

**LEASE OF PROPERTY AT 9A SERANGOON
NORTH AVENUE 5**

FOR REFUELLING STATION USE

ADDITIONAL CONDITIONS OF TENDER
(TECHNICAL)

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PART I

1.0 GENERAL

- 1.1** The Successful Tenderer must in addition to the Particulars and Conditions of Tender, observe and comply with these Additional Conditions of Tender (Technical) in the development and lease of the Land Parcel at 9A Serangoon North Avenue 5. The Particulars and Conditions of Tender and these Additional Conditions of Tender (Technical) shall be read in conjunction with the technical information booklet enclosed in the sale packet. The Successful Tenderer shall also comply with all applicable guidelines issued by the Competent Authorities and Public Utility Licensees. All proposals are subject to the approval of all relevant Competent Authorities and Public Utility Licensees.
- 1.2** The conditions and requirements of all relevant Competent Authorities and Public Utility Licensees set out in these Additional Conditions of Tender (Technical) and in the Conditions and Requirements of Relevant Competent Authorities and Public Utility Licensees and the appendices thereto (to be complied with by the Successful Tenderer at his own cost and expense) are provided to tenderers for their information only. Whilst every care and attention has been taken in the compilation and preparation of these conditions and requirements, the JTC does not warrant that they constitute an exhaustive list of the conditions and requirements of the relevant Competent Authorities and Public Utility Licensees in respect of the development or that they are free from any errors or omissions. These conditions and requirements are subject to change by the relevant Competent Authorities and Public Utility Licensees and the onus lies on the Successful Tenderer to verify these conditions and requirements with JTC, the relevant Competent Authorities and the Public Utility Licensees directly and comply with their current conditions and requirements.
- 1.3** The Government and JTC are not liable to any tenderer and tenderers shall not claim against the Government and/ or JTC for any errors and/ or omissions in and for any loss suffered by any tenderer arising directly or indirectly from the reference to, usage of and/or reliance on the contents of these Additional Conditions of Tender (Technical), the Conditions and Requirements of Relevant Competent Authorities and Public Utility Licensees and appendices thereto.
- 1.4** All references to “the Successful Tenderer” herein shall be deemed to include “the approved developer” as defined in the Particulars and Conditions of Tender where the context so admits.

PART II

2.0 PLANNING PARAMETERS

2.1 PROPOSED DEVELOPMENT

The Land Parcel at 9A Serangoon North Avenue 5 (hereafter referred to as the “said Land”) with a site area of 5,494.10 sq m shall be for Refueling Station development (hereafter referred to as “the said development”). The site area is the area measured up to the boundary lines as shown on the Survey Plan No. CP86424.

2.2 ALLOWABLE GROSS FLOOR AREA (GFA)

Based the latest approved WP on 9 Jun 2015, the current approved GFA is 2,596.42 sqm with a GPR of 0.473. Please note that the maximum GPR of 0.5 under the guidelines for petrol stations will apply for this site and is not to be exceeded*. The total GFA shall be computed in accordance with Urban Redevelopment Authority’s (URA) Development Control Guidelines.

URA will only allow the proposed site for a refueling station for CNG/Diesel/petrol under a fresh 10-year tenure (upon expiry of the current lease on 16 Sep 2023), based on prevailing initiative to progressively reduce island-wide Petrol Station supply in tandem with increase in EV adoption, subject to compliance with the relevant technical agencies.

As part of the tender, the Successful Tenderer operator is to install 1-2 Electric Vehicle (EV) chargers in line with MOT/LTA’s intent to support the growth and adoption of electric vehicles.

*Indicated for information of the Tenderer only.

2.3 RETAIL SPACE

Retail space within the said Land shall be allowed, subject to compliance with URA’s Development Control Group and other relevant Competent Authorities’ requirements. The maximum allowable retail quantum is 150m² or 15% of total approved GFA, whichever is lower, and ancillary offices, stores, and compressor rooms shall not exceed 10% of the total proposed GFA. Preparation, processing and cooking of food is not allowed within the allowable retail space.

2.4 BUILDING LINE / SETBACK

The Successful Tenderer shall at all times comply with the URA's and the relevant Competent Authorities' requirements on the building line setback. Notwithstanding the generality of the foregoing, the building

setbacks (including basement structures) shall be based on the boundary of the said Land delineated on the Survey Plan No. CP86424.

The Successful Tenderer shall conform to URA's current Development Control Guidelines for Petrol Station development including the Building Spacing and Setback Standards.

2.5 BUILDING HEIGHT

The technical and storey height control of the said development is to comply with all applicable standing guidelines issued by the Competent Authorities, including URA's Development Control Guidelines. The Successful Tenderer is to check with the Competent Authorities on the standing guidelines as the guidelines are reviewed from time to time. The lowest technical and storey height control imposed by the Competent Authorities will be applicable to the said Land. The final technical and storey height are subject to the approval of the Competent Authorities.

The Successful Tenderer shall ensure that all developments, structures, and fixtures on the said Land shall not exceed the maximum height of **100m Singapore Height Datum (SHD)**. Such developments, structures and fixtures include those on the roof tops, whether permanent, temporary, transient or stationary (including but not limited to the building superstructure, TV antennae, water tanks, lift motor rooms, cranes, maintenance equipment, lightning conductors, moving objects, vegetation etc.) and all construction equipment and temporary structures (including but not limited to cranes, piling rigs, etc.) which shall all be subject to the same height limit.

Republic of Singapore Air Force's (RSAF) clearance shall be sought for the use of construction equipment and temporary structures above **75m SHD** (Email: Height_Control@defence.gov.sg). For civil aviation height and requirements, please consult the Civil Aviation Authority of Singapore ("CAAS"). The more stringent height restriction(s) from the respective agencies shall apply.

All capital and operating costs or expenses incurred to meet all the above conditions and requirements will be borne by the Successful Tenderer.

In the event that there are any communication installations, the Successful Tenderer are advised to seek clearance from the relevant agencies such as IMDA.

2.6 ENVIRONMENTAL CONSIDERATIONS

The Successful Tenderer shall ensure that the said development and its activities will not cause any undue nuisance to the surrounding/adjacent developments in terms of noise, glare, smell and any other form of pollution.

2.7 VEHICULAR INGRESS / EGRESS

The Land Transport Authority (LTA) requires the Successful Tenderer to comply with the following requirements:

- 2.7.1 The vehicular access/egress from the said land is to be swapped for safety reasons.
- 2.7.2 Access to service areas (e.g. bin centre, electrical substation, loading/unloading bays) shall be taken from within the said development. No service access will be allowed to be taken directly from public road.
- 2.7.3 The Successful Tenderer shall at his own cost and expense construct the culverts for the access and hand it over to the relevant Competent Authorities for management and maintenance.
- 2.7.4 The exact location and detailed proposal for the access point and the traffic layout arrangement are subject to the requirements and approval of LTA and other relevant Competent Authorities at the formal submission stage.
- 2.7.5 Given that the number of Light Goods Vehicles (LGV) and private bus/coach are relatively high, and that Serangoon North Ave 5 is a 2 lane, 2-way road; any additional traffic from proposals such as McDonald's Drive-Through or any other similar types that may cause traffic obstructions, shall not be allowed.
- 2.7.6 Detailed plan submission, including the traffic plans for the said development showing the details of the access etc., shall be made to Development Building Control (DBC) Division, LTA, for review and clearance during the Development Control (DC) and Building Plan (BP) stages.

PART III

3.0 OTHER REQUIREMENTS

3.1 PRE- AND POST-CONSTRUCTION SURVEY

The Successful Tenderer shall submit the pre-construction and post-construction survey of JTC properties including photographs by an independent party with appropriate qualifications before and after any construction work. The survey is to be conducted to JTC properties within the influence zone of the works. The Successful Tenderer shall submit softcopy of the preconstruction survey report to the JTC before work commences. The report shall also include topographical survey showing all existing levels such as road levels, drain top and invert levels, road elements, street furniture and etc.

3.2 INSTRUMENTATION MONITORING

The Successful Tenderer shall submit the proposed instrumentation monitoring plan, endorsed by a Professional Engineer, to the JTC for comments for all JTC blocks which are within 50m radius of the said Land for all works. The Alert and Work Suspension Level shall be agreed upon with the JTC before work commences. The instrumentation monitoring plan should cover the entire influence zone, which may be further than 50m from the work site.

3.3 EXISTING SERVICES

The information on existing services plan ("Services Plan.pdf") is indicative only. The JTC shall not be liable for any damages suffered or expenses incurred as a result of the information given and shall not be held responsible for their accuracy. There may be departures from the courses and there may also be other findings of which no record is held. The Successful Tenderer is advised to carry out his own site verification at his own cost.

For underground services lines, the Successful Tenderer shall also carry out his own site verification and arrange and obtain approval from the relevant Competent Authorities and pay for the cost of any diversion or provision of the services including sewer lines etc. He shall be deemed to have included in his tender price such verification and diversion of services which may affect the said development to meet the specifications of the relevant Competent Authorities.

All new services lines serving the said development shall be contained within the said Land boundaries. The approval of the relevant Competent Authorities must first be sought before any connection can be made. All costs incurred shall be borne by the Successful Tenderer.

There may be services within or near the said Land. Prospective tenderers are required to carry out due diligence by purchasing the

services plans from the respective service providers. Please contact the respective telecoms for the services plans. For plans on electrical cables and gas, please approach the following Competent Authority and Public Utility Licensee for details, as they would like to keep a record of the parties who view the plans:-

Electricity & Gas

SP PowerGrid Ltd

Mapping & Earthworks Administration
Pasir Panjang District Office
25 Pasir Panjang Road
Singapore 117536
Tel: 6916 5022 / 69165150

Requests for the plans on electrical cables and gas can be made by filling up the Cable Plan Request form and Gas Plan Request form which can be downloaded from the Singapore Power Ltd website at <https://www.spgroup.com.sg/what-we-do/electricity-and-gas>.

3.4 EXISTING FOOTINGS, OBSTRUCTIONS AND OTHER MATERIALS

There may be footings and other obstructions left in the ground. The Successful Tenderer shall at his own cost and expense, carry out his own site verification of the possible positions of the footings, obstructions and other materials and ascertain the effect of these on the said development.

The Successful Tenderer shall be deemed to have taken into account the costs of such verification, tests, removal of the possible footings, obstructions and other materials etc which may affect the said development in his tender price.

3.5 SLOPES AND EARTH RETAINING STRUCTURES

The Successful Tenderer shall ensure that all slopes and earth retaining structures where required shall be designed to comply with the requirements of the relevant Competent Authorities. All slopes and earth retaining structures shall be kept within the boundary of the said Land.

The Successful Tenderer shall submit the details and design calculations prepared by a Professional Engineer for any proposed slopes or earth retaining structures to JTC and to the relevant Competent Authorities for approval before commencement of works.

3.6 WORKING AREA

The Successful Tenderer shall confine the construction work within the boundary of the said Land. He shall not cause obstruction to other parties who may be working around the said Land at the same time.

Hoarding shall be put up by the Successful Tenderer to ensure the safety and well-being of pedestrians. These hoarding shall be maintained in good condition throughout the project completion period of the said development.

3.7 CLEANING AND MAINTENANCE OF ROADS AND DRAINS

The Successful Tenderer shall maintain the cleanliness of public roads and drains used by his vehicles throughout the period of the Development Works. He shall construct a washing bay for the cleaning of earth-laden lorries before they leave the work site and shall be responsible for cleaning up all deposits left by his vehicles on the road. The Successful Tenderer shall be responsible for paying any fines imposed by the relevant Competent Authorities e.g. Environmental Health Department, Traffic Police etc.

3.8 PLANS OF PROPOSED DEVELOPMENT WORKS

The Successful Tenderer shall submit DC plans and Building Plans to JTC for its endorsement on behalf of the Government as landowner before these plans are submitted to the Competent Authority for approval.

The JTC shall have the right to require the Successful Tenderer to amend and modify the above-mentioned plans submitted by him.

**LEASE OF PROPERTY AT
9A SERANGOON NORTH AVENUE 5
FOR REFUELLING STATION USE**

**CONDITIONS AND REQUIREMENTS OF RELEVANT COMPETENT
AUTHORITIES/ PUBLIC UTILITY LICENSEES
(FOR INFORMATION OF TENDERERS)**

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1.0 DEFINITION

- 1.1** The lease of the Land Parcel at 9A Serangoon North Avenue 5 (“the said Land”) is subject to the Additional Conditions of Tender and the Conditions of Tender for the said Property contained in the Developer’s Packet.

2.0 GENERAL CONDITIONS AND REQUIREMENTS

- 2.1** The Successful Tenderer is required to consult and comply with all technical conditions imposed by the relevant authorities such as the Urban Redevelopment Authority, Land Transport Authority, National Environment Agency, Public Utilities Board, SP Power Grid and the Singapore Civil Defence Force, etc.

- 2.2** The Successful Tenderer for the said Land is required under the said Conditions of Tender to ascertain the exact and detailed conditions and requirements of all relevant Competent Authorities and Public Utility Licensees in respect of any Development Works to be carried out on the said Property thereon and shall at his own cost and expense observe and comply with the same.

- 2.3** Without affecting the generality of paragraph 2.1 above and without prejudice to the obligations of the Successful Tenderer as set out therein, the contents herein are provided for the information of the tenderers only. Whilst every care and attention has been taken in the compilation and preparation hereof, JTC does not warrant that the contents herein represent all the conditions and requirements of the relevant Competent Authorities/ Public Utility Licensees in respect of the proposed development on the Land Parcel or that they are free from errors or omissions whatsoever. The contents herein are subject to changes by the relevant Competent Authorities/ Public Utility Licensees concerned and the onus lies on the Successful Tenderer to verify these conditions and requirements directly with the JTC, the relevant Competent Authorities and Public Utility Licensees and comply with their current conditions and requirements.

- 2.4** A summary of the initial services requirements of the relevant Competent Authorities/ Public Utility Licensees is set out herein. It serves only as an indication of the possible work involved with regards to services, and is by no means exhaustive or final.

- 2.5** The Successful Tenderer shall ensure that the following requirements are complied with: -

To consult and liaise directly with the relevant Competent Authorities/Public Utility Licensees regarding the actual locations of all service mains within the Land Parcel and on the requirements and conditions for services diversion and provision prior to the

commencement of site work. All necessary precautions shall be taken by the Successful Tenderer to safeguard the service mains before they are diverted.

- 2.5.1 To engage his own licensed Cable Detection Worker (CDW) and licensed Telecommunication Cable Detection Worker (TCDW) to carry out cable detection and if necessary to carry out trial trenches to locate any manholes and cable routes prior to the commencement of site work. The Successful Tenderer shall bear the cost of any diversion work.
- 2.5.2 To ensure that all service mains that do not need to be diverted are identified and provided with protection, if necessary, during the construction stage of the proposed development. The cost of repairs to any damaged service main as a result of work carried out by the Successful Tenderer shall be borne by the Successful Tenderer.
- 2.5.3 To ensure that the relevant Competent Authorities/Public Utility Licensees are allowed free and unconditional access at all times to services that are required to remain within the Land Parcel for the purpose of installation, maintenance, repair and improvement works and all other work and activities incidental thereto.
- 2.5.4 To make his own arrangements with the relevant Competent Authorities/ Public Utility Licensees and pay for the costs of any diversion and/ or "Capping off" of existing services, provision of service mains and service connection, if any, in connection with the proposed development.
- 2.5.5 To provide for all the internal distribution for water, electricity, drainage and sanitary discharge for the proposed development.
- 2.5.6 To liaise with all the relevant Competent Authorities/ Public Utility Licensees on upgrading the road reserves abutting the Land Parcel to ensure that the necessary roadside drains, sidetable, kerb, etc are carried out in accordance with the latest Road Reserve requirements.
- 2.6** The Successful Tenderer shall be responsible to carry out at his own cost and expense his own site investigation to verify whether there is any sub-structure or other obstructions e.g. footings, piles, tree roots, etc. and other obstructions left in the ground of the Land Parcel, and ascertain their effect on the proposed development.
- 2.7** There may be some other existing services affected by the proposed development. The Successful Tenderer shall inform the relevant Competent Authorities / Public Utility Licensees immediately and bear the necessary cost of diversion and/or "capping off" of these existing services, if any.
- 2.8** In general, no structure shall be sited close to or over existing/ proposed services. The Successful Tenderer shall comply with all

the necessary requirements as stipulated by the relevant Competent Authorities/ Public Utility Licensees.

2.9 The Successful Tenderer shall seek all relevant agencies' approval on the layout plan.

3.0 LAND TRANSPORT AUTHORITY (LTA)

3.1 The Successful Tenderer shall ensure that all proposed street works, as well as proposed engineering / construction works within the road reserve shall be prepared / designed, submitted, supervised and constructed in accordance with Street Works (Private Street Works) Regulations, Street Works (Public Street Works) Regulations and the following prevailing standards and code of practice:

- (i) Code of Practice on Street Works Proposals relating to Development Works
- (ii) LTA Standard Details of Road Elements
- (iii) Materials & Workmanship Specifications for Civil & Structural Works
- (iv) Code of Practice for Road Opening Works
- (v) Code of Practice for Traffic Control at Work Zone
- (vi) Architectural Design Criteria, and
- (vii) Civil Design Criteria

3.2 The Tenant shall, at its own costs and expense, appoint a Licensed Electrical Worker (LEW) to install, test and certify the fitness of the installation. The Tenant and its appointed LEW are required to comply with the prevailing technical requirements for installation and maintenance of EV charging points.

3.3 The technical details, extent and completion date of such works shall comply with the requirements of the LTA and other relevant Competent Authorities.

3.4 The Successful Tenderer shall at his own cost and expenses carry out all the proposed works.

3.5 Detailed plan submissions including the traffic plans for the Land Parcel showing the details of the access etc., shall be made to Development and Building Control (DBC) Division, LTA, for review and clearance during the Development Control (DC) and Building Plan (BP) stages.

4.0 CATCHMENT AND WATERWAYS DEPARTMENT, PUBLIC UTILITIES BOARD (PUB)

4.1 General

4.1.1 The Successful Tenderer is advised to carry out thorough site investigations to determine the exact location of PUB's infrastructures.

4.1.2 The proposed site is near the 0.42m, 0.72m and 29m(w) drainage reserves (DR) shown in Drainage Interpretation Plan. No structures / services shall be constructed/ laid within the DR. The DR shall be excluded from the site, secured, safeguarded and free from encumbrances. The indicative location of PUB's infrastructure can be found in PUB's services plans. The plans can be purchased online through the INLIS portal at <https://www.sla.gov.sg/inlis/#/>. You are advised to carry out thorough site investigation to determine the exact location of PUB's infrastructures.

In the course of construction, access into the drainage reserve shall not be obstructed. The drainage reserve shall not be used for parking of vehicles/machinery/storage of construction materials/dumping of excavated earth etc. The drainage reserve (including the markers along the boundary of the drainage reserve) shall be reinstated upon completion of works. Please refer to attachment PUB_22_2013_Site 01DIP_Landscape_A3.pdf

4.1.3 The minimum platform level (MPL) for the subject site shall not be lower than 4.5m above Singapore Height Datum, or 600mm above the adjacent road/ground level for multi-residential and commercial developments, or any other level as determined by PUB as in stated in the latest edition of the 'Code of Practice on Surface Water Drainage', whichever is the highest.

The minimum crest levels for basements of industrial, institutional, commercial or multi-unit residential developments shall be at least 300mm above the MPL as stated above. Please pre-consult PUB(C&W) on the required MPL before making DC/BP submission.

In complying with the MPL requirement, thorough investigations of the site shall be conducted to determine

suitable platform profiles to ensure that the runoff within, upstream of and adjacent to the subject site can be effectively drained away without causing flooding within the site and in the vicinity of the site. Any proposal to level/backfill the subject site shall be submitted to PUB(C&W) for comments and approval.

- 4.1.4 The Successful Tenderer shall locate and identify all existing drains within and in the vicinity of the development site. The existing drainage system within and in the vicinity of the proposed site shall not be interfered with, in any manner, without written approval from PUB(C&W). All works shall not cause damage or affect the structural integrity of the roadside/outlet drains.
- 4.1.5 The Successful Tenderer shall ensure that the design and construction of the proposed development within the site will not cause damage and affect the structural integrity of the existing drains. The Successful Tenderer shall ensure that the runoff within, upstream of and adjacent to the site shall be effectively drained away without causing flooding within the site and in the vicinity of the site. Successful Tenderer shall take due care and precautionary measures to ensure that no damage, settlement or any adverse impacts occurs to any existing drain/drainage facilities in the course of the works. Free flow of water in the drains shall be maintained at all times. Any damages caused to the drainage structures shall be reinstated at the service provider/contractor's own cost to the satisfaction of PUB(C&W). Successful Tenderer shall carry out an impact assessment to establish the influence zone of the proposed works which affect the existing drains and drainage facilities. The impact assessment to be submitted to PUB shall be endorsed by a qualified person (QP).

Pre-work and post-work surveys shall be submitted to PUB and shall cover drains/drainage facilities in the area affected by the work (and shall extend to at least the area within the second reserve of the MRT lines - if applicable*). All drains/drainage facilities shall be located and identified. The survey shall show the levels of the drains/drainage facilities and shall be accompanied by a set of photographs showing the conditions of the drains/drainage facilities. All survey work shall be carried out by a Registered Surveyor.

Successful Tenderer shall carry out soil instrumentation for monitoring the soil/geo-technical/structural movements or changes at and around the work-site in particularly existing drains/drainage facilities throughout the contract period.

Successful Tenderer shall set the critical alert levels and put in place a contingency plan to rectify any damages to the drains/drainage facilities. The soil instrumentation shall be monitored daily and weekly summary reports of the results of the soil instrumentation shall be submitted to PUB. Any breach of the alert levels and/or anomaly found in the reports shall be immediately reported to PUB and rectify immediately to the full satisfaction of PUB. Details of the contingency plan including the schedule of works and organisation chart of the developer/developing agency and consultant/contractor shall be submitted to PUB before commencement of works.

In the event of breach of alert levels and/or anomaly in the soil instrumentation results, Successful Tenderer shall alert PUB immediately and activate the contingency plan to mitigate and rectify the situation. The analysis and rectification reports of the affected drains and drainage facilities shall be submitted to PUB for comments/approval.

Successful Tenderer shall conduct a joint visual inspection and any defects identified shall be made good to the full satisfaction of PUB and shall follow up with an incident report for the affected drains and drainage facilities within 3 days including remedial/repair works. If necessary, briefing/meeting shall be conducted by Successful Tenderer to address the damage and follow up actions to rectify the situation.

The method of construction of temporary drains and/or drains affected by the works shall be submitted to PUB for comments and approval before commencement of the works. Upon completion of the works, postcondition survey and topography survey of the affected drains shall be submitted and PUB may request for joint site inspection of the rectification works.

Successful Tenderer shall inform PUB in writing at least one week before the commencement of any work at the site which affects drains.

PUB may require the affected drain to be upgraded in conjunction with the proposal. Please further consult PUB(C&W) with the detailed proposal for further comments

- 4.1.6 The planning, design, construction activities and procedures for plan submission shall comply fully with the requirements as stipulated in the latest edition of the Code of Practice on Surface Water Drainage and The Sewerage and Drainage (Surface Water Drainage) Regulations 2007. You may download the latest version

of the COP from the PUB website:
<https://www.pub.gov.sg/drainage/COPsurfacewaterdrainage>.

- 4.1.7 The topography of the site shall not be changed without the approval of PUB.
- 4.1.8 The existing drainage system within and in the vicinity of the proposed site (if any) shall be upgraded/improved to cater for increased runoff from the proposed development. In addition, new drains, depending on the type and nature of the proposed development, may be built within the development site. Appropriate Drainage Reserves shall be set aside for drains in accordance with the prevailing Code of Practice on Surface Water Drainage.

The Successful Tender / QP shall pre-consult PUB(C&W) on the required size of the proposed drains affected by the proposed development before making DC/BP (Drainage) submission. Detailed drainage plans for the proposed crossing-over/reconstruction of roadside drain / outlet drain including hydraulic calculations, backwater analysis, longitudinal and cross sections etc shall be submitted to PUB for approval before the commencement of works.

- 4.1.9 a. The proposed site is within Punggol Water Catchment. The proposal shall not result in any loss of yield from the catchment area.
- b. Stringent pollution control measures shall be incorporated in the design and during the construction of the proposed development.
- c. All sewage and sullage water shall be discharged into a public sewer.
- d. Bulk storage of toxic and hazardous materials shall not be allowed.
- e. If there is any earth filling work at the development site, use good earth free of any debris or construction waste materials. If sand is used for backfilling, do not use marine sand. Only washed sand with chloride content not exceeding 0.01% (by Weight) shall be allowed. Test reports on the chloride content of the washed sand shall be submitted to PUB(C&W) for records before commencement of work.
- 4.1.10 a. The Successful Tenderer shall comply with the pollution control measures stipulated in NEA Environmental Protection and Management Act and Code of Practice on Pollution Control for the design of the fuel storage tanks/facilities.

- 4.1.11 a. All pollutive items shall be stored under shelters which shall be kerbed-up and properly contained. This is to ensure that no spills/leaks of wastes escape the proposed development and potentially enter controlled watercourses. All sullage water from the containment area shall be discharged into a public sewer.
- b. The site shall be designed to minimize the contamination of stormwater runoff. This includes having sheltered and perimeter kerbed areas for pollutive materials and activities.
- c. All contaminated stormwater runoff shall be collected and treated. Any discharges into watercourse shall comply with Allowable Limits for Trade Effluent Discharge to Controlled Watercourses under the EPMA (Trade Effluent) Regulations.
- d. Proper housekeeping is required, and the premises shall be kept clean and tidy at all times. All open ground (i.e. unsheltered areas) and drains in the premises shall be free of grease/oil/raw materials.
- e. The Successful Tenderer shall comply with the pollution control measures stipulated in NEA Environmental Protection and Management Act and Code of Practice on Pollution Control for the design of the fuel storage tanks/facilities.
- 4.1.12 The development schedule of the site shall be properly considered to avoid a situation where site and/or the lands in the vicinity of the site become 'land locked' without proper drainage outlets. The runoff within, upstream of and adjacent to the sites shall be effectively drained away without causing flooding within the site and in the vicinity of the site. Any proposal to level/backfill the site shall be submitted for PUB(C&W)'s comments and clearance.
- 4.1.13 Industrial, commercial, institutional and residential developments greater than or equal to 0.2 hectares in size are required to control the peak runoff discharged from the development sites. The maximum allowable peak runoff to be discharged to the public drains will be calculated based on a runoff coefficient of 0.55, and for design storms with a return period of 10 years and for various storm durations of up to 4 hours (inclusive). Peak runoff reduction can be achieved through the implementation of ABC Waters design features and structural detention and retention features, such as:
- i) Detention tanks;
 - ii) Retention/Sedimentation ponds;
 - iii) Wetlands;
 - iv) Bioretention swales;
 - v) Porous pavements;
 - vi) Bioretention basins or rain gardens, etc.

The Qualified Person (QP) shall be required to submit details (calculations and/or hydraulic model results) showing how the proposed system meets the required peak runoff rates. Due consideration shall be given to meeting ABC Waters stormwater quality objectives, which will often require treatment of stormwater runoff using ABC Waters design features. For design guidance on the ABC Waters design features, Successful Tenderer/QPs can refer to the ABC Waters Guidelines and relevant chapters in the Engineering Procedures, available on the PUB website.

PUB has in 2006 launched the Active, Beautiful and Clean Waters (ABC Waters) Programme. As part of the Programme, PUB has launched ABC Waters design guidelines which provide ideas on how natural runoff treatment systems termed ABC Waters design features such as rain gardens, vegetated swales and bioretention swales can be integrated within a development. These features detain/ slow down stormwater runoff and improve water quality by using plants and soil. They also enhance landscape and biodiversity of the development. Specific information on the design of these features can be found at the website:
<https://www.pub.gov.sg/abcwaters/designguidelines>.

PUB encourages the implementation of ABC Waters design features in the development as well as the achievement of ABC Waters certification. Information regarding ABC Waters Certification can be found via the link:
<https://www.pub.gov.sg/abcwaters/certification>.

If applicable, the design and construction supervision of ABC Waters design features as well as drawing up the maintenance plan for these features shall be carried out by an ABC Waters Professional.

You could contact Ms Ong Geok Suat (ong_geok_suat@pub.gov.sg) for issues related to ABC Waters design features.

- 4.1.14 For Catchment and Waterways, please contact ZENG WENQIU (email: ZENG_WENQIU@PUB.GOV.SG), SHEN HUI CHRISTIANA (email: CHRISTIANA_SHEN@PUB.GOV.SG), ONG JING YUAN (email: ONG_JING_YUAN@PUB.GOV.SG), TAN LEH HO (email: TAN_Leh_Ho@pub.gov.sg), YU PINGPING (email: YU_Pingping@pub.gov.sg), from PUB(C&W), if you need any clarifications.

5.0 WATER RECLAMATION NETWORK DEPARTMENT, PUBLIC UTILITIES BOARD (PUB)

5.1 General

- 5.1.1 The Successful Tenderer shall ensure that the premises is served by an adequate, effective and functional internal sanitary drainage and plumbing system and be connected to public sewers. The comments and requirements below are based on data available at the time of consultation and are given without prejudice to any changes, which may take place subsequently. PUB reserves the rights to amend and/or impose additional conditions depending on the prevalent situation as-and-when it deems necessary.
- 5.1.2 The planning of this project shall comply with the Code of Practice on Sewerage and Sanitary Works (2nd Edition Jan 2019 and Addendum No.1 – Mar 2021) [thereafter referred to as the “COPSSW (2nd Ed.)”].
- 5.1.3 There are existing 150mm diameter sewers and existing drain-lines within/ in the vicinity of the proposed site. Enclosed is a plan that shows the approximate location of our existing sewerage infrastructure within/in the vicinity of the proposed site. This plan is for your internal reference only. Thorough site investigation shall be carried out to determine the exact positions and levels of the existing sewerage infrastructure. Please refer to attachment PUB_22_2013_Site 01SIP_Landscape_A3.pdf
- 5.1.4 The used water generated from the proposed site shall be discharged to the existing 150mm diameter sewer via MH390950 along Serangoon North Avenue 5. Details of the sanitary/sewerage proposal including the proposed sewer connection shall be submitted to PUB(WRN) for approval. The proposed sanitary/sewerage works must not start before approval is received from PUB. The reuse of existing sanitary drain-lines/sewer connection to public sewer is subjected to PUB(WRN)’s approval. If PUB agrees to the reuse of the drain-lines/ sewer connection, the Successful Tenderer shall carry out CCTV inspection and water tightness test to satisfy PUB(WRN) that the existing sanitary drain-lines/sewer connection are in a serviceable condition. Otherwise, they shall be replaced/repared by the Successful Tenderer to the satisfaction of PUB.
- 5.1.5 PUB’s approval shall be obtained for any proposed abandonment of sewers/pumping mains/manholes/chambers/drain-lines as well as the manner in which they will be abandoned. Successful Tender /QP shall note that the upstream (inlet) and downstream (outlet) ends of the abandoned sewer connections, drain-lines or sewers/pumping mains of all sizes shall be sealed watertight with 225mm thick brick plugs rendered with cement mortar. All abandoned sewers/pumping mains of diameter 300mm or larger and abandoned sewers/pumping mains of all sizes within the road reserve shall be grouted with cement grout or other approved

materials. All abandoned manholes/chambers are to be demolished, filled up with well compacted approved material, and the manhole frames and covers removed. Details of the requirements can be found in the COPSSW (2nd Ed.) and “Standard Requirements for Abandoning of Disused Sewerage System” for compliance [https://www.pub.gov.sg/Documents/StdReq_sealing.pdf].

The abandoned sewers/pumping mains/manholes/chambers/drain-lines, including the manner of abandonment (remove, seal, grout, partial demolition, etc.), shall be indicated on the as-built drawings submitted to PUB(WRN). The following details shall also be included:

- a. whether the abandoned sewers/pumping mains/drain-lines are removed, grouted or sealed;
- b. For manholes/chambers that are only partially demolished with approval from PUB(WRN), the extent of demolition shall be shown;
- c. the exact extent/length of the abandoned sewers/pumping mains/drain-lines that is removed, grouted or sealed;
- d. the exact locations of the watertight seals; and
- e. the type of watertight seals.

- 5.1.6 Trade effluent discharge from the proposed development into the public sewerage system shall comply with the requirements as stipulated in the Sewerage and Drainage (Trade Effluent) Regulations. Pre-treatment plant/facilities shall be installed to ensure the compliance of the trade effluent with the discharge requirements. The Successful Tenderer shall be responsible for the provision, operation and maintenance of the pre-treatment plant/ facilities. Please refer to COPSSW (2nd Ed.) Section 5 on requirements for trade effluent discharge into public sewer.

Effluent that is prohibited to be discharged into public sewer shall be disposed of in accordance with its waste classification e.g. toxic industrial waste, general waste, etc. For toxic industrial waste (TIW), the operator shall engage only NEA licensed TIW collector. After obtaining Temporary Occupation Permit (TOP) for the development, the operator shall apply to PUB for a Written Approval (WA) **before** discharging trade effluent into public sewers. The application for WA for discharge of trade effluent into the sewer can be made online at <https://www.gobusiness.gov.sg/licences>. For further information on matters relating to trade effluent discharge, please email to PUB_WA@pub.gov.sg.

- 5.1.7 For minimum clearances of utilities crossing and parallel to sewers, please refer to COPSSW (2nd Ed.) Section 1.2.4 c. In addition, pre- and post-construction CCTV inspection shall be carried out on the affected sewers and manholes. The CCTV reports and video shall be submitted to PUB(WRN). A WRc certified CCTV specialist contractor [https://www.pub.gov.sg/Documents/RegisteredCCTVContractor.pdf] shall be engaged to interpret, prepare, and certify CCTV reports in accordance with PUB(WRN)'s CCTV requirements.

Please note that the defect classification shall be in accordance with the latest edition of the WRc/WAA "Manual of Sewer Condition Classification".

- 5.1.8 No building/ structure/piling/retaining structure, etc. (whether temporary or permanent), except light weight and demountable elements (such as awnings, surface drains, compound boundary wall & fencing, planting troughs and link-way shelters), shall be sited over or across any sewers/pumping mains without the approval of PUB. All proposed structures shall be kept as far away from the existing sewers/pumping mains as possible and no nearer than the following minimum lateral clearances (also known as sewer/pumping main setback):

Sewer/Pumping Main Nominal Diameter(mm) D	Sewer Depth (m)	Minimum Distance (m)*
≤ 600	≤3	1.0
	>3 and ≤5	1.5
	>5	2.0
> 600 to 1500	All	0.5D + 2.5
>1500 to 2500		0.5D + 3
>2500		0.5D + 4
Deep Tunnel Sewerage System (DTSS)		0.5D + 6
* measured from the outer most edge of the structure, including footings and overhangs, to the centreline of the sewer pipe or DTSS.		

More details can be found in COPSSW (2nd Ed.) Sections 1.2.4 and 1.2.5.

- 5.1.9 No sewerage systems (including abandoned sewers/ pumping mains, any sensors, meters, equipment, instruments, etc. within manholes) shall be altered/interfered with without the approval from PUB(WRN). Where diversion/removal of any sewer/pumping main is required, it shall be carried out by the Successful Tenderer at his own cost & expense. Details of the diversion (pipe size, gradient, invert level, etc.) shall be submitted to PUB(WRN) for approval before the commencement of works. Successful Tenderer shall be responsible for seeking approval from all relevant authorities/land owners for the proposed sewerage works to be carried out beyond the development site. Such approval or consent from the land owner/authorities shall not include any conditions that require PUB to provide a letter of undertaking to divert the sewerage infrastructure in future. Successful Tenderer is to ensure that all sewerage and sanitary designs comply with PUB's Code of Practice.

All sewers and manholes shall be readily accessible at all times to PUB for inspection and maintenance.

- 5.1.10 The Successful Tenderer/Contractor/QP shall take every measure to protect all existing sewers, particularly large (≥900mm diameter) sewers, affected by or in close proximity of the proposed works.

- 5.1.11 Where there are any Specified Activities (including excavation/tunnelling/jacking/boreholes/installation of ERSS for

services diversions) within the public sewer corridor [i.e. 10m for sewer/main of diameter <900mm, 20m for sewer/main of diameter ≥ 900mm and 40m for DTSS tunnel] as stipulated in COPSSW (2nd Ed.) Section 2.1.2, a written approval from the Director, Water Reclamation Network of PUB should first be obtained before carrying out the specified activities at the site. QP shall submit the Application Form via the Protection of Water and Sewer Pipes (POWS) at <https://bpu.pub.gov.sg/pows> prior to any commencement of the specified activities. The applicant shall refer to COPSSW (2nd Ed.) Section 2 for the technical requirements on sewer protection.

The guideline on 'Prevention of Damage to Public Sewerage System' can be found in PUB website at https://www.pub.gov.sg/Documents/WRN_AdvisoryNotes.pdf.

The QP/contractor is required to submit a notification to our Network Management Branch (NMB) at least 7 days before the commencement of any works or specified activities within the public sewer corridor.

- 5.1.12 Successful Tenderer/ QP must check for the presence of public sewerage pipelines by referring to the Sewerage Information Plan (SIP) and through site investigation. The SIP is available on SLA's INLIS at <https://app1.sla.gov.sg/inlis/#/PUB/UP/Search>. Please note that the sewerage information in SIPs is indicative and for reference only. A thorough site investigation, including trial trenches, shall be carried out to determine the exact position and levels of the existing sewers.

For development control clearance for the proposed development/building/infrastructure/utility works and clearance certificates for the proposed sewerage/sanitary works, the QP shall prepare plans and submit applications via BCA Corenet e-submission system to PUB's Building Plan Division (BPD). More details on these applications can be found at <https://www.pub.gov.sg/Documents/Used%20Water%20Submission%20Procedures.pdf>.

- 5.1.13 For comments/requirements on Water Reclamation, please contact ANDREW JULIUS TIONARDY (email: Andrew_TIONARDY@pub.gov.sg), ZHANG XIN (email: ZHANG_XIN@PUB.GOV.SG), TAN KING SIANG (email: KOH_King_Siang@pub.gov.sg), from PUB(WRN), if you need any clarifications.

6.0 WATER SUPPLY NETWORK DEPARTMENT, PUBLIC UTILITIES BOARD (PUB)

6.1 General (Submission of Plans)

6.1.1 a. The design of the internal water reticulation system shall comply with the Public Utilities (Water Supply) Regulations, Singapore Standard 636 - Code of Practice for Water Services and all other relevant statutory requirements. The modes of water supply to be adopted are as attached, Mode of Water Supply.pdf.

b. Notwithstanding the above modes of supply, where water is essential for the operations of the proposed development, storage tanks of capacity equivalent to 1 day's water requirements shall be provided for the purpose of maintaining a continuous supply of water in the event of supply interruptions.

c. Where pumping system or storage tanks are required for the water services, a Professional Engineer must submit the Notification of WSI Works together with a set of drawings to Centralised Services Department. If all the fittings in the water service installation are receiving direct water supply from PUB watermain, then a Licensed Plumber shall be engaged to submit the Notification of WSI Works together with a set of drawings to Centralised Services Department prior to commencement of the WSI works.

d. PUB is presently supplying NEWater for direct non-potable purposes such as for cooling towers, industrial processes, general washing, landscaping, and other non-potable purposes. All new nondomestic premises, such as commercial and industrial developments, etc, including those existing premises undergoing addition/alteration works where it is applicable to use NEWater, are therefore required to provide a dedicated NEWater pipe system now to facilitate the supply of NEWater when it becomes available in future. Provision shall also be made for a NEWater storage tank to be installed within the premises with its inlet not higher than 15 m above mean sea level and a capacity equivalent to the 1 day's non-potable water requirement. There shall be no cross connection between the PUB water and NEWater supply pipelines. Developers / consultants may consult PUB during the pre-planning stage on the detailed requirements. Please refer to attachment **Mode of Water Supply.pdf**

6.1.2 a. Water conservation measures as stipulated in the Public Utilities (Water Supply) Regulations and SS 636 – Code of Practice for Water Services shall be adopted.

b. Water fittings (e.g. pipes, pipe fittings, valves, water storage tanks, taps and mixers (basin, sink/bib, shower), dual-flush low capacity flushing cisterns (LCFCs), flush valves, materials in contact with water, etc.) to be used in the proposed development

shall be tested for compliance with the standards and requirements as stipulated in PUB's Stipulation of Standards & Requirements for Water Fittings (PUB S&R) which is available for downloading from PUB's website at <https://www.pub.gov.sg/compliance/watersupplyservices/standards>. Additionally, water fittings such as taps and mixers, LCFCs and flush valves shall be registered under the PUB's Mandatory Water Efficiency Labelling Scheme (MWELS).

c. Only water fittings (i.e. taps and mixers, LCFCs, WC flush valves and urinal flush valves/waterless urinals) that are of at least 2-tick rating under PUB's MWELS shall be installed. The proposed development should obtain the Water Efficient Building (Basic) Certification by PUB.

d. Unless with written permission by PUB, fixed or movable sprinklers are not allowed to be used to deliver any form of water supplied by PUB, including potable water, NEWater, raw water, effluent water, industrial water for watering any garden, lawn or other land including commercial market gardens, commercial nurseries, sports grounds, golf courses, race courses, public and club tennis courts. Where possible, developers are encouraged to use drought tolerant plants.

e. For non-domestic developments with estimated water requirements of at least 5,000 m³/month, and government developments with estimated water requirements at least 3,000 m³/month, private water meters in accordance to PUB's requirements to monitor water usage in the key areas as stipulated in the Fourth Schedule of the Public Utilities (Water Supply) Regulations shall be installed.

f. Wherever possible, alternate sources of water (such as industrial water, high grade industrial water, sea water, recycled water, rainwater and AHU condensate etc) should be used to meet the non-potable water requirements of the proposed development.

g. Wherever possible, water recycling system should be set up to reclaim water for reuse for non-potable purposes such as production process, toilet flushing, irrigation and as cooling tower make up water, etc.

h. Use non-water-cooled systems (such as air-cooled, refrigerant-cooled, etc) for cooling purposes wherever possible.

i. Cooling towers should achieve minimum 7 and 10 Cycles of Concentration (COC) using potable water and NEWater respectively.

6.1.3 For North BU: Please contact PUB officer Mr Chin Wei Kin or Mr Murray Seah at Tel. 63809832. Email to: Chin_wei_khin@pub.gov.sg or Murray_seah@pub.gov.sg.

6.2 Particular Requirement (Protection of Water Mains)

6.2.1 The Water Supply Plan shows the approximate positions of our existing and proposed water main of 100 mm diameter and above in the vicinity of the proposed site. Smaller submain to customers' premises / properties are not indicated. There is a 300mm diameter watermain in the vicinity of the land parcel. Please determine by means of trial holes the exact alignment and levels of all existing water pipe during the design stage and let PUB(WSN) know whether they are affected by the proposed works so that we can advise whether diversion is required. If diversion is required for water pipes of 300 mm dia and below, consultation must be made at least 6 months ahead and the cost of diversion of any water pipes shall be borne by the developer. Diversion of our existing water pipes of 500 mm and above, being our vital water pipes should be avoided unless absolutely necessary. If diversion is unavoidable, please be advised to engage a qualified pipe laying contractor with CR07 work head to carry out the diversion of the affected existing watermains.

6.2.2 Appended a copy of PUB WSN Advisory-Prevention of Damage to Watermains which provides the details on the protection and submission requirements for applications to seek PUB's approval for proposed works carried out in the vicinity of our water mains. This submission shall be made via our online submission portal, Protection of Water and Sewer pipes (POWS) at <https://bpu.pub.gov.sg/pows>. The latest Water Supply Plan is available on SLA's INLIS portal at <https://www.sla.gov.sg/INLIS>.

Please refer to attachment PUB WSN Advisory-Prevention of Damage to Watermains July 2020.pdf and PUB_22_2013_Site 01WSP_Landscape_A3.pdf

6.2.3 For Comments/requirements on Water Supply please contact WANG QIONG (email: WANG_QIONG@PUB.GOV.SG), TAN KE HAN, REGINA (email: REGINA_TAN@PUB.GOV.SG), ANG LIEW KWEE (email: ANG_LIEW_KWEE@PUB.GOV.SG), from PUB(WSN), if you need any clarifications.

7.0 NATIONAL PARKS BOARD (NPARKS)

The Successful Tenderer shall adhere to all NParks' general requirements below:

7.1 If the Successful Tenderer intends to carry out any regulated activities under the Parks and Trees Act and its Regulations that arise out of or pursuant to the use of the Land Parcel, it must seek the Commissioner of Parks and Recreation's ("Commissioner") approval before doing so.

- i. Before seeking the Commissioner's approval, the Successful Tenderer is required to consult the Commissioner, through the Greenery and Development Planning Branch at NPARKS_GDP@nparks.gov.sg at the planning and design stage of the development works concerning the Land Parcel.
- ii. The Successful Tenderer is required to present the following at the consultation:
 - a) A survey plan (dated not more than 2 years from the date of this letter) of the site and its peripheral roads, at a scale of at least 1:500. The plan must also clearly indicate the location, species, height and girth of trees at the Land Parcel; and
 - b) All other relevant additional information such as plans on construction hoardings.

7.2 The Successful Tenderer shall note and adhere to the following requirements in respect of the green verge(s) / road table(s) / green buffer(s) surrounding the Land Parcel. Further details of these requirements can be found in NParks' "Guidelines on Greenery Provision and Tree Conservation for Developments". It is available for downloading at <https://www.nparks.gov.sg/partner-us/development-plan-submission/guidelines-on-greenery-provision-and-tree-conservation-for-developments>.

- iii. The proposed development on the Land Parcel shall not encroach on the green verge(s) surrounding the Land Parcel, nor shall it affect any roadside table surrounding the Land Parcel.
- iv. The Successful Tenderer shall ensure that the green verge(s) abutting the Land Parcel are not to be affected by the development and use of the Land Parcel, including without limitation:
 - a) Ensuring that the construction or provision of any vehicular ingress/egress, acceleration/deceleration/storage/ vehicular lanes, services access, bus stops, and any structure required under statute to be erected to divert or reconstruct services or road features/elements, shall not affect the trees and plants located in the green verge(s);
 - b) Ensuring that the green verge is kept clear and shall be free from obstructions and encumbrances at all times, including without limitation bicycles parked on the green verge or items left on the green verge;

- c) Ensuring that vehicular and service access points, pick-up/drop-off points, taxi lay-bys, loading/unloading bays and fire engine hard-standing areas are to be located within the Land Parcel and not within the green verge(s); and
 - d) Ensuring that there is no change of soil level to the green verge(s) without prior approval from the Commissioner.
- v. The Successful Tenderer must also ensure that the development on the Land Parcel comply with the requirements for green buffers, including without limitation the following:
- a) The green buffers must be free from any encroachment above ground, and/or any structures or services are to be recessed to at least 2-metre below ground level and are not to slope with gradients steeper than 1:2.5; and
 - b) The width of the green verge shall be in accordance to LTA's standard road code for that category of road or aligned with the existing green verge along the road, whichever is wider.

If there is any indication that the works at the Land Parcels will affect the green verge(s) / road table(s) / green buffer(s) in any way whatsoever, the Successful Tenderer **must** seek the Commissioner's approval as set out in paragraph 7.1, as well as the approval of the other applicable authorities under the relevant legislation, for the conduct of the works that will affect the green verge(s) / roadside table(s).

7.3 Development works are to be confined within the Land Parcel and working boundaries. There must not be any illegal dumping or storing of construction materials beyond the approved boundaries. The proposed Development shall not encroach on the road reserve line and affect any roadside table.

7.4 The response as set out here is limited to specific technical considerations under our purview and is based on the information provided to us. In the event that there are new information or circumstances arising, such as additional requirements by other agencies (e.g. road widening, slip roads, bus stops, drain realignment, proposed access), there may be a change in our position. In such an event, the successful tenderer will be required to re-submit the updated plans and information for our re-assessment.

7.5 In order to preserve the health of the tree(s) on the green verge(s) surrounding the GLS Site, the Successful Tenderer shall consult NParks through its Streetscape division Ms Siti at Siti_Zaharah_Raman@nparks.gov.sg on the tree protection criteria for roadside trees before any commencement of works.

8.0 NATIONAL ENVIRONMENT AGENCY (NEA)

8.1 General

8.1.1 The quantities of flammable materials to be handled, used and stored at the proposed development shall be capped at the level so that they do not pose any unacceptable risk arising from fire and explosion incidents to people in the area. i.e. the safety criteria stipulated in the Guidelines for Quantitative Risk Assessment (QRA) will have to be duly complied with.

8.1.2 Sewage, used water and trade effluent from the proposed development shall be discharged into the public sewer in accordance to the conditions and requirements imposed by PUB. Sewage and wastewater shall not be discharged into any storm water drain or onto any land.

8.1.3 Refuse and solid wastes from the proposed development shall be collected and kept in a proper refuse bin centre before disposal by a licensed general waste collector. The refuse bin centre should comply with the provisions and requirements stated in the Code of Practice on Environmental Health.

8.1.4 All the applicable requirements and provisions of the Singapore Standard on Code of Practice for Pollution Control (i.e. SS593:2013), the Code of Practice on Environmental Health, the Environmental Protection and Management Act 1999, the Environmental Public Health Act 1987, the Radiation Protection Act 2007, the Energy Conservation Act 2012 and their Regulations, shall be complied with.

8.2 Particular Requirement

8.2.1 The Land Parcel is not affected any building height constraint (BHC) requirement imposed by NEA at the present moment. The QP/Successful Tender shall pre-consult NEA Development Control and Licensing Division for the prevailing BHC requirements before the proposed industrial development is finalized. The proposed industrial developments will have to comply with the BHC requirement.

9.0 MINISTRY OF DEFENCE (MINDEF)

- 9.1** The Successful Tenderer shall consult DSTA through URA - Development Control Group when the detailed development plans are available.

10.0 FIRE SAFETY DEPARTMENT (FSD) SINGAPORE CIVIL DEFENCE FORCE (SCDF)

- 10.1** The Successful Tender and building owner/management/user (named as the Proposer) are required to comply with the Fire Safety Act and Regulations, the prevailing "Code of Practice for Fire Safety Precautions in Buildings" (Fire Code), the relevant Codes of Practices & Guidelines, and SCDF Circulars. These general fire safety requirements are also applicable to any proposed temporary usage or installation. In addition, the following conditions will apply where applicable:

- (a) To consult SCDF on the specific design requirements if the premises is to store, handle, use, transport or import of hazardous materials, including petrol station or CNG station which may have impact within the premises or on the surrounding existing or new developments. SCDF may impose the Quantitative Risk Assessment study (QRA) and/or additional Fire Safety requirements or disapprove such proposal if there is possible impact within the premises or on the surrounding developments.
- (b) To consult SCDF on any specific developments or structures having impact on SCDF operations e.g. deep basement works (which are more than 4 storey or more than 24 metres in depth), tunnel or any other special developments, etc. SCDF may impose additional Fire Safety requirements.
- (c) The Proposer shall ensure that their proposal will not affect existing other surrounding developments (neighbouring) such as their exit provision, sidelane / backlane, window openings [the unprotected openings requirements, i.e. the Proposer and their Qualified Person (QP) shall strictly observe these existing conditions and provide more setback if necessary to prevent fire spread] and fire engine accessway etc. The Proposer and their QP shall consult SCDF directly for those new proposed building structures to be sited near to common boundary line, as additional Fire Safety requirements may be imposed.
- (d) The Proposer shall ensure that the boundary line of petroleum service stations, either be an existing or going-to-build petrol station, shall be at least 50m from any residential building, or 90m from any place of public assembly.
- (e) For existing premises, the Proposer may wish to note that the SCDF's Plan Approval and Fire Safety Certificate (FSC) will have to be

obtained if there is any change in use or involving any alteration / addition works. The Proposer shall ensure that the existing premises, including existing layouts and usages, have obtained the necessary Approvals from SCDF.

- (f) For lease extension, the Proposer is urged to engage their own QP in assisting them to obtain the SCDF's Plan Approval and Fire Safety Certificate (basing on the prevailing Fire Code) if it is not done so for the entire buildings/premises. The fire safety provisions, and mitigation measures are essential for all buildings; it is particularly true for religious premises where congregation of general public is possible, and for premises with similar usage as Nursing Home & Childcare Centre where the occupants are vulnerable to emergency situations. (The premises/building owner, such as HDB, SLA and JTC etc shall engage the operator and see how to address the shared concerns before considering granting their lease extension application).
- (g) For applications of non-exclusive and limited religious use, the Proposer shall liaise directly with the building owner/management to ensure their proposed usage and number of occupants for that particular room / floor does not exceed the limit as originally designed & approved for. The Proposer shall also provide the full details to the building owner/management so that the Emergency Response Plan (ERP) can be updated accordingly.
- (h) For new road development (including road widening, realignment, road expunction & interim measures etc), it shall not affect or encroach upon any part of existing development compounds. For public fire hydrant, do liaise with PUB directly for any proposed relocation or erection of new fire hydrant.
- (i) For drainage system development (including widening, realignment, extension & interim measures etc), it shall not affect or encroach upon any part of existing development compounds.

10.2 Before making any commitment (purchase/occupation or rental/lease etc) or commencement of any proposal, the Proposer shall engage Qualified Person (QP) to carry out a feasibility study to ensure the entire premises and new proposals are able to comply with all the Fire Safety requirements (the current Fire Code & other relevant standards/guidelines/circulars). The feasibility study shall also ensure those existing fire safety provisions of surrounding developments are not affected. The QP will then assist them to obtain the SCDF's Plan Approval and the Fire Safety Certificate (FSC). If the Proposer has any doubts or queries regarding the fire safety requirements or plan approval procedures, he shall visit the SCDF at SCDF Headquarters, 91 Ubi Ave 4, for a walk-in consultation.

10.3 For projects involving petroleum and flammable materials (P&FM) such as Chemical Plants, Petroleum Refineries and

Buildings/Structures used for handling & storage of bulk P&FM , the Proposer and their QP shall provide the overall layout details to SCDF at SCDF Headquarters at 91 Ubi Ave 4, for further comments, as additional fire safety provisions and mitigation measures will be imposed. The Proposer and their QP may wish to consult **MAJ Bryan Ng** (Email: Bryan_NG@scdf.gov.sg) for a consultation session.

11.0 ELECTRICITY

11.1 General

11.1.1 The Successful Tenderer shall liaise with the Transmission Licensee authorised under the latest Electricity Act for the electricity supply and any other electrical provisions required as a result of the proposed development.

11.2 Particular Requirement

11.2.1 Based on information given by SP PowerGrid Ltd (“PowerGrid”), there are underground electricity cables in the vicinity of the Land Parcel.

11.2.2 If the Successful Tenderer is to carry out earthworks in the vicinity of the electricity cables, their contractors shall engage the services of licensed cable detention workers to carry out the cable detention work prior to the commencement of earthworks. All necessary precautionary measures must be taken to prevent damaging PowerGrid’s cables at work site.

11.2.3 The Successful Tenderer / contractors can contact Earthworks Surveillance & Patrolling Section’s Mr Benny Quek, Principal Engineer at Tel no. 69165150 or email: quekgh@spgroup.com.sg regarding cable damage preventive measures. The contractors are required to submit notices to SP PowerGrid at least 7 days prior to earthworks (including trial trenches) in the vicinity of high voltage electricity cables under the provisions of the Electricity Act.

11.2.4 The Successful Tenderer / contractors are advised to acquire a set of drawings for the electricity cables around the proposed work area. For further details on cable plans requests, please contact Mapping & Earthworks Administration Section at Tel No. 69165022.

11.2.5 For proposed earthworks which are likely to affect the cables and need cable diversion/protection/suspension etc, after the cable detention work is done, the Successful Tenderer / contractors can request for diversion via SP e-Business Portal located at <https://ebiz.spgroup.com.sg/index.html> or contact the following officers:

- i. For 22kV and below cables, please contact Mr Jay Tan Wei Jie,

Senior Engineer of Distribution Network Central Section at Tel No. 69166406 or email: tanweijie@spgroup.com.sg

- ii. For 66kV cables, please contact Mr Sanjivi Reddy s/o Velusamy, Principal Engineer of Regional Network East 66kV Section at Tel No. 69165256 or email: sanjivirsv@spgroup.com.sg
- iii. For 230kV and above cables, please contact Mr Mohamed Shariff Bin Mydin A S, Senior Technical Officer of Extra High Voltage Network Section at Tel No. 69165483 or email: mohamedshariffmydin@spgroup.com.sg
- iv. For cable tunnels, please contact Mr Kua Siang Meng, Principal Engineer (Facilities Management Section) at Tel No. 69166008 or email: kuasiangmeng@spgroup.com.sg

11.2.6 The Successful Tenderer/ contractors shall notify SP PowerGrid 6 months before the commencement of earthworks affecting distribution cables and 24 months if the work involves transmission cables (66kV and above). The cost of cable diversion / protection / suspension incurred by SP PowerGrid shall be borne by the requesting party. The Successful Tenderer/ contractors shall not commence the proposed earthworks until the affected cables are diverted/protected/suspended.

11.2.7 Please consult Ms Seah Li Peng, Senior Engineer of Distribution Planning Section at Tel No. 69165524 or email: seahlipeng@spgroup.com.sg if you need information on substation and connection requirement, etc. for your proposal. For matters on substations to make way for redevelopment works, please contact Mr Tan Juay Hwee, Senior Technical Officer of Distribution Planning Section at Tel No. 69168385 or email: tanjuayhwee@spgroup.com.sg

11.2.8 If further clarification on cable damage prevention measures is required, please contact Mr Benny Quek, Principal Engineer of Earthworks Surveillance & Patrolling Section at Tel no. 69165150 or email: quekgh@spgroup.com.sg

11.2.9 Please note that PowerGrid's reply is limited to specific technical considerations under our purview only. For applications involving land use, you are advised to obtain clearance from URA, who will decide whether to grant planning approval taking into account planning considerations.

11.2.10 Based on information given by Energy Market Authority (EMA), the current approved load (subjected to verification by the LEW) is 276kVA and it is near the maximum allowable load of 280kVA without provision of a substation. The assessment was based on network condition (Mar 2021), and is subject to the eventual location of intake point and the network condition at the point when SPPG

receives the supply application. The existing connection shall be amalgamated and take supply from the new intake point. As the Distribution network is dynamic and availability of supply is on first-come-first-serve basis, Successful Tenderer is advised to consult SPPG/Distribution Planning in advance to ensure that the supply connection to the proposed connections can be supported in a timely manner.

- 11.2.11 For the purpose of Electric Vehicle (EV) charger, the public EV chargers to be installed has to comply with TR25-2020 (Technical Reference for electric vehicle charging system).

12.0 TELECOMMUNICATION

- 12.1** The Successful Tenderer shall liaise with the Telecommunication System Licensee under the latest Telecommunication Act, for the telecommunication supply to the proposed development.
- 12.2** The Successful Tenderer shall provide all facilities for telecommunication services, such as MDF room, Telecom riser ducts, lead-in pipes and manholes etc, within the Land Parcel. All Telecom facilities shall be provided according to the Info-communication Development Authority (IDA) of Singapore “Code of Practice for Info- communications Facilities in Buildings”.
- 12.3** The Successful Tenderer is required to consult with and obtain the relevant plant maps or information from the relevant Telecommunication System Licensees (e.g. Singapore Telecommunications Ltd, Starhub Pte Ltd, Starhub Cable Vision Ltd, SP Telecommunications Pte Ltd, etc) and the Facilities-Based Telecommunication Licensees early during the planning stage of the proposed development, on the location and diversion of existing Telecoms & Broadband services.
- 12.4** The Successful Tenderer may be required to compensate the affected telecommunication licensees for the removal or relocation cost, if they require the telecommunication licensees to remove or relocate their existing installation or plant.

13.0 GAS

13.1 General

- 13.1.1 The Successful Tenderer shall liaise with the PowerGas Limited (‘PowerGas’), regarding the requirements for Gas supply to the Land Parcel.
- 13.1.2 The Successful Tenderer shall submit a report to SPPG (Gas Network Management), upon detecting any gas mains of which

PowerGas have no records in the Land Parcel.

- 13.1.3 The Successful Tenderer is required to take all precautionary measures to prevent damaging gas pipes at the worksite and to contact EMCP Helpline for advice on gas pipe damage prevention.
- 13.1.4 The Successful tenderer shall submit written notices to PowerGas if earthworks have to be carried out in the vicinity of gas pipes at least seven (7) days prior to commencing works. Surveyed drawings have to be obtained if earthworks are within the vicinity of Gas Transmission Pipeline (GTP). This is mandatory and the Successful Tenderer has to evaluate if there is any GTP within the work area.
- 13.1.5 If diversion is required, it may take between a few weeks to several months from the date of receipt of payment. Commencement of works is subjected to road opening approval given by the relevant authorities. The Successful Tenderer is advised to avoid the need for diversion of GTP, where possible, as it requires a lot more resource and time.

13.2 Particular Requirement

- 13.2.1 Based on information given by PowerGas, there are existing gas pipelines near the vicinity of the Land Parcel. Tenderers are required to acquire a set of drawings from PowerGas to determine the locations of the gas pipelines around the proposed work area.
- 13.2.2 The successful tenderer can email gasenquiry@spgroup.com.sg for further enquiries pertaining to the existing gas distribution pipelines. A copy of "Requirement for Distribution Gas Mains Diversion Works" has been enclosed for the successful tenderer's information.

14.0 Singapore Land Authority

14.1 Particular Requirement

- 14.1.1 Successful Tender/JTC is to liaise with SLA on Land Betterment Charge (LBC) for any approved uses and/or GPR/GFA which exceed the use/GPR title restrictions;
- 14.1.2 If the successful tenderer is required to divert any infrastructure/ existing services within the sale site, any temporary replacement infrastructure / services should be located within the site boundary. The successful tenderer shall work with the relevant agencies to provide the location/alignment of the diverted services;
- 14.1.3 All utility connections and any diversion of services, if required, are to be kept entirely within the road/drainage reserves. No State land is to be affected;

14.1.4 The Land Parcel's boundary is to abut all road reserve lines, drainage reserve lines, adjacent land ownerships, and adjacent land uses, such that no remnant land is created.

14.1.5 No site is to be landlocked.