the implementation of the desired service model, the determination of design requirements, and the achievement of the targeted capital and recurrent costs of Health Care Facilities.

Design teams should be constantly reviewing their design proposals with this in mind and be able to demonstrate that the capital and recurrent cost implications of proposed operational policies have been fully evaluated and the most cost-effective and efficient solutions are being proposed and developed.

80 .39.00 To determine specific requirements and design elements, the impact of new technology and clinical work practices should be reviewed prior to commencing capital planning.

80 .40.00 SUMMARY

The definition and description of Operational Policies is imperative to ensure a facility is designed to match the services to be delivered. The planning effects of operational policy decisions are often not apparent until planning has commenced, and the consequences can sometimes be quite different to those expected.

The process of reviewing and documenting Operational Policies is valuable as it subjects the current operation of a Facility or Unit to scrutiny.

Operational Policies are crucial to the design and planning phases of capital projects for one Health Planning Unit such as the Emergency Unit or for an entire Health Care Facility.

80 .41.00 IMPORTANCE OF OPERATIONAL POLICIES

The specific operation of a Unit will also respond to the anticipated profile of patients who will use the service, the characteristics of the catchment area, and the defined

role of the Unit including its place within the service network where it will operate. These parameters should be determined and developed by the Area Health Service Planning Team and documented in a set of Operational Policies prior to commencement of the design process.

They should be documented in the PFP in 'broadbrush' terms to assist delivery of the desired service model and selection of the recommended capital option. They will then be developed further in the PDP stage.

Operational Policies are developed by the Project Team in consultation with health service stakeholders and require an appreciation of not only what is required to be brought forward from current practice, but what will be required in a new facility, or within an enhanced service network.

In addition to defining the functions around which the Facility must be designed, Operational Policies also determine the process and pace for change management, where this is required.

80 .42.00 RELATIONSHIP OF OPERATIONAL POLICIES TO THE FACILITY DESIGN PROCESS

Operational Policies must be established at the earliest stage possible as they have a major impact on physical planning and design.

Operational Policies set out how a Facility works or how services are provided. They are significant in the design process as they can have an impact on the size, configuration and the nature of accommodation. Operational Policies not only act as a specific guide to the operation of each group of spaces, but also as a frame of reference to the workings of the whole Facility.

Operational Policies should be consistent across health facilities within an Area Health Service, to the extent dictated by the role and service delineation of the individual facilities. The Operational Policies must also respond to, and incorporate policies of other services within the Area Health Service, so as to ensure a patient focussed continuum of care. Admission and discharge policies would be two key examples.

In the design phase, the operational policies, traffic and workflow diagrams will be used by the Architects, Engineers and Facility Planners to ensure that the range of activities and requirements are reflected in the design. At this stage, necessary compromises can be discussed or changes made where there are financial, building and other constraints.

A general description of a generic set of Operational Policies to be developed to inform the design and planning process follows.

80 .43.00 LIST OF OPERATIONAL POLICIES

Admissions
Amenities for Patients and Visitors
Cleaning
Clinical Information
Communications and IT Strategy
Consultation and Interviews
Disaster Planning
Equipment Storage
Food Services
Infection Control
Linen Management
Maintenance and Engineering
Medication Management
Operating Hours
Pastoral Care
Pharmacy
Safety and Security
Sterilising Services

Stores and Supplies
Vehicle Access and Parking
Waste Management

80 .44.00 ADMISSIONS:

SUMMARY

Patients may be admitted to the Unit from a number of different places.

OPTIONS

Patient admissions may be conducted in a variety of places, such as an Admissions and Discharge Unit, in or near the Main Entry, at the Unit itself, via the Emergency Department or from Operating Units, or elsewhere.

The admission process has two main components - the 'administrative' and the 'medical/nursing/allied health admission/assessment process'. See NSW Health Data Dictionary for a detailed description of each.

IMPLICATIONS

Depending on when and where admissions are conducted space allocated both within the Unit and elsewhere may be affected. This may generate a need for Waiting and Interview Areas. If admissions are conducted at Inpatient Units, then the space in the Main Entry may be reduced.

Space and personnel requirements will vary depending on the source of admissions, eg Emergency Department, Day Only, Operating Units etc, and associated Operational Policies.

Access routes to the Unit must also be considered.

80 .45.00 AMENITIES FOR PATIENTS AND VISITORS:

SUMMARY

Provision of appropriate patient amenities enhances the quality of a patient or visitor's hospital experience, and often assists in minimising stress.

SOME OPTIONS

Amenities may include Waiting Areas, gardens, toilets, baby change facilities, kiosks, quiet rooms etc. They may extend to provision of sleeping accommodation in Palliative Care or Paediatric Units, or on-site accommodation for relatives, patients from remote locations or from poor socio-economic circumstances.

The provision of disabled toilets as a ratio of all toilets should be determined in accordance with the acuity and dependency levels of patients and the needs of visitors.

IMPLICATIONS

The extent and location of amenities for patients and visitors will impact on planning of both the whole Facility and specific Units where they are needed.

80 .46.00 AMENITIES FOR STAFF

SUMMARY

The provision of appropriate staff amenities may influence the ability of a Health Care Facility to attract and retain staff and therefore should be considered in the planning process.

The OHS Act 2000 requires employers to provide for the welfare of employees and to

consult with employees when providing welfare facilities.

SOME OPTIONS

Infection control requirements may determine the need for staff amenities including showers, change rooms, clothing storage, PPE, etc.

BCA requirements are the minimum standard for provision of staff amenities.

Staff amenities will include Change Rooms, Showers and Toilets. In addition, Staff Lounges or Cafeterias may be provided depending on the size and location of the Facility.

Staff amenities may also include secure storage areas for staff property, ie handbags, clothes, etc.

IMPLICATIONS

The extent and location of amenities for staff will impact on planning of both the whole Facility and specific Units where they are needed.

Consultation with staff regarding the type and quality of facilities is an essential part of facility design.

The Workplace Amenities Code of Practice 2001 provides advice on the amenities to be provided. It can be downloaded from the WorkCover NSW website www.workcover.nsw.gov.au.

80 .47.00 CLEANING

SUMMARY

Cleaning services may be provided by Facility staff or by an external contractor. The time, frequency and methods of cleaning will determine the amount of storage space required for equipment and cleaning products within the Unit and the overall Facility.

SOME OPTIONS

A common option is a centralised Cleaner's Store with smaller Cleaners' Rooms strategically located throughout the Facility. This will also provide a supply of cleaning materials and equipment for staff to use in emergency situations or out of hours.

IMPLICATIONS

These include the allocation of space for storage of cleaning equipment, chemicals and consumables within the Unit or Facility.

Consumables such as toilet paper, paper hand towels, etc, must be stored separately from cleaners' wet area/ equipment to prevent cross contamination with moisture and exposure to equipment used throughout Patient Care Areas.

Design, layouts, fittings, furnishings, floor coverings and other finishes will have a significant impact on the cleaning of the Unit. Ledges, corners and all other surfaces that are difficult to clean should be minimised.

Facilities such as power outlets, adequate storage of cleaning materials and equipment, waste disposal and hand washing facilities should be provided in appropriate locations to enable staff to efficiently clean the Unit.

80 .48.00 CLINICAL INFORMATION

SUMMARY

Processing, storage, handling and delivery of medical records to and within a Facility or Unit should be clearly defined.

For records no longer in use, archiving policies need to be formulated. Consideration must be given to the statutory requirements for archiving, which dictate the length of time for which records must be held. The availability of space on site or the need to utilise off-site storage facilities must also be considered

SOME OPTIONS

The trend is towards computerised medical records and centralised patient records within a health service, resulting in one centralised record per patient and so reducing the multiplicity of records that often occurred in the past across health service providers.

However, many facilities still operate on the basis of paper records and are likely to do so for some time yet. These require shelves for storage and room around the shelves for processing of records, including retrieval and archiving.

The appropriate location of the Clinical Information Unit in relation to other departments that are key users of medical records must be determined.

Where paper records are the system used, the size of the storage areas for current and archived records is dependent on key policies concerning retrieval times and after hours access. It is also dependent on the physical dimensions of the files and folders used.

IMPLICATIONS

Within the Clinical Information Unit, space is required for current records and for archiving records no longer in use.

The method of retrieving and transporting records to areas where they are required will determine the space required in the Clinical Information Unit and in the Unit where the records are used. This may affect the planning of the Staff Station, the Patient Rooms and/or the Consult Rooms.

As records become increasingly computerised, the storage space requirements for paper records will decrease. However, the backlog of paper records to be archived will require storage space to be available and accessible for some time into the future.

Where paper records continue to be used or stored, the use of compactus systems is common. In these situations, the floor structure must be capable of supporting the additional dynamic load applied.

The use of computerised medical records will have different implications in terms of IT requirements and space for workstations, computers, etc to access and manipulate the records.

Should digitisation or microfilming of archived paper records become policy, this will also affect space requirements for holding of such records. Retrieval policies and procedures will then be required to deal with this situation.

In all situations, the security and handling of confidential patient information and records must be addressed.

Secure storage for paper records must be provided in staff stations at inpatient unit level.

Staff must have safe access to records after hours.

80 .49.00 COMMUNICATIONS AND IT STRATEGY:

SUMMARY

A wide range of communications/IT options are now available for a Health Care Facility.

The NSW Health Technical Series document, TS11 Engineering Services and

Sustainable Development Guidelines, sets out the primary objectives of communication facilities.

These objectives include:

+ Improving work efficiency;

+ Making clinical information more readily available to assist medical staff in their duties;

+ Assisting nursing staff to provide better service to inpatients;

+ Assisting patients in the post treatment recovery phase to maintain contact with their relatives and friends and access entertainment.

Communication facilities will be required to comply with DOH or AHS strategies and policies, plus many are subject to regulatory control. Therefore early advice should be sought regarding these.

SOME OPTIONS

The communication strategy chosen will depend on various issues including size of Facility, location, locally available technology, the available technical support and advances in technology.

Options to be considered may include:

+ Teleconferencing;

+ Video-conferencing;

+ Tele-radiology;

+ Tele-psychiatry;

+ Bedside data ports;

+ Telemetric monitoring;

+ Handheld computing;

+ Barcode scanning;

+ Fingerprint, handprint and voice recognition security systems;

+ One phone number contact for whole Area Health Service 24 hours per day.

This is in addition to the more ‘standard’ provision of systems covering:

+ Desktop computers

+ Communications cabling;

+ Telephones;

+ Intercom;

+ Dictation/transcription;

+ Data communication;

+ Nurse call;

+ EWIS;

+ Public address;

+ Pocket paging;

+ Personal duress alarms;

+ MATV distribution.

Refer to TS11 for further information regarding the briefing and technical requirements for the communication facilities being considered.

IMPLICATIONS

The Communications Strategy and the Information Technology strategy for a Facility are usually integrated.

In considering the strategy to be adopted, including all component parts, a careful analysis of options, including costs, flexibility and future adaptability is required.

It should be noted that NSW Health is always concerned with improving cost efficiency in the provision of communications infrastructure.

The aim, where possible, should be the 'future proofing' of communications infrastructure even though this may be difficult to achieve.

Newer technologies such as email currently appear to be superseding the older technology represented by the facsimile; video conferencing is becoming more commonplace, and this will require additional physical infrastructure.

80 .50.00 CONSULTATION AND INTERVIEWS:

SUMMARY

Clinical consultations and examinations should always take place in appropriately equipped Consultation/Examination Rooms - see Standard Components.

Interview Rooms and spaces are also required within a Facility to fulfil functions such as:

+ Interviewing patients (often with family/friends) on admission to a Facility or on discharge from a Facility for purposes such as arranging transport, paying of accounts etc;

+ Interviewing patients (often with family/friends) on first attendance for treatment or for pre-admission assessment for surgical treatment or ambulatory care;

+ Interviewing/supporting grieving family/friends following unsuccessful treatment of patients, eg in an Emergency Department;

+ Interviewing patients, and sometimes family and friends in situations where safety and security for staff and the patient may be an issue - such as in a mental health setting;

+ 'Family conferences' where clinical staff address treatment issues with family/friends with or without the patient present;

+ Interviews including IT components such as Health Outcomes assessment ie HoNOS, SF36, etc or Electronic Health Record (EHR) referencing and reviewing with client.

+ For formal and informal teaching space for small clinical groups.

SOME OPTIONS

Policy will often dictate the approach to the allocation of interview spaces within a Facility. Therefore in the process of Facility Briefing, the policy will be the first reference point.

The interview function may be included in the space allocated to individual offices, which will increase the size of offices and also the number of enclosed offices

required.

Another option is that interviews are conducted in shared Interview Rooms, which may be more flexible and reduce the overall space allocated to office accommodation. This will require a commitment to an efficient scheduling system to meet the requirements of those using these spaces.

Other options include interviews being conducted at the patient's bedside, in a Consultation/Examination Room, etc.

IMPLICATIONS

The major implications of the approach to be taken should be assessed in terms of the privacy and convenience for patients and staff, and the reallocation of space from Offices to Interview Rooms. In addition, the safety and security of staff, patients and visitors is a prime consideration.

80 .51.00 DISASTER PLANNING

SUMMARY

Towards the end of both the Schematic and Design Development phases of a project a specialist review session should be held to:

+ Consider the potential disasters that could occur within the hospital setting and those that could occur outside the hospital setting;

+ Consider the implication that those potential disasters could have on the proposed design;

+ Review how the design will respond to the potential disaster/s;

+ Develop actions to amend the design as required;

+ Review existing and develop new operational policies, for disaster management, to complement the new design and;

+ Document Operational Policies for future implementation.

SOME OPTIONS

Examples of the types of disasters that will need to be reviewed are:

+ Those occurring within the hospital setting eg loss of back up energy, fire, loss of gas supply;

+ Those occurring external to the hospital setting eg singular traumatic events affecting a large number of people, such as use of gas, or nuclear, biological or chemical agents or fire and rapid spread of disease such as SARS.

IMPLICATIONS

Some examples of issues that may impact on the design are:

For those occurring within the hospital setting:

+ Areas such as Intensive Care and Operating Units will require uninterrupted power supply systems to cope with loss of generator back up supply systems;

+ Are the paths of fire egress suitable for staff, ambulatory and bedridden patients and if not, can Operational Policies be reviewed to address this issue?

From those emanating from outside the hospital setting:

+ Does the design provide facilities for appropriate decontamination of personnel and equipment as required?;

+ Are the proposed airconditioned environments appropriate for the potential disasters?;

+ Has a disaster control facility been incorporated into the design in an identified area?;

+ Does the path from the helipad or nominated helicopter landing site provide for ease of access?;

+ Is it possible to design the Building Management System to respond to disaster situations?

All potential disasters should be identified and reviewed at both Schematic Design and Design Development Stages.

80 .52.00 EQUIPMENT STORAGE

SUMMARY

The increasing dependence on medical equipment, including non-invasive ventilatory support, monitors for oximetry, sphygmomanometry and testing equipment, has increased demands for equipment storage space.

Apart from demands on storage space, this will have significant implications for FF&E costs for a new building.

Storage of patient manual handling equipment must also be considered in locations convenient to usage.

SOME OPTIONS

Designated equipment may be stored at each bed space or in Interview/Consulting Rooms.

Alternatively, a central storage space for clustered Units or the entire Facility offers a number of economies and efficiencies, but requires a commitment to effective management, cleaning and safe storage of shared equipment to ensure that it is available when required. There are also implications for the maintenance and regular calibration of such equipment.

IMPLICATIONS

Where equipment is to be stored at the bed space or in Consult/Interview Rooms adequate space to use and service it must be provided.

Central storage requires provision of appropriately sized and located stores that can be safely accessed by staff during the day and after hours.

80 .53.00 FOOD SERVICES:

SUMMARY

Food services for Health Care Facilities will generally be required to provide meals, snacks and beverages for inpatients, day-only patients and staff. They may also be required to provide these for relatives and friends of patients, and to cater for functions on request. On occasions the hospital kitchen may also prepare ‘Meals-on-Wheels’ food for delivery, especially in rural or regional areas.

Meals may be prepared and delivered to patients and staff in a number of different ways.

SOME OPTIONS

Options for meal preparation and delivery include:

+ Cook fresh: All meals cooked and served in the Unit;

+ Cook Chill Receiving or Production:

- Some meals prepared in the Unit (light meals and snacks) but main meal provided hot or re-heated from central kitchen,

- Some meals kept cold in the Unit (eg Post Anaesthesia Care Unit, Emergency Department), but most meals provided hot or re-heated from a central kitchen.

IMPLICATIONS

The needs of people with special dietary requirements must be considered when determining food services operational policies. The capacity to produce special meals must be available.

The spatial needs of each different delivery method vary and will impact not only on the central catering facility within the Facility but also on the planning of the Unit in question. Small beverage bars, trolley park bays or trolley re-heat bays or even Activities of Daily Living (ADL) kitchens may be needed in the Patient Area, where ADL activities are offered.

80 .54.00 INFECTION CONTROL:

SUMMARY

The design of health care premises is fundamental to infection control and the prevention of transmission of infection. Refer to Part D of these Guidelines for assessment of infection control risks and suggested physical design responses.

Although adherence to infection control protocols is mandated by DOH policy, interpretation of these into Unit Operational Policies, and associated briefed space, is part of briefing a project.

SOME OPTIONS

The design and layout of all new or renovated Health Care Facilities should take account of the movement of people and incorporate all necessary physical requirements to minimise the transmission of infection.

IMPLICATIONS

Clean and dirty corridor planning for Operating Units is the clearest example of the major effects of infection control policies.

Single corridor Operating Suites are increasingly common and provide fewer planning constraints to the design team.

The inclusion and location of handwash bays/basins is a less dramatic example.

80 .55.00 LINEN MANAGEMENT:

SUMMARY

The procedures determined for the delivery and storage of clean linen and the removal of dirty linen impact on the planning for a Unit and for the whole Facility.

SOME OPTIONS

Laundry facilities may be located on or off campus.

Clean linen may be delivered on an imprest system basis with whole trolleys exchanged on a regular basis eg every day plus once on the weekend.

Alternatively, clean linen may be delivered and unpacked onto storage shelves or into cupboards, which is a more labour intensive approach.

Dirty linen will usually be sorted prior to collection and stored in appropriate receptacles awaiting pickup. This may be in the Dirty Utility Room, or in a Disposal Room.

IMPLICATIONS

Of central importance is ensuring that there are policies and procedures in place for the safe manual handling of linen. C2001/111 Policy and Best Practice Guidelines for the Prevention of Manual Handling Incidents in NSW Public Health Services outlines that each Health Service shall develop a manual handling incident prevention policy and program.

How linen is delivered and removed, in what type of trolley, cart or bin, how often and in what quantity, will affect sizes and placement of linen bays and cupboards, and of central linen receipt and holding areas. For example, the need to store extra trolleys awaiting pickup will determine space requirements in holding areas.

It is essential that clean linen is stored separately from dirty linen awaiting pickup.

Depending on the Facility requirements different types of linen may have different handling requirements, eg patient clothes or special items (such as may be necessary in longer term care facilities) may be processed in a laundry within the Unit or on the site, with other items sent off site to a central, District or commercial laundry.

Ensuring adequate clean linen delivery and pickup of soiled linen occurs is also a management issue for the Unit that will relate to the storage areas available for both.

80 .56.00 MAINTENANCE AND ENGINEERING

SUMMARY

Health service premises, furniture and equipment will all require regular inspection and maintenance. Bio-medical equipment will also require regular testing and calibration.

SOME OPTIONS

Maintenance and engineering services may be provided by staff or by contractors, or by a mix of both. They may be provided at a facility level or across an Area or other network of facilities. This will depend on the Service Level Agreement.

For staff and some contractors, maintenance facilities including indoor and outdoor covered work areas plus storage for tools and materials may be required on the facility site.

IMPLICATIONS

Maintenance contracts and work methods will impact on the need for work areas and storage on or off the site.

If performed on site, materials and equipment will be delivered and waste materials removed from maintenance work areas. To avoid any noise problems the maintenance work areas should not be located close to patient care or residential areas.

Staff should regularly conduct an inventory of stored equipment or furniture awaiting repairs and dispose of any surplus goods.

80 .57.00 MEDICATION MANAGEMENT

SUMMARY

The storage, dispensing and administration of oral and injectable drugs will impact on planning and operation of a Unit or Facility.

Refer also to Pharmacy, and to the Poisons and Therapeutic Goods Act, 1966 for the storage of drugs.

SOME OPTIONS

Options for dispensing include lockable medication trolleys, lockable bedside lockers, a Webster pack or other similar proprietary system.

Options for storage of drugs or medications include storage within a Clean Utility Room, one or more dangerous drug cupboards, a separate Medication Room with or without a dispensing window.

IMPLICATIONS

The option chosen will affect the size and layout of the Clean Utility Room or Drug Store. It will determine the need for a dangerous drug cupboard, the need for sinks, benches, etc, plus storage for the equipment associated with distribution such as trolleys, baskets, etc.

80 .58.00 OPERATING HOURS:

SUMMARY

The hours of operation of a Unit or Facility affect the provision of security and access for patients, visitors or the general public. This also affects the placement of the Unit in relation to other Units, and to the entry and exit points of the overall Facility.

Typically the need to access the Facility after hours will relate to public access eg visitors or patients attending Inpatient Units, the Emergency Unit and Maternity Ward. It may also relate to access required by staff, contractors, and others.

Refer to Part C for further information.

SOME OPTIONS

Units may operate 24 hours a day, 7 days a week or at the other extreme be operational for only limited hours and days each week.

Other Units may operate 5 days per week but require occasional after hours or weekend access.

Options for access that may be required include:

+ Staff access - 24 hours;

+ Public access 9am to 5pm;

+ Public access 9am to 5pm plus designated visiting hours;

+ Public access 9am to 9pm;

+ Public access 24 hrs;

+ Public access after hours by invitation/appointment;

+ Public access after hours only in case of emergency.

Consideration should be given to locking down defined spaces out of hours to improve security and reduce energy demands associated with lighting and airconditioning.

IMPLICATIONS

A Unit that operates 24 hrs over 7 days has different security needs to a 9am to 5pm Unit. It needs to be placed appropriately and planned so that traffic to and from the Unit does not adversely disturb other Units or jeopardise security for the Facility

overall.

Units with similar operating hours should be located within the same zone.

Requirements for after hours access to a Unit are important in planning the placement of the Unit, access stairs and lifts, and in considering the security issues for that Unit, Units nearby and the Facility as a whole.

80 .59.00 PASTORAL CARE

SUMMARY

Pastoral care services are generally offered to patients and their families during their use of health services.

SOME OPTIONS

Services may be provided by specially employed Health Service staff, by visiting clergy or other organisations.

IMPLICATIONS

Depending on facility needs, a quiet room may be provided for the use of bereaved relatives or friends. This is often located near the Emergency Department, ICU or in the Main Entry.

A Chapel or Prayer Room may be provided to meet the spiritual needs of patients, relatives and friends.

These requirements will impact space allocations with the Unit or Facility.

80 .60.00 PHARMACY

SUMMARY

The method of dispensing drugs and other pharmaceutical items within a Facility should be considered in conjunction with policies for medication management for individual Units.

SOME OPTIONS

Pharmaceutical items may be supplied from statewide, area wide or local sources. Delivery times may vary from same day to a week or longer for remote areas.

Items may be supplied from one source or from more than one depending on the type or class of item.

Dispensing may be done be a staff pharmacist on site or arrive pre-dispensed in systems such as Webster, etc.

Commonly used items may be kept in small quantities at local Unit level, for example in the Outpatient Unit, Emergency Department or Inpatient Units.

The location of Dangerous Drug Storage cupboards throughout the Facility will need to be determined.

Refer to the Poisons and Therapeutic Goods Act, 1966 and to the 'Public Hospitals Policy on Handling Medications in NSW' Circular 2001/64 (Aug 2001).

IMPLICATIONS

This will impact on the size and location of the central pharmacy and the storage required within each Unit.

80 .61.00 SAFETY AND SECURITY:

SUMMARY

Safety and security of staff, patients and visitors is of the highest priority and must be considered in the planning and design of every aspect of Health Care Facilities. Reference must be made to NSW Health DS36 - Safety and Security Guideline, 'Protecting People and Property - NSW Health Policy and Guidelines for Security Risk Management in Health Facilities', and other OHS documentation.

SOME OPTIONS

Specific requirements will vary depending on the type and location of the Facility.

IMPLICATIONS

Failure to address these issues could lead to serious injury or death. This may also result in increased operating and Workers Compensation costs.

80 .62.00 STERILISING SERVICES

SUMMARY

The method of providing sterile supplies to the various Units in the Facility should be determined in conjunction with consideration of the Operational Policies for each of the Units where sterile supplies are used.

SOME OPTIONS

Sterile items may be processed off-site at an Area level, in a centralised location in the Facility or at Unit level on an as needed basis.

IMPLICATIONS

The procedures adopted for sterile supply will determine the need for space and equipment for sterilisation within the Facility or Unit. It will also determine the requirements for storage space for sterile supplies, and the need to provide an area for used (contaminated) instruments and equipment storage prior to return to the Sterilising Unit.

Quality assurance and availability are key issues in choosing the sterilising method.

Reference should be made to AS4187 Sterilising Code.

80 .63.00 STORES AND SUPPLIES:

SUMMARY

Policies and procedures for the ordering, receipt and storage of supplies need to be determined for the Unit or Facility.

These items may include supplies for clinical needs such as drugs, medications, bandages, dressings, etc.

Usually they will also include supplies of general consumable items such as paper, stationery, etc, for use by nursing and general staff in office or administration type areas.

Specialised products for use by cleaning staff will also be supplied eg chemicals, soaps, detergents, cleaning cloths, toilet paper, hand towels, etc.

SOME OPTIONS

The system used may depend on centralised stores management, be Unit based, or a combination of the two.

The ordering system to be used will determine delivery times and storage requirements.

Different types of goods may be supplied via different ordering systems.

IMPLICATIONS

The Central Store may be located either on the hospital campus or off-site.

Systems of delivery such as 'Just In Time' may impact on the need for storage space in Health Planning Units.

The supply of goods will impact on planning and management of the whole Facility as well as the Unit.

Responsibility for ordering and receipt, location of bulk stores, frequency and method of distribution will affect size and location of storage facilities and staffing.

Different types of supplies will require different types of storage facility, eg shelves, cupboards, locked rooms, etc.

Different levels of security will also apply to the storage of different goods eg drugs and medications, although all supplies will need to be secured and managed to the extent that pilfering and wastage are prevented.

Provision of adequate storage for long weekends, etc, is important especially when a 'just in time' model is adopted.

80 .64.00 VEHICLE ACCESS AND PARKING:

SUMMARY

Access for Emergency, health service, staff, general public and service vehicles should be clearly designated and separated, where possible, for a Unit and for the whole Facility.

SOME OPTIONS

Patients may be admitted to the Facility through a dedicated entrance or through the Main Entrance.

Separate staff entrances may be provided.

Parking may be centralised, controlled or distributed around a site.

Provision of secure staff parking is essential.

IMPLICATIONS

The number and locations of vehicular and pedestrian entrances will determine site planning and reception points and impact on security requirements.

80 .65.00 WASTE MANAGEMENT

SUMMARY

Policies and procedures for the bagging, collection, storage and disposal of waste need to be determined.

Recycling issues, infection control, food and wet waste disposal, and environmental protection issues need to be considered.

SOME OPTIONS

Policies need to be developed to determine how waste is sorted and removed, the frequency of removal, the quantity, size and number of waste holding and transport

containers and who has responsibility for waste collection.

IMPLICATIONS

These will impact on planning and management of the whole Facility as well as the Unit including size and distribution of waste holding areas at Unit level and in central bulk handling facilities, equipment requirements eg compactor, cardboard baler, on site treatment.

Turning circles of equipment to be used such as tug trolleys will determine space layouts including key dimensions.