



جامعة تكنولوجى مارا
UNIVERSITI
TEKNOLOGI
MARA

DEPARTMENT OF BUILT ENVIRONMENT STUDY & TECHNOLOGY
CENTRE OF STUDIES FOR BUILDING SURVEYING
UNIVERSITY OF TECHNOLOGY MARA
PERAK BRANCH
SERI ISKANDAR

BSR 330
INTEGRATED FINAL PROJECT

CASE STUDY :

MENARA 1 IBU PEJABAT POLIS BUKIT AMAN

PREPARED BY:

NO	NAME	MATRIX NO.
1.	FIRDAUS HAIKAL BIN AHMAD KAMAL	2021490278
2.	HAIQAL HAQEEMI BIN NORHADI	2021838622
3.	MUHAMMAD 'ADI HAIKAL BIN ROSLAN	2021869988
4.	NAUFAL HAKIM BIN JOHARI	2021821622

SEMESTER :

AP119 5E SESSION OCTOBER 2023 - FEBRUARY 2024

ACKNOWLEDGEMENT

First and foremost, we want to thank Allah SWT for providing us with the health and guidance we needed to finish this report. Finally, we finished the report given by our lecturers, TS. DR. HASNAN BIN HASHIM and DR. AN NISHA NUR WELLIANA BINTI ABD RASED , in the time allotted.

On this occasion, we would like to express our heartfelt gratitude to our beloved lecturers, TS. DR. HASNAN BIN HASHIM and DR. AN NISHA NUR WELLIANA BINTI ABD RASED, for their guidance, understanding, patience, and, most importantly, for providing positive encouragement and a warm spirit in order for us to complete this report. They went into great detail about how to complete this report. It has been an honour and a pleasure to have them as our lecturer.

Finally, we hope that our report is completed and that we can gain a lot of knowledge from it. It will also help us understand what we have learned better. Thank you very much.

TABLE OF CONTENT

CHAPTER 1 : DETAILS OF PROPERTY.....	24
1.1 INTRODUCTION AND BUILDING BACKGROUND.....	25
1.2 BUILDING BACKGROUND.....	26
1.3 PROJECT BRIEF.....	39
1.4 LIST OF MAJOR OCCUPANT AND TENANTS.....	41
1.5 FACILITIES AND BUILDING SERVICES.....	42
1.6 SUMMARY.....	44
CHAPTER 2 : MAINTENANCE MANAGEMENT ORGANISATION.....	45
2.1 INTRODUCTION.....	46
2.2 ORGANISATION STRUCTURE.....	47
2.3 SCOPE AND RESPONSIBILITY.....	53
2.4 SUMMARY.....	55
CHAPTER 3 : MAINTENANCE POLICY AND PLANNING.....	57
3.1 INTRODUCTION.....	58
3.2 ORGANISATION MAINTENANCE DIVISION VISION, MISSION AND OBJECTIVE.....	59
3.3 MAINTENANCE POLICY AND QUALITY POLICY.....	60
3.4 MAINTENANCE DIVISION STANDARD AND QUALITY STANDARD.....	62
3.5 MAINTENANCE PLANNING.....	64
3.6 MAINTENANCE PROGRAMME.....	65
3.7 SUMMARY.....	83
CHAPTER 4 : BUILDING DESIGN AND TECHNOLOGY DESIGN.....	84
4.1 INTRODUCTION.....	85
4.2 BUILDING DESIGN AND CONCEPT.....	86
4.3 GREEN AND SUSTAINABLE INITIATIVE.....	91
4.4 BUILDING ELEMENT AND SPECIFICATION.....	92
4.5 BUILDING SERVICES AND FACILITIES.....	103
4.6 EXTERNAL WORKS AND SERVICES.....	144
4.7 SPECIAL TECHNOLOGY FEATURES.....	157
4.8 SUMMARY.....	159
CHAPTER 5 : BUILDING CONDITION ASSESSMENT.....	160
5.1 INTRODUCTION.....	161
5.2 SCOPE OF WORK AND LIMITATION.....	162
5.3 ANALYSIS OF BUILDING DEFECTS.....	163
5.4 SCHEDULE OF BUILDING CONDITION.....	166
5.5 DEFECT SHEET.....	171

5.6 DEFECT INDICATION PLAN.....	205
5.7 DEFECT RECTIFICATION COST.....	209
5.8 SUMMARY.....	243
CHAPTER 6 : MAINTENANCE STRATEGY.....	244
6.1 INTRODUCTION.....	245
6.2 MAINTENANCE STRATEGY IMPLEMENTATION.....	246
6.2.1 STRATEGY 1 - PLANNED PREVENTIVE MAINTENANCE (PPM).....	246
6.2.2 STRATEGY 2 - KEY PERFORMANCE INDICATOR (KPI).....	248
6.3 SUMMARY.....	250
CHAPTER 7 : LEGAL ASPECT.....	251
7.1 INTRODUCTION.....	252
7.2 BUILDING SERVICES CONTRACT.....	254
7.3 LAWS AND REGULATION RELATED TO THE BUILDING.....	263
7.4 SUMMARY.....	275
CHAPTER 8 : FINANCIAL / MAINTENANCE BUDGET.....	276
8.1 INTRODUCTION.....	277
8.2 FINANCIAL EXPENSES / MAINTENANCE BUDGET OBJECTIVE.....	278
8.3 FINANCIAL EXPENSES / MAINTENANCE BUDGET.....	279
8.3.1 CASH FLOW.....	280
8.3.1.1 OVERALL FINANCIAL / MAINTENANCE ANALYSIS.....	281
8.3.1.2 FINANCIAL / MAINTENANCE BUDGET INCOME ANALYSIS.....	282
8.3.1.3 FINANCIAL / MAINTENANCE BUDGET EXPENDITURE ANALYSIS.....	283
8.3.1.4 FINANCIAL / MAINTENANCE INCOME AND EXPENDITURE ANALYSIS	284
8.4 FINANCIAL / MAINTENANCE BUDGET FORECAST.....	285
8.5 SUMMARY.....	289
CHAPTER 9 : PROBLEM AND RECOMMENDATION.....	290
CHAPTER 10 : CONCLUSION.....	293
REFERENCES.....	295

1.1 INTRODUCTION AND BUILDING BACKGROUND



Figure 1.1 Menara 1 Ibu Pejabat Polis Di Raja Malaysia

Table 1.1 Name and address owner of the property

Name of Building	Menara 1 Ibu Pejabat PDRM
Address	Jln. Bukit Aman, Tasik Perdana, 50560 Kuala Lumpur, Wilayah Persekutuan Kuala Lumpur

The Royal Malaysia Police's (RMP) central and highest administrative office is located at Bukit Aman, often known as the RMP Headquarters. Bukit Aman, which is situated in Kuala Lumpur, Malaysia, acts as the tactical and operational core of the nation's law enforcement operations. The very name "Bukit Aman" means "Hill of Peace," signifying the dedication to upholding law and order, security, and tranquillity across the country.

Bukit Aman, the Ibu Pejabat Polis (Police Headquarters), is an essential hub for organising and supervising different facets of public safety, crime prevention, and policing activities. The central office bears the responsibility of devising policies, executing tactics, and guaranteeing efficient communication and cooperation between diverse police units and divisions throughout Malaysia.