

BIM SCOPE OF WORKS MATRIX

Stage	Submit format and content	Information required	Submission purpose	Example	Services
1 I	Early Planning stag	je			
1.1	Topography	Contour and coordinates for project area	For sunshade study, landscape study, excavation and back fill, even sub-structure analysis	To the second se	

1.2	Utilities analysis	Existing drainage and sewage system, electricity, gas and telecom system	Preparation for design of underground services	
-----	--------------------	--	--	--

1.3	Traffic analysis	Road map	To locate the main and secondary entrance of the building	O 10 20 30 Asterior
				The fail Very Works Help Thomas
				There is a superior of the sup



2	Design stage			
2.1	Sunshade, wind, energy consumption analysis for project	Site contour, existing landscape analysis, includes tree location, species and ages	For design reference, building location and building design checking	On the analysis of the state of
				CATA SIGN ADAPT GUIDO SHE CATALOG STORE SHE ADAPT SOUTH STORE STOR
				On the Asset of the Land of the Asset of the
				© SET \$1000 ANAPORT HOLD TO THE CONTROL TO BE SET TO THE CONTROL T

analysis	master plan and building plans, levels	used as design checking, which could help to revise the design to make sure the excavation keeps at minimum level	() CHO 1 () CHO 2 () CHO 2 () CHO 3 ()	
			② GROUAD LEVEL ③ CUIT AND FALL	

2.3	Landscape model, includes trees within project boundary	Site topography, site landscape report and arborist report	Could be used for landscape design, to relocate the purposed tree on the landscape model, and for visual checking	
2.4	Tree crown, roots and growth analysis	Tree species, age; dimension of tree crown and roots	Tree crown analysis for landscape design visual analysis; Tree root analysis for utilities design	

2.5	Clash detection between building and tree crown	Masterplan, building design; tree species, age and dimension of crown and roots	The clash detection will be used for landscape design	

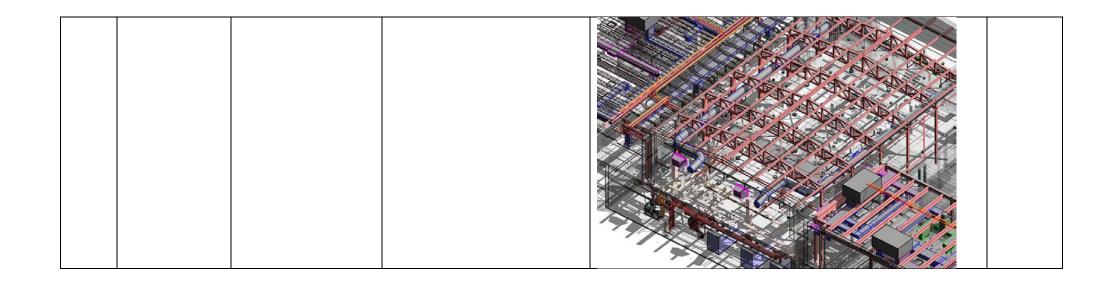
2.6	Design options	Masterplan, preliminary architectural and landscape design	Analyze design options to achieve quality design for architecture, master planning and landscape	
2.7	Architectural BIM model: room names, function, numbers and area	Masterplan and general arrangement plan, elevations and roof design	For drawing production, material schedule and area schedule	() P.200, ISO PLAN OVERALL

2.8	Architectural drawings: Masterplan, general arrangement plans, elevations and sections (up to 1:100)	Masterplan and floor plans, elevations and roof design	For tender drawings and construction drawings	Omitatorio, Level 45.60, 1F, 1200.
2.9	Area schedule	Masterplan, floor plan and levels	Area schedule from BIM model could provide accurate area instantly, not over or a lot less than the limitation	DE MAIR CORPANION CACAMICA SE LIGITA COMPANION CACAMICA SE LIGITA CACAMICA SE LIGITA COMPANION CACAMICA SE LIGITA CACAMICA

2.10	Schedule of quantities	Architectural design and materials	Schedule of windows, doors or louvres, help QS to start with preliminary quantity take-off	WINDOW SCHEDULE Type Mark Total Width Total Height Total Area
2.11	Structural BIM model: piling, pile cap, substructure and superstructure	Structural design for piling, pile cap, ELS, demolition plan, substructure and superstructure	For structural drawing production, export model for structural calculation	Appellux D Appell

2.12 Hoarding design Hoarding location and Commercial ads on hoarding	
2.12 Hoarding design Hoarding location and height Commercial ads on hoarding	1 bed a 2 bed a

2.13	Export structural model	Structural design for piling, pile cap, substructure and superstructure	For structural calculation	① Q.120-125 ② Q.130-135	The control of the
2.14	MEP BIM model: MVAC, P&D, FS and electrical design	MEP design for MVAC, P&D, FS and Electrical, dimension and level of ducting and pipework	All MEP elements were model to make sure the design feasibility		But of the second secon



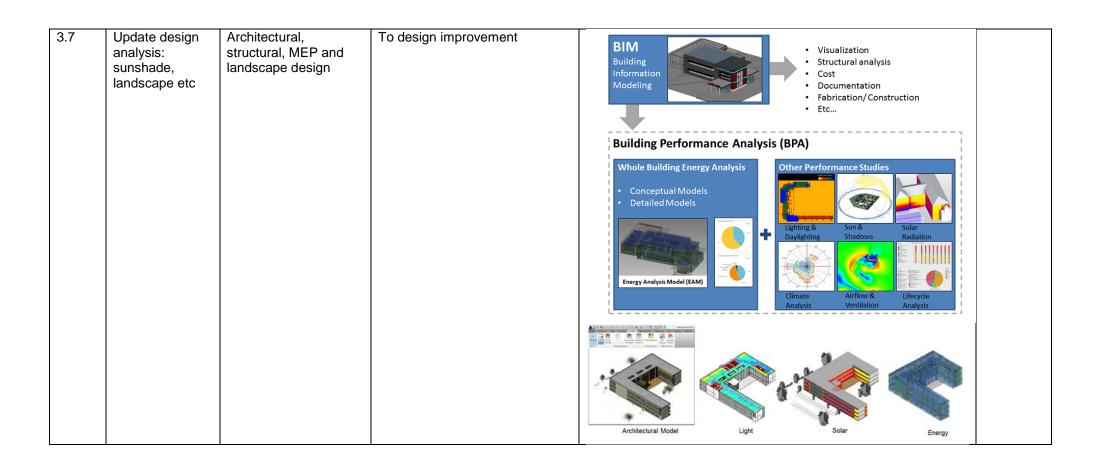


3	Detail design			
3.1	Drawing production for architecture, structure and MEP	Architectural, structural and MEP design	For government submission (GBP)	ABERGEN PRAYA ROAD O O O O O O O O O O O O O
				SECTION AA SOMETYIC VEW 3 (OR REFERENCE DIX.Y)
				CROSS SECTION 8-8 BOAR TSC VIEW 4 FOR REPRENCE ONLY)

3.2	Clash detection	Architectural, structural and MEP design	Design coordination	The state of the s
3.3	Spatial validation checks for headroom and working space	Architectural, structural and MEP design (all levels shall be clearly mentioned)	For building and services design, building operations and maintenance activities checking	Section 1 and 1 an
3.4	Drawing revision	Architectural, structural and MEP design revisions	Make sure all 2D and 3D information update and consistent	So View Section From the land on Drawing CS 150-FPO/S dated 16-03-2015 the headsoon of storcase between grid-5-8 is not sufficient.

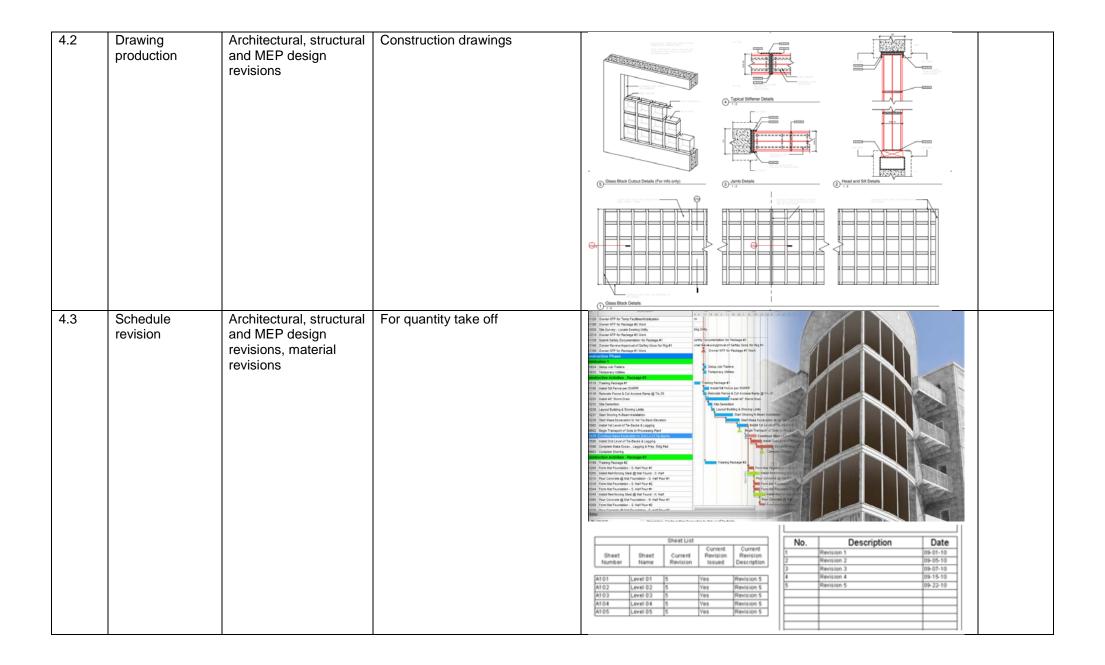
3.5	Schedule	Architectural, structural	Schedule updated as per design	Sections from the Section Street Section Street Section Street Section					
0.0	revision	and MEP design	updates will avoid the time gap	TH ACL SH (2004) (CANCEL DATE)					
	TOVISION			#1 APC 095					
		revisions	between design consultant and	### (15 C)					
			QS						
				00.315.000 PF the ADDRESS AND					
				## U.S.E.OF ## 19 (1900.00 APP)					
				W_CTL_CLL OF TENTIALS FOURIER LETS. OF TENTIAL TO JUST 201401 WCC Inc. WC					
				M_					
				## 2017 19 19 19 19 19 19 19 19 19 19 19 19 19					
				15 (20) 25 Entered 15 (20) 25 15 (20)					
				10 FO CONTROL 10 CONTR					
				10 May 200 11 POUNT DEPOKE COMPT 2013 MY 100 100 100 100 100 100 100 100 100 10					
				90,750-717 \$1.000, rotes and rectification 2 20000 Service S					
				The state of the s					Try 16
				## 04 A PROPERTY OF THE PROPER					
				10 12 12 13 14 14 15 15 15 15 15 15					
				0.125/2.25 9- 9-					
				0.] arg 1 COMPRESSION FEED SHARE SECURITION SECURITION SECURITION SECURITION SECURITION SECURITION SECURITION SECURITION SECURITIES SECURITION					
				W 1975 160 100 150					

3.6	Animation	Architectural, structural, MEP and landscape design	To visualize the design in virtual reality for design checking	Total Contraction
-----	-----------	---	--	---

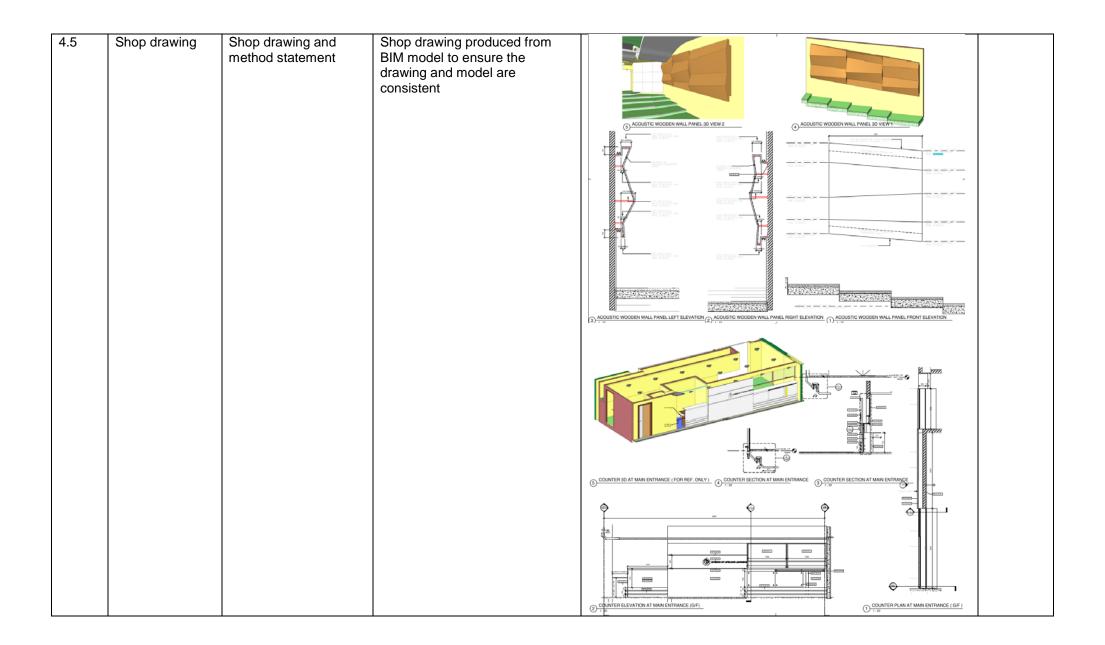




4	Tender / Constructi				
4.1	Clash detection revision	Architectural, structural and MEP design revisions	Constantly clash checking to avoid design fault to minimize unnecessary construction cost	CLASH BETWEEN PHE PIPE & HVAC DUCT W DOT! CLASH GERY Water and analoms W source And an analoms W source M source	
	1			executed c	



4.4	4D animation for construction sequence	Architectural, structural and MEP design revisions; construction programme and method statement	Construction sequence checking, clash between trades could be detected before commencement.	OSCILICATION DE LA CONTRACTION	
-----	--	---	---	--	--



4.6	CSD	Architectural, structural, MEP drawings from contractor	test the feasibility of MEP ductwork / pipework, clash detection between MEP and Architecture / Structure	Corb Indiana Survival
4.7	Procurement, cash flow and payment	Contractor's design for architecture, structure and MEP, material and equipment to be used	Procurement, lead time and payment will affect the construction programme	Aligned Based Base
4.8	Construction safety check	Construction equipment	4D Construction simulation to highlight the construction sequence, while at the same time to visualize the temporary works during construction to ensure the site safety, delivery route, protective measures etc.	Control (Control (Con

4.9 Site Procurement To utilize the 4D Construction	
Site management schedule, lead time and site logistic planning, installation detail Procurement schedule, lead time and site logistic planning, installation detail To utilize the 4D Construction Simulation the site planning - material storage, delivery path, hoist management and installation logistics.	

5	Construction comp	leted		
5.1	As-built model	Contractor's architecture, structure, MEP and landscape design, and MEP equipment	Related information to be stored in the model, extra information to future facility management purpose will be added	

	warranty and maintenance information	and re-store into model in EcoDomus for facility management purpose	File Model Checking Presentation Information	Takeoff COBie +		
			Pset_SpaceCommon PSet_Revit_Phasing A B	C D	E F	
			PSet Revit Other 1 Name CreatedBy		FloorName Description A	
			PSet_Revit_Identity Data 2 2080H.01	28-09-2012T12:30:40 OPEN KITCHEN	GROUND F OPEN KITCHEN	
			PSet_Revit_Dimensions 3 2080H.02 PSet_Revit_Constraints 4 2080H.03	28-09-2012T12:30:40 BOH CIRC.	GROUND F BOH CIRC. GROUND F WASHING AREA	
			PSet_Revit_Constraints 4 2080H.03 Hyperlinks GSA Space Areas 5 2080H.04	28-09-2012T12:30:40 WASHING AREA 28-09-2012T12:30:40 CHILLER ROOM	GROUND F WASHING AREA GROUND F CHILLER ROOM	
			Space Boundary Areas Classification 6 2080H.05	28-09-2012112:30:40 CHILLER ROOM 28-09-2012T12:30:40 BOH HOLDING SPACE	GROUND F BOH HOLDING SPACE	
			Relations Space Boundaries 7 2080H.06	28-09-2012T12:30:40 WASTE ROOM	GROUND F WASTE ROOM	
			Identification Location Quantities 8 2080H.07	28-09-2012T12:30:40 JANITOR	GROUND F JANITOR	
			9 2080H.08 9 2080H.08	28-09-2012T12:30:40 POT WASHING	GROUND F POT WASHING	1
				28-09-2012T12:30:40 STORE	GROUND F STORE	
			Model NBS Lakeside R 11 2080H.12 12 2080H.14	28-09-2012T12:30:40 PUBLIC HEALTH/ WATER SERVI 28-09-2012T12:30:40 PLANT/ BATTERY	GROUND F PUBLIC HEALTH/ WAT GROUND F PLANT/ BATTERY	1
			Name MAIN DINING II 13 2080H.6	28-09-2012T12:30:40 LV ROOM	GROUND F LV ROOM	1
			Number 200NT.01	28-09-2012T12:30:40 MAIN DINING	GROUND F MAIN DINING	1
			Type MAIN DINING 15 20INT.04	28-09-2012T12:30:40 ENTRY LOSSY	GROUND F ENTRY LOSSY	1
			0		1	
			Instruction Contact Facility Floor	Space Zone Type Component System Assembly Connection 5	pare Resource Job Impact Document Attr	
			Welcome to Solibri Model Checker		Role: COBie Selected: 0	1



6 Facility m	nagement			
6.1 Model at COBie informat combine EcoDom facility manage	design for architecture, on restructure, MEP and related equipment, landscape design Information:	because of the insufficient information, massive information could be centralize and accessible when BIM technology introduced into facility	The state of the s	



7	Marketing purpose			
7.1	Perspective	Architectural, structural, MEP and landscape design, material, color selection and tree information	Generated directly from BIM model, which is tally with the construction model, minimize the possibility of argument since the inconsistency of market drawing and actual built area	

7.2	3D printing	Architectural, structural, MEP and landscape design, material, color selection and tree information	Generated directly from BIM model, which is tally with the construction model, minimize the possibility of argument since the inconsistency of market drawing and actual built area	

7.3	Animation for interior and exterior	Architectural, structural, MEP and landscape design, material, color selection and tree information	Generated directly from BIM model, which is tally with the construction model, minimize the possibility of argument since the inconsistency of market drawing and actual built area	

7.4	Color plan or isometric perspective	General arrangement plan, interior design including furniture, material and color selection	Generated directly from BIM model, which is tally with the construction model, minimize the possibility of argument since the inconsistency of market drawing and actual built area	
-----	-------------------------------------	---	---	--

7.5	Sales brochure	Leasable area and material selection	Generated directly from BIM model, which is tally with the construction model, minimize the possibility of argument since the inconsistency of market drawing and actual built area	

7.6	Area schedule	Architectural design and unit price	Generated directly from BIM	it Building 9 - [cost.ryt - Schedule: Cost Estimate]						
	and unit price		model, which is tally with the construction model, minimize the possibility of argument since the inconsistency of market drawing and actual built area	Modelling Drafting Site Tools Settings Window Help Solution Solution Solution Solution Move Indicate Indi						
	·									
				✓ Headers:						
				⊕ Floor I rans ⊕ Ceiling Plans ⊕ 30 Views ⊕ Elevations (Building Elevation ⊕ Drafting Views (Detail) ⊟ Area Plans (Cost Estimating) □ 1st Floor			Cost Est	timate		
					Name	Area	Work	Cost	Estimated (
					Hardscape					
					Area 1	429 SF	Addition	100	42875	
					Indoor Conditioned					
					Area 2	429 SF	Addition	150	64312.5	
					Indoor Unconditioned		1-	1	Towns or	
					Area 3 Infrastructure	429 SF	Demolition	50	21437.5	
					Area 4	429 SF	Remodel	150	64312.5	
					Area 4	[429 SF	Remodel	1150	192937.5	
				□ ■ Schedules/Quantities					102501.5	

7.7	Facility	Architectural, structural, MEP and landscape design	Generated directly from BIM model, which is tally with the construction model, minimize the possibility of argument since the inconsistency of market drawing and actual built area	
				First bride State bride S