Document Status

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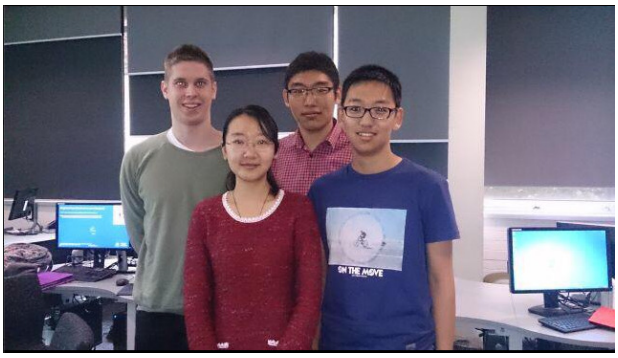

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1. Introduction and Purpose

The assignment requires the group to identify an existing project within the City of Melbourne that has a number of associated risks; these risks can be technical and/or commercial. Then, using qualitative risk analysis techniques, the chosen project will be assessed and a report written which describes the project, the analysis of risks undertaken and the outcome of this analysis.

The objectives of this assignment are to employ a methodology to both identify the risks associated with the chosen project and to assess the given risks in terms of their likelihood of occurring and the associated consequences if they were to occur. Once a number of risks have been identified and assessed, where possible, ways to prevent or reduce the risks will be discussed. For risks that cannot be treated an implementation for monitoring these risks will be discussed.

2. Executive summary

The following report outlines a risk analysis completed on the construction of the Victorian Comprehensive Cancer Centre in Parkville, Melbourne. Eight risks were identified for this project, they were: pedestrian safety, traffic and parking, interference with hospital operations, damage caused by excavation, access to the site, on-site storage, weather and site safety.

The eight risks have then been described and assessed before potential risk treatments were discussed. All of this information is summarized in the risk register in section eight of this document. Based on the risk analysis the first action that should be taken is properly analyzing the site prior to excavation and creating a detailed plan. The other risks, when the suggested risk treatments are applied, require monitoring to some degree to ensure the risk does not change over time and the measures continue to be effective in preventing the consequences from occurring.

3. Context of Analysis (organisation, project, stage, key objectives)

The project we have selected to analyze is the construction of the Victorian Comprehensive Cancer Centre (VCCC) in Parkville, Melbourne. The VCCC project is a $1 billion initiative jointly funded by the Victorian and Australian Governments with the remaining funds coming from donations and other sources. The VCCC consists of eight partner organisations; including Melbourne Health, the Peter MacCallum Cancer Center and The University of Melbourne (VCCC Project, 2013).

The Victorian Comprehensive Cancer Centre aims to be a world-class cancer centre, being purpose built for cancer research, training and education as well as treatment and care. The centre will consist of a number of beds to treat patients with a range of cancers, specialized research space as well as a number of education and training facilities. The VCCC aims to attract leading researchers and assist in the discovery of new cancer treatments, train and educate current and future cancer specialists and provide the best possible care for those that have cancer (VCCC Project, 2013).

The VCCC will consist of a new building at the corner of Grattan Street, Flemington Road and Royal Parade on the site of the former Royal Dental Hospital as well as new facilities at the Royal Melbourne Hospital, linked by bridge. Figure 1 below shows an artist's impression of the finished product and Figure 2 shows on a map where the centre will be built.

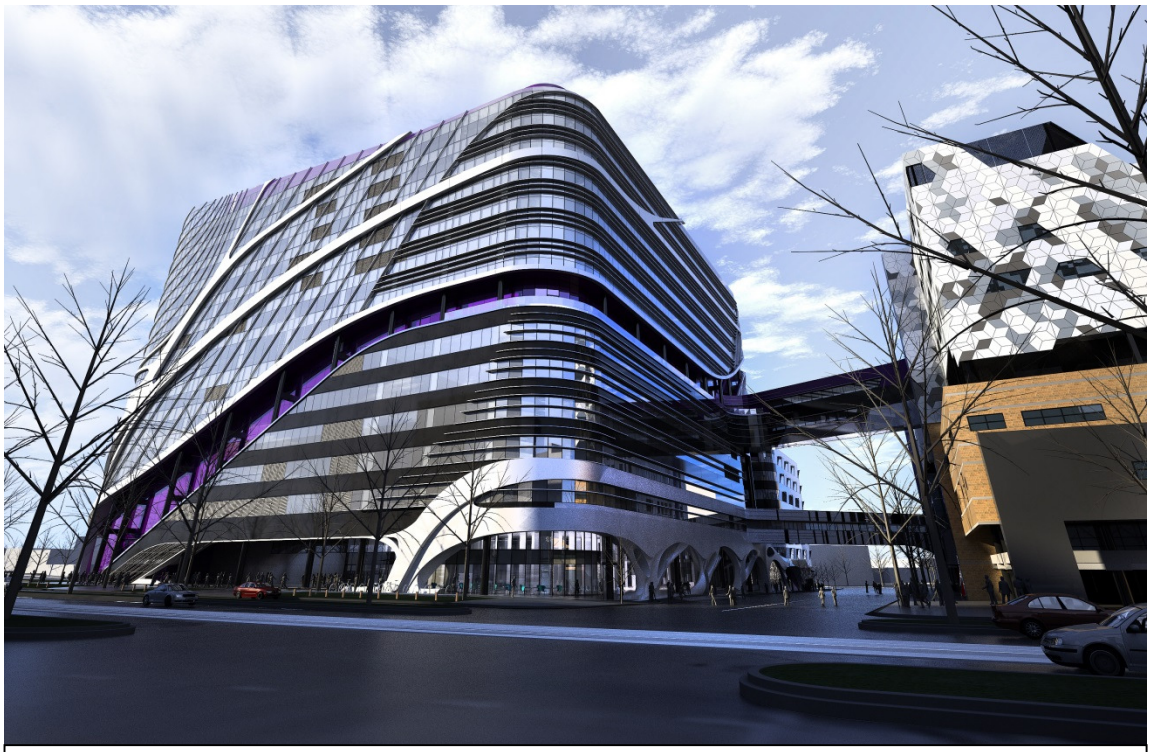

Figure 1: Artist's impression of VCCC
Retrieved from: http://www.vcccproject.vic.gov.au/Artistimages

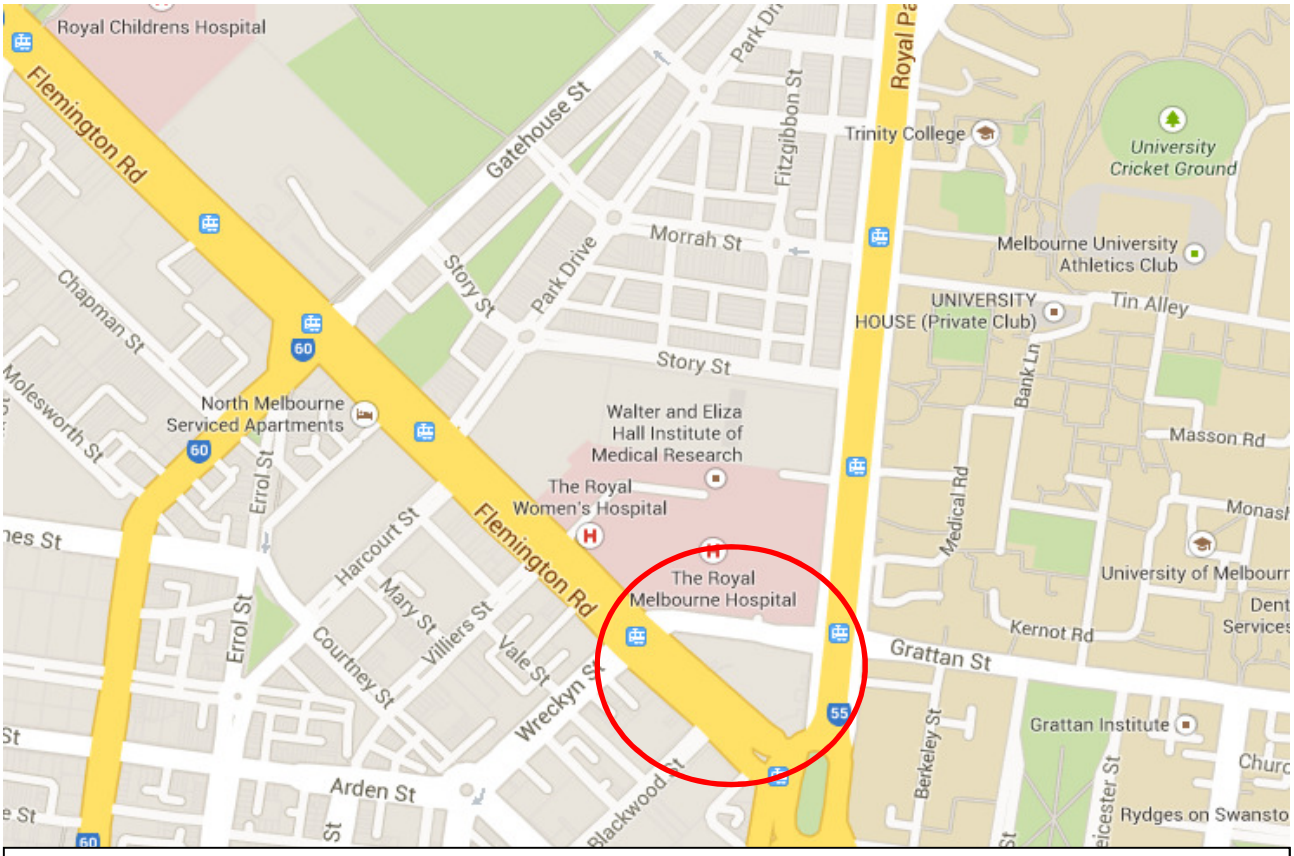

Figure 2: Street map of the location of the VCCC
Retrieved from: https://www.google.com.au/maps/@-37.7977107,144.9587909,16z

The VCCC is currently under construction with the completion date being at the end of 2015. Excavation of the site began in early 2012, however before this could happen the former Royal Dental Hospital needed to be demolished – demolition was completed in August 2010. The new building is currently under construction as well as the new facilities at the Royal Melbourne Hospital.

The VCCC project will be delivered under the State Government as a public-private partnership – meaning the government contracts a consortium from the private sector to be responsible for designing, building and maintaining the infrastructure project. The Plenary Health consortium was elected as the consortium responsible for delivering this project. The consortium consists of Plenary Group as a sponsor, Grocon/PCL as the builder, and Honeywell as the facilities manager (VCCC Project, 2013).

We have chosen the construction of the Victorian Comprehensive Cancer Centre as our project to analyze for a number of reasons. Firstly, it is multifaceted - the project consists of the demolition of a former building, the construction of a brand new building in its spot and the construction of new facilities on an existing building. Secondly, it is a major project – this VCCC project costs around $1 billion and will be a huge step in terms of cancer research and treatment. Finally, it is occurring in a busy part of the city – right near The University of Melbourne.

The stake holder we have chosen as the risk 'owner' for this assignment is the Project Manager and the period under consideration for this analysis is the life of the project – i.e. right through from excavation to completing the final product.

4. Methodology used & key stakeholders involved

The risks associated with the construction of the Victorian Comprehensive Cancer Centre were identified by first determining potential hazards and from there determining the associated risks. This process was completed via visual inspection of the site, analysis of the official webpage for the project and using knowledge gained from completing case studies in lectures and tutorials.

The risks will be evaluated using qualitative analysis techniques. Firstly, the likelihood of the risk occurring will be assessed and determined to be one of; rare, unlikely, possible, likely or almost certain. Then, the associated consequences if the risk were to occur are determined to be one of; insignificant, minor, moderate, major or catastrophic. The likelihood and consequence rating are then used to determine where the risk sits on the Risk Matrix; risks are given a status of very low, low, moderate, high or critical. This status is then considered when determining the response that should be taken for the associated risk. (WorkSafe Act, 2013) The Risk Rating Matrix is shown in Figure 3 to the right.

Risk Rating Matirx

Impact	Likelihood				
	Rare	Unlikely	Possible	Likely	Almost certain
Catastrophic	moderate	moderate	high	critical	critical
Major	low	moderate	moderate	high	critical
Moderate	low	moderate	moderate	moderate	high
Minor	very low	low	moderate	moderate	moderate
Insignificant	very low	very low	low	low	moderate

Figure 3: Risk Rating Matrix
Retrieved from: http://www.worksafe.act.gov.au/page/view/1039#1.IdentifytheHazard

After risks have been identified and rated the next thing to do is take an appropriate control measures to completely eliminate or manage the risk. The risk control measures for residual risk – i.e. risks that could not be completely eliminated by control measures – are also placed on a scale, being rated on a scale from excellent to unsatisfactory. The rating of the control measure and the rating of the risk if left untreated are then placed in a matrix to advise what risk management approach should be taken towards the given risk. The possible management approaches are periodic monitoring, active management, no major concern and control critical (Bishop, 2014). This process is described to the right in Figure 4.

Level	Descriptor	Guidance for Risk Control Rating
1	Excellent	The system is effective in mitigating the risk. Systems and processes exist to manage the risk and management accountability is assigned. The systems and processes are well documented and understood by staff. Regular monitoring and review indicates high compliance with the process.
2	Good	Systems and processes exist which manage the risk. Some improvement opportunities have been identified but not yet actioned. Formal documentation exists for key systems and processes in place to manage the risk that is reasonably understood by staff.
3	Fair	Systems and processes exist which partially mitigates the risk. Some formal documentation exists and staff have a basic understanding of systems and processes in place to manage the risk.
4	Poor	The system and process for managing the risk has been subject to major change or is in the process of being implemented and its effectiveness cannot be confirmed. Some informal documentation exists, however staff are not aware or do not understand systems or processes to manage the risk.
5	Unsatisfactory	No system or process exists to manage the risk.

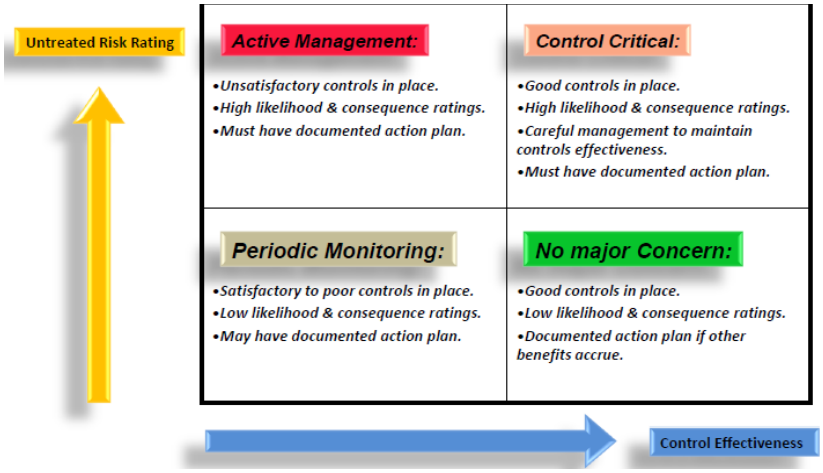

Figure 4: Residual Risk Assessment
Retrieved from: Risk Identification & Qualitative Risk Analysis – Peter Bishop (2014)

5. Identified risks: description and existing controls
The eight risks we have identified from the Project Manager's perspective for the timeline outlined are:

1 – Pedestrian safety
With projects such as the Victorian Comprehensive Cancer Centre that are completed of the street there is always the concern of providing a safe environment for pedestrians that walk by the site. As mentioned above the project is taking place at the intersection of Grattan Street, Royal Parade and Flemington Road – three busy roads in Melbourne especially when people are traveling to and from work.

Potential hazard resulting in an unsafe pedestrian conditions are trucks and other machinery using pedestrian walkways as access points to the site, dust and other waste obstructing walkways, less walkway space being available resulting in pedestrians and traffic being closer together and materials falling from the site onto walkways below.

2 – Traffic and parking
As mentioned above the Victorian Comprehensive Cancer Centre is being constructed amongst three busy roads in Melbourne – thus it is inevitable that the roads and the project will have some kind of effect on each other. Over the course of construction, the locations used as access points will be changed – thus multiple areas are going to be affected over the course of the projects development.

Potential problems could arise if trucks and other machinery are trying to access or leave the site during peak traffic hours, this could result in delays for not only the traffic but for construction – this is a particular problem if the actions taking place are time sensitive. Additionally, if cars are allowed to park too close to the site there is the potential for them to be damaged due to falling objects, trucks flicking rocks, etc. as well as obstructing access to the site.

Construction updates show that over the course of construction various roads have been closed for periods to assist with the project. Additionally, on Grattan Street an access lane for trucks has been added whilst existing lanes have been made smaller to accommodate for the extra lane.

3 – Interference with hospital operations
The VCCC is being built on the former site of the Royal Dental Hospital with some additional facilities being built on the existing Royal Melbourne Hospital across the road – four new floors are being built on the hospital as well as bridges across Grattan Street linking the two buildings. The construction site being in such close proximity to the hospital creates the potential for the project to interfere with daily operation, including access to and from the hospital for ambulances. Figure 5 to the right shows an up-to-date photo of the construction site. To the right of the picture is the construction on top of the Royal Melbourne Hospital mentioned above.

Figure 5: Construction Site
Retrieved from: http://www.vcccproject.vic.gov.au/Webcam

There is the potential for dust and dirt from the construction site to compromise the clean environment that is expected from a hospital. Additionally, loud machinery and operations – especially during late hours – could interfere with patients' rest and recovery. The construction, especially when the bridges linking the main building and the new facilities on top of the hospital, will also have an effect on the access to the hospital via Grattan Street – including an ambulance area.

4 – Damage caused by the excavation

The first stage of the project, after the Royal Dental Hospital was demolished, was to excavate the site. Excavation to a depth of 27 metres was required as four floors of the main building of the VCCC are to be underground (VCCC Project, 2013).

Excavation and building below ground level isn't uncommon, however there are risks when doing so if it isn't done properly.

Any faults in the excavation design and operation can cause damage to the surrounding area – including differential settlement of soil, failure of the foundation, water leakage, damage to underground infrastructure and deflection of supports.

Consequently this could cause damage to existing buildings and infrastructure such as roads and underground piping.

Figure 6: Excavated building site
Retrieved from: http://www.vcccproject.vic.gov.au/construction

5 – Access to site

For any construction site, it is important that the site is accessible in order to deliver the materials and machinery needed for construction as well as removing any waste materials and rubbish from the site. For inner city construction sites this can prove to be an issue when the site borders on busy roads – not only is it an issue even reaching the site, the roads might not be wide enough for a truck to maneuver itself amongst flowing traffic.

Not being able to readily access the site can cause problems for construction, namely potentially lengthy delays which can easily add up and thrown out the schedule of the project.

Currently Flemington Road is used as the main access and egress point for the site, however at different times Elizabeth Street will be required. For a site that is largely restricted to one access point it is important that access is maintained and, if for any reason access isn't possible, a back-up plan is in place.

6 – On-site storage

The VCCC, as with any construction site, will require a lot of materials and machinery for building. For some sites the storage of materials and machinery is an issue due to a lack of spare room on or around the site, this is the case for the Victorian Comprehensive Cancer Centre. As discussed above, the site is

located in a busy part of Melbourne and the building is going to take up a majority on the site – therefore there is not a lot of spare room around.

A lack of storage creates issues for storing large quantities of materials for building, storing machinery as well as storing waste before it is picked up and removed from the site. Issues could arise in the project if there is any kind of delay transporting new materials to the site or removing waste as there may not be enough room to continue construction – thus leading to delays. The requirement of more frequent deliveries can also lead to increased cost.

7 – Weather

The next risk to be considered is the weather conditions at the site of the project. Whilst the chances of a major weather disaster occurring in Melbourne is very low, a wide variety of weather conditions are experienced during the course of the year and thus over the period of the project we are considering.

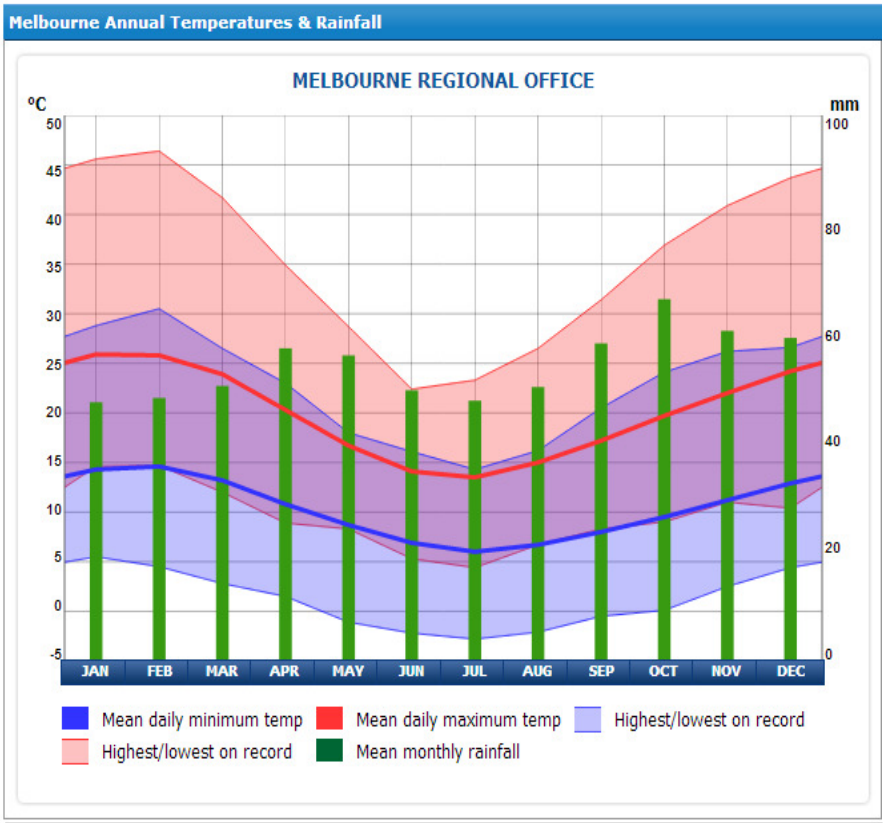

Figure 7: Melbourne Annual Temperatures and Rainfall
Retrieved from: http://www.weatherzone.com.au/climate/station.jsp?lt=site&lc=86071

Analysis of the average weather in Melbourne, illustrated in Figure 7, shows over the course of the year Melbourne can experience extremely hot days and days in which extremely heavy rain occurs – both of which have a number of associated risks.

During extremely hot weather there are a number of constructions union rules dictating under what conditions work continues as normal and when workers are to be relocated to less exposed or air conditioned areas, or sent home. The CMFEU Heat Policy (2014) outlines the steps that employers must take under these circumstances.

The other end of the spectrum to consider is inclement weather. Like extremely hot weather, there are union rules dictating under what conditions work is to continue and when work should stop.

The existing control measure for this risk are the union rules, as described above, and potentially some early detection method so the project manager can know in advance if a day will have unworkable conditions.

8 – Site Safety

The final risk we are considering from the Project Manager's perspective is the safety at the construction site. For a project as big as the construction of the Victorian Comprehensive Cancer Centre there are a lot of moving parts and as with any construction site there is the potential for accidents – thus ensuring the safety of all working on the site is of upmost importance.

The potential hazards of a construction site such as the VCCC include; heavy items that require lifting, machinery and other tools that require proper safety equipment, items falling from upper levels, heavy machinery and trucks driving on the site and unstable footing. All of the hazard lifted above could result in the injury or potentially death of construction workers if they are not handled correctly and appropriate safety measures are not taken.

Current measures in place would include; worker training, spotters around heavy machinery, scaffolding and support beams, and management to ensure there is not crowding on the site.

6. Risk assessment: likelihood & consequence

1 – Pedestrian safety

Based on the number of construction projects that take place every year around other busy streets in Melbourne and the number of reported pedestrian accidents there is a low chance that an accident will occur near the VCCC construction site. Thus, the likelihood can be given a rating of rare.

Whilst the likelihood is low, the consequences if an accident were to occur are very big. If a pedestrian were to be injured or even killed as a result of having an unsafe environment around the site the project will likely face serious legal action and major delays due to investigations. Thus the consequences can be rated as catastrophic.

Using the risk rating matrix, pedestrian safety can be given a rating of moderate – thus this risk will require some measures to be taken to minimize it or eliminate consequences where possible.

2 – Traffic and parking

The likelihood of the construction of the VCCC has an impact on the traffic and parking on the surrounding streets and roads is almost certain. Flemington Road, Royal Parade and Grattan Street are all busy inner city streets, where any sort of delay or obstacle can create problems for traffic flow and parking spaces are always hard to come by. Therefore, a construction site that will require access from trucks and heavy machinery and will more than likely require some sort of road closure is guaranteed to have some sort of effect.

The consequences of this risk include traffic delays, restricted access to surrounding buildings and less available parking. Whilst these consequences will likely cause much inconvenience to drivers in the surrounding area they will have minimal impact on the project financially, they are more likely to cause negative feeling and complaints towards the project. Thus the consequences can be rated as moderate.

Using the risk rating matrix, traffic and parking can be given a rating of moderate – thus this risk will require some measures to be taken to minimize it or eliminate consequences where possible.

3 – Interference with hospital operations

From the very start of construction of the project, noises and floating dusts are generated as by-products. Additionally, as the project progresses and the bridges are built there will be further impacts on the ambulance access to the hospital. Thus, the likelihood rating for this risk is almost certain.

Any affect to the access to the hospital by ambulances is major, especially in emergencies where prompt action is required to save lives. A louder than normal environment and the added concern of additional dirt and dust will also have a negative effect of the treatment and recovery of patients – especially in areas that are required to be kept extremely clean. Therefore the consequences of this risk can be rated major.

Using the risk rating matrix for an almost certain likelihood and major consequences gives this risk a classification of critical, therefore it needs a series of complete and comprehensive treatments.

4 – Damage due to excavation

With the current methods and tools available for building and excavation the chances of accidents occurring during this stage of construction are low. Additionally, the site had a building on it prior to this project so the quality of the ground is already known to be good. Therefore the likelihood rating for this risk is rare.

As discussed above, the potential consequences of improper excavation are very big and expensive to fix, therefore the consequences can be rated as catastrophic.

Using the risk rating matrix, the risk of damage due to excavation can be classified as moderate – it needs reasonable, conventional treatment.

5 – Access to the site

Based on how busy the three roads surrounding the VCCC and the unpredictability of road delays there is a good chance that at some point during the life of the project there will be issues related to being unable to access the construction site. Thus, the risk can be given a rating of likely.

The consequences of not being able to readily access the construction site are mainly delays to the project having to wait some time, for example if an emergency delivery is required to fix a piece of required machinery that stopped working. The consequences related to this risk cause more inconvenience than serious financial loss, etc. – thus they can be given a rating of minor.

According to the risk rating matrix, the risk can be given an overall rating of moderate. Therefore some steps should be taken to try and minimize the risk, however it is not the worst risk associated with the project.

6 – On-site storage

The Victorian Comprehensive Cancer Centre consists of a number of different levels, various purpose built rooms as well as a number of floors below ground level for which excavation was required – thus, a lot of materials and different machinery will be required on the site at any given time. There is a chance that at certain times it will not be possible to store everything that is needed on-site, therefore the likelihood of this risk is likely.

The consequences of not having much on-site storage are that the project will require more frequent deliveries. Not only does this mean increased costs for the project, but the project will also be at the mercy of the timeliness of deliveries – if a delivery is late or cannot be made for any reason the whole project could be delayed if a particular stage is waiting on some materials or machinery to be delivered. Therefore, the consequences can be given a rating of moderate.

From the risk rating matrix, this risk can be given a rating of moderate.

7 – Weather

Based on the analysis of the average weather in Melbourne during the year, illustrated in Figure XX, it is safe to say that the chances of having an extremely hot day or very inclement weather is likely during the lifetime of the project.

The consequences of the weather can greatly vary. If the union rules are abided and work is stopped as soon as, or even before, the conditions become unworkable then the consequences will just be a loss of working hours. Depending on how well managed the schedule is this could result in just a minor delay or it could have a ripple effect and delay other parts of the project. Additionally, if the union rules aren't followed or ignored and work is continued the consequences could be major/catastrophic – including work place deaths and injuries, damage to the building and legal action.

Therefore the likelihood of this risk is likely, and the consequences vary anywhere from minor to catastrophic. Referring to the Risk Rating Matrix this gives the weather a rating of moderate to critical.

8 – Site Safety

The consequences of having an unsafe construction site are also wide are varying. Potential consequences from having an unsafe construction site are injuries, deaths, law suits, damage to project infrastructure, project delays due to safety investigations and a loss of reputation. All of the consequences listed above are very serious, thus the consequences can be given a rating of major to catastrophic.

The number of catastrophic on-site accidents that occur is low, thus the likelihood of this occurring can be given a rating of rare. However, minor incidents such as workplace injuries are more common – thus they can be given a likelihood rating of possible.

Using the risk rating matrix, the risk of site safety can be given a moderate rating. Whilst the likelihood of the outcomes described above isn't very likely, the consequences if they were to occur are major – thus this risk should be treated with appropriate control measures to mitigate the risk.

7. Risk treatments and proposed implementation

1 – Pedestrian Safety

The walkway and surrounding areas can be kept clean and unobstructed by spraying water to reduce buildup of dirt and rocks, etc. as well as making use of street sweepers. If the walkway was to be closed for any reason flagmen could be on-site to provide safe travel around the site. The site should also use flagmen whenever trucks need to access or leave the site to prevent collisions with pedestrians.

A gantry has already been constructed to provide a walkway for pedestrians, periodic maintenance should be completed to ensure that it remains safe to walk under and protect pedestrians.

Additionally, if for any reason an area of the site was particularly dangerous to walk around, the best measure would be to close off the walkway all together to provide pedestrians getting anywhere near the hazard. In this event a sufficient alternate path would have to be designated and the walkway closure should be well signed.

2 – Traffic and parking

As described in the existing measures above, if any area is too dangerous for cars to be parked or the possibility of construction and normal road activity operating concurrently isn't possible the best measure is to simply close the road. That way the hazard is completely eliminated, if sufficient warning is given as well it will help minimize any frustrations.

In order to minimize the effect on traffic flow, analysis on road trends should be completed so the busiest periods of the three roads can be determined. That way, when the project requires a number of trucks, etc. to access the site it can be completed during quite periods to minimize the effects on traffic and make access easier.

3 – Interference with hospital operations

There are a number of treatment options to reduce the impact of the project on the operation of the Royal Melbourne Hospital. Firstly, the building schedule should be organized such that loud machinery is not operated during quite times at the hospital – additionally noise barriers could be put up to reduce the effect of the noise even at its worst periods. Secondly, a simple measure such as spraying water around the site to disperse dust would reduce the possibility of making the hospital dirty.

Finally, perhaps the hardest risk to reduce, the effect on ambulance access and parking. The best way to reduce this risk would be to maintain the existing ambulance access point, as it would not change protocol during emergency situations, and provide a temporary access lane for just ambulances.

4 – Damage due to excavation

The best way to reduce, and possibly eliminate, any damaged caused to the surrounding environment due to the excavation of the site is to scientifically evaluate the quality of the surface, make a rational excavation design and ensure that the is followed and executed correctly.

Bringing in qualified staff that is familiar with the excavation process would ensure this stage of the project is completed properly and in such a way that there is minimal chance of anything going wrong.

5 – Access to site

The risk of accessing the site cannot be completely eliminated due to the location of the VCCC; however through appropriate measures the likelihood of it being an issue can be reduced. Analysis of the traffic in the local area and assessing different routes to the site could help determine the most efficient and effective ways to make deliveries to the site.

Where possible, scheduling deliveries earlier rather than just on time would reduce the chance of slower than expected delivery having a negative effect – however this may not always be possible due to the lack of storage on the site, also discussed in this report.

6 – On-site storage

The size of the site cannot be changed, and the amount of spare space on the site will be reduced as the construction progresses – so this risk cannot be eliminated and will potentially get worse. Additionally, the VCCC is being constructed in an already developed area in the city, thus there isn't any spare space in the local vicinity that can be used.

Using materials and machinery from locally based suppliers and companies would reduce the amount of time for deliveries to be made, machinery to be repaired, etc. if something was to go wrong.

7- Weather

Based on the description of this risk in section 5 and the assessment in section 6 it is clear that nothing can be done to reduce the likelihood. The weather is a natural occurrence, thus it is beyond the control of the project manager. Instead, efforts can be focused on reducing the level of consequences if the risk was to occur.

The first course of action should be education on the union policies for the conditions under which work should be altered on discontinued. If the conditions under which work should be stopped are more widely known, the chances of work continuing when it should be stopped and big accidents occurring is greatly reduced.

8 – Site Safety

Whilst this risk is already unlikely, measures can still be taken to reduce the likelihood. These control measures are mostly management measures, such as ensuring all staff working on the project are up-to-date with training and are briefed on the areas they should pay special attention to at various stages of construction.

Introducing a log book for workers that are on-site at any given time and diligent planning would reduce the chances of overcrowding or having workers in locations that are potentially dangerous if something was to go wrong with a process being completed elsewhere. Additionally, the project manager could instruct somebody to periodically check the support beams, scaffolding, etc. in place as a means of early detection for improper support.

8. Findings & recommendations

Risk Number	Risk	Risk Description	Likelihood	Consequence	Rating	Control Measure	Measure Classification	Management Classification
No.1	Pedestrian Safety	Pedestrians might be injured during construction	Rare	catastrophic	Moderate	Cleaning the site; providing striking signs; reinforcing special tunnel	Excellent	No Major Concern
No.2	Traffic and Parking Place	Congestion and lack of parking places caused by construction	Almost certain	Moderate	High	Providing a flexible timetable; giving warning to traffic	Fair	Control critical
No.3	Interference with hospital operations	Noise, floating dust, parking space	Almost Certain	Major	Critical	Block barrier, water spraying, temporary access road	Excellent	Control critical
No.4	Damage caused by the excavation	Potential influence and even damage on surrounding area	Rare	Catastrophic	Moderate	Rational design, correct methods, scientific management pattern	Fair	Active Management
No.5	Access to site	Traffic jam, equipment and vehicles access	Likely	Minor	Moderate	Set temporary road signs, Avoid accessing during the morning and evening peak	Excellent	Control critical
No.6	On-site storage	Lack space of storage materials	Likely	Moderate	Moderate	Manager control, lock-up container	Good	Periodic monitoring

No.7	Weather	Injuries or accidents caused by working through poor weather and time lost due to weather	likely	From minor to catastrophic	Moderate to critical	Educate on weather rules Early detection methods	Fair	Periodic monitoring
No.8	Site safety	Injuries and accidents occurring on the construction site	Rare	Catastrophic	Moderate	Education on safety Regular safety inspections	Fair	Periodic monitoring

Based on the risk analysis completed, summarized in the risk register above, the first step that should be taken is to examine the site being excavated and come up with a scientific based design. The excavation is the first step in the project and there consequences were severe if not handled correctly. This stage was completed successfully, based on the stage the project is at now.

Traffic and parking, access to the site, and interference with hospital operations were all determined to be control critical. This means good controls will be put into place, however the situation needs to be monitored and the controls maintained to ensure long term control of the risk.

The risks of on-site storage, weather and site safety were all determined to require periodic monitoring. This means that the controls in place are sufficient, however we require action plans in place in the event that the situation changes and the risks require more attention in order to be prevented.

Finally, pedestrian safety was determined to be no major concern. This means the risk is well managed and the likelihood of the risk occurring is low – thus not much attention is required by this risk.

Due on the nature of the project, a risk analysis similar to this should be completed every few months or at major milestones of the project. This is as when the project proceeds onto the next major step, the dynamics of the construction changes and thus there will be potentially different risks to analysis and existing risks may no longer be of concern or will have a different likelihood and consequence.

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