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Bowls Club

Construction &
Refurbishment Guidelines

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A MESSAGE FROM BOWLS AUSTRALIA

It is my pleasure to introduce you to the Bowls Australia 'Bowls Club Construction and Refurbishment Guidelines'.

The overall purpose of this resource is to provide bowling clubs with comprehensive construction guidelines to guide them through the process of club refurbishment and/or construction. It is a significant investment for any bowling club and this publication is intended to assist bowling clubs (their committee's and administrators) to make informed decisions with the aim of achieving a high quality club on completion.

Bowls Australia' mission is to grow the sport of bowls in Australia. In partnership with our state and territory associations and close to 2000 bowling clubs, Bowls Australia is striving to grow regular participation to over a million Australians each year.

By adopting the principles described in this publication, bowling clubs across Australia can be confident that their new or refurbished facility will be of a standard that the club will be proud of for many years to come.

The strong footprint of clubs is one of the key strengths of the sport and utilising your club for other revenue sources is important for the sustainability of every club and therefore the sport.

Finally, I wish to make special mention of Ian Macdonald from Macdonald Architects who has been instrumental in helping us to create this publication.

Neil Dalrymple

Chief Executive Officer



TABLE OF CONTENTS

CHAPTER 1 5

Introduction

- 1.1 Purpose of the guidelines
- 1.2 How to use the guidelines

CHAPTER 2 7

Getting started

- 2.1 Needs – Identifying the clubs needs, immediate and future
- 2.2 Consider other stakeholders
- 2.3 Project team
- 2.4 Evaluating the existing conditions
- 2.5 An example of an existing condition survey

CHAPTER 3 12

A master plan

- 3.1 A Masterplan has the following advantages
- 3.2 Factors to consider during the Master planning process
- 3.3 Staging the works
- 3.4 Siting

CHAPTER 4 14

Design

- 4.1 Exterior design – interior design
- 4.2 Club and lounge bar
- 4.3 Interior ambiance
- 4.4 Furniture
- 4.5 Do's and Don'ts
- 4.6 Signage
- 4.7 Spaces and their relationships

CHAPTER 5 18

Environmentally sustainable design

- 5.1 Passive solar systems
- 5.2 Direct gain – heating cycle
- 5.3 Direct gain – cooling cycle
- 5.4 Energy efficiency
- 5.5 Planning
- 5.6 Walls, windows and doors
- 5.7 ESD conclusion

CHAPTER 6 24

The architect and professional services required

- 6.1 Pre-design stage – formulating the brief
- 6.2 Concept design stage
- 6.3 Schematic design stage
- 6.4 Design development stage
- 6.5 Construction documentation stage
- 6.6 Contract administration stage
- 6.7 Post contract stage

CHAPTER 7 29

Public relations and promotion

- 7.1 Relationship with the local community
- 7.2 Image of the club
- 7.3 New members
- 7.4 Publicity
- 7.5 Official opening

CHAPTER 8 30

Financial aspects

- 8.1 Identifying the costs
- 8.2 Indicative costs associated with differing construction options
- 8.3 Funding

CHAPTER 9 33

Building contracts

CHAPTER 10 34

Sequence and joint action requirements

CHAPTER 11 36

Maintenance of the club's new facility

- 11.1 Regular Maintenance
- 11.2 Security

Image Gallery..... 37

References..... 44

Glossary of terms 45

Contacts 47

CHAPTER 1

INTRODUCTION

1.1 PURPOSE OF THE GUIDELINES

Building new clubrooms or refurbishing or extending existing facilities is one of the most important projects a bowling club will undertake. Most bowling clubs operate on a limited budget, so it is critical to ensure any investment is wisely and to minimise the risk of something going wrong. Construction projects involve significant costs which can escalate or be wasted if badly managed.

A construction or refurbishment project is going to offer a new challenge for most bowling clubs. It will require new skills and ways of working. The key to any refurbishment or construction project is sound planning.

Planning is not an added option, but is crucial for the project in order to:

- identify the key risks;
- ensuring sound financial management;
- maintaining a clear focus on essential matters; and
- carrying the project to a successful conclusion and establishing the foundations for effective on going management.

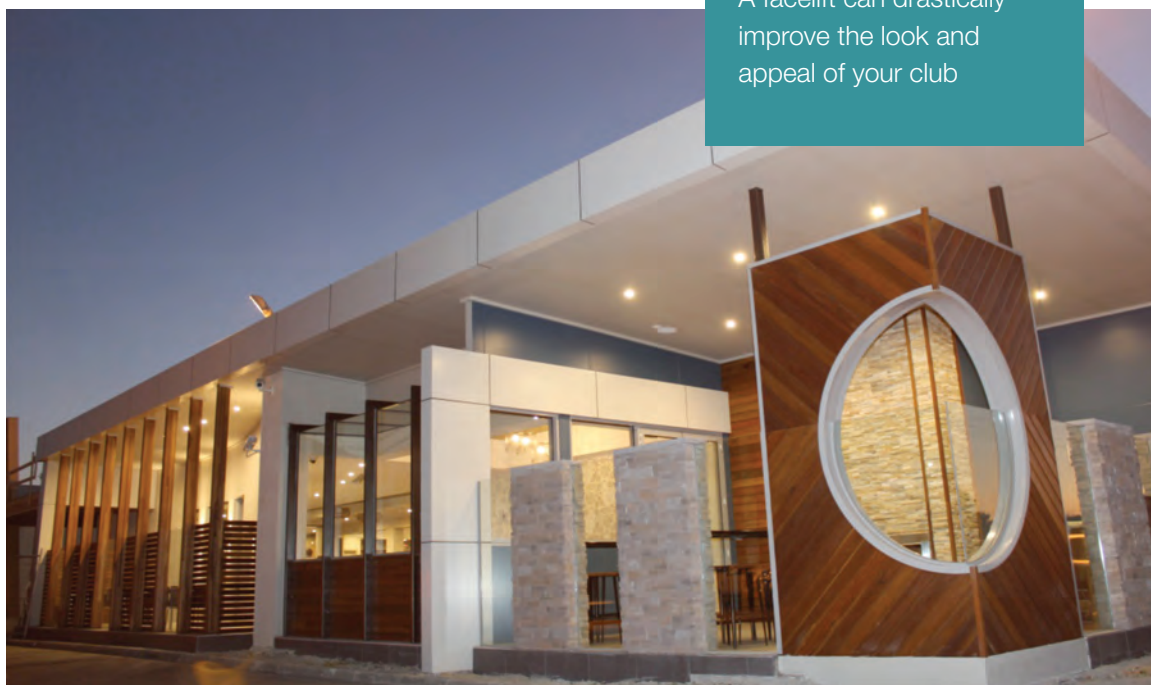
In approaching the task of planning a major project, the bowling club should avoid re-inventing the wheel and look to capitalise on the experiences of others and this publication provided by Bowls Australia. The primary intent of these construction guidelines is to assemble and pass on the experiences and expertise of others who specialise in club design and construction work.

These guidelines are to guide and assist club management in achieving a successful refurbishment, upgrade or new facility to their bowling club.

Many clubrooms are in a desperate need of a new 'facelift' with outdated facilities and 'old and tired finishes' inappropriate for today's bowling activities, and more importantly, community needs.

The current resurgence in the popularity of bowls, particularly by younger people, requires clubs to revisit the state of their facilities, many which have had no work undertaken since their construction in the 1960's or even before.

A facelift can drastically improve the look and appeal of your club



Items such as outdated kitchen facilities, old fashioned toilets, inadequate storage, and worn and dull lounge areas and bars exist in many clubs. This doesn't provide a comfortable and pleasant environment to its members and patrons. Equally it won't attract new members or enhance the usage of the club for visitors and other visiting clubs.

Clubs need to look to the future and their ongoing sustainability in years to come. Younger potential members expect modern, well planned and well designed facilities that meet today's contemporary and well equipped standards.

1.2 HOW TO USE THE GUIDELINES

These guidelines provide an overview of the process and the main considerations when planning a new or upgraded facility.

Although the nature of a refurbishment or upgrade will vary with each project, the same general procedure can be used to plan and implement the project.

A project will undergo the following four main phases:

- (i) Planning phase
- (ii) Design phase
- (iii) Construction phase
- (iv) Post Construction phase

There will be many variables to consider along the project pathway. No two sites or projects will be the same and adjustments will need to be made for the site specific conditions. This aside, a standardised approach can be followed when undertaking a major project.

The key to any refurbishment or construction project is sound planning.



CHAPTER 2

GETTING STARTED

ISSUES TO BE CONSIDERED ARE:

2.1 NEEDS – IDENTIFYING THE CLUBS NEEDS, IMMEDIATE AND FUTURE

Identify items that are currently unacceptable due to:

- Age, wear, appearance etc., and must be included in the immediate new works;
- Identify items that will become unacceptable in the near future;
- Determine immediate needs for types of facilities currently lacking;
- Forecast future growth patterns and changing procedures and activities to be included in the master planning stage (see section four).

2.2 CONSIDER OTHER STAKEHOLDERS

A vital consideration is who owns the land on which you are looking to refurbish or construct. Given the range of owners of bowls club facilities (local government, sporting clubs, private ownership, other clubs and even the club itself) it goes without saying that the needs of multiple groups may need to be taken into consideration.

Who will pay for the refurbishment or construction...? How long will it last...? How long is the lease on the property if there is one...? Is there a benefit in involving the owner of the land in a financial sense...?

These are all valid questions and the short answer is that it is best to involve the owner of the land to ensure that all parties are aware of their rights and responsibilities.

It's also fair to say that often when local government is involved, there can be a contribution to the costs which should not be ignored. Bowls clubs are renowned for keeping their facilities in good order, but there is only so much a club can do if the venue needs refurbishment or to be constructed from scratch.



Damaged carpet



Sagging ceilings

Remember, it's in the land owner's interest to have a good facility too.



Old Kitchen



Tired Toilets

2.3 PROJECT TEAM

Establish and set up a 'Building Sub Committee'. Ideally a 5-6 person team should consist of members with a related background in building or similar fields. i.e. architect, draftsman, builder, together with members having differing but relevant skills, eg. accounting, town planning, management, engineering.

2.4 EVALUATING THE EXISTING CONDITIONS

The starting point for any refurbishment or upgrade works should be an evaluation of the existing facilities and their conditions. This will establish which areas can be retained and those areas which can be removed or require upgrading. This audit will identify the club's current condition and will form part of the club's design brief to its architect.

If members of the building sub-committee have the necessary experience, then the audit could be undertaken 'in house', however as an audit on the condition of mechanical, electrical and hydraulics services should be included, then it may be necessary to engage a professional for those specialist sections of the works.

The audit will also identify any Occupational Health and Safety (OHS) hazards that may exist and ensure solutions meet all current OHS regulations.

The survey should be comprehensive and if relevant to the proposed works, should include an external survey which may also include a report on the structural condition of the building.

Some clubs may choose to engage an architect to undertake the survey and audit. In addition to being well qualified to prepare the report, the architect who will later design and manage the project is best suited to this task.



The starting point for any refurbishment or upgrade works should be an evaluation of the existing facilities and their conditions.

2.5 AN EXAMPLE OF AN EXISTING CONDITION SURVEY IS SET OUT BELOW:

INTERNAL WORKS

ROOM: MAIN CLUBROOMS:

	DESCRIPTION OF WORK	COMMENTS
<u>Floor Finishes:</u>		
Carpet and underlay Ceramic floor tiles	<ul style="list-style-type: none"> - Replace with new - Replace damaged tiles with new - Re-point all joints in matching colour grout - Thoroughly clean 	Check floor for dampness
Sheet vinyl	<ul style="list-style-type: none"> - Remove existing vinyl - Replace with new - Provide new junction strip 	Level floor as required
Rubber anti slip flooring behind bar	<ul style="list-style-type: none"> - Replace with new studded rubber sheet flooring to selected colour 	
Entry mat	<ul style="list-style-type: none"> - Remove existing coir mat - Replace with new rubber mat in aluminium frame 	
Timber strip flooring	<ul style="list-style-type: none"> - Punch all nail holes and fill with approved stopping compound. Machine sand, and seal with three coats clear polyurethane 	Satin finish
<u>Wall Finishes:</u>		
Walls	<ul style="list-style-type: none"> - Clean down all wall surfaces - Patch, fill, and sand smooth any damaged areas as required - Fit new corner beads to plasterboard and hard plaster surfaces as required - Paint walls two coats 'wash and wear' acrylic low sheen to selected colour 	
Timber dado	<ul style="list-style-type: none"> - Replace any damaged sections with new with profile to match existing - Paint satin enamel to selected colour 	
Wall tiles	<ul style="list-style-type: none"> - As for floor tiles above 	
Blinds	<ul style="list-style-type: none"> - Replace with new to match existing 	
Doors and architraves	<ul style="list-style-type: none"> - Replace doors to male and female toilets with flush panel semi-solid core doors - Paint full gloss enamel to selected colour - Replace any damaged door grilles with new to match existing - Remove existing door furniture, replace with new 	

BASIC TEMPLATE THAT COULD BE USED BY THE CLUB
TO UNDERTAKE ITS OWN EXISTING CONDITIONS AUDIT

EXTERNAL ELEMENTS

ITEM	LOCATION	CONDITION	COMMENTS
Roof gutters & downpipes			
Eaves			
Windows, doors & frames			
Verandahs			
Pergolas			
Decks			
Pavement, carpark, paths			
Stormwater / sewer			
Landscaping / garden areas			
Irrigation			
Gates			
Signage			
Other			

INTERNAL ELEMENTS

ROOM	LOCATION	CONDITION	COMMENTS
Floors			
Walls			
Windows			
Doors & frames			
Ceiling			
Light fittings			
Electrical works			
Built in joinery			
Bar			
Sanitary fixtures			
Heating			
Cooling			
Other			

CHAPTER 3

A MASTERPLAN

Before commencing any detailed design work to specific areas of the club, the preparation of a masterplan is considered essential.

Don't forget that a master plan is different to the club's strategic plan. But clearly, any refurbishment or construction of a new clubhouse should be identified in the club's strategic plan. If your club needs a plan, consult your local Regional Bowls Manager, and their contact details can be found via the BA website. They are happy to assist (free of charge) and have templates which will suit your club.

The initial design process and master-planning is a most important part of any new building project, and the success of a well-designed, cost effective project is the end result of a 'team effort' between the architect, his/her consultant team and the club.

The clubs' ethos and goals are an essential tool in developing a suitable and compatible master plan. These factors determine the clubs' direction and identifies a vision for the club.

A masterplan sets out all the facilities internally and externally that a club currently requires and which is anticipated to be required in the future.

3.1 A MASTERPLAN HAS THE FOLLOWING ADVANTAGES:

- Indicates the direction of future planning;
- Members are able to see the total future development of the club;
- Avoids the possibility of adhoc alterations in the future;
- Avoids abortive work to areas constructed previously; and
- Ensures that the development of the club takes place in a planned and logical manner.

3.2 FACTORS TO CONSIDER DURING THE MASTER PLANNING PROCESS:

- The club's charter and ethos;
- The strategic goals of the club;
- The special identity of the club;
- Membership levels;
- The expanded activities and programmes to be offered by the club;
- Facilities required to meet the projected activities;
- The club's organisation and management;
- The condition of the club's fabric and structure;
- Access to, from and within the club;
- Site factors and constraints;
- Spatial relationships;
- Site utilisation;
- Quiet spaces;
- Community spaces;
- Future direction of the club.

The architect must work closely with the club and its community to develop the masterplan and establish the club's specific needs and guide and assist in implementing these requirements within the overall framework of the master plan.

The master plan is a plan for the future. A plan that projects the club's identity and vision and provides a facility flexible enough to be used in varying ways both by the club, and community groups alike.

3.3 STAGING THE WORKS

The masterplan can be broken down into certain areas of work which can be grouped together to form 'stages' of work. Estimates are prepared for each stage to meet the 'project budget' allocation for each stage. Stages of work can be completed and future works commenced as funding becomes available, without affecting the works undertaken in previous stages.

3.4 SITING

For new clubs or new additions or rearrangements of spaces in existing clubs, careful consideration should be given to the aspect and orientation of spaces.

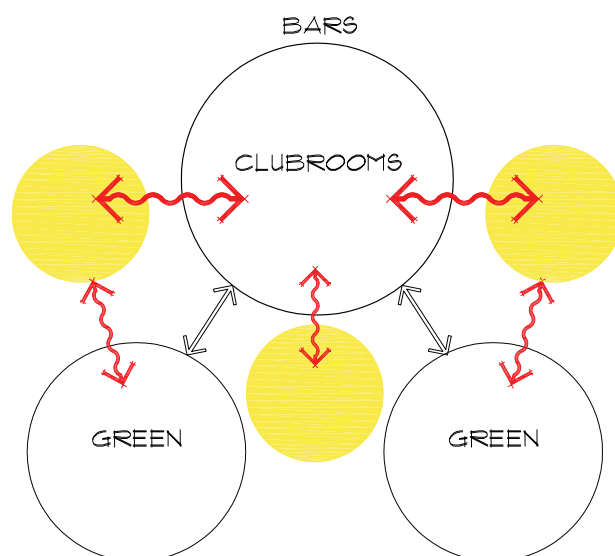
Generally activity spaces, eg. lounge, bar, dining areas should be adjacent and have an aspect to the greens. This may mean a north or south facing green. As the bowls season is mainly a summer period, south facing greens would be preferable as spectators can be shaded by the clubrooms, portico or verandah on the north side of the green.

New works or extensions for the above areas should therefore be sited with the long axis of the building running east-west. It is also important to consider external social and recreation spaces adjoining the clubrooms. There needs to be the provision of passive, sheltered spaces for seating, barbeque facilities etc.

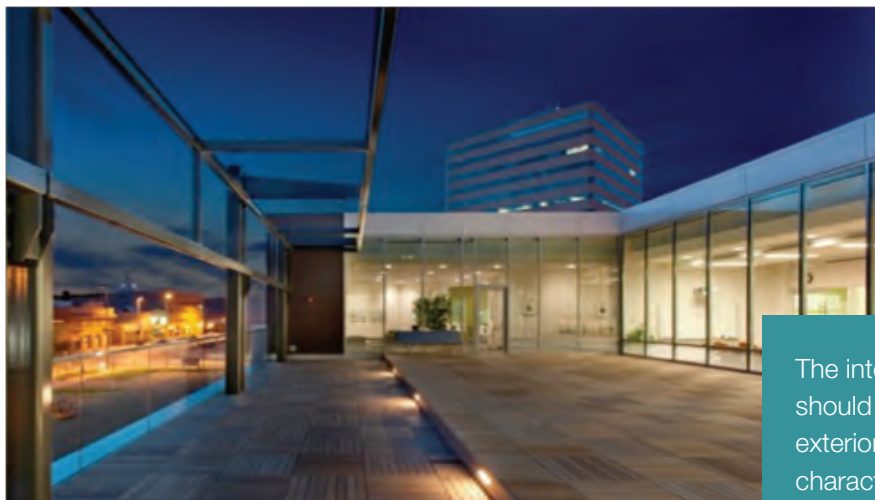
This may take the form of paved areas, deck or courtyard, but it is important that these spaces generate and encourage an 'indoor – outdoor' relationship with clubrooms, in fact to become almost an extension of the indoor spaces.

Project team meeting

This 'design to budget' process ensures that project avoids 'cost blow-outs' as the work in each stage can be tailored to achieve target budgets.



PRIMARY LINKS



The interior of the club should compliment the exterior in terms of its character and finishes.

CHAPTER 4

DESIGN

4.1 EXTERIOR DESIGN – INTERIOR DESIGN

The external appearance of the clubrooms should project the ethos of the club to the community and other clubs. The entrance should be easily recognisable and welcoming.

The design and finishes of the building should respect its adjacent neighbours and convey its function as an important recreational facility in the community.

It should be comfortable, easily accessible with lifts, automatic doors, and easy access for the elderly and disabled. Spaces should be arranged to relate and link to its appropriate neighbouring space.

Differing levels should be designed to provide disabled access to all parts of the building. This may require external and internal ramps in accordance with Australian Standards and Codes.

4.2 CLUB AND LOUNGE BAR

This is the 'heart' of the club. It is a meeting place for members and guests. It should relate directly to the adjacent greens with large areas of glass to provide a visual link to the greens with doors opening onto the playing areas to encourage 'indoor-outdoor' usage.

The bar is also the funds generator, much care and skilled design is required to ensure a practical working facility of pleasing appearance as well as the focal point of the space.



4.3 INTERIOR AMBIANCE

Lighting should be designed to be energy efficient and capable of being able to change lighting levels to suit varying areas of the club at certain occasions. Noise is an important factor to consider and the selection of finishes and materials should address this issue particularly where large numbers of people will be present. In addition heating and cooling provisions should be adequate and controllable to meet all conditions.

4.4 FURNITURE

The selection of tables and chairs, bar stools, sofas, etc. should complement the materials and colours used throughout the club. These are high use elements and therefore it is extremely important that materials selected and the quality of furniture is sturdy and requires low maintenance.

4.5 DO'S AND DON'TS

It is important to decide on what existing items (if any) are to be retained or re-used in the new works.

Any existing items that have been in use and are possibly showing some form of aging or may be outdated in terms of appearance should be carefully considered as to whether to re-use or not. There is a likelihood of it standing out to the detriment of the new finished works.

Some suggested Do's and Don'ts are listed below:

Do's

- Keep the new finished works in a tidy and clean condition.
- Consider new or re-upholstering existing furniture in a colour and material that is appropriate and complements the new décor. (Your architect can arrange or assist).
- Be selective with retaining memorabilia, honour boards, old club badges etc. and locate in an appropriate area.
- Consider photographing and reducing existing honour boards in size so that they may be mounted on the walls as small framed pictures, rather than dominate the wall space.
- Provide new door furniture throughout one space to include any existing doors that are to remain, where the space contains a mixture of existing doors and new doors.



Furniture is an important item to be budgeted for as nothing looks worse than the re-use of old existing furniture in a brand new facility.

Similarly, old crockery and cutlery should not be used in a new or refurbished bar or dining space.

Don'ts

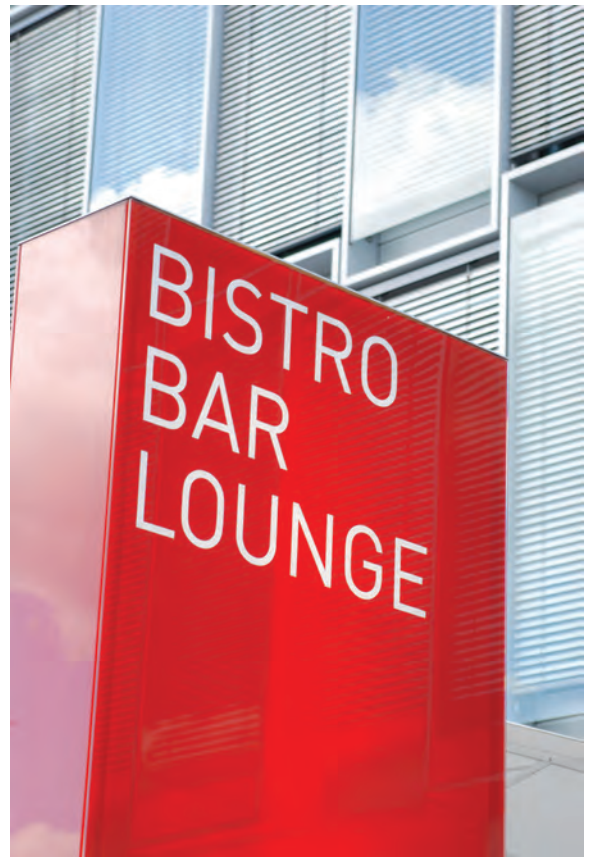
- Do not reuse existing worn out updated furniture.
- Do not re-use existing cutlery and crockery if chipped or odd pieces.
- Do not stack or store any items in the lounge, bar or public areas. Locate in stores.
- Do not re-hang existing honour boards or permerts in areas where they dominate the area of a wall.
- Do not stick notices, flyers etc. on windows or glazed doors, particularly at or near the main entry.
- Do not leave dining chairs scattered from tables in bistro or lounge areas.
- Do not retain old existing wall furnaces or heaters even if they are still working satisfactorily.
- Do not retain old fashioned door furniture and hardware on those existing doors that are scheduled to remain unaltered.

4.6 SIGNAGE

Often overlooked, the design of signage throughout the club provides the 'finishing touches' to a refurbished or new project.

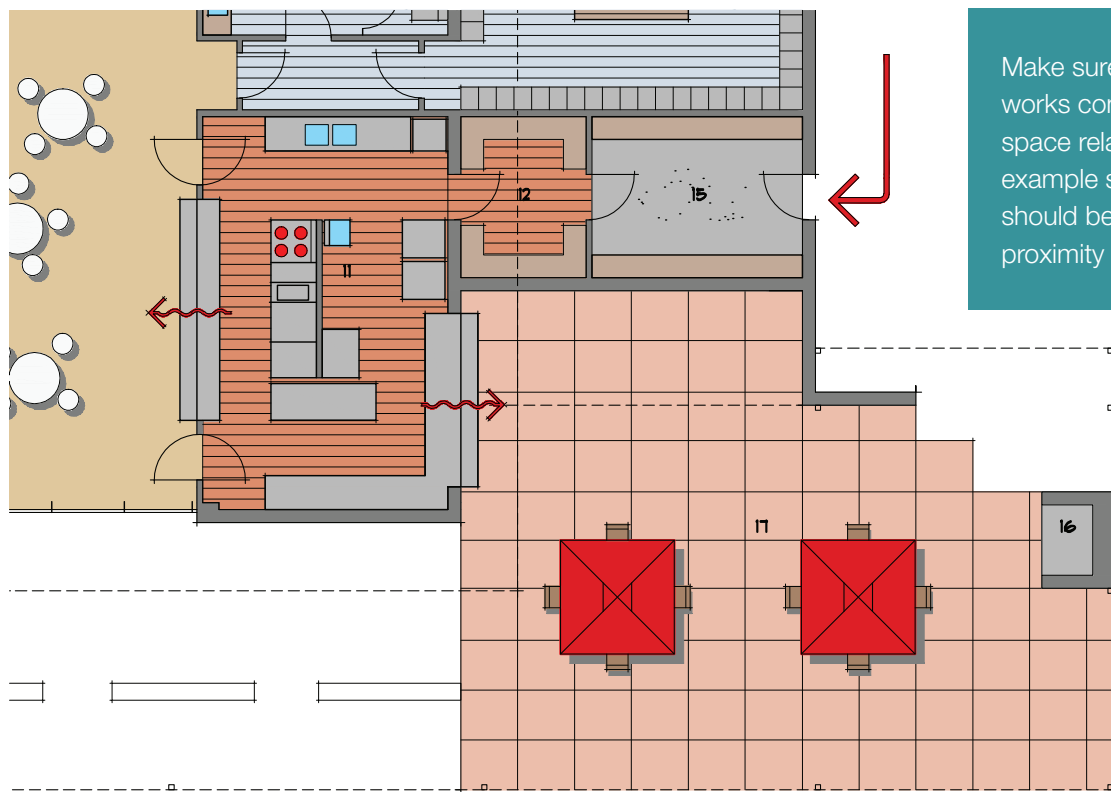
It should have continuity in its theme, be of the same material or complementary materials throughout, and promote the club to visitors and guests. Many clubs have very attractive badges or logos. These can be featured externally by the entrance to reinforce a sense of 'arrival' at the club.

When upgrading a venue, consideration should be given to introducing a new club logo befitting the premisis.

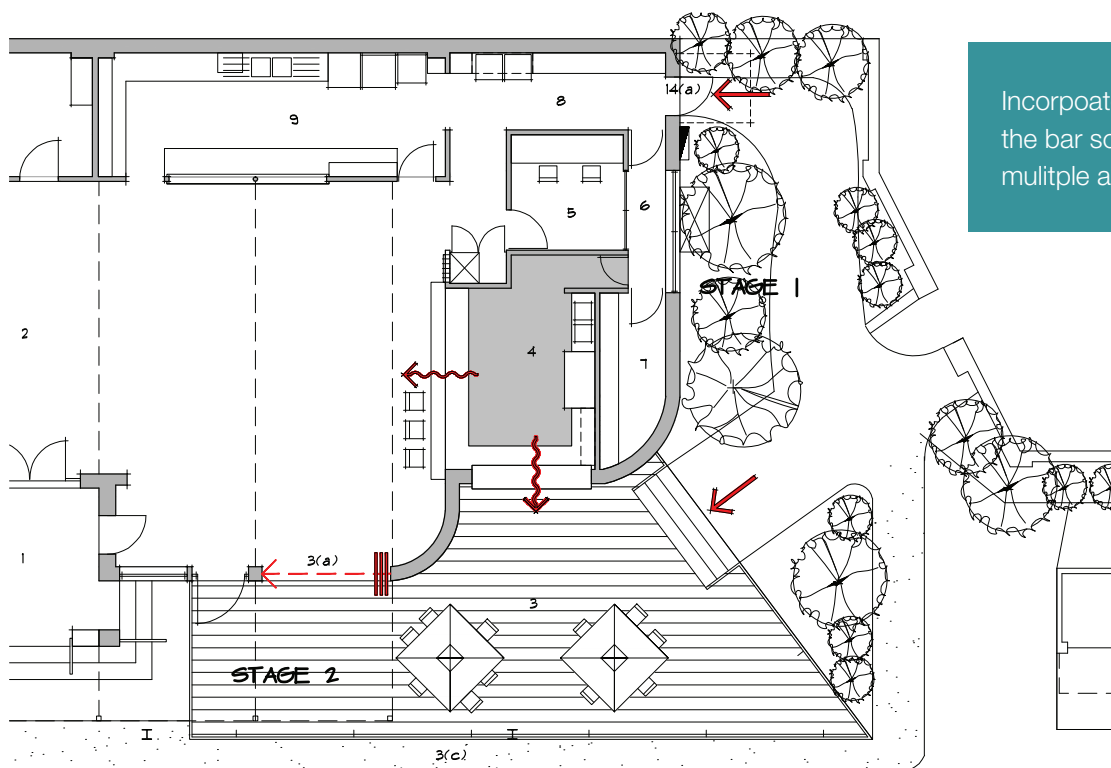


4.7 SPACES AND THEIR RELATIONSHIPS

Consideration should be given to the use and function of differing indoor and outdoor spaces.



Make sure any new works consider the space relationships, for example stock rooms should be in close proximity to the bar.



Incorporate the design of the bar so it can serve multiple areas at once

CHAPTER 5

ENVIRONMENTALLY SUSTAINABLE DESIGN (ESD)

The primary objective of ESD is to make the best possible use of the sun, the wind, the site and the construction materials, to admit and store the sun's energy when it is needed and exclude and remove heat energy when it is not needed. The aim of passive solar design is to achieve a high level of comfort with minimum energy cost.

Passive solar design concepts are particularly suited to the temperate and arid zones of Australia.

Passive solar design exploits insulated solid or heavy building materials such as concrete panel walls and floor slabs and masonry for their value-added characteristics in conjunction with the difference in altitude angle of the sun between summer and winter.

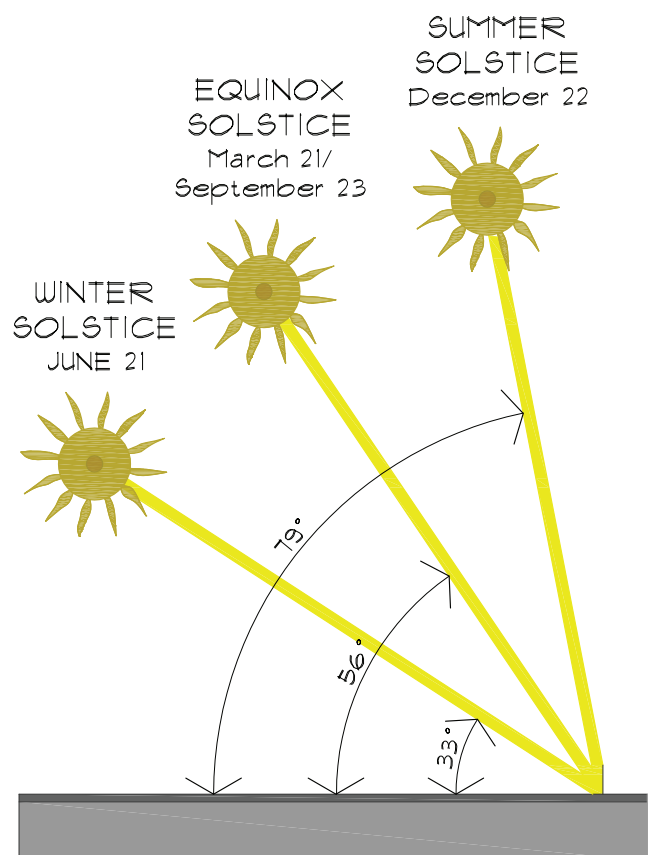
By harnessing the natural advantage of high mass together with the heat of the sun, more comfortable living conditions can be achieved with reduced reliance on space heating or cooling and subsequent reduced energy demands.

Concrete floors, solid internal and external walls, north-facing windows and insulated roofs can be used in passive solar design. In the cooler months, these elements collect solar energy through windows, storing it in the high-mass floor slab/walls/ceilings, releasing it only when the air temperature drops below that of the walls and floor.

5.1 PASSIVE SOLAR SYSTEMS

Most passive solar designs are of the direct-gain type where sunlight entering through north-facing windows falls onto an element of the building suitable for absorbing and storing of heat, usually a concrete slab floor, with additional storage provided by solid internal walling.

The direct gain system is most often used because it is relatively easily achieved through the provision of generous north facing glass. Additionally, it does not increase construction costs as it relies on traditional building materials such as concrete floor built as a slab-on-ground.



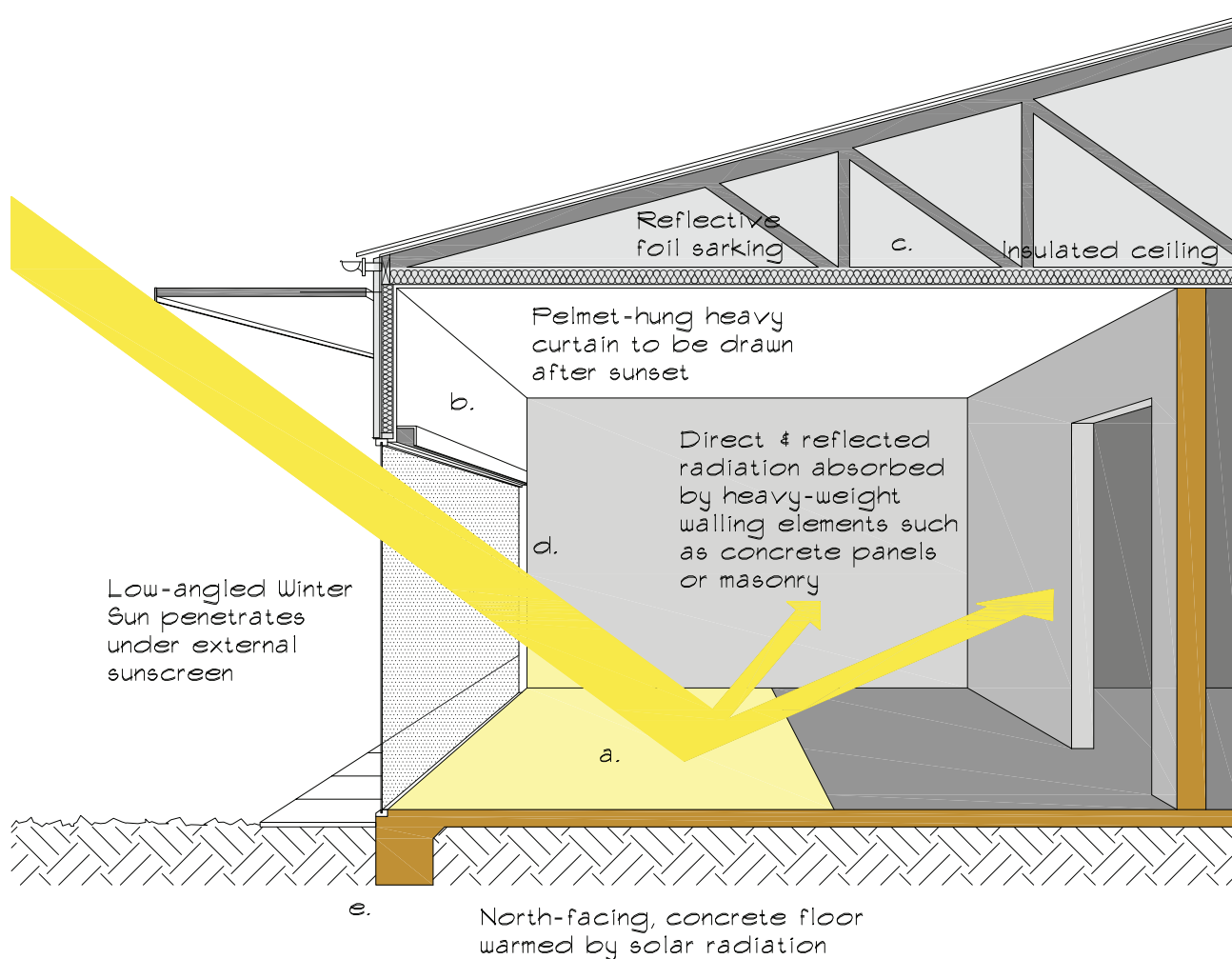
TYPICAL ALTITUDE ANGLES AT 12.00PM FOR NORTH-FACING WALL.

5.2 DIRECT GAIN – HEATING CYCLE

A building should aim to have north-facing glazing of a size approximately one-fifth the floor area of the rooms to be warmed by the direct-gain method. The effect of direct gain heating should be optimized as follows:

- Use concrete as floor slab, and wall panels.
- In temperate and cool temperate zones insulate the windows with pelmet-hung, close-fitting, heavy wall furnishings such as curtains, which should be drawn after sunset.
- Insulate the ceiling to prevent heat loss from thermal stores during the day and from the room at night.
- Seal around all wall penetrations to prevent heat loss by excessive air leaks.
- Insulate the edges of the slab-on-ground floor, especially the northern edge that acts as the prime heat store, reducing heat loss to the earth.

Thickening of the slab to the depth of 250mm in a two-metre-wide strip along this northern edge and insulating the outer face of internal masonry leaf of external walls may also be considered.



DIRECT GAIN - HEATING CYCLE

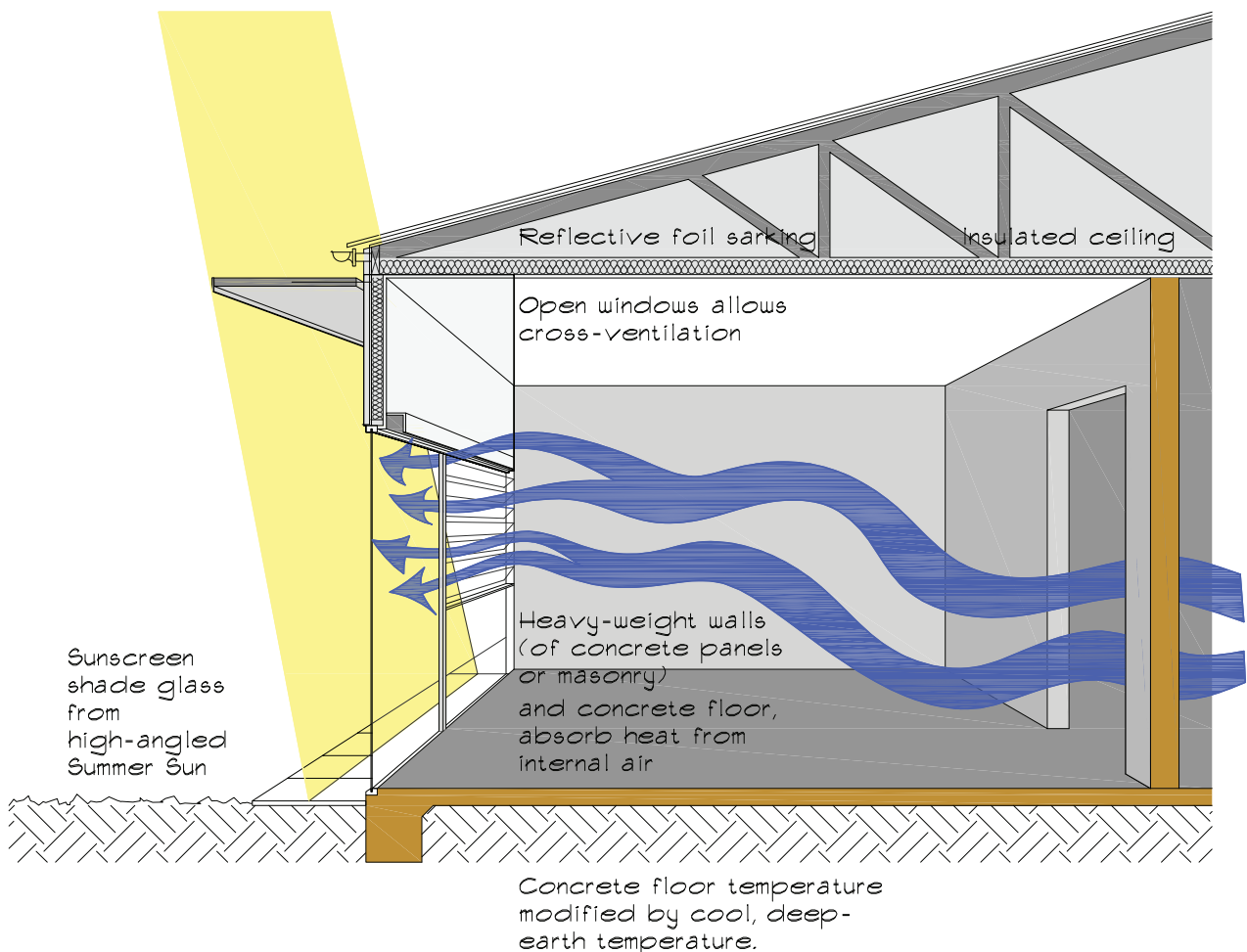
5.3 DIRECT GAIN – COOLING CYCLE

A common failure of many low-energy designs in temperate Australia is that they cater only for the winter heating cycle and forget the summer cooling cycle. It is vital to provide cross-ventilation in a building in summer to not only supply fresh air but also:

- Give instantaneous cooling whenever the inside temperature is higher than the outside one;
- Remove overnight the heat stored in the building fabric during the day commonly referred to as night purging; and
- Provide the feeling of cooling on the skin by accelerating its evaporative cooling (this can also be provided by the use of fans).

Shading should be provided over the northern windows to exclude most summer sun to the interior spaces. As the outside air temperature increases during a summer day, the inside air temperature is modified by the walls and floor absorbing heat from the air. Additional efficiencies can be introduced into the direct-gain cooling cycle by:

- Watering vegetation near the southern-side openings used for ventilation – the air passing through them will be partly cooled before entering the internal space;
- Planting deciduous trees on the northern and western sides of a building to provide shade in summer and admit sunlight in winter;
- Adding suitable insulation under the roofing material.





5.4 ENERGY EFFICIENCY

ESD principals should be an important consideration in the planning and design of the new building.

- **LIGHT**

Natural light and ventilation should be harvested for entry into the building wherever possible. Horizontal shading with a minimum projection of 1000mm should be provided to all north facing glass areas together with vertical sunscreens to all west facing glass to shade summer sun and reduce heat loads into the building, whilst at the same time permitting winter sun to penetrate.

Horizontal shading with a minimum projection of 1000mm should be provided to all north facing glass areas

- **VENTILATION**

Natural ventilation should be provided by openable sections of external glazing or by thermal chimneys.

- **SOLAR ENERGY**

Solar panels facing north should be centrally located at roof level to generate and provide hot water to service areas.

- **GREY WATER**

Rainwater tanks will harvest rain catchment from the roof areas to serve toilets, plant and equipment and irrigate greens and landscaped areas.

- **ARTIFICIAL LIGHTING AND AIR-CONDITIONING**

Air conditioning should be zoned to service only those areas in use at the time.

All artificial lighting should be energy efficient fittings, grouped, linked and zoned to restrict use to those areas in use at the time.

- **GLAZING**

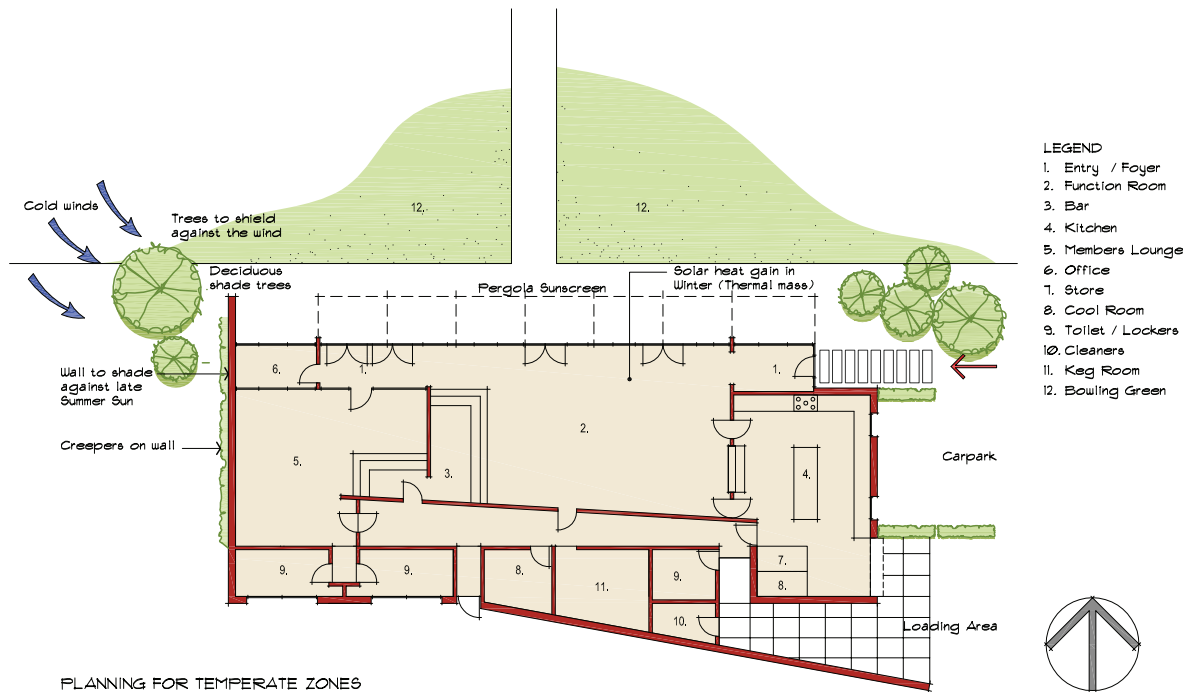
All glazed areas facing South should be double glazed, elsewhere 'E' glass (energy efficient glass) should be used.

- **INSULATION**

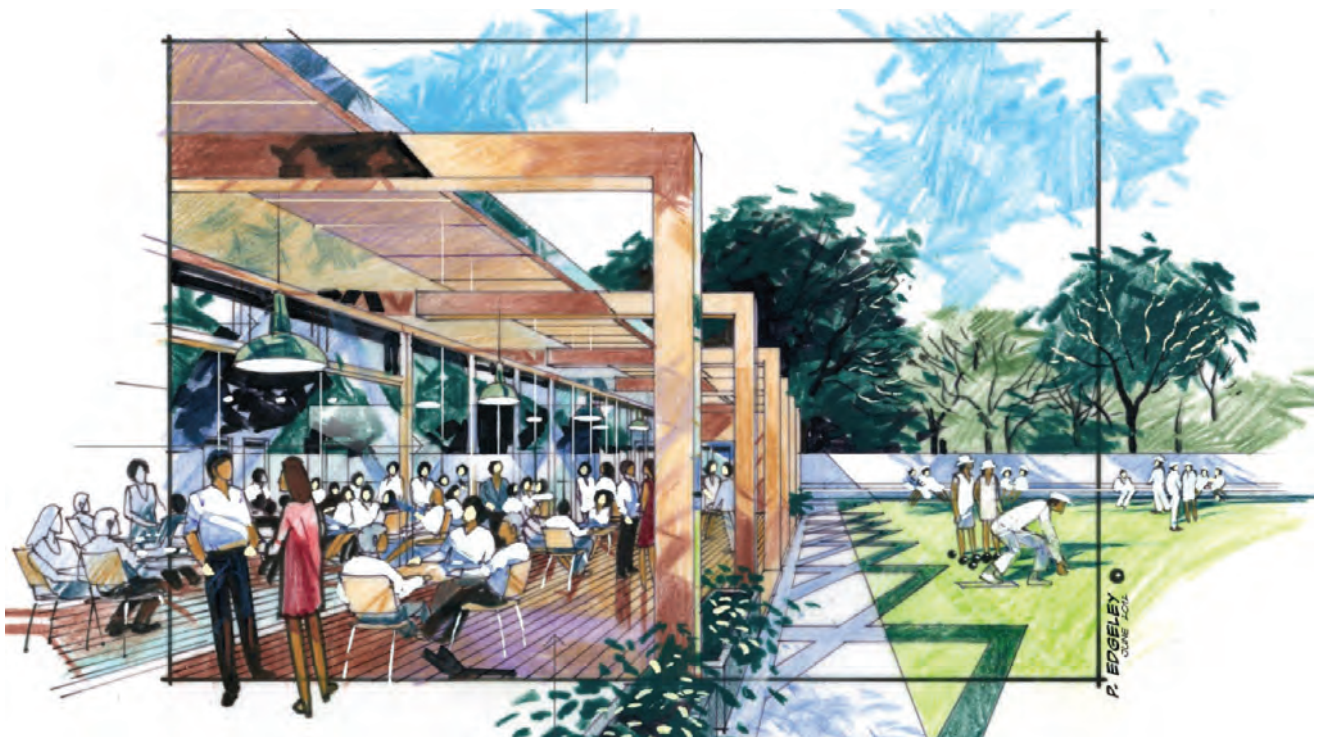
Roof, ceilings, walls, and floors should be insulated to meet and better the standards required by Section J of the Building Code of Australia.

5.5 PLANNING

In temperate climates buildings that are longer in the east-west than in the north-south direction are more efficient for both winter heating and summer cooling. This orientation allows for maximum glazing to the north and minimum east-west exposure to morning and afternoon sun. This does not mean that all buildings must be so oriented.



Different building shapes can be designed which satisfy the particular problems of each site by using the shape of the building, number of levels, and particularly effective glazing including the use of clerestory windows and roof lights, combined with adequate shading.



5.6 WALLS, WINDOWS AND DOORS

Internal walls can add substantially to the thermal mass of a building. External walls should act as insulation surrounding.

Windows are necessary for light and ventilation and play an important role in the collection and retention of solar radiant energy. In each wall, however, they need to be treated differently.

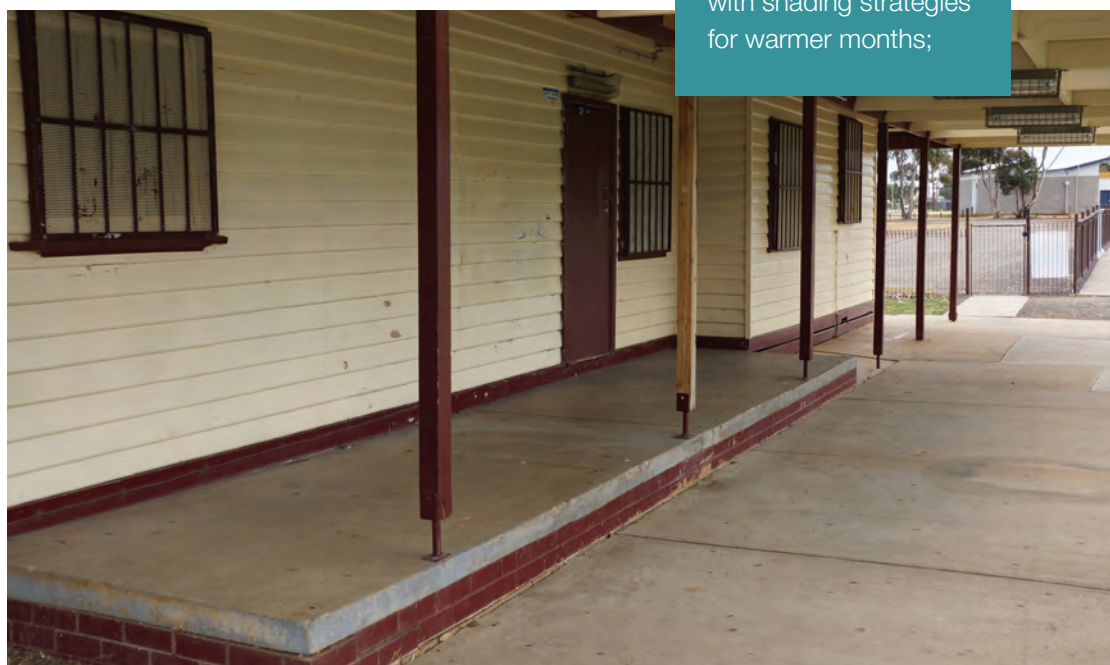
- North-facing walls have the greatest potential exposure to sunlight with ample heat-absorbing and storage material behind glass. However, they must be provided with appropriate sun shading devices to allow winter sun penetration but exclude summer sun.
- East-facing walls may have a few windows intended to catch morning sunlight that can be pleasant in any season in a temperate climate, however north-east orientation should be used judiciously it is a potential source of excessive solar gain in summer months.
- South-facing walls never get direct sunlight. South walls should have only the minimum area of windows required for lighting, ventilation and to admit cooling summer breezes.
- West-facing walls should have minimum windows and be shaded with external awnings, verandahs or deciduous vegetation against the penetration of the low summer afternoon sun.
- Openings in a wall such as windows, doors or any other penetration should be sealed around their perimeter to prevent seepage of air (infiltration).

5.7 ESD CONCLUSION

Significant increase in the capital cost to buildings to save energy are unnecessary where design incorporates passive solar techniques that require little or no extra capital outlay.

The following are various passive design concepts worthy of consideration when building in temperate regions of Australia:

- Use insulated concrete elements such as slab-on-ground floors, wall panels, ceiling/ roof slabs and suspended upper storey floors to act as exposed internal thermal mass;
- Plan for maximum north orientation of windows with shading strategies for warmer months;
- Carefully design sunshading such as eaves, verandahs or building overhangs and provide;
- Windows with blinds or curtains;
- Reduce windows in walls other than north-facing;
- Plant deciduous trees and shrubs for summer shade;
- Foster plentiful foliage around southern air intakes.



Plan for maximum north orientation of windows with shading strategies for warmer months;

CHAPTER 6

6. THE ARCHITECT AND PROFESSIONAL SERVICES REQUIRED

For many clubs building or renovating can be a once in a lifetime venture. It involves considerable expenditure and a club is well advised to enlist the services of an expert. The club's main guide is its architect who should be experienced in club work and who is trained to assist the client in securing its requirements.

An architect can manage the entire design and construction process. More than a designer, an architect will help the club set a viable and realistic budget, guide the club through the town planning process, obtain competitive quotes for the work, manage consultants and administer and project manage the construction contract.

The architect will inspect the work right through the construction period to ensure the club achieves the quality and level of finishes it expects.



6.1 PRE-DESIGN STAGE – FORMULATING THE BRIEF

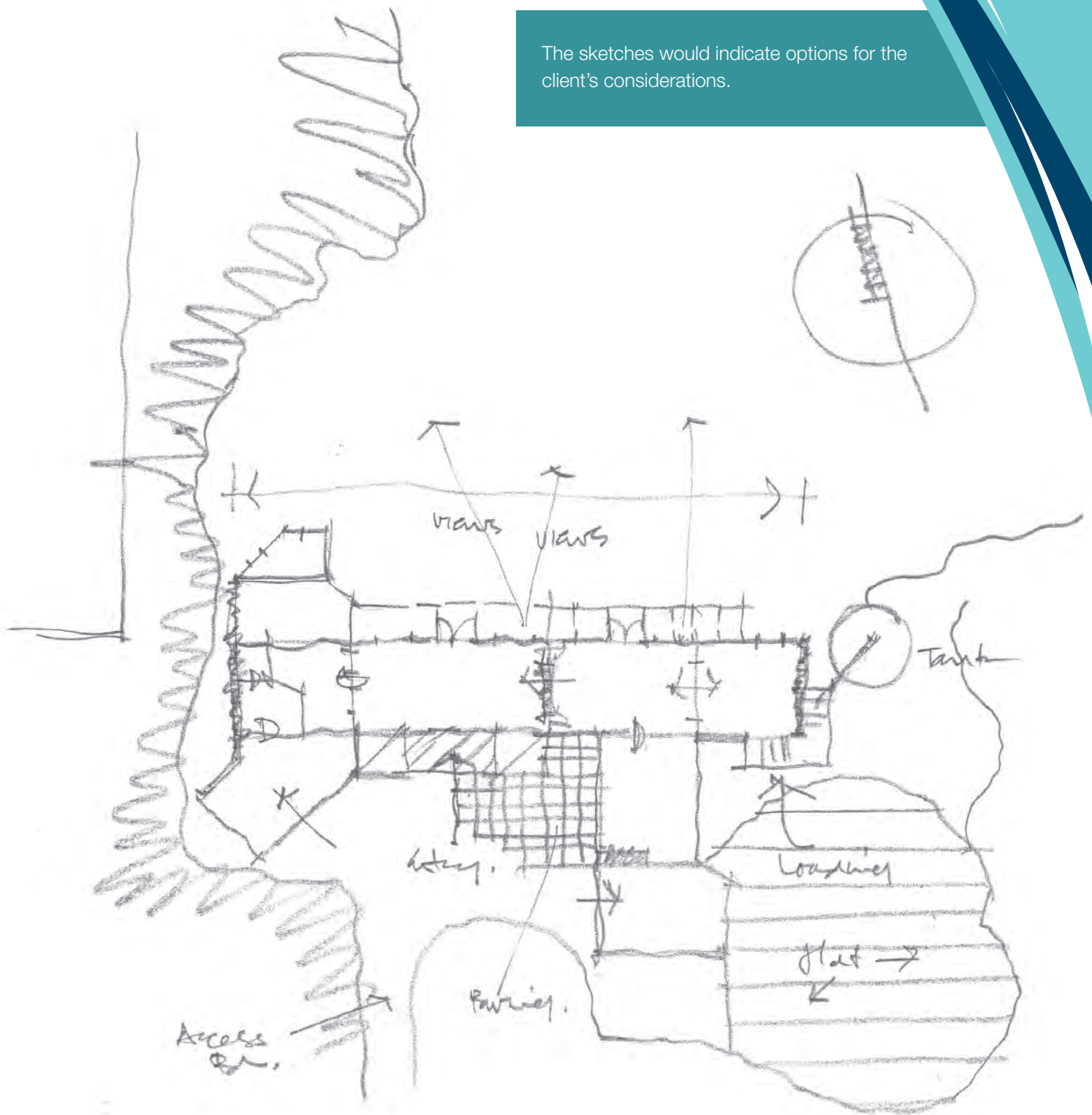
The architect will work with the club to guide and assist in developing a project brief of requirements.

This could take the form of a 'schedule of accommodation' for a new club, or for refurbishment projects, a detailed list of work to be done to certain areas of the club. The architect can provide guide estimates of the work to establish a project budget. In many instances the architect will be able to identify certain additional areas that may not be apparent to the club that should be included in the brief.

6.2 CONCEPT DESIGN STAGE

This is the first stage of the architect's work. Preliminary sketch drawings are prepared. These are usually simple single line freehand sketches of proposals for using the site and basic planning of the relationship of spaces within and around the building and site including considerations for siting, access etc.

The sketches would indicate options for the client's considerations.



6.3 SCHEMATIC DESIGN STAGE

Once a preferred option has been selected from the Concept-Design, further sketches to scale are prepared to explore and develop ideas and solutions.

Preliminary investigations into the type of structure for floor, walls, roof etc... are undertaken and estimates of costs prepared.

6.4 DESIGN DEVELOPMENT STAGE

This involves further development of the schematic designs to define the structural systems, decide on the mechanical and hydraulics arrangements and systems and select materials. At this time the architect will recommend the engagement of necessary secondary specialist consultants on behalf of the client, eg. quantity surveyor, structural and civil engineers, and integrate their work within the final design.

Presentation drawings are then prepared consisting of site plans, floor plans, elevations, sections, defining the full scope of the project.

Materials, finishes and colours are selected, furniture layouts prepared, and material and colour samples presented for approval.

Estimates of costs are again prepared based on the upgraded design scheme.

Example of Design Development drawings:



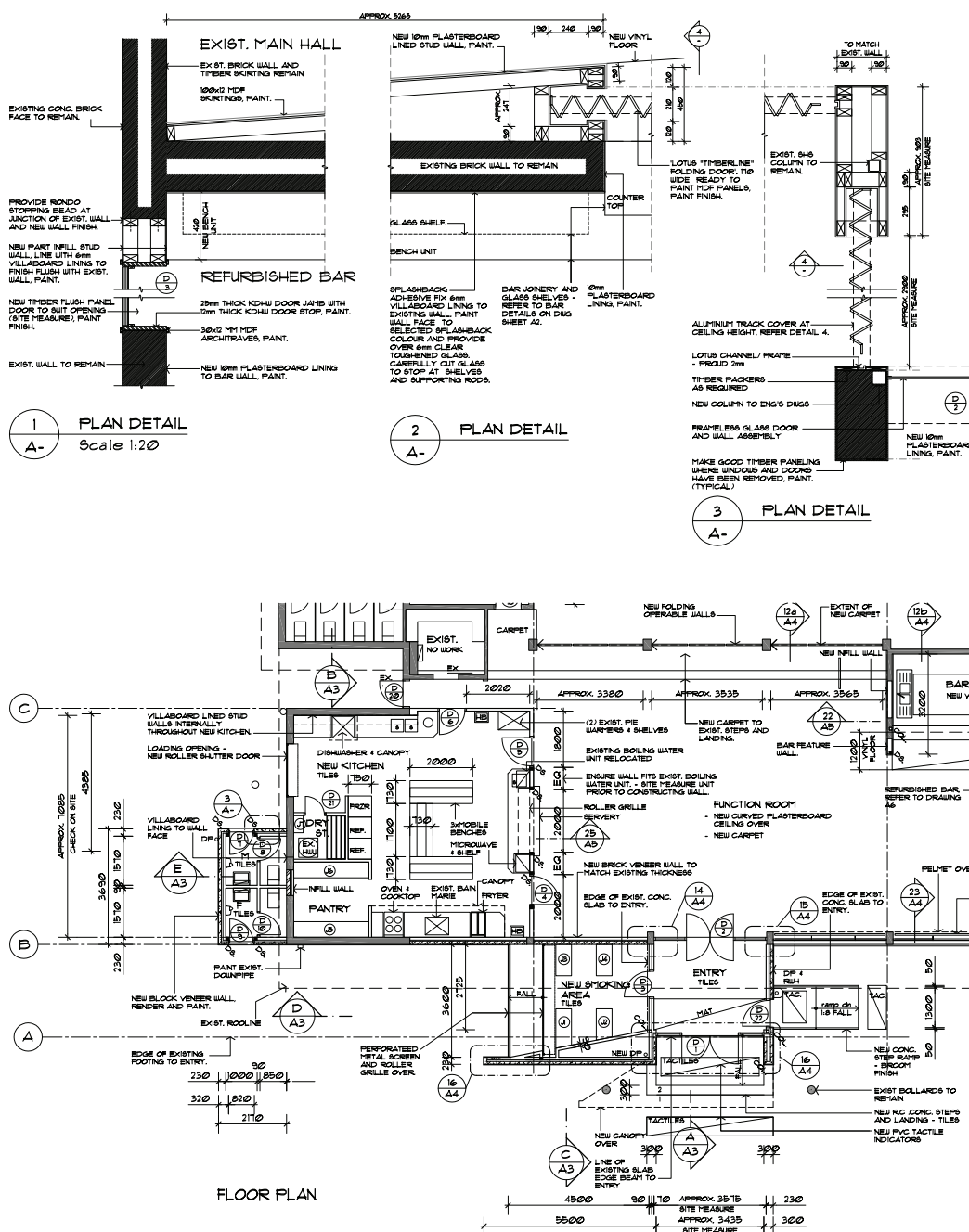
6.5 CONSTRUCTION DOCUMENTATION STAGE

Once client approval has been obtained for the development design stage, construction drawings and specifications are prepared.

This work comprises the preparation of detailed technical drawings of plans, elevations, sections and details. The drawings are fully dimensioned scale drawings with full descriptions of materials and their assembly. The drawings are supported and accompanied by a written specification which describes the quality and standard of work required for the project. These are the documents used for construction and which form part of the building contract documents.

Engineering drawings from secondary consultants for structural, civil, mechanical and electrical services are included and integrated within the content of architectural documentation.

A pre-tender estimate is prepared based on the completed set and documents adjusted if required to meet budget constraints before calling tenders.



6.6 CONTRACT ADMINISTRATION STAGE

This stage of the architectural services covers (two) parts:

(a) Calling and reporting on tenders

- Calling for tenders in conjunction with or on behalf of the client and answering tenderer's queries.
- Analysis and advice in respect of tenders received.
- Negotiation, preparation of documents and arrangements for execution of contract.

(b) Administering the Contract

- Administration of the contract and inspection of the works including, as appropriate, supplying information, checking builder's claims and issuing progress payment certificates, negotiating variations and cost adjustments and dealing with claims for extensions of time and other matters included in the building contract.

6.7 POST CONTRACT STAGE

Some projects may require certain post construction services to be provided by the architect. For example, providing drawings for phased developments, studies, models. Projects that have undergone significant changes during construction, may require re-drawing for record purposes. Other services may include commissioning assistance and providing maintenance manuals.

Most building contracts require a defects period of 12 months (extending over four seasons). During this time the architect periodically inspects the works and prepares lists of minor defects requiring rectification by the builder, thus ensuring that the completed project is left in the best possible order.

Having the right professional advice will ensure an excellent result.



CHAPTER 7

PUBLIC RELATIONS AND PROMOTION

7.1 RELATIONSHIP WITH THE LOCAL COMMUNITY

Bowls is a team sport and as such requires interaction and co-operation with team members. Bowls clubs attract members from their local communities who enjoy the social activities generated by the clubs in addition to the competitive nature of bowls. To many members, their local club plays an important role in their day to day activities and is the focal point of their community.

7.2 IMAGE OF THE CLUB

As an important local institution, a club requires to set an appropriate image to its community and to other clubs. It is therefore important that the facilities offered by the club are aligned with this cause and project the ethos and philosophy of the club both within and outside its membership.

A poor image will ensure potential members are turned away.



7.3 NEW MEMBERS

Most clubs strive for an increase in membership, to strengthen their teams' prowess and to maintain the general well being of the club.

In order to attract members a club needs to provide attractive facilities both in terms of its bowling facilities and its clubroom amenities.

7.4 PUBLICITY

Don't forget to tell the community you have finished renovating. Have an open day/night to show off your new facility.

7.4 OFFICIAL OPENING

Invite and special ersons or funding agencies to the official opening of the new club/facility. The local member of parliament or councillor are often important to have present, especially if they have contributed financially.



Conversly, a fresh, vibrant and well cared for facility will appealing to new members.

CHAPTER 8

FINANCIAL ASPECTS

8.1 IDENTIFYING THE COSTS

Identifying the cost of a new building or refurbishment project, and the method of funding are key elements of the planning process.

Systems need to be in place to ensure the budget is well planned and monitored.

Costs will vary over time and from one project to another. Factors that may affect costs are:

- Increases or variances in the cost of materials
- The market place i.e. the building climate at the time
- The time of the year for construction commencement and completion
- The nature of the site i.e.
 - Access
 - Soils conditions
 - Topography
 - The design of the project
 - Materials to be used
 - Number of levels

A summary of project costs is provided below.

SOURCE OF COST	DESCRIPTION
Preparation costs	<ul style="list-style-type: none"> • Land surveyor • Aerial photos, • Geotechnical report, • Asbestos audit
Fees payable to authorities	<ul style="list-style-type: none"> • Permits: planning permit, building permit, health department permit.
Construction cost	<ul style="list-style-type: none"> • The cost of the project paid monthly as progress payments to the builders and sub-contractors during construction.
Variations and provisional sum adjustments	<ul style="list-style-type: none"> • Additional funds required to cover the cost of change orders by the client and/ or unforeseen works or additional works requested by the client.
Professional fees	<ul style="list-style-type: none"> • Architect • Civil and structural engineer • Services engineer • Quantity surveyor • Land surveyor

8.2 INDICATIVE COSTS ASSOCIATED WITH DIFFERING CONSTRUCTION OPTIONS

The question of whether it is better to demolish and rebuild as new, versus refurbishment of the existing facilities will of course vary with each individual project; however it is generally accepted that refurbishment works are the less expensive of the two options.

This theory is based on the retention of some 'core elements' as part of the refurbishment works, eg. concrete floor slabs, footings, some walls and perhaps the roof structure.

Cost comparison between the two options could be in the order of:

<p>Demolition of existing building and construction of a new Single Storey building comprising:</p> <ul style="list-style-type: none"> Clubrooms & lounge + bar Change rooms & toilets Administration areas Function room & bar Fully equipped kitchen 	<p>The cost of new additions could be in the order of \$2,800/m² - \$3,500/m²</p>
<p>Alterations and additions, and refurbishment of the existing facilities as listed above</p>	<p>The cost of alterations could be in the order of 50% - 75% of the above rates</p>
<p>If construction of a multi level building is considered essential to achieve the space for the required facilities, then new construction rather than refurbished construction would be the less expensive option.</p> <p>This is because construction of additional floors would be considered and designed as part of the early design stages of the project, whereas to design and construct additional floors over an existing building is more generally difficult in terms of both design and construction. In many instances this is not possible due to the condition of the existing facilities.</p>	

8.3 FUNDING

It may be expected that fundraising could include:

- Advertising, sponsorships
- Extra bowling club activities. Hire out for functions, eg. weddings, 21st birthdays, social groups etc.
- Rental from business conferencing, seminars, etc.
- Bar takings
- Corporate functions, bare foot bowls etc.
- Federal, State and/or Local Government grants.
- Registration with the Australian Sports Foundation (see website www.asf.org.au).

Considerations should be given to refurbishing or extending existing facilities to include a separate function room with a commercial kitchen and new full bar services for hire out to the general public which would assist to generate income for upgrading works.

An example of a refurbished function room is shown below:



Before: A tired function room which isn't appealing to the general public or corporate market.



After: A modern facility available for a range of uses, enabling increased utilisation.

CHAPTER 9

BUILDING CONTRACTS

There are a number of standard building contracts available for execution between the client and the builder prior to the builder or contractor commencing construction.

The following contract types are in common use:

- Fixed lump sum contracts;
- Lump sum contracts with rise and fall;
- Cost plus percentage fee contracts;
- Cost plus fixed fee contracts;
- Schedule of rates contracts;
- Minor works contracts.

Some contracts can only be administered by a registered architect. This is an important safeguard of the client's interest as the architect must under law administer the contract impartially and has no vested interest in the running of the project.

Some contracts permits an 'upfront' contribution payment before the work commences. The architect will monitor the amount and terms of monies paid to the builder at all times. Clubs should beware of 'up front' payments that are large proportions of the contract amount.

The architect will advise on the most suitable contract to use on the project, it is important to note that the contact is between the client and the builder. The architect's role is to administer the contract on behalf of its client as the client's agent.

The Master Builders Association and the Australian Institute of Architects have jointly compiled the ABIC Simple Works Contract, suitable for projects up to \$5,000,000.

This contract is suitable for use in new club or refurbishment works and can be found at:
www.masterbuilders.com.au/products/abic-simple-works-contract-forms

CHAPTER 10

SEQUENCE & JOINT ACTION REQUIREMENTS

JOINTLY	ARCHITECT	CLUB
1 Preliminary discussions		
2 Establish budget		
3 Establish building program		
4 Agree design and documentation time chart		
	5 Consultation with authorities	
	6 Recommend consultants (if required)	
	7 Schematic design	
	8 Preliminary estimates	
		9 Approve schematic design
	10 Design development drawings and specifications	
	11 Progressive estimates	
12 Discussion of detailed requirements		
	13 Modification to design development documents	
		14 Approve design development documents
	15 Contract working drawings and specifications	
	16 Progressive estimates	
17 Set down construction time program		
		18 Approve contract documents
19 Select tenders		

	20 Issue tender documents	
	21 Receive tenders	
	22 Analyse and report on tenders	
23 Review tenders		
	24 Assist in execution of contract	
	25 Check insurance and retention arrangements	
	26 Contract administration and inspections	
27 Discuss progress, possible variations, etc.		
	28 Prepare progress payment certificates, statements, etc.	
		29 Make progress payment
30 Finalisation of fittings, finishes, etc.		
	31 Prepare and issue variation – quotations	
	32 Check and recommend quotations	
		33 Accept variation quotations
34 Issue contract variations		
35 Inspect at practical completion		
36 Issue of Notice of Practical Completion and certificate for half retention		
		37 Occupy building
	38 Receive warranties from builder	
	39 Make final inspection at end of defects liability period and check that all defects made good	
	40 Issue final certificate	
		41 Make final payment

CHAPTER 11

MAINTENANCE OF THE CLUB'S NEW FACILITY

11.1 REGULAR MAINTENANCE

Regular on-going maintenance of the facility is essential.

Clubs by their very nature are high wear facilities; the materials, finishes and services all require regular monitoring and maintenance.

Considerations are:

- Cleaning gutters;
- Flushing stormwater drains;
- Cleaning grease traps;
- Regular and systematic general cleaning;
- Kitchen and bar maintenance;
- Painting;
- Locks and operation of doors;
- Electrical services and lighting.



With advancements in modern technology, CCTV is relatively inexpensive today

11.2 SECURITY

Your new or refurbished bowls club is a valuable asset and one that should be protected.

Wireless security cameras, also known as Closed-Circuit Television (CCTV) cameras transmit a video and audio signal to a wireless receiver through a radio band.

Many wireless security cameras require at least one cable or wire for power; 'wireless' refers to the transmission of video/audio. However more modern systems can be battery-powered, making the cameras truly 'wireless'.

Wireless cameras are proving very popular due to their low installation costs (there is no need to cables) and additionally the more flexible mounting options. Wireless cameras can be installed in locations previously unavailable to wired cameras.

In addition to the ease of use and convenience of access, wireless security camera allows users to leverage broadband wireless internet to provide seamless video streaming over-internet.

Remember, there are certain rules and guidelines as to how and where security cameras can be installed. Consult your local supplier for the regulations and the system that will best suit your clubs needs.





BOWLS
AUSTRALIA

Image Gallery



Examples of best practice
and other considerations





ANY CLUB CONSTRUCTION OR
REFURBISHMENT SHOULD BLEND
IN WITH THE NATURAL ENVIRONMENT




USE FOILAGE TO SOFTEN HARD SURFACES/
TEXTURES SUCH AS CONCRETE AND TIMBER



SCREENING CAN MAKE A CLUB LOOK NEW
WHEN PART OF THE REFURBISHMENT



NEW FURNITURE AND FITTINGS ARE
ESSENTIAL WITH ANY CONSTRUCTION OR
REFURBISHMENT



ENSURE YOUR CLUB IS ATTRACTIVE AND
WELL LIT SO IT IS AN AESTHETICALLY
PLEASING FACILITY NIGHT AND DAY






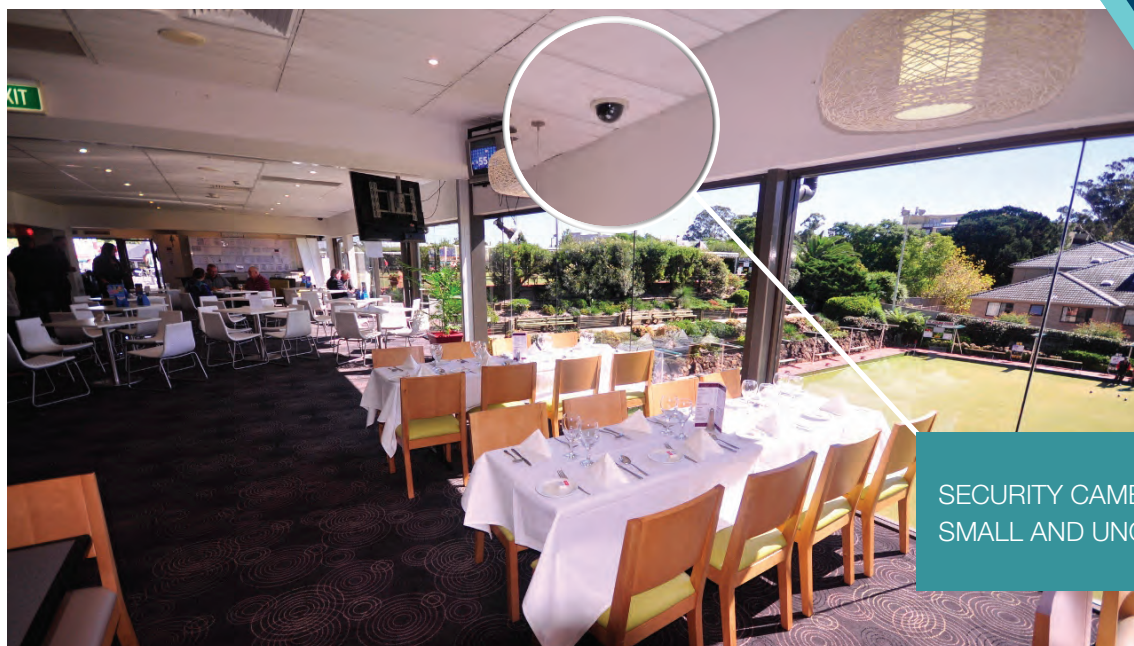
PROVIDE A SHELTERED
OUTDOOR AREA TO CATER FOR
ALL NEEDS



HIDE CARPARKS AND OTHER
OBJECTS WITH FOLIAGE



DIFFERENT FURNITURE CAN BE
USED TO CREATE SECTIONS
WITHIN A LARGER ROOM



SECURITY CAMERA'S CAN BE SMALL AND UNOBTRUSIVE



KEEP THE FACILITY WELL PRESENTED AT ALL TIMES



WHERE POSSIBLE, MAXIMISE VIEWING FROM ABOVE TO ALLOW FOR SPECTATORS

CHOOSE A HARD WEARING
CARPET OF A DESIGN WHICH
WON'T DATE



EVEN WHEN NOT IN USE, SET
TABLES TO ENSURE THEY LOOK
APPEALING TO POTENTIAL
CUSTOMERS



REFERENCES

Bowls Australia 2011 - *Bowling Green Construction Guidelines*

Cement & Concrete Association of Australia 1994 - *Energy Saving using Passive Solar Design*

Victorian Solar Energy Council - Varied publications, newsletters, pamphlets

Working with your Architect - Royal Australian Institute of Architects

GLOSSARY

Architect

A person who engages in the profession of architecture.

Australian Standards and Codes

Legislated documents setting down minimum standards for materials and their use.

Brief

A type of educational or business document including desires and requirements.

Builder

A person who builds.

Building permit

Is a permit required in most jurisdictions for new construction, or adding onto pre-existing structures, and in some cases for major renovations.

Building sub-committee

Group of people representing the committee of an organisation for building matters.

Club's design brief

A list of requirements and scope of works.

Club's strategic plan

An organisation's document defining its strategy or direction and making decisions on allocating its resources to deliver this strategy.

Construction

The action of building something, typically a large structure.

Construction drawings

Detailed drawings used for authority approvals and final construction.

Contract

Is an agreement having a lawful object entered

into voluntarily by two or more parties, each of whom intends to create one or more legal obligations between them.

Costs plus percentage fee contracts

The actual cost of materials plus a percentage of these costs as a fee.

Cross-ventilation

Fresh air having an inward and outward movement across an internal space.

Design brief

A list of requirements and scope of works.

Design development drawings

Design drawings developed from schematic design sketches.

Double glazed

Are double glass window panes separated by an air or other gas filled space to reduce heat transfer across a part of the building envelope.

Draftsperson

A person employed in making drawings, especially in an architectural or engineering firm.

ESD

Environmentally sustainable design.

Fixed lump sum contracts

Building contracts based on a fixed sum for supply of all materials and full construction of the project.

Foliage

Is a mass noun that refers to leaves collectively.

Geotechnical report

A report on the soil conditions on a building site derived from the result of tests on soil cores from the site.

Grey water

Wastewater generated from wash hand basins, showers and baths, which can be recycled on-site for uses such as toilet flushing, landscape irrigation and constructed wetlands.

Lump sum contracts with rise and fall

A building contract subject to adjustment of the variation in the costs of labour and materials.

Master-plan

An overall plan for all future building works.

Minor works contracts

A short-form building contract suitable for small projects only.

Orientation

The position of a building with respect to the sun.

Passive solar design

The heating and cooling of a building by design means only; such as siting, orientation, protection, materials, mass, shape, etc.

Preliminary sketch drawings

Initial sketches of concepts, design and planning options.

Presentation drawings

High quality drawings for display, showing plans, elevations, sections, materials and furniture layouts.

Refurbishment

To refurbish again; renovate; brighten.

Re-upholstering

To provide (chairs, sofas, etc.) with coverings, cushions, stuffing, springs, etc.

Schedule of accommodation

Plans drawn up that will specify precisely the number and size of rooms that will be required, the relationships between rooms and groups of

rooms, the finishes, equipment, furniture that will fit the room for its functional purpose and the environmental conditions that will assist the purpose.

Schedule of rates contracts

Building contract where each item or component is listed in terms of quantity and quality and a rate determined and agreed against each item.

Schematic design stage

Preliminary sketch drawings/reports and indicative estimates of costs.

Stages

Construction can be staged in parts or sequenced over a period of time.

Spatial relationships

The relationship or location of one space to another.

Tenders

A structured invitation to vendors for the supply of goods or services.

Thermal mass

Is a property of the mass of a building which enables it to store heat, providing "inertia" against temperature fluctuations.

Topography

The type and shape on a site and adjacent areas.



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