



PART C3: WORKS INFORMATION

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C3.1 EMPLOYER'S WORKS INFORMATION

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SECTION 1

1 DESCRIPTION OF THE *WORKS*

1.1. Executive overview

Most of the air conditioning units were replaced in the financial year 2023/24. Some of the air conditioning units are due for replacement, this is caused by the working conditions or environments where they are.

The air conditioners are split wall units, and therefore some air conditioners have been reported by the service provider who is appointed to do service and maintenance of air conditioners that they cannot be repairable due to their faulty condition/damage of compressors that cannot be repaired. Additionally, the current units are affected by the coastal air which causes the outside mounted section of the air conditioner to corrode and causes the failure of many working parts.

The Port of East London has been experiencing faults in the air conditioning units and air conditioners that are being stolen in some of the areas, this leaves the operational areas without air conditioning units, which creates uncomfortable working conditions.

It becomes uncomfortable and unbearable to work in the offices and boardroom without the air conditioner as there will not be enough ventilation.

The proposed air conditioner units (inverter) to be purchased provide superior energy efficiency, lower noise levels, and consistent temperature control compared to non-inverter units. This will align to ISO 50001 requirements as it ensures energy performance.

Some air conditioners will be new installations.

The *works* that the *Contractor* is to perform involve:

- removal of old air conditioners,
- Supply, delivery, installation and testing of air conditioners.

1.2. Employer's objectives

The objective is to procure new air conditioners to replace those that are not working and install new air conditioners where there are no air conditioners to comfortable and safe work with enough ventilation environment in the offices and boardroom and including the gymnasium.

2. SECTION 2 ENGINEERING AND CONTRACTORS DESIGN

There are no detailed designs to be performed in the project however the appointed *Contractor* will have to perform works strictly in accordance with:

2.1.1. Standards adherence

The bidder shall be aware that the standards to be adhered to are not limited to the listed below ones, should the bidder be the successful bidder.

2.1.2. Relevant standards and SANS standards

- SANS 10111 (Latest): Engineering drawing
- The Occupational Health and Safety Act and Regulations (Act no. 85 of 1993 as amended)
- Any municipal by-laws and regulations
- The local authority requirements
- The National Building Regulations – SANS 10400
- SANS 10142 – Code of Practice for the wiring of Premises
- SABS 0147 – Code of Practice for Refrigeration & Air-conditioning Installations
- SABS 0173 – Code of Practice for the installation, testing & balancing of air
- SABS 1091 – National colour standards for paint
- BS 587 – Specification for motor starters and controllers

3. SECTION 3

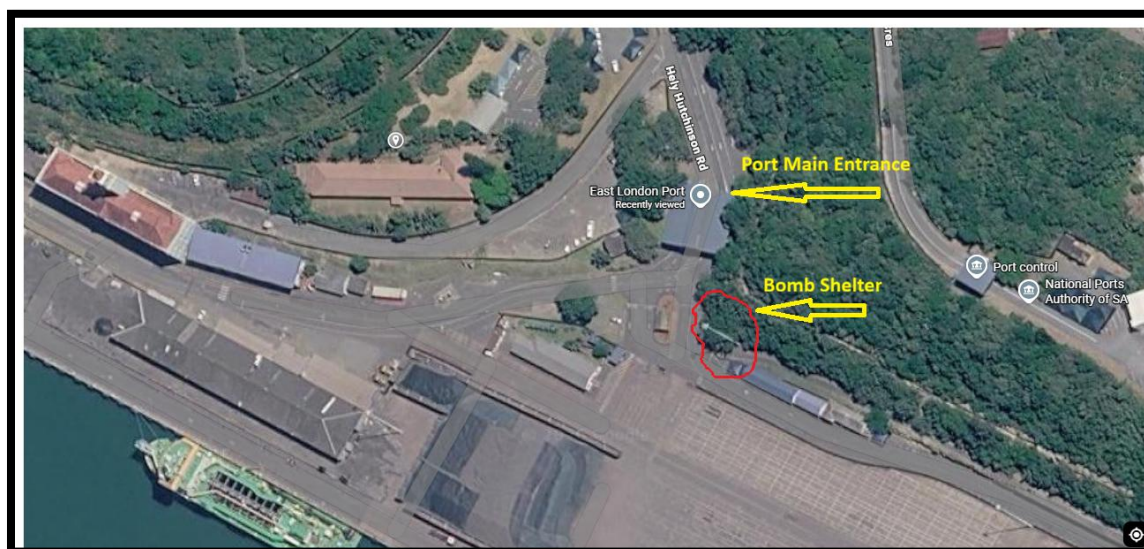
3.1. SCOPE OF WORKS

Old/Existing UPS

The scope of works includes the removal of the existing air conditioners from the stipulated areas. The removal of the existing air conditioners to be conducted by the appointed *Contractor*.

Building Name	Air Conditioners
Port Control	Drawing office (Thina & Zuki's Office)
Sub-total	2
Port Admin	Boardroom
Sub-total	1
Marine	Computer room
Sub-total	1
EMD	Server room
Sub-total	1
SAPS	- Server room (2 aircons) - Cargo Office - SAPS office G15
Sub Total	4
Total	9

The *Contractor* to transport and place the existing air-conditioner sets at the Bomb shelter after removal (see aerial view below).



• **New Air Conditioner Units**

(a) 5 x New 9000 BTU Midwall Split aircon	(b) 3 x New 12000BTU Console Units	(c) 6 x New 12 000 BTU Midwall Split aircon units	(d) 3 x New 12000 BTU Ceiling cassette	(e) 1 x New 18000 BTU Ceiling Cassette aircon unit	(f) 1 x New 24000 BTU Ceiling Cassette aircon unit	(g) 2 x New 24000 BTU Midwall Split aircon unit
Supply, delivery, installation and testing of 9000 BTU (AR09BSHGAWK/FA) OR Similar midwall split unit air-conditioner at: 1. Two (2) x aircon – Port Control Drawing Office 2. One (1) x aircon - Marine Computer room	Supply, delivery, installation and testing of 12000 BTU console unit at: 1. One (1) x aircon – SAPS Office G14 2. One (1) x aircon – SAPS Office G13 3. One (1) x aircon – SAPS Office G01	Supply, delivery, installation and testing of 12000BTU (AR40F12C0AG/FA) OR Similar midwall Split air conditioner units at: 1. Two (2) x aircon – EMD Server Room 2. One (1) x aircon – SAPS Office G10 3. One (1) x aircon – SAPS Office 105 4. One (1) x aircon – SAPS Office 109	Supply, delivery, installation and testing of 12000BTU (AC035NNNDEH/AF) OR Similar Ceiling cassette units at: 1. One (1) x aircon- SAPS Cargo Office 2. One (1) x aircon-SAPS Office G12 3. One (1) x aircon- SAPS Office 104	Supply, delivery, installation and testing of 18000 BTU (AC052RNNDKG/EU) OR Similar Ceiling Cassette air conditioner at: One (1) x aircon – Admin Boardroom	Supply, delivery, installation and testing of 24000 BTU (AC071NN4DEH/AF) OR Similar Ceiling Cassette air conditioner at: 1. One (1) x aircon- SAPS Service Centre	Supply, delivery, installation and testing of 24000 BTU (AR24BSHGAWK/FA) OR Similar midwall Split air conditioner units at: Two (2) x aircons - Customs building (Gym)

3. One (1) x aircon - SAPS Server Room		5. One (1) x aircon – SAPS Office 110				
4. One (1) x aircon – SAPS Office G15						

The *Contractor* to perform/provide the following:

Product Specification

Product	Specification
9000BTU Mid-wall split- inverter (AR09BSHGAWK/FA) OR Similar	Remote Control, 5year warranty on compressor,12-month warranty on Unit, A-rated energy efficiency, low noise, voltage 220-240V, 50Hz.
12000BTU Mid-wall split inverter (AR40F12C0AG/FA) OR Similar	Remote Control, 5year warranty on compressor,12-month warranty on Unit, A-rated energy efficiency, low noise, voltage: 220-240V, 50Hz.
12000 BTU Ceiling cassette inverter (AC035NNNDEH/AF) OR Similar	Remote Control, 5year warranty on compressor,12-month warranty on Unit, A-rated energy efficiency, low noise, voltage: 220-240V, 50Hz.
18000 BTU Ceiling Cassette inverter (AC052RNNDKG/EU)_OR Similar	Remote Control, 5year warranty on compressor,12-month warranty on Unit, A-rated energy efficiency, low noise, voltage: 220-240V, 50Hz.
24000BTU Ceiling Cassette inverter (AC071NN4DEH/AF) OR Similar	Remote Control, 5year warranty on compressor, 12-month warranty on Unit, A rated energy efficiency, low noise, voltage: 220-240V, 50Hz.
24000BTU Midwall Split inverter (AR24BSHGAWK/FA) OR Similar	Remote Control, 5year warranty on compressor, 12-month warranty on Unit, A rated energy efficiency, low noise, voltage: 220-240V, 50Hz.
12000BTU Console Units	Remote Control, 5year warranty on compressor, 12-month warranty on Unit, A rated energy efficiency, low noise, voltage: 220-240V, 50Hz.

3.2. TECHNICAL REQUIREMENTS

3.2.1. General

- The Air conditioners which are of split type design shall be equipped with cooling and heating options.
- The air conditioners shall be a R410A/R32 refrigerant, TNPA shall not accept air conditioner using R22 refrigerant.
- The air conditioners shall generally be in accordance with SANS 1125 with sound levels not exceeding the values specified.
- Room air side shall be equipped with a suitable and easily accessible filter, variable fan speed, adjustable directional air discharge grille, adjustable outside our intake damper, control thermostat, electric heating elements (if not specified as reverse cycle heating) (where applicable), drain pan and drain piping, cooling coil, controls and control panel and complete wiring, including interlocking with outdoor unit.
- The outdoor unit shall contain the matching compressor unit, air-cooled condenser, condenser fan within a waterproof painted and corrosion protected casing.

- The indoor/outdoor units shall be interconnected with refrigerant piping (separately insulated suction and delivery piping for reverse cycle units), electric wiring and interlocking control cabling.
- Where applicable provision shall be made in the unit design to re-evaporate condensate from the condenser.
- Provision shall however be made in all cases for the drainage of excessive condensate to the nearest building drain (where practical) by means PVC tubing not less than 18mm diameter.
- All panels shall be neat fitting with hardwearing exposed surfaces of baked enamel or equal finish.
- TNPA reserves the right to change the location of the units.

3.2.2. Electrical

- Electrical interlocking shall be provided to ensure that compressor cannot run without both indoor and outdoor fans running, electric heating elements can only be switched on if the indoor fan is running, it shall not be possible to switch cooling and heating on simultaneously (where applicable)
- All conduit and draw boxes shall be installed flush in the walls or partitions.
- Surface mounted wiring in trunking or the like will only be accepted if specified as such.
- No joints will be allowed in the control wiring.
- Appointed contractor to provide all the suitable components that will be needed for electrical installation of air-conditioning units (i.e Plugs, Circuit breakers, isolators etc.)

3.2.3. Cooling and heating

- Unless otherwise specified in the air conditioners in the cooling mode shall be rated at 35°C ambient dry bulb air temperature on to the condenser, 27°C dry bulb and 19°C wet bulb air entering conditions to evaporator, all at sea level with the cooling capacities specified at these conditions.

3.2.4. Mechanical parts

- Where visible and/or exposed to the weather or possible mechanical damage refrigerant piping and cabling shall be run inside trunking, neatly erected.

Remote control

- AC units shall be controlled via remote control.
- Remote controls shall be mounted at eye level in the positions indicated.

3.2.5. Refrigeration and Piping

- Split type units shall consist of a direct expansion indoor fan coil unit and a separate (remote) externally located air-cooled condensing unit.

- Suction lines shall be insulated. Suction and delivering lines may not be insulated grouped together as for a single line. Vapour barrier integrity will be critical to prevent dripping.
- Gas piping (insulated as specified) and wiring shall be installed in trunking throughout for protection, painted as specified where exposed or visible.
- Refrigerant piping shall be sized and fitted in accordance with the manufacturer's requirements.

3.2.6. Coastal Applications

- All steel parts exposed to the atmosphere or to ambient air (including outdoor unit air path) shall be either hot dip galvanised or electroplated before painting.
- Outdoor unit coil shall be constructed of copper-to-copper tubing and fins. Electric terminals and connections shall be corrosion protected.
- The complete compressor unit internal parts fan motors, fan scroll and internal fan wheels shall similarly be sprayed with a continuous layer of rust preventive (Blue chemo).

3.2.7. Mounting

- Outdoor units shall be installed on galvanised steel brackets, properly braced and fixed.
- The indoor fan coil unit shall be wall mounted as agreed with TNPA personnel.

3.2.8. Material and Workmanship

- All material to perform the works shall be provided by the appointed *Contractor*.
- All work is to be executed with materials of the best quality and in the most substantial manner under the inspection and to the entire satisfaction of TNPA.
- All apparatus, components parts, fittings and materials supplied and/or installed whether especially specified herein or not shall conform in respect of quality, manufacture, tests, and performance with the requirements of the appropriate current South African (SANS) or British Standard Specifications (BS).
- Material and workmanship must be replaced or rectified as the case may be, to the satisfaction of TNPA.
- No second-hand equipment of any description may be offered for supply or installation.
- Any fitting or item of equipment not specifically mentioned but obviously necessary for the successful completion of the installation is to be included so as to form a complete working installation.
- Clean wall and ensure all holes are closed with appropriate filling material or tiles are replaced where required.
- Where aircons are replaced or installed in a ceiling, replace ceiling sections accordingly to ensure clean finish of all work.

- **Low voltage cable**

- Low voltage cables to be PVC/SWA/PVC ECC type with copper conductors which comply with the requirements of SANS 1507. Main cables are supplied with earthing conductor.
- The supply, installation, termination and jointing of cables comply with SANS 10198 and with the requirements of these documents.
- Earthing shall comply with the requirements of the Supply Authority and SANS 10142-1 as amended.
- Cables to be labelled at all terminations with suitable and approved labels (stainless steel Dymo-tape or Irvone white ivorene label written in black) indicating:
 - i. Origin and Destination; (e.g., from Main DB to DB – 1)
 - ii. Cable size and no. of cores; (e.g., 50mm² 4-core)
 - iii. Conductor type. (E.g., PVC/SWA/PVC Copper ECC cable)

- The final cable routes to be determined on site before installation commences.
- All cable glands shall be of the CCG or Pratley type IP 65 rated and conform to SANS 1213. All cables have cable glands at the termination points.

- **Conduit and fittings**

Surface Mounted in Visible / Exposed Areas

Contractor is to install PVC trunking in all AC visible gas and electrical wiring and make the installation good. Trunking jointing to be done with couplings or approved jointing accessories for conduit jointing and electrical *Contractor* is to make sure that the jointing or connection of trunking is permanently fixed.

4. **COMPLETION, TESTING AND CORRECTION OF DEFECTS**

The work to be done by the Completion Date stipulated:

- On or before the Completion Date the *Contractor* shall have done everything required to provide the works including the work listed as per the scope of work which is to be done before the *Completion Date* and in any case before the dates stated. For testing, the Contractor shall be required to do a test on site to ensure the air conditioners are working.
- The *Employer* cannot certify completion until all the work listed on the scope of work has been done and is also free of defects, which would have, in his/her opinion, prevented the *Employer* from using the works and others from doing their work.
- All remedial work regarding the closing of holes and making right any areas affected by the works will be done by the *Contractor* and approved by the Civil Supervisor before sign-off for the works.

Works' completion

Item of work	To be completed by
Complete installation in working order	Date agreed upon on accepted final project plan
Certificate of compliance	After the defects period where applicable
Handover	After all defects have been concluded

Start-up procedures required to put the works into operation:

- The *Contractor* shall be responsible to ensure that the entire installation is in a safe working condition such that each unit is ready for immediate use by employees.
- Operational manuals must be provided after completion.

4.1. Take over procedures.

- The *Contractor* shall ensure that only after he/she has tested the installation and deemed it safe and issued a certificate of compliance in the presence of the TNPA electrical Personnel then only take over will happen for the air-conditioning units covered by this scope.
- The bidder shall supply certificate of compliance, handover document and drawings post installation.

4.2. GUARANTEES

A minimum of two (2)-year guarantee shall be provided on all new air conditioner units from the date of takeover or as per the OEM supplier. A minimum 12-month guarantee shall be provided for any associated works.

4.3. SAFETY

The *Contractor* shall:

- Accept his obligation to complying fully with Transnet safety requirements.
- Provide a written Health and Safety plan.
- Provide a basic risk assessment that covers the work to be undertaken.
- Always keep a safety file.
- Provide proof of induction before the commencement of the work.
- Keep a site diary and instruction book.
- Be responsible to arrange occupations.
- TNPA reserves the right to audit the Tenderer's office and workshop.
- Allow for induction before starting work.

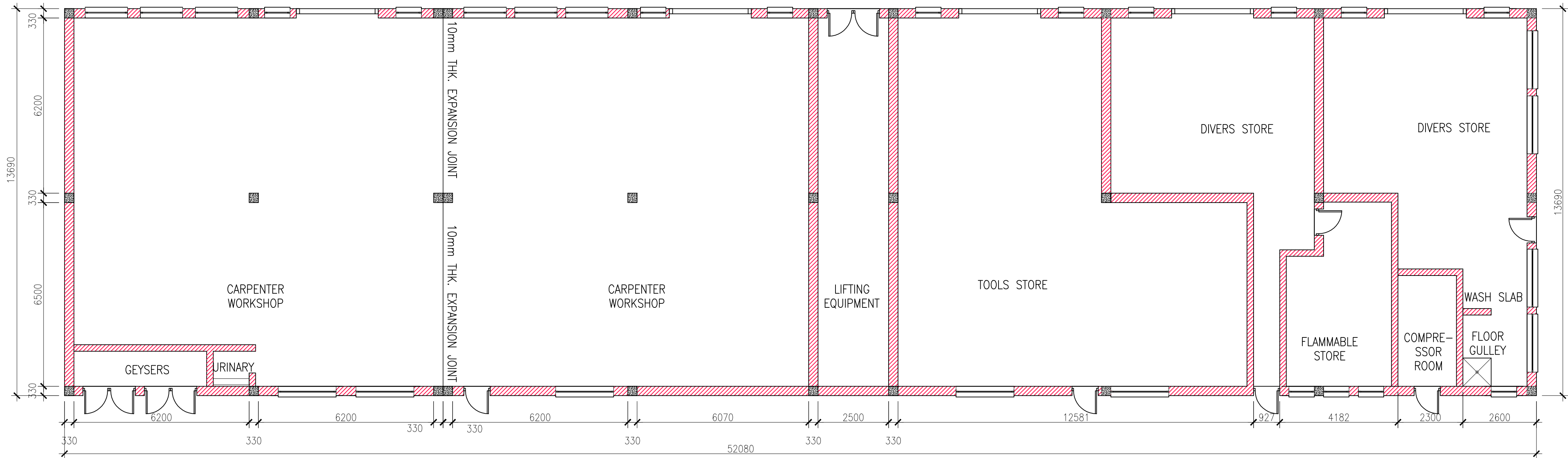
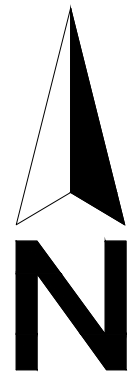
4.4. ENVIRONMENTAL RESPONSIBILITY

The *Contractor* shall:

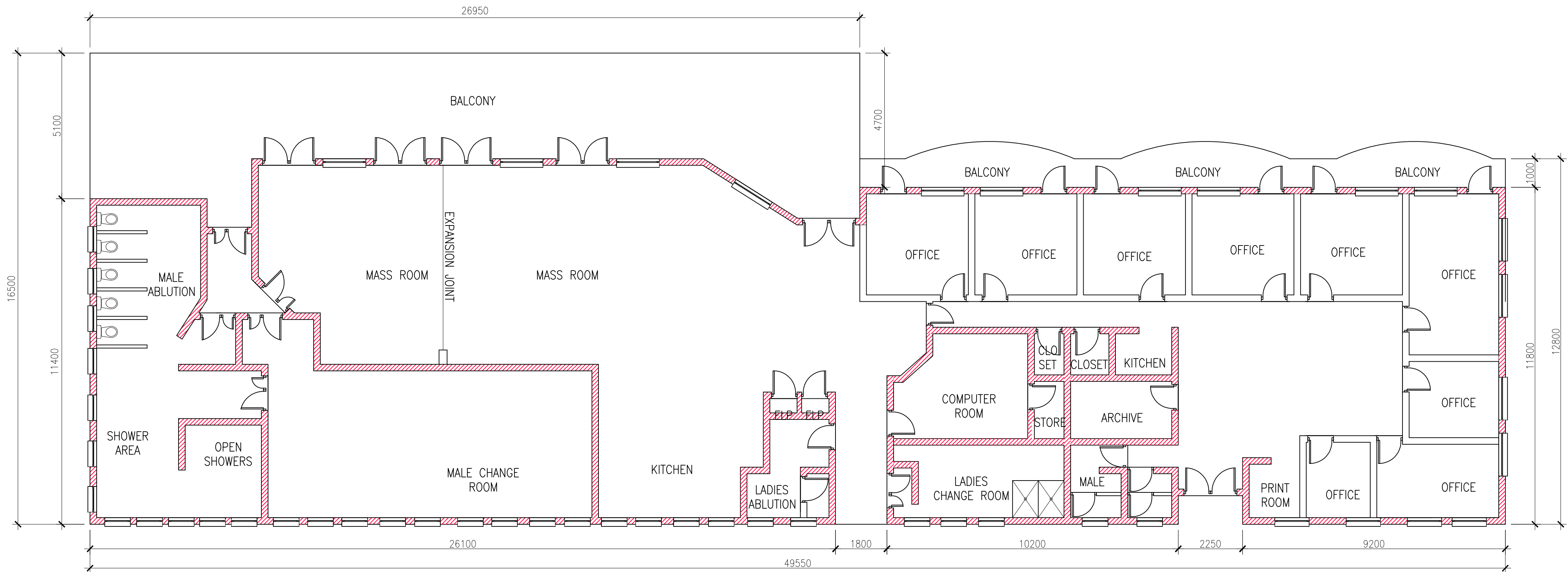
- Separate hazardous or non-hazardous waste and where practical, waste for recycling prior to disposing thereof.

- Also undertakes to minimize the amount of waste generated or released, whether it is hazardous or non-hazardous waste, as far as possible to reduce the impact on the Environment.
- Undertake to dispose of all waste generated, albeit hazardous or non-hazardous waste in a responsible manner and submit proof of all disposal documents to the Project Manager.

DRAWINGS



1:100 02WH013L GROUND FLOOR LAYOUT

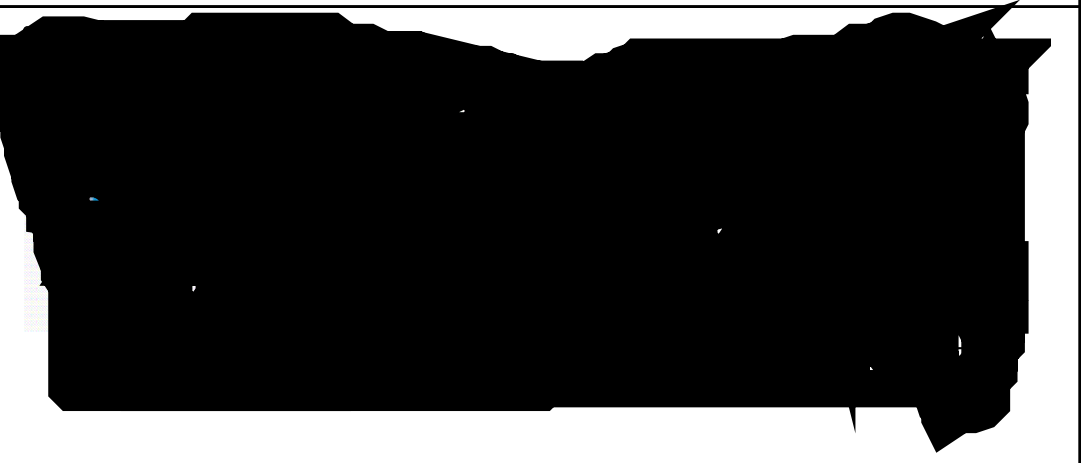


1:100 02WH013L FIRST FLOOR LAYOUT

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This drawing is not to be scaled. Figured Dimensions only are to be followed. Additional Dimensions, when required, will be provided upon request. Contractors are to check all Dimensions before work commences and refer any Discrepancy to the Engineer for Adjustments.

NO.	DATE	REVISION	DRAWN
	03/2023	ISSUED FOR INFORMATION	S.B



PROJECT
TRANSNET BUILDINGS
EAST LONDON PORT

DRAWING TITLE
02WH013L LAYOUT PLAN

	SIGNATURE	FOR NCE	DATE	PR.No.	SHEET SIZE
DRAWN			03-2023		A1
CHECKED			03-2023		SCALE AS SHOWN
APPROVED					DWG STATUS P P = PRELIMINARY C = CONSTRUCTION
CO-ORDINATOR					

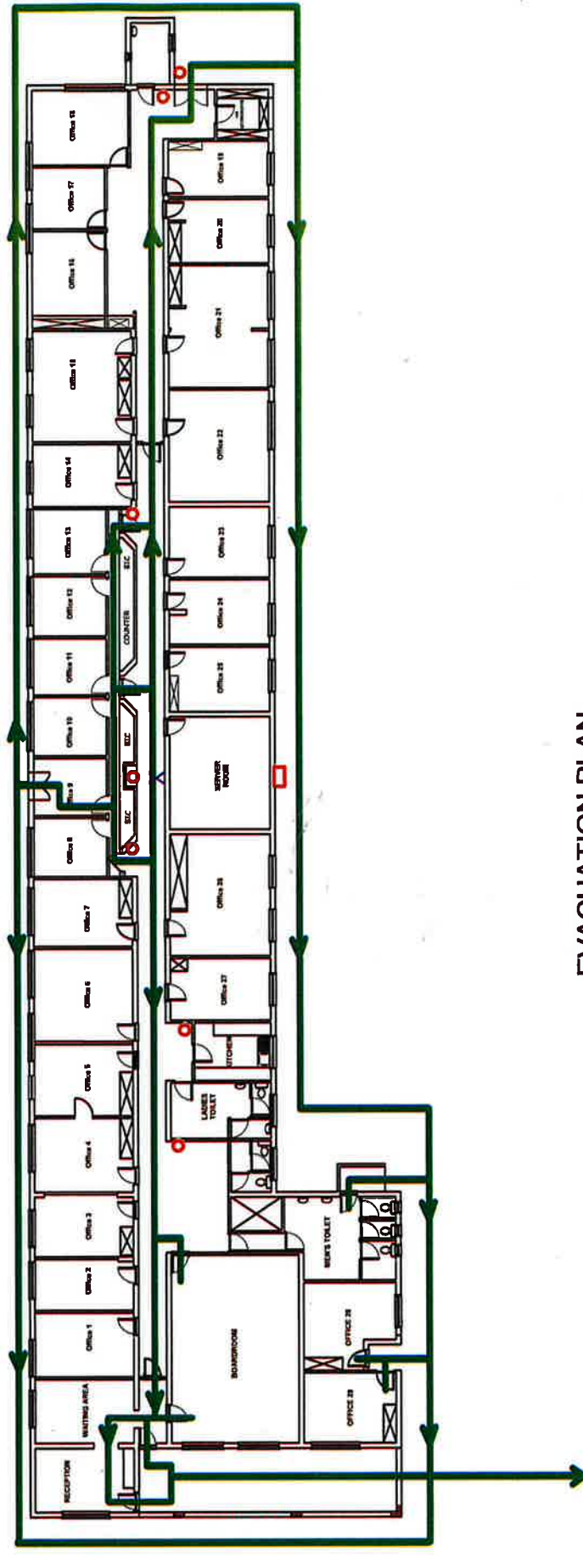
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02WH013L			

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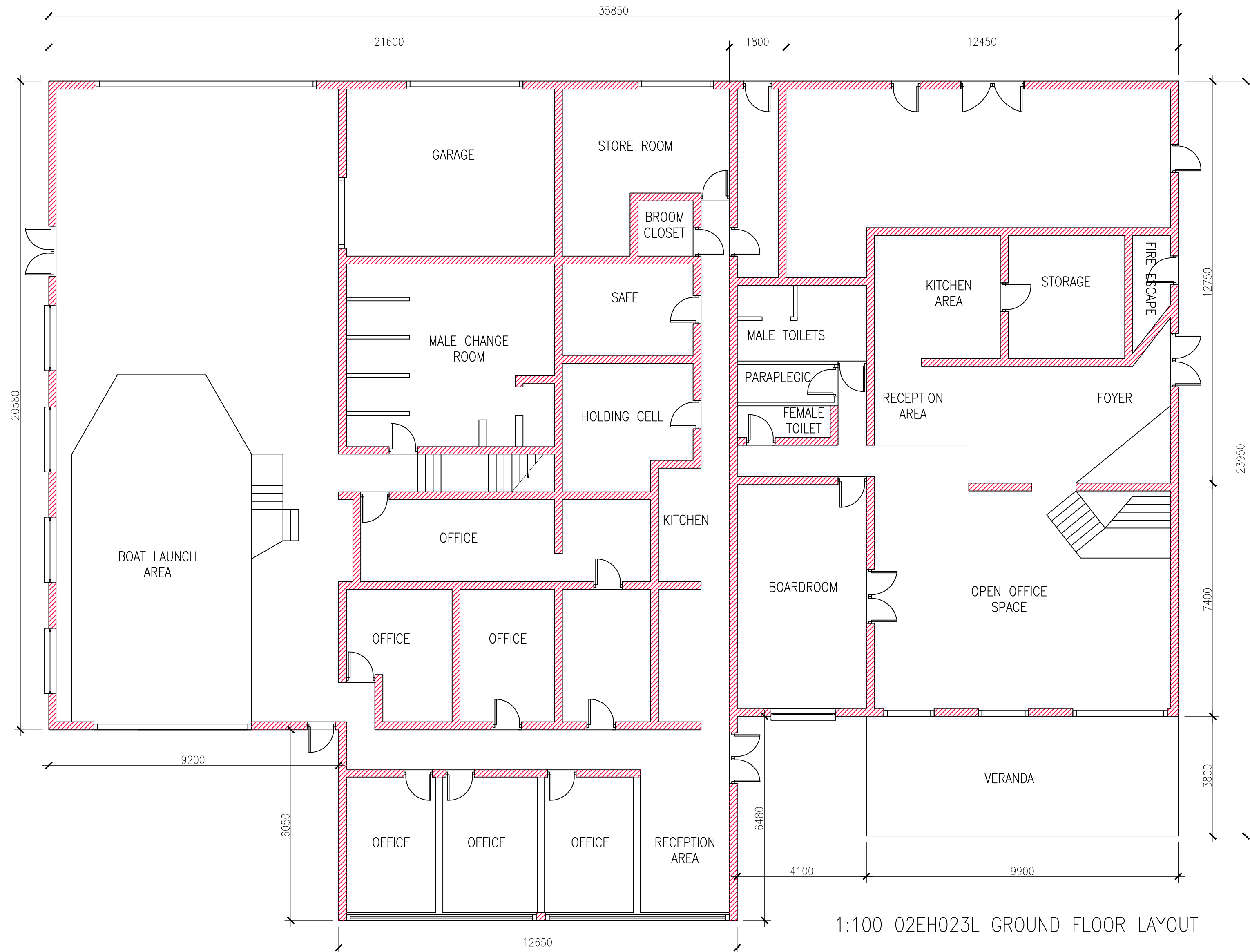
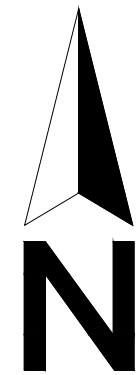
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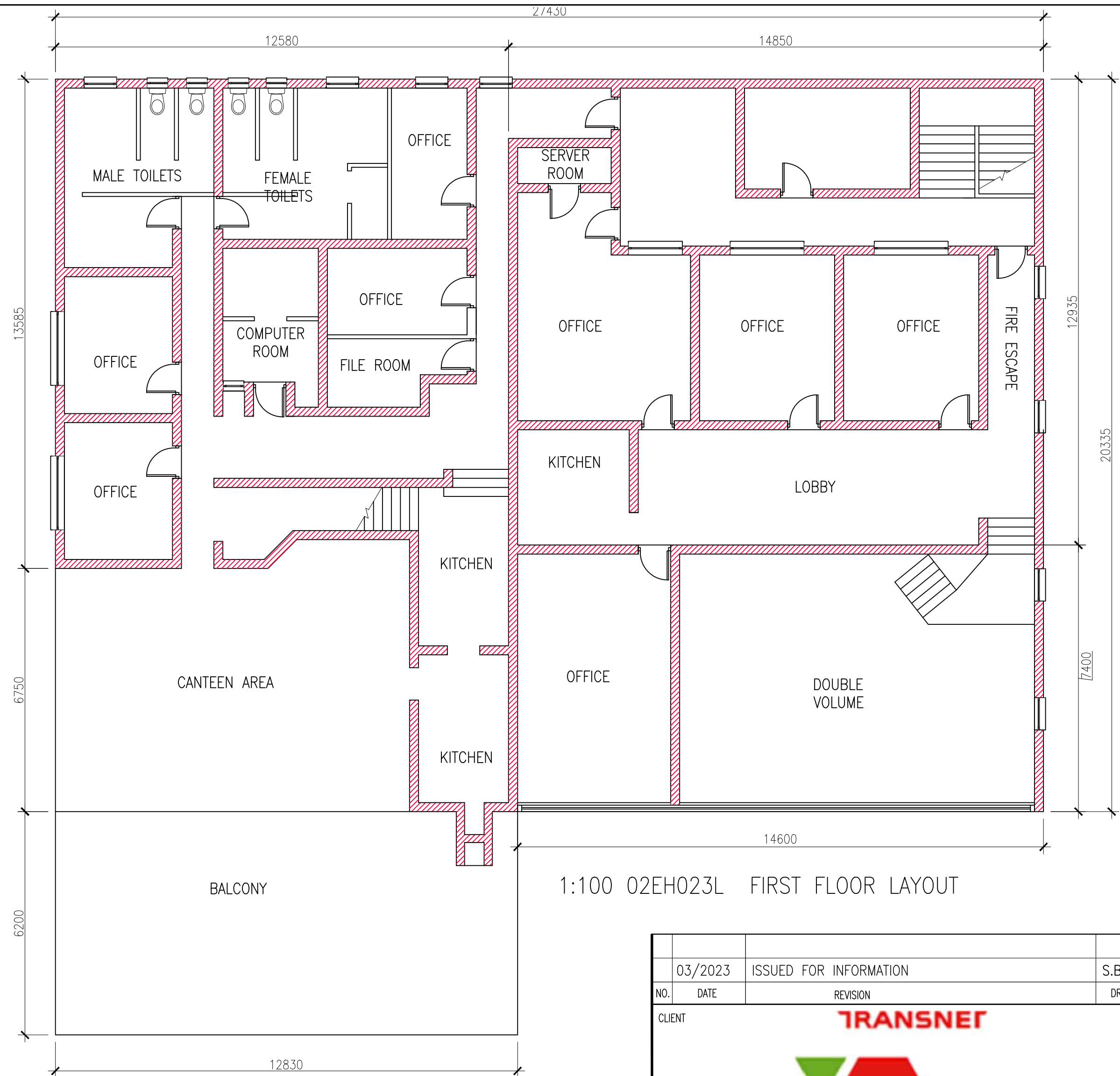
EVACUATION PLAN PORT ADMINISTRATION BUILDING

ASSEMBLY POINT

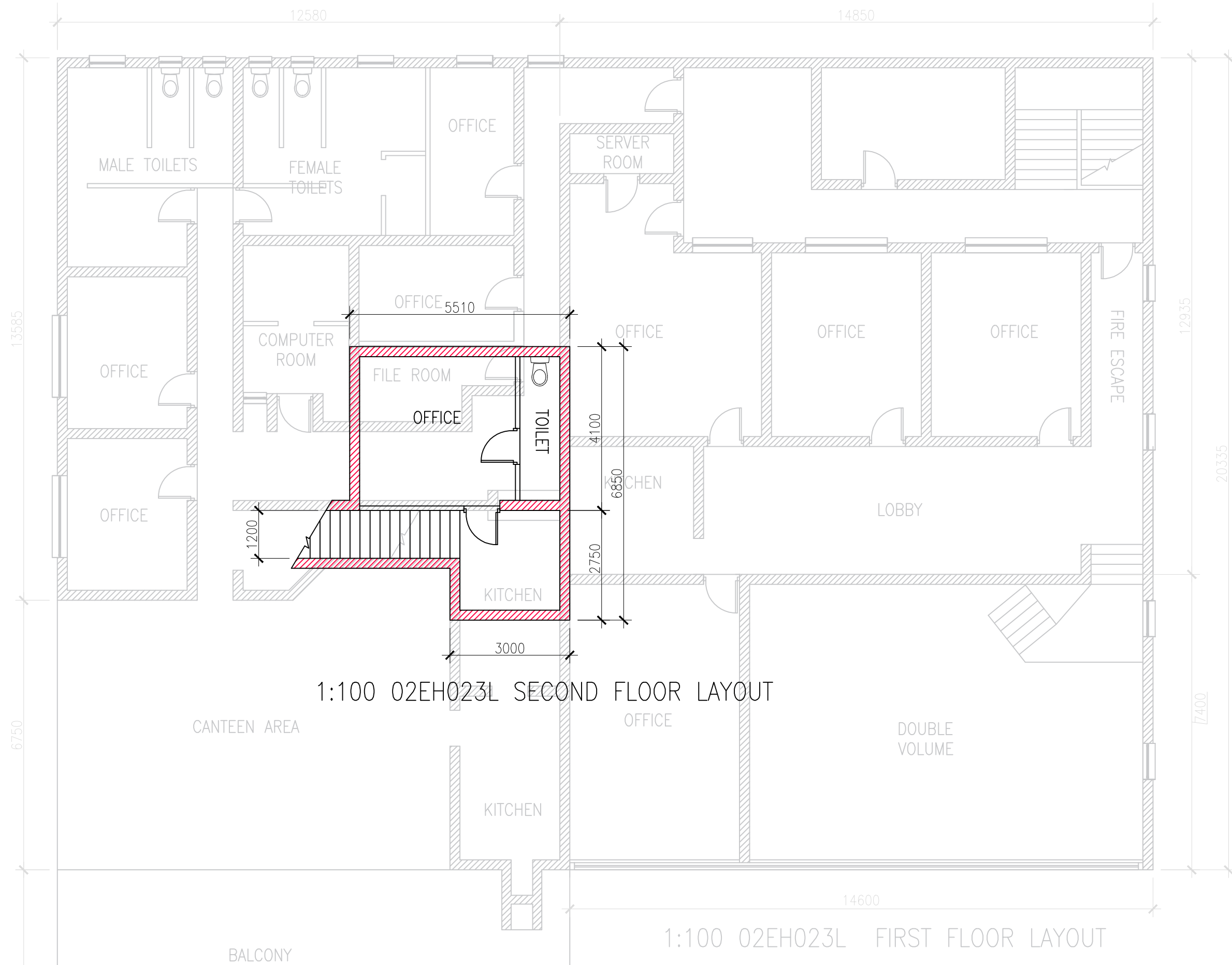
LEGEND
 GREEN = FIRE ESCAPE ROUTES
 RED = FIRE FIGHTING EQUIPMENT
 X = YOU ARE HERE



1:100 02EH023L GROUND FLOOR LAYOUT



1:100 02EH023L FIRST FLOOR LAYOUT



1:100 02EH023L SECOND FLOOR LAYOUT

1:100 02EH023L FIRST FLOOR LAYOUT

03/2023		ISSUED FOR INFORMATION		S.B
NO.	DATE	REVISION		DRAWN
CLIENT				
				
PROJECT				
TRANSNET BUILDINGS EAST LONDON PORT				
DRAWING TITLE				
02EH023L LAYOUT PLAN				
SIGNATURE		FOR	NCE	DATE
S. BANGANI				03-2023
CHECKED		M.GRETTON		03-2023
APPROVED				
CO-ORDINATOR				
SHEET SIZE				
A1				
SCALE				
AS SHOWN				
DWG STATUS				
P = PRELIMINARY C = CONSTRUCTION				
NCE DRAWING NUMBER				
PROJECT No		AREA		DRAWING No
02EH023L				
REVISION No				
NCE-DRAWING No.				
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PART C4: SITE INFORMATION

TRANSNET NATIONAL PORTS AUTHORITY - PORT OF EAST LONDON

TENDER NUMBER: TNPA/2026/07/1650/9239/RFQ

DESCRIPTION OF GOODS AND SERVICES: SUPPLY, DELIVERY, REMOVAL OF EXISTING AIR CONDITIONING UNITS, INSTALLATION AND TESTING OF TWENTY-ONE (21) AIR CONDITIONING UNITS AT THE PORT OF EAST LONDON FOR A PERIOD OF FOUR (4) MONTHS

PART C4: SITE INFORMATION

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TRANSNET NATIONAL PORTS AUTHORITY - PORT OF EAST LONDON

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PART 4: SITE INFORMATION

Core clause 11.2(16) states

"Site Information is information which

- describes the Site and its surroundings and
- is in the documents which the Contract Data states it is in."

In Contract Data, reference has been made to this Part 4 of the contract for the location of Site Information.

1. Description of the Site and its surroundings

1.1. General description

The area where the *works* will be performed is within the Port of East London Boundary. Access to the Port of East London and *works* site is at buildings stipulated below. (see annexure A for aerial view.

- Port Control Building
- Port Admin Building
- Marine building
- EMD Building
- SAPS Building
- Customs building

Access must be subject to the National Ports Authority security requirements and regulations, which should be obtained for all *Contractors'* personnel at CRD building, security offices.

The *Contractor* personnel will be required to have Identity documents or driver's licence whenever they access the Site and ensure that the PPE in the form of Safety boots, overalls during removal and installation, reflector vest and hard hats are always clothed.

Normal working hours at the Port of East London are from 07:00 to 16:30, Monday to Friday, Inclusive. Transnet National Ports Authority has a strict Health and Safety policy in place. No person(s) may enter the site and undertake work on the site until undergoing the mandatory induction. The induction must be arranged by the Port personnel at no cost to the *Supplier*. Prior arrangement must be made with the *Purchaser*.

TRANSNET NATIONAL PORTS AUTHORITY - PORT OF EAST LONDON

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1.2. Existing buildings, structures, and plant & machinery on the Site

The appointed *Contractor* will perform work at the mentioned buildings and the appointed *Contractor shall be aware that there are existing infrastructure services in buildings e.g electrical wiring, ICT networks or civil infrastructure.*

1.3. Hidden services

The *Contractor* is to apply care not to damage existing services during decommissioning, of exiting air conditioners, installation, testing and commissioning of new airconditioners. See project specification for further requirements.

1.4. Other reports and publicly available information

The *Contractor* will have to notify TNPA electrical personnel when coming to work on site.

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Annexure A

Port Control, Port Admin and Customs Buildings



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EMD and SAPS Buildings

