

APPENDIX A

SCOPE OF WORKS

**CADANGAN MENINGKATKAN SISTEM BEKALAN AIR DI WILAYAH
ISKANDAR, JOHOR BAHRU, JOHOR: CADANGAN PERLANTIKAN JURUKUR
BAGI KERJA-KERJA UKUR KEJURUTERAAN BAGI**

**PAKEJ 1: CADANGAN PEMASANGAN PAIP AGIHAN DAN TANGKI
PENGIMBANG BARU DARI LOJI RAWATAN AIR LAYANG 2 KE JOHOR
BAHRU**

SCOPE OF WORKS

1.0 GENERAL

1.1 Objectives

The objective of Proposed Appointment Surveyor is to acquire all necessary data and information on the existing buried pipelines & other fittings for the detailed engineering design of the project within the stipulated corridor prior for pipe laying works for:

Pakej 1: Cadangan Pemasangan Paip Agihan dan Tangki Pengimbang Baru dari Loji Rawatan Air Layang 2 ke Johor Bahru.

1.2 Definitions

“Engineer” wherever used herein shall mean **Angkasa Consulting Services Sdn. Bhd.** and his successors in office and such person or persons as may be deputed by him in writing to act on his behalf for the supervision of the work under this Contract.

“Surveyor” wherever used herein shall mean the person or persons, partnership, firm or company who is carrying out the survey works under this Contract.

2.0 LOCATION AND AREA TO BE SURVEYED

The areas identified as the site for the preparation final engineering survey drawings in this Quotation are located within the district of Johor Bahru. The selected location is shown in **Appendix B**. The extent or distance and width of the new pipe alignment is be shown on by the EC, but generally the survey work shall cover 10 meters on each side along proposed pipe route or within the area specified by Engineer. Additionally, hydrographical survey to be covered 250 meters upstream and 250 meters downstream from the proposed pipe alignment or within the area specified by Engineer.

Summary of the approximate surveyor drawing to be conducted at pipeline area is indicated in the following figure.

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3.0 COMPLETION PERIOD

The pipeline surveyor works for each of the above locations shall be completed within **six (6) weeks** as depicted below: -

Mobilization	- 1 week
Completion of Site Works	- 3 weeks
Completion of Draft and Final Drawings and Report	- 2 week
Total Completion Period	- 6 weeks

Overall completion period for site works and submission of final report is **6 weeks**.

APPENDIX B

LOCATION OF WORK



Google Earth

Image © 2023 Maxar Technologies
Image © 2023 Airbus

Legend:
— Proposed Pipe Alignment
Survey Area
Hydrographical Survey Area

Reference Coordinates:
1.518846°, 103.774013°

APPENDIX C

BILL OF QUANTITIES

PACKAGE 1: CADANGAN PEMASANGAN PAIP AGIHAN DAN TANGKI PENGIMBANG BARU DARI LOJI RAWATAN AIR LAYANG 2 KE JOHOR BAHRU

Pipe Alignment Avoiding Lot 1876

Item No.	Description	Unit	Quantity	Rate	Amount (RM)
A	<u>GENERAL</u>				
A.1	Allow for Insurances (Workmen's Compensation) as instructed by S.O.	L.S.		Based on actual receipts of Insurances taken as directed by the S.O.	1,000.00
A.2	Allow for all costs for necessary fees imposed by authorities i.e. special certificate / license, etc.	L.S.		Based on actual receipts of costs incurred as directed by the S.O.	1,000.00
B	<u>MOBILISATION AND DEMOBILISATION FOR SURVEY WORKS</u>				
B.1	Mobilisation and demobilisation for the survey works. This rate shall be based on the distance from Surveyor's Office to survey site.				
	a) Up to 50km from Surveyor's Office.	L.S.			
	b) More than 50km but not exceeding 150km from Surveyor's Office.	L.S.			
	c) More than 150km but not exceeding 300km from Surveyor's Office.	L.S.			
	d) Exceeding 300km from Surveyor's Office.	L.S.			2,229.00
B.2	Preparatory work for site survey and liason with relevant authorities.	L.S.			743.00
B.3	Carry out land ownership and status search including purchase of all relevant certified plans, revenue sheets, development structure plans, and any other information required for the performance of the survey works as specified for the specified sites in the Project.	L.S.			1,650.00
B.4	Extra over item B.3 for obtaining latest current land ownership and status details for use in submission of land acquisition, way leave and/or project development planning approval to the relevant authorities.				
B.5	Allow for all costs to coordinate with other surveyors or contractors appointed by the Employer or any other relevant parties for the specified performance of the works.	L.S.			450.00
C	<u>Topographical Surveys</u>				
C.1	Planimetric control as specified.	Km			
C.2	Height control as specified.	Km			
C.3	Monumenting of TBMs as specified.	Nr			
C.4	Topographical survey with contours at 1.0m intervals.	Ha			
D	<u>Pipeline Survey</u>				
D.1	Planimetric control as specified.	Km	2	2,500.00	5,000.00
D.2	Height control as specified.	Km	2	743.00	1,486.00
D.3	Monumenting of TBMs as specified.	Nr	5	185.75	928.75
D.4	Setting out pipeline and longitudinal profiling.	Km	2	5,572.50	11,145.00
D.5	Strip survey	Ha	6.8	743.00	5,052.40
E	<u>River Cross Sectioning and Hydrographical Survey</u>				
E.1	River / drain cross-sectioning including necessary hydrographical survey as directed.	Section	13	185.75	2,414.75
E.2	Hydrographical survey.	Ha	2.86	5,944.00	16,999.84
Page Total to Grand Summary					50,098.74

PACKAGE 1: CADANGAN PEMASANGAN PAIP AGIHAN DAN TANGKI PENGIMBANG BARU DARI LOJI RAWATAN AIR LAYANG 2 KE JOHOR BAHRU

Pipe Alignment Avoiding Lot 1876

Item No.	Description	Unit	Quantity	Rate	Amount (RM)
H	<u>Survey Plans and Report</u>				
H.1	Preparation of key plans, location plans and survey plans to the specified scales, and submit to Employer and Engineer in the following format:				
	a) Endorsed A1 size drawing including one (1) CD containing the soft copies of the drawings in original format.	Set	1	5,500.00	5,500.00
	b) Endorsed A3 size including one (1) CD containing the soft copies of the drawings in original format.	Set	2	3,000.00	6,000.00
H.2	Submission of survey report as specified.	Nr	2	1,000.00	2,000.00
I	<u>Land Acquisition (LA) / Way Leave / Other Plans</u>				
I.1	Check and confirm status of the existing LA / Way Leave / other plans already submitted to the Authorities.	L.S			
I.2	Amendment of existing LA / Way Leave / other plans already submitted and resubmit the revised plans duly signed to the Authorities. Rate to include necessary draft & final copies and one (1) CD containing the soft copies of the drawings in original format.	Lot		RM20.00 subject to minimum charge RM400.00 per job	
I.3	Preparation of new or additional LA / Way Leave / other plans and submit to the relevant authorities. Rate to include necessary draft & final copies and one (1) CD containing the soft copies of the drawings in original format.	Lot		RM20.00 subject to minimum charge RM400.00 per job	
I.4	Preparation of all necessary drawings for withdrawal of land acquisition / way leave / other plans. Rate to include necessary draft & final copies and one (1) CD containing the soft copies of the drawings in original format.	Lot		RM20.00 subject to minimum charge RM400.00 per job	
J	<u>Land Alienation Plans</u>				
J.1	Preparation of pre computation plans for Land Alienation as specified to the relevant authorities. Rate to include necessary draft & final copies and one (1) CD containing the soft copies of the drawings in original format.	Lot		RM20.00 subject to minimum charge RM400.00 per job	
J.2	Preparation of as built drawings for the purpose of Land Alienation as specified by the relevant Authorities / Land Office. Rate to include necessary draft & final copies and one (1) CD containing the soft copies of the drawings in original format.	Lot		RM20.00 subject to minimum charge RM400.00 per job	
Page Total to Grand Summary					13,500.00

PACKAGE 1: CADANGAN PEMASANGAN PAIP AGIHAN DAN TANGKI PENGIMBANG BARU DARI LOJI RAWATAN AIR LAYANG 2 KE JOHOR BAHRU

Pipe Alignment Avoiding Lot 1876

Item No.	Description	Unit	Quantity	Rate	Amount (RM)
K	<u>Survey Certified Plans / Certified Plans</u>				
K.1	Preparation of Survey Certified Plans for submission to relevant authorities for planning approval.	Nr	3		
K.2	Obtain Certified Plans by JUPEM for submission to relevant authorities for planning approval.	Nr			
L	<u>Title Survey - Survey Of Land For Buildings</u>				
L.1	Basic charge per Job	Nr			
L.2	Preparation of pre computation plans for requisition survey plans. Standard format imposed by the Authority/Land Office.	Lot			
L.3	Re-establishment of old boundary marks found missing or out of position for each mark refixed or replaced.	Nr			
L.4	Survey of each lot for residential purpose				
	a) Up to 100 Sq.m	Lot			
	b) Above 100 Sq.m but up to 200 Sq.m	Lot			
	c) For each additional 100 Sq.m or part thereof above the first 200 Sq.m	Lot			
	d) Survey of Azimuth, Connections and Controls per metre	M			
	e) Survey to determine the ends of the party wall boundary per wall	Wall			
	f) Survey of block pegging of corners of blocks not exceeding 16 lots per block	Block			
	g) Survey of pegging each lot with wooden pegs	%			
L.5	Survey of each lot for commercial purpose				
	a) Up to 100 Sq.m	Lot			
	b) Above 100 Sq.m but up to 200 Sq.m	Lot			
	c) For each additional 100 Sq.m or part thereof above the first 200 Sq.m	Lot			
	d) Survey of Azimuth, Connections and Controls per metre	M			
	e) Survey to determine the ends of the party wall boundary per wall	Wall			
	f) Survey of block pegging of corners of blocks not exceeding 16 lots per block	Block			
	g) Survey of pegging each lot with wooden pegs	%			
L.6	Survey of each lot for industrial purpose				
	a) Up to 2,000 Sq.m	Lot			
	b) For each additional 100 Sq.m or part thereof above the 2,000 Sq.m	Lot			
	c) Survey of Azimuth, Connections and Controls per metre	M			
	d) Survey to determine the ends of the party wall boundary per wall	Wall			
	e) Survey of block pegging of corners of blocks not exceeding 16 lots per block	Block			
	f) Survey of pegging each lot with wooden pegs	%			
L.7	Survey data in digital format	%			
Page Total to Grand Summary					

J102: CADANGAN MENINGKATKAN SISTEM BEKALAN DI WILAYAH ISKANDAR, JOHOR BAHRU

**PACKAGE 1: CADANGAN PEMASANGAN PAIP AGIHAN DAN TANGKI PENGIMBANG BARU DARI LOJI RAWATAN AIR
LAYANG 2 KE JOHOR BAHRU**

GRAND SUMMARY

Page No	Amount
	RM
Page BQ / 1 - 3	50,098.74
Page BQ / 2 - 3	13,500.00
Page BQ / 3 - 3	
Sub - Total	63,598.74
Add Government Service Tax 6%	3,815.92
GRAND SUMMARY	67,414.66

The total amount (in words) Ringgit Malaysia : Sixty Seven Thousand Four Hundred Fourteen and Sixty Six cent



Signature of Consultant

Ts. Saiful Azhar Bin Ramlee

Name

General Manager

Designation

27.07.2023

Date



Official Stamp