KERAJAAN MALAYSIA

CADANGAN PEMBINAAN PROJEK BALAI BOMBA & KUARTERS PUTATAN DI ATAS SEBAHAGIAN LOT N.T 213059771, JALAN SAILAN IMBAAN PUTATAN, DAERAH PUTATAN, SABAH



KEMENTERIAN PERUMAHAN DAN KERAJAAN TEMPATAN,
Aras 2 -38, No.51,
Persiaran Perdana,
Presint 4, 62100 Putrajaya.

JABATAN BOMBA DAN PENYELAMAT MALAYSIA,
Bahagian Pembangunan, Aras 4,
Lebuh Wawasan, Presint 7,
62250 Putrajaya.

LAPORAN KAWALAN KUALITI PERUNDING

ALASIM OMAR ARCHITECT
F-27-1, Royal Plaza Putatan,
Km 11.2, Jalan Putatan,
88200 Kota Kinabalu, Sabah.

KANDUNGAN :
- STATUS KELULUSAN PBT
- STATUS KELULUSAN BAHAN
- INSPECTION AND TESTING PLAN

15/04/2021 Khamis

STATUS KELULUSAN PBT

Updated 15/04/2021

Item	Authorithy	PIC	Consultant	1st Sub Date	Ref-Sub1 Date & Ref. No	Sub2 Date & Ref. No	Comments
1	MAJLIS DAERAH PUTATAN Dewan Mini, Pejabat Daerah Putatan 88200 Putatan, Sabah. Tel : 088-772823 Fax : 088-772825	Abd Said Ombok Pegawai Eksekutif	submission for DP - 16 set BP - 14 set	08/08/2020 MDPTN: 200-0/8(2020)(01)			
2	IBU PEJABAT JABATAN BOMBA DAN PENYELAMAT MALAYSIA NEGERI SABAH Jalan Lintas, Likas Beg Berkunci 30 88990 Kota Kinabalu. Tel: 088-422873, 422871 Fax: 088-422742 088-422878, 422817 E-mail : 999@bombasabah.gov.my	Jemros bin Olin Penolong Pengarah, Bahagian Keselamatan Kebakaran	submission for DP BP	08/08/2020	13/08/2020 JBPM/SB/BKK:700-2/1/2/623(4) Ulasan Lulus mengikut kehendak-kehendak kelengkapan menentang kebakaran atau pepasangan keselamatan kebakaran yang perlu dipatuhi oleh pihak tuan bagi projek di atas.		
3	SABAH ELETRICITY (SESB) Ibu Pejabat, Wisma SESB, Jalan Tunku Abdul Rahman 88673 Kota Kinabalu, Sabah. www.sesb.com.my	Ir. Yismir Yusop Pengurus Zon Kanan Zon Metro/KPKK	submission for DP	25/11/2020	07/12/2020 SESB/KPKK/100-12(20)/10 Ulasan - i sehingga vii		
4	JABATAN PERANCANG BANDAR DAN WILAYAH Tingkat 3, 4 & 5 Wisma Tun Fuad Stephens 88646 Kota Kinabalu.	Carolyn C. Tay b.p. Pengarah	submission for DP BP	13/12/2020	19/01/2021 JPBW:21/12/60(71) Ulasan - 3(i) sehingga 3(ix)		
5	JURUTERA BAHAGIAN (DIVISIONAL ENGINEER) PANTAI BARAT TENGAH Jabatan Kerja Raya Bandaraya 88863 Kota Kinabalu Sabah. Tel: 088-244577 Fax: 088-256724	Ir Liaw Vui Phing Jurutera Bahagian	submission for DP BP	16/11/2020	07/01/2021 JKR.KBU.DL/415/Jld.10(58) Ulasan di perkara 2.		
6	JABATAN PENGAIRAN DAN SALIRAN PENAMPANG Tingkat Satu, Bangunan Pejabat Daerah Penampang W.D.T. 6 89509 Penampang Sabah. Tel: 088-711703 Fax: 088-725407	Ir Irene Choo Jurutera Daerah	submission for DP	25/11/2020	09/12/2021 JPS(PPG)100-44/2/20/17(4) Ulasan - 3 sehingga 5		
7	JABATAN ALAM SEKITAR NEGERI SABAH Aras 4, Blok A Kompleks Pentadbiran Kerajaan Persekutuan Sabah, Jalan UMS 88450 Kota Kinabalu, SABAH. Tel: 088-488166 Fax: 088-488177	Yaras Bin Hj. Yusup Ketua Penolong Pengarah	submission for DP	05/02/2021	10/02/2021 ASSH(B)91/110/907/213 Ulasan - 2.1 sehingga 2.8		
8	PEJABAT KESIHATAN KAWASAN PENAMPANG Lot 13 A-2, Pusat Dagangan Donggongon, Pekan Donggongon, 89500 Penampang, Sabah. Tel: 088-722017 Fax: 088-723531	Dr. Omar Kwang Kugan Pegawai Kesihatan Daerah	submission for DP BP	25/11/2020	26/11/2020 PKDP/KPAS/09/01/58 Ulasan - Tiada halangan 2.0 syarat		
9	JABATAN AIR NEGERI SABAH JURUTERA AIR BAHAGIAN JABATAN AIR KOTA KINABALU, Peti Surat No. 14677, 88853 Kota Kinabalu. Tel: 088-717070 Fax: 088-713522	Chee Chun Chieh Jurutera Air Bahagian Jabatan Air, Kota Kinabalu.	submission for DP	24/11/2020	18/02/2021 JAN.KK: 600-1(XI)/403-4 Ulasan - 2a, 2b & 2c		
10	JABATAN TANAH DAN UKUR Pantai Barat Selatan 88576 Kota Kinabalu, Sabah. Tel: 088-527655 Fax: 088-413706	Ahmad Shah Bin A. Kallon Jurukur Daerah Bahagian Pantai Barat Selatan. Kota Kinabalu.	submission for DP	23/11/2020	22/12/2020 JUD.PB(S):D(13)-26(39)/13/(JB/...) Ulasan - 2a sehingga 2f		

STATUS KELULUSAN BAHAN

Semua spesifikasi hendaklah dari jenama yang dipersetujui oleh pihak Arkitek dan KPKT/Bomba.

Updated 15/04/2021

Item	BAHAN BANGUNAN / unit dalam milimeter	Targetted Submission Date	Supplier / Brand / Code	Submission Date	Status & Date
1	Anti Termite				
2	Water Proofing				
3	Homogeneous/ceramic Tiles Floor : HT - 300 x 600 homogeneous tile JH - 600 x 600 x 8 tebal jubin homog. lengkap dengan 300 x 100 x 8 tebal Kambi. JH1 - 300 x 300 x 8 tebal jubin 'non slip' homog. lengkap dengan 300 x 100 x 8 tebal Kambi. JH2 - 100 x 100 x 8 tebal jubin homo. 'heavy duty' atau setaraf lengkap dengan 100 x 100 x 8 tebal Kambi. Wall : JS - 300 x 600 x 6 tebal jubin seramik gilap.				
4	Roll Carpet CA - Roll Carpet dengan 100% fiber sintetik BCF berat pile minimum 850gb/sqm 'PVC FiberGlass Reinforce Backing' dengan Kambi Kayu.				
5	Rubber Tiles RM - 500 x 500 x 25 thickness Rough surface Rubber mat Tiles.				
6	Batu Bata BB - 110 tebal dinding batu bata dengan lepa simen pada kedua-dua permukaan 20 tebal (Dalam dan Luar) serta di cat atau mana-mana kemasan seperti dinyatakan.				
7	IBS PD - Binaan sistem berindustri (IBS) rujuk sistem dan butiran pengeluar yang diluluskan oleh JKR seta lepa simen 20 tebal (Dalam dan Luar) serta di cat atau di mana-mana kemasan seperti dinyatakan.				
8	Dinding Akustik AK - Dinding Akustik jenis Panel Rockwool - 'full - height',				
9	Paint CE - Dalaman : 1 coat basecoat sealer Strax, APEO (Alkyphenol Ethoxylate) free dan rendah VOC (Volatile Organic Compound) serta dengan kelulusan 'Green Label' oleh SIRIM. CTC - Luaran : 1 coat alkaline resisting primer diikuti dengan 2 coat cat 2X UV Protected Colours, Dirt Resistant, Temperature Reduction, Weather Resistant, 100% acrylic anti kulat, rendah VOC (Volatile Organic Compound) serta dengan kelulusan 'Green Label' oleh SIRIM dan fade color dengan 6 tahun warranti.				
10	Door and Window				
11	Iron Mongery				
12	Sanitary Fitting				
13	Taps				
14	Floor Trap				
15	Ventilation Block				
16	UPVC Gutter & Rain water down pipe 100 Ø rain water down pipe				
17	Metal Roofing PC - 05 tebal bumbung jenis kepingan Polycarbonate 'Heat Ray Cut (HRC) Series type Solid Sheet with atau setara dengan warna 'tinted', l/d sistem bingkai keluli sederhana keras 3 tebal.				
18	Epoxy VHD- Very heavy duty Epoxy floor to manuf's spec.				
19	Ceiling PF - Plaster Board Ceiling dengan ketebalan 12mm yang diluluskan Arkitek AL - 0.55 tebal Siling Jalur Aluminium ` Aluminium Strip Ceiling 'rujuk butiran pengeluar dgn corak / warna.				

INSPECTION AND TESTING PLAN - ARCHITECTURAL WORKS

Bil	TRADE
1	CEILING WORKS
2	DOOR, WINDOW AND IRON MONERY
3	ROOF
4	PLASTERING WORKS
5	PAINTING WORKS
6	TILING WORKS (FLOOR/WALL TILES)
7	SANITARY WARE & FITTINGS
8	INTERIOR, SIGNAGE AND GRAPHIC
9	SOFT LANDSCAPE WORKS
10	HARD LANDSCAPE WORKS

TRADE 1 : CEILING WORK

Item	Description of Work	Point of Inspection/ TEST	Standard/Requirement	Tools/Equipment	Stage/Frequency	
1	Receive and check shop drawings from supplier. Ceiling type : - plaster ceiling -suspended ceiling Fixed ceiling	catalog / drawings / sample	Check as per contract document and take into account factors such as: <u>Plaster & suspended ceiling</u> - Check the thickness, stiffness, weight and ceiling board pattern. - Other components such as - 'main T & cross T' , 'wall angle', 'soffit cleat' , 'hanging C channel' and 'comice' <u>Fixed ceiling</u> - Check the thickness, stiffness, weight and ceiling board pattern. - Other components such as- 'comice' Other requirement - SIRIM Certificate and warranty, fire rated and sound insulation (acoustic ceiling).	Contract Dokumen / SPK Tools / Shop Dwg.	Ealier / months before the ceiling installation works or after roof structure works done.	
2	Receive and check sample for approval	Sample material	Check as per contract document and shop drawings.	Visual	Ealier construction works or after superstructure works finish.	
3	Ceiling mock-up at site.	Set mock-up	Check the mock-up as per construction drawings & shop drawings together with the sample that have been approved and verified.	Mock-up / Sample material	3 months before ceiling work.	
4	Check material that is sent to site	Random check by batch / lab test	Check material whether is the same as per approved sample. Store in a close area that free from dirt and moisture.	Measuring Tape / Laser measure	All Stages	
5	Ceiling Installation	Random check installation / similar to mock-up.	Check the ceiling installation as per construction drawings and for each space: - Installation technique as per approved mock-up. - Design and pattern of the ceiling shall be aligned with the roof fall. - Floor to ceiling height must be enough to cater the ceiling space for mechanical and electrical wirings. 'ceiling manhole' for fix ceiling as required.	Visual	All Stages	
6	Afther the installation	Check room by room / Audit before handing over	Final inspection for: - electrical & mechanical fixtures such as air-cond diffusers, lightings, ceiling fans and fire requirements are not directly fix to the ceiling boards. Finished of the ceilings must be made good after the work is completed.	Visual	All Stages	

TRADE 2 : DOOR, WINDOW & IRON MONERY

Item	Description of Work	Point of Inspection/ TEST	Standard/Requirement	Tools/Equipment	Stage/Frequency	
1	Submit sample / catalogue / shop drawing / method statement for approval and prepared mock up at site.	Catalog / Shop drawings / Sirim cert. / Sample material	- Submit within 'x' month from commencement of building works - As specified in contracts document - To ensure only specified item submitted for approval	Shop drawing / Certified material.	Once before delivery	
2	Material delivered to site	Lab material test	- As specified in contract document and as per approved proposal		All	
3	Contractor to measure opening provided at site for windows and doors.	Random Check	- To check prior to fabrication of any deviation to the specified size and report to the SO	Measuring tape / Laser measure	All	
4	Fix Sub frame in position	Random Check	- As specified in contract document and method statement. - To fix sub frame before plastering and check the alignment with level before fixing in position	Spirit level	All	
5	Fix frame in position	Random Check	- Check defect on the frame if any, rectify or reject.	Visual	All	
6	Install door window panel / install Ironmongery	Random Check	- As specified in contract document and method statement.	Visual	All	

TRADE 3 : ROOF

Item	Description of Work	Point of Inspection/ TEST	Standard/Requirement	Tools/Equipment	Stage/Frequency	
1	Sample	Catalog / Shop drawings / Sample	- Submission of shop drawing and sample for approval prior to mock-up fabrication on site 2 months before commencement on site. - As specified in contract document	Shop drawing / Certified material.	Once (before delivery)	
2	Material Delivery	Check material at random	- Ensure only approved items are delivered at as specified in contract document. - Items should be kept unexpoded for long before installation process commences. - Reject all damage items and items that does not confirm to specifications. - Handling & storage of roofing sheets/ tiles / related items shall comply to the approved Method Statement.	Visual	Delivery stages	
3	Installation	Approved installer and Certified by roof Supplier	- Finishing - No Stain marks shall be visible - Finishing shall be in good paint works -Falls - Roof fall shall look smooth with no tool marks - Even and level especially no potential in stripping - Falls in right direction -Physical Damage - No visible damage / defects eg. crack, chip, etc - Joint / Sealant / Alignment shall be consistent, neat and aligned - Inspect exterior for continuity of roof covering, deterioration of fascias, gutters and soffits; and performance of flashings - Inspect interior finishes (ceilings and walls) for signs of water penetration, and structuraldistress -Chockage / Ponding - No sign of chockage or ponding - Construction - No sign of leaking - Proper dressing for protrusion if any - Neat and secured installation of fixture	Visual	ALL	
4	Flat / Membrane Roof / water proofing installation	Ponding test as per audit check list.	- Proding shall be not more than 3mm high - No blisters shall be on the roof (either broken or not), which may allow water to enter the roof - Look for depressions around vent pipes where water can collect and begin leaking through cracks in the surface. - No gap / separations of flashing by the parapet that rings the flat roof - Surface to level to avoid tripping - Proper dressing for any protrusion - Openings to be sealed to prevent pest invasion - Clean and no stain marks	Spirit Level	ALL	
5	Sloped Rood Installation	Audit check list	- All purlins are in the right level and none is out of line (structure tolerance shall meet roofing manufacturer recommendation) - Final coating of paint has been applied to roof structural members - Layers of insulation shall as specified in contract document, approved construction/shop drawings or other relevant documents. - Thickness (BST) of metal roofing sheet shall as specified in contract document, approved construction/ shop drawings or other relevant documents. - Roof tiles in alignment - Openings to be sealed to prevent pest invasion - Consistent colour tone - Proper dressing for any protrusion	Visual	ALL	
6	Roof Features - Fascia - Soffit - Flashing - Gutters / Drains / RWDP - Skylights - Vents - Others	Audit check list	- No ponding and chockage - No cracks, chips and any other visible damage - RWDP inlet shall be lower than the surrounding gutter invert level - Gutter and RWDP inlet to be covered to prevent chockage where practical - Clean and no cement stains - No physical damage of all roof flashing and the flashing around vent stacks, roof edges, dormers, and skylights.	Visual	ALL	

TRADE 4 : PLASTERING WORK

Item	Description of Work	Point of Inspection/ TEST	Standard/Requirement	Tools/Equipment	Stage/Frequency	
1	Preparation for Plastering	Check mock-up preparation / random check	- at least 3 days after the completion of brickwall as specified in the contract drawing	Visual / Laser equiment	Once	
2	Clean Surface	Random Check	The surface shall be cleaned and wetted before plastering. As Specified in the contract document.	Visual	All	
3	Plaster Mix	Preparation / external test	1 part of cement to 6 parts of sand by volume. As Specified in the contract document.	Visual / Sample	All	
4	Aligment	Random Check	Set out alignments on brickwall surface before commencement of plastering works.	Measurement tools	All	
5	Apply the first coat	Random Check	Averaging 10 mm thick appied to the area having greater deviation from the intended finish surface. As specified in the document.	Measurement tools	All	

TRADE 5 : PAINTING WORKS

Item	Description of Work	Point of Inspection/ TEST	Standard/Requirement	Tools/Equipment	Stage/Frequency	
1	Submit sample / Catalogue / Colour scheme proposal	Catalog / Shop drawing / Sirim cert. / Sample material	- Submit within 'x' month from commencement of building works - As specified in contracts document - To ensure only specified or equivalent paint are submitted for approval	Colour scheme	Once before delivery	
2	Material delivered to site	Random Check	- As specified in contract document and as per approved proposal	Visual	All	
3	Wall / Surface perparation	Random Check	- Make sure all surfaces are clear from dirt, smoothly plastered and completely dry	Visual	All	
4	Site readiness	Random Check	- Other construction works overlapped are well planned on site to avoid conflict - No other site activity to take place near painting area to disrupt painting quality	Visual	All	
5	Apply base coat	Random Check	- To make sure wall surface is free from unevenness - Make sure base coat applied is as specified in contract document	Visual	All	
6	Applying paint	Approved applicator and Certified by Paint Supplier	- To make sure walls are coated with 2 layers of emulsion acrylic paint for internal, and weather resistance acrylic paint with anti fungus for external - Paint must be in good condition, maintenance free with good aesthetics, APEO free (alkylphpnol ethoxylate) and low VOC (Volatile Organic Compound) with green label by SIRIM - Minimum 5 years warranty	Visual / Certification	All	

TRADE 6 : TILING WORKS (Floor / Wall Tiles)

Item	Description of Work	Point of Inspection/ TEST	Standard/Requirement	Tools/Equipment	Stage/Frequency	
1	Submit sample / Catalogue / Colour scheme proposal	Catalog / Shop drawing / Sirim cert. / Sample material	- Submit within 'x' month from commencement of building works - As specified in contracts document - To ensure only specified or equivalent paint are submitted for approval	Mock-up / Sample / Certified material		
2	Check quality of tiles upon delivery	Random Check	- As specified in contract document and as per approved proposal, and tile installation guideline - Check on tonality, crack, chip, wasp and surface unevenness	Visual		
3	Confirm tiles dimension	Sample / Mock-up	- As specified in contract document and drawing specification - Width and length tolerance to be +/- 1%, thickness +/- 10%	Measurement tools / Spirit level		
4	Wall / surface preparation	Random Check	- Make sure all surfaces are clear from dirt, ready to accept tiles and completely dry	Visual		
5	Floor surface preparation	Random Check	- Make sure all surfaces are clear from dirt, ready to accept tiles and completely dry	Visual		
6	Tiles installation	Random Check and Test	- Check mortar/glue thickness as stated in tiles intallation guildeline - As specified in contract document	Visual		
7	Site inspection	Audit check list construction	- As specificed in contract document and tiles installation guideline	Visual		

TRADE 7 : SANITARY WARE & FITTINGS

Item	Description of Work	Point of Inspection/ TEST	Standard/Requirement	Tools/Equipment	Stage/Frequency	
1	Submit sample / Catalogue / Shop drawing / Method statement for approval and prepared mock up at site.	Catalog / Shop drawing / Sirim cert. / Sample material	- Submit within 'x' month from commencement of building works - As specified in contracts document - To ensure only specified or equivalent paint are submitted for approval	Shop drawing / Certified material	Once before delivery	
2	Site Readiness / Storage material	Random check	- Other construction work overlapped are well planned on site to avoid conflict - No other site activity to take place near painting area to disrupt painting quality	Visual	All	
3	Check material that is sent to site	Random check	- To check prior to fabrication of any deviation to the specificed size and report to the SO As stated in the specification	Visual	All	
4	Sanitary ware & Fittings installation	Random check	Check the sanitary installation as per construction drawing and for each space : - Installation technique as per approved mock-up	Visual	All	
5	Sanitary ware after the installation	Audit check list before hand over	- As specified in contract document and method statement.	Visual	All	

TRADE 8 : INTERIOR, SIGNAGE & GRAPHIC

Item	Description of Work	Point of Inspection/ TEST	Standard/Requirement	Tools/Equipment	Stage/Frequency	
1	Submit sample / Catalogue / Colour scheme proposal	Catalog / Shop drawing / Sirim cert. / Sample material	- Submit within '6' month before installation of works. - As specified in contracts document - To ensure only specified or equivalent material are submitted for approval	Mock-up / Sample	6 months before the completion work	
2	Factory visit / Fabricate material in factory / in site / Mock-up for Furniture and signage.	Random Check / Material	- Inspection the material used and fabricate at factory - As specified in contract document and as per approved proposal - Mock-up for Furniture, signage, and other related.	Visual	3 months before the completion work	
3	Site readiness	Random Check	- To make sure all material delivered in good condition / inspect the materials on site. - Make sure the site is ready / clear for major work - Measured the site area to be constructed.	Visual	All Stages	
4	Material delivered to site / site preparation / confirms I.D works dimension	Random Check / Lab Test	- To make sure all material approved delivered as specified and approve contract document. - Provide protection and secured storage.	Lab cert / Visual	All Stages	
5	Site Preparation	Random Check	- Make sure the site ready / clear for major work. - Measured the site area to be constructed.	Visual	All Stages	
6	Installation materials	Random Check	- To make sure all materials in good condition / inspect the material on site. - check mortar / glue / carcass thickness in ID works and related works. - As specified in contract document	Visual	All Stages	
7	Site Inspection	Audit check list construction	- As specified in contrat document and intallations guideline.		All Stages	

TRADE 9 : SOFT LANDSCAPE WORKS

Item	Description of Work	Point of Inspection/ TEST	Standard/Requirement	Tools/Equipment	Stage/Frequency	
1	Nursery visit	Approval of selected plant	- Check the specification - Visit nursery and mark all plants with paint - Only select good quality of plants	Visual	Once before delivery	
2	Material Delivery	Random check the type, size and height of plants	- Ensure only approved and marked plants are delivered at site as specified in the contract document - Plant should be stored at shed or temporary coveref nursery - Plant should not be left under the sun at site more than 2 days. - Reject all damage or unhealthy or unhealthy plants	Visual / Measurement tools	Delivery stages	
3	Planting preparation	Random Check	- Ensure all hole are excavated as per specified in the drawing and left for one week to eliminate fungus and parasites. - Ensure soil mixture is from ratio of 3 topsoil : 1 organic compound.	Visual	All	
4	Planting process	Random Check	- For plams, make sure all fronds are tied to avoid moisture loss. - Water immediatedly after planting - Ensure mulching and stakes are provided as per detail drawing provided.	Visual	All	
5	Maintenance	Audit Check List	- Ensure all plants are watered twice a day and fertilize fortnightly for first six month. - Check all dead and unhealthy plants to be replaced.	Visual	All	

TRADE 10 : HARD LANDSCAPE WORKS

Item	Description of Work	Point of Inspection/ TEST	Standard/Requirement	Tools/Equipment	Stage/Frequency	
1	Nursery visit	Approval of selected plant	- Check the specification - Visit nursery and mark all plants with paint - Only select good quality of plants	Visual	Once before delivery	