Rating Tool	Credit	Description of technique/technology (in alphabetical order)	File name	Page no
-				
NB v1.2/v2.0	IA1	AHU advanced disinfection devices Al-based chiller plant optimisation	NB Nov 24 NB Nov 24	P.21 P.19
			NB Nov 24 NB Nov 24	P.19 P.8
		Al environmental monitoring stations		
		Battery clean power supply for construction sites	NB May 24	P.6
		Bicycle parking system (automatic) Biodiesel in construction	NB Jul 22 NB Nov 24	P.16 P.7
		BIM with RFID and Blockchain	NB Jul 22	P.19
		Blockage detection system for drainage system Chilled beam	NB Nov 24	P.24
			NB Jul 22	P.8 P.7
		Chilled ceiling	NB Jul 22 NB Nov 24	P.7 P.6
		Carbon assessment during construction stage		
		C-POLAR filters DALI digital lighting standard	NB Nov 24 NB Nov 24	P.22 P.14
			NB Jul 22	P.14 P.11
		Daylight autonomy system		P.11 P.14
		Digital works supervision system / Dev. & Constr. Site Mobile Sys (DCSMS)	NB May 23	P.14 P.15
		Double refuse chutes in residential buildings	NB Nov 24	
		Dry river as a sustainable drainage system (SuDS) technique	NB May 23	P.7
		Earth tube free cooling	NB Jul 22	P.6
		EC plug fans	NB Nov 24	P.20
		Energy metering inside residential flats	NB May 23	P.11
		Escalator sterilisation device	NB Nov 24	P.26
		GPS concrete truck tracking system	NB May 23	P.15
		Green lease	NB May 23	P.13
		Hybrid solar panels	NB Jul 22	P.17
		Hybrid ventilation	NB Jul 22	P.14
		Mall without air-conditioning	NB Nov 24	P.17
		Metal scaffolding replaces bamboo scaffolding	NB Nov 24	P.11
		MiC (Modular integrated construction)	NB Jul 22	P.12
		MiMEP and DfMA	NB Nov 24	P.13
		Occupant engagement platform - residential buildings	NB May 23	P.10
		Odour control in toilets using advanced technology	NB Nov 24	P.23
		Pinnacle air handling system	NB Jul 22	P.9
		Porous drain covers	NB May 23	P.6
		Predictive control for AC system / people counting for fresh air control	NB Nov 24	P.18
		Recycled aluminium for making façade finish	NB May 24	P.7
		Robotics	NB Nov 24	P.10
		SBTi - Science Based Target Initiatives	NB Nov 24	P.16
		Smart car parking systems	NB Nov 24	P.9
		Smart glass / dynamic glass	NB Jul 22	P.15
		Smart pad in home	NB Jul 22	P.18
		Solar desiccant dehumidification	NB Jul 22	P.10
		Sustainability information system - residential buildings	NB May 23	P.12
		Touchless operations	NB Nov 24	P.25
		Trigeneration system	NB Jul 22	P.13
		Underground rainwater detention system	NB May 23	P.8
		UV vent guard at top of soil stacks	NB May 23	P.9
		Wood chip mulches / other recycled wood applications	NB Nov 24	P.12
		(Remark: Some EB & BI innovations below may also be applied to NBs.)		
NB v1.2	IA2	Aluminium formwork	NB Jul 22	P.23
		BIM	NB Jul 22	P.21
		Biodiesel for on-site plant (backup generators for data centre)	NB May 23	P.18
		Biotech refuse collection point de-odourising system	NB May 23	P.23
		Carbon-neutral operation (high amount of renewable energy generation)	NB May 24	P.9
		CIC Carbon Label for concrete - 100% concrete is labelled	NB May 23	P.19
		Community farm	NB Jul 22	P.21
			NB May 23	P.17
		Design for manufacture and assembly (DfMA) Energy smart monitoring system for a public rental estate	NB May 23 NB May 23	P.17 P.21
		Design for manufacture and assembly (DfMA)		
		Design for manufacture and assembly (DfMA) Energy smart monitoring system for a public rental estate ePMS / Internet project comm centre / Online collaboration platform	NB May 23	P.21 P.21
		Design for manufacture and assembly (DfMA) Energy smart monitoring system for a public rental estate ePMS / Internet project comm centre / Online collaboration platform EV charging facilities at carpark	NB May 23 NB Jul 22 NB Jul 22	P.21 P.21 P.21
		Design for manufacture and assembly (DfMA) Energy smart monitoring system for a public rental estate ePMS / Internet project comm centre / Online collaboration platform EV charging facilities at carpark Food waste decomposer	NB May 23 NB Jul 22 NB Jul 22 NB Jul 22 NB Jul 22	P.21 P.21 P.21 P.21
		Design for manufacture and assembly (DfMA) Energy smart monitoring system for a public rental estate ePMS / Internet project comm centre / Online collaboration platform EV charging facilities at carpark Food waste decomposer Food waste eliminator	NB May 23 NB Jul 22 NB Jul 22 NB Jul 22 NB Jul 22 NB Nov 24	P.21 P.21 P.21 P.21 P.21 P.29
		Design for manufacture and assembly (DfMA) Energy smart monitoring system for a public rental estate ePMS / Internet project comm centre / Online collaboration platform EV charging facilities at carpark Food waste decomposer Food waste eliminator Green Contractor Award	NB May 23 NB Jul 22 NB Jul 22 NB Jul 22 NB Nov 24 NB May 23	P.21 P.21 P.21 P.21 P.29 P.20
		Design for manufacture and assembly (DfMA) Energy smart monitoring system for a public rental estate ePMS / Internet project comm centre / Online collaboration platform EV charging facilities at carpark Food waste decomposer Food waste eliminator Green Contractor Award Hard-paved construction site	NB May 23 NB Jul 22 NB Jul 22 NB Jul 22 NB Nov 24 NB May 23 NB Jul 22	P.21 P.21 P.21 P.21 P.29 P.20 P.21
		Design for manufacture and assembly (DfMA) Energy smart monitoring system for a public rental estate ePMS / Internet project comm centre / Online collaboration platform EV charging facilities at carpark Food waste decomposer Food waste eliminator Green Contractor Award Hard-paved construction site IAQ Excellent Class	NB May 23 NB Jul 22 NB Jul 22 NB Jul 22 NB Nov 24 NB May 23 NB Jul 22 NB Jul 22	P.21 P.21 P.21 P.21 P.29 P.20 P.21 P.21
		Design for manufacture and assembly (DfMA) Energy smart monitoring system for a public rental estate ePMS / Internet project comm centre / Online collaboration platform EV charging facilities at carpark Food waste decomposer Food waste eliminator Green Contractor Award Hard-paved construction site IAQ Excellent Class IAQ real-time monitoring	NB May 23 NB Jul 22 NB Jul 22 NB Jul 22 NB Nov 24 NB May 23 NB Jul 22 NB Jul 22 NB Jul 22 NB May 24	P.21 P.21 P.21 P.29 P.20 P.20 P.21 P.21 P.21 P.21
		Design for manufacture and assembly (DfMA) Energy smart monitoring system for a public rental estate ePMS / Internet project comm centre / Online collaboration platform EV charging facilities at carpark Food waste decomposer Food waste eliminator Green Contractor Award Hard-paved construction site IAQ Excellent Class IAQ real-time monitoring Multi-sensory map	NB May 23 NB Jul 22 NB Jul 22 NB Nov 24 NB May 23 NB Jul 22 NB Jul 22 NB Jul 22 NB May 24 NB Jul 22	P.21 P.21 P.21 P.29 P.20 P.20 P.21 P.21 P.21 P.10 P.21
		Design for manufacture and assembly (DfMA) Energy smart monitoring system for a public rental estate ePMS / Internet project comm centre / Online collaboration platform EV charging facilities at carpark Food waste decomposer Food waste eliminator Green Contractor Award Hard-paved construction site IAQ Excellent Class IAQ real-time monitoring	NB May 23 NB Jul 22 NB Jul 22 NB Jul 22 NB Nov 24 NB May 23 NB Jul 22 NB Jul 22 NB Jul 22 NB May 24	P.21 P.21 P.21 P.29 P.20 P.20 P.21 P.21 P.21 P.21

		Twin tanks	NB Jul 22	P.21
		Two-stage lighting	NB Jul 22	P.21 P.21
		Water mist cooling	NB Jul 22	P.22
		Zero irrigation system	NB May 23	P.22
			50.44 - 04	0.5
xisting Buildings	IA1	Al-based chiller optimisation	EB May 24	P.5
		Air-quality Improvement Photovoltaic (AIPV) panels	EB May 24	P.4
		Carpark ventilation - use of IoT plus demand control	EB BI ND May 23	P.4
		Chiller plant - combine two plants in an existing building	EB BI ND May 23	P.5
		Chilled water battery by charging up the piping	EB BI Nov 24	P.3
		EC plug fans	EB BI ND May 23	P.3
		Nano surface treatment to lifts	EB BI ND Jul 22	P.3
		Solar-charging movable electricity tool car (for use in a shopping mall) Waste management system (RFID + weighing device + cloud)	EB May 24 EB BI ND May 23	P.3 P.6
		waste management system (Krib + weigning device + cloud)	ED DI NU IVIAY 25	P.0
	IA2	Automatic fill cleaning for cooling towers	EB BI ND Jul 22	P.3
		Charity activity utilising the building's characteristic	EB BI ND May 23	P.8
		Food donation	EB BI ND May 23	P.7
		IAQ Excellent Class	EB BI ND Jul 22	P.3
		IAQ real-time monitoring	EB May 24	P.8
Data Centres	IA1	Liquid immersion cooling system	EB May 24	P.6
nteriors	IV1	Al thermal comfort control	EB BI ND Jul 22	P.4
		BIM with O&M database	EB BI ND Jul 22	P.7
		Bladeless ceiling fans	EB BI ND Jul 22	P.5
		Bottle walls	EB BI ND Jul 22	P.7
		Disinfectant robot	EB BI ND May 23	P.9
		Education for visitors	EB BI ND Jul 22	P.7
		Energy generating exercise machines	EB BI ND Jul 22	P.7
		Food donation to charities	EB BI ND Jul 22	P.6
		Human centric lighting (circadian lighting)	EB BI Nov 24	P.4
		IAQ Excellent Class	EB BI ND May 23	P.10
		IEQ real-time monitoring sensors linked to BMS	EB BI Nov 24	P.7
		Indoor hydroponic farming	EB BI ND Jul 22	P.7
		Kitchen waste decomposing machine	EB BI ND Jul 22	P.6
		Oceanic guide for plastic-free offices	EB BI ND Jul 22	P.9
		Odour sensing system in toilet linked to ventilation fan	EB BI Nov 24	P.6
		PalmEco boards for temporary protection (also used as permanent)	EB BI ND Jul 22	P.6
		Partition system	EB BI ND Jul 22	P.4
		Peltier headboard cooling	EB BI ND Jul 22	P.5
		Radiant cooling	EB BI ND Jul 22	P.5
		Real time energy monitoring display	EB BI ND Jul 22	P.5
		Renewable energy certificate purchase	EB BI ND Jul 22	P.6
		Room for Mom - caring for employees	EB BI ND Jul 22	P.10
		Smart toilet	EB BI Nov 24	P.5
		Solar hot water	EB BI NOV 24 EB BI ND Jul 22	P.6
		Temporary IAQ improvement guard	EB BI ND Jul 22	P.0 P.7
		Yoga and other devices for active living	EB BI ND Jul 22	P.7 P.8
		Zhaga LED lighting standard		P.8 P.5
		בוופקס בבש ווצוונווצ אנמועמוע	EB BI ND Jul 22	F.5
	IV2	Coffee grounds recycling	EB BI ND May 23	P.11
		Free food containers for staff to use	EB BI ND May 23	P.12
		IAQ real-time monitoring	EB BI ND Jul 22	P.11
		Ink cartridge recycling facility	EB BI Nov 24	P.9
leighbourhood	IA1	Automatic refuse collection system (ARCS)	EB BI ND May 23	P.15
		Integrated geographical & building information platform (IGBIP)	EB BI ND May 23	P.13
		Robotic parking	EB BI ND May 23	P.14
		Waste-to-energy: thermal hydrolysis for sludge treatment	EB BI ND Jul 22	P.12
	IA2	Combined-heat-and-power + PV generates high amount of energy	EB BI ND Jul 22	P.12
	0.12	or Operational Carbon Neutral		
Other	IDCM	Battery clean power supply for construction sites	OT Jul 22	P.7
emerging		DfMA and MiMEP (see also MiMEP new support system below)	OT Jul 22	P.4
practices /		Double refuse chutes on construction site	OT Nov 24	P.6
echnologies		Electrified construction machinery (telescopic cranes, crawler cranes,)	OT May 24	P.4
		Fuel cell generator on construction site	OT Nov 24	P.5
		Low-noise demolition methods	OT Jul 22	P.10
		Metal scaffolding	OT Jul 22	P.9
		MiLift	OT May 23	P.4
		MiMEP new support system (lightweight) - see also DfMA above	OT Nov 24	P.4
		Modular hoardings without welding	OT Jul 22	P.8

	Solar-powered construction sites	OT Jul 22	P.6
SS	Car parking facilities that are smart	OT Jul 22	P.13
	Cool pavements to mitigate urban heat island effect	OT Nov 24	P.8
	Structural root cell modules for planters	OT Jul 22	P.12
MW	3D printing to reduce material consumption	OT Nov 24	P.10
	ARCS and refuse weighing system for commercial building	OT May 24	P.12
	Bamboo (augmented) as a strong building material	OT May 23	P.10
	Biochar replacing cement	OT Jul 22	P.16
	BubbleDeck lightweight prefabricated slab system	OT Nov 24	P.11
	Carbon-negative building materials	OT Nov 24	P.12
	CCUS bricks (carbon capture, utilisation and storage)	OT May 23	P.8
	Cement-less blocks (utilising C&D waste, plastic and bones)	OT Nov 24	P.13
	Flexible sprinkler drops replace rigid G.I. pipes	OT May 23	P.11
	Glass bottles replace plastic bottles in hotels Ice cube re-use for AC system	OT Nov 24 OT Nov 24	P.16 P.15
	Lightweight concrete + High strength steel for MiC modules	OT Nov 24 OT May 23	P.15 P.6
	Low-carbon concrete (GGBS at 60%)	OT May 23	P.7
	Low-carbon rebars (100% recycled)	OT May 23	P.9
	Oyster shells recycled to make cement	OT Nov 24	P.14
	Plastic reuse in construction materials	OT Jul 22	P.15
	Recycling facilities (new) to cope with increased needs for recycling	OT Jul 22	P.19
	Synthetic macro-fibre in on-grade concrete slabs	OT Jul 22	P.17
	Timber (mass engineered timber) as low-carbon construction material	OT Jul 22	P.18
EU	AHU EC plug fans - new apply / retrofit	OT Jul 22	P.28
	Algae for carbon capture (see also HWB - Green moss and)	OT May 24	P.8
	Batteries for storing emergency power	OT Jul 22	P.40
	BIPV applied to canopies (carparks, building façade, etc)	OT Nov 24	P.20
	BIPV applied to non-glass opaque wall surfaces	OT Nov 24	P.21
	BIPV applied to roof tiles, road tiles and curtain walls	OT May 23	P.14
	BVG (building vacuum glass) Glazing Retrofit	OT Nov 24	P.23
	Cascade water supply system to save pumping energy	OT May 23 OT Nov 24	P.22 P.27
	Ceramic coating (interior and exterior) to improve bldg performance Clothes drying racks - an innovative form	OT Nov 24 OT May 23	P.27 P.20
	Coating retrofit for AC condenser coils	OT May 23	P.16
	Coatings on lighting fixtures / ceiling panels to enhance reflectance	OT Jul 22	P.42
	DALI system / Individual control modules for lighting / AC	OT Jul 22	P.43
	DC micro-grids within a building	OT Jul 22	P.41
	Digital energy monitor for MCB Boards	OT Jul 22	P.44
	Distributed pumping for chilled water system	OT Jul 22	P.31
	Double skin façade	OT Nov 24	P.22
	Fan as a standard provision by developer	OT Jul 22	P.32
	Fan fitted at air diffuser to improve circulation of AC air	OT Jul 22	P.33
	FCU PM / EC motors - new apply / retrofit	OT Jul 22	P.28
	Hydropower generator (inline type) installed in water pipes	OT Nov 24	P.25 P.19
	Lighting management system for outdoor lighting Local and mini-area cooling	OT May 23 OT Jul 22	P.19 P.34-35
	Magnetic bearing oil-free chillers	OT Jul 22 OT Jul 22	P.34-35 P.29
	Mall without air-conditioning, which utilizes natural wind	OT Jul 22	P.27
	Nanofiber filter HEPA performance but low pressure drop	OT Nov 24	P.29
	On-demand control of hot water recirculation pumps	OT May 23	P.23
	Passive radiative cooling films	OT May 23	P.15
	Passive radiative cooling paint as external wall or roof finishes	OT Jul 22	P.21
	Passive radiative cooling paint on PV panels, water pipes, AC eqt, etc.	OT May 24	P.6
	Passive radiative cooling paint on roof + Bifacial PV panels	OT Nov 24	P.19
	Passive radiative cooling materials incl external tiles, asphalt, etc	OT Nov 24	P.18
	Pavements that generate energy (and data)	OT Jul 22	P.25
	Predictive control for AC system	OT Jul 22	P.39
	Predictive control for carpark vent/light or street lighting	OT May 23	P.17
	REC certificate / carbon credit purchase to achieve carbon neutrality Retrofit double glazing by insert replacement	OT May 23 OT Jul 22	P.21 P.22
	Smart AC controller (AI) for home application	OT Jul 22 OT May 23	P.22 P.18
	Solar hot water panels : balcony-mounted	OT Jul 22	P.16 P.26
	Solar windows that generate electricity	OT Jul 22	P.23
	Tilted glazing panels reduce glare and solar heat gain	OT Nov 24	P.28
	Variable primary flow (VPF) chiller plant w/optimization control	OT Jul 22	P.30
	Vacuum insulated glass retrofit (see also BVG Glazing Retrofit)	OT May 23	P.13
	Walk-on PV panels / flexible PV sheets	OT Jul 22	P.24
	Water source heat pump AC system utilizing stormwater channel	OT Jul 22	P.38
	Water source heat pump quasi-central AC sys for residential buildings	OT Jul 22	P.36-37
	Window screens (bug/pet resistant) to facilitate natural ventilation	OT Nov 24	P.24

	WU	Artificial wetland / greywater garden	OT May 24	P.10
		Midori-chan zero irrigation planter system	OT Jul 22	P.46
		Overflow water/drained water reclaimed for re-use	OT May 23	P.25
		VFD for top-floor booster potable/flushing water pumps	OT Jul 22	P.47
	HWB	AirGuard "Clean Air as A Service" disinfection system	OT Jul 22	P.50
		Algae for air purification (see also "Green moss and" below)	OT May 24	P.8
		Antibacterial and dustfree coating for metal air duct internal surfaces	OT Jul 22	P.51
		Ceramic coating (interior and exterior) to improve bldg performance	OT Nov 24	P.27
		Diatomaceous earth wall coating or plaster	OT Jul 22	P.52
		Displacement ventilation for restaurants	OT Jul 22	P.49
		Graphene / silver ion paints (absorb CO2, avoid condensation, etc)	OT May 23	P.29
		Green moss and microalgae green walls	OT May 23	P.28
		Gypsum block wall system	OT Jul 22	P.53
		Hydrogel added to flushing water to fight COVID-19 and odours	OT Jul 22	P.54
		Impact noise isolation (floating floor finish) in residential buildings	OT May 23	P.30
		Nanofiber filter w/HEPA performance but low pressure drop	OT Nov 24	P.29
		NanoFil innovative air filters	OT May 23	P.27
		NCCO vent for top of soil stacks	OT Jul 22	P.55
		Solar responsive ventilators near curtain walls	OT May 23	P.31
		Tilted glazing panels to reduce glare and solar heat gain	OT Nov 24	P.28