

ITEM	AREA OF ASSESSMENT	DETAIL POINTS	MAX POINTS	MUST SCORE	Responsible party	SCORE	Remark
1	ENERGY EFFICIENCY (EE)						
DESIGN							
EE1	MINIMUM EE PERFORMANCE (MANDATORY COMPLIANCE)						
	Establish minimum Energy Efficiency (EE) performance to reduce energy consumption in buildings, thus reducing CO ₂ emission to the atmosphere.						
	Meet the following minimum EE requirements as stipulated in MS 1525 1) OTTV ≤ 50 W/m ² AND 2) Lightweight Roof U-value ≤ 0.4 W/m ² K Heavyweight Roof U-value ≤ 0.6 W/m ² K	1	1	1	BH Yew Architect / Pen Konsult	1	From the prelim assessment, OTTV can meet the mandatory point. RTTV will not be able to meet the mandatory point if no insulation installed.
EE2	ADVANCED EE PERFORMANCE						
	Establish EE Performance to reduce dependence on energy to keep indoor environment at satisfactory comfort level. Computed OTTV and Roof U-value to show lower dependence on energy to maintain indoor thermal comfort.						
	C) High-rise						
	OTTV ≤ 46 W/m ² , OR	1					
	OTTV ≤ 42 W/m ² , OR	2					
	OTTV ≤ 38 W/m ² , OR	4					
	OTTV ≤ 34 W/m ² , OR	6					
	OTTV ≤ 30 W/m ²	9					
	Lightweight Roof U-value ≤ 0.35 W/m ² K / Heavyweight Roof U-value ≤ 0.50 W/m ² K, OR	1	12	7	BH Yew Architect / Pen Konsult		To achieve the 7 points, followings have to be installed: a. Single glazing Low E glass with U-value < 4 W/sqmK. b. Roof to be insulated with 2 layers of rockwool 50mm thick 150kg/sqm
	Lightweight Roof U-value ≤ 0.30 W/m ² K / Heavyweight Roof U-value ≤ 0.40 W/m ² K, OR	2					Architect/Owner to provide the followings for detail calculation: a. Light weight brick U-value b. Glass specifications on shading coefficient, U-Value, Visible Light Transmission (VLT) c. Roof details with sectional view, TPO membrane etc.
	Lightweight Roof U-value ≤ 0.25 W/m ² K / Heavyweight Roof U-value ≤ 0.30 W/m ² K, OR	3				3	
EE3	RENEWABLE ENERGY						
	Encourage use of renewable energy system to offset energy cost and promote green energy use.						
	B) Low-rise OR High-rise (Building Energy Consumption shall apply to energy consumption at common areas only, excluding carparks)						
	Where 3 kWp is generated by renewable energy, (PV or equivalent), OR	1	5	1	PLA		M&E Engineer to provide the followings: a. To use solar panel on compound lightings amounting to 3kWp. B. Areas where these solar panels will be installed. C. Percentage of the renewable energy generation over overall energy. D. Additional cost incurred
	Where 6 kWp or 10% of building energy consumption (whichever is the greater), is generated by renewable energy, (PV or equivalent), OR	2					
	Where 10 kWp or 15% of building energy consumption (whichever is the greater), is generated by renewable energy, (PV or equivalent), OR	3					
	Where 20 kWp or 20% of building energy consumption (whichever is the greater), is generated by renewable energy, (PV or equivalent), OR	4					
	Where 30 kWp or 25% of building energy consumption (whichever is the greater), is generated by renewable energy, (PV or equivalent).	5					
ENERGY EFFICIENCY							
EE4	EXTERNAL LIGHTING AND CONTROL						
	Encourage use of energy efficiency lighting and sensors to optimize energy savings to external or common areas.						
	B) Low-rise OR High-rise						
	1. Provide High Efficiency External Lighting to at least 90% of the common areas (including lift lobbies, staircases, carparks and gardens) with lamp efficacy ≥ 80 Lumens per Watt. AND 2. Maintain and overall luminance level of not more than what is specified in MS1525.	1	2	2	PLA	1	M&E engineer to provide the followings: a. Lightings for each area on scaled floor plans with their respective efficiency and description. Efficiency shall be more than 80 lm/W. b. Calculation of percentage of coverage area and overall luminance level. C. Electrical schematic of areas controlled by photo sensors with motion detectots and system description. d. Additional cost incurred.
	Provide photo-sensor with motion detectors controlled lighting in conjunction with daylighting strategy for 90% of the common areas (including lift lobbies, staircases, carparks and gardens)	1				1	
EE5	INTERNET CONNECTIVITY						
	Encourage working from home via internet connection, thereby discourage avoidable commuting.		1	1	Paramount / PLA		Owner/M&E Engineer to provide letter of support from Internet Service Provider that this project has internet services
	Provide infrastructure for internet connectivity to meet the current speed capacity provided by the service providers.	1					
MAINTENANCE AND BUILDING USER MANUAL (BUM)							
EE6	SUSTAINABLE MAINTENANCE AND BUILDING USER MANUAL (BUM)						
	Ensure that the Green Building Design features will continue to perform as intended. Document all features and strategies in Building User Manual (BUM) for users or building maintenance team information and in guiding them to sustain performance during occupancy.						
	B) Buildings With Common Management						
	1. Provide a designated building maintenance office equipped with facilities (including tools and instrumentation) and inventory storage, AND 2. As least 50% of permanent building maintenance team to be on-board 3 months before practical completion and fully participate (to be specified in contract condition) in the Testing and Commissioning of all Green Building Design feature, AND 3. Provide full set (hard and soft copy) of all Architectural, Structural and M&E Drawings and Maintenance Plan to the Building maintenance team. AND 4. Provide evidence of documented plan for at least 3 year of facility maintenance and preventive maintenance budget.	1	2	2	All Parties		Architect to indicate the followings: a. Building maintenance office - at level 9
	Provide a Building User Manual (BUM) which documents both the passive and active green design feature to the building maintenance team and every unit owner if applicable	1			Pen Konsult	1	Owner to provide the followings: a. Maintenance team org chart b. letter of commitment to engage 50% of permanent building maintenance team before CPC. C. 3 year facility maintenance budget inclusive staffing. GBIF to compile BUM.
ENERGY EFFICIENCY (EE) TOTAL							
			23	14			
2	INDOOR ENVIRONMENTAL QUALITY (EQ)						
AIR QUALITY							
EQ1	MINIMUM INDOOR AIR QUALITY PERFORMANCE						
	Establish minimum indoor air quality performance to enhance indoor air quality in building, thus contributing to the comfort and well-being of the occupants.						
	B) Low-rise OR High-rise						
	All habitable rooms to meet the minimum requirements of ventilation rate in the local building code.	1	3	2	BH Yew Architect	1	Architect to provide the followings: a. Project ventilation description and strategy b. Schematic to illustrate project ventilation design c. Calculations and tabulations to demonstrate the openings provided meet local building code. D. Calculation and tabulations that more than 75% of habitable rooms are natural ventilated.
	≥ 75% of the total habitable rooms to be provided with cross and/or stack ventilation.	1					
	All public and circulation spaces to be naturally ventilated to meet the minimum requirements of ventilation rate in the local building code.	1				1	
EQ2	VOLATILE ORGANIC COMPOUNDS MINIMISATION						
	Reduce the detrimental impact on occupant's health from finishes that emit internal air pollutants						
	1 point is awarded for any 2 of the following items, up to a maximum of 2 points: 1. Low VOC paint and coating to walls (at least 90% of walls) OR no paint or coating used. 2. Low VOC paint and coating to ceilings (at least 90% of ceilings) OR no paint or coating used. 3. Low VOC carpet or interior flooring (at least 90% of flooring) OR no carpet or interior flooring used. 4. Low VOC adhesive and sealant (at least 90% of overall usage) OR no adhesive or sealant used	2	2	2	BH Yew Architect	2	Architect to provide the followings: a. Report and plans showing areas where low VOC paint and coatings, flooring and sealant will be used. B. Manufacturer's information on those products mentioned above showing their VOC content. C. Tabulations on the percentage of low VOC materials used for surface of each room.
EQ3	FORMALDEHYDE MINIMISATION						
	Reduce the exposure of occupants to formaldehyde and promote good indoor air quality in the living spaces.						
	Use products with no added formaldehyde OR use products which comply with the formaldehyde emission ratings recognised by GBI, if glue is used in the manufacturing process.	1	1	1	BH Yew Architect	1	Architect to provide the followings: a. report that products with low formaldehyde will be used. B. If glue is used, submit manufacturer's information.
LIGHTING, VISUAL AND ACOUSTIC COMFORT							
EQ4	DAYLIGHTING						
	Encourage and recognise designs that provide good levels of daylighting for building occupants. Demonstrate that a nominated percentage of the habitable rooms as defined under Uniform Building By Laws (UBBL) has a Daylight Factor of minimum 0.5% as measured at floor level;						
	B) Low-rise OR High-rise						
	≥ 50% of habitable rooms, OR	1	3	2	BH Yew Architect	1	Architect to provide the followings: a. Design strategies that 75% of habitable rooms has a Daylight Factor of 0.5%. B. Summary of daylight factor result of each room and demonstrate that > 50% of habitable rooms are naturally lit.
	≥ 75% of habitable rooms,	2					
	All public and circulation spaces being naturally lit.	1				1	

3 SUSTAINABLE SITE PLANNING & MANAGEMENT (SM)					
SITE PLANNING					
SM1	SITE SELECTION AND PLANNING				
<p>Avoid development of inappropriate sites and reduce the environmental impact from the location of a building on a site. Proposed development should be appropriate for the site, complies with the Local Plan or Structure Plan for the area and does not overburden the available infrastructure.</p> <p>Do not develop buildings, hardscape, roads or parking areas on sites or part of sites that meet any one of the following criteria:</p> <p>1. Prime agriculture land as defined by the Town and Country Planning Act; 2. Land that is specifically identified as habitat for any species threatened or endangered lists; and 3. Within 30m of any wetlands as defined by the Structure Plan of the area,</p> <p>OR within setback distances from wetlands prescribed in state or local regulations, as defined by local or state rule or law, whichever is more stringent.</p> <p>1. Previously undeveloped land that is within 30m of a water body, defined as seas, lakes, rivers, streams and tributaries which support or could support wildlife or recreational use; 2. Land which prior to acquisition for the project was public parkland, unless land of equal or greater value as parkland is accepted in trade by the public landowner; and 3. Land which is classified as Class IV (steeper than 30 degrees).</p> <p>The proposed building must comply with the following requirements: 1. The Structure Plan for the area AND/OR The Local Plan where available, AND 2. The infrastructural requirements are available for the area.</p>		1	1	BH Yew Architect	1
SM2	RE-HABILITATION OF BROWNFIELD SITES OR RE-DEVELOPMENT OF EXISTING BUILDINGS				
<p>Reduce pressure on undeveloped land by rehabilitating damaged sites where development is complicated by environmental contamination or redeveloping existing buildings</p> <p>Rehabilitation of brownfield sites, OR</p> <p>Re-use OR refurbishment of sites with existing buildings to improve the quality of the development.</p>		1			
SM3	COMMUNITY CONNECTIVITY				
<p>Encourage the selection of sites close to basic community amenities and the planning of new residential areas to encourage the provision of local amenities. This is to reduce the current and future heavy use of private transport, which is the greatest contributor to Greenhouse Gases (GHG) emission.</p> <p>Basic Amenities as listed below are to be provided or are available within 750m measured on plan from the furthest residential units: <i>(1 point for any 3 of the following Basic Amenities, up to a maximum of 2 points):</i> 1. Bank or ATM; 2. Playground or Public Park; 3. Religious Centre (Mosque, Surau, Temple, Church, Kuil); 4. Restaurant or Coffee Shop; 5. Supermarket or Grocery Store or Mini-market or Wet Market; 6. University or College or School or Crèche or Kindergarten</p> <p>Other Amenities as listed below are to be provided or are available within 750m measured on plan from the furthest residential units: <i>(1 point for any 3 of the following Other Amenities, up to maximum of 2 points):</i> 1. Community Center or Assembly Hall; 2. Hair Saloon or Barber Shop; 3. Hardware Store; 4. Hospital or Medical Center or Clinic or Pharmacy; 5. Laundry; 6. Library or Book Store or Newsagent or Stationery Shop; 7. Police Station or Police Pondok; 8. Post Office</p>		2	4	BH Yew Architect / Owner	2
CONSTRUCTION MANAGEMENT					
SM4	EARTHWORKS – CONSTRUCTION ACTIVITY POLLUTION CONTROL				
<p>Reduce pollution from construction activities by controlling soil erosion, waterway sedimentation and airborne dust generation.</p> <p>Create and implement an Erosion and Sedimentation Control (ESC) Plan for all construction activities associated with the project. The ESC Plan shall conform to the erosion and sedimentation requirements of the approved Earthworks Plans OR Local erosion and sedimentation control standards and codes, whichever is the more stringent. The plan shall describe the measure implemented to accomplish the following objectives: 1. Prevent loss of soil during by storm water runoff and/or wind erosion, including protecting topsoil by stockpiling for reuse; 2. Prevent sedimentation of storm sewer or receiving stream; and 3. Prevent polluting the air with dust and particulate matter</p>		1	1	Perunding Kelana	1
SM5	QLASSIC - QUALITY ASSESSMENT SYSTEM FOR BUILDING CONSTRUCTION WORK				
<p>Encourage and recognize good quality construction – do it right first time – that does not require re-work that wastes materials and labour.</p> <p>Subscribe to independent method to assess and evaluate quality of workmanship of building project based on CIDB's CIS 7: Quality Assessment System for Building Construction Work (QLASSIC) or equivalent systems recognized by GBI. Project should achieve a minimum score of 70%.</p>		1	1	Paramount / BH Yew architect / Unitech	1

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SM6	WORKERS' SITE AMENITIES						
	Reduce pollution from construction activities by controlling pollution from waste and rubbish from workers. Create and implement a Site Amenities' Plan for all construction workers associated with the project.						
	The plan shall describe the measures implemented to accomplish the following objectives: 1. Proper accommodation for construction workers at the site or at temporary accommodation nearby; 2. Prevent pollution of storm sewer or receiving stream by having proper septic tank; 3. Prevent polluting the surrounding area from open burning and improper disposal of domestic waste; and 4. Provide, at reasonable distances, adequate health and hygiene facilities for workers on site.	1	1	1	Paramount	1	Owner / Main contractor to provide the followings: a. scaled building plan indicating site amenities for workers. B. Temporary toilets for upper floor areas
SM7	IBS – INDUSTRIALISED BUILDING SYSTEM						
	Encourage IBS and reduce on-site construction. Reduce material wastages from construction material and process.						
	CIDB IBS score ≥ 50%, OR	1	2		BH Yew Architect / Perunding Kelana		Architect / C&S engineer to provide the followings: a. Proposed IBS plan b. CIDB IBS report and description of adopted IBS system
	CIDB IBS score ≥ 70%.	2					
TRANSPORTATION							
SM8	PUBLIC TRANSPORTATION ACCESS						
	Encourage the selection of sites close to public transport Stops or Interchanges or routes, and encourage use of public transport in the planning of the new housing areas. This is to reduce the current and future heavy dependence on private transport, which is the greatest contributor to GHG emission. Points are awarded according to the proximity from the furthest residential units, and quality of the pedestrian access, to the Public Transport Stops or Interchanges						
	Provision of Covered Waiting Area for ≥ 2% of total residents, up to maximum of 20 persons. (50% of points if private shuttle service to Public Transport Stops or Interchanges are provided)						
	Public Transport Stop located within 500m with one transport Route only; OR	2					
	Public Transport Interchange with same Mode of Transport (eg Bus) located within 750m with more than one transport Route; OR	4	6	2	BH Yew Architect	2	Architect to provide followings: a. Public Transport Stop within 500m. B. Design of bus stop.
	Public Transport Interchange with more than one Mode of Transport (eg Bus, Monorail, Train, Ferry, etc.) located within 1km.	6					
	Quality of Pedestrian Dedicated Access						
	Dedicated walkway – Public OR Private walkway with provision for the physically handicapped, OR	1					
	Dedicated covered walkway – Dedicated Public OR Private walkway with provision for the physically handicapped and with man-made shades or natural shade-providing trees at regular spacings covering at least 70% of the pedestrian access.	2	2	1	BH Yew Architect	1	Architect to provide deicated walkway to abovementioned bus stop.
SM9	DEDICATED CYCLING NETWORK						
	To reduce travel by car by promoting cycling as an alternative transportation mode.						
	A) Landed						
	Provision of bicycle lanes with proper signage for safety that is accessible to at least 90% of the residential units and common areas, where applicable.	1					
	Dedicated cycling network with man-made shades or natural shade-providing trees at regular spacings covering at least 70% of the cycling network.	1	2	1	BH Yew Architect		
	B) Low-rise OR High-rise						
	Provision of bicycle lanes with proper signage for safety and provision of secured bicycle parking for ≥ 2% of total residents, up to maximum of 20 parking spaces.	1				1	Architect to provide the followings: a. summary of dedicated cycling network. B. scaled layout with building locations, cycling routes with signages and locations.
	Dedicated cycling network with man-made shades or natural shade-providing trees at regular spacings covering at least 70% of the cycling network	1					
DESIGN							
SM10	STORM WATER DESIGN – QUANTITY AND QUALITY CONTROL						
	Limit disruption of natural hydrology by reducing impervious cover, increasing on-site infiltration and managing storm water runoff. Reduce or eliminate water pollution by reducing impervious cover, increasing onsite infiltration, eliminating sources of contaminants and removing pollutants from storm water runoff						
	Control post-development peak flow of any ARI at the project outlet to less than or equal to the pre-development peak flow of the corresponding ARI (Qpost ≤ Qpre) in compliance with Manual Saliran Mesra Alam (MSMA) OR local equivalent minimum requirements, whichever is more stringent; OR	1	3	2	Perunding Kelana	0	
	Reduce the above-mentioned post-development peak flow of any ARI at the project outlet by another 30%.	2				2	C&S engineer to provide the followings: a. Study report complying with MSMA. B. Proposed systems of stormwater management to reduce post development peak flow ARI at outlet by >30%.
	Provide permanent pollutant control facilities with minimum overall percentage removal efficiency as defined by MSMA OR to attain a Class II(b) water quality standard as defined by the Interim National Water Quality Standards for Malaysia during and after construction, whichever is more stringent	1				0	
SM11	HEAT ISLAND EFFECT – GREENSCAPE AND WATER BODIES						
	To reduce Heat Island Effect and to minimize negative impact on microclimate by conserve existing natural area or create larger soft landscape area.						
	A) Landed						
	1. Provide greenscape with native and adaptive plants (if applicable) and/or water body to ≥ 25% of land area, OR	1					
	2. Provide greenscape with native and adaptive plants (if applicable) and/or water body to ≥ 35% of land area, OR	2					
	3. Provide greenscape with native and adaptive plants (if applicable) and/or water body to ≥ 45% of land area, OR	3					
	4. Provide greenscape with native and adaptive plants (if applicable) and/or water body to ≥ 55% of land area, OR	4					
	5. Provide greenscape with native and adaptive plants (if applicable) and/or water body to ≥ 65% of land area. OR	5					
	B) Low-rise OR High-rise		5	2	Landart		
	1. Provide greenscape with native & adaptive plants and/or water body to ≥ 15% of land area, OR	1				1	Landscape architect to provide the followings: a. scaled site plan showing setback dimensions, outline of building plinth, greenscape and water bodies areas with percentage of greescape and water bodies indicated.
	2. Provide greenscape with native & adaptive plants and/or water body to ≥ 25% of land area, OR	2				1	
	3. Provide greenscape with native & adaptive plants and/or water body to ≥ 35% of land area, OR	3					B. Landscape plan showing 25% of land area is covered by native or adaptative vegetation.
	4. Provide greenscape with native & adaptive plants and/or water body to ≥ 45% of land area, OR	4					c. Name list of plants and characteristics.
	5. Provide greenscape with native & adaptive plants and/or water body to ≥ 55% of land area.	5				0	
SM12	HEAT ISLAND EFFECT – HARDSCAPE						
	To reduce Heat Island Effect and to minimize negative impact on microclimate through selection of hardscape material. Provide a combination of the following strategies over the percentage of the site's hardscape areas, including sidewalks, courtyards, plazas and parking lots: a) Shade, within 5 years of occupancy; b) Paving materials with a Solar Reflectance Index (SRI) of at least 29; c) Open grid pavement system		2			1	Landscape architect to provide the followings: a. scaled site plan of proposed hardscape with their percentage out of total site area. B. List of materials used and their SRI more than 29 for 50% of hardscape.
	1. ≥ 50 of the site's hardscape areas. OR	1					
	2. ≥ 75 of the site's hardscape areas	2					
SM13	HEAT ISLAND EFFECT – ROOF						
	To reduce Heat Island Effect and to minimize negative impact on microclimate through selection of roof material.						
	1. Use roof material with SRI ≥ 78 for low pitch roof (gradient < 2:12), or SRI ≥ 29 for steep pitch roof (gradient > 2:12) for ≥ 75% of the roof surfaces; OR		1	1	BH Yew Architect		Architect to provide the followings: a. Roof material with their SRI value > 78.
	2. Install a vegetated roof to at least 50% of the roof area; OR						

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	3. Install high albedo and vegetated roof surface that, in combination, meet the following criteria (Area of SRI Roof / 0.75) + (Area of vegetated roof / 0.5) Total Roof Area.						

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IN1	INNOVATION IN DESIGN & ENVIRONMENTAL DESIGN INITIATIVES						
	Provide the design team and the project the opportunity to be awarded points for exceptional performance above the requirements set by GBI rating system						
	<div>1 point for each approved innovation and environmental design initiative up to a maximum of 7 points, such as, but not limited to:</div> <div><ul style="list-style-type: none">• Bioswale (25% of the building perimeter)• Central Vacuum System (50% of NLA)• Central Pneumatic Waste Collection System• Charging Station for Hybrid or Electric Car (5% of the total parking spaces provided, up to a maximum of 20 nos)• CUI ≤ 0.5 m²/m²• External Shading Devices (50% of glazed façade)• Herb and/or Food Garden (Landed-25% of landscape area. Low-rise and High-rise-10% of landscape area or 20m² whichever is the larger)• LED Façade Lighting (only where mandated by Local Authority)• Light Pipes (1% of NLA)• Substantial usage of Green Label Product• Sustainable Construction Practice (with substantial environmental impact)• Performance 'over and above' any of the Tool's stated criterias (awarded on a case by-case basis)• Preserve existing greenery (awarded on a case-by-case basis)• Promote Biodiversity (with substantial environmental impact)• Provide only 5-Star Energy Efficient Appliances approved by KeTTHA, e.g. Air-Conditioning, Refrigerator, Fan, Television etc.• Real time energy and water usage display and educational facilities• Recycling Fire System Water (Sprinkler and Wet Riser systems, where applicable) during regular testing• Regenerative Lift (50% of installed lifts)• Self-cleaning Façade (90% of facade area)• Solar Hot Water System (composition to meet Shower requirement for all Bathrooms)• Turbine Ventilator (all roofs)• Vertical Green Wall (10% of the facade area)• Wind Chimney</div>	7	7	6	BH Yew Architect / Landart / PLA	6	<div>1. Architect / M&E engineer to provide the design brief, schematic and catalogues for followings:</div> <div>a. Central Pneumatic Waste System Collection Schematic and design brief.</div> <div>b. LED Façade</div> <div>c. 5 star Energy Efficient Appliances</div> <div>d. Recycle fire system water during test</div> <div>e. Regenerative Lift</div> <div>2. Landscape architect to provide the followings:</div> <div>a. Report and calculation that Herb Garden is 10% of landscape area or 20 sqm whichever higher.</div>
IN2	GREEN BUILDING INDEX FACILITATOR (GBIF)						
	Green Building Index Facilitator to support and encourage the design integration required for Green Building Index rated buildings and to streamline the application and certification process.						
	Appointment of a Green Building Index Facilitator (GBIF).	1	1	1		1	To engage GBI facilitator
INNOVATION (IN) TOTAL			8	7			

100

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