

Appendix 4.7 Construction Plant Inventory (Mitigated)

| Item                             | Activity                                     | Power Mechanical Equipment (PME)                        | Reference   | SWL, dB(A) / Unit                                       | No. of Units     | % Usage | Mitigation Measure          | Adjustment, dB(A)         | SWL, dB(A) (PME) | SWL, dB(A) (Activity) |     |     |
|----------------------------------|--|---|---|---|------------------|---------|-----------------------------|---------------------------|------------------|-----------------------|-----|-----|
| A                                | Inlet Work + PST                             | Mobilisation & Excavation                               | KOBELCO SK125SR Excavator, wheeled/tracked              | EPD-11011 [2]   | 92               | 4       | 50%                         | Movable noise barrier [3] | -5               | 90                    | 105 |     |
|                                  |  |   | Kobelco CKS900 Crane, mobile                            | EPD-09602 [2]   | 101              | 4       | 50%                         | Movable noise barrier [3] | -5               | 99                    |     |     |
|                                  |  |   | Generator, standard                                     | CNP 101 [1]   | 108              | 2       | 100%                        | Noise enclosure [4]       | -15              | 96                    |     |     |
|                                  |  |   | Water pump (electric)                                   | CNP 281 [1]   | 88               | 2       | 100%                        |                           |                  | 91                    |     |     |
|                                  |  |   | Dump truck, 5.5 tonne < gross vehicle weight ≤ 38 tonne | Other PME 46 [1]  | 105              | 4       | 50%                         | Movable noise barrier [3] | -5               | 103                   |     |     |
|                                  | Piling                                       | Drill rig, rotary type (diesel)                         | Other PME 15 [1]  | 110   | 8                | 90%     | Noise insulating fabric [5] | -10                       | 109              | 111                   |     |     |
|                                  |  | Kobelco CKS900 Crane, mobile                            | EPD-09602 [2]   | 101   | 8                | 70%     | Movable noise barrier [3]   | -5                        | 103              |                       |     |     |
|                                  |  | Generator, standard                                     | CNP 101 [1]   | 108   | 1                | 100%    | Noise enclosure [4]         | -15                       | 93               |                       |     |     |
|                                  |  | Water pump (electric)                                   | CNP 281 [1]   | 88  | 1                | 100%    |                             |                           | 88               |                       |     |     |
|                                  |  | Piling, large diameter bored, reverse circulation drill | CNP 166 [1]   | 100   | 8                | 90%     | Noise insulating fabric [5] | -10                       | 99               |                       |     |     |
|                                  |  | Grout mixer   | Other PME 21 [1]  | 90  | 1                | 100%    | Movable noise barrier [3]   | -5                        | 85               |                       |     |     |
|                                  | Superstructure                               | Grout pump  | Other PME 22 [1]  | 105   | 1                | 100%    | Movable noise barrier [3]   | -5                        | 100              | 116                   |     |     |
|                                  |  | Concrete lorry mixer                                    | CNP 044 [1]   | 109   | 3                | 50%     |                             |                           | 111              |                       |     |     |
|                                  |  | Kobelco CKS900 Crane, mobile                            | EPD-09602 [2]   | 101   | 1                | 50%     |                             |                           | 98               |                       |     |     |
|                                  |  | Generator, standard                                     | CNP 101 [1]   | 108   | 1                | 100%    |                             |                           | 108              |                       |     |     |
| B                                | Biological / Tertiary Treatment              | Mobilisation & Excavation                               | KOBELCO SK125SR Excavator, wheeled/tracked              | EPD-11011 [2]   | 92               | 4       | 50%                         | Movable noise barrier [3] | -5               | 90                    | 105 |     |
|                                  |  |   | Kobelco CKS900 Crane, mobile                            | EPD-09602 [2]   | 101              | 4       | 50%                         | Movable noise barrier [3] | -5               | 99                    |     |     |
|                                  |  |   | Generator, standard                                     | CNP 101 [1]   | 108              | 2       | 100%                        | Noise enclosure [4]       | -15              | 96                    |     |     |
|                                  |  |   | Water pump (electric)                                   | CNP 281 [1]   | 88               | 2       | 100%                        |                           |                  | 91                    |     |     |
|                                  |  |   | Dump truck, 5.5 tonne < gross vehicle weight ≤ 38 tonne | Other PME 46 [1]  | 105              | 4       | 50%                         | Movable noise barrier [3] | -5               | 103                   |     |     |
|                                  | Piling                                       | Drill rig, rotary type (diesel)                         | Other PME 15 [1]  | 110   | 8                | 90%     | Noise insulating fabric [5] | -10                       | 109              | 111                   |     |     |
|                                  |  | Kobelco CKS900 Crane, mobile                            | EPD-09602 [2]   | 101   | 8                | 70%     | Movable noise barrier [3]   | -5                        | 103              |                       |     |     |
|                                  |  | Generator, standard                                     | CNP 101 [1]   | 108   | 1                | 100%    | Noise enclosure [4]         | -15                       | 93               |                       |     |     |
|                                  |  | Water pump (electric)                                   | CNP 281 [1]   | 88  | 1                | 100%    |                             |                           | 88               |                       |     |     |
|                                  |  | Piling, large diameter bored, reverse circulation drill | CNP 166 [1]   | 100   | 8                | 90%     | Noise insulating fabric [5] | -10                       | 99               |                       |     |     |
|                                  |  | Grout mixer   | Other PME 21 [1]  | 90  | 1                | 100%    |                             |                           | 90               |                       |     |     |
|                                  | Superstructure                               | Grout pump  | Other PME 22 [1]  | 105   | 1                | 100%    |                             |                           | 105              | 116                   |     |     |
|                                  |  | Concrete lorry mixer                                    | CNP 044 [1]   | 109   | 3                | 50%     |                             |                           | 111              |                       |     |     |
|                                  |  | Kobelco CKS900 Crane, mobile                            | EPD-09602 [2]   | 101   | 1                | 50%     |                             |                           | 98               |                       |     |     |
|                                  |  | Generator, standard                                     | CNP 101 [1]   | 108   | 1                | 100%    |                             |                           | 108              |                       |     |     |
| C                                | Sludge Treatment                             | Excavation  | KOBELCO SK125SR Excavator, wheeled/tracked              | EPD-11011 [2]   | 92               | 4       | 50%                         | Movable noise barrier [3] | -5               | 90                    | 105 |     |
|                                  |  |   | Kobelco CKS900 Crane, mobile                            | EPD-09602 [2]   | 101              | 4       | 50%                         | Movable noise barrier [3] | -5               | 99                    |     |     |
|                                  |  |   | Generator, standard                                     | CNP 101 [1]   | 108              | 2       | 100%                        | Noise enclosure [4]       | -15              | 96                    |     |     |
|                                  |  |   | Water pump (electric)                                   | CNP 281 [1]   | 88               | 2       | 100%                        |                           |                  | 91                    |     |     |
|                                  |  |   | Dump truck, 5.5 tonne < gross vehicle weight ≤ 38 tonne | Other PME 46 [1]  | 105              | 4       | 50%                         | Movable noise barrier [3] | -5               | 103                   |     |     |
|                                  | Piling                                       | Drill rig, rotary type (diesel)                         | Other PME 15 [1]  | 110   | 8                | 90%     |                             |                           | 119              | 120                   |     |     |
|                                  |  | Kobelco CKS900 Crane, mobile                            | EPD-09602 [2]   | 101   | 8                | 70%     |                             |                           | 108              |                       |     |     |
|                                  |  | Generator, standard                                     | CNP 101 [1]   | 108   | 1                | 100%    |                             |                           | 108              |                       |     |     |
|                                  |  | Water pump (electric)                                   | CNP 281 [1]   | 88  | 1                | 100%    |                             |                           | 88               |                       |     |     |
|                                  |  | Piling, large diameter bored, reverse circulation drill | CNP 166 [1]   | 100   | 8                | 90%     |                             |                           | 109              |                       |     |     |
|                                  |  | Grout mixer   | Other PME 21 [1]  | 90  | 1                | 100%    |                             |                           | 90               |                       |     |     |
|                                  | Superstructure                               | Grout pump  | Other PME 22 [1]  | 105   | 1                | 100%    |                             |                           | 105              | 116                   |     |     |
|                                  |  | Concrete lorry mixer                                    | CNP 044 [1]   | 109   | 3                | 50%     |                             |                           | 111              |                       |     |     |
|                                  |  | Kobelco CKS900 Crane, mobile                            | EPD-09602 [2]   | 101   | 1                | 50%     |                             |                           | 98               |                       |     |     |
|                                  |  | Generator, standard                                     | CNP 101 [1]   | 108   | 1                | 100%    |                             |                           | 108              |                       |     |     |
| D                                | Sludge Treatment 2 + Organic Waste Reception | Excavation  | KOBELCO SK125SR Excavator, wheeled/tracked              | EPD-11011 [2]   | 92               | 2       | 50%                         |                           |                  | 92                    | 110 |     |
|                                  |  |   | Kobelco CKS900 Crane, mobile                            | EPD-09602 [2]   | 101              | 2       | 50%                         |                           |                  | 101                   |     |     |
|                                  |  |   | Generator, standard                                     | CNP 101 [1]   | 108              | 1       | 100%                        |                           |                  | 108                   |     |     |
|                                  |  |   | Water pump (electric)                                   | CNP 281 [1]   | 88               | 1       | 100%                        |                           |                  | 88                    |     |     |
|                                  |  |   | Dump truck, 5.5 tonne < gross vehicle weight ≤ 38 tonne | Other PME 46 [1]  | 105              | 2       | 50%                         |                           |                  | 105                   |     |     |
|                                  | Piling                                       | Drill rig, rotary type (diesel)                         | Other PME 15 [1]  | 110   | 8                | 90%     |                             |                           | 119              | 120                   |     |     |
|                                  |  | Kobelco CKS900 Crane, mobile                            | EPD-09602 [2]   | 101   | 8                | 70%     |                             |                           | 108              |                       |     |     |
|                                  |  | Generator, standard                                     | CNP 101 [1]   | 108   | 1                | 100%    |                             |                           | 108              |                       |     |     |
|                                  |  | Water pump (electric)                                   | CNP 281 [1]   | 88  | 1                | 100%    |                             |                           | 88               |                       |     |     |
|                                  |  | Piling, large diameter bored, reverse circulation drill | CNP 166 [1]   | 100   | 8                | 90%     |                             |                           | 109              |                       |     |     |
|                                  |  | Grout mixer   | Other PME 21 [1]  | 90  | 1                | 100%    |                             |                           | 90               |                       |     |     |
|                                  | Superstructure                               | Grout pump  | Other PME 22 [1]  | 105   | 1                | 100%    |                             |                           | 105              | 116                   |     |     |
|                                  |  | Concrete lorry mixer                                    | CNP 044 [1]   | 109   | 3                | 50%     |                             |                           | 111              |                       |     |     |
|                                  |  | Kobelco CKS900 Crane, mobile                            | EPD-09602 [2]   | 101   | 1                | 50%     |                             |                           | 98               |                       |     |     |
|                                  |  | Generator, standard                                     | CNP 101 [1]   | 108   | 1                | 100%    |                             |                           | 108              |                       |     |     |
| E                                | Roadworks                                    | Roadworks   | Concrete lorry mixer                                    | CNP 044 [1]   | 109              | 1       | 50%                         |                           |                  | 106                   | 116 |     |
|                                  |  |   | Poker, vibratory, hand-held                             | CNP 170 [1]   | 113              | 1       | 70%                         |                           |                  | 111                   |     |     |
|                                  |  |   | Generator, standard                                     | CNP 101 [1]   | 108              | 1       | 100%                        |                           |                  | 108                   |     |     |
|                                  |  |   | Chipper, hand-held (pneumatic)                          | CNP 043 [1]   | 112              | 1       | 60%                         |                           |                  | 110                   |     |     |
|                                  |  |   | Roller, vibratory                                       | CNP 186 [1]   | 108              | 1       | 60%                         |                           |                  | 106                   |     |     |
|                                  | F  | Pipeworks + Buried Utilities                            | Pipeworks + Buried Utilities                            | KOBELCO SK125SR Excavator, wheeled/tracked              | EPD-11011 [2]    | 92      | 1                           | 70%                       |                  |                       | 90  | 115 |
|                                  |  |   |   | Generator, standard                                     | CNP 101 [1]      | 108     | 1                           | 100%                      |                  |                       | 108 |     |
|                                  |  |   |   | Water pump (electric)                                   | CNP 281 [1]      | 88      | 1                           | 100%                      |                  |                       | 88  |     |
|                                  |  |   |   | Breaker, mini-robot mounted (electric)                  | CNP 031 [1]      | 115     | 1                           | 70%                       |                  |                       | 113 |     |
|                                  |  |   |   | Kobelco CKS900 Crane, mobile                            | EPD-09602 [2]    | 101     | 1                           | 70%                       |                  |                       | 99  |     |
|                                  |  |   |   | Generator, standard                                     | CNP 101 [1]      | 108     | 1                           | 100%                      |                  |                       | 108 |     |
|                                  | G  | Workshop + Store Room + Car Park                        | Superstructure  | Concrete lorry mixer                                    | CNP 044 [1]      | 109     | 3                           | 50%                       |                  |                       | 111 | 116 |
|                                  |  |   |   | Kobelco CKS900 Crane, mobile                            | EPD-09602 [2]    | 101     | 1                           | 50%                       |                  |                       | 98  |     |
|                                  |  |   |   | Generator, standard                                     | CNP 101 [1]      | 108     | 1                           | 100%                      |                  |                       | 108 |     |
|                                  |  |   |   | Poker, vibratory, hand-held                             | CNP 170 [1]      | 113     | 2                           | 50%                       |                  |                       | 113 |     |
| Bar bender and cutter (electric) |  |   |   | CNP 021 [1]   | 90               | 1       | 50%                         |                           |                  | 87                    |     |     |
| H                                |  | Sludge Treatment 3 + Admin Building                     | Piling  | Drill rig, rotary type (diesel)                         | Other PME 15 [1] | 110     | 4                           | 90%                       |                  |                       | 116 | 117 |
|                                  |  |   |   | Kobelco CKS900 Crane, mobile                            | EPD-09602 [2]    | 101     | 4                           | 70%                       |                  |                       | 105 |     |
|                                  |  |   |   | Generator, standard                                     | CNP 101 [1]      | 108     | 1                           | 100%                      |                  |                       | 108 |     |
|                                  |  |   |   | Water pump (electric)                                   | CNP 281 [1]      | 88      | 1                           | 100%                      |                  |                       | 88  |     |
|                                  |  |   |   | Piling, large diameter bored, reverse circulation drill | CNP 166 [1]      | 100     | 4                           | 90%                       |                  |                       | 106 |     |
|                                  |  |   |   | Grout mixer   | Other PME 21 [1] | 90      | 1                           | 100%                      |                  |                       | 90  |     |
| Superstructure                   |  | Grout pump  | Other PME 22 [1]  | 105   | 1                | 100%    |                             |                           | 105              | 116                   |     |     |
|                                  |  | Concrete lorry mixer                                    | CNP 044 [1]   | 109   | 3                | 50%     |                             |                           | 111              |                       |     |     |
|                                  |  | Kobelco CKS900 Crane, mobile                            | EPD-09602 [2]   | 101   | 1                | 50%     |                             |                           | 98               |                       |     |     |
|                                  |  | Generator, standard                                     | CNP 101 [1]   | 108   | 1                | 100%    |                             |                           | 108              |                       |     |     |

Remark:

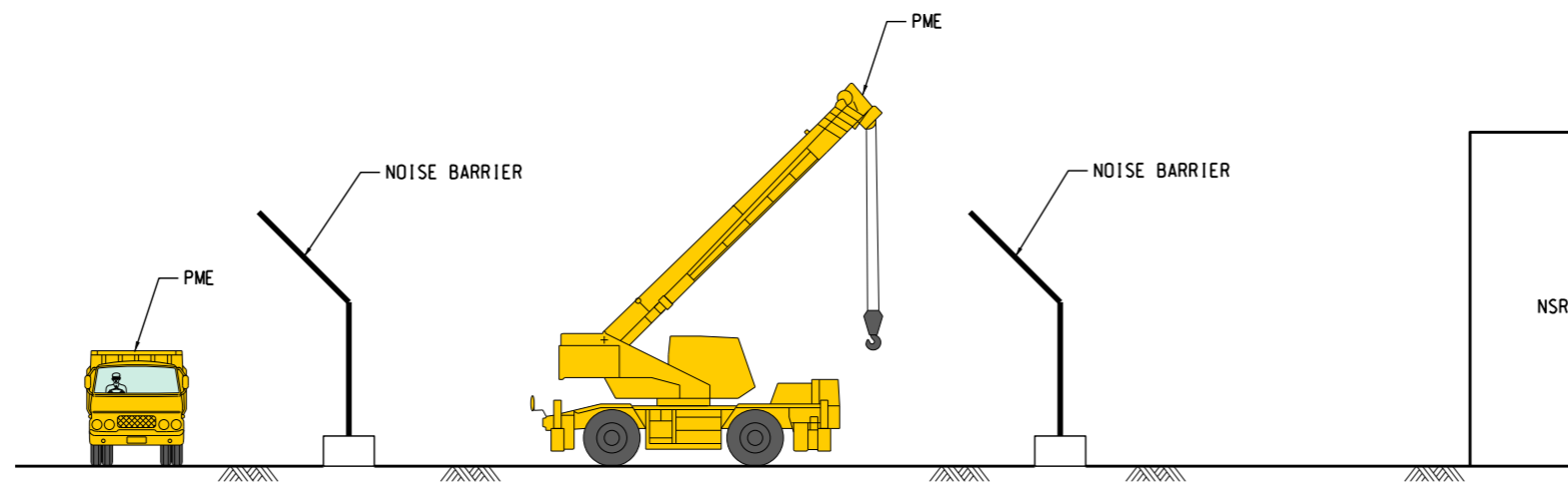
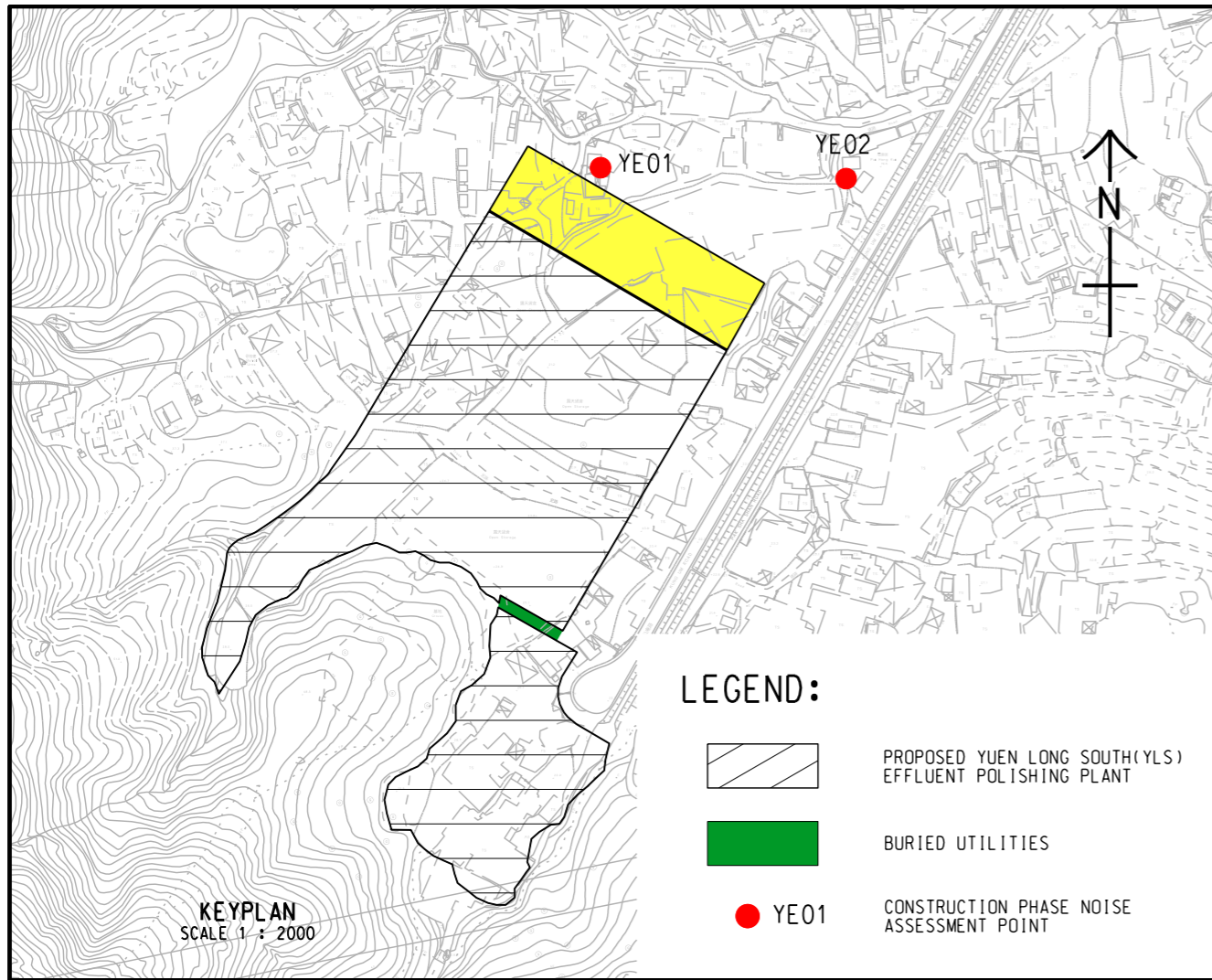
[1] The SWL is referenced from Table 3 of EPD's Technical Memorandum on Noise from Construction Work Other Than Percussive Piling.

[2] The SWL is referenced from QPME system published by EPD.

[3] Use of movable noise barriers could provide at least 5 dB(A) noise reduction for movable plant.

[4] Use of noise insulating fabric could provide at least 10 dB(A) noise reduction.

[5] Use of noise enclosures could provide at least 15 dB(A) noise reduction for stationary plant.



**ISSUE/REVISION**

| I/R | DATE | DESCRIPTION | CHK. |
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**STATUS**

**SCALE**      **DIMENSION UNIT**

A1 AS SHOWN      METRES

**KEY PLAN**    A1 1 : XXXXX

**PROJECT NO.**      **CONTRACT NO.**

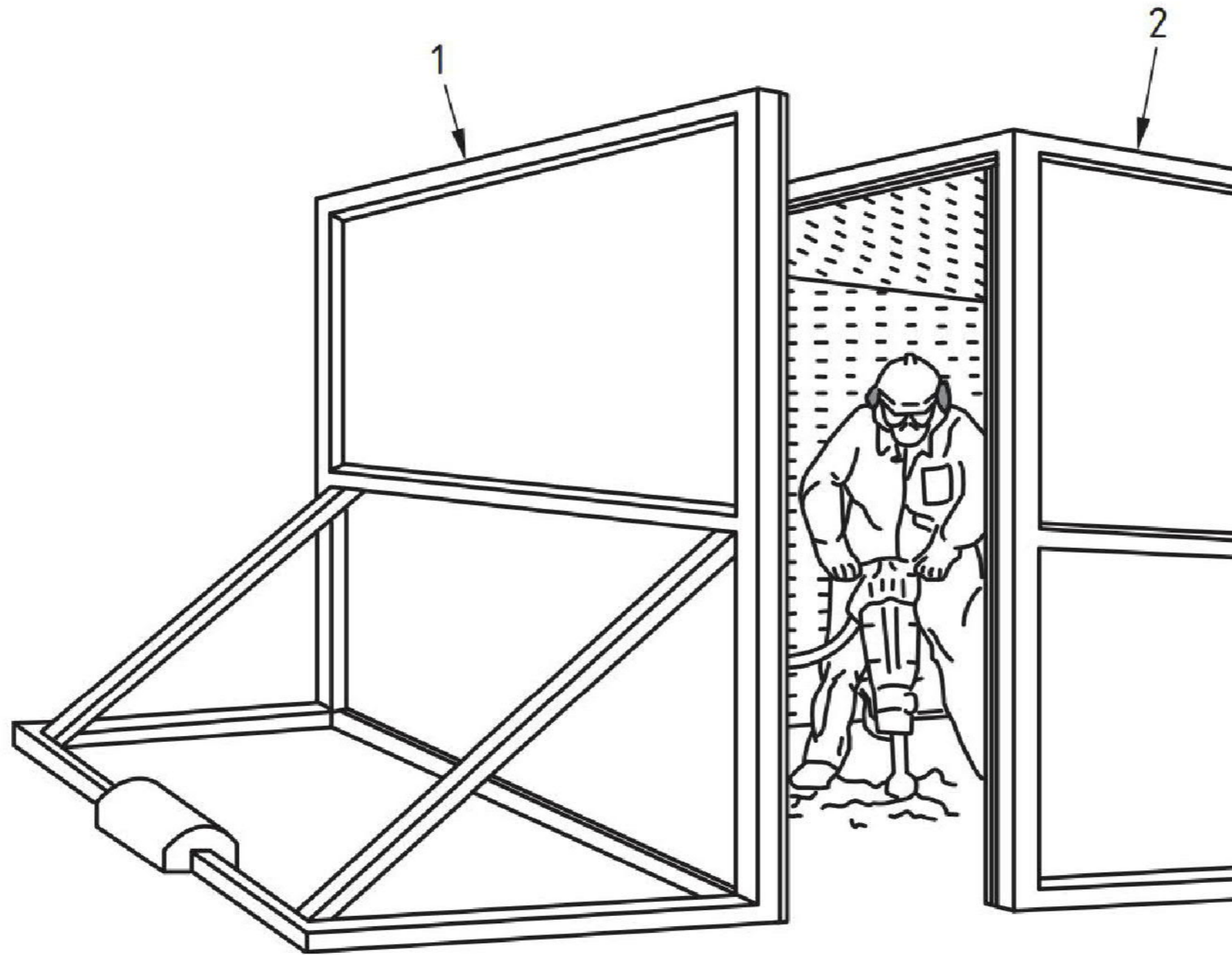
60631936      CE 6/2019 (DS)

**SHEET TITLE**

DRAWING OF TYPICAL  
 NOISE BARRIER ARRANGEMENT

**SHEET NUMBER**

60631936/SK4102



**Key**

- 1 Acoustic screen 2 m wide and 2.7 m high
- 2 Acoustic shed 2 m square and 2.7 m high

EXTRACTED FROM BS 5228-1:2009+A1:2014 CODE OF PRACTICE FOR NOISE AND VIBRATION CONTROL ON CONSTRUCTION AND OPEN SITES - PART 1: NOISE

**PROJECT**  
項目

HUNG SHUI KIU  
EFFLUENT POLISHING  
PLANT AND  
YUEN LONG SOUTH  
EFFLUENT POLISHING  
PLANT - INVESTIGATION

**CLIENT**  
業主



**CONSULTANT**  
工程顧問公司

AECOM Asia Company Ltd.  
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**SUB-CONSULTANTS**  
分判工程顧問公司

**ISSUE/REVISION**  
設計

| I/R | DATE | DESCRIPTION | CHK. |
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**STATUS**  
狀況

**SCALE**                      **DIMENSION UNIT**  
比例                              尺寸單位

N.T.S.                              METRES

**KEY PLAN**  
索引圖

**PROJECT NO.**                      **CONTRACT NO.**  
項目編號                              合約編號

60631936                              CE 6/2019 (DS)

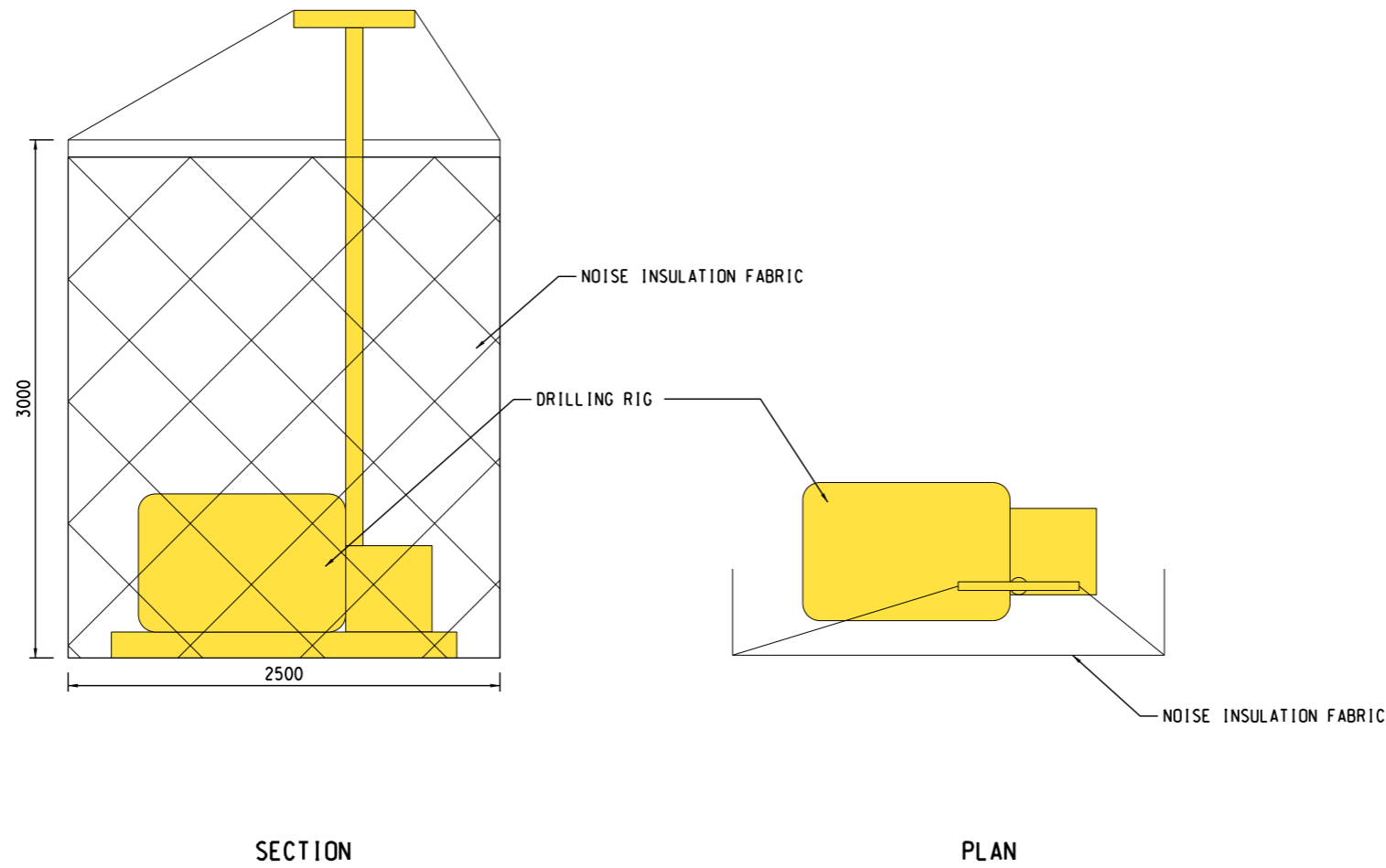
**SHEET TITLE**  
圖紙名稱

SCHEMATIC CONFIGURATION  
OF NOISE ENCLOSURE

**SHEET NUMBER**  
圖紙編號

60631936/SK7010

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PROJECT

HUNG SHUI KIU  
EFFLUENT POLISHING  
PLANT AND  
YUEN LONG SOUTH  
EFFLUENT POLISHING  
PLANT - INVESTIGATION

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ISSUE/REVISION

| I/R | DATE | DESCRIPTION | CHK. |
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STATUS

SCALE DIMENSION UNIT

A1 1 : 20 MILLIMETRES

KEY PLAN

PROJECT NO. CONTRACT NO.

60631936 CE 6/2019 (DS)

SHEET TITLE

SCHEMATIC CONFIGURATION  
OF NOISE INSULATION FABRIC

SHEET NUMBER

60631936/SK4104

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