The Duxton Hotel Additions
Project Definition Report

March 2013

Prepared by rad architecture and Impressions Pty Ltd

Contents »

1.0 FOREWARD »

The Duxton Hotel Additions (DHA) on St Georges Terrace is a bold project that will serve the tourism and entertainment community. The expansion project will continue to promote the city of Perth, as Western Australia's premier tourist destination.

This document describes the key aspects of the DHA project. The design elements contained in this document are in keeping with Amuret's desire to achieve a "5-star international hotel" outcome, while ensuring that "value-for-money" is the primary consideration in planning and design for the DHA.

The DHA will reflect the hotel's immediacy to the Swan River, and will enhance connections to the City, with vistas to Kings Park. The DHA, with ballroom and conference facilities will enhance Perth's position as a world-class city with sophisticated entertainment options.

2.0 EXECUTIVE SUMMARY »

In November 2012, Amuret committed to preparing a Development Application for additions to the Duxton Hotel. After reviewing the work of Impressions/rad architecture prepared in 2012 and considering the views of management, Amuret confirmed an additional 9-storeys as the preferred project scope, and committed to the preparation of the Development Approval submission documents.

Amuret's decision to undertake the hotel expansion represents a long-term commitment to provide International standard 5–star hotel accommodation with complementary function and entertainment facilities. The hotel expansion will contribute to the redevelopment of Perth City. It will be one of the major accommodation and entertainment venues for Perth and one of the major international conference venues for Western Australia.

The purpose of the Project Definition Plan is to provide the basis for a decision to commence the delivery phases of the project. This plan provides the level of definition required for the preparation of detailed design and documentation to take the project to the market for tender. As such, the Project Definition Plan confirms the agreed extent of the project, including the impact on cost, time program and scope. The following key elements of the project are included in the Project Definition Plan:

- Master Plan for the Hotel accommodation and entertainment expansion (including the traffic/parking solution and the staging and implementation strategy).
- Functional brief and accommodation schedule (the spatial requirements of the hotel expansion and how areas within the facility will function and interrelate).
- Time program (the dates by which key milestones must be achieved to ensure project completion for the end of 2016).
- Cost plan (that established the budget for the hotel expansion and supporting services).
- Procurement strategy (how the hotel expansion and supporting services will be delivered).
- Financial analysis.

3.0 WHAT IS A PROJECT DEFINITION PLAN »

The DHA is a challenging and complex project that has undergone a deliberate planning process. Fundamental to this process is the Project Definition Plan.

This is the document that answers the questions of:

- What?
- When?
- How?

The answers to these questions can be found in the following sections of this document:

Project Scope

- The DHA section and functional brief describe all of the elements to be included in the hotel expansion – essentially what is to be built, including references to relevant standards and benchmarks.

The Master Plan

- The Mater Plan section describes how the hotel expansion will be integrated into the Duxton Hotel as well as how the Duxton Hotel relates to Perth.

Project delivery

- The time plan (or program) describes when the hotel expansion will be built.
- The cost plan describes how much it will cost.
- The procurement strategy describes how the project will be delivered.

The approved Project Definition Plan then becomes the reference point for all future decisions during design and construction of the DHA.

3.1 Background

In March 2012, Amuret commenced investigations into the feasibility of expanding the Duxton Hotel. Key aspects of the investigations were:

- 5 additional levels of hotel rooms (4 levels of Deluxe rooms and 1 levels of Club rooms).
- 1 level of Sky Lounge and function rooms.
- 1 ballroom level with capacity for 500 seats and pre-function areas.
- 1 Sky Bar level with plant and equipment.
- The hotel expansion will have state-of-the-art facilities and technologies, comparable to Marina Bay Sands Singapore or better, in order to provide a world-class hotel experience.
- There will be a 1-year design and documentation process to address the Master Plan, scope and costing.
- Construction will need to begin in 2014, for the hotel expansion to be completed for the end of 2016.

Amuret has commissioned a project team to guide the Development Application for the DHA, under the joint leadership of Impressions and rad architecture.

The project team provides leadership and oversight on the DHA, and its roles include:

- Overseeing the concept design and Development Application of the hotel expansion.
- Developing a project plan and implementing appropriate risk management strategies addressing contractual, commercial, legal and other risks/opportunities and recommending to Amuret ways to contain risks and realise opportunities.
- Establishing and directing the project team and resolving issues brought forward by the team.
- Reviewing and monitoring the project budgetary position and advising Amuret.
- Providing recommendations to Amuret on any significant variations to the project budget.

Developing and implementing a management plan to consult and liaise with the hotel management, staff, independent operators and user groups.

Following the completion of the preliminary investigations in November 2012, the project team was commissioned to prepare documents suitable for the Development Application submission.

3.2 The Project Team

The DHA is a complicated, advanced and large project. No-one has done this type of construction in Perth before.

Consequently, Amuret's Strategic Investment Manager (Chin Han Low) has a lead role and is accountable for the planning and delivery of the hotel expansion on behalf of Amuret. Chin Han Low is working in close association with the hotel General Manager (Bruce Doig) and lead design consultants Impressions and rad architecture.

As the project team responsible for service delivery, Impressions and rad architecture are leading:

- The definition of the scope and specifications of the DHA.
- Communication with stakeholders.

3.3 Stakeholder Engagement

At the beginning of the planning phase for the DHA, one of the first tasks was to consult and liaise with the hotel management, staff, local government and other stakeholders. The hotel expansion's initial planning phase has included consultation with government agencies, planning bodies and local governments, as well as user groups. Consultation with user groups and other key stakeholders will continue throughout the design of the project.

Services
A representative from each in-house service provider/independent contractor was consulted in most aspects of the planning process, including the functional brief and master planning. One-on-one consultation sessions were held with the project team's architect to ensure the specific requirements for each service delivery have been addressed.

Authorities
During the planning phase, the DHA Project team has met with the relevant local government authorities to brief them on the proposed planning process for the hotel expansion.

A summary of key stakeholders engaged to date is as follows:

Service Providers
- Catering
- Housekeeping
- Maintenance
- Management
- Human Resources
- Perth Audio Visual

State Government
- Department of Planning
- Metropolitan Redevelopment Authority
- Western Power
- Water Corporation

Local Government
- City of Perth
-

Project Aspirations
Throughout the planning phase of the project, consultation with key stakeholders was undertaken to determine the key aspirations for the DHA. The stakeholders recognised that the hotel expansion should "embrace the unique CBD location". Ideas considered include connections to the Swan River, and allowing vistas to the city and Kings Park. Above all, the stakeholders identified the need to provide a '**column free ballroom** in the hotel expansion. This necessitated the cantilevered floor plates (size) and roof top location (weight).

Following this research and stakeholder input, the project team developed the following aspirations for the project:

Cater for the guests who use the hotel by designing an exceptional 5-star hotel/entertainment atmosphere.
- The flexible design will deliver a multipurpose venue.
- It will be designed with leading edge hotel technology that caters for future trends.
- The hotel will bring a new experience in ballroom dining and entertainment

The hotel expansion will transform the Duxton Hotel and create a City landmark.
- The hotel will take advantage of its riverside views and central city location.
- It will be a catalyst for future development in the area, creating a new tourism and entertainment precinct for Perth.
- It will enable Perth to attract more international events.

Project management for the DHA will focus on sound planning and strong contract management to achieve the best value for money and deliver a world-class hotel on time and within the approved budget.

Vision
The vision for the DHA is that it will form a landmark for the re-development of central Perth. It will be one of the major tourism and entertainment venues for Perth.

The standard of the hotel facility, including its functionality, services, finishes and fit-out will be equal to the world's best practice. It has been benchmarked with Australian and international hotels, and the following planning decisions highlight the innovative approach to the hotel expansion.

Supporting the vision for the project, the functional brief contains a series of best practice highlights included in the design of the DHA.

Best
- Future proofed: designed to allow for future portable technology.
- Highest standard of Deluxe room accommodation.
- Widest range of Club rooms premium accommodation.
- Range of conference/function options to accommodate all price ranges including premium product.
- Highest standard of Ballroom facilities

Design Features
- Innovative design solution to provide for multi-purpose Ballroom.
- Design flexibility to allow for future functions.
- Uninterrupted river views from SkyLounge, Ballroom, SkyBar and SkyFall.

3.4 Project Parameters

Table 1 below summarises the key parameters that guided the development of the Project Definition Plan. These include a description of the key activities and operational requirements that the DHA will need to allow for.

Project Requirement	Description
Site	In June 2012, Amuret commenced investigations into the 8-storey expansion to the Duxton Hotel at #1 St Georges Terrace Perth. In December 2012, Amuret commissioned the project team to prepare Concepts for Development Approval. The Master Plan optimises the location of the proposed hotel facilities.
Capital Cost	The project team has noted that the indicative capital cost for the hotel expansion would be in the order of $110 million (Exc GST).
Deluxe rooms	Additional 34 deluxe rooms (inclusive of six universal access suites) with outwards views to the cityscape or the Swan River.
Club rooms	Additional 92 club rooms (inclusive of 12 universal access suites) with outward views to the cityscape or the Swan River
Sky Lounge description	The Sky Lounge will have a total capacity of 300 seats for the exclusive use of in-house guests.
Activities	The Sky Lounge will accommodate a bar, buffet and restaurant setup.
Day Spa description	Day Spa with a capacity for 15 guests with outward views to the Swan River
Activities	The Day Spa can accommodate several massage booths, manicure and pedicure parlours, and a couple's treatment room.
Function rooms description	Four function rooms with a total seating capacity of 360 seats. It will feature conference facilities and have the flexibility for function rooms to combine to form a larger venues where required.
Activities	The function rooms are designed primarily as a conference venue but will also have the capability to accommodate small scale functions.
Ballroom description	The Ballroom will have a maximum capacity of 460 seats, with provision to expand to 770 theatre guests. It will be a state-of the-art multipurpose venue, with the ability to be configured for a range of sophisticated dining experiences.
Activities	The Ballroom will be designed primarily to host diner/dance functions, but will also be capable of accommodating: • Conferences • Performance theatre events • Trade displays
SkyBar description	The SkyBar comprises of SkyBar (360 seat capacity), and an exclusive rooftop bar Skyfall (90 seat capacity).
Activities	The SkyBar is designed primarily to function as a bar, but it will also be able to accommodate small performance spaces.
Summary of Hotel expansion	This Project Definition Plan identifies the preferred procurement delivery model for the hotel expansion. This will be the main delivery package for the design and construction of the hotel expansion, as well as the porte cochere. In broad terms, the hotel expansion works will comprise the following: • Porte cochere • 4 levels deluxe rooms • 2 levels Club suites • 1 level Sky Lounge, function rooms, Day Spa and kitchen • 1 level Ballroom, pre-function areas and kitchen • 1 level Sky Bar and kitchen • 1 mezzanine level Sky Fall bar
Expected date for the commencement of early works	Forward works packages – Early 2014
Expected date for the commencement of construction	Hotel expansion works packages – Mid 2014
Expected date for completion	Hotel expansion complete – Late 2016

Table 1: Project Parameters

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4.0 MASTER PLAN »

4.1 Overview

The DHA provides the opportunity to deliver a landmark international 5-star hotel consistent with the City's Growth Needs for the Future – Plot Ratio and Built Form Study (Amendment #25 to the Town Planning Scheme).

A Master Plan has been prepared to guide the re-development of the Duxton Hotel within the City of Perth. The objective is to realise development of the DHA by the end of 2016, with the Master Plan also providing a framework to guide staged redevelopment in the context of the City's Growth Needs for the Future prepared for the City of Perth.

The preparation of the Master Plan to support re-development of the Duxton Hotel has been underpinned by research, consultation and analysis to inform the international and local context of the hotel site. This work has been subject to input from key local government agencies and stakeholders to consider and address compliance matters, as summarised below.

4.2 Site Context

The main characteristics of the Duxton Hotel site, which have informed the preparation of the Master Plan are outlined below, with appropriate strategies to manage these conditions where relevant.

Land Uses

St. Georges Terrace, Victoria Avenue, Terrace Road, Governors Avenue, Riverside Drive and Barrack Street bound the city block containing the Duxton Hotel. The Duxton Hotel site extends over an area of approximately 3041 m^2 and is located approximately 1 km south-east of the Perth Central Business District (CBD).

The Plan in **Figure 1** identifies the predominant land uses within the city block, including the existing Law Courts Building, the Government House and gardens, the Supreme Court and gardens, the Francis Burt Law Education Centre, the City of Perth offices, the Perth Concert Hall, and the Duxton Hotel. Included are the road and pedestrian corridors incorporating St Georges Terrace, Riverside Drive, Barrack Street and Victoria Avenue.

Figure 1 - Land Use

It is noted that realignment of Riverside Drive is currently underway with a high-density mixed-use activity centre planned for Elizabeth Quay (Barrack Square). Current proposals could deliver 1700 additional residential apartments, a minimum of 300 hotel rooms, approximately 150,000m^2 of office space and 39,000 m^2 of retail or mixed use to the Perth Waterfront, within approximately 900m of the Duxton Hotel.

Legislation and Land Tenure

The Duxton Hotel and Law Court Access Easement and Building Development Height Restrictions were established in 1995 and extend over the walkway area as depicted in **Figure 2.**

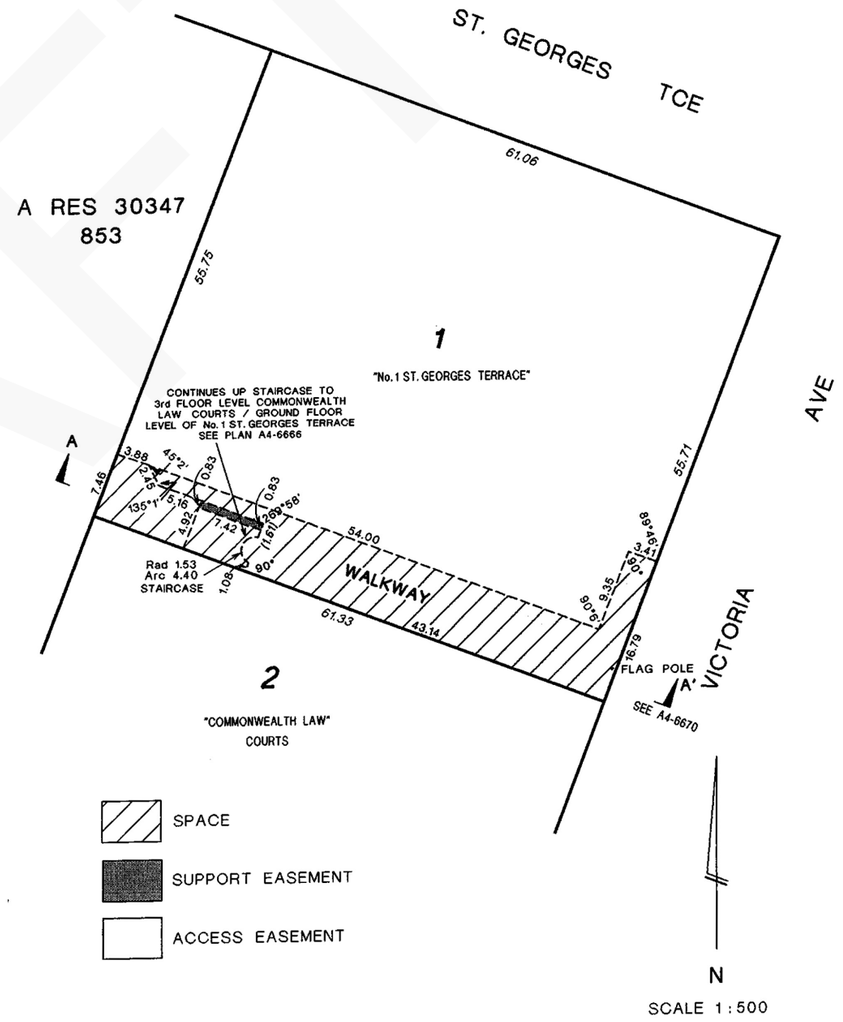

Figure 2 Duxton Hotel Access Easement Deed (1995)

The Porte Cochere as depicted in **Figure 3** extends over the St Georges Terrace Road Reserve. In 1995 the road reserve was placed in the control of the Duxton Hotel, which is responsible for the ongoing management, and maintenance of the road reserve.
It is intended that the area required for the DHA will include the St Georges Terrace Road Reserve. This will require the consent of the City of Perth and the Department of Land Administration.

Figure 3 St Georges Terrace Road Reserve

Under the provisions of the Town Planning Act, the Metropolitan Region Scheme applies to the hotel site with the requirement therefore to obtain development approval. Similarly the City of Perth Town Planning Scheme applies to the site.

A number of strategic and statutory planning documents relate to the hotel, especially the City's Growth Needs for the Future – Plot Ratio and Built Form Study which establishes accommodation targets and Amendment #25 to the Town Planning Scheme which forms the basis for the Precinct Guidelines established by the City of Perth.

Geotechnical
A desktop review of the likely order of ground settlement given the proposed additional building loads has ben investigated through:

- Local ground conditions from a nearby site in the Perth CBD have been relied upon in the assessment of the likely order of past and possible future ground settlements beneath the existing raft foundation.

The Duxton Hotel site was originally riverbank. The shape and form of the present land surface is the result of riverbank works and building works on and adjacent to the site.

The Perth 1:50,000 geology sheet indicates that shallow subsurface materials are likely to comprise sand derived from Tamala Limestone.
The Perth Groundwater Atlas indicates that the groundwater level was below 1m AHD in May 2003, which is at least 6m to 9m below existing street levels adjacent to the site.

As a result of the underlying ground conditions, it is estimated that the raft foundation may have already undergone total settlement in the order of 150mm to 200mm since construction. It is considered that further settlements could be in the order of 40mm to 80mm at the centre of the raft under the proposed additional loads.

The development of major buildings on such site conditions is not unusual and has been successfully undertaken for the existing hotel and adjoining buildings, including the Perth Concert Hall and the Commonwealth Law Courts Building.

Environmental
The major environmental matters to be considered on the Duxton Hotel site are largely associated with the Wind and Noise impacts of the redevelopment on the surrounding environs.

Noise
A full acoustic assessment for the DHA was prepared, including:

- Road traffic noise
- Construction noise
- Onsite Activity noise
- Mechanical Services noise

Conforming noise impacts at onsite and neighbouring offsite receivers could be achieved.

Wind
Wind tunnel tests for the DHA were conducted. The wind tunnel model study has shown the streetscapes surrounding the Duxton Hotel with the additional 9 levels to be generally similar to the existing conditions in the streetscape.

4.3 Services/Utilities

The service requirements for the DHA generally include the need to extend water, sewer, gas, telecommunications, power and vertical transportation within the hotel.

4.4 Structure

The existing Duxton Hotel building structure was analysed to establish the current load carrying capacity and quantity reserve load capacity of the existing structure.

Load takedowns and analysis indicated that strengthening will be required to the internal upper floors from level 10 upwards. Investigations determined it is feasible to carbon fibre wrap with an additional concrete capital to the top of each column.

It was determined that the existing building is in reasonable condition to good condition with no unusual areas of distress observed and that it is structurally feasible to add the additional 9 floors to the top of the Duxton Hotel.

4.5 Transport

The Duxton Hotel is currently serviced by significant road infrastructure. Analysis confirms the capacity of the existing infrastructure to ensure the efficient transport of hotel patrons/guests.
Transport Strategy
The main elements of the public transport strategy include:

Bus:
The development is located in close proximity to frequent bus services and connected to nearby bus stops with wide footpaths and signalised pedestrian crossings, thereby facilitating public transport use.

Private Vehicle:
No increase in parking is proposed which restricts the vehicle traffic generated by the development.
The development is located in close proximity to many attractions, further minimising the need for private vehicular trips to be made.

Bicycle:
High quality bicycle end of trip facilities will encourage staff to commute to work by bicycle.

Taxi:
It is anticipated that a number of guests may travel to the Duxton Hotel by Taxi/private vehicle - with drop-off in proximity to the hotel. Taxi and car drop-offs require an appropriate facility that is in close proximity to the hotel and is separated from buses, pedestrians and hotel vehicles to allow ease of access and egress.

4.6 Hotel Investigations

A study of major Australian hotels was undertaken to examine the characteristics of these hotel precincts. The key lessons learned from the study relate to:

Guest Movement: The majority of guests who leave a hotel at the conclusion of an event are prepared to walk up to 400 metres to their transport destination provided a safe, attractive route is available. Also, a significant number of guests may be resident in the hotel and will remain within the hotel environs.

Public Transport: Guests expect to exit a hotel within 5 to 10 minutes following and event, supported by multiple exit points leading to different transport modes. Easy access to public transport is important, although separation between the hotel entrance and public transport is preferred to allow guest dispersal.

4.7 The Master Plan

Based upon the investigations and research undertaken, a concept has been developed to facilitate the development of the DHA by the end of 2016, and to guide stages of development.
The concept proposes to expand the hotel within its urban setting, and aims to support and complement other tourism, entertainment and commercial activities within the Perth CBD.
Other key principles that underpin the preparation of the concept include:

- Integration with the City, developing a major international hotel at its centre, and enhancing the sense of place through a visual relationship with the river and Kings Park.
- Identifying entertainment opportunities within the Concert Hall precinct to further activate the precinct outside of concert events.
- Capitalising on the CBD location and utilising existing parking and transport infrastructure.
- Consideration of hotel design to optimise the advantages of the site. Important design opportunities include working with the urban landscape, utilising the building form, shape, materials and lighting as major contributors to character and sense of place, creating a unique hotel experience using the river, the City, and Kings Park, enabling the Duxton Hotel to hold international events beyond its current capability.

The concept demonstrates how the principles may be integrated to deliver an international 5 –Star hotel within an urban entertainment precinct that will evolve over time to become an integral part of the Perth City. The concept is anticipated to develop in stages, with the Town Planning Scheme amendment #25 to be implemented to support the re-development of the Duxton Hotel by the end of 2016.

The concept for the DHA provides a framework for the design of the hotel and the porte cochere. A consolidated plan of the short, medium and long-term view is identified in **Figure 4**

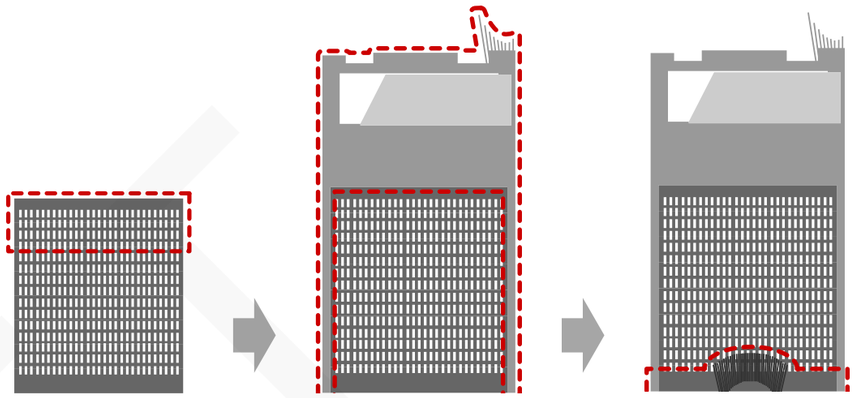

Figure 4 Duxton Hotel Additions Short, Medium and Long-term view

It should be noted that the concept incorporates the DHA proposal prepared for a Development Application in March 2013.

4.8 Concept

The key elements of the concept are illustrated in **Figure 5**. These elements will be incorporated into the documentation for the hotel expansion (as part of the project brief), and provide a framework for the hotel project team to develop their designs.

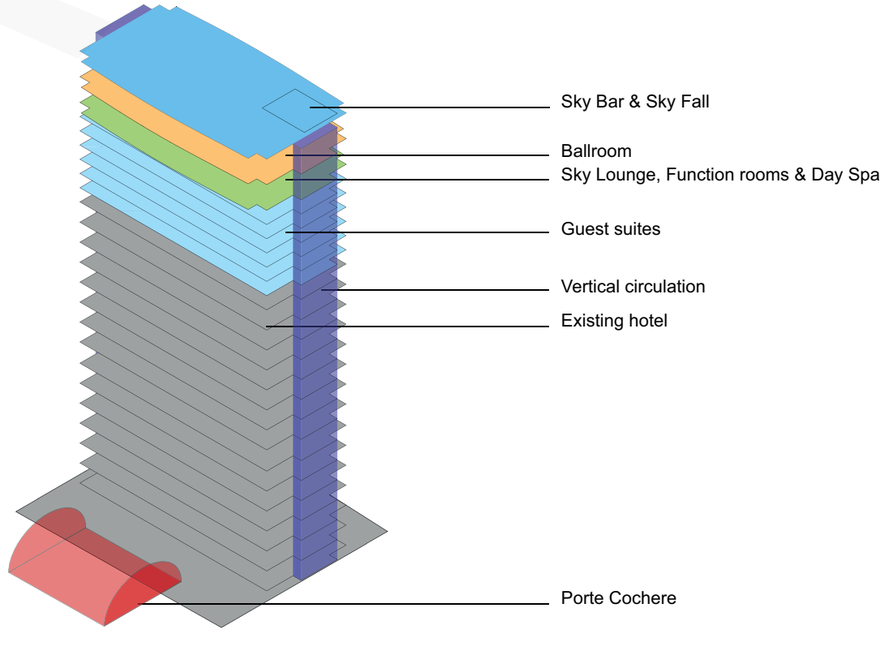

Figure 5 Key elements of the design concept

SkyBar:
As a feature of the hotel, the concept identifies a roof top bar with a series of open air spaces. The SkyBar provides a casual dining venue with views to the City and a potential performance stage, with the Swan River and Kings Park in the background.

Ballroom:
The hotel size, footprint, and scale are consistent with the Amuret requirements that the DHA will accommodate a 460 seat ballroom, with potential for configuration in alternate seating formats.
The uninterrupted, “column-free” ballroom will be located at the 23rd level of the hotel, serviced by exclusive “express lifts” from the ground floor lift lobby.
The pre-function areas will wrap around the ballroom on 3 sides and it is likely to vary in width (between approximately 3m and 6m), depending on the location. The pre-function area needs to be large enough to accommodate the majority of a full capacity ballroom, and should provide for furniture and temporary displays to complete the entertainment atmosphere.

SkyLounge + Function Centre:
The Sky Lounge commands arresting views of the Swan River while providing a mixed use bar, restaurant and buffet space. In the same manner, function rooms providing conference facilities to the north have the ability to open their outlook towards the Perth cityscape.

Club Suites:
Club suites provide a standard five-star hotel experience, but still maintaining a high-quality finish with outlooks towards the Perth cityscape, or uninterrupted views towards the Swan River.

Deluxe Hotel Rooms:
Deluxe rooms provide spacious hotel layouts, with high-quality finishes with outlooks towards the Perth cityscape, or uninterrupted views towards the Swan River.

Porte Cochere:
The Port Cochere, with views along St Georges Terrace and Adelaide Terrace, will be a landmark entrance to the hotel, creating an outstanding setting for the FireWater Grille and Lobby Bar - opening out with alfresco dining. The height of the Porte Cochere provides an opportunity for sophisticated, undercover arrival and departure.

4.9 Implementation Strategy

An implementation strategy has been developed to identify the processes and time frames to be considered in delivering the project, recognising the existing ground conditions and strengthening required to the existing hotel structure associated with the DHA.

The two phases of the project (forward works and hotel construction) are incorporated into the implementation strategy as follows:

- Forward Works: appoint the project team to undertake the design development and documentation of the project works, subject to approval of the Amuret Board.
- Hotel construction: WA Planning Commission and City of Perth approvals are a pre-requisite for commencement of building works.

Management plans will be developed to guide the various elements of project including construction management plans, environmental management plans, landscape management plans and traffic management plans. The detailed design of the DHA will inform this process.

5.0 DUXTON HOTEL EXPANSION »

5.1 Background

At this point in the design process there is a concept for the hotel expansion. The focus in the Project Definition Plan has been to determine all of the elements of the DHA (scope) and how they are to work and relate to other areas (function). This critical information forms the “functional brief” for the delivery of the hotel expansion (the procurement process is outlined in Chapter 7). The key aspects of this brief are outlined below.

The scope and function were determined in a number of ways by:

- Establishing the requirements for the hotel expansion as to what it is expected to achieve and how it is expected to be used.
- Reviewing existing and planned hotels to identify features that performed well and benchmark accordingly. While a number of Australian, Asian and European hotels were used; Marina Bay Sands Hotel in Singapore was the key reference hotel.
- Extensive consultation with stakeholders, particularly future users of the Duxton Hotel. In addition, consultation was undertaken with the hotel management, builders, engineers and designers.
- Researching new and emerging trends that will impact the future design and operation of the hotel.
- Meeting the audio-visual standards of conference/function organisers in order to achieve required accreditations and reference to international guidelines.
- Applying a “value–for–money” approach to planning the DHA.

5.2 Functional Requirements

The functional requirements of the DHA that have been developed in accordance with the Project’s general objectives are to:

- Improve access and opportunities to experience a range of national and international conference/entertainment events.
- Provide a facility that is efficient, functional, distinctive and clearly identifiable as the Duxton Hotel that will also reflect the sophistication and elegance of a 5-star hotel.
- Provide a facility that ensures a whole-of-life approach to the management, operations and maintenance of the hotel.
- Develop a multi-purpose 460-seat ballroom suitable for a range of uses including hosting conferences, weddings, functions and entertainment events.
- Create a ballroom that can allow for expansion to 750 theatre seats.
- Provide a facility that will achieve a structural life of at least 50 years.

5.3 Key Design Trends

An analysis into emerging hotel trends occurred, with the findings discussed with key stakeholders, including hotel management. These meetings covered a range of topics, which are summarised in the following sections. The trends analysis and meetings have highlighted the need to ensure that the DHA is flexible and adaptable over its expected 50-year life span. In summary, the key findings include:

- Enhancing the hotel experience and revenue generation by increased use of the ground and roof top levels of the DHA.
- Providing a wide mix of hospitality products to suit all price points.
- Incorporating future proofing measures within the design in recognition of the rapid and continuous development of technology.
- Using technology to improve the efficiency and effectiveness of hotel operations and management in areas of communications, security, sales and stock management.

International
Hotels have increasingly been used in the redevelopment of underutilised city precincts to generate new areas of activity, as demonstrated with the Elizabeth Quays development on the Perth Waterfont.

The use of hotels has also evolved beyond the provision of accommodation to a complex facility capable of providing a broader entertainment experience. This marked increase in expectation from the guest around all aspects of the hotel experience is driving new commercial opportunities and innovation in hotel design.

Commercial opportunities are a critical component of the operational planning and business model of hotels and must be built into the facility's design. This is particularly true of the range of hospitality and products offered.

The desire to create a superior experience for the guest continues to drive developments in hotel design and new revenue generating opportunities. They include:

- Branding a Hotel to reflect the ethos of the hotel operator and create a sense of belonging for the guests.
- Activate the internal and external areas to make the guest experience last longer.
- Providing opportunities that can only occur at the Hotel. This is often achieved through providing quality experiences (variety of food and beverage, a range of product opportunities) and access to events.

This approach needs to apply to all aspects of the hotel operation and is achieved through flexibility and adaptability to accommodate multiple venues and future changes in events.

Technology
There have been significant advances in portable technology. The evolution of applications and access to data has led to an increase in opportunities to engage with hotel guests. Contemporary hotels endeavour to use technology to enhance the guest's experience – from engagement and communication prior to arrival at the hotel, to state of the art technologies that improve efficiencies for guests (for example, in the delivery of services) and hotel operations. Although there are clear benefits arising from such technology, the costs and rapidly evolving nature of this technology will continue to pose challenges for project budgets.

In this regard, the preferred approach is to provide the physical space for the infrastructure rather than try to pre-empt the associated technical infrastructure that will evolve through the design and construction phase. Ways in which technology has evolved in modern hotels include:

- Use of video boards replacing traditional static signage.
- Use of lighting to give the hotel vibrancy and to create an enhanced atmosphere.
- Creation of video production and broadcasting to be used on hotel screens as well as portable technology (smart phones and tablets).
- Integration of the systems and documentation (in electronic and model form) from design phase through to operation to assist facility managers and hotel operators.
- Expansion of the data network to enable the use of portable technology.

It is noted that in addition to the provision of physical space, the DHA cost plan includes a reasonable provision for the backbone network required to future proof the DHA for technological changes.

Hotels
Traditionally, hotels have provided a limited range of products, mainly catering for the higher end (luxury) guest and the business guest with limited choice in between. Luxury products generally comprised a mix of club lounges, day spas and restaurants, and were far superior to the amenity provided to the business guest. Hotel operators have increasingly sought to fill this gap with a range of products that enable all guests to access affordable premium products.

Environmental Sustainable Design (ESD)
A number of significant hotels were evaluated in the development of an approach to Environmental Sustainable Design for the DHA. The Crowne Plaza Copenhagen Towers constructed in 2010 leads the integration of ESD with its design through a number of approaches, including the use of recycled materials, lighting, water harvesting and an advanced waste management system. This has resulted in less energy and water consumption in the construction and operation of the hotel.

The Crowne Plaza Copenhagen Towers generates all its energy from renewable sources, including Photo Voltaic Cells (PVC) integrated into the hotel's façade.

With regard to the DHA, the ESD approach is one that integrates the existing building with the additions. This will need to be achieved through a number of measures, including lifecycle costing, performance measures and best practices which arises from the study of various benchmarks and sustainability tools.

5.4 The Duxton Hotel Additions – Key Design Features

The key design features of the DHA are detailed below.

Guest Suites
A total of 126 additional guest suites, which comprises of 34 deluxe rooms and 92 club rooms. This is also inclusive of 18 universal access suites.

Function Rooms /Sky Lounge
Four function rooms with a total capacity of 360 seats, with flexibility to combine function rooms to form large venues where required (maximum capacity 170 – 190 seats). All function rooms are provided with external outlooks to the city. For exclusive use by hotel guests, the Sky Lounge can accommodate 300 patrons within its bar, restaurant and buffet sections, with external outlooks to the Swan River.

Ballroom
The Ballroom will have a multi-purpose column free space.
The seating configurations will be:

- 470 people in a dinner/dance style (10 seats /table).
- 700 people in a cocktail setting (stand up)
- 700 people in a theatre seating arrangement.

The configurations are based on the development of a compromise between sight lines and proximity to the stage.

Skybar
There has been considerable focus on the facilities for the guests to ensure that they have a great experience. Some of the key considerations have been to make:

- Easy access from generous public areas.
- Facilities for people with disabilities will be distributed within the hotel.
- Public amenities evenly distributed throughout the additions at all levels.

Guest Facilities
It is anticipated that the DHA will have the greatest range of guest accommodation options of any hotel in Perth. Research and benchmarking of major Australian hotels reflects a growing demand for a range of accommodation options. Depending on the level of guest accommodation, it can also include access to the swimming pool and Gymnasium.

In addition to the more traditional guest services of Club Lounge and restaurants, there are a number of new services proposed, including:

- Day Spa.
- Sky Bars

Staff Facilities
There has been extensive consultation with the hotel operations and management staff, in particular catering, food and beverage, corporate events, and housekeeping.

Technology
One of the key planning challenges has been to capture the role that future technology will play in the DHA.
Some of the elements that are currently known are:

- There will be a minimum of two screens in the Ballroom.
- There will be the ability to use personal mobile technology in the hotel.
- There will be the capability for in-house video production.
- The hotel will incorporate digital signage and the ability to change through electronic signage and lighting.

To anticipate future trends the focus has been to provide the space and capacity to accommodate emerging technology.

5.5 The Duxton Hotel Additions – by Level

In developing the design solution for the DHA, the planning has determined the functional and spatial requirements for each level.

Level 15
This is the plant room level and is not accessible by the hotel guests. **Figure 6** outlines the various functions to be located in the plant room.

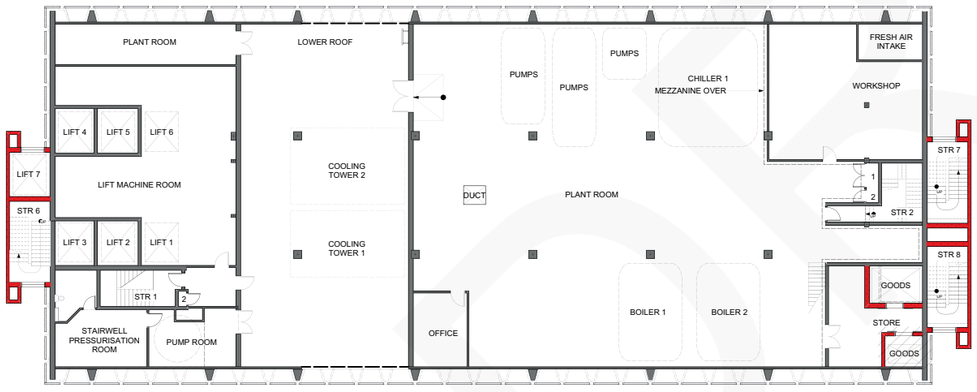

Figure 6 Level 15; Plant Room

Level 16 – 19
The Deluxe rooms are located at these levels. Direct access to the premium upper level guest suites will be provided by extended and refurbished lifts. **Figure 7** outlines the various functions to be located in levels 16 -19.

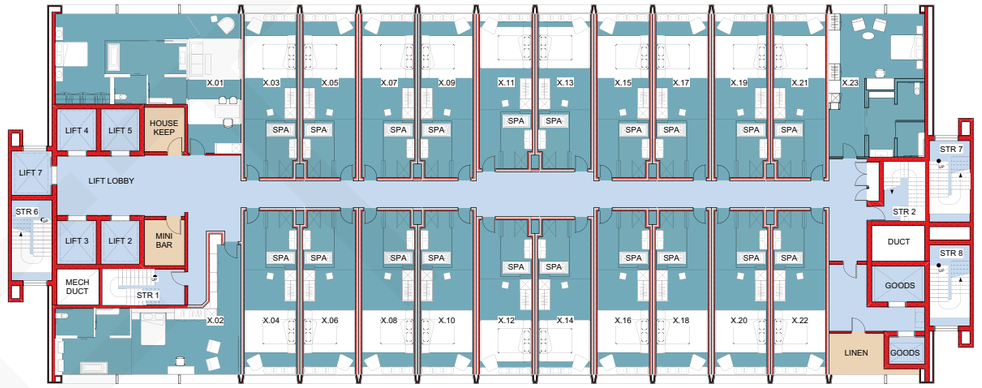

Figure 7 Level 16-19; Deluxe Rooms

Level 20 - 21
The Club rooms are located at these levels. Direct access to the premium upper level guest suites will be provided by dedicated express lifts. **Figure 8** outlines the various functions to be located in levels 20 - 21.

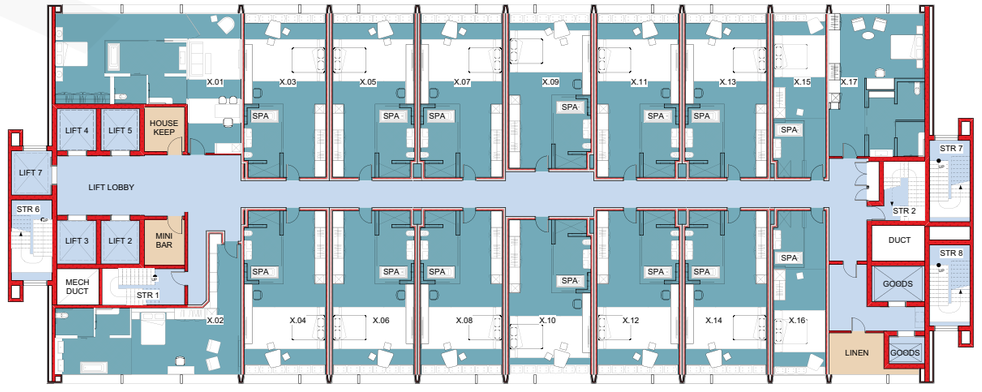

Figure 8 Level 20-21; Club Rooms

Level 22

The function rooms, sky lounge (premium club lounge) and day Spa are located at this level. A back of house zone faces St Georges Terrace, serving all function rooms. Guest facilities, house keeping and catering support spaces are located with direct access to the public corridors. A satellite kitchen and dispensing bar are also located on this level. This kitchen is sized to provide the finishing requirements for the function rooms and sky Lounge. Direct access to the service lifts from the satellite kitchen allow for the movement of catering goods from the main commissary kitchen in the basement. **Figure 9** outlines the various functions to be located in level 22.

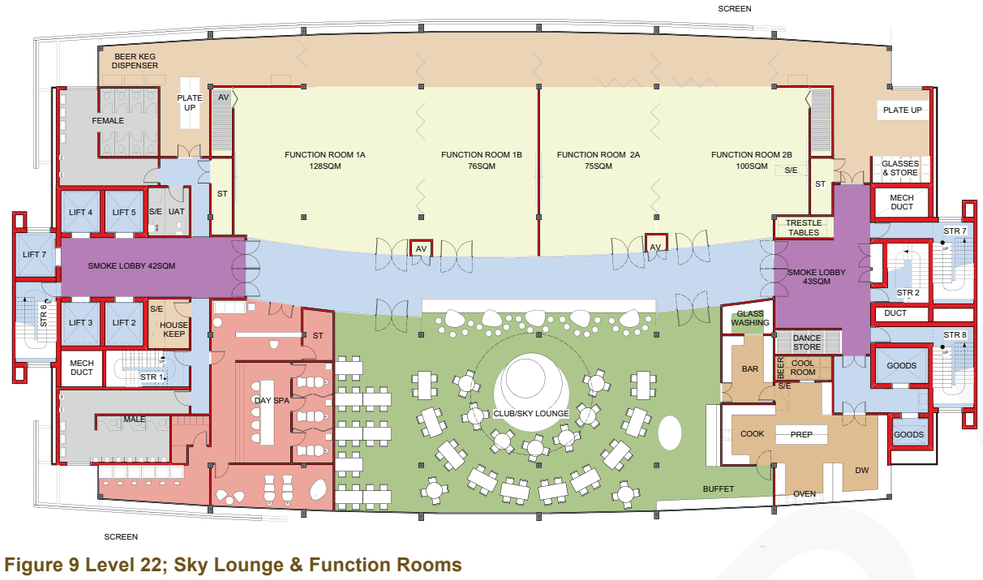

Figure 9 Level 22; Sky Lounge & Function Rooms

Level 23

The pre-function areas and Ballroom are located at this level. A back of house zone faces Victoria Avenue, serving the ballroom and pre-function areas. Guest facilities (cloakroom and toilets) are located with direct access to the pre-function areas. A satellite kitchen and bar are also located on this level. This kitchen is sized to provide the finishing requirements for the Ballroom. Direct access to the service lifts from the satellite kitchen allow for the movement of catering goods from the main commissary kitchen in the basement. **Figures 10 and 11** outlines the various functions to be located in level 23.

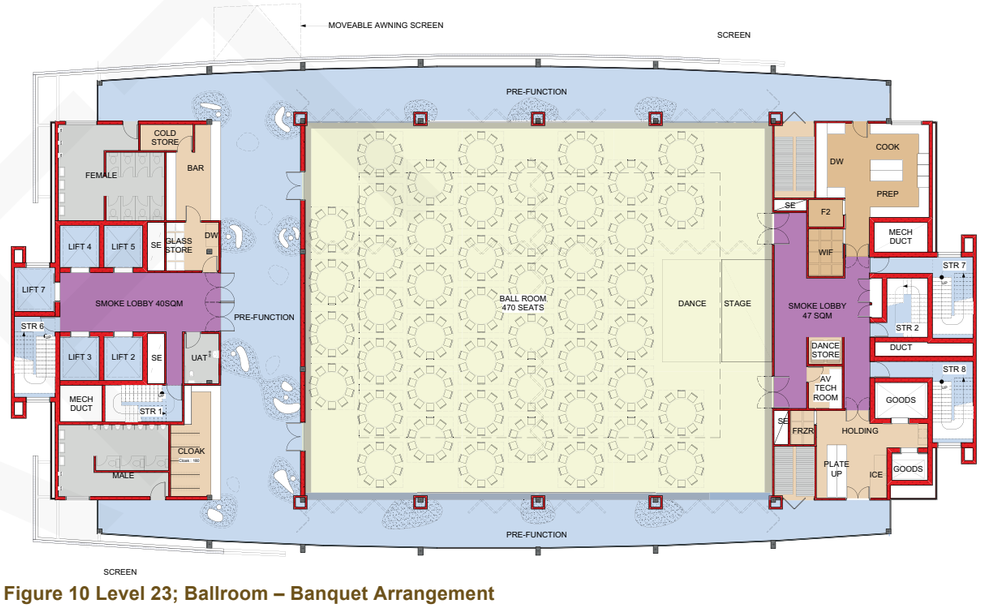

Figure 10 Level 23; Ballroom – Banquet Arrangement

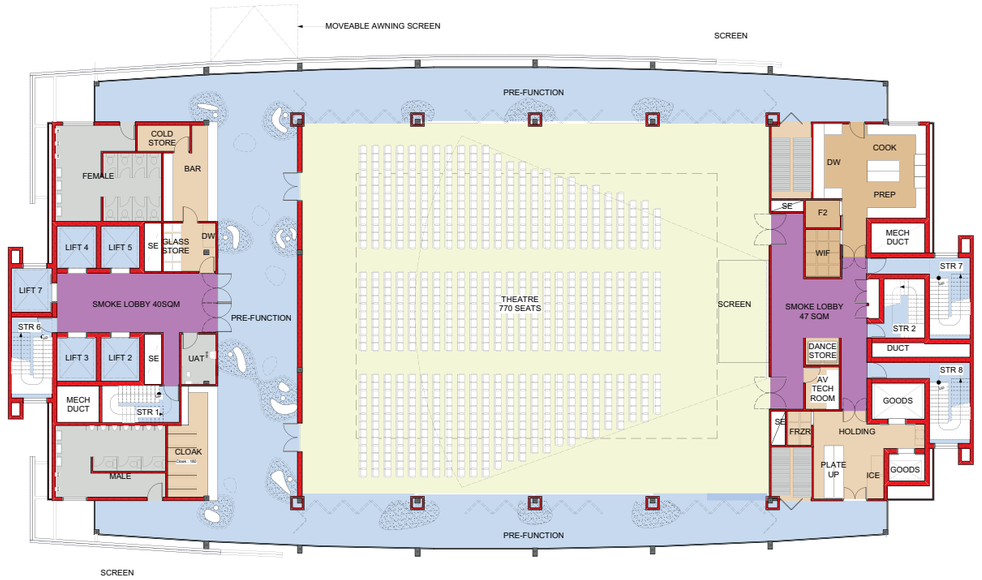

Figure 11 Level 23; Ballroom - Theatre Arragement

Level 24
The sky bar terrace, located on the south and west of this level, maximise the panoramic views of the Swan River and Kings Park. A back of house zone faces St Georges Terrace and Victoria Avenue, containing 5 storage areas. Guest facilities (toilets) are located with direct access to the lobby areas. A satellite kitchen and bar are also located on this level. This kitchen is sized to provide the finishing requirements for the sky bar. Direct access to the service lifts from the satellite kitchen allow for the movement of catering goods from the main commissary kitchen in the basement. **Figure 12** outlines the various functions to be located in level 24.

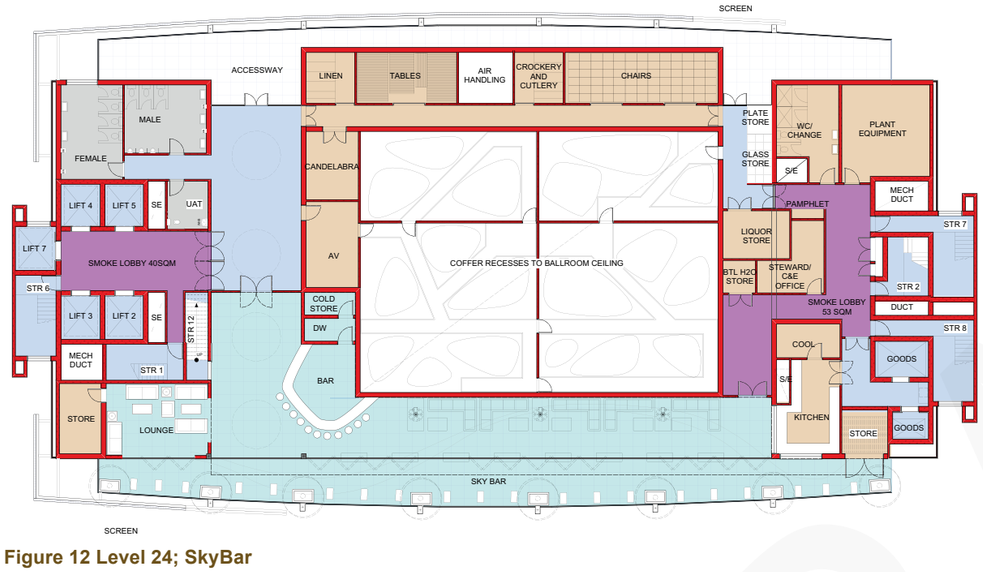

Figure 12 Level 24; SkyBar

Level 25
The mezzanine Sky Fall bar is located at this level. **Figure 13** outlines the various functions to be located in level 25.

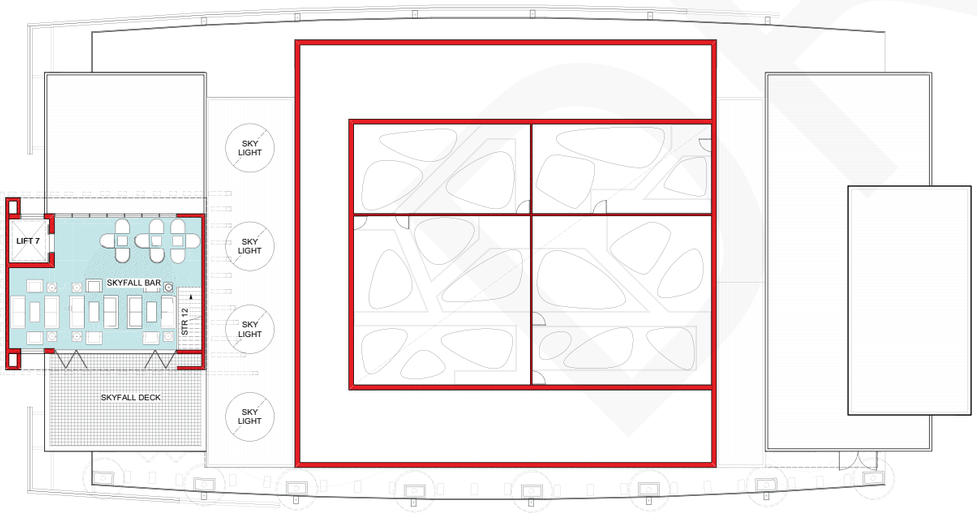

Figure 13 Level 25; Sky Fall

6.0 PROJECT DELIVERY »

6.1 Cost Plan

Cost planning has focussed on developing a reliable indication of the cost of delivering the DHA.
The starting point for the analysis was the estimated capital cost for the additions which was prepared by Davis Langdon in June 2012. This is summarised in **Table 2.**

Existing Building Works			Amount	Room Cost
Remove existing roofing complete from level 15 plant	Item		$ 75,000	$ 652
Replace existing soil stacks	Item		$ 386,750	$ 3,363
Upgrade MSB sub mains risers for power and comms	Item		$ 495,000	$ 4,304
Remove existing passenger and goods lifts - New cost included below	Item		$ 105,000	$ 913
Sub total			**$ 1,061,750**	**$ 9,233**
New Building Works	**Area**	**Rate**	**Amount**	**Room Cost**
Hotel levels 16 to 20	6,250	$ 3,650	$ 22,812,500	$ 198,370
Ballroom floor - level 21	1,570	$ 5,650	$ 8,870,500	$ 77,135
Sky lounge - level 22	1,350	$ 5,650	$ 7,627,500	$ 66,326
Plant room level	1,570	$ 2,000	$ 3,140,000	$ 27,304
New passenger lift shafts from basement to level 15 including forming new openings	1,547	$ 775	$ 1,198,615	$ 10,423
New goods lift from B1 to level 22 - 19 stops	1	$ 700,000	$ 700,000	$ 6,087
New passenger lift from B1 to level 23 - 19 stops	6	$ 600,000	$ 3,600,000	$ 31,304
New passenger lift from B1 to level 23 - 7stops	2	$ 400,000	$ 800,000	$ 6,957
Rooftop lap pool	Item		$ 300,300	$ 2,611
Sustainability allowance	3%		$ 1,273,515	$ 11,074
FF&E	115	$ 50,000	$ 5,750,000	$ 50,000
Preliminaries	20%		$ 11,426,936	$ 99,365
Sub total	**10,740**	**$ 6,285**	**$ 67,499,866**	**$ 586,955**
Total Current Construction Cost			**$ 68,561,616**	**$ 596,188**
Contingencies		15%	$ 10,284,242	$ 89,428
Escalation provision - Assume 18 months		5%	$ 3,428,081	$ 29,809
Provision for professional fees		10%	$ 6,856,162	$ 59,619
Total Budget			**$ 89,130,101**	**$ 775,044**
GST		10%	$ 8,913,010	$ 77,504
Total Budget including GST			**$ 98,043,111**	**$ 852,549**

Exclusions and assumptions				
> Two tower cranes required				
> Assume existing air conditioning and ventilation systems do not require upgrading				
> Lifts completely replaced				
> No allowance has been made for any upgrading to the existing building due to BCA				
> No allowance has been made for upgrading/refurbishing the existing hotel				

Table 2 Duxton Hotel Additions – June 2012 Cost Planning

Cost Plan Assumptions

This Project Definition Plan (PDP) has considered the capital budget required to design and construct the DHA based on the Master Plan (Chapter 5) and the Functional Brief Chapter 6) developed over the past twelve months. All costs are inclusive of GST.

Key Cost Risks

The project team builder - Perkins Builders has used costs from a range of current projects as a benchmark to prepare estimates.
A key issue in determining a cost estimate based on benchmarks is determining the escalation factor to apply. Given the unique nature of the DHA, it is not possible to be conclusive with regard to the quantum of escalation to be applied. However, given the decline in the market rates for building projects since 2008, an assumption of zero increase in building costs has been adopted.

Capital Cost Estimate for the Duxton Additions

Table 3 provides two cost plans prepared by Perkins Builders for the DHA.
The first column shows the cost plan prepared for the November 2012 functional brief.
The second column shows the cost plan for the functional brief outlined in Chapter 4.

There are a number of material differences in the project scope between the November 2012 functional brief and the current functional brief, as follows:

- In total, the cantilevered floor plates have a 20% greater floor area, which provides the space required for the Ballroom and SkyLounge.
- The SkyBar has increased by 25%.
- Strengthening requirements to the existing building structure have been identified;
- There is an allowance for several items not included in the November 2012 cost plan, including:
  - A new goods lift;
  - An additional fire escape stair to Victoria Avenue;
  - Fire escape smoke lobbies on Sky Lounge and Ballroom levels;
  - The Sky Fall roof bar;
  - Refurbishment to kitchen/management areas on the Lower Lobby Level (B1); and
  - Exterior refurbishment of the ground floor walls, fascia and columns to St Georges Terrace.

Cost escalation assumptions in the tender process will be made by sub-contractors making their own assessment of the bid cost having regard to forecast price movements in the cost of labour, materials, and equipment over the duration of the construction period.

Capital Costs – Total

Duxton Hotel Additions	November 2012 Brief	Current Project Brief
COSTS	**$**	**$**
Building Works Summary		
Level B2 - Staorage Areas		$28,000.00
Level B1 - New Works		$1,815,000.00
Eastern/Western Fire Discharge Stair 3, 6 7, 8, 9, 10, 11		$6,402,000.00
Porte Cochere including paving alterations	$1,000,000.00	
Porte Cochere/ External Cladding /External Works		$1,662,000.00
West fire stair discharge	$321,000.00	
New west escape stair	$1,610,000.00	
New east escape stair	$1,742,000.00	
New steel glass lift shaft	$2,222,000.00	
Precast/Glazed Lift Shaft		$1,777,000.00
Level 10 - 15 Strengthening of columns		$745,000.00
Level 11 - 14 Demolition and refurbishment of Bathrooms/ Corridorrs/ Lobbies		$3,599,000.00
Level 15 - plant room and alterations	$2,873,000.00	$2,396,900.00
Levels 16 - 20 - excluding modular rooms	$5,863,000.00	
Level 16 - 21 Excluding Modular Rooms		$11,384,950.00
Level 21 - excluding modular bathrooms	$3,448,000.00	
Level 22 - function / Sky Lounge	$6,965,000.00	$6,824,311.00
Level 23 - ballroom	$7,133,000.00	$7,791,720.00
Level 24 - sky bar	$2,747,000.00	$3,438,430.00
Level 25 -SkyFall/ Plant Deck		$1,932,064.00
Feature Signage (Steel/Danpalon)		$1,250,000.00
Sub Total Building Works	**$35,924,000.00**	**$51,046,375.00**
Modular Rooms- (Levels 16 - 21)	$13,835,000.00	$14,100,440.00
Services		
Mechanical	$4,500,000.00	$4,800,000.00
Electrical	$4,000,000.00	$3,700,000.00
Hydraulic	$2,100,000.00	$2,100,000.00
Fire	$1,500,000.00	$1,500,000.00
Lift	$2,200,000.00	$2,200,000.00
Services - Level B1		
Mechanical		$180,000.00
Electrical		$80,000.00
Hydraulics		$120,000.00
Fire		$60,000.00
Preliminaries	**$9,020,000.00**	**$11,520,000.00**
Sub-Total	**$73,079,000.00**	**$91,406,815.00**
Professional Consultant Fees		**$6,000,000.00**
Project Management	$425,000.00	
Architect	$2,430,000.00	
Interiors	$1,071,000.00	
Structural Engineering	$850,000.00	
Building Services (M&E, F&HYD)	$750,000.00	
BCA	$35,000.00	
Acoustic	$25,000.00	
Fire Engineering	$25,000.00	
Quantity Surveying	$30,000.00	
Estimate Total	**$78,720,000.00**	**$97,406,815.00**
GST	$7,872,000.00	$9,740,681.50
GST Inclusive	**$86,592,000.00**	**$107,147,496.50**
Exclusions		
FF&E	$6,600,000.00	$6,900,000.00
Escalation	$4,329,600.00	
Contingency	$12,988,800.00	$5,357,374.83
Any works required to strengthen existing structure (i.e it is assumed that the existing structure will support the new works)		
TOTAL CONSTRUCTION BUDGET	**$110,510,400.00**	**$119,404,871.33**
Note: $6,000,000 professional fees to be confirmed by consultants on receipt of scope of works		

Table 3 Duxton Hotel Additions Cost Plan Comparison November 2012 and March 2013.

Project Team

Included in the capital works cost, are the project budget costs for the project team, which will provide the overall project management.

6.2 Time Plan

The procurement analysis has recommended that the project be delivered in three phases of:

- Forward works (column strengthening and bathroom refurbishment).
- Duxton Hotel Additions.
- Porte Cochere.

Approval of the Project Definition Plan enables the project to proceed to the Design Development and Contract Documentation stage. During 2013 the project team will focus on the detailed development of tender documentation that will describe the Hotel owner's legal, commercial and technical requirements for the design development, documentation and construction of the forward works, and then for the design development, documentation and construction of the Duxton Hotel additions. The indicative project timeline is shown in **Figure 15.**

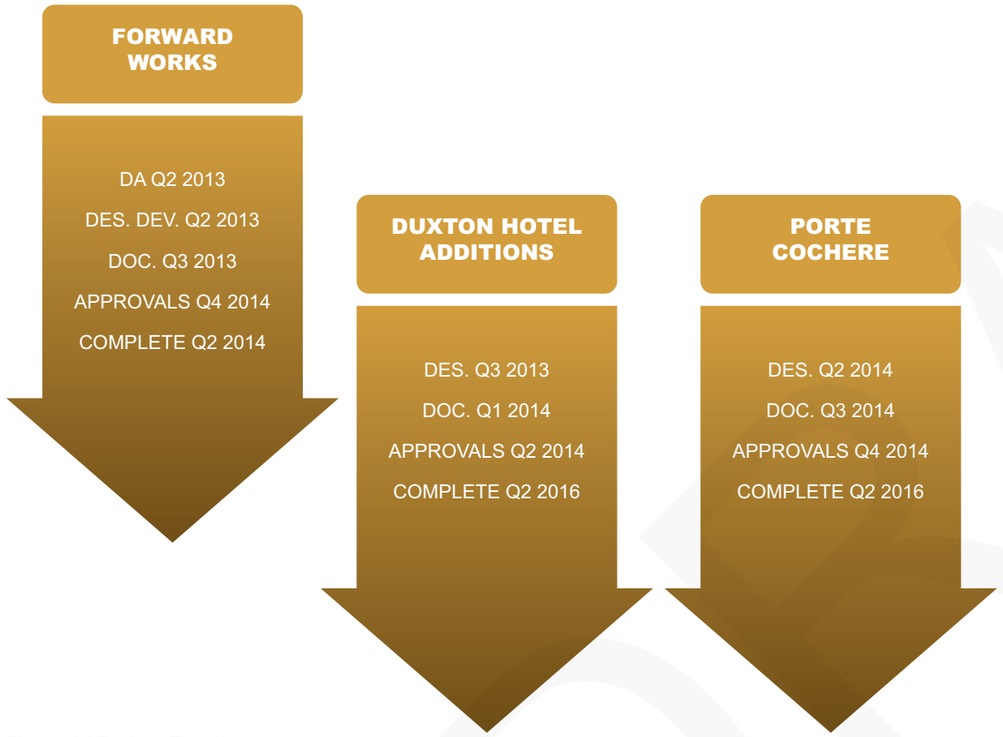

Figure 14 Project Timeline

6.3 Forward Works

In March 2013 the design team identified a forward works package, comprising strengthening of the existing columns to the top 5 floors and refurbishing the affected bathrooms. The forward works package is designed to expedite the commencement of column strengthening and bathroom refurbishment works concurrently with the detailed planning and procurement processes for the DHA itself. The forward works package will precede the main contract for the DHA delivery, which will enable the planning for Development Approval and Design Compliance Certificate to commence immediately and for the forward works package to be designed and commence construction by early 2014. This strategy will help ensure delivery of the DHA by the end of 2016, given that 24 to 28 months is expected to be required for all the construction works**.**

Forward Works Package Stages

The first stage of the forward works will include strengthening of the existing columns and bathroom refurbishment to prepare the existing building ahead of the main DHA construction works.

The second stage will focus on preparing the existing plant room and building services to remain operational during the main DHA construction works.

6.4 Duxton Hotel Additions Works

The procurement processes required for the delivery of the DHA will be progressed while the forward works are underway. This will enable the detailed design to commence, so that structural works can commence as soon as the forward works are finished – expected to be in the second half of 2014 (actual timing of handover to the main contractor timing will depend on the timing of planning and building approvals, and the design of the forward works).

The DHA construction period is estimated at 24 months when benchmarked against a number of significant hotel/building additions. Hence if construction starts by mid 2014 (when the forward works should be ready for handover, then construction may be completed by mid 2016.

The timeline therefore incorporates a six month time contingency to enable a fully operating hotel by the end of 2016.

6.5 Transition to Operations Program

The hotel operator should be present during the design development, documentation and construction phase and involved in the commissioning of the hotel additions, to facilitate its ongoing operation and knowledge of the new systems incorporated within the hotel.

6.6 Procurement Strategy

The procurement strategy for the DHA has been determined after an analysis of options. It is essential that the right model is chosen, because it will establish the commercial environment for the delivery of the DHA (including the allocation of risks and responsibilities between the contracting parties) along with ensuring quality control of design and specification and therefore will have a far reaching effect on all aspects of the project delivery.

To achieve project timeframes, the project team has been exploring options to fast track construction activities to ensure that the DHA are fully commissioned and ready for use by the end of 2016.

As a consequence, the preliminary analysis concluded that the design development for the forward works package should proceed immediately, to ensure delivery of the DHA by the end of 2016, given that the DHA construction period is estimated at 24 months.

For the procurement strategy for the DHA works package, the project team undertook a procurement Options Analysis. The decision-making process focussed on identifying the procurement model that best balances the control of project cost and risk with the achievements of the project objectives and is considered to provide the best value-for-money to the hotel owners.

The process identifying the preferred procurement model for the DHA followed the following three steps.

Part A – Preliminary Procurement Options Analysis: the purpose of this analysis was to identify suitable procurement models, and to obtain a shortlist of models that are best suited to deliver the project, for further consideration. 5 possible models were identified, which were shortlisted to 2 after discussions with procurement experts.

Part B – Market Sounding: the market sounding process was conducted after the Procurement Options Analysis discussions and focussed on the shortlist of procurement models. The key step in this process was:

- Discussions with an independent consultant to provide advice on the current market appetite regarding procurement options.

Part C – Identification of a Preferred Procurement Model: Based on the outcomes and feedback from Parts A and B, the project team made its final assessment and recommendation of the preferred procurement option.

Preferred Procurement Model

A two stage tender converting to a Guaranteed Maximum Price (GMP) procurement model was identified as the model that best balances the control of project cost and risk with the achievement of the project objectives, and is the structure most likely to maximise value-for-money outcomes for the hotel owners. It is now the project team's preferred model for the delivery of the DHA.

The two-stage/GMP model incorporates a number of features that are well suited to this project. It will deliver construction solutions prepared under a competitive process. The model is well understood by the market and is capable of extracting very competitive market responses and tender prices. The model can also deliver the DHA by the end of 2016.

In addition, the two-stage/GMP model:

- Will provide significant intellectual, operational and commercial focus to the procurement process.
- Has an excellent track record of achieving on time and on budget outcomes when compared with traditional procurement models.

In making this recommendation the Project Team noted the following issues:

- There is currently a competitive tender environment for projects of this type and scale.
- It is possible for the GMP to convert to a Design and Construct (D & C).
- Pre-qualification of contractors to tender on stage 1 on the basis of preliminaries/ overheads and profit with a priced cost plan (or just selected rates).
- Stage 2 tender appointment and process to terminate stage 1 contractor if they cannot meet price/programme/quality thresholds/standards.
- Amuret to obtain legal advise and appoint an independent Quantity Surveyor (QS) to manage the pre-qualification document, assess and report on the response, prepare and consider the stage 1 tender document along with all non-architectural information, assess the tenders that come back, appoint the contractor, manage the contractor during stage 1 and assess their trade prices.

7.0 FINANCIAL ANALYSIS »

An appropriate business model is required for the ongoing success and sustainability of the Duxton Hotel. It is critical to the longer term financial sustainability of the Duxton Hotel that the business model is able to demonstrate that the returns expected to be generated by the DHA are able to meet its whole of life costs which include preventative maintenance and lifecycle costs.

The business model that has been developed from the perspective that the DHA net surplus should be able to fund the key expenditures, including "whole of life costs" and share holder return on investment, necessary to ensure its sustainability. It is noted that the hotel management provided a large range of data for the projected revenues and expenses. Due to the commercial nature of the data provided, actual revenue and expense figures are not detailed in this document.

The key inputs and outcomes of the model are provided below.

Inputs

- An event calendar ranging from xx to xx ballroom events per annum.
- An event calendar ranging from xx to xx function room events per annum.
- 90 % utilisation of the hotel accommodation suites.

Outcomes

The test of the financial model was to examine the net returns of the Duxton Hotel. The whole of life costs, critical for ensuring the sustainability of the DHA, are subtracted from the net revenues. Under this examination the model indicates that these revenues can fund the whole of life costs.