

APPENDIX 4 TO CONDITIONS OF TENDER

TECHNICAL CONDITIONS OF TENDER

- Annex-4A** : Architectural Design Guidelines
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- Annex-4C** : Open Digital Platform (ODP) Requirements
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ANNEX 4A: ARCHITECTURAL DESIGN GUIDELINES

The Architectural Design Guidelines contain information on the development's façade strategy, landscaping strategy, and the development's façade lighting strategy for the Tenderer's information.

Any proposed changes by the Tenderer to the façade, landscaping, or façade lighting shall be assessed and approved by JTC. No changes can be made to any of the above without JTC's prior consent and approval.

Please refer to "**Annex 4A_Architectural Design Guidelines**" for more details.

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ANNEX 4B: M&E PROVISIONS AND TECHNICAL DRAWINGS

Whilst every care and attention has been taken in the compilation and preparation of all information and to ensure its accuracy at the point of publishing this tender, the contents herein may be subject to changes by JTC and/or its contractors without prior notice.

Tenderers are advised to refer to “**Annex 4B1_M&E Provisions**” for details of the handover condition of this development as well as the technical specifications included by JTC as part of the core and shell development. The full set of Combined Services Drawings will be provided to the Successful Tenderer upon award of the tender.

Tenderers shall note that all proposed works to the development shall comply with the relevant codes of practices, standards and regulations stipulated by the relevant authorities of Singapore.

Mechanical and Electrical (M&E) Systems

1 Conformity with Regulation, Codes, Standards and Specifications

- 1.1 All proposed works shall comply with the relevant codes of practices, standards and regulations stipulated by the relevant authorities of Singapore.

2 Diversion and Provision of Utilities Services (if applicable)

- 2.1 The Successful Tenderer shall ensure that the following requirements are complied with:
 - 2.1.1 Consult and liaise directly with the relevant public authorities/Public Utility Licensees regarding the actual locations of all service mains within the Property and on the requirements and conditions for services diversion and provision, if any, prior to the commencement of any works at the Property. All necessary precautions shall be taken by the Successful Tenderer to safeguard the service mains before they are diverted.
 - 2.1.2 Ensure that all service mains that do not need to be diverted are identified and provided with protection, if necessary, throughout the construction period of the Property. The cost of repairs to any damaged service main as a result of works carried out by the Successful Tenderer shall be borne by the Successful Tenderer.
 - 2.1.3 Arrange with the relevant public authorities/Public Utility Licensees and pay for the cost of any diversion and/or “capping off” of existing services,

provision of service mains and connection fees if any, in connection with the proposed works at the Property.

- 2.1.4 Consult and liaise directly with the relevant public authorities/Public Utility Licensees to provide all the internal distribution for water, electricity, gas, drainage and sanitary discharge for the proposed works at the Property.
- 2.2 The Successful Tenderer shall comply with all the necessary requirements as stipulated by the relevant public authorities/Public Utility Licensees.
- 2.3 The Successful Tenderer shall at its own cost and expense install separate utility meters and pay for consumption of utility direct to the Public Utilities Board (PUB), SP Services Ltd and SP PowerGrid Ltd.
- 2.4 The Successful Tenderer shall at its own cost and expense make its own arrangements with the relevant service departments or public authorities and shall pay for its own service connection including any diversion and provision of service mains. The Successful Tenderer shall also provide for its own internal distribution for water, electricity and sanitary discharge including sewer line, construction of substation or transformer in connection with the proposed usage. Any new service lines serving the Property shall be contained within the boundary of the Property.
- 2.5 The Successful Tenderer shall also comply with the requirements of the relevant Departments or public authorities in relation to his service requirements such as provision of an electrical substation or transformer room etc. if required by SP PowerGrid Ltd.
- 2.6 The Successful Tenderer shall liaise with the Telecommunication System Licensee pursuant the provisions of the Telecommunications Act, for the telecommunication supply at the Premises.
- 2.7 If necessary, the Successful Tenderer shall provide the facilities for telecommunication services, such as Telecom riser ducts, lead-in pipes and manholes etc., within the Property. All Telecom facilities shall be provided according to the prevailing Infocommunications Media Development Authority (IMDA) of Singapore's "Code of Practice for Info-communications Facilities in Buildings".
- 2.8 The Successful Tenderer is advised to approach the Telecommunication Facility Co-ordination Committee (TFCC) and StarHub Cable Vision Ltd (SCV) early during the planning stage for consultation on the location and diversion of existing Telecom services with the Telecommunication System Licensees, proposed connection and design of Telecom facilities. The detailed Telecom facilities shall be submitted and duly verified by TFCC and SCV, and approved by IMDA of Singapore prior to commencement of works.

3 Air-Conditioning and Mechanical Ventilation

- 3.1 Punggol Digital District runs on a District Cooling System (DCS) and all air conditioning within Punggol Digital District shall be provided via a chilled water supply via JTC's appointed DCS operator, Engie.
- 3.2 The Successful Tenderer shall sign a separate Chilled Water Service Agreement (CWSA) with Engie directly to obtain chilled water supply for all air conditioning of this hotel / serviced residence. The rates for the chilled water charges shall be discussed and negotiated between the Successful Tenderer and Engie.

Civil and Structural (C&S)

All proposed works shall comply with the relevant codes of practices, standards and regulations stipulated by the relevant authorities of Singapore

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ANNEX 4C: OPEN DIGITAL PLATFORM (ODP) REQUIREMENTS

The Open Digital Platform (ODP) is a digital infrastructure unique to PDD that is developed by JTC and GovTech. The ODP brings together various systems to enable the optimisation of building management and resources on a district level as well as to enable PDD to be a “living lab” for experimentation and innovation.

The ODP contains an Open Standard Multiprotocol Middleware which allows for different district management systems to connect on different communication technologies. Besides the Open Standard Multiprotocol Middleware, the ODP also has a digital twin based on the real-life 3D model of PDD. The digital twin can display real-time information of district data collected through various sensors installed in the district, including temperature and weather, power consumption, and the number of people in the district. Companies in the district looking to testbed their solutions have the freedom to plug directly in the digital twin and experiment without worrying about compromising either their solutions or the district. They can also use its event simulations and historical playback functions to test solutions, allowing for real-world results from simulations without the risks usually involved with test bedding ideas.

JTC encourages the Successful Tenderer to tap on the ODP to trial new solutions within the district and/or their premises. At the same time, as part of PDD’s smart district vision, the Successful Tenderer is required to work with JTC on the implementation of any smart solutions or services which are to be rolled out on a district level.

Please refer to “**Annex 4C_ODP Requirements**” for more information.

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ANNEX 4D: GREEN LEASE REQUIREMENTS

PDD is a BCA Green Mark Platinum district. The district employs at-scale sustainable practices in energy efficiency, water efficiency, material and waste management, environmental planning, green buildings, and transport.

All tenants and lessees of PDD must conform to the requirements stated in “**Annex 4D_Green Lease Requirements**” throughout their tenancy or lease term in order to contribute to a greener and more sustainable PDD and ensure that PDD continues to meet the Green Mark Platinum rating.

The Successful Tenderer is required to comply with the Green Lease requirements with any green cost and performance bonds associated with it to ensure that the requirements are not compromised or forfeited. The Successful Tenderer is also required to compile and submit the documentary evidence to JTC on a yearly basis, or as and when requested by JTC.