SYDNEY COMMERCIAL KITCHENS
Phone: (02) 9972 0075 or 1300 881119. Fax: (02) 9984 1958

Commercial Kitchen Planning Kit

Contents

1. Introduction

Planning is the stage when the ultimate success or failure of a catering operation is decided.

The aim of planning a kitchen is to achieve a work area with the maximum efficiency, safety and which keeps to a minimum wastage of labour, energy and material.

Kitchen design principles remain the same whether you are planning a large or small kitchen, except that space limitations have a bearing on the flow pattern efficiency in smaller kitchens. It is wise to always seek the advice of a professional kitchen designer.

Before you can start planning a kitchen you need a good basic understanding of the main types of food services, the structure of menu's, flow patterns, what equipment is available, how each item of equipment can be used and its capacity.

This Commercial Kitchen Planning Kit will enable you to prepare a basic kitchen design.

Gathering accurate information on which to base the final plan is extremely important. It ensures the most energy efficient and productive kitchen is established for your operation.

2. Planning basics

- **The menu**

  The menu is the essential link in the preparatory stage of planning a kitchen. The menu will determine the type of preparation space, cooking equipment and refrigeration facilities required for the kitchen.

  When preparing the menu thought should be given to the number of staff who will be working in the kitchen and the number of customers to be served during the average shift. Initially it may be wise to have a number of alternative menu's which will allow flexibility in case of space limitations.

  Having prepared a menu, each dish should be broken down into its ingredients to assess the storage requirements, preparation techniques and methods of cooking. This analysis will also assist the assessment of space required for storage and preparation areas for appliances and for cooking and servery equipment in the proposed kitchen.

  It is at this stage that the menu may be altered to suit the space available for the kitchen. Allowance should be made for future changes, such as to menu's, to dining

trends and to changes of kitchen staff.

The type of establishment will determine the style of menu to be prepared, whether it is a restaurant, function centre, cafe or take away food business.

Based on the above considerations, a list of food storage needs, both dry and refrigerated and a list of preparation, cooking and serving equipment should be made.

- **Flow pattern**

To determine the production flow pattern of a kitchen the total environment needs to be assessed. Consideration needs to be given to:

0. the space available
1. the entrance for deliveries
2. the location of the dining rooms
3. the location of existing services such as gas, power, water and waste
4. the location of windows
5. the numbers to be catered for
6. the number of kitchen staff
7. the number of waiting staff

The flow pattern of a kitchen is comparable to any industrial manufacturing process. Raw materials enter at one end of the production line and exit at the other end as a finished product.

The flow needs to reduce working effort, cross traffic and avoid bottlenecks. Clearances between benches, tables and equipment must avoid congestion. If possible the kitchen needs to be divided into clearly defined areas so that the tasks can be carried out in the most efficient and productive manner possible.

The basic flow pattern stages of a kitchen are:

8. storage - dry, refrigeration and frozen foods
9. preparation - wet and dry areas
10. cooking - wet and dry areas
11. serving - hot foods and cold foods
12. dish and pot washing
13. cutlery and crockery
14. removal of waste

The major flow pattern involves the food from raw product through to cooked and plated food leaving the kitchen. There are however, some minor flow patterns to consider when designing the kitchen.

15. cooking utensils --> from clean storage --> to preparation area --> to the cooking area --> to pot sink --> to clean storage
16. crockery/cutlery --> from clean storage --> to the servery --> to the dining room --> to the dishwashing area --> to the clean storage area
17. garbage is generated in the storage, preparation and cooking areas, at the servery and in the dishwasher area

If the above flow patterns are used when designing a kitchen, staff will be able to carry out their tasks with safety and a minimum of interference and congestion.

- **Equipment**

  Having established the menu, preparation and cooking techniques, it is now time to assess the types and brands of equipment available. It is advisable to approach a supplier with experience in the area you are about to enter in order to gain a good appreciation of what is required.

  Existing equipment or second hand bargain priced equipment should be analysed very carefully before being designed into your plan. To often, little thought is given to what equipment is required to produce the desired result. The size and efficiency of an oven, fryer, griddle or dishwasher will have a long term effect on the running costs and production capabilities of a kitchen.

  When assessing equipment give consideration to:

  0. cleaning access
  1. service and spare parts back up
  2. warranty periods
  3. safety aspects
  4. production capabilities
  5. cost of operation / energy usage
  6. services available - gas, power, water and waste
  7. dimensions of the appliance
  8. cost

3. Checklist

To assist your planning process the following checklist provides a list of information required before preparing a sketch plan of the proposed kitchen:

1. determine the style of food service to be established
2. plan or measure the area available for the kitchen
3. prepare the full menu
4. from the menu
   a) prepare an ingredient list for storage needs
   b) prepare a list of preparation and cooking techniques
   c) list all the appliances necessary to carry out cooking and preparation techniques
5. establish the average number of customers to be served per meal session per day
6. in an existing building, prior to preparing a plan, check:
   a) the location for goods and produce deliveries and a yard for waste storage
   b) the size of doorways for delivery of new equipment
   c) the area available for storage and an internal or external coolroom location
   d) whether the space is sufficient for the kitchen and does it allow for a reasonable production flow?
   e) the location of existing water and gas supply and waste drains
   f) the location of windows
   g) the number and location of power points
   h) access to dining areas
   i) the condition of the floor for food service operation
   j) the ceiling height and condition for location of the exhaust canopy
   k) the condition of the walls for food service operation
   l) power availability - is 3 phase electrical supply available
   m) lighting levels for food service operation

7. prepare a list of equipment and appliances required
8. from your equipment supplier seek information and design specifications and assess equipment brands
9. assess existing equipment for possible re-use
10. check the delivery frequency of supplies to determine storage requirements
11. scale the kitchen on graph paper
12. check the drawing with your equipment supplier
13. seek quotations for the supply of equipment, stainless steel benches, exhaust canopy, plus any other building alterations, electrical work, plumbing etc that is required

4. How to use this kit

Having made the decision to install a new kitchen or renovate an existing kitchen, a number of facts and figures need to be established before the design stage:

14. refer to the planning checklist and gather all the available information required for the design
15. acquire local council health, building, fire and licence regulations
16. draw the available area to scale on graph paper
17. check the flow pattern, the accuracy of the scale drawings and that the space is adequate to perform the required tasks
18. check with the Tecnical data (section 5) to assess whether your plan will meet code requirements
19. upon completion of the sketch discuss it with your equipment supplier

5. Essential design factors

To conform to most council health and building codes, certain standards are required. However, please check with your local council to determine what are the correct codes and specifications.

Exhaust canopies

A commercially constructed canopy is required over all cooking equipment - domestic rangehoods are not permitted. Grease filters must be fitted and be easily removable to encourage regular cleaning.

The exhaust canopy is generally required to have a minimum extraction rate of 500 litres / per second / per square metre across the base of the hood installed.

The canopy should extend 150 mm minimum beyond the perimeter of the cooking equipment to be ventilated.

Dishwashers requiring greater than 7.5 kW electrical supply should have their own exhaust canopy.

Sometimes high rise buildings have specific requirements regarding exhaust canopies, so once again check with the local council.

Ceilings

Ceilings must be of dust proof, smooth faced, non-porous material painted with a washable paint of light colour.

Floors

Floors are required to be maintained in good repair, be of impervious, non-slip material and be able to be readily and thoroughly cleaned. They must be free from obstructions, such as a change in levels. Coving of not less than 70 mm high should extend around the perimeter of the kitchen floor. Adequate drainage must be provided.

Walls

All walls, doors and surrounds are required to be capable of being readily cleaned and should be finished with a smooth, durable and impervious material to a height of at least 1.8 metres above floor level.

Lighting

A well lit kitchen looks clean as well as providing a functional and safe working environment. Recommended lighting levels are:

- 350 LUX for work areas
- 160 LUX for storage areas.

Fittings used in canopies are required to be of the vapour proof type and all kitchen fittings should have guards to prevent glass falling in the event of breakage.

Hand basins

One hand basin for every 30 employees or any number up to 30 employees are required to be installed in the kitchen area. The adequate supply of hot and cold water must be controlled by sensor taps. The provision of an electric hand dryer will ensure a hygienic means of drying hands.

Equipment location

All fixed cooking and refrigeration equipment must be located 150 mm from any wall unless it is sealed with a flexible sealing material or provided with castors to enable cleaning access behind and underneath the equipment.

Sinks

Sinks must be provided in preparation, potwash and dishwashing areas.

Electrical requirements

The kitchen's total electrical load must be identified at the planning stage. This information is available from your equipment supplier. Make sure your building is capable of providing the required power prior to purchasing the equipment.

A distribution board for the kitchen equipment should be located in a convenient position on or near the kitchen in a dry, vapour-proof location. This provides:

- better distribution
- easy access to restore supply
- reduced wiring costs
- provision for future additions

Circuit breakers are preferred to fuses. A clearly marked schedule of equipment connected to each circuit breaker should be made. Power points in kitchens should preferably be 15

amp general purpose outlets.

General purpose outlets must be a minimum distance from wet areas such as sinks and troughs and must be installed in accordance with the current edition of the SAA Wiring Rules (AS3000/2000 and AS3008) and the Wiring Regulations.

Plumbing

When food is prepared on a commercial premises, a grease trap is required. Check with your local council and your plumber for the appropriate sizing.

Hot water service

Your hot water supply must be sufficient for normal food service use, including dish and glass washers, both of which have a high hot water requirement in a busy establishment.

Staff change rooms and toilets

Department of Health requirements must be considered.

Stainless steel benches and shelving

The preferred height for stainless steel benches is 900 mm. Ideally they should be located off the wall and have a 140 mm up-stand or splashback at the rear and applicable sides.

Under bench and wall shelving should be located off the wall and with a minimum clearance or 150 mm from the floor.

Equipment

The preferred height for equipment is 900 mm with a minimum of 150 mm clearance from the floor.

Walkways

1000 mm of walkway space is required for 2 or more staff to allow ease of passing and safe working conditions.

6. Conclusion

If you have found this Commercial Kitchen Planning Kit useful then please consider using Sydney Commercial Kitchens for the purchase of your food service equipment.

We are suppliers of all catering equipment, custom stainless steel benches and exhaust canopies to clubs, restaurants, cafes, hotels, nursing homes and private hospitals.

Extra discounts are available for multiple equipment purchases. Contact us to enquire or use the Request Quote option.

Please also investigate our other business tools at our showroom , all designed to make your business success easier to achieve.

PO Box 5056, Wheeler Heights NSW 2097, Australia