



pH JKR SCORECARD
NEW AND UPGRADING ROADS - KJ



PROJECT			
REG. NO.			
DATE OF ASSESSMENT	Pre - Assessment (PA):	Design Evaluation (DE):	Verification Scoring(VS):
ROAD CRITERIA	NEW ROAD/ UPGRADING ROAD		

CODE	CRITERIA	RESPONSIBILITY	ALLOCATION POINTS (AP)	MAXIMUM POINTS (MP)	Pre-Assessment (PA)	Design Evaluation Points (DE)	Verification Scoring (VS)	Submittal documents (DE)	checked [v / X] DE	Submittal documents (VS)	checked [v / X] VS	NOTES		
SM	SUSTAINABLE SITE PLANNING AND MANAGEMENT													
SM 1	REQUIREMENTS FOR ROAD WORKS DESIGN													
FOR UPGRADING ROAD	Traffic Study	CJ	1	New Road: 5				A copy of reports/ records/ data that support the requirement of road works design . Traffic Impact Assessment Report (TIA) A copy of flood records from JPS A copy of response / complaints /requests Bridge assessment report/ Inventory card CBA calculations/ VE report As built drawings POL 27 for accident reports		Nil				
	Axle Load Study	CJ	1											
	Flood records	CJ	1	Upgrading Road: 8										
	Response to public complaints and requests	CJ	1											
	Cost Benefit Analysis	CJ	1											
	As built drawings	CJ	1											
	Accident reports	CSFJ	1											
	Structure replacement	CJ	1											
SM 2	ROAD ALIGNMENT													
	Not more than 6 berms	CJ	1	6				Drawings		As-built drawings				
	Cut slope not steeper than 1:1.5 or Rock slope not steeper than 4:1	CKG	1					Penilaian Awal Tapak (PAT) report						
	Fill slope not steeper than 1:2	CKG	1					Mitigation Plan report						
	Maximum grade less than 7%	CJ	1											
	No reclamation involved	CJ	1											
	Provide added uphill lane (climbing lane) where the length of critical grade exceeds 5%	CJ	1											
	Not in Sensitive Area	CASKT	1											
	OR													
	Sensitive area with mitigation plan													
SM 3	SITE VEGETATION													
	Use non-invasive plant species (example: grass/creeper)	CJ	1	3				i. Design Drawing showing the location of all plants to be planted		As-built drawing				
	use native plant species only	CJ	1					ii. Bill of Quantities (related items only)						
	use of grass/creeper for slope protection/unpaved shoulder	CJ	1					iii. A copy of Environmental Impact Assessment (EIA) report if required and Environmental Management Plan (EMMP).						
	Hydroseeding with recycled fibrous material (Example: Fibromat, Paddy Straw, Coconut husk, Rice husk)	CJ	1					iv. A copy of specification sections relating to site vegetation including planting bed requirements. These are typically found in the Arahan Teknik Jalan 16/03 Pindaan 2015.						
	Preservation of existing vegetation	CJ	1											
	Use bio-engineering techniques (example : vetiver grass, creeper and regeneration of natural plant species and material)	CJ	1											
SM 4	NOISE MITIGATION PLAN													
	Supply and install noise barrier including maintenance during the construction and defects liability period	CJ	2	2				i. Drawing showing the location of the proposed quiet pavement.		i. A list of pavement sections built and their associated surface material type and surface areas.				
	To ensure that all equipment and machinery are in proper working condition so as to minimise the amount of noise generated.	CJ						ii. Quiet pavement design mix.						
								iii. Quietness test result						
TOTAL SM		NEW ROAD		16	0	0	0							
		UPGRADING ROAD		19	0	0	0							

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PT	PAVEMENT TECHNOLOGIES											
PT 1	EXISTING PAVEMENT EVALUATION											
FOR UPGRADING ROAD	Surface Condition Survey	CSFJ	1	3				i. Submit a copy of the Pavement Evaluation reports with the intergrated analysed data.		NIL		
	Coring & Dynamic Cone Penetrometer test	CSFJ	1					ii. Recommended pavement rehabilitation method.				
	Deflection test	CSFJ	1					iii. Construction Drawing				
	Trial pit & Laboratory test	CSFJ	1									
	Surface Regularity Test	CSFJ	1									

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PT 2	PERMEABLE PAVEMENT											
	Use of permeable (porous) pavement mix design with higher range of air void (18 -25%)	CJ	1	3				Copy of the permeable pavement mix design. The mix design should have the following items highlighted :		i.Permeable pavement installed (processes) on the project (Photos/Progress report) iii. Delivery Order Record iv. Test results		
	Drainability shall be sufficient to allow satisfactory drainage of drain water during heavy rainfall	CJ	1					i. Copy of the permeable pavement mix design record				
	Drainability shall not be less than 10 litre/minute for 54cm2 area, 50mm thickness	CJ	1					ii.Bill of quantities				
PT 3	PAVEMENT PERFORMANCE TRACKING											
	Use a process that allows construction quality measurements and long-term pavement performance measurements to be spatially located and correlated to one another. i. Construction quality measurements must be spatially located such that the location of the quality measurement is known. ii. Pavement condition measurements must be taken at least every 2-3 years (To be confirm) and must be spatially located to a specific portion of roadway or location within roadway. iii. An operational system, computer based or otherwise that is capable of storing construction quality measurements, pavement condition measurement and their spatial locations. iv. The designated system must be demonstrated in operation, be capable of updates and have written plans for its maintenance in perpetuity.	CFSJ	2	2				i. Pavement structure design ii. Pavement Testing reports		Pavement performance tracking system that is operational and has been populated with the required data.		
PT 4	LONG-LIFE PAVEMENT											
	Meet the requirements of Arahan Teknik Jalan 5/85 (Pindaan 2013). Manual for the structural design of flexible pavement.	CJ	1	4				i. A list of pavement sections to be built or reconstruction and their associated pavement material type, surface areas, ESALs, design thickness and subgrade CBR.		As-built drawings		
	Pavement design is in accordance with a design procedure that is formally recognized, adopted and documented by the agency.	CJ	1					ii. A calculation to indicate the total percentage of trafficked lane pavement areas that are designed for long-life.				
	Rigid Pavement > 40 years design life OR Flexible Pavement > 20 Years design life	CJ	2					iii. Design calculation iv. Drawing showing locations of pavement sections designed for long-life.				
TOTAL PT		NEW ROAD		9	0	0	0					
		UPGRADING ROAD		12	0	0	0					

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EW	ENVIRONMENT & WATER											
EW 1	ENVIRONMENTAL MANAGEMENT SYSTEM											
	ISO 14001:2004 certification for main contractor	AST	3	3				NIL		Submit copy of the MS ISO 14001:2004 certification for the main contractor.		
EW 2	STORMWATER MANAGEMENT											
	Develop a stormwater management plan for the site using stormwater best management practices (BMP) for flow control in conformance to the Stormwater Management Manual for Malaysia (MSMA) and EMS ISO 14001:2004. Demonstrate that the planned BMPs to conform to all applicable 5% above minimum flow control standards set by MSMA and EMS ISO 14001: 2004.	CKAS	1	2				i. Documentation of the Stormwater Management Plan. ii. Executive summary of the project drainage design report.		Copy of monthly water quality monitoring report. (Based on requirement).		
	Develop a stormwater management plan for the site using stormwater best management practices (BMP) for water quality control in conformance to the Stormwater Management Manual for Malaysia (MSMA) and EMS ISO 14001:2004. Demonstrate that the planned BMPs to conform to all applicable 5% above minimum water quality standards set by MSMA and EMS ISO 14001: 2004.		1					iii. Calculation for runoff areas and runoff volume (output from any rainfall modelling software used is adequate).				
TOTAL EW		NEW ROAD		5	0	0	0					
		UPGRADING ROAD		5	0	0	0					

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AE	ACCESS & EQUITY											
AE 1	SAFETY AUDIT											
	Road Safety Audit Stage 1-3 (Design Stage)	CJ	1	4				i. Submit a copy of the Road Safety Audit (RSA) Report, Designer's Response report and decision of meeting for Stage 1 to Stage 3.		i. Submit a copy of the Road Safety Audit (RSA) Report and Contractor's Response report for Stage 4 to Stage 5		
	Road Safety Audit Stage 4 Part I-III (Construction Stage)		1					ii. Show any exemption of any stages of audit (to be issued only by the authorized party).		ii. Submit additional Audit Report for Traffic Management during construction		
	Road Safety Audit Stage 5 (Operational Stage)		1									
	Additional Audit For Traffic Management During Construction		1									
AE 2	SCENIC VIEWS											
	Provide at least one access from the project to a designated area for vehicles to exit the traffic stream.	CJ	1	2				Indicate in the submitted plans where the lookout point or overlook is drawn and specified.		i. Provide a photo of the access point and a picture of the related attraction.		
	Provide park area for road user to stop and experience the scenic views at strategic location.		1									
TOTAL AE		NEW ROAD		6	0	0	0					
		UPGRADING ROAD		6	0	0	0					

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CA	CONSTRUCTION ACTIVITY											
CA 1	REQUIREMENT FOR ROAD WORKS DESIGN											
	MS ISO 9001: 2008 or (latest version) certification for main contractor.	CJ	3	3				NIL		Valid MS ISO 9001 certificate		
CA 2	OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT SYSTEM											
	OHSAS 18001:2007 or (latest version) certification for main contractor	CJ	3	3				NIL		Valid OHSAS 18001 certificate		
CA 3	CONSTRUCTION WASTE MANAGEMENT PLAN											
	Create, establish, implement and maintain a formal construction waste management plan during road construction	CASKT	2	4				NIL		Copy of the project construction waste management plan (CWMP). The plan should identify these items: i. Type of construction waste ii. Expected tonnage iii. Related cost of disposal of such waste iv. Management strategy for waste generated from site including household and domestic waste		
	Provide a designated location to segregate construction waste on-site		1									
	Appoint the licensed contractor(s) to collect the construction waste		1									
CA 4	TRAFFIC MANAGEMENT PLAN											
	Create, establish and implement a formal traffic management plan during road construction	CJ	2	2				Copy of the project Traffic Management Plan (TMP). The plan should identify these items, Eg, i. all sequence of construction stage with appropriate traffic control devices ii. Smooth flow of existing traffic connected to project iii. Adequate signages and barriers iv. Temporary road diversion where necessary v. Adequate flagman and blinkers		Audit report (part of Road Safety Audit report stage 4) – to be submitted during construction stage.		
CA 5	SITE ROUTINE MAINTENANCE PLAN											
	Create, establish, implement and maintain a formal construction waste management plan during road construction	CJ	2	2				Contractual Requirements for the implementation of Site Routine Maintenance Plan (Eg:- Bill of Quantity/ Need Statement)		Records showing the periodic maintenance works being carried out by the contractor.		
CA 6	HOUSEKEEPING											
	Establish and implement housekeeping during construction	CJ	2	2				Contractual Requirements for the implementation of Housekeeping plan (Preliminary item)		Progress report (with photo)		
CA 7	SUSTAINABLE CONSTRUCTION MACHINERIES											
	Perform scheduled maintenance of construction machineries	CJ	2	4				NIL		i. Documents and record showing the maintenance schedule and maintenance works done.		
	Use high performance machineries with low fuel consumption and low air emission.		2							ii. Any documented evidence showing the procurement and usage of high performance machineries.		
TOTAL CA			NEW ROAD	20	0	0	0					
			UPGRADING ROAD	20	0	0	0					

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MR	MATERIAL & RESOURCES											
MR 1	MATERIAL REUSE											
	Reuse at a minimum 30% of existing pavement materials by estimated volume.	CJ	3	5				i. A calculation that shows the computed percentage of material reused including the following items at minimum: a) Total volume of existing pavement material. b) Total volume of reused pavement material. c) The computed percentage of the total reused volume. ii. Inventory of existing road furniture iii. Earthwork calculation		Total volume of reused pavement material via progress payment or delivery order		
	Reuse of existing material other than pavement materials		1									
	Earthwork balance		1									
MR 2	GREEN PRODUCT											
	Green Products Scoring System (GPSS) of 70% - 100%	CASKT	3	3				i)Product Certification and brochure ii)Specification of the products use		Copy of product certification.		
	Green Products Scoring System (GPSS) of 50% - 69%		2									
	Green Products Scoring System (GPSS) of 40% - 49%		1									
MR 3	ROAD INVENTORIES											
	Provide updated master inventory of material/product after completion of road works.	CSFJ	1	NEW ROAD 1				A copy of established master inventory of material/product of existing road.		A copy of updated master inventory of material/product after completion of road works.		
FOR UPGRADING ROAD	Provide established master inventory of material/product of existing road		1	UPGRADING ROAD 2						As built drawing		
MR 4	EFFICIENT ROAD LIGHTINGS											
	All systems should be designed to use energy efficient road lightings, while complying to standard and specification for road lightings (eg. MS 825 part 1:2007).	CKE	1	1				Submit a copy of the following documents: 1. specifications 2. drawings 3. catalogue		As-built drawings		
TOTAL MR		NEW ROAD		10	0	0	0					
		UPGRADING ROAD		11	0	0	0					

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IN	INNOVATION											
	Any related Innovation	ALL		5				Contractual requirement for innovation plan		1. A copy the specification an innovative idea and photos 2. A copy of innovation report.		
	< Innovation 1 >		1									
	< Innovation 1 >		1									
	< Innovation 1 >		1									
	< Innovation 1 >		1									
	< Innovation 1 >		1									
	< Innovation 1 >		1									
	TOTAL IN		NEW ROAD		5	0	0					
		UPGRADING ROAD		5	0	0	0					

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EC	ELECTIVE CRITERIA											
EC-SM 5	SERVICES FOR DISABLED USERS											
	Crossing for disabled users with noise making devices installed	CJ	1	3				A copy of approved Development Order (DO) by the local authority.		Photo evidence showing type and location of disabled services provided As-built drawings		
	Walkway access for disabled users by providing sidewalks sloped for easy access	CJ	1					Detail drawings				
	Tac tile on the pedestrian pathway and access for disabled users.	CJ	1									
EC-SM 6	NOISE CONTROL											
	The pavement mix design by using quiet pavement	CJ	2	2				i. Related drawing		i. As build drawing ii. Sound Testing report		
	Noise barrier shall be provided in sensitive areas such as housing situated beside busy roads or highways, schools and hospitals.	CJ	2									
	Buffer Zone	CJ	2									
EC-EW 3	ECOLOGICAL CONNECTIVITY											
	Provide dedicated wildlife crossing structures and protective fencing as determined by Environmental Impact Assessment	CJ	1	2				i. Submit a copy of approved EIA report. ii. Related design reports / presentations showing type and location of wildlife access		i. As-built drawings ii. Photo evidence		
	Provide sound barrier at sensitive area for wildlife		1									
EC-AE 3	PEDESTRIAN ACCESS											
	Zebra Crossing, Signalised Pedestrian Crossing and Refuge Island	CJ	1	4				i. Copy of Road Safety Audit report that focuses on pedestrian facilities and related drawings.		As-built drawings		
	Overhead Pedestrian Bridge		2									
	Sidewalk / Walkway and Raised Crosswalk		1									
EC-AE 4	MOTORCYCLE LANE											
	Paved shoulder, non-exclusive motorcycle lane and end treatment at junction.	CJ	1	5				i. Submit a copy of Road Safety Audit report that focuses on motorcycle lane facilities. ii. Design drawings		i. As-built drawings		
	Exclusive motorcycle lane		2									
	Overhead motorcycle bridge		1									
	Motorcycle shelter		1									
EC-AE 5	REST AREA											
	Provide or maintain existing rest area along the project location.	CJ	2	2				i. Submit a copy of rest area layout plan including detailed drawing.		i. Related As-built drawings		
TOTAL ELECTIVE POINTS				18	0	0	0					

TOTAL POINTS (CORE)		TOTAL MAXIMUM POINTS		TOTAL PRE-ASSESSMENT		TOTAL DESIGN EVALUATION		TOTAL VERIFICATION SCORING	
		NEW ROAD	UPGRADING ROAD	NEW ROAD	UPGRADING ROAD	NEW ROAD	UPGRADING ROAD	NEW ROAD	UPGRADING ROAD
SM	SUSTAINABLE SITE PLANNING AND MANAGEMENT	16	19	0	0	0	0	0	0
PT	PAVEMENT TECHNOLOGIES	9	12	0	0	0	0	0	0
EW	ENVIRONMENT & WATER	5	5	0	0	0	0	0	0
AE	ACCESS & EQUITY	6	6	0	0	0	0	0	0
CA	CONSTRUCTION ACTIVITIES	20	20	0	0	0	0	0	0
MR	MATERIAL AND RESOURCES	10	11	0	0	0	0	0	0
IN	INNOVATION	5	5	0	0	0	0	0	0
TOTAL POINTS (CORE)		71	78	0	0	0	0	0	0
TOTAL POINTS (ELECTIVE)		18		0		0		0	
TOTAL POINTS (CORE + ELECTIVE)		89	96	0	0	0	0	0	0

PRE-ASSESSMENT SUMMARY	
FINAL TARGET POINTS	0
FINAL PERCENTAGE	0%
PH JKR RATING	0 ★
	TIADA PENARAFAN

pH JKR RATING LEVEL		
TOTAL CREDIT SCORE (%)	Ph JKR RATING	pH JKR
40 - 49	2 STAR	Potensi Pengiktirafan
50 - 69	3 STAR	Amalan Pengurusan Terbaik
70 - 84	4 STAR	Kecemerlangan Nasional
85 - 100	5 STAR	Kecemerlangan Global

DESIGN EVALUATION SUMMARY	
FINAL TARGET POINTS	0
FINAL PERCENTAGE	0%
PH JKR RATING	0 ★
	TIADA PENARAFAN

VARIFICATION SCORING SUMMARY	
FINAL TARGET POINTS	0
FINAL PERCENTAGE	0%
PH JKR RATING	0 ★
	TIADA PENARAFAN

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