

# Munsang College Kindergarten

Tender No. : T-2122-RC-001

Tender : DESIGN AND BUILD OF VENTILATION  
SYSTEM FOR THE SCHOOL

Details : As Attached Including

1. Invitation Letter

2. Tender Schedule

3. Tender Form For Services/Stores

4. Front Cover

Closing Date : 12:00 noon on 13<sup>th</sup> June, 2022

Contact Person : Mr KWOK Chun Chi (Tel: 3655 3427)

School Ref. No: T-2122-RC-001

For Reference Only

24<sup>th</sup> May, 2022

Dear Sir/ Madam,

**INVITATION TO TENDER**  
**TENDER FOR DESIGN AND BUILD OF VENTILATION SYSTEM FOR THE SCHOOL**

You are invited to tender for design and build of ventilation system for the school as specified in the enclosed tender schedule. If you are not prepared to accept a partial order, please state this clearly on the tender schedule.

Your sealed tender, in duplicate, with a copy of valid business registration certificate of your company, should have the attached label adhered and delivered by hand or by registered mail to the Principal, Munsang College Kindergarten, 8 Dumbarton Road, Kowloon City, Kowloon. It must arrive not later than 12:00 noon on 13<sup>th</sup> June, 2022. Late tenders will not be accepted.

Your tender will remain open for 90 days from the above closing date, and you may consider your tender to be unsuccessful if no order is placed with you within these 90 days. You are requested to note that unless Part II of the tender form is completed, the tender will not be considered.

A school site visit is scheduled for 30<sup>th</sup> May, 2022 (Monday) at 12:30 p.m. on our Administration Centre.

The school will reserve the right to accept the whole or part of the offer received at quoted rates.

If you are unable or do not wish to quote, it would be appreciated if you return this letter and the tender forms with reason to the above address at your earliest convenience.

Yours sincerely,

Dr. Gladys CHEUNG  
Principal

Encl.

# TENDER FOR DESIGN AND BUILD OF VENTILATION SYSTEM FOR THE SCHOOL

Name and Address of School: Munsang College Kindergarten

8 Dumbarton Road, Kowloon City, Kowloon

School Ref. No.: T-2122-RC-001

Tender Closing Date and Time: 12:00 noon on 13<sup>th</sup> June, 2022

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## **PART I**

The undersigned hereby offers to supply all or any part of the items described in the tender schedule attached with the delivery term quoted therein against the date of a firm order placed by the school at the price or the prices quoted in the tender schedule free of all other charges and in accordance with any specifications provided by the schools. In so doing, the undersigned acknowledges that all items not otherwise specified shall be in accordance with British Standard specifications where such exist; tenders shall REMAIN OPEN FOR 90 DAYS after the Closing Date; and the school is not bound to accept the lowest or any tender and reserves the right to accept all or any part of any tender within the period during which the tenders remains open. The undersigned also warrants that his Company's Business Registration and Employees' Compensation Insurance Policy are currently in force and that the items which his Company offers to supply do not to his knowledge infringe any patents.

## **PART II**

### RECONFIRMATION OF TENDER VALIDITY

With reference to Part I of this tender document, it is reconfirmed that the validity of tender offered by this company remains open for 90 days from 13<sup>th</sup> June, 2022.

The undersigned also agrees to accept the fact that once the validity of tender is reconfirmed, the pre-printed clause specified in the Company's tender forms in regard to this nature shall NOT apply.

Dated this ..... day of .....2022.

Signature ..... in the capacity of .....

(State official position, e.g. Director, Manager, Secretary, etc.)

Duly authorized to sign tenders for and on behalf of :-

.....

whose registered office is situated at .....

..... Hong Kong.

Telephone No.....

Fax No.....

# **Munsang College Kindergarten**

## **Tender for Design and Build of Ventilation System for the School**

### **Brief:**

The purpose of this exercise is to prepare the existing ventilation assessment report and improvement proposal plans for the School, including 15 classrooms at A105-106, A201-207 & A301-306, a staff room at A107-108, a multi-purpose room at F301, a library at F201, 2 Music rooms at A307 & F202, and four toilet blocks on Block A & F, for kindergarten education (floor plans as attached). Also, the contractors make a preliminary cost estimate with specifications for the actual supply, installation, and fitting out works (if applicable).

To start with the ventilation assessment and design process, please kindly note that the following tentative service specifications are the basic requirements for your reference. The contractors have to meet all requirements. Also, we would arrange a school site visit with contractors to understand the user's requirements better and scheduled on 30th May 2022 (Monday) at 12:30 p.m.

## Munsang College Kindergarten Limited

### Tender Schedule for Design and Build of Ventilation System for the School

(Columns 4, 5 and 6 to be completed by supplier)

(1) Item No.	(2) Description / Specification	(3) Quantity Required	(4) Unit Rate (HK\$)	(5) Total Amount (HK\$)	(6) Delivery Offered
001	Provision of Ventilation Assessment Services for the School <ul style="list-style-type: none"> <li>• Compliance with the standards and requirements for Kindergarten (as attached)                             <ul style="list-style-type: none"> <li>■ 15 Classrooms (A105-106, A201-207, A301-306)</li> <li>■ 2 Music rooms (F202, A307)</li> <li>■ Library (F201)</li> <li>■ Staff Room (A107-108)</li> <li>■ Multi-purpose room (F301)</li> <li>■ 4 Toilet Blocks (From G/F to 3/F of Block A and 3/F of Block F)</li> </ul> </li> </ul>	1Job			
002	<b>Proposed Design, Supply, Installation, and Replacement of Ventilation System for Classrooms of A105-106, A201-207, and A301-306</b> <ul style="list-style-type: none"> <li>♦ Mechanical Ventilation System has to include but not limited to consider the following criteria:                             <ul style="list-style-type: none"> <li>■ Design and Build a qualified ventilation system for Kindergarten;</li> <li>■ Design drawings for ventilation installations shall be submitted to related government departments;</li> <li>■ Location and cooling capacity of each existing air conditioning unit shall be indicated;</li> <li>■ Location mode of operation (intake or exhaust) of each ventilation fan shall be indicated;</li> <li>■ the Fan size and air handling capacity (l/s) of each ventilation fan shall be shown;</li> <li>■ Fresh air supply quantity and air exchange rate calculations for each area normally occupied by students and teachers (e.g. classroom, children toilet, etc.) shall be provided to demonstrate compliance with the standards and requirements for kindergarten.</li> <li>■ The fresh/exhaust air quantity at each air duct/louver/grille, if applicable, shall be shown;</li> <li>■ Provision shall be allowed in the fresh/exhaust air duct for measurement of airflow rate;</li> <li>■ Compliance with all standards for kindergartens as attached.</li> </ul> </li> </ul>	15 Rooms			

003	<p><b>Proposed Design, Supply, Installation, and Replacement of Ventilation System for Special Rooms of A107-108, A307, F201-202 and F301 (Optional Item)</b></p> <ul style="list-style-type: none"> <li>♦ Mechanical Ventilation System has to include but not limited to consider the following criteria: <ul style="list-style-type: none"> <li>■ Design and Build a qualified ventilation system for Kindergarten;</li> <li>■ Design drawings for ventilation installations shall be submitted to related government departments;</li> <li>■ Location and cooling capacity of each existing air conditioning unit shall be indicated;</li> <li>■ Location mode of operation (intake or exhaust) of each ventilation fan shall be indicated;</li> <li>■ the Fan size and air handling capacity (l/s) of each ventilation fan shall be shown;</li> <li>■ Fresh air supply quantity and air exchange rate calculations for each area normally occupied by students and teachers (e.g. classroom, children toilet, etc.) shall be provided to demonstrate compliance with the standards and requirements for kindergarten.</li> <li>■ The fresh/exhaust air quantity at each air duct/louver/grille, if applicable, shall be shown;</li> <li>■ Provision shall be allowed in the fresh/exhaust air duct for measurement of airflow rate;</li> <li>■ Compliance with all standards for kindergartens as attached.</li> </ul> </li> </ul>	5 Rooms			
004	<p><b>Proposed Design, Supply, Installation, and Replacement of Ventilation System for Toilets at G/F to 3/F of Block A and 3/F of Block F (Optional Item)</b></p> <ul style="list-style-type: none"> <li>♦ Mechanical Ventilation System has to include but not limited to consider the following criteria: <ul style="list-style-type: none"> <li>■ Design and Build a qualified ventilation system for Kindergarten;</li> <li>■ Design drawings for ventilation installations shall be submitted to related government departments;</li> <li>■ Location and cooling capacity of each existing air conditioning unit shall be indicated;</li> <li>■ Location mode of operation (intake or exhaust) of each ventilation fan shall be indicated;</li> <li>■ the Fan size and air handling capacity (l/s) of each ventilation fan shall be shown;</li> <li>■ Fresh air supply quantity and air exchange rate calculations for each area normally occupied by students and teachers (e.g. classroom, children toilet, etc.) shall be provided to demonstrate compliance with the standards and requirements for kindergarten.</li> <li>■ The fresh/exhaust air quantity at each air duct/louver/grille, if applicable, shall be shown;</li> <li>■ Provision shall be allowed in the fresh/exhaust air duct for measurement of airflow rate;</li> <li>■ Compliance with all standards for kindergartens as attached.</li> </ul> </li> </ul>	4 Toilets			

005	Ventilation Air and Fresh Air Measurement Reports for the School <ul style="list-style-type: none"> <li>• Completion of installation and testing of the whole system</li> <li>• Submit the measurement report for the School, including but not limited to Test report, Calculation and As-fitted drawing(s).</li> </ul>	1 Job			
006	<b>Others:</b> <ul style="list-style-type: none"> <li>• The main contractor is requested to take appropriate insurance policies to cover the work as well as their staff or <i>Third Party Liability (at least HK\$10millions)</i> and submitted a copy of cover note to the school before the work commence;</li> <li>• Other items required by the contractor (please specify)</li> </ul>	1 Job 1 Lot			

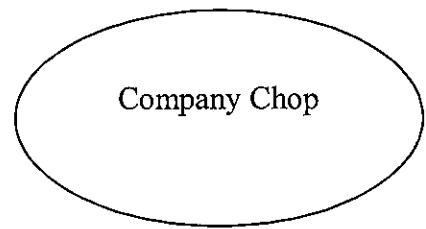
We/I understand that if we/I fail to supply the services as offered in our/my tender upon accepting school's order, we are/I am prepared to pay the price difference to the school if such stores are obtained from elsewhere.

Name of Tenderer: .....

Signature of Person

authorized to sign Tender : .....

Date : .....





## **Service Specifications**

- Notes: (a) Contractor shall note that **all the service specifications are essential requirements.**
- (b) Contractor shall provide documentary evidence thereto wherever requested in the Service Specifications to show compliance of their offered ventilation assessment services with all the requirements.

## 1. **General**

### 1.1. Introduction

The COVID-19 variant is spreading in Hong Kong and may worsen the epidemic situation. The School Management Council to ensure the ventilation situation of school is satisfactory, the school is required to review the ventilation in the premises and purchase and install or replace exhaust fans, or even with installation of air purifiers to improve the ventilation as necessary.

### 1.2. Scope of Services

1.2.1. This Service Specifications sets out the criteria for provision of services to school in accordance with the below guiding principle.

<b>Items</b>	<b>Suggested Standard</b>
Fresh Air Supply at occupied space <sup>1</sup>	6 Air Change per Hour in enclosed rooms or 10 L/s/person whichever is greater
Distance between fresh air intake and other sources of contamination	5 m
Air Flow Pattern	Maintain the air flow direction from clean zones to dirty zones
Toilet Ventilation	15 Air Change per Hour (Exhaust)

Note:

1. This fresh air requirement should cover all occupied space, including but not limited to classrooms, function rooms, staff rooms and play area. The number of persons per room shall follows the permitted accommodation, if any.

1.2.2. Reference should also be made to the relevant guidelines (including supplement to guidelines if any) / regulations related to ventilation as set out by the Department of Health, Buildings Department and Fire Services Department.

1.2.3. The contractor shall provide a report on the ventilation assessment findings and the shortcomings of ventilation system based on the guiding principle stated in Clause 1.2.1.

## **2. Ventilation Assessment Services**

### **2.1. Collection of Operation Data**

- 2.1.1. The contractor shall collect information on operation and technical characteristics of the ventilation system of the school. The collection method shall include, but not limited to, site visits, interviews, surveys, and reviews on building layouts, drawings, schematic diagrams, operation and maintenance records.
- 2.1.2. The operation data of the ventilation system shall include, but not limited to, the following items:
- (i) Opening days and hours of ventilation system;
  - (ii) Estimated internal floor areas and number of individual rooms;
  - (iii) Records on all ventilation system installations as far as reasonably practicable;
  - (iv) Equipment list of ventilation system and operation and maintenance status; and
  - (v) Ventilation performance in accordance with the guiding principle as stated in Clause 1.2.1 under natural ventilation or mechanical ventilation including air-conditioning or any mixed mode of natural and mechanical ventilation.
- 2.1.3. The contractor shall bear any cost to collect and retrieve operation data from the building management system or similar system(s), with no additional cost to the School.
- 2.1.4. If some of the building data are not available, the contractor shall conduct measurement at representative instants and intervals in order to reasonably predict the operation data with no additional cost to the School.

### **2.2. Site Inspection**

- 2.2.1. The contractor shall study the collected building data and conduct site inspections as far as practicable according to the guiding principle as stated in Clause 1.2.1.
- 2.2.2. The site inspection shall include, but not limited to, verification of equipment data, air flow (L/s) measurement, and visual inspection of the ventilation system.
- 2.2.3. The contractor shall identify any abnormalities of the ventilation system installations and take photo record of any abnormalities found. The contractor shall also examine their effects according to the guiding principle as stated in Clause 1.2.1.

### 2.3. Analysis and Recommendations

2.3.1. With the analysis of site inspection result, the contractor shall be able to advise the School and the School Sponsoring Body (SSB) / School Management Committee (SMC) of the school concerned of the followings: -

- Condition of the existing ventilation system;
- Fresh air supply status to different student areas in the school;
- Air change rate of specified area;
- Dead air zone / area;
- Distance between fresh air intake and other sources of contamination; and
- Proposed types and numbers of exhaust fans, or even air purifier and to augment the ventilation for infection control.

2.3.2. For each item mentioned in Clause 2.3.1, the contractor shall provide the root cause and propose a remedial action plan with illustration of drawings and photos, which include a short-term modification/housekeeping proposal and a long-term improvement action plan, if necessary.

### 2.4. Number of Ventilation Assessment Services Provided

2.4.1. The contractor shall conduct at least one full ventilation assessment and a follow-up visit to the school. As the exact number of the on-site visits to school may vary, the contractor shall also bear the cost of all on-site visits with no additional cost to the School.

2.4.2. The contractor shall visit the school and complete the first ventilation assessment (including submission of an assessment report as specified in Section 4) within 1 month upon award of contract. The follow-up visit shall be provided to the school within 1 month after the improvement measures have been put in place to check and advise the school again on the ventilation condition.

## 3. Ventilation Assessment Report

3.1. The contractor shall complete the ventilation assessment report in a specified form in Appendix 1 with Checklist on Ventilation System for Kindergarten as an appended annex upon the full ventilation assessment, and the Certificate on Ventilation System for Kindergarten in a specified form in Appendix 2 upon the follow-up visit, taking into account the guiding principle as stated in Clause 1.2.1 and such report shall be countersigned by the Authorized Signatory.

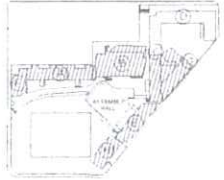
3.2. If the contractor recommends the school to procure the air purifier and/or air disinfection equipment as the remedial measures, the **contractor shall be responsible to vet the model of such equipment(s) proposed by the school to ensure the specification compliance.**

#### **4. Briefing on Ventilation Assessment Report**

4.1. Upon completion of the ventilation assessment services for school, the contractor shall conduct a briefing to explain the report to the school. The presentation shall at least cover the following items:

- (i) introduction of the ventilation assessment;
- (ii) findings and results of the ventilation assessment;
- (iii) short-term proposal; and
- (iv) long-term improvement plans if necessary.

4.2. The presentation shall normally include questions and answers.

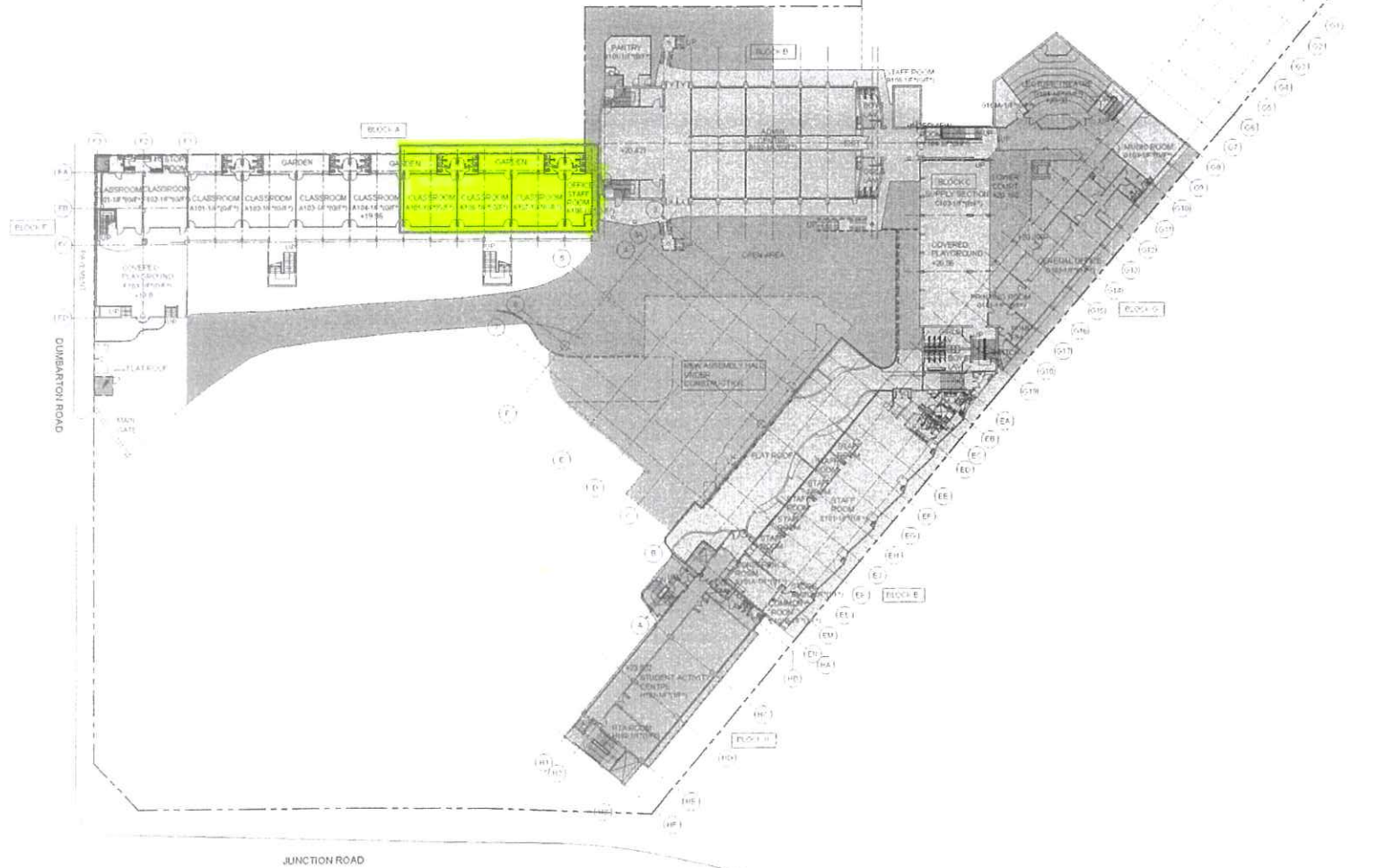


LEGEND:

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- \* - USER FLOOR LEVEL
- A - INDICATED IN THE BUILDING PLANS

BLOCK PLAN SCALE 1: 2000

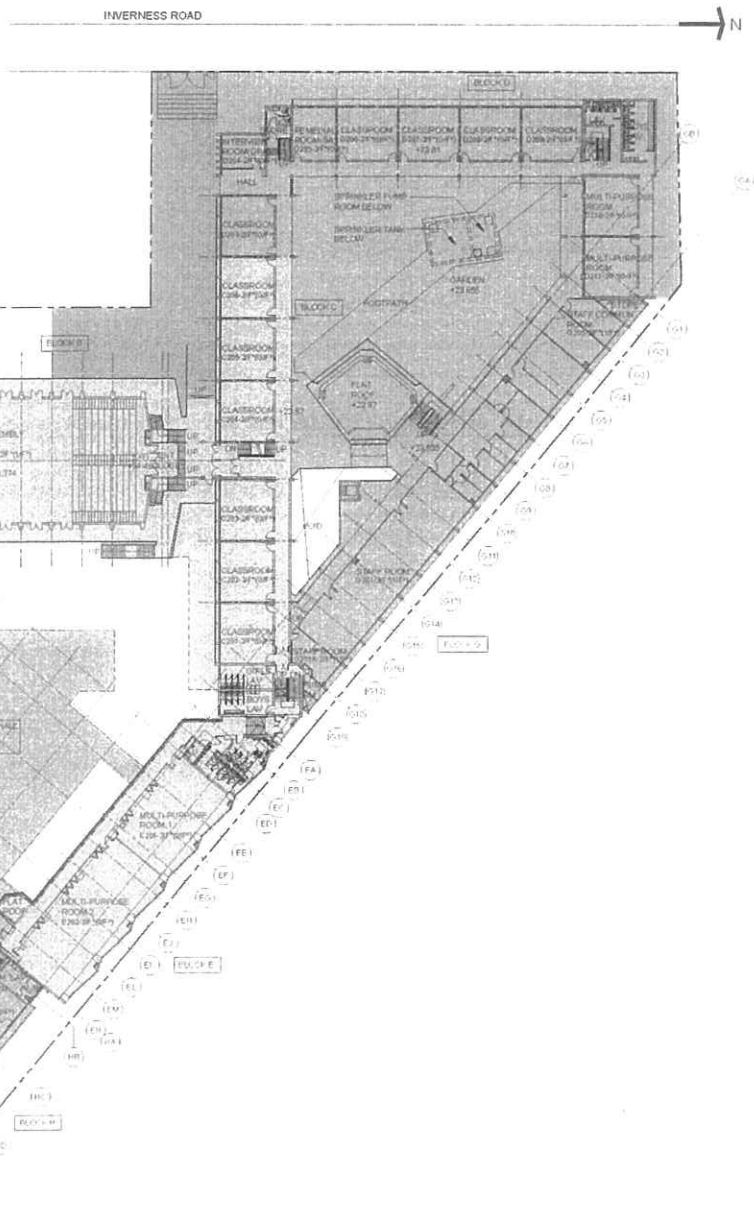


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C	18-3-21	WOP ROOMS
D	18-3-21	WOP ROOMS
E	19-3-21	WOP ROOMS
F	22-3-21	WOP ROOMS
G	21-3-21	WOP ROOMS
H	21-3-21	WOP ROOMS
I	21-4-21	WOP ROOMS
K	18-4-21	WOP ROOMS
L	15-4-21	WOP ROOMS
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<b>MUNSHANG COLLEGE</b>		
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BLOCK PLAN SCALE 1: 2000

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  - NURSERY (MANAGEMENT BY NURSERY)
  - COMMON AREA (FOR USAGE COMMONLY MANAGED AREA / ACCESS BY SECONDARY, PRIMARY, KINDERGARTEN AND NURSERY)
- \* - USER FLOOR LEVEL  
 A - INDICATED IN THE BUILDING PLANS



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NO.	DATE	DESCRIPTION
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2	14-3-21	WKS REVISED
3	15-3-21	WKS REVISED
4	18-3-21	WKS REVISED
5	19-3-21	WKS REVISED
6	22-3-21	WKS REVISED
7	22-3-21	WKS REVISED
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10	15-4-21	WKS REVISED
11	15-4-21	WKS REVISED

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 ALL DIMENSIONS TO BE CHECKED BY THE  
 DESIGNER.  
 DATE: 20/04/2021  
 DRAWN: [Name]  
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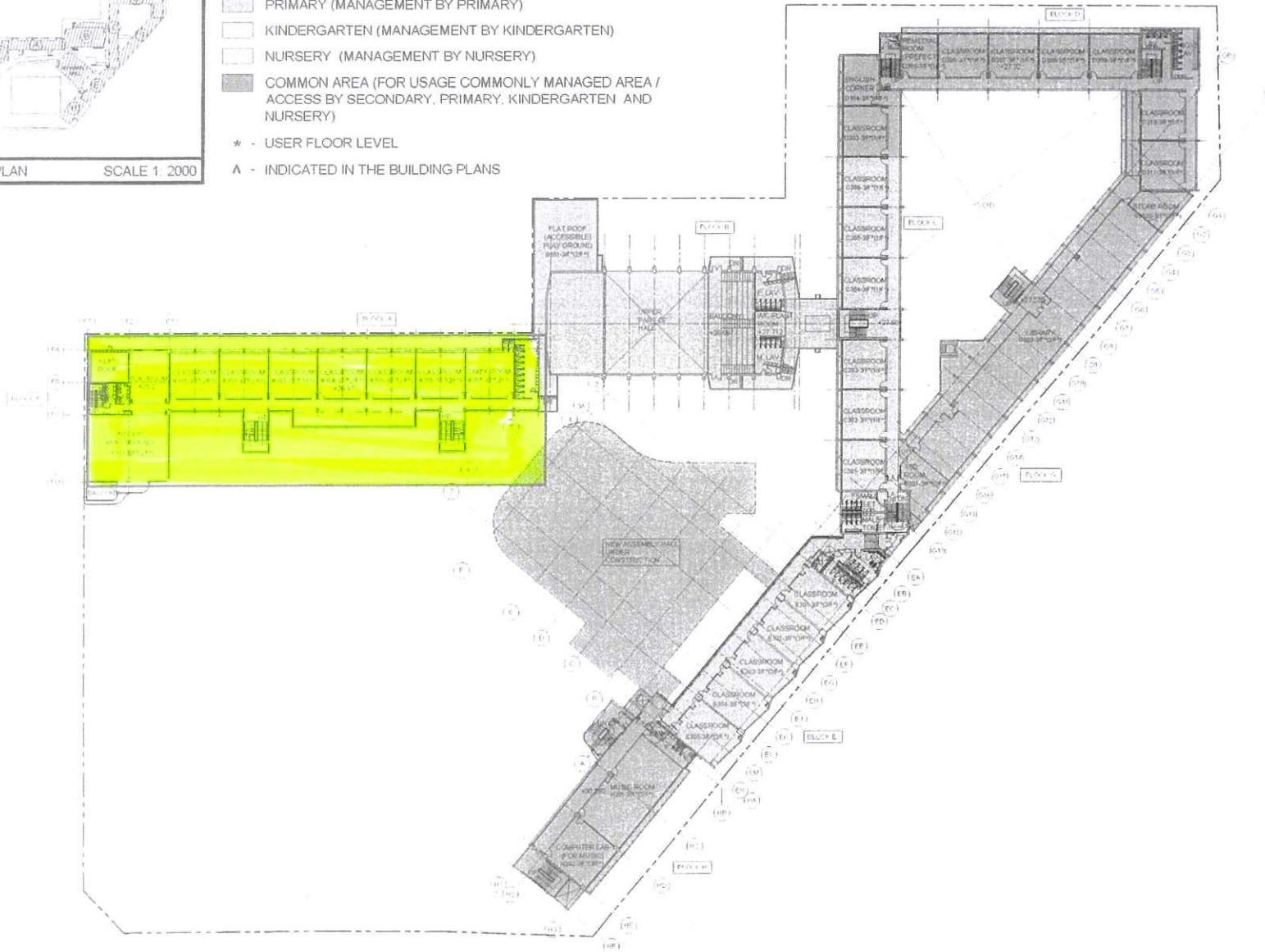
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BLOCK PLAN SCALE 1:2000

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  - KINDERGARTEN (MANAGEMENT BY KINDERGARTEN)
  - NURSERY (MANAGEMENT BY NURSERY)
  - COMMON AREA (FOR USAGE COMMONLY MANAGED AREA / ACCESS BY SECONDARY, PRIMARY, KINDERGARTEN AND NURSERY)
- \* - USER FLOOR LEVEL  
 A - INDICATED IN THE BUILDING PLANS



NO.	DATE	DESCRIPTION
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4	18-1-21	WORK PROGRESS
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12	18-1-21	WORK PROGRESS
13	18-1-21	WORK PROGRESS
14	18-1-21	WORK PROGRESS
15	18-1-21	WORK PROGRESS

APPROVED: TO THE BEST OF HIS KNOWLEDGE AND BELIEF THIS PLAN IS CORRECT AND COMPLETE.	
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DATE:	10/01/2024
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DRAWING TITLE:	3/1 PLAN
PROJECT:	
MUNSAH COLLEGE	
PROJECT NO:	CLASSROOM ST. 158
PLAN NO:	



# **Confidential 機密**

**「Tender for Design and Build of Ventilation System for the School」**

**The Principal**

**Munsang College Kindergarten**

**8 Dumbarton Road, Kowloon City, Kowloon**

**T-2122-RC-001**

**「By Registered Mail or By Hand」**

**Deadline: 12:00 noon on 13<sup>th</sup> June 2022**