JABATAN KERJA RAYA
MALAYSIA

RISK MANAGEMENT PLAN

KOMPLEKS KERJA RAYA 2, (KKR 2) JALAN SULTAN SALAHUDDIN, KUALA LUMPUR

Cawangan :
Ibu Pejabat JKR Malaysia
Kuala Lumpur

Version (OPEN)
20-Sep-2011

Build Status

Version	Date	Author	Reason	Section
01	13-04-2010	PKCKBA		

Summary of KOMPLEKS KERJA RAYA 2, (KKR 2) JALAN SULTAN SALAHUDDIN, KUALA LUMPUR Risk Profile

The initial process of developing the risk for Kompleks Kerja Raya 2 project was conducted through a risk management workshop session and discussion. From that session 77 risks were identified and analysed. The information provides and a preliminary analysis of the risks indentified to be undertaken.The overall risk profile of the project as it stands would be considered Extreme High. This is not unusual as this stage of the project. A significant risk mitigation strategy currently in place for the project is the adopted and implementation of the Partnering model, as many of the identified risk will be resolved by good communication and discussions to develop a common understanding of the requirements requires do deliver the successful outcomes of the project.Initial assessment was conducted against the risk identified as Planning Stage, Procurement stage, Design Stage, Construction stage and Hand Over stage and sorted into Extreme High (26), High (18) and Medium (20). Some of the Extreme and High Risks for the project are shown in Figure 1, and some initial strategies were identified during the workshop, to reduce the likelihood or impact of the risk.Descriptions of all the risks identified are shown in the Risk Register, Appendix A and initial assessment sheets completed for Extreme and High Risks Appendix B

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1. INTRODUCTION

1.1 Background

There are always risks associated with a project. The purpose of risk management is to ensure levels of risk and uncertainty are effectively managed, so that the project is completed successfully on time and within budget. The risk management process enables stakeholders involved in a project to identify possible risks and the manner in which these risks can be contained and the likely cost of mitigation strategies.

Proper risk management allows the project to prosper through taking and avoiding risks. Good risk management will greatly improve the transparency of how the project operates, providing a roadmap to achieve strategic goals and objectives and reassurance over the management of risks.

Successful management of the project requires informed, proactive, and timely management of risks. The specific objectives of this risk management plan and approach are:

- Ensure critical risks impacting scope, schedule, budget, business performance, and/or change management are proactively identified, communicated, mitigated, and escalated in a timely manner.
- Facilitate attention to key risks impacting the project and individual teams.
- Produce meaningful information that allows project management to focus efforts on the “right” (e.g., high likelihood and high impact) risks with an effective coordination of effort.
- Ensure appropriate stakeholders are informed and, if applicable, participate in the mitigation.
- Record an audit trail of discussions and mitigation of project risks.

The goal of this Risk Management Plan (RMP) is to proactively identify and address risks early in the project and throughout its lifecycle in order to avoid surprises.

1.2 Purpose

This document describes how the project team for KOMPLEKS KERJA RAYA 2, (KKR 2) JALAN SULTAN SALAHUDDIN, KUALA LUMPUR will perform the job of managing risks for the project. It defines roles and responsibilities for stakeholders in the risk processes, the risk management activities that will be carried out, the schedule and subsequent budget for risk management activities and subsequently the tools and techniques that will be used.

This RMP presents the process for implementing proactive risk management as part of the overall management of the KOMPLEKS KERJA RAYA 2, (KKR 2) JALAN SULTAN SALAHUDDIN, KUALA LUMPUR project. Risk management is a program management tool to assess and mitigate events that might adversely impact the project. Therefore, risk management increases the probability/likelihood of project success.

This RMP will:

- Serve as a basis for identifying alternatives to achieve cost, schedule, and performance goals
- Assist in making decisions on budget and funding priorities
- Provide risk information for milestone decisions
- Allow monitoring the health of the project as it proceeds.

The RMP describes methods for identifying, analyzing, prioritizing, and tracking risk drivers; developing risk-handling plans; and planning for adequate resources to handle risk.

It assigns specific responsibilities for the management of risk and prescribes the documenting, monitoring, and reporting processes to be followed.

1.3 Project Summary

Client:Kementerian Kerja RayaProject Director:Pengarah Kanan Bangunan AmContractor:Ahmad Zaki Sdn BhdContract Cost:RM 309,374,000.00Construction Period:130 weeksCompletion Date :28 May 2012Building Component:1) Tower (38 Storeys)2) Podium (Car Park)

1.3.1 Project Governance

The primary function of the Governance Committee is to take responsibility for the feasibility, business case and the achievement of outcomes of the Kompleks Kerja Raya 2 (KKR2). The Kompleks Kerja Raya 2 (KKR2) Governance Committee will monitor and review the project status, as well as provide oversight of the project deliverable rollout. The Governance Committee provides a stabilizing influence so organizational concepts and directions are established and maintained with a visionary view. The Governance Committee provides insight on long-term strategies in support of legislative mandates. Members of the Governance Committee ensure business objectives are being adequately addressed and the project remains under control. In practice these responsibilities are carried out by performing the following functions:Monitoring and review of the project at regular Governance Committee meetings;Providing assistance to the project when required;Controlling project scope as emergent issues force changes to be considered, ensuring that scope aligns with the agreed business requirements of project sponsor and key stakeholder groups;Resolving project conflicts and disputes, reconciling differences of opinion and approach; Formal acceptance of project deliverables. The Governance Committee will consist of the following main stakeholder members identified by the Chairman/ Project Lead 1.Ketua Pengarah Kerja Raya,Project Lead/Chairman,Jabatan Kerja Raya Malaysia2.Ketua Setiausaha / Wakil,Member, Kementerian Kerja Raya (Client)3.Timbalan KPKR Sektor Bisnes,Member, Jabatan Kerja Raya Malaysia4.Timbalan KPKR Sektor Pengurusan/ Pakar, Member,Jabatan Kerja Raya Malaysia5.Pengarah Kanan,Cawangan Kerja Bangunan Am,Project Director/Member,Jabatan Kerja Raya Malaysia6.Pengarah Urusan,Member, Ahmad Zaki Sdn Bhd7.Pengurus Besar Kanan Pembinaan, Pasukan Projek KKR2WPD / SecretariatJabatan Kerja Raya Malaysia

1.4 Scope and Context

This RMP identifies the procedures used to manage risk throughout the project. In addition to documenting the approach to risk identification and analysis, the plan covers who is responsible for managing risks, how risks will be tracked throughout the project lifecycle, and how mitigation and contingency plans are developed and implemented.

Risk management starts at the beginning of the project (Initiation Phase) with initial planning and assessing and is carried out at all levels within the project: Project Manager and his team, client and contractor. The risk management process ensures that risks are mitigated at the appropriate level and communicated as appropriate. While this plan provides guidance on managing all levels of risks, the primary focus is on risks at the project level; assuming that similar processes are in effect within the individual teams and contractors that comprise the project.

Risk management is an integral part of overall project planning and management and effective project planning and management requires effective identification and assessment of risks and determining what mitigating actions are required. Managing the effective completion of mitigation actions should be integrated with overall project tasks and assignments.

Risk management also works in concert with issue management. The key difference between issue management and risk management is the element of uncertainty inherent in risks. Uncertain events that could impact the project should be identified and managed through this RMP. Note that risks could lead to identification of issues and issues could drive identification or resolution of risks.

In order to be successful, the principles listed below guide the use and implementation of the overall Risk Management process that is described in detail in Section 2 of this document**.**

- Decisions will not be revisited once made (unless substantively new facts become available).
- A single owner is assigned responsibility for a risk even if several people work to mitigate it.
- Work and communicate progress on most severe risks first.
- Set realistic due dates and then work to meet the dates.
- Mitigate risks at the appropriate level (i.e., Project Manager, team, client and contractor).
- Responsible team leads, determine and agree on the risk severity level.
- Document the planned risk mitigation history and actual mitigation of a risk. This documentation serves as a key input to root cause analysis, key learning, metrics, and risk analysis

1.5 Definitions, Acronyms and Abbreviations

PM	Project Manager
RMgr	Risk Manager

RMP	Risk Management Plan
CCC	Certificate of Completion and Compliance
CF	Certificate of Fitness
CPM	Critical Path Method
EPU	Economic Planning Unit
PM	Project Manager
SOA	Schedule of Accommodation
VO	Variation Order

Specific risks definitions are shown at Attachment D.

2. RISK MANAGEMENT PROCESS

This section describes the JKR project risk management process and provides an overview of the KOMPLEKS KERJA RAYA 2, (KKR 2) JALAN SULTAN SALAHUDDIN, KUALA LUMPUR risk management approach. Risk management is defined as the act or practice of controlling risk and includes risk planning, assessing risk areas, developing risk-handling options, monitoring risks to determine how risks have changed, and documenting the overall risk management program. Figure 1 shows, in general terms, the overall risk management process that has been followed in the KOMPLEKS KERJA RAYA 2, (KKR 2) JALAN SULTAN SALAHUDDIN, KUALA LUMPUR . Each of the risk management functions shown in the figure is discussed in the following paragraphs, along with specific procedures for executing them.

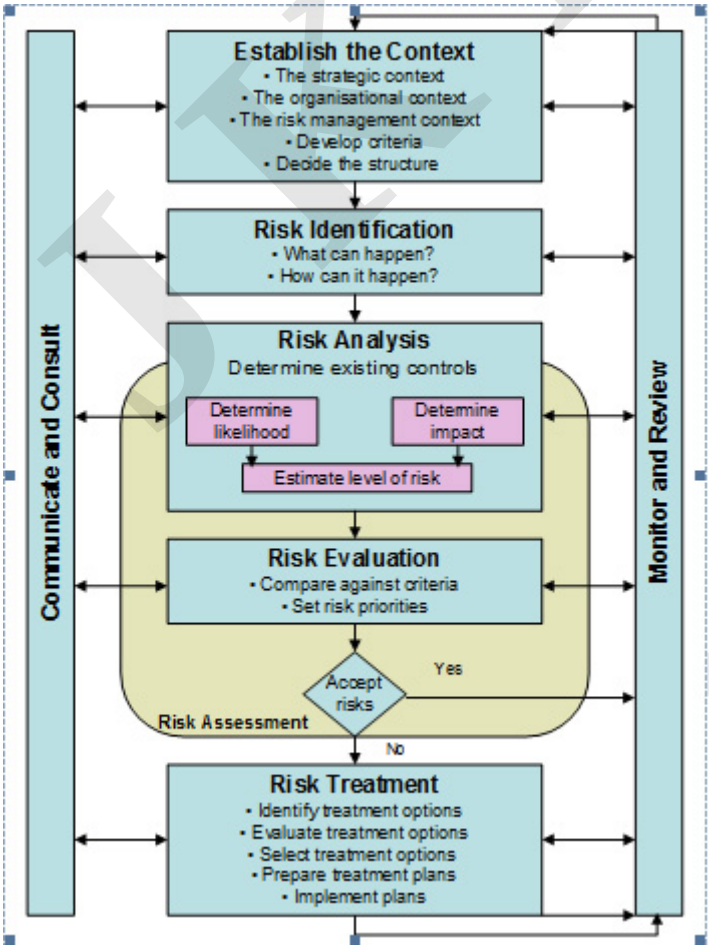

Figure 1: JKR Project Risk Management Process

2.1 Establish the Context

Establishing the context for the KOMPLEKS KERJA RAYA 2, (KKR 2) JALAN SULTAN SALAHUDDIN, KUALA LUMPUR consists of the up-front activities necessary to execute a successful risk management program. It is an integral part of normal project planning and management. The planning addresses each of the other risk management functions, resulting in an organized and thorough approach to assess, handle, and monitor risks. It also assigns responsibilities for specific risk management actions and establishes risk reporting and documentation requirements. This RMP serves as the basis for all detailed risk planning, which must be continuous. The risk planning is detailed out in the Risk Planning Template (see Attachment A).

2.1.1 Responsabilities

The project manager (or delegate or risk manager if appropriate) is responsible for conducting risk planning, using this RMP as the basis. Planning covers all aspects of risk management to including assessment, handling options, and monitoring of risk mitigation activities. The project management monitors the planning activities of the team to ensure that they are consistent with this RMP and that appropriate revisions to this plan are made when required to reflect significant changes resulting from the team planning efforts.

Each person involved in the design, production, operation, and support of the project is a part of the risk management process. This involvement is continuous and should be considered a part of the normal management process.

2.1.2 Documentation

This RMP establishes the basic documentation and reporting requirements for the project. Team members should identify any additional requirements that might be needed to effectively manage risk at their level. Any such additional requirements must not conflict with the basic requirements in this RMP.

2.2 Risk Identification

Risk identification is the first step in the assessment process. The basic process involves reviewing the entire (project name) to determine those critical events that would prevent the project from achieving its objectives. All identified risks were documented in the Risk Register (see Attachment B).

Risks were identified by the team, including the client and contractors, which allowed the identification of significant concerns earlier than otherwise might be the case and the identification of those events in critical areas that need to be dealt with to avoid adverse consequences/impacts. Likewise, individuals involved in the detailed and day-to-day technical, cost, and scheduling aspects of the project are most aware of the potential problems (risks) that need to be managed.

For the purpose of this assessment, risks were identified in the Post Award stage of the project implementation.

2.2.1 Tools and Techniques

Tools and techniques used in the risk identification and mitigation strategies for this project were as follows:

- [X] Brainstorming, with a facilitator and range of stakeholders
- [X] Interviews with stakeholders
- [X] Scenario, business analysis and event tree modelling.
- [ ] Dependency modelling.
- [X] Experience from other projects, metrics and published data norms
- [X] Reviewing project information, including plans, analysis and designs.
- [ ] Checklists.

☐ Others :

2.2.2 Risk Register

The key output of the risk identification phase is the risk register. The risk register for the project is shown at Attachment B.

Note: At this stage just a list of identified risks would appear in the risk register. The risk register Attachment B has had further analysis applied to the risks.

2.3 Risk Analysis

Risk analysis can be undertaken using similar methods as used for risk identification and is also a continuous process in the same way that risk identification is and the two may often be combined, in a structured way, into one activity.

Project or program risks are analysed to identify the:

- Estimated likelihood that the risk will occur (preferably probability using quantitative methods);
- Estimated impacts of the risk occurring in terms of its cost, schedule, 'quality' and other impacts on the project objectives including its products;
- The most appropriate risk owner; and
- Potential impact of the risk on third parties such as other projects and organisations.

It can also be useful at this stage of the analysis to conduct an initial high level assessment of whether the risk should be managed. There are three cases where a risk may not need managing by a project:

- The likelihood of it happening is extremely small.
- The impacts are insignificant and require no treatment.
- The risk belongs outside the project; in this case the outside owners must formally take responsibility for it.

2.3.1 Updated Risk Register

The risk register is updated with the likelihood and impact Information and the consequent risk rating as per Attachment B.

2.4 Evaluation

Typically an analysis or review of the risks associated with a project is made and a decision formed on what risks need treatment and what are their associated priorities. The first action is to sort the analysed risks by classifying them as one of:

- Accepted Risks, risks that are currently acceptable and do not require treatment, but will be kept under review.
- Rejected Risks, risks that are considered non-existent after analysis or of no significance.
- Significant Risks to be treated, these may need prioritisation.

Classification and prioritisation will be against risk criteria in the light of contexts and policies established in the Risk Management Plan.

2.5 Risk Treatment

An initial identification and assessment of measures to modify the identified risks was performed and the preparation of treatments for the risks identified. Risk Owners should also be assigned and may be members of the project team, business or other managers elsewhere in JKR, participating agencies or other stakeholder bodies. They will require an appropriate allocation of resources for their task(s), which may require negotiation by the sponsor depending on their relationship to the project.

Treatments are aimed to either reduce the risk's likelihood or impacts or both. Preparation of treatments requires inputs from stakeholders and coordination with the Project Manager. Normally if there is an unacceptable risk of a treatment failing (or not being found) or when a risk may reach an unacceptable level then a contingency plan must be developed.

2.5.1 Risk Analysis Templates

The output of the identification and assessment of the high priority risks is shown at Attachment C. At this stage some implementation measures have been identified (New Risk Treatments) but actions arising from these strategies, should, where possible, be included as activities in the project management plan.

2.6 Risk Monitoring and Reporting

The project manager as overall responsibility for monitoring and managing all aspects of the risk management process, unless the risk management activities have been assigned to a separate risk manager.

To ensure that significant risks are effectively monitored, risk-handling actions should be reflected in integrated project planning and scheduling. Identifying these risk handling actions and events in the context of Work Breakdown Structure (WBS) elements establishes a linkage between them and specific work packages, making it easier to determine the impact of actions on cost, schedule, and performance.

Risk status should be reported on an exception basis at the weekly project status meetings, with a full risk review conducted on a monthly basis.

3.0 RISK MANAGEMENT ORGANISATION

The risk organisation for the KOMPLEKS KERJA RAYA 2, (KKR 2) JALAN SULTAN SALAHUDDIN, KUALA LUMPUR is not a separate organisation, but rather risk is integrated into the project's existing structure. A role is typically assigned to a Risk Manager who in turn is the overall coordinator of the project's Risk Management Program.

Note: This role in most projects will be performed by the Project Manager, but depending on the size of the project this role may be performed by a dedicated person.

The Risk Manager is responsible for:

- Maintaining this RMP
- Briefing the PM on the status of project risk
- Tracking efforts to reduce moderate and high risk to acceptable levels
- Providing risk management training
- Facilitating risk assessments
- Preparing risk briefings, reports, and documents required for project reviews and the acquisition milestone decision processes.

The program manager endorses the risk management plan and receives update reports on the status of project risks from the Project Manager or Risk Manager.

The project team is responsible for implementing risk management tasks as per this Plan. This includes the following responsibilities:

- Review and recommend to the Risk Manager changes on the overall risk management approach based on lessons learned.
- As directed, update the project risk assessments made during the applicable project phase.
- Review and be prepared to justify the risk assessments made and the risk mitigation plans proposed.
- Report risk to the PM, with information to the Risk Manager via the Risk Register or Risk Analysis Templates.
- Ensure that risk is a consideration at each project review.

It is also important that the user/owner organisation remains fully involved in the risk management process, and identifies risks associated with future operation of the project deliverable(s).

ATTACHMENT A

RISK MANAGEMENT PLANNING

1.0 PROJECT INFORMATION

PROJECT TITLE :	KOMPLEKS KERJA RAYA 2, (KKR 2) JALAN SULTAN SALAHUDDIN, KUALA LUMPUR
PROJECT REF. NO. :	JKR/IP/CKUB/241/2009
SKALA REF. NO. :	SKL0202/B08/15680/12254/10178/TB/RB
CLIENT MINISTRY :	Kementerian Kerja Raya
END USER :	
FUNDING :	pfi
PROGRAM MANAGER :	Yyuri Muji
PROJECT MANAGER :	Ir Roslina Abdul Rahman
SITE SUPERVISION OFF :	
RISK MANAGER :	
PROJECT ENTRY DATE:	00-00-0000
PROJECT COMPLETION DATE :	00-00-0000
CONTRACT START DATE:	01-12-2009
CONTRACT END DATE:	18-08-2012
PROJECT CEILING COST:	350,000,000.00
CONTRACT COST:	309,374,000.00
TYPE OF CONTRACT:	design-build
CONTRACTOR'S NAME:	AHMAD ZAKI SDN. BHD.
ADDRESS:	

Need for Workshop?

- (●) Yes
- ( ) No

2.0 RISK MANAGEMENT WORKSHOP

DATE OF WORKSHOP:	13-04-2010
LOCATION :	Bukit Tinggi Resort

PARTICIPATING ORGANISATIONS :	1. JKR 2. AZSB 3. ARUP Jurunding 4. GDP Architect
NO. OF PARTICIPANTS :	
NO. OF PRESENTER / FACILITATORS :	Presenter Gunasegaran Facilitators Halimaton
ESTIMATED COST :	RM 20,000.00
SOURCE OF FINANCING :	Projek
ITINERARY TYPE :	B
PROJECT PHASES :	CONSTRUCTION
CURRENT PROJECT ISSUES :	1. GBI 2. End User 3. TNB Substation
WORK PLAN :	WORK SCHEDULE
LIST OF APPARATUS & EQUIPMENT AND NOS REQUIRED :	1. Projector 4 Nos 2. Laptop 5 Nos

3.0 MONITORING & CONTROL

3.1 RISK MANAGEMENT PLAN

DATE OF INITIAL RISK REVIEW MEETING :	13-04-2010
PARTICIPATING ORGANISATIONS :	
DATE TO APPROVE RMP	03-09-2010
DATE TO DISTRIBUTE RISK REGISTER :	04-09-2010

3.2 MONITORING & FEEDBACK

1	PROJECT SITE MEETINGS	☒
2	FOLLOW UP RISK REVIEW MEETINGS	☒
3	TECHNICAL MEETINGS	☒
4	E-MAIL	☒
5	OTHERS :	☐

3.3 REPORTING

FREQUENCY OF STATUS REPORT :	BI MONTHLY
DATE TO COMPLETE FINAL REPORT :	18-08-2012
REPORTING OFFICER :	Mohd Nazira Mohd NAsir
VERIFYING OFFICER :	Ir Roslina Abdul Rahman

4.0 SIGN OFF

Prepared by Project Manager :	Ir Roslina Abdul Rahman
Approved by Program Manager / Director :	Yyuri Muji
Date Approval :	14-07-2011

ATTACHMENT B

RISK REGISTER

Project Title : KOMPLEKS KERJA RAYA 2, (KKR 2) JALAN SULTAN SALAHUDDIN, KUALA LUMPUR	Date : 14-07-2011
Project Ref. No. : JKR/IP/CKUB/241/2009	Compiled By :
Project Manager : Ir Roslina Abdul Rahman	Reviewed By : Ir. Roslina Abdul Rahman

CATEGORY OF PROJECT RISK	
1. Political	9. Contractual
2. Scope	10. Technical
3. Schedule	11. Environmental
4. Financial	12. Suppliers
5. Human Resources	13. Industrial relations
6. Quality	14. Organisational
7. Communications	15. OH & S
8. Other resources	16. Cultural & Social

Likelihood Rating	Impact Rating	Risk Rating
5. Almost certain	V. Severe	E- Extreme risk, immidiate action required
4. Likely	IV. Major	H- High risk, will jeopardize project if not managed
3. Possible	III. Moderate	M- Medium risk, will impact time, cost or quality if not managed
2. Unlikely	II. Minor	L- Low risk, acceptable project management risk, monitor only
1. Rare	I. Insignificant	

Risk Matrix

LIKELIHOOD						
	5	H	H	H	E	E
	4	M	M	H	E	E
	3	L	M	M	H	E
	2	L	L	M	H	H
	1	L	L	M	M	H
		I	II	III	IV	V
		IMPACT				

Ref No. (WBS)	Risk Event There is a risk that	Category of Risk	Likelihood Rating	Impact Rating	Risk Rating	Treatment Measures	Responsible Party	Target Deadline
1.0	PLANNING RISK							

1.1	There is a risk of escalation in construction cost (material & labor cost) leads to continuous change in scope of works resulting in delayed implementation of project	4	5	IV	E	1)	1)	1)
1.2	Long lead time required by management to make decisions on scope of works & development budget leads to long duration required for implementation process resulting in escalating construction cost.	3	4	IV	E	1)	1)	1)
1.3	There is a risk of periodic changes in project objective leading to many changes in scope of works resulting in delayed implementation of project.	1	3	IV	H	1)Prioritizing project objectives to ensure that top priorities are still met even with budget constraints and changes in scope	1)JKR	1)13-04-2011
1.4	There is a risk of end user Late confirmation of end-users (occupants) leading to late confirmation of Interior Design & construction may cause abortive design & resulting in late delivery of project and cost overrun.	10	4	IV	E	1)Write officially to the Client for confirmation	1)HOPT	1)23-04-2010
						2)Carry out discussions with the Client (KSU)	2)HOPT	2)24-05-2010
1.5	There is a risk of late confirmation of 33kV sub-station leading to delayed construction & handover of sub-station resulting in late commissioning & handover.	2	3	IV	H	1)To negotiate with TNB on providing 11 kV substation only	1)HOPT	1)30-04-2010
1.6	Site locationLimited site selection leading to construction constraints resulting in high cost of construction and longer completion period	2	3	V	E	1)	1)	1)
1.7	Differing levels of understanding of Development and Construction process leading to longer planning period resulting in abortive works and project delays.	14	3	III	M	1)	1)	1)
1.8	There is a risk of long lead time of project implementation leading to outdated specifications resulting in obsolete facility and technology which is not acceptable by end-users.	10	4	V	E	1)	1)	1)
1.9	There is a risk of incorrect site survey and site boundaries leading to delays in confirming site plan for DO submission resulting in delayed approval by DBKL.	10	4	IV	E	1)	1)	1)
2.0	DESIGN RISK							

2.1	The contractor/consultant detail design does not fulfill JKR requirement	10	3	III	M	1)	1)	1)
2.2	There is a risk that lack of coordination and communication among consultants will lead to project delay and cost overrun.	7	5	IV	E	1)Perform internal audit on document control procedures every 3 months	1)Contractor	1)14-07-2010
						2)Define line of communication	2)Project Manager	2)15-05-2010
						3)Define function chart of role and responsibility	3)Project Manager	3)15-05-2010
						4)Use latest communication tools/ gadget	4)Project Manager	4)15-05-2101
2.3	: There is a risk that delay in concept design acceptance by client will lead to delay in design development and construction drawings.	10	3	IV	H	1)Regular discussion and presentation with stakeholders	1)HOPT and consultant	1)15-04-2010
						2)Offer a few alternative concept design	2)HODT	2)15-10-2010
2.4	Changes of design and new requirement by JKR/client	10	3	III	M	1)	1)	1)
2.5	Delay in design for provisional items	10	3	III	M	1)	1)	1)
2.6	There is a risk that delays in producing detail design drawing will affect the construction.	10	4	IV	E	1)Recruit more competent and experienced staff.	1)Consultant	1)30-05-2010
						2)Introduce incentive and bonus for good performer.	2)Consultant	2)31-12-2010
						3)Include design deliverable in master work program	3)AZSB	3)30-05-2010
2.7	Financial constraint will cause repetitive design	4	3	III	M	1)	1)	1)
2.8	Design changes arising from site condition/ authorities requirement/ weather condition.	10	3	III	M	1)	1)	1)
2.9	New requirement/ regulation from authorities eg. Railway Act.	10	3	III	M	1)	1)	1)
2.10	Inadequate soil investigation anduncertainty of underground condition (soil, rock, utilities) may lead to delay in construction.	10	4	IV	E	1)	1)	1)
2.11	There is a risk that concept design for foundation and main structure not finalized will cause delay of issuance of construction drawing leading to delay in work commencement.	10	4	IV	E	1)Presentation to top management	1)AZSB	1)30-04-2010
2.12	There is a risk that additional requirements imposed to the contract on Green Building Index will cause design changes leading to cost escalation	2	4	IV	E	1)Conduct special presentation to Works Minister for gold rating	1)Project Director	1)19-05-2010
						2)Request for budget increment from Client	2)HOPT	2)19-05-2010

2.13	Non compliance to specifications and non comprehensive audit by HODTs and Independent Checker then lead to time and cost on corrective action.	10	3	IV	H	1)To conduct monthly design Audit	1)JKR Project Team and HODTs	1)28-05-2010
						2)To conduct monthly coordination meeting between JKR and Contractor	2)HOPT	2)30-05-2010
2.14	If late issuance of construction drawings by consultants then no commencement of work at site	10	3	IV	H	1)Biweekly design coordination by contractor	1)PM AZSB	1)15-05-2010
2.15	If late approval from local authorities (DBKL, TNB, SYABAS, BOMBA, IWK) then no commencement of work at site	10	4	IV	E	1)Comply with requirement & Submit building plan to DBKL	1)Consultant Architect AZSB/Design Coordinator	1)15-07-2010
						2)Follow up with TNB for approval (11kV) for detail design	2)Consultant Electrical AZSB / Design Coordinator	2)15-06-2010
2.16	Overlook of maintenance aspect during design stage (M&E, architectural)	10	3	IV	H	1)	1)	1)
2.17	Non compliance to IBS requirements (70%)	2	3	III	M	1)	1)	1)
2.18	Non compliance to BEI requirements (100kWh/m2/yr)	2	3	III	M	1)	1)	1)
3.0	PROCUREMENT RISK							
3.1	There is a risk that short tender duration leading to Tenderer not having considered all technical requirements resulting in inaccurate pricing, possible variation claims or sub-standard products.	3	3	IV	H	1)	1)	1)
3.2	There is risk that large difference between JKR available budget versus Tenderers offers leading to inability to award tender resulting in redesign and retendering exercise.	4	5	V	E	1)	1)	1)
3.3	Late delivery of preliminary equipment leading to JKR unable to effectively utilize equipment resulting in wasted resources.	9	3	II	M	1)	1)	1)
3.4	Obsolete / shortage / unreasonable price increase of approved material or equipment leading to long lead time for deliver or lost of profit resulting in delays in project	12	3	III	M	1)	1)	1)

3.5	There is a risk that incomplete and unclear Pre-bid document will lead to inaccurate tender pricing, non conforming offer, thus delay in issuance of award	10	4	IV	E	1)Issuance of NCR by all HODTs. 2)Official undertaking by contractor to comply.	1)HODTs 2)Contractor	1)13-04-2010 2)13-04-2010
3.6	Insufficient period given for tenderers to bid.	3	3	III	M	1)	1)	1)
3.7	Initial construction materials proposed during tender became obsolete at construction stage.	12	3	II	M	1)	1)	1)
3.8	There is a risk that the changes of scope during tender period will lead to delay in project implementation.	2	5	IV	E	1)Issue addendum to the tenderers 2)Retender	1)HOPT & HODTs 2)HOPT&HODT	1)13-04-2010 2)13-04-2010
3.9	Selection of subcontractor does not go through pre-qualification processes.	9	3	II	M	1)	1)	1)
3.10	Difficulty to get capable class F contractors as required.	9	3	II	M	1)	1)	1)
3.11	Leakage of information during tender evaluation will affect the evaluation process	10	3	III	M	1)	1)	1)
3.12	Weakness in tender evaluation process and inexperienced evaluation team.	10	3	III	M	1)	1)	1)
4.0	CONSTRUCTION RISK							
4.1	There is a risk that site constraint and poor site maintenance (poor housekeeping) will cause difficulties in logistic leading to delay in project delivery	2	4	IV	E	1)	1)	1)
4.2	There is a risk that inadequate safety measures at site will cause accident leading to stop work order and project cannot finish on time	15	3	IV	H	1)	1)	1)
4.3	There is a risk that machinery breakdown will cause stop work leading to delay of project delivery	8	3	IV	H	1)	1)	1)
4.4	Shortage of material supply	8	3	IV	H	1)	1)	1)
4.5	Shortage of skill workers will cause poor workmanship	5	3	IV	H	1)	1)	1)
4.6	Delay handing over of SSU building to TNB will cause TNB to delay electrical supply leading to delay in project completion	3	3	IV	H	1)	1)	1)

4.7	Non-compliance to specifications/ method of statement will cause poor quality Late submission and consent of method statement will cause delay in construction works	10	3	IV	H	1)	1)	1)
4.8	Insufficient numbers of project team (JKR, contractor)	5	3	III	M	1)	1)	1)
4.9	Slow response (e.g contractor)	0	0			1)	1)	1)
4.10	Lack of understanding on contractual matters	0	0			1)	1)	1)
4.11	Late preparation of material, mock-up for approval	0	0			1)	1)	1)
4.12	Late confirmation and supply by utilities provider (SYABAS, TNB,TELEKOM, IWK, etc)	0	0			1)	1)	1)
4.13	Non compliance to DBKL requirement for additional parking	0	0			1)	1)	1)
4.14	Lack of supervision (contractor)	0	0			1)	1)	1)
4.15	As built drawings not ready prior to progress payment	0	0			1)	1)	1)
4.16	Difficulties to construct perimeter column	0	0			1)	1)	1)
4.17	Damages to adjacent building due to ground anchor (ASWARA, JKRs buildings)	0	0			1)	1)	1)
4.18	Complaint from public and neighbouring building	16	5	II	H	1)	1)	1)
4.19	There is a risk that poor workmanship due to unskilled worker and inferior material will affect the increase of cost (rectification works) and prolong project duration.	6	4	IV	E	1)Close monitoring by AZSB	1)site team (contractor RA/RE personnel)	1)01-12-2009
						2)Prepare schedule quality audit by HODT and ensure audit carried out regularly	2)WPD & HODT	2)10-06-2010
4.20	There is a risk that material and equipment below specification (glass, chiller, lift etc) due to unavailability of local certified body/party hence affecting the building functionality and maintainability.	10	4	IV	E	1)Sending representative(s) to manufacturer plant witness the performance tests.	1)Contractor (Project Manager)	1)01-12-2010

4.21	There is a risk that slope failure due to insufficient EMP implementation will cause delay in project progress.	11	3	V	E	1)To ensure Environmental Protection Works (EPW) to be part of CPM	1)Contractor EO / Environmental officer by JKR	1)01-12-2009
						2)Contractor to submit EMP prepared by registered Environment Consultant to HODT	2)Contractors EO / Environmental officer by JKR	2)01-12-2009
						3)To ensure the EMP well implemented progressively	3)Contractor EO / Environmental officer by JKR	3)01-12-2009
4.22	There is a risk that insufficient coordination drawing among all disciplines will affect double handling works (External & Internal M&E services, C&S works)	10	4	IV	E	1)Superimposed AutoCAD drawings for all services with different colour codings	1)Contractor-project manager	1)01-12-2009
						2)Implement communication matrix	2)Contractor-project manager	2)01-12-2009
4.23	There is a risk that scope changes during constructions caused by the client and local authorities that will delay in project handing over as well as additional cost borne by the project owner	10	3	IV	H	1)Get written consent from local authorities	1)WPP / Contractor Project Manager	1)01-12-2009
						2)To get end user confirmation and agreement	2)HOPT	2)01-12-2009
						3)Invite the local authorities to the project site meetings/ dialogue session prior to the finalizing and submission of drawings	3)WPP / Contractor Project Manager	3)01-12-2009
4.24	Delay of work due to unforeseen weather	10	3	IV	H	1)	1)	1)
4.25	Insufficient communication between project team (end-users, project management team, HODTs & HOPT and contractor) leading to unsolved issues that may delay the project implementation.	7	4	IV	E	1)	1)	1)
4.26	Late submission of design / construction drawings to HODT leading to late consent resulting in delay in construction.	3	4	IV	E	1)	1)	1)
4.27	Intervention by stakeholders leading to disruption of project implementation resulting in project delay and cost increase.	14	4	IV	E	1)	1)	1)
4.28	Non compliance to BEI requirements (100kWh/m2/yr)	0	0			1)	1)	1)
5.0	HANDOVER RISK							
5.1	There is a risk that shortage of parking space due to cater for existing office blocks resulting in complaints from the visitors/occupants of KKR2	16	5	IV	E	1)Build the elevated carpark for future	1)KKR	1)18-08-2012
						2)Provide RETURN shuttle bus service from different destinations(Padang Merbok/ commuter stations) to KKR2	2)KKR	2)18-08-2012

5.2	There is a risk that traffic congestion at Jln Sultan Salahuddin due to increase in traffic volume resulting to traffic jams, complaints, stress and social issues.	16	4	IV	E	1)Propose alternative exit / entrance roads	1)KKR	1)18-08-2012
5.3	There is a risk that full testing of M&E services cannot be done due to contractor handover as a bare office space without the definition of the functional area from the client	10	4	IV	E	1)To confirm the scope of works and appointment the ID specialist	1)Pengarah Projek (PD /WPD)	1)17-04-2012
						2)To identify and confirm the end user of KKR2	2)HOPT	2)17-04-2012
5.4	There is a risk that acceptance criteria from Caw Senggara Fasiliti Bangunan cannot be achieved due to non compliance of CSFB requirement checklist resulting the end user refuse to accept	6	4	IV	E	1)Acquire the check list for the criteria from JKR	1)Contractor project Manager/ WPP	1)01-06-2010
5.5	Low incoming water pressure (Once project completed)	10	3	III	M	1)	1)	1)
5.6	Delay in local authorizes approval for CCC	13	3	III	M	1)	1)	1)
5.7	Non compliance to the requirement of Energy Efficiency due to failure in achieving BEI 100 kWh/m2/year resulting to unfulfilled to the needs statement/quality of the projects	10	5	IV	E	1)Make mandatory of all electrical/mechanical systems/ fittings to be Energy Efficiency (EE) compliance	1)Contractor -Energy Consultant/ WPP/HODT	1)30-05-2010
5.8	Uncomfortable working area hand over to end user.	0	0			1)	1)	1)
5.9	NCR still not close will delay in issuing CPC	0	0			1)	1)	1)
5.10	Compilation of Operation and Maintenance Manual not ready prior to handing over	0	0			1)	1)	1)

ATTACHMENT C

Risk Analysis Template

Ref No (WBS): 1.1	Risk Title: Escalation in construction cost (material & labor cost) leads to continuous change in scope of works resulting in delayed implementation of project		
Risk Description: There is a risk of escalation in construction cost (material & labor cost) leads to continuous change in scope of works resulting in delayed implementation of project			
Risk Nature: OPERATIONAL	Risk Category: 4	Risk Manager:	Business Unit: CKBA

Risk Factors:	Possible Effects:
- Long lead time required by management to make decisions on scope of works & development budget	- Inflation causes increase in prices of material & labor
- Budget constraints due to limited funds	- Reduced scope of works may result in end product not meeting original objective. - Abandonment of project resulting in wasted resources
- Non specific critical project objectives	- End user not satisfied with product. - JKR continues to bear high overheads for rental of external offices.

Existing Risk Treatments:	Effectiveness: (High/Medium/Low)
- 1) Regular meetings emphasizing on outstanding issues / decisions and critical datelines to be met.	- 1) Medium

New Risk Treatments :	Responsible Party:	Target Deadline:
-	-	-

Risk Assessment Date	Inherent Risk			Assessed Risk			Target Risk		
	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating
	5	IV	E						

Ref No (WBS): 1.2	Risk Title: Long lead time required by management to make decisions on scope of works & development budget leads to long duration required for implementation process resulting in escalating construction cost.		
Risk Description:			
Risk Nature:	Risk Category: 3	Risk Manager:	Business Unit:

Risk Factors:	Possible Effects:
-	-

Existing Risk Treatments:	Effectiveness: (High/Medium/Low)
-	-

New Risk Treatments :	Responsible Party:	Target Deadline:
-	-	-

Risk Assessment Date	Inherent Risk			Assessed Risk			Target Risk		
	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating
	4	IV	E						

Ref No (WBS): 1.3	Risk Title: Periodic changes in project objective leading to many changes in scope of works resulting in delayed implementation of project.		
Risk Description: There is a risk of periodic changes in project objective leading to many changes in scope of works resulting in delayed implementation of project.			
Risk Nature: OPERATIONAL	Risk Category: 1	Risk Manager:	Business Unit: CKBA

Risk Factors:	Possible Effects:
- Budget constraints due to limited funds	- Project only able accommodate 30% of KKR staff that is currently occupying rented offices.
- Change of decision makers throughout planning stage of project	- Delayed implementation results in increase in construction cost.
- Changes in end-user priority	- JKR having to bear additional cost to fit-out rented offices due to later completion of project. (e.g. Mid-Valley, Menara TIMA, PJD)

Existing Risk Treatments:	Effectiveness: (High/Medium/Low)
- 1) Formalization of project Design Brief (Project Objectives)	- 1) Medium

New Risk Treatments :	Responsible Party:	Target Deadline:
- 1) Prioritizing project objectives to ensure that top priorities are still met even with budget constraints and changes in scope	- 1) JKR	- 1) 13-04-2011

Risk Assessment Date	Inherent Risk			Assessed Risk			Target Risk		
	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating
	3	IV	H						

Ref No (WBS): 1.4	Risk Title: End userLate confirmation of end-users (occupants) leading to late confirmation of Interior Design & construction may cause abortive design & resulting in late delivery of project and cost overrun.		
Risk Description: There is a risk of end user Late confirmation of end-users (occupants) leading to late confirmation of Interior Design & construction may cause abortive design & resulting in late delivery of project and cost overrun.			
Risk Nature: OPERATIONAL	Risk Category: 10	Risk Manager:	Business Unit: CKBA

Risk Factors:	Possible Effects:
- No decision by KKRs top management	- Late occupancy. - Difficulties to meet GBIs requirement. - Difficulties on services arrangement. - Delay to produce the shop drawings for the IBS pre-cast elements

Existing Risk Treatments:	Effectiveness: (High/Medium/Low)
- 1) Acknowledgement to the Client through official letter	- 1) Low
- 2) Official request from Contractor to HOPT requesting the scope to be parked under Main Contract	- 2) Low

New Risk Treatments :	Responsible Party:	Target Deadline:
- 1) Write officially to the Client for confirmation	- 1) HOPT	- 1) 23-04-2010
- 2) Carry out discussions with the Client (KSU)	- 2) HOPT	- 2) 24-05-2010

Risk Assessment Date	Inherent Risk			Assessed Risk			Target Risk		
	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating
00-00-0000	4	IV	E	4	IV	E	3	III	M

Ref No (WBS): 1.5	Risk Title: Late confirmation of 33kV sub-station leading to delayed construction & handover of sub-station resulting in late commissioning & handover.		
Risk Description: There is a risk of late confirmation of 33kV sub-station leading to delayed construction & handover of sub-station resulting in late commissioning & handover.			
Risk Nature: OPERATIONAL	Risk Category: 2	Risk Manager:	Business Unit: CKBA

Risk Factors:	Possible Effects:
- Requirements set by TNB above the load requirements of the project	- Construction cost higher than provisional sum resulting in increase in total contract value.
- Provisional sum insufficient to construct 33kV sub-station	- Construction cost higher than provisional sum resulting in increase in total contract value.
- Large land area required for 33kV sub-station	- Late completion & handover of sub-station resulting in late power supply and delayed commissioning
- Long lead time for fit-out and energizing of 33kV sub-station (1.5yrs)	- Late completion & handover of sub-station resulting in late power supply and delayed commissioning.

Existing Risk Treatments:	Effectiveness: (High/Medium/Low)
- 1) Reconfirmation of overall electrical load to verify load requirements.	- 1) Medium
- 2) JKR to have direct negotiations with TNB to confirm if a 33kV sub-station is necessary.	- 2) Medium
- 3) CKE (Cawangan Kej. Elektrik) to provide report to JKR on their recommendations on this matter	- 3) High

New Risk Treatments :	Responsible Party:	Target Deadline:
- 1) To negotiate with TNB on providing 11 kV substation only	- 1) HOPT	- 1) 30-04-2010

Risk Assessment Date	Inherent Risk			Assessed Risk			Target Risk		
	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating
	3	IV	H						

Ref No (WBS): 1.6	Risk Title: Site locationLimited site selection leading to construction constraints resulting in high cost of construction and longer completion period		
Risk Description:			
Risk Nature:	Risk Category: 2	Risk Manager:	Business Unit:

Risk Factors:	Possible Effects:
-	-

Existing Risk Treatments:	Effectiveness: (High/Medium/Low)
-	-

New Risk Treatments :	Responsible Party:	Target Deadline:
-	-	-

Risk Assessment Date	Inherent Risk			Assessed Risk			Target Risk		
	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating
	3	V	E						

Ref No (WBS): 1.7	Risk Title: Differing levels of understanding of Development and Construction process leading to longer planning period resulting in abortive works and project delays.		
Risk Description:			
Risk Nature:	Risk Category: 14	Risk Manager:	Business Unit:

Risk Factors:	Possible Effects:
-	-

Existing Risk Treatments:	Effectiveness: (High/Medium/Low)
-	-

New Risk Treatments :	Responsible Party:	Target Deadline:
-	-	-

Risk Assessment Date	Inherent Risk			Assessed Risk			Target Risk		
	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating
	3	III	M						

Ref No (WBS): 1.8	Risk Title: Long lead time of project implementation leading to outdated specifications resulting in obsolete facility and technology which is not acceptable by end-users.		
Risk Description: There is a risk of long lead time of project implementation leading to outdated specifications resulting in obsolete facility and technology which is not acceptable by end-users.			
Risk Nature: OPERATIONAL	Risk Category: 10	Risk Manager:	Business Unit: CKBA

Risk Factors:	Possible Effects:
- Long lead time of project implementation (>10yrs)	- Outdated technology / obsolete equipment resulting in poor equipment performance & efficiency
- Long construction period equipments only to be handed over at end of project.	- End user might not be willing to accept equipment

Existing Risk Treatments:	Effectiveness: (High/Medium/Low)
- 1) To ensure that contractor has programmed for the procurement of the ICT equipment only when necessary.	- 1) High
- 2) To review contractors proposal just-in-time for procurement and delivery.	- 2) High

New Risk Treatments :	Responsible Party:	Target Deadline:
-	-	-

Risk Assessment Date	Inherent Risk			Assessed Risk			Target Risk		
	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating
	4	V	E						

Ref No (WBS): 1.9	Risk Title: Incorrect site survey and site boundaries leading to delays in confirming site plan for DO submission resulting in delayed approval by DBKL.		
Risk Description: There is a risk of incorrect site survey and site boundaries leading to delays in confirming site plan for DO submission resulting in delayed approval by DBKL.			
Risk Nature: OPERATIONAL	Risk Category: 10	Risk Manager:	Business Unit: CKBA

Risk Factors:	Possible Effects:
- Outdated information from JKPTG (Jabatan Ketua Pengarah Tanah & Galian)	- Incorrect setting out building. - Set-back insufficient to meet DBKL requirements. - Encroachment to neighboring land.

Existing Risk Treatments:	Effectiveness: (High/Medium/Low)
-	-

New Risk Treatments :	Responsible Party:	Target Deadline:
-	-	-

Risk Assessment Date	Inherent Risk			Assessed Risk			Target Risk		
	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating
	4	IV	E						

Ref No (WBS): 2.1	Risk Title: The contractor/consultant detail design does not fulfill JKR requirement		
Risk Description:			
Risk Nature:	Risk Category: 10	Risk Manager:	Business Unit:

Risk Factors:	Possible Effects:
-	-

Existing Risk Treatments:	Effectiveness: (High/Medium/Low)
-	-

New Risk Treatments :	Responsible Party:	Target Deadline:
-	-	-

Risk Assessment Date	Inherent Risk			Assessed Risk			Target Risk		
	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating
	3	III	M						

JABATAN KERJA RAYA MALAYSIA

Ref No (WBS): 2.2	Risk Title: Lack of coordination and communication among consultants/contractor and JKR and unclear of roles and responsibility will lead to project delay and cost overrun.		
Risk Description: There is a risk that lack of coordination and communication among consultants will lead to project delay and cost overrun.			
Risk Nature: OPERATIONAL	Risk Category: 7	Risk Manager:	Business Unit: Projek KKR2

Risk Factors:	Possible Effects:
- 1) No proper distribution of drawings among consultants	- 1) Incomplete or outdated drawings
- 2) Lack of coordination by main contractor	- 2) Information or data not properly shared
- 3) Repetitive or abortive of design.	- 3) Delay in construction drawings

Existing Risk Treatments:	Effectiveness: (High/Medium/Low)
- 1) Regular and scheduled design coordination meeting	- 1) High
- 2) Appointment of project design coordinator.	- 2) High
- 3) Appointment of document controller	- 3) High

New Risk Treatments :	Responsible Party:	Target Deadline:
- 1) Perform internal audit on document control procedures every 3 months	- 1) Contractor	- 1) 14-07-2010
- 2) Define line of communication	- 2) Project Manager	- 2) 15-05-2010
- 3) Define function chart of role and responsibility	- 3) Project Manager	- 3) 15-05-2010
- 4) Use latest communication tools/ gadget	- 4) Project Manager	- 4) 15-05-2101

Risk Assessment Date	Inherent Risk			Assessed Risk			Target Risk		
	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating
14-06-2010	5	IV	E	2	IV	H	I	II	

Ref No (WBS): 2.3	Risk Title: There is a risk that delay in concept design acceptance by client will lead to delay in design development and construction drawings.		
Risk Description: : There is a risk that delay in concept design acceptance by client will lead to delay in design development and construction drawings.			
Risk Nature: OPERATIONAL	Risk Category: 10	Risk Manager:	Business Unit: UPP1B CKBA

Risk Factors:	Possible Effects:
- 1) Does not meet client expectation or requirement	- 1) Delay in finalizing construction drawings
- 2) Client request for alternative design	- 2) Will effect time and cost.

Existing Risk Treatments:	Effectiveness: (High/Medium/Low)
- 1) Regular discussion and presentation with stakeholders	- 1) High
- 2) Offer a few alternative concept design	- 2) High

New Risk Treatments :	Responsible Party:	Target Deadline:
- 1) Regular discussion and presentation with stakeholders	- 1) HOPT and consultant	- 1) 15-04-2010
- 2) Offer a few alternative concept design	- 2) HODT	- 2) 15-10-2010

Risk Assessment Date	Inherent Risk			Assessed Risk			Target Risk		
	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating
00-00-0000	3	IV	H	2	II	L	1	II	L

Ref No (WBS): 2.4	Risk Title: Changes of design and new requirement by JKR/client		
Risk Description:			
Risk Nature:	Risk Category: 10	Risk Manager:	Business Unit:

Risk Factors:	Possible Effects:
-	-

Existing Risk Treatments:	Effectiveness: (High/Medium/Low)
-	-

New Risk Treatments :	Responsible Party:	Target Deadline:
-	-	-

Risk Assessment Date	Inherent Risk			Assessed Risk			Target Risk		
	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating
	3	III	M						

Ref No (WBS): 2.5	Risk Title: Delay in design for provisional items		
Risk Description:			
Risk Nature:	Risk Category: 10	Risk Manager:	Business Unit:

Risk Factors:	Possible Effects:
-	-

Existing Risk Treatments:	Effectiveness: (High/Medium/Low)
-	-

New Risk Treatments :	Responsible Party:	Target Deadline:
-	-	-

Risk Assessment Date	Inherent Risk			Assessed Risk			Target Risk		
	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating
	3	III	M						

Ref No (WBS): 2.6	Risk Title: There is a risk that delays in producing detail design drawing will affect the construction.		
Risk Description: There is a risk that delays in producing detail design drawing will affect the construction.			
Risk Nature: OPERATIONAL	Risk Category: 10	Risk Manager:	Business Unit: UPP1B CKBA

Risk Factors:	Possible Effects:
- 1) Insufficient information for procurement of subcontractor and materials	- 1) Delay in procurement
- 2) Shortage of man power	- 2) Delay in issuing final conceptual layout design
- 3) High staff turnover rate of consultants	- 3) Leading to discontinuity in design resulting in lack of consistency and poor design.
- 4) Inexperienced designer	- 4) Resulting in poor quality detail design.

Existing Risk Treatments:	Effectiveness: (High/Medium/Low)
- 1) Impose more vigorous monitoring and control through agreed schedule.	- 1) High

New Risk Treatments :	Responsible Party:	Target Deadline:
- 1) Recruit more competent and experienced staff.	- 1) Consultant	- 1) 30-05-2010
- 2) Introduce incentive and bonus for good performer.	- 2) Consultant	- 2) 31-12-2010
- 3) Include design deliverable in master work program	- 3) AZSB	- 3) 30-05-2010

Risk Assessment Date	Inherent Risk			Assessed Risk			Target Risk		
	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating
14-05-2010	4	IV	E	3	IV	H	2	III	M

Ref No (WBS): 2.7	Risk Title: Financial constraint will cause repetitive design		
Risk Description:			
Risk Nature:	Risk Category: 4	Risk Manager:	Business Unit:

Risk Factors:	Possible Effects:
-	-

Existing Risk Treatments:	Effectiveness: (High/Medium/Low)
-	-

New Risk Treatments :	Responsible Party:	Target Deadline:
-	-	-

Risk Assessment Date	Inherent Risk			Assessed Risk			Target Risk		
	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating
	3	III	M						

Ref No (WBS): 2.8	Risk Title: Design changes arising from site condition/ authorities requirement/ weather condition.		
Risk Description:			
Risk Nature:	Risk Category: 10	Risk Manager:	Business Unit:

Risk Factors:	Possible Effects:
-	-

Existing Risk Treatments:	Effectiveness: (High/Medium/Low)
-	-

New Risk Treatments :	Responsible Party:	Target Deadline:
-	-	-

Risk Assessment Date	Inherent Risk			Assessed Risk			Target Risk		
	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating
	3	III	M						

Ref No (WBS): 2.9	Risk Title: New requirement/ regulation from authorities eg. Railway Act.		
Risk Description:			
Risk Nature:	Risk Category: 10	Risk Manager:	Business Unit:

Risk Factors:	Possible Effects:
-	-

Existing Risk Treatments:	Effectiveness: (High/Medium/Low)
-	-

New Risk Treatments :	Responsible Party:	Target Deadline:
-	-	-

Risk Assessment Date	Inherent Risk			Assessed Risk			Target Risk		
	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating
	3	III	M						

Ref No (WBS): 2.10	Risk Title: Inadequate soil investigation anduncertainty of underground condition (soil, rock, utilities) may lead to delay in construction.		
Risk Description:			
Risk Nature:	Risk Category: 10	Risk Manager:	Business Unit:

Risk Factors:	Possible Effects:
-	-

Existing Risk Treatments:	Effectiveness: (High/Medium/Low)
-	-

New Risk Treatments :	Responsible Party:	Target Deadline:
-	-	-

Risk Assessment Date	Inherent Risk			Assessed Risk			Target Risk		
	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating
	4	IV	E						

Ref No (WBS): 2.11	Risk Title: There is a risk that concept design for foundation and main structure not finalized will cause delay of issuance of construction drawing leading to delay in work commencement.		
Risk Description: There is a risk that concept design for foundation and main structure not finalized will cause delay of issuance of construction drawing leading to delay in work commencement.			
Risk Nature: OPERATIONAL	Risk Category: 10	Risk Manager:	Business Unit: UPP1B CKBA

Risk Factors:	Possible Effects:
- 1) Special request by JKR top management	- 1) Detail design could not be produced
- 2) No firm requirement in design brief	- 2) Delay in project implementationCost escalation

Existing Risk Treatments:	Effectiveness: (High/Medium/Low)
- 1) Seek confirmation from top management	- 1) High
- 2) Conduct series of presentation on options for decision	- 2) High

New Risk Treatments :	Responsible Party:	Target Deadline:
- 1) Presentation to top management	- 1) AZSB	- 1) 30-04-2010

Risk Assessment Date	Inherent Risk			Assessed Risk			Target Risk		
	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating
14-05-2010	4	IV	E	2	V	H	2	III	M

JABATAN KERJA RAYA MALAYSIA

Ref No (WBS): 2.12	Risk Title: There is a risk that additional requirements imposed to the contract on GBI and Late confirmation of GBI requirements will cause design changes leading to cost escalation and late delivery of project.		
Risk Description: There is a risk that additional requirements imposed to the contract on Green Building Index will cause design changes leading to cost escalation			
Risk Nature: OPERATIONAL	Risk Category: 2	Risk Manager:	Business Unit: UPP1B CKBA

Risk Factors:	Possible Effects:
- 1) Special request by Menteri Kerja Raya	- 1) Cost escalation and delay in construction

Existing Risk Treatments:	Effectiveness: (High/Medium/Low)
- 1) Seek confirmation from KKR top management	- 1) Low
- 2) Conduct series of presentation for decision	- 2) Low

New Risk Treatments :	Responsible Party:	Target Deadline:
- 1) Conduct special presentation to Works Minister for gold rating	- 1) Project Director	- 1) 19-05-2010
- 2) Request for budget increment from Client	- 2) HOPT	- 2) 19-05-2010

Risk Assessment Date	Inherent Risk			Assessed Risk			Target Risk		
	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating
14-05-2010	4	IV	E	4	IV	E	3	III	M

Ref No (WBS): 2.13	Risk Title: If Non compliance to specifications and non comprehensive audit by HODTs and Independent Checker then lead to time and cost on corrective action.		
Risk Description: Non compliance to specifications and non comprehensive audit by HODTs and Independent Checker then lead to time and cost on corrective action.			
Risk Nature: OPERATIONAL	Risk Category: 10	Risk Manager:	Business Unit: UPP1B

Risk Factors:	Possible Effects:
- 1) Time constraint	- 1) Non compliance
- 2) Work load of HODTs and ICE	- 2) Redesign

Existing Risk Treatments:	Effectiveness: (High/Medium/Low)
- 1) Weekly technical meeting, by contractor	- 1) Medium
- 2) Biweekly coordination meeting by contractor	- 2) Medium
- 3) Online communication update on status of drawing	- 3) High

New Risk Treatments :	Responsible Party:	Target Deadline:
- 1) To conduct monthly design Audit	- 1) JKR Project Team and HODTs	- 1) 28-05-2010
- 2) To conduct monthly coordination meeting between JKR and Contractor	- 2) HOPT	- 2) 30-05-2010

Risk Assessment Date	Inherent Risk			Assessed Risk			Target Risk		
	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating
15-05-2010	3	IV	H	3	III	M	2	II	L

Ref No (WBS): 2.14	Risk Title: If late issuance of construction drawings/ shop drawings by consultants will delay the completion of the project.		
Risk Description: If late issuance of construction drawings by consultants then no commencement of work at site			
Risk Nature: OPERATIONAL	Risk Category: 10	Risk Manager:	Business Unit: UPP1B

Risk Factors:	Possible Effects:
- 1) Late confirmation of concept design	- 1) Late of issuance of construction drawings
- 2) Insufficient data (confirmatory SI, utilities mapping, dilapidation survey)	- 2) Late of issuance of construction drawings
- 3) Inefficiency of consultants	- 3) Late of issuance of construction drawings

Existing Risk Treatments:	Effectiveness: (High/Medium/Low)
- 1) Seek confirmation from top management Of JKR	- 1) High
- 2) Conduct series of presentation on options for decision	- 2) High
- 3) Carried out Confirmatory Soil Investigation, pile load test, utilities mappings, dilapidation survey	- 3) High
- 4) Appointment of reputable consultant	- 4) High

New Risk Treatments :	Responsible Party:	Target Deadline:
- 1) Biweekly design coordination by contractor	- 1) PM AZSB	- 1) 15-05-2010

Risk Assessment Date	Inherent Risk			Assessed Risk			Target Risk		
	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating
15-05-2010	3	IV	H	3	III	M	2	II	L

Ref No (WBS): 2.15	Risk Title: There is a risk that delays in design submission & approval from local authorities (DBKL, TNB, SYABAS, BOMBA, IWK) will affect the design development and finalization of construction drawings.		
Risk Description: If late approval from local authorities (DBKL, TNB, SYABAS, BOMBA, IWK) then no commencement of work at site			
Risk Nature: OPERATIONAL	Risk Category: 10	Risk Manager:	Business Unit: UPP1B CKBA

Risk Factors:	Possible Effects:
- 1) Late submission to local authorities (DO)	- 1) No commencement of work at site
- 2) Incomplete/ non compliance submission to Local Authority	- 2) Resubmission to Local Authorities
- 3) Late action in decision making from local authorities	- 3) Late approval

Existing Risk Treatments:	Effectiveness: (High/Medium/Low)
- 1) Early submission	- 1) High
- 2) Expedite the re-submission as commented by all technical agencies	- 2) High
- 3) Regular monitoring / meeting with respective local authorities (DBKL, SYABAS, IWK, BOMBA, TNB)	- 3) High

New Risk Treatments :	Responsible Party:	Target Deadline:
- 1) Comply with requirement & Submit building plan to DBKL	- 1) Consultant Architect AZSB/Design Coordinator	- 1) 15-07-2010
- 2) Follow up with TNB for approval (11kV) for detail design	- 2) Consultant Electrical AZSB / Design Coordinator	- 2) 15-06-2010

Risk Assessment Date	Inherent Risk			Assessed Risk			Target Risk		
	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating
15-05-2010	4	IV	E	3	II	M	2	II	L

Ref No (WBS): 2.16	Risk Title: Overlook of maintenance aspect during design stage (M&E, architectural)		
Risk Description:			
Risk Nature:	Risk Category: 10	Risk Manager:	Business Unit:

Risk Factors:	Possible Effects:
-	-

Existing Risk Treatments:	Effectiveness: (High/Medium/Low)
-	-

New Risk Treatments :	Responsible Party:	Target Deadline:
-	-	-

Risk Assessment Date	Inherent Risk			Assessed Risk			Target Risk		
	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating
	3	IV	H						

Ref No (WBS): 2.17	Risk Title: Non compliance to IBS requirements (70%)		
Risk Description:			
Risk Nature:	Risk Category: 2	Risk Manager:	Business Unit:

Risk Factors:	Possible Effects:
-	-

Existing Risk Treatments:	Effectiveness: (High/Medium/Low)
-	-

New Risk Treatments :	Responsible Party:	Target Deadline:
-	-	-

Risk Assessment Date	Inherent Risk			Assessed Risk			Target Risk		
	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating
	3	III	M						

Ref No (WBS): 2.18	Risk Title: Non compliance to BEI requirements (100kWh/m2/yr)		
Risk Description:			
Risk Nature:	Risk Category: 2	Risk Manager:	Business Unit:

Risk Factors:	Possible Effects:
-	-

Existing Risk Treatments:	Effectiveness: (High/Medium/Low)
-	-

New Risk Treatments :	Responsible Party:	Target Deadline:
-	-	-

Risk Assessment Date	Inherent Risk			Assessed Risk			Target Risk		
	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating
	3	III	M						

Ref No (WBS): 3.1	Risk Title: Short tender duration leading to Tenderer not having considered all technical requirements resulting in inaccurate pricing, possible variation claims or sub-standard products.		
Risk Description: There is a risk that short tender duration leading to Tenderer not having considered all technical requirements resulting in inaccurate pricing, possible variation claims or sub-standard products.			
Risk Nature: OPERATIONAL	Risk Category: 3	Risk Manager:	Business Unit: CKBA

Risk Factors:	Possible Effects:
- 1) Need to utilize allocated funds within a stipulated time	- 1) Inaccurate pricing high contingency sums / underpriced items
- 2) Too much assumptions made by Tenderer	- 2) Possible variation claims
- 3) Tenderer may overlook certain requirements	- 3) Non-conforming end products.

Existing Risk Treatments:	Effectiveness: (High/Medium/Low)
- 1) Thorough design review to ensure that Contractors proposal conforms to Needs Statement.	- 1) High
- 2) Ensure that Project Needs Statement is as clear and comprehensive as possible.	- 2) High

New Risk Treatments :	Responsible Party:	Target Deadline:
-	-	-

Risk Assessment Date	Inherent Risk			Assessed Risk			Target Risk		
	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating
	3	IV	H						

Ref No (WBS): 3.2	Risk Title: Large difference between JKRs available budget versus Tenderers offers leading to inability to award tender resulting in redesign and retendering exercise.		
Risk Description: There is risk that large difference between JKR available budget versus Tenderers offers leading to inability to award tender resulting in redesign and retendering exercise.			
Risk Nature: OPERATIONAL	Risk Category: 4	Risk Manager:	Business Unit: CKBA

Risk Factors:	Possible Effects:
- 1) Needs Statement does not always tally with available budget	- 1) Abortive design work by Architect
- 2) Non-prioritization of project objectives to meet budget	- 2) Increased man-hour allocations to carry out retendering exercise.Escalating construction cost due to long lead time for project implementation.

Existing Risk Treatments:	Effectiveness: (High/Medium/Low)
-	-

New Risk Treatments :	Responsible Party:	Target Deadline:
-	-	-

Risk Assessment Date	Inherent Risk			Assessed Risk			Target Risk		
	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating
	5	V	E						

Ref No (WBS): 3.3	Risk Title: Late delivery of preliminary equipment leading to JKR unable to effectively utilize equipment resulting in wasted resources.		
Risk Description:			
Risk Nature:	Risk Category: 9	Risk Manager:	Business Unit:

Risk Factors:	Possible Effects:
-	-

Existing Risk Treatments:	Effectiveness: (High/Medium/Low)
-	-

New Risk Treatments :	Responsible Party:	Target Deadline:
-	-	-

Risk Assessment Date	Inherent Risk			Assessed Risk			Target Risk		
	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating
	3	II	M						

Ref No (WBS): 3.4	Risk Title: Obsolete / shortage / unreasonable price increase of approved material or equipment leading to long lead time for deliver or lost of profit resulting in delays in project		
Risk Description:			
Risk Nature:	Risk Category: 12	Risk Manager:	Business Unit:

Risk Factors:	Possible Effects:
-	-

Existing Risk Treatments:	Effectiveness: (High/Medium/Low)
-	-

New Risk Treatments :	Responsible Party:	Target Deadline:
-	-	-

Risk Assessment Date	Inherent Risk			Assessed Risk			Target Risk		
	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating
	3	III	M						

Ref No (WBS): 3.5	Risk Title: There is a risk that incomplete and unclear Pre-bid document will lead to inaccurate tender pricing, non conforming offer, thus delay in issuance of award		
Risk Description: There is a risk that incomplete and unclear Pre-bid document will lead to inaccurate tender pricing, non conforming offer, thus delay in issuance of award			
Risk Nature: OPERATIONAL	Risk Category: 10	Risk Manager:	Business Unit: CKBA

Risk Factors:	Possible Effects:
- 1) Client requirement not finalized on time.	- 1) Inaccurate tender pricing.
- 2) Insufficient time to prepare prebid documents	- 2) Delay in issuance letter of award.

Existing Risk Treatments:	Effectiveness: (High/Medium/Low)
- 1) Issuance of NCR by all HODTs.	- 1) High
- 2) Official undertaking by contractor to comply.	- 2) High

New Risk Treatments :	Responsible Party:	Target Deadline:
- 1) Issuance of NCR by all HODTs.	- 1) HODTs	- 1) 13-04-2010
- 2) Official undertaking by contractor to comply.	- 2) Contractor	- 2) 13-04-2010

Risk Assessment Date	Inherent Risk			Assessed Risk			Target Risk		
	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating
00-00-0000	4	IV	E	1	II	L	1	II	L

Ref No (WBS): 3.6	Risk Title: Insufficient period given for tenderers to bid.		
Risk Description:			
Risk Nature:	Risk Category: 3	Risk Manager:	Business Unit:

Risk Factors:	Possible Effects:
-	-

Existing Risk Treatments:	Effectiveness: (High/Medium/Low)
-	-

New Risk Treatments :	Responsible Party:	Target Deadline:
-	-	-

Risk Assessment Date	Inherent Risk			Assessed Risk			Target Risk		
	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating
	3	III	M						

Ref No (WBS): 3.7	Risk Title: Initial construction materials proposed during tender became obsolete at construction stage.		
Risk Description:			
Risk Nature:	Risk Category: 12	Risk Manager:	Business Unit:

Risk Factors:	Possible Effects:
-	-

Existing Risk Treatments:	Effectiveness: (High/Medium/Low)
-	-

New Risk Treatments :	Responsible Party:	Target Deadline:
-	-	-

Risk Assessment Date	Inherent Risk			Assessed Risk			Target Risk		
	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating
	3	II	M						

Ref No (WBS): 3.8	Risk Title: There is a risk that the changes of scope during tender period will lead to delay in project implementation.		
Risk Description: There is a risk that the changes of scope during tender period will lead to delay in project implementation.			
Risk Nature: OPERATIONAL	Risk Category: 2	Risk Manager:	Business Unit: CKBA

Risk Factors:	Possible Effects:
- 1) New requirement from client.	- 1) Exceed original budget.
- 2) Budget revision due to budget constraint	- 2) Extend tender period

Existing Risk Treatments:	Effectiveness: (High/Medium/Low)
- 1) Issue addendum to the tenderers.	- 1) High
- 2) Retender.	- 2) High

New Risk Treatments :	Responsible Party:	Target Deadline:
- 1) Issue addendum to the tenderers	- 1) HOPT & HODTs	- 1) 13-04-2010
- 2) Retender	- 2) HOPT&HODT	- 2) 13-04-2010

Risk Assessment Date	Inherent Risk			Assessed Risk			Target Risk		
	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating
00-00-0000	5	IV	E	2	I	L	2	I	L

Ref No (WBS): 3.9	Risk Title: Selection of subcontractor does not go through pre-qualification processes.		
Risk Description:			
Risk Nature:	Risk Category: 9	Risk Manager:	Business Unit:

Risk Factors:	Possible Effects:
-	-

Existing Risk Treatments:	Effectiveness: (High/Medium/Low)
-	-

New Risk Treatments :	Responsible Party:	Target Deadline:
-	-	-

Risk Assessment Date	Inherent Risk			Assessed Risk			Target Risk		
	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating
	3	II	M						

Ref No (WBS): 3.10	Risk Title: Difficulty to get capable class F contractors as required.		
Risk Description:			
Risk Nature:	Risk Category: 9	Risk Manager:	Business Unit:

Risk Factors:	Possible Effects:
-	-

Existing Risk Treatments:	Effectiveness: (High/Medium/Low)
-	-

New Risk Treatments :	Responsible Party:	Target Deadline:
-	-	-

Risk Assessment Date	Inherent Risk			Assessed Risk			Target Risk		
	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating
	3	II	M						

Ref No (WBS): 3.11	Risk Title: Leakage of information during tender evaluation will affect the evaluation process		
Risk Description:			
Risk Nature:	Risk Category: 10	Risk Manager:	Business Unit:

Risk Factors:	Possible Effects:
-	-

Existing Risk Treatments:	Effectiveness: (High/Medium/Low)
-	-

New Risk Treatments :	Responsible Party:	Target Deadline:
-	-	-

Risk Assessment Date	Inherent Risk			Assessed Risk			Target Risk		
	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating
	3	III	M						

Ref No (WBS): 3.12	Risk Title: Weakness in tender evaluation process and inexperienced evaluation team.		
Risk Description:			
Risk Nature:	Risk Category: 10	Risk Manager:	Business Unit:

Risk Factors:	Possible Effects:
-	-

Existing Risk Treatments:	Effectiveness: (High/Medium/Low)
-	-

New Risk Treatments :	Responsible Party:	Target Deadline:
-	-	-

Risk Assessment Date	Inherent Risk			Assessed Risk			Target Risk		
	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating
	3	III	M						

Ref No (WBS): 4.1	Risk Title: There is a risk that site constraint and poor site maintenance (poor housekeeping) will cause difficulties in logistic leading to delay in project delivery		
Risk Description:			
Risk Nature:	Risk Category: 2	Risk Manager:	Business Unit:

Risk Factors:	Possible Effects:
-	-

Existing Risk Treatments:	Effectiveness: (High/Medium/Low)
-	-

New Risk Treatments :	Responsible Party:	Target Deadline:
-	-	-

Risk Assessment Date	Inherent Risk			Assessed Risk			Target Risk		
	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating
	4	IV	E						

Ref No (WBS): 4.2	Risk Title: There is a risk that inadequate safety measures at site will cause accident leading to stop work order and project cannot finish on time		
Risk Description:			
Risk Nature:	Risk Category: 15	Risk Manager:	Business Unit:

Risk Factors:	Possible Effects:
-	-

Existing Risk Treatments:	Effectiveness: (High/Medium/Low)
-	-

New Risk Treatments :	Responsible Party:	Target Deadline:
-	-	-

Risk Assessment Date	Inherent Risk			Assessed Risk			Target Risk		
	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating
	3	IV	H						

Ref No (WBS): 4.3	Risk Title: There is a risk that machinery breakdown will cause stop work leading to delay of project delivery		
Risk Description:			
Risk Nature:	Risk Category: 8	Risk Manager:	Business Unit:

Risk Factors:	Possible Effects:
-	-

Existing Risk Treatments:	Effectiveness: (High/Medium/Low)
-	-

New Risk Treatments :	Responsible Party:	Target Deadline:
-	-	-

Risk Assessment Date	Inherent Risk			Assessed Risk			Target Risk		
	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating
	3	IV	H						

Ref No (WBS): 4.4	Risk Title: Shortage of material supply		
Risk Description:			
Risk Nature:	Risk Category: 8	Risk Manager:	Business Unit:

Risk Factors:	Possible Effects:
-	-

Existing Risk Treatments:	Effectiveness: (High/Medium/Low)
-	-

New Risk Treatments :	Responsible Party:	Target Deadline:
-	-	-

Risk Assessment Date	Inherent Risk			Assessed Risk			Target Risk		
	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating
	3	IV	H						

Ref No (WBS): 4.5	Risk Title: Shortage of skill workers will cause poor workmanship		
Risk Description:			
Risk Nature:	Risk Category: 5	Risk Manager:	Business Unit:

Risk Factors:	Possible Effects:
-	-

Existing Risk Treatments:	Effectiveness: (High/Medium/Low)
-	-

New Risk Treatments :	Responsible Party:	Target Deadline:
-	-	-

Risk Assessment Date	Inherent Risk			Assessed Risk			Target Risk		
	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating
	3	IV	H						

Ref No (WBS): 4.6	Risk Title: Delay handing over of SSU building to TNB will cause TNB to delay electrical supply leading to delay in project completion		
Risk Description:			
Risk Nature:	Risk Category: 3	Risk Manager:	Business Unit:

Risk Factors:	Possible Effects:
-	-

Existing Risk Treatments:	Effectiveness: (High/Medium/Low)
-	-

New Risk Treatments :	Responsible Party:	Target Deadline:
-	-	-

Risk Assessment Date	Inherent Risk			Assessed Risk			Target Risk		
	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating
	3	IV	H						

Ref No (WBS): 4.7	Risk Title: Non-compliance to specifications/ method of statement will cause poor quality Late submission and consent of method statement will cause delay in construction works		
Risk Description:			
Risk Nature:	Risk Category: 10	Risk Manager:	Business Unit:

Risk Factors:	Possible Effects:
-	-

Existing Risk Treatments:	Effectiveness: (High/Medium/Low)
-	-

New Risk Treatments :	Responsible Party:	Target Deadline:
-	-	-

Risk Assessment Date	Inherent Risk			Assessed Risk			Target Risk		
	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating
	3	IV	H						

Ref No (WBS): 4.8	Risk Title: Insufficient numbers of project team (JKR, contractor)		
Risk Description:			
Risk Nature:	Risk Category: 5	Risk Manager:	Business Unit:

Risk Factors:	Possible Effects:
-	-

Existing Risk Treatments:	Effectiveness: (High/Medium/Low)
-	-

New Risk Treatments :	Responsible Party:	Target Deadline:
-	-	-

Risk Assessment Date	Inherent Risk			Assessed Risk			Target Risk		
	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating
	3	III	M						

Ref No (WBS): 4.9	Risk Title: Slow response (e.g contractor)		
Risk Description:			
Risk Nature:	Risk Category: 0	Risk Manager:	Business Unit:

Risk Factors:	Possible Effects:
-	-

Existing Risk Treatments:	Effectiveness: (High/Medium/Low)
-	-

New Risk Treatments :	Responsible Party:	Target Deadline:
-	-	-

Risk Assessment Date	Inherent Risk			Assessed Risk			Target Risk		
	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating
	0								

Ref No (WBS): 4.10	Risk Title: Lack of understanding on contractual matters		
Risk Description:			
Risk Nature:	Risk Category: 0	Risk Manager:	Business Unit:

Risk Factors:	Possible Effects:
-	-

Existing Risk Treatments:	Effectiveness: (High/Medium/Low)
-	-

New Risk Treatments :	Responsible Party:	Target Deadline:
-	-	-

Risk Assessment Date	Inherent Risk			Assessed Risk			Target Risk		
	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating
	0								

Ref No (WBS): 4.11	Risk Title: Late preparation of material, mock-up for approval		
Risk Description:			
Risk Nature:	Risk Category: 0	Risk Manager:	Business Unit:

Risk Factors:	Possible Effects:
-	-

Existing Risk Treatments:	Effectiveness: (High/Medium/Low)
-	-

New Risk Treatments :	Responsible Party:	Target Deadline:
-	-	-

Risk Assessment Date	Inherent Risk			Assessed Risk			Target Risk		
	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating
	0								

Ref No (WBS): 4.12	Risk Title: Late confirmation and supply by utilities provider (SYABAS, TNB,TELEKOM, IWK, etc)		
Risk Description:			
Risk Nature:	Risk Category: 0	Risk Manager:	Business Unit:

Risk Factors:	Possible Effects:
-	-

Existing Risk Treatments:	Effectiveness: (High/Medium/Low)
-	-

New Risk Treatments :	Responsible Party:	Target Deadline:
-	-	-

Risk Assessment Date	Inherent Risk			Assessed Risk			Target Risk		
	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating
	0								

Ref No (WBS): 4.13	Risk Title: Non compliance to DBKL requirement for additional parking		
Risk Description:			
Risk Nature:	Risk Category: 0	Risk Manager:	Business Unit:

Risk Factors:	Possible Effects:
-	-

Existing Risk Treatments:	Effectiveness: (High/Medium/Low)
-	-

New Risk Treatments :	Responsible Party:	Target Deadline:
-	-	-

Risk Assessment Date	Inherent Risk			Assessed Risk			Target Risk		
	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating
	0								

Ref No (WBS): 4.14	Risk Title: Lack of supervision (contractor)		
Risk Description:			
Risk Nature:	Risk Category: 0	Risk Manager:	Business Unit:

Risk Factors:	Possible Effects:
-	-

Existing Risk Treatments:	Effectiveness: (High/Medium/Low)
-	-

New Risk Treatments :	Responsible Party:	Target Deadline:
-	-	-

Risk Assessment Date	Inherent Risk			Assessed Risk			Target Risk		
	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating
	0								

Ref No (WBS): 4.15	Risk Title: As built drawings not ready prior to progress payment		
Risk Description:			
Risk Nature:	Risk Category: 0	Risk Manager:	Business Unit:

Risk Factors:	Possible Effects:
-	-

Existing Risk Treatments:	Effectiveness: (High/Medium/Low)
-	-

New Risk Treatments :	Responsible Party:	Target Deadline:
-	-	-

Risk Assessment Date	Inherent Risk			Assessed Risk			Target Risk		
	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating
	0								

Ref No (WBS): 4.16	Risk Title: Difficulties to construct perimeter column		
Risk Description:			
Risk Nature:	Risk Category: 0	Risk Manager:	Business Unit:

Risk Factors:	Possible Effects:
-	-

Existing Risk Treatments:	Effectiveness: (High/Medium/Low)
-	-

New Risk Treatments :	Responsible Party:	Target Deadline:
-	-	-

Risk Assessment Date	Inherent Risk			Assessed Risk			Target Risk		
	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating
	0								

Ref No (WBS): 4.17	Risk Title: Damages to adjacent building due to ground anchor (ASWARA, JKRs buildings)		
Risk Description:			
Risk Nature:	Risk Category: 0	Risk Manager:	Business Unit:

Risk Factors:	Possible Effects:
-	-

Existing Risk Treatments:	Effectiveness: (High/Medium/Low)
-	-

New Risk Treatments :	Responsible Party:	Target Deadline:
-	-	-

Risk Assessment Date	Inherent Risk			Assessed Risk			Target Risk		
	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating
	0								

Ref No (WBS): 4.18	Risk Title: Complaint from public and neighbouring building		
Risk Description:			
Risk Nature:	Risk Category: 16	Risk Manager:	Business Unit:

Risk Factors:	Possible Effects:
-	-

Existing Risk Treatments:	Effectiveness: (High/Medium/Low)
-	-

New Risk Treatments :	Responsible Party:	Target Deadline:
-	-	-

Risk Assessment Date	Inherent Risk			Assessed Risk			Target Risk		
	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating
	5	II	H						

Ref No (WBS): 4.19	Risk Title: Poor workmanship due to unskilled worker and inferior material will affect the increase of cost (rectification works) and prolong project duration.		
Risk Description: There is a risk that poor workmanship due to unskilled worker and inferior material will affect the increase of cost (rectification works) and prolong project duration.			
Risk Nature: OPERATIONAL	Risk Category: 6	Risk Manager:	Business Unit: CKBA

Risk Factors:	Possible Effects:
- 1) Unskilled workers	- 1) Need to carry out the rectification works.Prolong project duration.
- 2) Usage of inferior material (contradicting from contract)	- 2) Need to carry out the rectification works.Cost increase to the contractor.

Existing Risk Treatments:	Effectiveness: (High/Medium/Low)
- 1) Employed skill workers	- 1) High
- 2) Approved material by consultant and get consent from JKR Reprsentative	- 2) Medium
- 3) Material testing	- 3) High

New Risk Treatments :	Responsible Party:	Target Deadline:
- 1) Close monitoring by AZSB	- 1) site team (contractor RA/RE personnel)	- 1) 01-12-2009
- 2) Prepare schedule quality audit by HODT and ensure audit carried out regularly	- 2) WPD & HODT	- 2) 10-06-2010

Risk Assessment Date	Inherent Risk			Assessed Risk			Target Risk		
	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating
00-00-0000	4	IV	E	2	III	M	2	II	L

Ref No (WBS): 4.20	Risk Title: Material and equipment below specification (glass, chiller, lift etc) due to unavailability of local certified body/party hence affecting the building functionality and maintainability.		
Risk Description: There is a risk that material and equipment below specification (glass, chiller, lift etc) due to unavailability of local certified body/party hence affecting the building functionality and maintainability.			
Risk Nature: OPERATIONAL	Risk Category: 10	Risk Manager:	Business Unit: CKBA

Risk Factors:	Possible Effects:
- 1) Material performance may not meet to the requirement	- 1) Functionality and maintainability affected

Existing Risk Treatments:	Effectiveness: (High/Medium/Low)
- 1) To establish quality and standard as stipulated in BEI requirement.	- 1) Medium
- 2) Sending expert representative(s) to manufacturer plant witness the performance tests	- 2) Medium

New Risk Treatments :	Responsible Party:	Target Deadline:
- 1) Sending representative(s) to manufacturer plant witness the performance tests.	- 1) Contractor (Project Manager)	- 1) 01-12-2010

Risk Assessment Date	Inherent Risk			Assessed Risk			Target Risk		
	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating
00-00-0000	4	IV	E	4	IV	E	2	II	L

Ref No (WBS): 4.21	Risk Title: Slope failure due to insufficient EMP implementation will cause delay in project progress.		
Risk Description: There is a risk that slope failure due to insufficient EMP implementation will cause delay in project progress.			
Risk Nature: OPERATIONAL	Risk Category: 11	Risk Manager:	Business Unit: CKBA

Risk Factors:	Possible Effects:
- 1) Improper EMP implementation	- 1) Delay in project progress.Fatal accidents.

Existing Risk Treatments:	Effectiveness: (High/Medium/Low)
- 1) Provide settlement marker for monitoring purposes	- 1) Medium
- 2) Provide proper slope protection / slope drainage as per EMP requirement	- 2) High
- 3) Appointed Environmental Officer at contractor side	- 3) High

New Risk Treatments :	Responsible Party:	Target Deadline:
- 1) To ensure Environmental Protection Works (EPW) to be part of CPM	- 1) Contractor EO / Environmental officer by JKR	- 1) 01-12-2009
- 2) Contractor to submit EMP prepared by registered Environment Consultant to HODT	- 2) Contractors EO / Environmental officer by JKR	- 2) 01-12-2009
- 3) To ensure the EMP well implemented progressively	- 3) Contractor EO / Environmental officer by JKR	- 3) 01-12-2009

Risk Assessment Date	Inherent Risk			Assessed Risk			Target Risk		
	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating
00-00-0000	3	V	E	2	III	M	2	III	M

Ref No (WBS): 4.22	Risk Title: Insufficient coordination drawing among all disciplines will affect double handling works (External & Internal M&E services, C&S works)		
Risk Description: There is a risk that insufficient coordination drawing among all disciplines will affect double handling works (External & Internal M&E services, C&S works)			
Risk Nature: OPERATIONAL	Risk Category: 10	Risk Manager:	Business Unit: CKBA

Risk Factors:	Possible Effects:
- 1) Communication breakdown among consultants	- 1) Possible abortive works
- 2) No single point coordination	- 2) Prolong construction period
- 3) Late issuance of constructions drawings which are required for the coordination work	- 3) Additional cost incurred.Possible abortive works.

Existing Risk Treatments:	Effectiveness: (High/Medium/Low)
- 1) Design coordinator is appointed by contractor (coordination manager)	- 1) High
- 2) To include as one of design and technical meeting agenda	- 2) High
- 3) To capture in CPM	- 3) High
- 4) Ensured Consultant prepare Superimposed AutoCAD drawings for all services with different colour codings	- 4) High

New Risk Treatments :	Responsible Party:	Target Deadline:
- 1) Superimposed AutoCAD drawings for all services with different colour codings	- 1) Contractor-project manager	- 1) 01-12-2009
- 2) Implement communication matrix	- 2) Contractor-project manager	- 2) 01-12-2009

Risk Assessment Date	Inherent Risk			Assessed Risk			Target Risk		
	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating
00-00-0000	4	IV	E	2	III	M	1	II	L

Ref No (WBS): 4.23	Risk Title: Scope changes during constructions caused by the client and local authorities that will delay in project handing over as well as additional cost borne by the project owner		
Risk Description: There is a risk that scope changes during constructions caused by the client and local authorities that will delay in project handing over as well as additional cost borne by the project owner			
Risk Nature: OPERATIONAL	Risk Category: 10	Risk Manager:	Business Unit: CKBA

Risk Factors:	Possible Effects:
- 1) New requirements from different clients representatives	- 1) Cost increase.Delay in project completion.
- 2) Additional requirements from local authorities	- 2) Abortive works

Existing Risk Treatments:	Effectiveness: (High/Medium/Low)
- 1) Early submission and proactive follow up to the local authorities	- 1) Medium
- 2) Invite the local authorities to the project site meetings/ dialogue session prior to the finalizing and submission of drawings	- 2) High

New Risk Treatments :	Responsible Party:	Target Deadline:
- 1) Get written consent from local authorities	- 1) WPP / Contractor Project Manager	- 1) 01-12-2009
- 2) To get end user confirmation and agreement	- 2) HOPT	- 2) 01-12-2009
- 3) Invite the local authorities to the project site meetings/ dialogue session prior to the finalizing and submission of drawings	- 3) WPP / Contractor Project Manager	- 3) 01-12-2009

Risk Assessment Date	Inherent Risk			Assessed Risk			Target Risk		
	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating
00-00-0000	3	IV	H	3	III	M	3	III	M

Ref No (WBS): 4.24	Risk Title: Delay of work due to unforeseen weather		
Risk Description:			
Risk Nature:	Risk Category: 10	Risk Manager:	Business Unit:

Risk Factors:	Possible Effects:
-	-

Existing Risk Treatments:	Effectiveness: (High/Medium/Low)
-	-

New Risk Treatments :	Responsible Party:	Target Deadline:
-	-	-

Risk Assessment Date	Inherent Risk			Assessed Risk			Target Risk		
	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating
	3	IV	H						

Ref No (WBS): 4.25	Risk Title: Insufficient communication between project team (end-users, project management team, HODTs & HOPT and contractor) leading to unsolved issues that may delay the project implementation.		
Risk Description:			
Risk Nature:	Risk Category: 7	Risk Manager:	Business Unit:

Risk Factors:	Possible Effects:
-	-

Existing Risk Treatments:	Effectiveness: (High/Medium/Low)
-	-

New Risk Treatments :	Responsible Party:	Target Deadline:
-	-	-

Risk Assessment Date	Inherent Risk			Assessed Risk			Target Risk		
	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating
	4	IV	E						

Ref No (WBS): 4.26	Risk Title: Late submission of design / construction drawings to HODT leading to late consent resulting in delay in construction.		
Risk Description:			
Risk Nature:	Risk Category: 3	Risk Manager:	Business Unit:

Risk Factors:	Possible Effects:
-	-

Existing Risk Treatments:	Effectiveness: (High/Medium/Low)
-	-

New Risk Treatments :	Responsible Party:	Target Deadline:
-	-	-

Risk Assessment Date	Inherent Risk			Assessed Risk			Target Risk		
	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating
	4	IV	E						

Ref No (WBS): 4.27	Risk Title: Intervention by stakeholders leading to disruption of project implementation resulting in project delay and cost increase.		
Risk Description:			
Risk Nature:	Risk Category: 14	Risk Manager:	Business Unit:

Risk Factors:	Possible Effects:
-	-

Existing Risk Treatments:	Effectiveness: (High/Medium/Low)
-	-

New Risk Treatments :	Responsible Party:	Target Deadline:
-	-	-

Risk Assessment Date	Inherent Risk			Assessed Risk			Target Risk		
	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating
	4	IV	E						

Ref No (WBS): 4.28	Risk Title: Non compliance to BEI requirements (100kWh/m2/yr)		
Risk Description:			
Risk Nature:	Risk Category: 0	Risk Manager:	Business Unit:

Risk Factors:	Possible Effects:
-	-

Existing Risk Treatments:	Effectiveness: (High/Medium/Low)
-	-

New Risk Treatments :	Responsible Party:	Target Deadline:
-	-	-

Risk Assessment Date	Inherent Risk			Assessed Risk			Target Risk		
	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating
	0								

Ref No (WBS): 5.1	Risk Title: Shortage of parking space due to cater for existing office blocks resulting in complaints from the visitors/occupants of KKR2		
Risk Description: There is a risk that shortage of parking space due to cater for existing office blocks resulting in complaints from the visitors/occupants of KKR2			
Risk Nature: OPERATIONAL	Risk Category: 16	Risk Manager:	Business Unit: CKBA

Risk Factors:	Possible Effects:
- 1) Budget constraint	- 1) Complaints from the visitors/occupants of JKR /KKR.Morale issue due to illegal parking especially in front of ministry office.

Existing Risk Treatments:	Effectiveness: (High/Medium/Low)
-	-

New Risk Treatments :	Responsible Party:	Target Deadline:
- 1) Build the elevated carpark for future	- 1) KKR	- 1) 18-08-2012
- 2) Provide RETURN shuttle bus service from different destinations(Padang Merbok/ commuter stations) to KKR2	- 2) KKR	- 2) 18-08-2012

Risk Assessment Date	Inherent Risk			Assessed Risk			Target Risk		
	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating
00-00-0000	5	IV	E	5	IV	E	2	II	L

Ref No (WBS): 5.2	Risk Title: Traffic congestion at Jln Sultan Salahuddin due to increase in traffic volume resulting to traffic jams, complaints, stress and social issues.		
Risk Description: There is a risk that traffic congestion at Jln Sultan Salahuddin due to increase in traffic volume resulting to traffic jams, complaints, stress and social issues.			
Risk Nature: OPERATIONAL	Risk Category: 16	Risk Manager:	Business Unit: CKBA

Risk Factors:	Possible Effects:
- 1) Concentration of existing JKR offices and new KKR2 building in one location but the existing road is not widen.	- 1) Traffic jam.Complaints.
- 2) Single point of entrance	- 2) Traffic jam.Complaints.

Existing Risk Treatments:	Effectiveness: (High/Medium/Low)
-	-

New Risk Treatments :	Responsible Party:	Target Deadline:
- 1) Propose alternative exit / entrance roads	- 1) KKR	- 1) 18-08-2012

Risk Assessment Date	Inherent Risk			Assessed Risk			Target Risk		
	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating
00-00-0000	4	IV	E	4	IV	E	3	III	M

Ref No (WBS): 5.3	Risk Title: Full testing of M&E services cannot be done due to contractor handover as a bare office space without the definition of the functional area from the client		
Risk Description: There is a risk that full testing of M&E services cannot be done due to contractor handover as a bare office space without the definition of the functional area from the client			
Risk Nature: OPERATIONAL	Risk Category: 10	Risk Manager:	Business Unit: CKBA

Risk Factors:	Possible Effects:
- 1) Contractors scope of work is only bare office space	- 1) Uncomfortable to the occupants
- 2) Unstable power supply	- 2) Uncomfortable to the occupants

Existing Risk Treatments:	Effectiveness: (High/Medium/Low)
-	-

New Risk Treatments :	Responsible Party:	Target Deadline:
- 1) To confirm the scope of works and appointment the ID specialist	- 1) Pengarah Projek (PD /WPD)	- 1) 17-04-2012
- 2) To identify and confirm the end user of KKR2	- 2) HOPT	- 2) 17-04-2012

Risk Assessment Date	Inherent Risk			Assessed Risk			Target Risk		
	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating
00-00-0000	4	IV	E	4	IV	E	2	II	L

Ref No (WBS): 5.4	Risk Title: Acceptance criteria from Caw Senggara Fasiliti Bangunan cannot be achieved due to non compliance of CSFB requirement checklist resulting the end user refuse to accept		
Risk Description: There is a risk that acceptance criteria from Caw Senggara Fasiliti Bangunan cannot be achieved due to non compliance of CSFB requirement checklist resulting the end user refuse to accept			
Risk Nature: OPERATIONAL	Risk Category: 6	Risk Manager:	Business Unit: CKBA

Risk Factors:	Possible Effects:
- 1) Quality not up to the standard	- 1) Delay of handover date

Existing Risk Treatments:	Effectiveness: (High/Medium/Low)
- 1) Establish the implementation of Project Quality Plan	- 1) Medium

New Risk Treatments :	Responsible Party:	Target Deadline:
- 1) Acquire the check list for the criteria from JKR	- 1) Contractor project Manager/ WPP	- 1) 01-06-2010

Risk Assessment Date	Inherent Risk			Assessed Risk			Target Risk		
	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating
00-00-0000	4	IV	E	3	III	M	2	II	L

Ref No (WBS): 5.5	Risk Title: Low incoming water pressure (Once project completed)		
Risk Description:			
Risk Nature:	Risk Category: 10	Risk Manager:	Business Unit:

Risk Factors:	Possible Effects:
-	-

Existing Risk Treatments:	Effectiveness: (High/Medium/Low)
-	-

New Risk Treatments :	Responsible Party:	Target Deadline:
-	-	-

Risk Assessment Date	Inherent Risk			Assessed Risk			Target Risk		
	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating
	3	III	M						

Ref No (WBS): 5.6	Risk Title: Delay in local authorizes approval for CCC		
Risk Description:			
Risk Nature:	Risk Category: 13	Risk Manager:	Business Unit:

Risk Factors:	Possible Effects:
-	-

Existing Risk Treatments:	Effectiveness: (High/Medium/Low)
-	-

New Risk Treatments :	Responsible Party:	Target Deadline:
-	-	-

Risk Assessment Date	Inherent Risk			Assessed Risk			Target Risk		
	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating
	3	III	M						

Ref No (WBS): 5.7	Risk Title: Non compliance to the requirement of Energy Efficiency due to failure in achieving BEI 100 kWh/m2/year resulting to unfulfilled to the needs statement/quality of the projects		
Risk Description: Non compliance to the requirement of Energy Efficiency due to failure in achieving BEI 100 kWh/m2/year resulting to unfulfilled to the needs statement/quality of the projects			
Risk Nature: OPERATIONAL	Risk Category: 10	Risk Manager:	Business Unit: UPP1B CKBA

Risk Factors:	Possible Effects:
- 1) Low efficiency in chiller system, transformer, etc	- 1) High Power consumption
- 2) The usage non energy saving electrical fittings	- 2) Achievement of Building Energy Index (BEI) fail
- 3) Failure of the performance of Low-E glass	- 3) ..

Existing Risk Treatments:	Effectiveness: (High/Medium/Low)
- 1) Appointment of Energy Consultant	- 1) High
- 2) The usage of energy efficient simulation	- 2) Medium

New Risk Treatments :	Responsible Party:	Target Deadline:
- 1) Make mandatory of all electrical/mechanical systems/ fittings to be Energy Efficiency (EE) compliance	- 1) Contractor -Energy Consultant/ WPP/HODT	- 1) 30-05-2010

Risk Assessment Date	Inherent Risk			Assessed Risk			Target Risk		
	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating
15-05-2010	5	IV	E	3	III	M	2	II	L

Ref No (WBS): 5.8	Risk Title: Uncomfortable working area hand over to end user.		
Risk Description:			
Risk Nature:	Risk Category: 0	Risk Manager:	Business Unit:

Risk Factors:	Possible Effects:
-	-

Existing Risk Treatments:	Effectiveness: (High/Medium/Low)
-	-

New Risk Treatments :	Responsible Party:	Target Deadline:
-	-	-

Risk Assessment Date	Inherent Risk			Assessed Risk			Target Risk		
	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating
	0								

Ref No (WBS): 5.9	Risk Title: NCR still not close will delay in issuing CPC		
Risk Description:			
Risk Nature:	Risk Category: 0	Risk Manager:	Business Unit:

Risk Factors:	Possible Effects:
-	-

Existing Risk Treatments:	Effectiveness: (High/Medium/Low)
-	-

New Risk Treatments :	Responsible Party:	Target Deadline:
-	-	-

Risk Assessment Date	Inherent Risk			Assessed Risk			Target Risk		
	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating
	0								

Ref No (WBS): 5.10	Risk Title: Compilation of Operation and Maintenance Manual not ready prior to handing over		
Risk Description:			
Risk Nature:	Risk Category: 0	Risk Manager:	Business Unit:

Risk Factors:	Possible Effects:
-	-

Existing Risk Treatments:	Effectiveness: (High/Medium/Low)
-	-

New Risk Treatments :	Responsible Party:	Target Deadline:
-	-	-

Risk Assessment Date	Inherent Risk			Assessed Risk			Target Risk		
	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating	Likelihood	Impact	Risk Rating
	0								

ATTACHMENT D

DEFINITIONS

Assumptions List	A record of the assumptions embedded in the project plan. Assumptions that are not validated are potential risks.
Business Case	The document that justifies the need for the system to be delivered by a project, what the business changes will be and the resources required to deliver, operate and dispose of the system. It provides the basis for project funding and may undergo approved revisions during the project
Impact	The outcome of an event expressed in qualitative or quantitative terms (for example, financial or reputational) being a loss, injury, disadvantage or gain
Inherent Risk	A raw risk that is a risk that has no mitigation factors or treatments applied to it.
Monitoring and Accountability	The processes used to manage the Enterprise Risk Management Framework on an on-going basis to reduce risk and take advantage of risk as an opportunity.
Opportunity	The possibility of realizing a favourable outcome and the impact this outcome has on the involved party. Opportunity is positive risk and can be identified and managed in a similar way.
Probability	A qualitative description of the likelihood and/or frequency of a risk occurring.
Residual risk	The degree of risk left after mitigation factors have been identified.
Risk	Risk is anything that may happen that impacts the achievement of an organization's objectives. Risk encompasses the following three dimensions: •Hazard - preventing an exposure from turning into a loss •Uncertainty - coping with volatility and change; and •Opportunity - harnessing opportunities to one's advantage. Risk is an event having a cause and a impact that could be either positive or negative.
Risk Acceptance	The informed decision to accept the impact and the likelihood of a particular risk.
Risk Analysis	A systematic use of available information to determine how often specified evens may occur and the magnitude of their impacts.
Risk Appetite	Risk appetite is the amount of risk, on a broad level, an entity of willing to accept in pursuit of objectives. It reflects that organization's risk management philosophy and, in turn, influences the organization's culture and operating style.
Risk Avoidance	An informed decision not to become involved in a risk situation.

Risk Event	The occurrence of an event, which has the potential to affect the viability of a project.
Risk Management Framework	A formalized process for managing risk on an explicit basis. The framework consists of a risk assessment, response and accountability for the risk and mitigation activities around it.
Risk Manager	The role responsible for operating the project's risk management process and the custodian of the Risk Management Plan and Risk Register
Risk Mitigation	The processes built into the controls environment, such as policies, frameworks, accountabilities etc to lower the residual risk.
Risk Owner	A designated position in an organisation assigned the responsibility for managing a specific risk
Risk Reduction	A selective application of appropriate techniques and management principles to reduce either the likelihood of an occurrence or its impacts, or both.
Risk Register	A record, under formal change control, of all identified risks, their assessment, treatments and outcomes
Risk Retention	Intentionally or unintentionally retaining the responsibility for loss or financial burden or loss within the organization.
Risk Response	The decision to accept, decline, treat or mitigate a risk or share a risk with another party.
Risk Sharing	Sharing the responsibility for the impact of a risk with another party such as through an outsourcing contract or insurance policy.
Strategic Risk	Any risk event which has serious or catastrophic consequence even though the likelihood of occurrence may be quite low
Uncertainty	The gap between the information required to estimate an outcome and the information already possessed by the decision maker

ENDORSEMENTS

Project Manager / Risk Manager

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Program Manager

Name	Signature	Date
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