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Project Management and Engineering Practice

The Cathedral and Treasury Precinct Project

MECH & CO

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Executive Summary

This report analyses a ‘real world’ development, critiquing the project management approach used in each of the four key project stages. The stages being conceptualisation, planning, execution and finalisation were extensively researched via online sources and contacting personnel involved before being evaluated. The project examined was the Perth Cathedral and Treasury Precinct development in which the team worked together to investigate any challenges that presented themselves and then developed recommendations on how to better manage these issues.

A central theme existent throughout this study was the triple bottom line and lifecycle thinking approach. These were heavily referred to during the case analysis and when generating potential solutions for the problems faced. The following points outline the key recommendations made.

- Closer attention paid to stakeholder assessment and management
- The encouragement for more competing contractors to achieve a wider selection of designs or plans
- The use of techniques to improve the balance of social, environmental and economic sustainability
- Stricter methods to track the progress of the project, keeping in mind the original vision and scope
- Thorough evaluation to find out exactly how the cost and deadlines of the project strayed so far from the initial plans

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Acronyms and Abbreviations

BMW	Building Management Works
CBD	Central Business District
CBUS	Construction & Business Industry Super
CMW	Chapman Morton Woodward
C&TP	Cathedral and Treasury Precinct
EVM	Earned Value Management
FJM	Fini Jones Mack (Property)
NABERS	National Australian Built Environment System
PIR	Post-Implementation Review
PMBOK	Project Management Body of Knowledge
TBL	Triple Bottom Line
WGE	Wood & Grieve Engineering
WA	Western Australia

SECTION A: Case Study Writing

1.0 Introduction

Situated in the heart of the Perth CBD, the Cathedral and Treasury Precinct (C&TP) is a site rich in history and tradition, and includes some of the city's most significant historical buildings. It originally comprised of heritage-listed State Buildings, formerly known as the Treasury Buildings that dated as far back as 1880. Constructed for state government purposes, they were used until 1995 after which the decision was made to relocate (Cathedral and Treasury 2015). Since this time the area has remained vacant and it is only recently that a new project has been approved to redevelop and bring this part of the city back to life.

The purpose of this report is to provide a detailed analysis of the project management approach used throughout the C&TP project, and to provide recommendations on how to improve any management aspects or techniques implemented during the four lifecycle stages of this development.

1.1 Project Overview

With the diverse plans proposed for the site which will include a new hotel and city library, the area will be used for government, communal, hospitality and retail purposes which will no doubt introduce vibrant opportunities for the people of Perth (Cathedral and Treasury 2015). The project which commenced in 2012 and is expected to be complete by 2017 is spearheaded by the State Government of Western Australia, the City of Perth, the Anglican Diocese of Perth, FJM Property, Mirvac, and the Public Trustee (Cathedral and Treasury 2015). The aforementioned stakeholders envisioned the redevelopment of this area and broke it down into the following seven sub-projects.

- The construction of a new City of Perth library in place of the old Law Chambers
- The construction of a new Church House replacing the old Playhouse Theatre
- The Construction of the 33 level Mirvac office tower
- The Refurbishment of the office building at 565 Hay street
- The upgrade of the public plaza
- The internal upgrade of the Public Trustee Building along with minor structural changes
- The restoration and transformation of the former Treasury Buildings to be used as a luxury hotel, along with other hospitality and retail offerings

Figure 1 below shows an illustration of the master plan proposed.

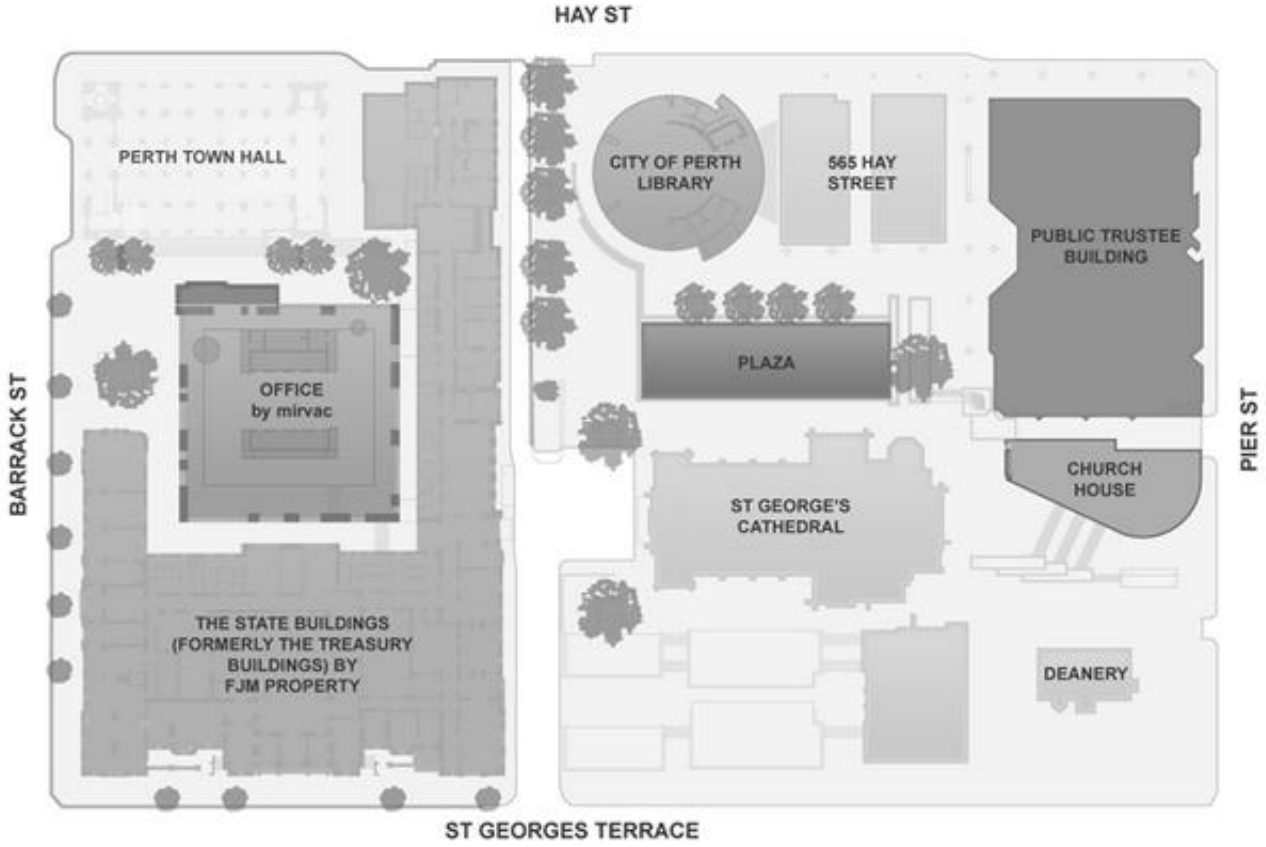

Figure 1: Master plan of the C&TP project (Cathedral and Treasury Precinct, 2012c)

The initial projected figure of all works carried across the Precinct was expected to be valued in excess of $580 million (Cathedral and Treasury 2015). This investment figure is expected to complete the following objectives:

1) Providing the commercial driver for the redevelopment of the Old Treasury Buildings and St George's Cathedral Heritage Precinct, including re-invigoration of heritage buildings with public uses as well as;

2) Support the consolidation of Government office accommodation in the CBD within a 'justice precinct', including long term leases for the WA Supreme Court and State Administrative Tribunal.

(Department of Treasury, 2012)

1.2 Scope and Structure of Report

This case study has been broken up into three sections. Section A aims to provide all the necessary background information on the project, section B contains the analysis of the project stages and section C outlines the recommendations made to improve the management approach used.

Section B analyses and compares the C&TP development to known management concepts that dictate a successful project, in particular the triple bottom line and project lifecycle approach. This section has been broken up into the four life cycle stage and any challenges that the project faced during each these were critiqued. Potential causes for the problems identified were also explored.

Following on, section C which has also been broken up into the four lifecycle stages, discusses the recommendations to potentially improve the way in which the management team handled the project. Through research and prior knowledge on management theories and conceptual frameworks, appropriate suggestions have been developed.

1.3 Triple Bottom Line and Lifecycle Thinking Approach

Two key sustainability frameworks that are of critical importance in project management are the triple bottom line and lifecycle thinking. The two approaches provide methods that encourage all important aspects of a project to be considered and managed in order to achieve the project goals in the most sustainable and efficient way possible. They are referred to throughout this report where they have both been used to analyse the management of the project so far and its alignment with these concepts.

The lifecycle of any project can be broken up into four core stages; conceptualisation, planning, execution and finalisation. The lifecycle thinking approach involves collecting and analysing information on all the project inputs and outputs at each of these four stages thus providing a very clear overview of what occurs throughout the life of the project and a reference point to measure progress (Hartley 2014).

The triple bottom line can be thought of as a measure of sustainability and refers to ‘a company’s ability to achieve its business goals and increase long-term stakeholder value’. This is accomplished by implementing economic, environmental, and social opportunities into its business strategies (Hartley 2014).

Section B measures the extent in which the project has aligned with a TBL project by using common forms of measurements for the three criterions. The economic performance was more easily measured of the three. Traditional accounting methods clearly state the inflow and outflow of resources of the business, generally including cash and finances, assets, liabilities and other easily definable resources. The social performance of an organization takes into account the impact that a business has on people within the business (employees) and people outside of the business (the community). This can be measured by indicators such as wages, working conditions, and contribution to community living standards. Lastly, the environmental performance is concerned with a business' total impact on the natural environment; TBL organizations should aim to improve the environment where feasible, or at the very least, limit their negative impacts.

2.0 C&TP Project Background Information

This section provides important background information regarding the C&TP project including the unsuccessful history of redevelopment proposals, the approval of this project and the historical matters surround it.

2.1 Previous Proposals

The C&TP redevelopment project did not receive much attention until 2008 when designs had first commenced for the former state buildings. It was in 1996 that the government had completely vacated the premises (Colin Barnett 2012) and since then had intentions to attract private investment in the form of redevelopment; however, this initial proposition was unsuccessful. The first major vision was proposed in 2005 by the Labor government, who launched an investigation as to whether the Old Treasury Precinct should be a place of office for the Premier, a cabinet room, or ministry of offices (Colin Barnett 2012).

It was envisioned that the redevelopment would reinvigorate a part of the city, which has become lifeless (Eric Ripper 2005). Unfortunately, there was a significant amount of controversy that surrounded the design of this initial concept, especially by the city of Perth who had actually initially supported this idea but in the end had retracted its stance.

Figure 2: An artist's impression of the initial concept proposed (Dondaldson and Warn, n.d.)

2.2 Redevelopment Approval

Expressions of private sector interest were then caught again in 2007 to develop buildings; however, it was not until 2009 that a consortium of Mirvac and superannuation company, CBUS, was nominated by the government to be the tenderers for the redevelopment project (Colin Barnett 2012). Mirvac and CBUS then started considering how the redevelopment was to be financed, and began to engage other stakeholders including the Anglican diocese, Public trustee, and the City of Perth. Arrangements made by the government saw that it would lease out the buildings for 99 years to Mirvac-CBUS who would be handling the redevelopment of the site.

The redevelopment plans also included a 46 room, boutique Aman hotel which FJM Property will undertake, a central space, and a 33 story office tower built by Mirvac for the purposes of justice legal operations of government. This building will become the primary legal precinct of Perth and the State government. A new city of Perth library will also be constructed in the place of the demolished Law Chambers. Renowned Australian architect group, Kerry Hill Architects, was responsible for designing the three aforementioned developments. The Public trustee area is also to be completely refurbished and will be subsequently leased by the State Government.

Figure 3: An artist impression of the 33 level Mirvac office tower Cathedral and Treasury Precinct 2012d)

2.3 Historical Importance

The Old Treasury buildings and the surrounding precinct are of great historical importance and significance. Although the site is being redeveloped, contractors as well as the government bodies are ensuring that the importance of this site is preserved with the ongoing works. The team behind Senior Structural Project Engineer, Eric La Meur of Wood & Grieve Engineers who delivered the structural design and construction-phase services to Mirvac understood the historical importance of this site and thus provided services keeping this in mind.

Because of the historical nature of the site it was important to select construction firms which took into consideration the sensitivity of the surrounding heritage buildings and was committed to preserving this (WGE 2015). This consequently warranted an engineering design that made use of the original basement walls to temporarily support the adjoining Perth Town hall and the old Treasury building as forms of boundary retention method. This, among other highly tailored structural approaches used in this project allowed for the preservation of historic adjoining buildings whilst supporting a modern, progressive commercial development (WGE 2015).

SECTION B: Case Study Analysis

3.0 Analysis of Conceptualisation Stage

The conceptualisation phase of a project is where the ideas, goals and potential outcomes of the project are formed and carefully discussed. Alternative designs are considered during this stage and research is carried out to approximate costs, time and other project parameters (Hartley 2014). This section analyses the C&TP project, specifically looking at this first stage.

3.1 Unsuccessful Proposals

The conceptualisation of this project dates back to 1998, when Premier Richard Court sought expressions of interest in regards to the redevelopment of the Old Treasury Buildings. The rejuvenation of these buildings was desired to enhance the appeal of the city while ensuring the preservation of history and heritage for future generations (Government of Western Australia 1998).

However one of the major problems this project faced has been its inability to get off the ground. It wasn't until 2005 when acting Premier Eric Ripper reopened the tender for the project after the previous tenderer was unable to propose a viable design for the heritage hotel (Government of Western Australia 2001). This proposal headed by architects Donaldson and Warn on behalf of the Department of Housing and Works also failed to get the project to tender.

During the conceptualisation phase, this type of problem can arise due to lack of information provided to the stakeholders and unauthorised changes made to the project scope. This was primarily why the project fell through in 2005, as the development application from the Department of Housing and Works for a 10-storey government office by the old treasury buildings was rejected by one of the major stakeholders, the City of Perth.

In a meeting headed by the lord mayor the council raised their concerns that it was an overdevelopment of the site and that they were extremely disappointed with the Central Perth Planning Committee's refusal to consult with the people of Perth. The minutes of this meeting state that they believed the proposed development was an excessive and unrealistic requirement that could not be achieved without compromising the integrity of the surrounding heritage (City of Perth 2006a). This caused the project to be delayed before it ever went to tender.

3.2 Lack of Alternative Designs

A major reason why this proposal was unsuccessful was due to the lack of alternative designs on offer. The architects, Donaldson and Warn, were chosen specifically by the Department of Housing and Works to design this project. This did not allow for any competition between architectural firms to provide a solution that would satisfy all requirements demanded by the stakeholders, and hence the single design choice meant that it was difficult for any alternative to be considered or overviewed to overcome design issues.

3.3 Insufficient Environmental Considerations

When the project was conceived again in 2008, it was decided that the entire cathedral and treasury precinct was to be redeveloped. The overriding vision for the sub-projects concerning the library and plaza was for it to become a "visible, welcoming, active service that contributes to our diverse community by providing the resources and services for lifelong learning and enjoyment, and the space and opportunities to meet and connect with other members of the community" (City of Perth 2011).

The major objectives of this section of the redevelopment focus largely on social and economic sustainability, primarily in the form of meeting heritage requirements. However for a full triple bottom line approach, environmental sustainability needs to be considered just as equally. This was not a major problem in all areas of the precinct. For example, the Mirvac office tower had a commitment to environmental sustainability through the use of tri-generation plant to control power, heating and cooling in the building (Macdonald 2015). However, an approach for sustainability to be balanced in social, economic and environmental terms in all parts of the project needs to be reflected in the objectives for the project. In the case of the library and plaza, this was not so much, and leaving environmental sustainability out of the picture could potentially impact the project in the long-term.

4.0 Analysis of Planning Stage

After the objectives and goals are outlined during the concept stage, the vision developed amongst the key stakeholders is implemented into the deliverables. During the planning stage, all work required by the project is carefully arranged and scheduled (Hartley 2014). Objectives, resources, budget and timelines are developed and finalised.

This section analyses the management during the planning stage of the sub-project concerning the City Library shown in figure 2. In particular the selection criteria used for the procurement tender.

Figure 4: Illustration of the proposed City of Perth Library (Cathedral and Treasury Precinct, 2012d)

4.1 Financial Influence on Architect Selection

The tender quotes are summed up by the following: “while the company’s informal systems strongly promote sustainability, their formal systems seemingly have a very traditional focus on financial performance” (Faiello 2014).

This is evident where the City of Perth procured the architect for the Library and Plaza. A booklet released to the public recorded the selection process of the new architect. A brief overview of the process is explained below with an insight into the thought process governing their final decision. The process was split into two stages. Initially in Stage 1 the council offered this position to an open tender. The key principles that tendering companies were required to take into account were outlined with a particular emphasis on promoting sustainability. Exactly what sustainability principles were not explicitly outlined, nor were any basic measurements required. As a result it is unsure exactly how sustainability measures were incorporated into the final decision making process as many of the key files outlining the exact criteria being used was deemed confidential (City of Perth 2011).

Following stage 1, companies were shortlisted. The selection stage of the short listed companies was then judged based on three main criteria. The relevant experience of the firm, the personal experience and the roles of nominated personnel within the project, and the design concept approach proposed. The design concept was weighted such that all the design requirements including ones concerning sustainability measures influenced 50% of the overall score (City of Perth 2011). The experience of the firm and personnel accounted for the other 50%, clearly favouring a larger firm. While it was good to mitigate risks to ensure the successful completion of the project by selecting the firm this way, the actual design approach potentially may not have been the best achievable, possibly resulting in sustainability aspects of the design being overlooked.

4.2 Financial Influence on Construction Tenders

Another example where economic decision-making seemed to govern the tender decision making process, was the tender for the contractors to undertake construction of the Library and Plaza. The City of Perth advertised for Expressions of Interest before shortlisting the top six contenders. The exact selection criteria used was deemed confidential, however information regarding the assessment of tenders was obtained referring to committee meeting minutes (City of Perth 2013) outlining the major factors forming their final decision. Issues such as timelines, co-operation criteria and façade design are only mentioned as part of their "Qualitative Criteria" and Price was a "critical" factor in determining the final outcome. The tender rankings of the top six contenders summarised below in tables 1 and 2 were produced using information obtained from the committee meeting minutes.

Table 1: Rankings of Top Six Contractors for Library and Plaza Construction

Tenderer	Price Rank	Qualitative Rank	Overall rank
BGC Construction Pty Ltd	2	4	3
Broad Construction Services (WA) Pty Ltd	3	2	2
Doric Contractors Pty Ltd	1	1	1
Northerly Group Pty Ltd	5	3	5
Perkins Contracting Pty Ltd	6	6	6
Probuild Constructions (Aust) Pty Ltd	4	5	4

Table 2: Price Ranking of Top Six Contractors for Library and Plaza Construction

Tenderer	Tender Price (excluding GST)	Price Rank
Doric Contractors Pty Ltd	$33,244,838	1
BGC Construction Pty Ltd	$34,417,450	2
Broad Construction Services (WA) Pty Ltd	$34,929,836	3
Probuild Constructions (Aust) Pty Ltd	$34,989,660	4
Northerly Group Pty Ltd	$39,045,354	5
Perkins Contracting Pty Ltd	$40,997,000	6

Doric Contractors ended up winning the tender with the "best value for money offer to the City" (City of Perth 2013). It seems that sustainability measures were not given enough consideration or mentioned as an important point in their response to the selection criteria. As a result no Green Star rating or NABERS ratings have been awarded or specifically outlined as one of the goals for the construction phase of the Library and Plaza. This stands out in comparison to the surrounding buildings being developed in the C&TP which have been given high ratings.

These ratings could potentially be due to the sustainability considerations during the tendering stages and hence the practices of the awarded contractors. They were not proposed adhering to specific objectives set by the City of Perth's selection criteria. Operational Costs of the subsequent designs were also not taken into account as part of the "best value for money offer to the City" which also questions how thoroughly the lifecycle thinking approach was used and if the impacts that each stage had after completion was reviewed.

5.0 Analysis of Execution Stage

In the execution stage, the project has commenced and management is more focussed on reviewing the projects as it advances, ensuring everything is following the schedules and plans developed in the previous stage. This includes tracking the progress of costs, time, resource use, managing changes and updating appropriate parties (Hartley 2014). This section discusses some of the issues that came up during this stage, in particular concerning cost and time.

An extensive portion of the project involves the demolition, refurbishment and construction of various buildings, involving many different teams working on different sections. As such, the practices involved should be made well known to all in order to work in an efficient cross-functional manner. For example, among others, both the architects and the construction crews should be involved in development of a reliable and realistic quote concerning factors such as cost and time. However, though the project is only 60 percent along its original timeline, it has already overshot the quoted budget and experienced delays due to unexpected heritage issues.

5.1 Delays in Project Schedule

It is critical to account for potential delays when planning a project as there will always be factors unforseen, and it is important that time for errors and change are taken into consideration. Table 3 below compares the initial and current expected times of completion for the different sub-sections of the project (Cathedral and Treasury Precinct 2012b).

Table 3: Project Completion Dates

Sub-Project	Initial expected completion date	Current expected completion date
565 Hay Street	June 2014	September 2014
Treasury Buildings	Early 2015	Early 2015
City of Perth Library	September 2014	Mid 2015
Office Tower	Early 2015	Mid 2015
St Georges Plaza	Late 2014	Early 2015
Public Trustee Building	Early 2012	Early 2012

Most of the delays presented above are only a few months, which is within an acceptable timeframe when considering the scope of the project. However, the library shows an expected shift in completion time of about 9 months. The detailed timeline for the library shows matching dates except for the final two, wherein commencement of construction was delayed by 2 months (Cathedral and Treasury Precinct 2012b). From this limited information, we can only conclude that the actual construction of the library has had setbacks of approximately 6 months.

Figure 5: The Perth City Library and Plaza under construction October 2014 (Cathedral and Treasury Precinct 2012d)

There were issues that were expected and planned for. For example, for the anticipated heritage matters, companies such as Chapman Morton Woodward (CMW) were contracted to analyse the heritage sites and ensure the all work carried out was to adhere to the heritage limitations outlined. An issue they discovered while analysing the old Treasury building was the unexpected behaviour of the needle beams when subjected to jacking (CMW Geosciences 2015). Planning for this, the possible delay was circumvented as CMW carried out weekly site visits to appraise current construction methods and plan early for any changes that were necessary.

A heritage issue that was not expected, however, concerned the St Georges Cathedral precinct which was listed as an Aboriginal heritage site, once hosting the burial ground of an important Nyoongar male (Prior 2011). Demolition within this area to make place for the construction of the new Church house was only approved as it was done very intricately resulting in agreement with the Aboriginal elders. As the construction of the Church house was planned as one of last sub-projects on the project timeline, this unexpected issue is unlikely to have major ramifications as there aren't many operations depending on this.

5.2 Increase in Projected Costs

The refurbishment of old Treasury building and its transformation into a retail front and hotel, combined with the creation of the Mirvac tower was initially expected to cost $208 million (Government of Western Australia 2015). However the current investment into the tower alone, which is nearing completion, has been estimated at $280 million alone (Marmion 2015). As the tower is the most expensive sub-project, the increase in total cost quote from $580 million to $700 million is likely to have been largely influenced by the office tower. The reason for these cost increases is currently not available to the public, but given the nature of this sub-project (demolition, site works and then construction) there could be several potential factors responsible for the increase in price.

6.0 Analysis of Finalisation Stage

The finalisation stage commences once the project has been completed and is the period in which resources have been disposed of and appropriate aspects of the project are evaluated before it is closed. Though most of the project is still in the execution stage this section aims to detail problems in the finalisation phase or the ones which are expected to come up given the occurrences so far.

So far, works on two of the seven buildings have been completed. Minor structural and internal upgrades were made to the Public Trustee Building in 2012 and refurbishments to 565 Hay Street show in figure 5 below, were finished in 2014 (Cathedral and Treasury Precinct 2012a). The reuse of underlying superstructures demonstrates BMW's desire to extend the lifecycle of existing buildings whilst still making necessary improvements to benefit the public for years to come.

Figure 6: An artist's impression of the 565 building (Cathedral and Treasury Precinct 2012d)

6.1 Social Sustainability

The project will undoubtedly have a positive social impact on the area, however not all requests have been accepted as planned. The owners of the State Buildings applied for a 24-hour liquor licence for their bars and restaurant, only to be declined due to a risk of increasing alcohol-related violence in the area (The West Australian 2014). Although there were strong cases for and against this proposition, the final decision reflected a need to strike a balance between the profitability of the businesses and the safety of patrons and the general public. Although the likelihood of alcohol related violence may be reduced in high-class establishments, the consequences of such an incident have the potential to affect the perception and patronage of the surrounding area as well as the bar or restaurant in which it occurred. In order to reach and maintain the high social value this project has to offer, its impact must be monitored continuously after completion.

6.2 Economic Sustainability

The budget for the entire project was initially estimated at $580m. On the 19th of March 2015 the Minister for Finance, Bill Marmion, announced that around $700m has been invested so far. Although details of the source of the issue are not currently available, a 20% blowout is certainly outside of the acceptable threshold. BMW has procurement policies in place that dictate how business should be conducted in order to ensure value for money and positive competition between suppliers. Mirvac has also commented that all contracts, including the procurement of goods, are tendered to ensure value for money (Mirvac 2015). There are many other aspects that would have affected the final cost of this project in addition to procurement and contracting. Each of these will need to be analysed in detail during the finalisation stage in order to determine the cause.

SECTION C: Recommendations to the Case

7.0 Recommendations for Conceptualisation Stage

This section provides recommendations on how management of the conceptualisation stage could have been improved to either prevent or better handle the challenges discussed in section 3.

7.1 Stakeholder Management

In relation to the problem that the project faced in initially going to tender, it should have been a necessity that the Department of Housing and Works engaged key stakeholders throughout the entire concept stage. Had the Department of Housing and Works, alongside Donaldson and Warn, provided updates of their design for the office tower, any problems that compromised the heritage value of the precinct could have been addressed earlier. The City of Perth made a series of recommendations in which they opposed the erection of the office tower (City of Perth 2006b), but Donaldson and Warn did not follow these closely enough, and should have been consulting with the City of Perth to address these problems. In not receiving any updates, the City of Perth could also have got in contact with Donaldson and Warn on the progress of the design to proactively seek out any possible issues.

As such, adjustments that could have been made to stakeholder management would be if the Department of Housing and Works clearly understood and appreciated the needs and particular interests of each stakeholder. This means that management in this regard should have gone beyond stakeholder identification, and hence allowed for information and decisions to be relevant and directed towards the appropriate stakeholder (Hartley 2014). In reference to the ignorance shown towards the City of Perth, there was a clear underestimation of their degree of power, authority, and influence. Mapping potential 'power' of stakeholders could have avoided this, as it enables the project manager to comprehend the importance that each holds. This allows one to understand the idea that establishing 'positive' stakeholders will trigger 'positive' power and therefore manifest beneficial management strategies such as: endorsing decision-making procedures, supporting the change control process, or escalating appropriate issues (Hartley 2014). As expected, adverse effects occur when 'negative' power comes into play, and as evident in this initial conceptualisation phase - it had led to its failure.

7.2 Multiple Design Teams

The lack of alternative designs needed to be addressed during this stage. Given that considering alternatives to the project is a very important part of the concept stage (Hartley 2014), the Department of Housing and Works should have commissioned more than one architectural firm at this time to present a design to the City of Perth. Doing so would have created competition to meet the design challenges in the most efficient way with a focus on meeting heritage requirements, and forced the City of Perth to strongly oppose the one design option put forward.

7.3 Addressing Environmental Sustainability

When the project was conceptualised again, the City of Perth needed to establish objectives relating to environmental sustainability for the new library and plaza. This could have been achieved from following the example that Mirvac set in assessing the sustainability of their office tower through use of a risk register. With such a large focus on heritage value for social sustainability, using a risk register or various other tools such as environmental risk specialists or impact assessment studies would shift the balance back towards environmental sustainability. In evaluating the extent of environmental risk, a probability and impact matrix represents a practical way of prioritising the effect that considering environmental sustainability will have on the four project variables of cost, time, resources and quality (Hartley, 2014). In terms of balancing these variables, the reward for conducting an analysis of environmental risks will greatly outweigh the risk of not doing so.

8.0 Recommendations for Planning Stage

The following section discusses the recommendations made regarding the problems encountered during the planning phase.

Outlining minimum requirements directs a project and provides tender applicants with standards. The selection criteria is thus crucial and adherence ensures these standards are met and that the final deliverables achieved encapsulate the core objectives of the vision.

8.1 Appropriately Weighted Criteria

One of the problems faced during the procurement tender phases was that there was an over-emphasis on the experience of the firm and personnel working for them. By putting such a heavy weighting on this criteria, the actual design became less significant to the final selection decision. To promote greater innovation the selection criteria should have lowered the weightings of previous experience, which would have resulted in a more balanced selection. This would have levelled the playing field and created more competition allowing greater number companies to be considered.

If necessary, the winning company could have been teamed with a larger company so that while the proposed design of the smaller company was approved, the risks associated with smaller companies would have been mitigated. By allowing this, greater support would have been given to smaller companies, opening opportunities for growth. As a government agency strengthening the economy should be an important focus when developing large projects such as this.

Although the exact selection criterion is not available it is recommended that the council should have followed a more comprehensive evaluation matrix after shortlisting the prospective companies. The matrix would be used to numerically evaluate and produce results which would then be analysed and compare the competing firms (Hartley 2014).

As shown in table 1 the open tender for the Library and Plaza contract was simplistically set into two categories, price and qualitative rank, with an overall ranking shown as well. There was no specific weighting given to each respective category, nor information on how the ranking was awarded. A suggestion on to improve this is to break down the qualitative category into more detailed criteria to evaluate each tender so that a clear conclusion can be drawn and the reasons behind this decision are transparent. It is also suggested that more

sustainability criteria are considered during the assessment of tenders, for example the degree of TBL thinking incorporated into the design. An example of such an evaluation matrix is shown below in table 4 with a score or weighting of 1 being the lowest or of least importance and 5 being the highest and or of most importance.

Table 4: Evaluation Matrix Example

		Contractor 1		Contractor 2	
Criteria	**Weighting**	**Score**	**Total**	**Score**	**Total**
Quality/TBL	4	2	8	5	20
Technical Capability	4	4	16	3	12
Previous Performances	4	3	12	5	20
Price	3	3	9	3	9
Timely Supply	5	5	25	5	25
			70		86

(Hartley 2008)

To incorporate and promote more sustainable designs it is recommended that the council explicitly outline certain sustainability requirements that must be met on the onset of the open tender. Ratings such as the NABERS or Green Star ratings could be employed to motivate and push the design into an environmentally friendly focussed direction. Those that conform to these standards will be given better opportunities to score higher and win the tender. In doing this the selection criteria will set a higher benchmark and thus promote private enterprises to come up with better more sustainable solutions.

9.0 Recommendations for Execution Stage

The problems ascertained from the execution stage of this project are ones that are commonly encountered in the field. With a considerable time and cost increases purely during the execution phase, it is important to review what went wrong and improve the methodology used in order to prevent or minimise the potential negative effects that followed.

9.1 Critical Path Adjustments

The City of Perth public library had a noticeable delay in its expected completion time, stemming solely from the construction phase. With no documented cause, it is hard to evaluate the key reason responsible for this. The recommendations made to better manage this phase are to improve the methods of self-appraisal and review for the worksite.

The city of Perth should make note of this delay and possibly amend their personal weighting of Doric in a customer experience matrix. In essence, something has occurred that has in turn affected the critical path of the project. During the execution phase, the means to remedy this lies within comparison with the project schedule (Hartley 2014). Upon reviewing the project schedule, new critical tasks can be identified and re-scheduling can occur to accommodate these tasks. Progress, status and forecast of the project need to be re-evaluated when it appears likely that a critical task will not be completed in time. Furthermore, a project buffer could be applied, allowing for some leeway in the project completion without the need for the due date to be pushed back.

9.2 Cost and Scope Analysis

Clearly the project has gone way over budget and there are no publicly available reasons as to why this happened. As mentioned earlier, it is speculated that the cost of the Mirvac office tower was higher than planned. Either the quote given by Mirvac or the cost management side of the project is at fault. The latter of these two is a matter of using earned value management (EVM) at numerous stages of the project. Through the use of EVM, the comparison of planned value, earned value and actual costs can be displayed graphically and further analysed (Hartley 2014).

Earned value is an important measurement to include; it states the delivered scope of the project to date which can then be compared to the actual cost, which itself is ideally a

percentage of the planned value, and thus a measure of delivered scope. Namely, this analysis brings forth the question of "Why hasn't all the planned value been delivered?" which will lead to discussion between the stakeholders and the contractor as to the position of the project and the creation of plans to control the budget.

Further to this primary analysis, the use of schedule performance index and cost performance index can be applied to compare how much time the project is taking and how much the project cost is compared to the planned values. These indexes give a ratio that will show how much work is being completed for every 1 day of planned work, as well as how much value each $1 of the budget appears to be actually achieving. However it's the current analysis results that need to be examined in order to determine whether or not changes should be made to the project's budget or if different design choices need to be made whilst possible. As construction is not complete the review process may not have been efficient enough or that sources of considerable cost were not appreciated.

10.0 Recommendations for Finalisation Stage

The following section discusses the recommendations for what should be addressed during the finalisation phase of this project. Using well-known theories and concepts, the issues outlined in section 6 are addressed below.

During the closeout stages of the project, BMW should first seek to evaluate its performance in three key areas: scope, schedule and cost. If adequate documentation was maintained throughout the project, information on these areas should be readily available and will serve as an early indication of how successful it was. Key stakeholders involved in the project should then take the opportunity to reflect on successes and shortcomings during a formal stakeholder debrief. This would allow BMW to improve their practices and become more efficient and sustainable in the long term. Finally, a complete Post-Implementation Review (PIR), incorporating the baseline analysis and stakeholder debrief, would yield a detailed and objective assessment of the project. Within the resulting document, quality should be evaluated in terms of metrics defined at the start of the project and by the satisfaction of the clients. The outcome of identified risks, as well as the identification of new risks, should also be included to help construct valuable risk registers in future projects. Ultimately the PIR would serve as an evaluation of the 10 key areas of project management outlined in the Project Management Body of Knowledge (PMBOK).

The denial of a 24 hour liquor licence serves to highlight one of many potential social impacts the project may have. Once the venues are operational, the area should be monitored for public disturbances. If there is no increase in the frequency of such incidents, the owners of the establishments could use this as evidence to reduce their limitations in order to better cater for their intended clientele.

The NABERS and Green Star ratings achieved by the various buildings in this project were awarded for environmentally sustainable design. It is important to note that in the case of new buildings, these ratings are determined via estimations of performance in key areas, rather than empirical data of the buildings themselves. Although the tools used to generate these estimates may be sophisticated and sufficiently accurate, BMW should still analyse the environmental impact of each building periodically to ensure they meet their sustainability targets now and into the future.

During the finalisation stage it is essential that the budget and actual cost is compared in detail. The original budget of a project does not offer any significant meaning until it is compared with the actual costs incurred during the project (Hartley 2014). Valid reasons may account for the 20% discrepancy in the budget of this project, however it should be thoroughly investigated to ensure the long term viability of the organisation.

11.0 Conclusion

The analysis carried out on the C&TP project with respect to the TBL and project life cycle approach allowed for a much greater understanding of the role of management within a project. Reviewing the project from this perspective, understanding the goals, techniques and reasoning behind the project management approach used, the team evaluated the decisions and developed recommendations to potentially improve each stage of the project life cycle.

The project chosen, faced challenges from the outset and so it was a very beneficial case to study and a lot was taken from this experience. Due to lack of communication and inadequate studies on the distribution of stakeholder power, unproductive decisions were made, leading the project back to square one where it was stuck for a decade. The following phases also had their share of problems including unforseen resistances and changes in the initial projected time and costs.

The team came up with recommendations involving paying more attention to stakeholder management, using techniques to broaden design options and how to better manage the project scope during the execution stages concerning cost and time. A major point would have also been that the TBL could have been significantly enhanced by implementing techniques at every stage to ensure a more sustainable and balanced outcome.

The analysis of the Cathedral and Treasury precinct allowed the entire team to appreciate what makes efficient project management and the fundamentals of project structure. Evaluating the TBL and lifecycle thinking approach of a real world project allowed for the important connection between theory and practice. This assignment provided a very valuable insight into this area and significantly improved the way in which project management was interpreted.

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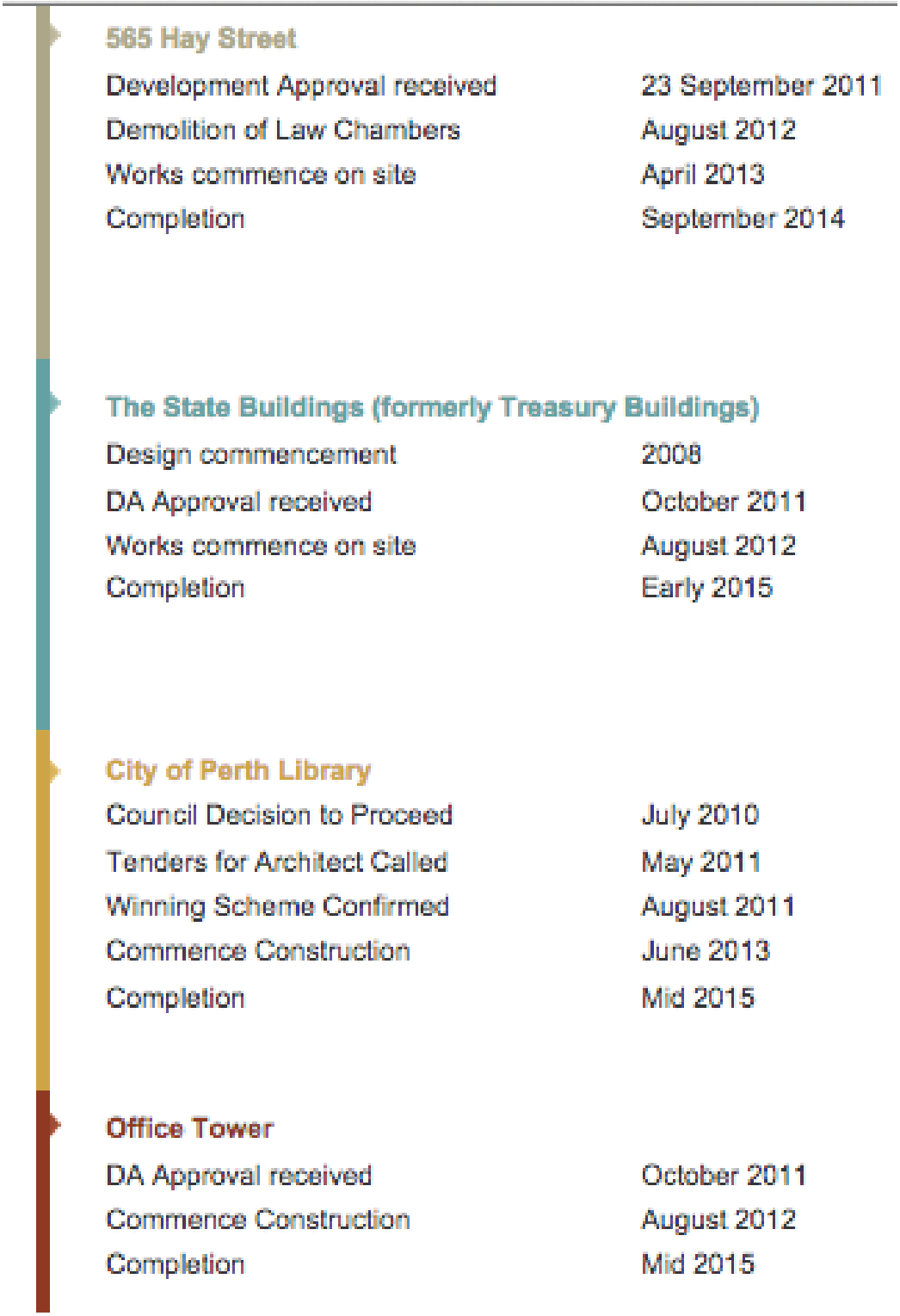
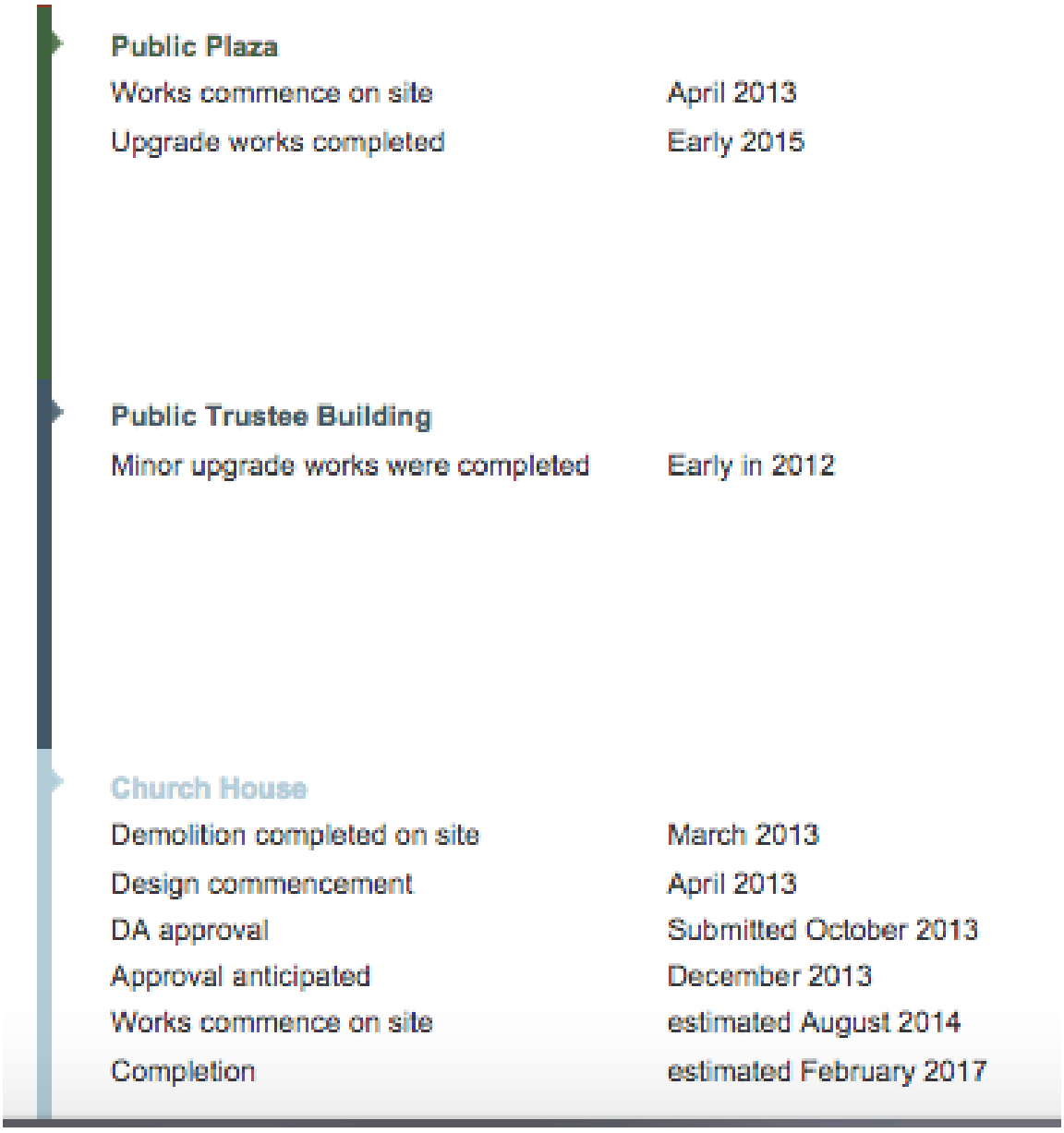
Appendix A: Timeline of the C&TP Redevelopment





(Cathedral and Treasury Precinct, 2012b)

Appendix B: Council meeting minutes 28/07/06 (Concept Stage)

520/06 LOTS 1065 AND 1108 ST GEORGE'S TERRACE, PERTH AND THE PROPOSED ADAPTIVE RE-USE OF THE OLD TREASURY BUILDINGS

The Council discussed the proposed adaptive re-use of the Old Treasury Buildings and addition of office accommodation on Lots 1065 and 1108 St Georges Terrace, Perth.

Moved by Cr McEvoy, seconded by the Lord Mayor

That the Council:-

1. ***confirms in the strongest possible terms its opposition to the current development application from the Department of Housing and Works to erect a building on the Old Treasury Buildings site because it is an overdevelopment of the site, it dominates the place of the Town Hall and Foundation Park and it clashes with the adjacent historical buildings that make up the heart of Perth's Heritage Precinct;***

2. ***expresses its extreme disappointment at the Central Perth Planning Committee's refusal to consult with the people of Perth over the erection of this inappropriate government office building on Perth's most historically important site that marks where the Swan River Colony was founded;***

3. ***advises the Department of Housing and Works that the requirement to provide 17,000 square metres of government office space in the proposed development is an excessive and unrealistic requirement that cannot be achieved without compromising the integrity of the surrounding heritage buildings;***

4. ***commends the State Government on its resolve to upgrade the Old Treasury Buildings and once again re-activate it for the people of Perth, and offers its support to achieve this outcome.***

The motion was put and carried

The votes were recorded as follows:-

For: **The Lord Mayor, Crs Butler, Davidson, Hardy, Kay, McEvoy, Scaffidi and Sutherland**

Against: **Nil**

(City of Perth 2006a)

Appendix C: Council meeting minutes 23/04/13 (Planning Stage)

Tender Item	Subtraction to Tender Price	Addition to Tender Price	Progressive Total
Starting conforming tender price			$33,244,838
Use of Austral Verde Stone for the internal stone work		$40,206	$33,285,044
Use of Austral Verde Stone for the external stone work		$185,479	$33,470,523
Design alternative option 2 – façade design	$431,744		$33,038,779
Design alternative option 3 – ground floor slab design		$112,964	$33,151,743
Program amendments impact on preliminaries		$208,365	$33,360,108
TOTALS	**$431,744**	**$547,014**	**$33,360,108**

Summary

Doric Contractors Pty Ltd proved to be the highest rated submission and the lowest price. Submission rankings were as follows.

Tenderer	Price Rank	Qualitative Rank	Overall Rank
BGC Construction Pty Ltd	2	4	3
Broad Construction Services (WA) Pty Ltd	3	2	2
Doric Contractors Pty Ltd	1	1	1
Northerly Group Pty Ltd	5	3	5
Perkins Contracting Pty Ltd	6	6	6
Probuild Constructions (Aust) Pty Ltd	4	5	4

FINANCIAL IMPLICATIONS:

ACCOUNT NO:	CW 0125000
BUDGET ITEM:	Libraries – Cathedral Square – Library and Plaza
BUDGET PAGE NUMBER:	18 (2012/13 Budget)
BUDGETED AMOUNT:	$61,446,114 ($24,838,106 – 2012/13 Budget)
AMOUNT SPENT TO DATE:	$16,608,382
PROPOSED COST:	$33,360,108
BALANCE:	$11,467,624
ANNUAL MAINTENANCE:	Nil in 2012/13. Operating costs will be incurred in future years when operational.

The Public Lending Library and Plaza Project has a budget allocation of $61,446,114 in the 2012-17 Strategic Financial Plan with project expenditure scheduled to occur over the 2010/11 to 2014/15 financial years.

(City of Perth 2013)

Appendix D: Interview response from Mirvac

The following section contains information obtained during a phone interview with Andrew Maddams, the Development Manager at Mirvac in charge of the office tower project.

02/04/15

Conceptualisation Stage

1. **What challenges/risks and opportunities were identified and how were they identified/prioritized? What factors were thought to be critical to the success of the project?**

   The Construction/Development industry is vast and a risk register of the critical elements must be identified and monitored. Previous knowledge and experience helps in preparing this register however as the project evolves this list is likely to expand given the nature of unanticipated events resulting from other Stakeholders, Design Development or Construction related issues.

2. **How were the interests of other stakeholders interested in the project managed in order for Mirvac to commence building the office tower?**

   Stakeholder relations is a big part of what the Development team have to facilitate. Various Stakeholder meetings are held on an ongoing basis to keep all parties involved in the decision making process.

3. **Were any alternatives to building an office tower discussed, and why was an office tower chosen over other options?**

   Initially a residential & hotel concept formed part of the submission but with changing marketing conditions a commercial development underpinned by State lease was the preferred outcome.

Planning Stage

4. **How did you communicate and negotiate with key stakeholders to gain contracts to the project and get everyone on board?**

   Early negotiation was involved at the outset of the project to agree leaseholds for the site. Contractual documents followed to align all parties and enable construction to commence. Monthly and subsequently fortnightly meetings were attended by all stakeholders including government agencies.

5. **How were they updated during the planning stage?**

   Once the Development Application is approved this forms part of the Legal documentation. As long as the design intent is maintained throughout Design Development and any material changes are communicated to the City of Perth then it is packaged up through the handover process.

6. **How did you ensure that sustainability measures were incorporated into the planning process?**

   See comments above under item 4.

7. **How did you evaluate tenders of subcontractors and suppliers so that you knew who would be best for the job?**

   A rigorous process is undertaken throughout the tender process mentioned above under item 5. Typically they are scored in a tabulated format to provide an overall score. This is broken down based on specific criteria that needs to be met.

Finalization Stage

8. **What has been done (or is planned for) in the finalization stage?**

   For example are they carrying out a PIR? Generating other reports? Debriefing stakeholders? There are standard procedures for gaining an Occupancy Certificate by the Principal Certifying Authority (PCA) which in this case is to be procured by the building surveyor John Massey Group (JMG). Various supporting information needs to be collated on numerous levels by the various contractors/consultants including the construction and development teams. In this case it is Mirvac Constructions Western Australia and Mirvac

Development. An Independent Certification (IC) process then provides a formal response upon review of the documentation and confirms Practical Completion (PC) has been met.

9. **Was there any discrepancy in the budget and actual cost of the project?**
   If so, what was the difference and what were the main contributing factors. This is commercially sensitive information but my response would be that this is generally tracked on a monthly basis to compare actual cost against forecast budget.

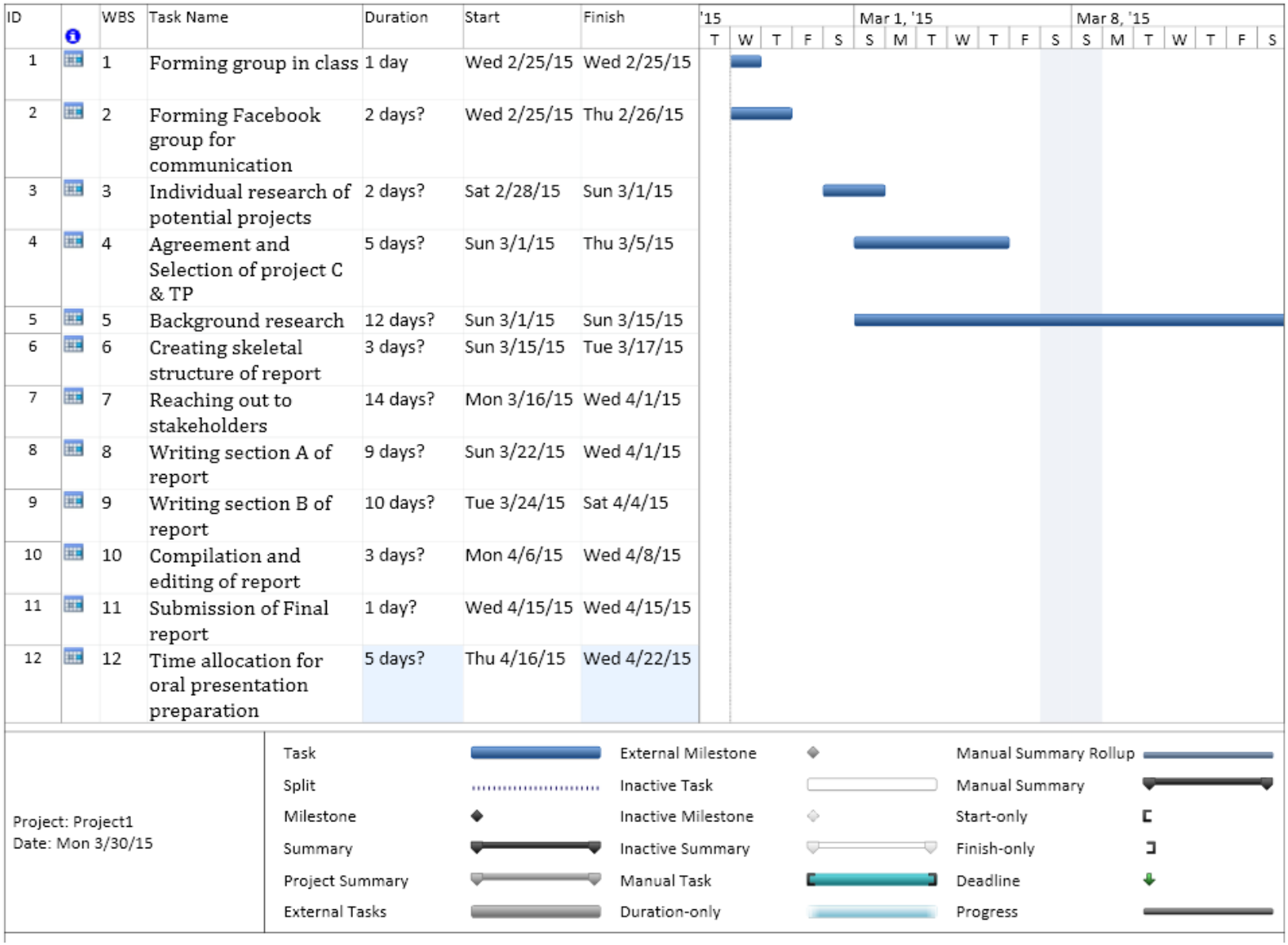
10. **Was there any discrepancy in the schedule and actual time taken to complete the project? If so, what was the difference and what were the main contributing factors?**
    Again this is sensitive information but my response would be that again this information is tracked on an ongoing basis to compare actual program against forecast program to determine if the critical path has been effected and the PC milestone will be achieved.

11. **Did they face any challenges in meeting the environmental sustainability targets? If so, how were they overcome?**
    There are two areas of sustainable design. NABERS and Green Star. The Old Treasury Building will achieve a Base Building 4.5 NABERS star rating and a Base Building 5 Green Star. This is monitored throughout the design and construction phases to ensure these targets are met.

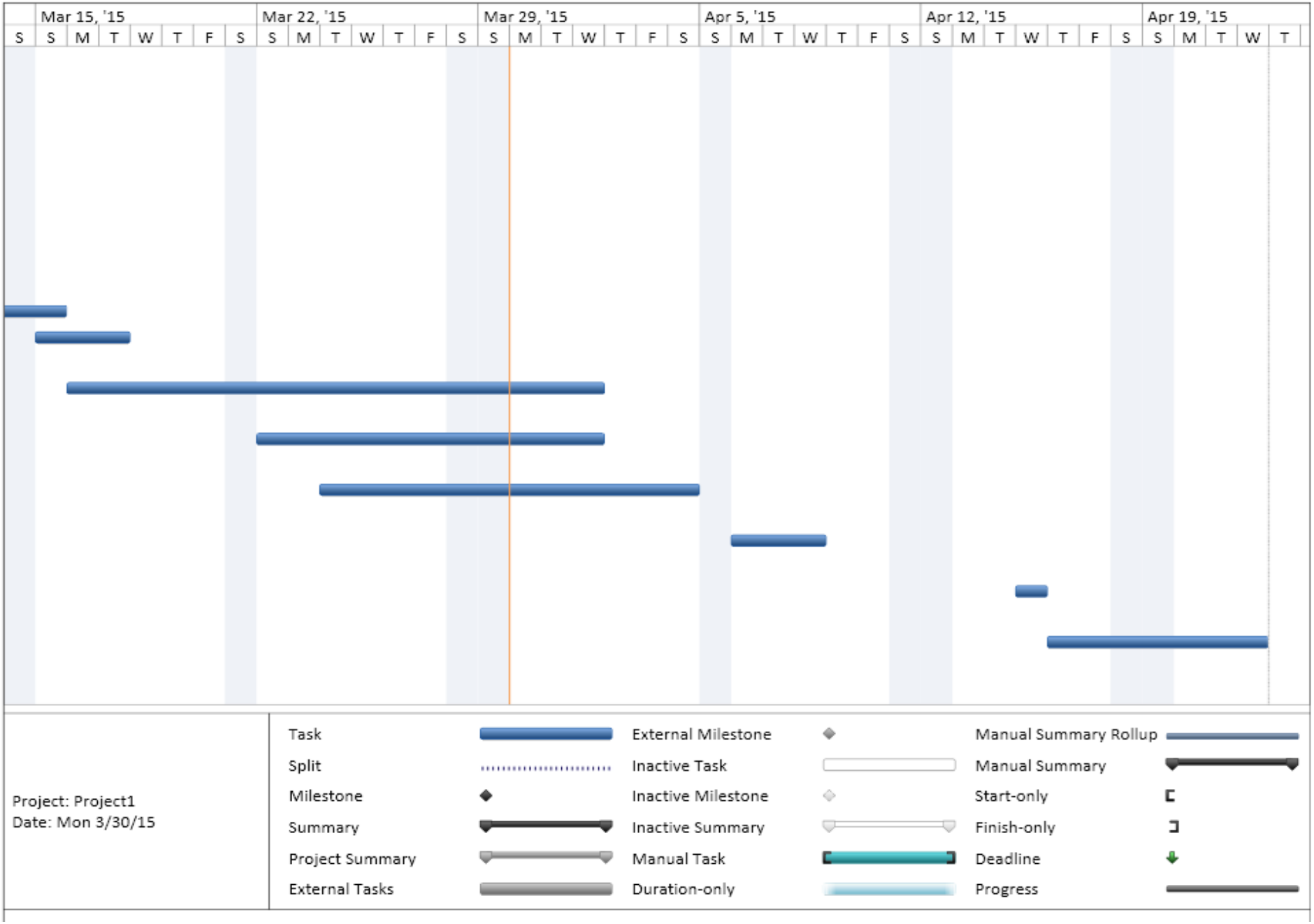
12. **Were there any cases where subcontractors or procured goods were not considered good value for money? If so what kind of impact did they have on the project's economic bottom line?**
    I work within the development team and this question is targeted more towards the construction team. In general terms though, all contracts are tendered to ensure you gain value for money. This includes the procurement of goods.

13. **Was the project ultimately as profitable as expected?**
    Commercially sensitive information.

Appendix E: MECH & CO Gantt chart



ID	WBS	Task Name	Duration	Start	Finish
1	1	Forming group in class	1 day	Wed 2/25/15	Wed 2/25/15
2	2	Forming Facebook group for communication	2 days?	Wed 2/25/15	Thu 2/26/15
3	3	Individual research of potential projects	2 days?	Sat 2/28/15	Sun 3/1/15
4	4	Agreement and Selection of project C & TP	5 days?	Sun 3/1/15	Thu 3/5/15
5	5	Background research	12 days?	Sun 3/1/15	Sun 3/15/15
6	6	Creating skeletal structure of report	3 days?	Sun 3/15/15	Tue 3/17/15
7	7	Reaching out to stakeholders	14 days?	Mon 3/16/15	Wed 4/1/15
8	8	Writing section A of report	9 days?	Sun 3/22/15	Wed 4/1/15
9	9	Writing section B of report	10 days?	Tue 3/24/15	Sat 4/4/15
10	10	Compilation and editing of report	3 days?	Mon 4/6/15	Wed 4/8/15
11	11	Submission of Final report	1 day?	Wed 4/15/15	Wed 4/15/15
12	12	Time allocation for oral presentation preparation	5 days?	Thu 4/16/15	Wed 4/22/15


Mar 15, '15
Mar 22, '15
Mar 29, '15
Apr 5, '15
Apr 12, '15
Apr 19, '15
S S M T W T F S S M T W T F S S M T W T F S S M T W T F S S M T W T F S S M T W T
Project: Project1
Date: Mon 3/30/15
Task
Split
Milestone
Summary
Project Summary
External Tasks
External Milestone
Inactive Task
Inactive Milestone
Inactive Summary
Manual Task
Duration-only
Manual Summary Rollup
Manual Summary
Start-only
Finish-only
Deadline
Progress

Appendix F: MECH & CO meeting minutes 17/03/15

Date:	17/03/2015	Start/End time:
Attendees:	David Coman, Jade De Melo, Dylan Jarret, Alistair Netterfield, Thomas Walton, Sandun Welisara	
Absentees:	Jason Sam	
Chair:	Thomas Walton	

	Last Week's Priorities	***Done/Not Done***
Jason	**1.** Research on potential project for major assignment **2.** Create Poll for meeting time **3.** Create a template for taking minutes: complete an agenda for the meeting (discussion topics, priorities, etc.) **4.** Complete schedule providing group objectives and rules (to submit to Cosimo in wk2 Friday)	**1.** Done **2.** Done **3.** Done **4.** Done
Tom	**1.** Research on potential project for major assignment **2.**	**1.** Done
David	**1.** Research on potential project for major assignment **2.**	**1.** Done
Dylan	**1.** Research on potential project for major assignment **2.**	**1.** Done
Jade	**1.** Research on potential project for major assignment **2.**	**1.** Done
Sandun	1. Research on potential project for major assignment	**1.** Done
Alistair	**1.** Research on potential project for major assignment **2.**	**1.** Done

Discussion

Assignment of Project team roles

Discussion Topics	***Comments***
1. Four roles- Coordinator, communicator, editor, and writer. Either nominate yourself or take it to a vote. ***2.*** Obviously the role of the editor and writer is	**1.** Roles have been distributed. Jason is coordinator, Sandun and Jade will both be communicators and editors, and Thomas, David, Alistair and Dylan will be

presently not as intense as the project report is still in its infant stage, so where will we divide these resources for the time being? ***3.*** Is each of the roles equal in terms of workload? If not, how are we able to rectify this? Discuss each role- are you happy with your description?	researchers/writers. **2.** Sandun and Jade will be communicators whilst information is being gathered for the project, and will assume the editors role once the report has been compiled. **3.** Everyone present at the meeting was happy with their role – only Jason needs to be consulted about being coordinator and whether he is happy to do it.
Division of workload (Report vs. Presentation)	
Discussion Topics	***Comments***
1. Both the report as well as the presentation is due during the same time (~wk7-8). Report worth 30%, presentation worth 15%, when will we start focusing on the presentation? **2.** Who amongst the team are confident in public speaking, and who would rather do the PowerPoint. **3.** Communicator to email Cosimo to get a brief idea of how he will be marking the presentation- does each member have to speak equally?	**1.** It was agreed on by those at the meeting that it was too early to consider the presentation, and that these issues should be addressed at a later date when the report has been started.
Concept stage of the Project	
Discussion Topics	***Comments***
1. As the project takes on the development of the town hall, the construction of a hotel, as well as hospitality departments, the team should divide each of the aforementioned to research about its conceptualisation phase.	**1.** An alternative to this was discussed in the sense that we will consider the project as a whole and not as its individual components. As such, the conceptualisation stage (and subsequent stages) will be split into sections such as stakeholders and scope etc., and one of the researchers/writers will handle one of these specific topics in each of the four stages.
Meetings	
Discussion Topics	***Comments***
1. Are weekly meetings necessary or are fortnightly sufficient? **2.** What happens with absentees?	**1.** Weekly meetings are necessary due to the short amount of time in which the report is due. **2.** Absentees will be informed of what they missed at the meeting by the chairperson. Absentees should do their best to give at least a day's notice prior to the meeting if they are unable to attend.

Timeline	
Discussion Topics	***Comments***
1. Make a start to setting a deadline for the report/presentation components (at least discuss it if a date cannot be determined)- what is ideal?	**1.** As we are in the very early stages of the report, no writing has commenced and hence no deadline set for any components. This week will be focused on developing a skeletal structure for the report, gathering background information and establishing contact with stakeholders.
Discussion of any ideas/topics	
Discussion Topics	***Comments***
1. Develop a skeletal structure for the report so that all group members can clearly identify what needs to be in regards to their role. 2. Establish initial contact with stakeholders. 3. Begin research for background section of report.	**1.** A skeletal structure of the report needs to be developed in order to give direction for the group. This will be handled by one of the researchers/writers. Once this has been completed, the communicators will look at getting in contact with key stakeholders who may be able to give us information for the report, and the other researchers/writers will be able to start compiling information to put together the background section of the report.

Priorities over the next week

	Weekly Priority
Jason	**1.** Co-ordinate group for this week by checking in on how other group members are tracking, and maintaining contact between Assoc/Prof Cosimo Faiello and the group. Anything else that needs to be done will be worked out once he has been filled in on the meeting.
Tom	**1.** Develop a skeletal structure of the report by Sunday (22/3/15), and inform Jason on what was discussed in the meeting.
David	**1.** Begin compiling information for the background section of the report for next week's meeting.
Dylan	**1.** Begin compiling information for the background section of the report for next week's meeting.
Jade	**1.** Start establishing contact with key stakeholders in the project for guidance as to where we can access information or potentially set up interviews.
Sandun	**1.** Start establishing contact with key stakeholders in the project for guidance as to where we can access information or potentially set up interviews.
Alistair	**1.** Begin compiling information for the background section of the report for next week's meeting.

Appendix G: MECH & CO meeting minutes 24/03/15

Date:	24/03/2015	Start/End time: 2:00-3:10pm
Attendees:	Alastair, David, Jade, Jason, Sandun, Tom	
Absentees:	Dylan	
Chair:	Jason	

	Last Week's Priorities	***Done/Not Done***
Jason	**5.** Contact stakeholders **6.** Check in with team members **7.** Start an introduction or background for the report **8.** Complete agenda for next meeting	**5.** Done **6.** Not Done **7.** Done **8.** Done
Tom	**3.** Develop a skeletal structure of the report by Sunday (22/3/15), and inform Jason on what was discussed in the meeting.	**2.** Done
David	**3.** Begin compiling information for the background section of the report for next week's meeting.	**2.** Done
Dylan	**3.** Begin compiling information for the background section of the report for next week's meeting.	**2.** Done
Jade	**3.** Start establishing contact with key stakeholders in the project for guidance as to where we can access information or potentially set up interviews. **4.** Create a skeletal structure for the report	**1.** Done **2.** Done
Sandun	**2.** Start establishing contact with key stakeholders in the project for guidance as to where we can access information or potentially set up interviews.	**2.** Done (partially, as awaiting reply)
Alistair	**3.** Begin compiling information for the background section of the report for next week's meeting.	**2.** Done

Discussion

Stakeholders

Discussion Topics	***Comments***
4. *Who have we reached out to? What relation do they have to the project? Status (replied, not replied)?* **5.** *Have we completely defined every major/minor stakeholder involved in the project?* **6.** *Who will we reach out to next? Is it necessary?*	**4.** Sandun has reached out to Kerry Hill Architects and is awaiting a reply. They are in charge of designing several of the buildings under construction within the project. Jade has contacted to a project manager, Louise, who oversees certain areas of the project. She has replied to Jade and they are in the process of setting up a form of communication/meeting time. **5.** We have compiled a list of every major/minor stakeholder given the resources available on the Internet. The team understands that this may not include every single stakeholder

	involved in the project. **6.** Mirvac will be contacted next ASAP- this is very important as they are the main tenderers
Building on Tom's/Jade's skeletal structure	
Discussion Topics	***Comments***
4. Hopefully everyone has had a look at the work Tom and Jade have put in the time to complete- are there any suggestions? **5.** For the background: finding difficulty in uncovering why this project took place- was it for economic growth? **6.**	**2.** The team is happy with the skeletal structure so far and believes that it will be beneficial in assisting the commencement of the report. Suggestions will be offered as the writing progresses **3.** Team members have suggested to Jason to search government websites as they are the most informative
Division of Section B: Case study analysis	
Discussion Topics	***Comments***
2. Section A should be nearing its completion if priorities have all been completed. As such it is necessary to begin talking about starting section B. • Will we be dividing each stage of the project for each writer? If so, who will take on each stage? • Will we be dividing one stage and split its sub-categories (i.e. the 10 competencies of project management)- if we are to do this, there are four main stages (concept, planning, execution, and finalization) which means we have to complete 2 of these a week) **3.** The report is due in approximately 3 weeks. In this time we need to complete also an oral presentation- we really need to get on top of things. Suggestions on how to stay on track?	**2.** The division of each stage of the project will be as follows: Tom- conceptualisation, Dylan- Planning, David- Execution, and Alastair- finalisation. Each writer will subsequently offer recommendations for their allocated section **3.** Sandun suggested the implementation of a GANTT chart to stay on track. The team agrees and Jason will send Sandun a schedule.
Discussion of any ideas/topics	
Discussion Topics	***Comments***
4. Jade is concerned about the Cathedral and Treasury Precinct as it does not offer substantial amount of information regarding management of problems. Stakeholders are also difficult to contact and so Jade has suggested the potential of changing projects- WOODSIDE BROWSE FLNG PROJECT.	**2.** Jade informed the team that she has a project manager contact and may have access to internal documents. The team likes this idea, but understands time constraints. Jason suggested the team continue work on current project and will contact Cosi on the potential change. Jade will gather info on this other project.

Priorities over the next week

	Weekly Priority
Jason	**2.** Make a start on Section A and complete a rough draft **3.** Create agenda for next week **4.** Assist researchers in finding information **5.** Check in with memberes **6.** Communicate with Cosi regarding potential project change
Tom	**2.** Make a start on Section B and produce a completed rough draft **3.** Research relevant information for allocated stage of project **4.** Check in with group coordinator
David	**4.** Make a start on Section B and produce a completed rough draft **5.** Research relevant information for allocated stage of project **2.** Check in with group coordinator
Dylan	**2.** Make a start on Section B and produce a completed rough draft **3.** Research relevant information for allocated stage of project **4.** Check in with group coordinator
Jade	**2.** Keep in contact with stakeholder (louise) **3.** Research more potential stakeholders **4.** Contact insider for Woodside Browse FLNG Project to gather information: determine project change viability **5.** Check in with group coordinator
Sandun	**2.** Research more potential stakeholders **3.** Complete Gantt chart **4.** Check in with group coordinator
Alistair	**2.** Make a start on Section B and produce a completed rough draft **3.** Research relevant information for allocated stage of project **4.** Check in with group coordinator

Appendix H: MECH & CO meeting minutes 31/03/15

Date:	31/03/2015	Start/End time:
Attendees:	Alastair, David, Dyan, Jade, Jason, Tom	
Absentees:	Sandun	
Chair:	Jason	

	Last Week's Priorities	***Done/Not Done***
Jason	**9.** Make a start on Section A and complete a rough draft **10.** Create agenda for next week **11.** Assist researchers in finding information **12.** Check in with members **13.** Communicate with Cosi regarding potential project change	**9.** Done **10.** Done **11.** Done **12.** Done **13.** Done
Tom	**4.** Make a start on Section B and produce a completed rough draft **5.** Research relevant information for allocated stage of project **6.** Check in with group coordinator	**3.** Done **4.** Done **5.** Done
David	**6.** Make a start on Section B and produce a completed rough draft **7.** Research relevant information for allocated stage of project **8.** Check in with group coordinator	**3.** Done **4.** Done **5.** Done
Dylan	**4.** Make a start on Section B and produce a completed rough draft **5.** Research relevant information for allocated stage of project **6.** Check in with group coordinator	**3.** Done **4.** Done **5.** Done
Jade	**5.** Keep in contact with stakeholder (louise) **6.** Research more potential stakeholders **7.** Contact insider for Woodside Browse FLNG Project to gather information: determine project change viability **8.** Check in with group coordinator	**2.** Done **3.** Done **4.** Done **5.** Done
Sandun	3. Research more potential stakeholders 4. Complete Gantt chart 5. Check in with group coordinator	**3.** Done **4.** **Done** **5.** Done
Alistair	**4.** Make a start on Section B and produce a completed rough draft **5.** Research relevant information for allocated stage of project **6.** Check in with group coordinator	**3.** Done **4.** Done **5.** Done

Discussion

Project Change Decision Y/N

Discussion Topics	***Comments***
7. I have checked in with a few of you and most agree that it is best to stay with our current project. Reasons for not changing: We cannot have an individual copy of the report; it is bound by a confidentiality agreement, which makes referencing difficult (we cannot reference something we technically do not have). Our time with the report is also finite- we do not know how long we have. Managerial information of Browse is also limited.	**7.** We will stay- it is far too difficult to make the switch due to time constraints and change of availability of the resources that we initially thought we would have access to

Progress of each section

Discussion Topics	***Comments***
7. *Jason check-in: update team on current progress of section A. Difficulties?* ***8.*** *Alastair, David, Dylan, and Tom check-in: update team on current progress of section B. Difficulties?* **9.** *Sandun and Jade check-in: Stakeholder progress*	**4.** Happy with the structure that Jason has produced thus far **5.** Split B and C. environmental & economic factors hard to find. Alastair has found that the project has in fact gone over budget- this would be a problem he will be talking about. We need to make sure we are talking about <u>management</u> of each of the problems **6.** Jade left a message for Louise to get into contact shortly. Jason has contacted mirvac and will update Sandun on progress.

Structure of Section B

Discussion Topics	***Comments***
4. *Hopefully every writer has a rough draft of his section of the report, and thus sufficient information regarding of their parts. This means that we have to agree on a uniform structure for this section* **5.** *References: referencing newspaper articles- repercussions?* **6.** *Any questions to Louise?*	**4.** It was agreed that we will get all the information done and we will let the editors (sandun/jade) to structure it uniformly **5.** Try to find the information on a government website by typing in keywords listed on the newspaper article. Use newspaper article as last resort as Cosi does not like excessive use of such references **6.** The team will pass on any questions to Jade they have

Section C: Recommendations	
3. Have the writers found any significant problems in their allocated stages of the project that we can apply theory learnt in class to offer recommendations? What are some problems? **4.** Completion date **5.** Any questions to Louise?	***Comments*** **3.** Many issues revolve around budgets exceeding, failed conceptualisation plans, & delays. The team will refer to PMBOK to offer recommendations **4.** These will be completed by next week **5.** Questions will be passed on from writers to Jade to liaise with Louise.
Submission of report of Editing	
2. We have exactly two weeks till due date, what is sufficient time for the editor (sandun) to completely edit the document?	***Comments*** **2.** *Section B by end of the week. Section C (thus the whole report) by 8th/9th April)*
Discussion of any ideas/topics	
Discussion Topics 1. Jade will post updated questions for Louise on Facebook 2. Conclusion discussion **3.** Help alastair on finalization stage:	***Comments*** **1.** Any vague questions will be brought to the attention of the writers so that they can specify a more detailed questions **2.** We will summarize the report by talking about the success of the report as a whole **3.** Finding challenges and issues with this stage of the project. Any fresh ideas

Priorities over the next week

	Weekly Priority
Jason	**7.** Structure Section A properly **8.** Keep checking in with writers to make sure they are on track **9.** Assist all team members
Tom	**5.** Complete section B & C by given deadlines **6.** Pass any questions to Jade/Sandun
David	**3.** Complete section B & C by given deadlines **4.** Pass any questions to Jade/Sandun
Dylan	**5.** Complete section B & C by given deadlines **6.** Pass any questions to Jade/Sandun
Jade	**6.** Speak to Louise **7.** Contact Rebecca (details are on main C&TP website)
Sandun	**5.** Contact mirvac (via phone) **6.** Contact stakeholder involved with 565 Hay street (via phone) **7.** Help Alastair find finalization stage
Alistair	**5.** Complete section B & C by given deadlines **6.** Pass any questions to Jade/Sandun

Appendix I: MECH & CO meeting minutes 07/04/15

Date:	07/04/2015	Start/End time:
Attendees:	Alastair, David, Dyan, Jade, Jason, Tom, Sandun	
Absentees:		
Chair:	Jason	

	Last Week's Priorities	***Done/Not Done***
Jason	**14.** Structure Section A properly **15.** Keep checking in with writers to make sure they are on track **16.** Assist all team members	**14.** Done **15.** Done **16.** Done
Tom	**7.** Complete section B & C by given deadlines **8.** Pass any questions to Jade/Sandun	**6.** Done **7.** Done
David	**9.** Complete section B & C by given deadlines **10.** Pass any questions to Jade/Sandun	**6.** Done **7.** Done
Dylan	**7.** Complete section B & C by given deadlines **8.** Pass any questions to Jade/Sandun	**6.** Done **7.** Done
Jade	**8.** Speak to Louise Contact Rebecca (details are on main C&TP website)	**6.** Done
Sandun	**8.** Contact mirvac (via phone) **9.** Contact stakeholder involved with 565 Hay street (via phone) Help Alastair find finalization stage	**6.** Done **7.** **Done**
Alistair	**7.** Complete section B & C by given deadlines **8.** Pass any questions to Jade/Sandun	**6.** Done **7.** Done

Discussion	
Check-in of report writing	
Discussion Topics	***Comments***
10. *Jason check-in:* ***11.*** *Alastair, David, Dylan, and Tom check-in:* ***12.*** *Sandun and Jade check-in*	**8.** Section A is basically complete, and all I need is a final paragraph to add to it to summarise the scope of the report. Just missing alastairs Part **9.** Parts all completed and handed into the google docs. (Alastair just has some final details to add to section C) **10.** As already shown on the Facebook group, mirvac questions have be liaised and posted accordingly by Sandun.

	Unfortunately Louise has failed to respond so our only primary form of contact is through Mirvac.
Presentation	
Discussion Topics 1. Division of topics: who will speak about what? And how will questions be directed during the presentation?	***Comments*** **7.** It was agreed that each team member will be talking about their parts that they wrote on as they feel most confident to discuss it. Relevant questions will subsequently be directed to the person who wrote the section. Jade and Sandun will be presenting sections that are more content-intensive (probably the conceptualization phase)
Editing of the report	
7. *References: Havard Style* **8.** *Appendices*	***Comments*** **7.** The team will ensure that all references follow the uniform Havard APA style referencing as instructed by Jade. **8.** *Any facts/figures/tables/pictures will be sent through to Jade ASAP (before 13th April for final editing and printing)*
Discussion of any ideas/topics	
Discussion Topics **4.** Rehearsing for the Presentation	***Comments*** **1.** The team has agreed to pick out important and relevant points of their parts to discuss in the presentation. Information will subsequently be condensed onto a power point presentation. Rehearsal will take place next week (date tba.)

Priorities over the next week

	Weekly Priority
Jason	**10.** Make sure all sections are handed into Jade by constantly checking in with team members **11.** Prepare for Presentation **12.** Read over Jade's editing **13.** Send any relevant info for appendices to Jade/Sandun
Tom	**7.** Prepare for Presentation **8.** Read over Jade's editing **9.** Send any relevant info for appendices to Jade/Sandun
David	**5.** Prepare for Presentation **6.** Read over Jade's editing

	7. Send any relevant info for appendices to Jade/Sandun
Dylan	**7.** Prepare for Presentation **8.** Read over Jade's editing **9.** Send any relevant info for appendices to Jade/Sandun
Jade	1. Prepare for Presentation 2. Complete editing the entire report 3. Communicate with sandun to divide editing/ask for assitance
Sandun	1. Prepare for Presentation 2. Complete editing the entire report 3. Communicate with Jade to divide editing/ask for assitance
Alistair	**7.** Prepare for Presentation **8.** Read over Jade's editing **9.** Send any relevant info for appendices to Jade/Sandun