## TECHNICAL SPECIFICATIONS

— 180 Brisbane by Daisho —



## Daisho

PARAMETER	ITEM	SPECIFICATION
ESD Floth	Rainwater recycling	The building will be provided with a tank for harvesting rainwater and reusing it for cooling tower make-up and landscape irrigation.
	NABERS	The building is targeting a 5.5 Star NABERS Energy rating.
	Green Star Design rating	The building is targeting a 6 Star Green Star Office Design V3 rating.
	Green Star As-built rating	The building is targeting a 6 Star Green Star Office As-built V3 rating.
	Other key features of 180 Brisbane	The building will be provided with a tri-generation plant.
	Greywater recycling	The building will recycle greywater from basins and showers for reuse in toilet flushing.
BMS Floth	Electrical / hydraulic services control	BMS system to control time scheduling of internal and external house lighting.
	Electrical / hydraulic services monitoring	BMS system to monitor all hydraulic pumps and all electrical intelligent energy meters for base building power.
	Security interface	High Level Interface provided to the security system from the BMS to enable security system to be linked with BMS functionality e.g. lighting.
	Tenant after hours control	Web based login access provided to tenants to enable after hours A/C requests. After hours calls will be available for areas down to 1/4 of a floor for adjustable time periods with a minimum of 2 hours. After hours requests are logged on the BMS for run time reports to be generated to bill the tenants for usage of after hours A/C.
	Trend logging	Any point in the BMS system will have the ability to be trended at appropriate time intervals, for building tuning purposes.
Mechanical Floth	Cooling capacity	Design occupancy based on 1 person per 10m². 70W sensible and 60W latent heat load per person. 10W/m² lighting allowance (PCA A grade).
	Tenant equipment	20W/m2 tenant equipment heat load allowance (PCA A grade).
	Zones (all air systems)	4 Dedicated perimeter zones (North West, North East 1, North East 2, South West).
		2 Dedicated internal zones (Internal 1, Internal 2). After hours operation.

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Mechanical Floth	Design Conditions	Ambient Summer 32°C Dry Bulb, 25°C Wet Bulb.
		Ambient Winter 9°C Dry Bulb.
		Internal 23°C DB Summer.
		40% relative humidity perimeter zones, 45% relative humidity internal zones for "low temp VAV" cold air distribution design.
		Upper limit humidity control & mould prevention.
		Internal 21°C Dry Bulb Winter.
	After hours A/C operation	After hours A/C operation provided through web based access to BMS system. Tenant can log in and request after hours A/C for any floor for a minimum 2 hour period.
		The commercial floors are divided into 4 after hours zones per floor to enable up to 4 tenants per floor to separately request after hours A/C.
		All after hours requests are logged through the BMS system and after hours run time reports will be generated in order to charge tenants for after hours A/C costs.
	Thermal performance of building facade	Double glazing U value 1.8 W/sqm K.
		Shading coefficient 0.3.
		External Wall U value 0.66 W/sqm K.
Passenger Lifts Norman Disney	Waiting intervals (average waiting time)	Less than or equal to 30.0 seconds.
& Young	Handling capacity	1 person per 12 sqm NLA. Greater than or equal to 14.0%.
	Car capacity	Low + Medium Rise 25 persons, High Rise 26 persons.
	Lateral vibration	Less than or equal to 15 mg.
	Handicapped access	Compliant with relevant building codes.
	Lobby arrangement	In-line arrangement for Low, Medium & High Rise groups.
	Door size	Tower passenger lifts 1100mm wide x 2200mm high.
	Car height	Tower passenger lifts 2600mm high.
	Use as goods lift	1x lift in each group able to operate as a shared goods lift. Protective quilting exceeds PCA Premium Grade.
	Goods lifts — capacity	2,500kg.
	Car park lifts — car park access	Separate shuttle lifts provided.

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Passenger Lifts Norman Disney & Young	Lift security	All lifts will be provided with restricted access and CCTV.
	Escalators	Escalators will be provided to connect entry levels and retail.
	Energy efficiency	All lifts and escalators will be provided with energy efficient drive systems.
Electrical Floth	Authority supply	High voltage connection to the Energex three feeder mesh network.
	Electrical metering	The main switchboards will have private power quality metering on the incoming supplies and private multi-function intelligent metering on the sub-mains all connected to an Energy Metering and Monitoring System (EMMS). Commercial office and retail ten- ancies will be metered with private energy meters connected to the EMMS. All major mechanical and house services loads will be indi- vidually metered with private energy meters connected to the EMMS.
	Generator standby power	Standby generator supply will be provided the main switchboards serving the base building services as listed below. Spatial provision at the mid-level plant room will be provided for tenants to install their own standby diesel generators.
	Standby power (base building) lifts	1x lift in each rise.
	Emergency Services	100% of emergency services.
	House lights and power	100% of house light and power.
	Tenant supplementary loop	100% of tenants supplementary condenser water system pumps and cooling towers.
		A bulk diesel fuel storage tank will be provided to enable at least 12 hours of full load operation of standby diesel generators capable of providing 100% of the building load. The diesel fuel system will include filtering systems capable of filtering the fuel in both the bulk fuel and day tanks by recirculation through the entire system.
Hydraulic Floth	Fittings	Basin taps: 6 Star WELS rated.
		WC: 4 Star WELS rated.
		Showers: 3 Star WELS rated.
		Urinal: Waterless.
	Water demand sub-metering	Sub-metering of major water users. Each tenancy will be provided.

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Hydraulic Floth	Water storage	Hours of operation: 2 hours.
	Rainwater harvesting – Storage tanks and pumps	Rainwater harvesting at mid-level plantroom and supply irrigation and cooling towers.
	Hydraulics authority approvals – Authority requirements	Will be submitted to Authority for approval in due course.
	Watermark approval	Yes.
	Hydraulics tenant facilities – Wet stack risers	Provisional stacks will be provided to cover 70% of the NLA.
	Grease stacks	One trade (grease) stack and vent will be provided near the core.
	Water storage for tenant cooling tower	Hours of operation: 2 hours.
	Emergency services	100% of emergency services.
Structural Hyder	Compactus zones	Each office floor has been allocated three areas for which a compactus can be safely located. These areas are noted on the architectural plans and have been designed for a heavier live loading of 7.5kPa (750kg/m2) in accordance with Australian Standards AS1170.1 "Dead and Live Loads".
	Interslab connections/Internal stairs	Each office floor has been allocated two areas for future use as an internal staircase between adjacent floors. The structural design of these areas have assumed that the area in question does not exist and therefore can be removed latter if the tenant so desires. The location of the potential void will be noted on the underside of the slab soffit by a thin recess which will denote the area of slab that can be demolished.
Fire Services ARUP	Floor by floor sprinkler system isolation	A monitored isolation valve at each level for the isolation of the sprinkler system to facilitate tenancy modifications without affecting other levels.
	Fire detection system code compliance	A fire detection and alarm system compliant with the National Construction Code (NCC), AS 1670 and AS 1668 as applicable will be provided to control the smoke management systems.
	Fire detection system type	The fire detection system will utilise individually addressable detectors and field devices to provide flexibility in detector response and Fire Indicator Panel (FIP) output programming.
	EWIS	An Emergency Warning and Intercom System (EWIS) compliant with AS 1670 will be provided to facilitate an orderly evacuation of the building in the event of an emergency.

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Fire Services ARUP	Fire control room	A fire control room will be provided in accordance with the requirements of the NCC.
	Fire detection tenancy provisions – Special fire detection systems	The FIP will accept alarm signals from specialised fire detection systems installed by the tenants and initiate a fire alarm and occupant warning systems as required.
	Special fire suppression systems	Installed by the tenant if required by their fitout design.
	Security system interface	A direct interface capability with individual access controlled doors will be provided to enable their release in the event of an emergency on individual floors.
	BMS system interface	A general fire alarm and FIP fault will be communicated to the BMCS via a low level interface.
	Sprinkler and hydrant system interface	The FIP will monitor sprinkler and hydrant system for alarms and faults.
	Mechanical services system interface	The FIP will provide a general fire alarm signal to each mechanical services switchboard and control and monitor all essential services fans and dampers.
	Computer room facilities and security system interface	The FIP will accept alarm signals from specialised fire detection systems installed by the tenants and initiate a fire alarm and occupant warning systems as required.
	Fire hydrant and hose reels	The building will be provided with hydrants in accordance with the NCC and AS 2419 and hose reels in accordance with the NCC and AS 2118.
	Extinguishers	The building will be provided with fire extinguishers in accordance with the NCC and AS 2444.
Communications Floth	Communications building distributor/ equipment rooms	Two carrier entrance rooms will be provided.
	Equipment room air conditioning	The carrier entrance rooms will be air conditioned.
	Equipment room security	The carrier entrance room doors will be monitored and access controlled by the building access control and security system.

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Communications Floth	Communications backbone pathways carriers	Two communications cable entry points to the building will be provided to enable diverse cable routes to the site by communications carriers.
	Tenant data risers	Two dedicated tenants communications risers will be provided with cable pathways back to the carrier entrance rooms.
	Primary communications riser	A base building communications riser will be provided to serve the retail and commercial office tenancies.
	Fire rating for communications risers	Communications risers will be fire rated to meet the requirements of the National Construction Code.
	Communications horizontal reticulation – Secure on-floor pathways	A 300mm cable tray will be provided to support cabling from the retail or commercial tenancies to the base building communications riser.
	Communications roof top facilities – Space provision	A 100m <sup>2</sup> clear space will be provided on the roof of the building to enable tenants to install roof top communications equipment such as microwave and satellite dishes.
	Cable access to risers	Tenants will be provided with access to both the base building and dedicated tenant's communications risers.
	Personnel access	Personnel access will be provided to the roof to access roof top communications facilities.
	Communications MATV – Master antenna system	A Master Antennae Television (MATV) system will be provided. An eight way multiswitch will be provided to each office floor and provision for one outlet to each retail tenancy.
	Master antenna system – FM/AM radio	The MATV system will also be capable of distributing FM radio to all tenanted floors.
	Master antenna system – FTA and Foxtel	The MATV system will distribute both free to air and pay TV (Foxtel) television signals.
	Communications systems – Design life	Two communications cable entry points to the building will be provided to enable diverse cable routes to the site by communications carriers.
	Mobile phone and radio reception	A Distributed Antenna System (DAS) will be provided that can extend the mobile telephone coverage into the building.
	Wireless system compatibility	Services separation will be designed to minimise interface with the operation of wireless communication systems.

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Security Floth	After hours building entry	After hours access to the building will be by proximity card controlled doors at the main lobby entrances and car park entry.
	Base building security control room	A security control room for the building will be provided on site. The security control room will contain the headend equipment for the access control, CCTV and intercom systems.
	Perimeter security	Intruder detection will be provided to all external egress doors by using reed switches. The podium level lobby spaces will be protected glass break alarms and access controlled doors.
	Access system connected to uninterrupted power supply	The access control and security system will be supplied a UPS capable of maintaining headend operation until the base building standby generator comes online. All remote field controllers will be battery backed to provide a minimum of 2 hours of operation. The access control card will be proximity type and non-proprietary to enable multiple service providers to maintain the system.
	Credential card issues and control	The base building access control system will allow partitioned databases to enable tenants to extend the base building system into their tenancy and program their own cards.
	Base building/tenant security interface	Tenants will be able to install their own workstations on the access control and security system to control the installation within their tenancy and allow the transfer of events and alarms to the base building security for escalation procedure responses.
	Option for tenant fully integrated system or low-level interface	See above.
	Car park entry	Vehicular entry to the car park will utilise the access control system and can be activated without drivers leaving their car.
	Base building lift security	Access control card readers will be provided to all lift destination control panels and interfaced with the lift control system.
	Communications risers monitoring	All dedicated tenants communications riser doors will be monitored with reed switches to specifically identify the level and door status.
	Fire doors to typical floors	One fire stair will be provided with card readers to enable interfloor access. All fire stair doors will be provided with electric stikes to provide re-entry in accordance with the National Construction Code.

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Security Floth	Monitoring of non-tenanted areas of the building	All major plant rooms and services rooms will be provided with access controlled and monitored doors.
	CCTV monitoring to entry and exit points	CCTV monitoring will be provided to all egress doors, building entry points, main building lobby, goods lifts, retail levels, car park levels and loading dock.
	Intercoms	A video intercom will be provided from the bike entry door, car park entry boom gate and nominated after-hours entry door to the security control room.