Medworth EfW CHP Facility Order:
SI 2024 No.230

Requirement 2 Detailed Design: Work No.10 Acoustic Fence at 10 New Bridge Lane

(part discharge)

April 2025

Revision 1.0
Document ref. CP1_R02

We inspire with energy.

Acoustic fence detailed design

1.1 Purpose of this document

1.1.1 Schedule 2 of the Order requires the Developer to comply with and or submit detailed information to implement the Authorised Development. Requirement 2 of Schedule 2 states:

*"**Detailed design approval***

***2.**—(1) No part of Work Nos. 1, 1A, 1B, 2A, 2B, 3, 6A, 6B, 7, 8, 9 or **10 may commence until details of the layout, scale and external appearance for that Work No. have been submitted to and approved by the relevant planning authority** [emphasis added].*

(2) The details submitted for approval under sub-paragraph (1) must be substantially in accordance with the design principles set out in Appendix A of the design and access statement.

(3) Where a requirement requires the authorised development to be constructed in accordance with details approved by the relevant planning authority, the approved details are taken to include any amendments subsequently approved by the relevant planning authority.

(4) The authorised development must be carried out in accordance with the approved details."

1.1.2 **Table 1.1** lists the detailed drawings submitted to discharge the pre-commencement of development conditions of Requirement 2 for Work No.10, the Acoustic Fence.

1.1.3 **Appendix A** provides the data sheet for the Acoustic Fence, confirming the embedded acoustic performance**.**

1.1.4 **Appendix B** provides a Technical Note to confirm the Acoustic Fence meets the standards required by Order.

1.1.5 The design principles listed in **Appendix A** of the **Design and Access Statement Appendix A REV_1 (Volume 7.5) [APP-096]** do not include the Acoustic Fence, therefore (2) of Requirement 2 is immaterial.

Table 1.1: Drawing schedule for Work No.10 (Acoustic Fence)

Document/ drawing no.	Revision no.	Title	Date
CP1_R02_001	1.0	Location Plan	April 2025
CP1_R02_002	1.0	Topographical survey (existing)	April 2025
CP1_R02_003	1.0	Plan view of the Acoustic Fence (existing access)	April 2025
CP1_R02_004	1.0	Plan view of the Acoustic Fence (altered access)	April 2025

Document/ drawing no.	Revision no.	Title	Date
CP1_R02_005	1.0	Acoustic Fence (including side gate)	April 2025
CP1_R02_006	1.0	Acoustic Fence (including entrance gate) 1 of 2	April 2025
CP1_R02_007	1.0	Acoustic Fence (including entrance gate) 2 of 2	April 2025
CP1_R02_008	1.0	Automated track sliding entrance gate	April 2025
CP1_R02_009	1.0	Manual tracked sliding side gate	April 2025
CP1_R02_010	1.0	Appearance from New Bridge Lane	April 2025

1.2 Summary of Consultation

1.2.1 Notwithstanding their opinions about the Authorised Development, the Developer has consulted the landowner of 10 New Bridge Lane to ensure the design of the Acoustic Fence is agreed, including:

- Fence position – to follow the existing fence's alignment and site levels;
- Gate arrangements – position, width and opening mechanisms;
- Fence panel materials – not wood (flammable). Concrete selected;
- Colour – RAL 6003 Olive Green; and
- Future proofed – to accommodate an extant planning consent to alter the existing access into 10 New Bridge Lane[1].

[1] LPA Ref: F/YR23/0432, approved on 8 November 2023

Appendix A Data Sheet – Gramm Barrier Systems SoundBlok Range

GRAMM BARRIER SYSTEMS

Noise Barrier - Acoustic Fencing

CONCRETESoundBlok®

GRAMM CONCRETESoundBlok® noise barriers are made of a proprietary material consisting of organic softwood shavings processed to an acoustically engineered size and bonded together under pressure with Portland cement.

GRAMM CONCRETESoundBlok® is highly sound absorptive, porous, rigid, non-combustible, thermally insulating and freeze-thaw resistant. GRAMM CONCRETESoundBlok® noise barriers are panel and post systems. They are engineered in-house and specify the size for posts and the depth and diameter of footings. Standard steel posts or optional concrete posts can be accommodated.

Our standard systems are noise absorptive on both sides. They can also incorporate solid noise reflective or transparent elements, as well as integrated traffic barriers and retaining wall panels.

Visual Appeal
Wide variety of architectural textures, patterns and colours

Panel and Post Design
Lightweight, easy-to-install systems

Acoustical Characteristics
Noise reduction Coeffi cient of 0.70 or greater

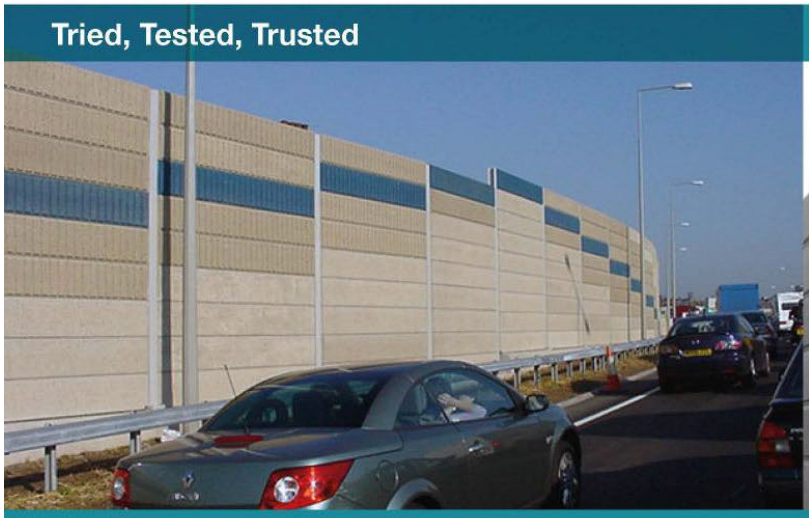
Wall height	Wall height	Wall height
Engineered for heights up to 6m	Engineered for heights up to 11m or more	Engineered for heights up to 11m or more
Innovate design	**Versatile**	**Versatile**
Noise barrier and retaining wall panels are stacked on top of each other	Ideal for slope conditions, directional changes and areas with difficult site access	Fewer panels reduces on-site handling and installation costs
Cost-effective	**Flexible**	**Unique**
Longest post spacing	Panels can be modified on-site for short bays	Ideal for straight runs of wall with good site access where noise absorption in not required on the residential side
Functional	**Minimal Space Requirements**	
Well-suited for areas where there are grade difference between the two sides of a barrier	Useful in tight spacesaccess	

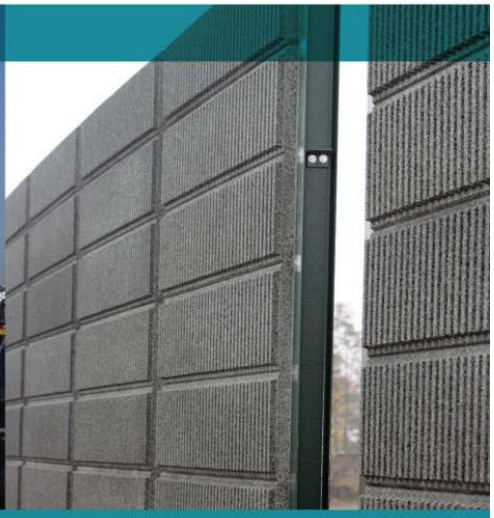
Applications

Road · Rail · Airport · Commercial · Industrial · Utilities · Ports · Defence · Residential · Housing

CONCRETE**SoundBlok®**

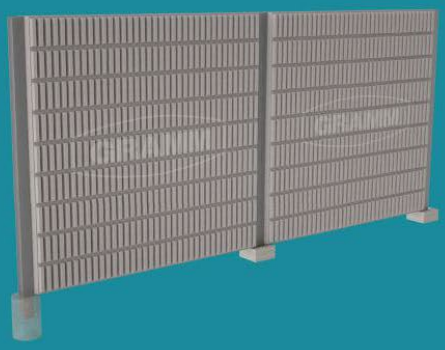
Tried, Tested, Trusted

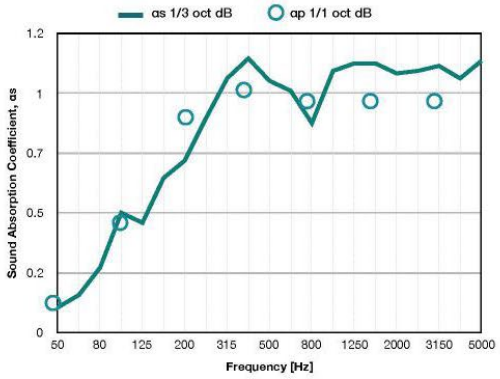


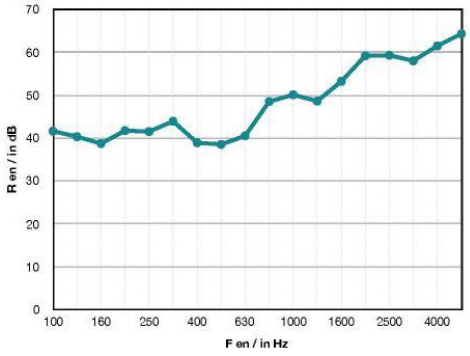


Technical Information

- Barrier Rating: A4, B4
- Absorption: 20 Dla
- Reflection: 44 DLr
- Height: From 0.3m - 10m (Bespoke Heights available on request)
- Lengths: 1.0m - 3.0m (Bespoke Lengths available on request)
- Material: Concrete
- Weight: 205kg/m²
- Finish: Concrete (Various colours available)
- Design Life: 60 years







Head Office
Gramm Barrier Systems Ltd
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BN25 1NP

South East Office
Gramm Barrier Systems Ltd
Mildave
Station Road
Felsted, Essex
CM6 3D

Wales & West Office
Gramm Barrier Systems Ltd
Venture Wales Offices
Merthyr Tydfil Industrial Park
Pentrebach, Merthyr Tydfil
CF48 4DR

North Office
Gramm Barrier Systems Ltd
No 2 Wellington Place
Leeds
West Yorkshire
LS1 4AP

Scotland Office
Gramm Barrier Systems Ltd
20 – 23 Woodside Place
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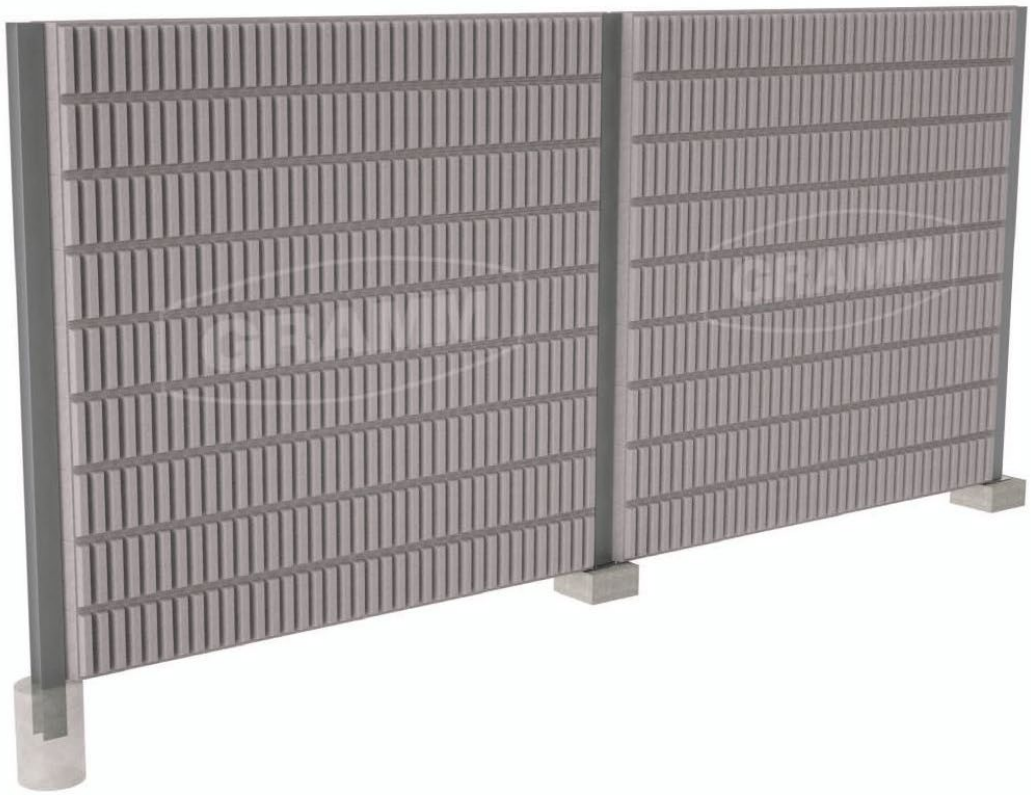
GRAMM BARRIER SYSTEMS SOUNDBLOK RANGE

CONCRETESoundBlok®



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Cross section detail

Gramm offer a full range of acoustic barriers to safeguard and protect a whole range of property and sites from noise as well as providing the security you need. Whether your requirement is to keep sound in or out of your premises, we have the right noise barriers and acoustic fencing to provide the solution.

Call now for free Quote
08442 259002 or 01323 872243

info@grammbarriers.com grammbarriers.com

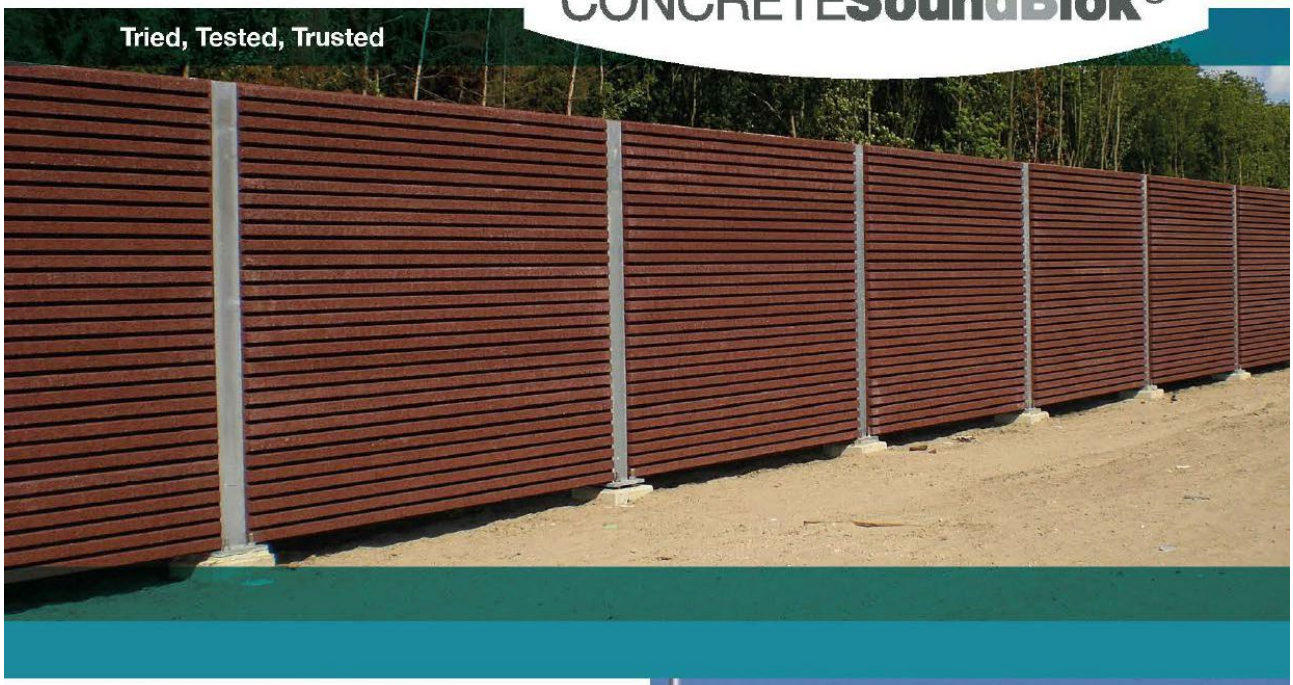
Class	Acoustic Performance	Design Life	Replacement Design Life Based on 120 years
B4 A5	D_{Ir} 44 dB DL_{α} 20 dB(A)	60 years - Panels 60 years - Posts	1 1
Foundation Type	**Fixing Method / Post Type**	**Fixings**	**Maintenance**
1) Shallow concrete pad footing set a 3.0 or 4.0m centres. 2) Augered foundations set at 3.0m or 4.0m centres.	1) Galvanised steel or PPC posts with baseplates fixed to concrete pad footings using chemfix resin anchors/studs. 2) Steel RSJ posts set into augered foundations using ST5 concrete.	Stainless Steel	Zero Maintenance. Yearly inspection required.

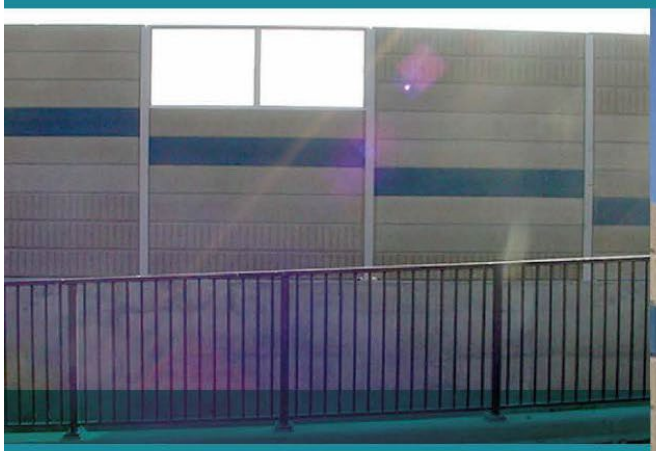
Gramm Barrier Systems ltd noise barrier & fencing specialist.

GRAMM BARRIER SYSTEMS

GRAMM BARRIER SYSTEMS SOUNDBLOK RANGE

CONCRETESoundBlok®





Gramm Barrier Systems ltd noise barrier & fencing specialist.

Appendix B Technical Note

MEMO

TO	Tim Marks, MVV Environment Ltd	**FROM**	Giles Hine
DATE	**11 March 2025**	**CONFIDENTIALITY**	**Public**
SUBJECT	Acoustic Suitability of Proposed Acoustic ,10 New Bridge Lane		

BACKGROUND

The noise assessment undertaken and reported within DCO document Volume 6.2 ES Chapter 7 Noise and Vibration concluded that an acoustic fence was determined as being necessary in order to reduce the effect of noise upon the occupiers of 10 New Bridge Lane.

The provision of an acoustic fence is secured under the Requirement 19 (3) of the DCO: *"No part of Work No. 4A may commence until Work No. 10 has been constructed. Work No. 10 must be maintained until the authorised development has been decommissioned in accordance with requirement 28 unless otherwise agreed by the relevant planning authority."*

The then Applicant provided further information on role and purpose of the acoustic fence within Volume 6.4 ES Chapter 7 Appendix 7D Outline Operational Noise Management Plan rev4. The relevant text is included below:

"An acoustic fence will be provided to 10 New Bridge Lane to reduce daytime sound levels from fixed plant and waste delivery vehicles. A diagram indicating the proposed location of the acoustic fence is provided in Figure 5.1 Proposed acoustic fence to 10 New Bridge Lane. The Applicant will engage with the owner and occupier of 10 New Bridge Lane to discuss the detailed design of the acoustic fence and agree installation and maintenance access agreements. The agreed details, which will also include the height, materials and noise attenuation calculations will be set out in a report which will be forwarded to the relevant planning authority"

THE ACOUSTIC FENCE

The plan of the fence (Drawing Ref: CP1_R2_001_REV_1.0) shows that the vertices of the proposed barrier are consistent with those modelled in the noise assessment.

The sectional, elevation, and finishes (Drawing Refs: CP1_R2_002_REV_1.0, CP1_R2_003_REV_1.0 and CP1_R2_004_REV_1.0) drawings show that the required 3.0 m height minimum will be achieved by the proposed fence and the two sliding gates (manual gate to the side and main automatic gate fronting New Bridge Lane).

The details for the fencing and the front and side gates (MVV Requirement 2 Detailed Design : WORK NO.10 ACOUSTIC FENCE AT 10 NEW BRIDGE LANE ref CP1_R2) contains the spectral performance for the proposed fencing materials. The Gramm Barrier Systems "Concrete SoundBlok" exceeds the advised nominal requirements for mass per unit area by a significant margin.

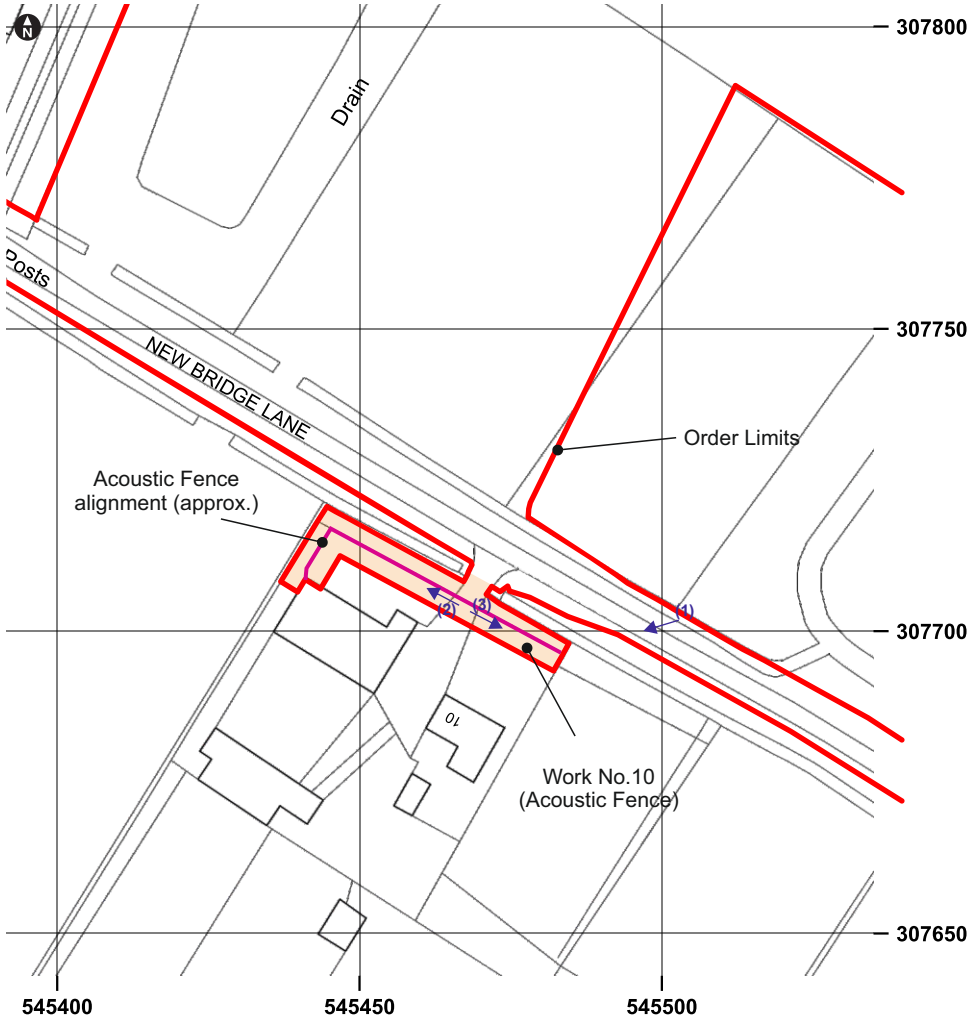
Therefore, with regard to the requirements for the predicted performance of the barrier, the proposals are all equivalent or better than those modelled for the DCO application. As such, the proposed barrier

represents Best Available Techniques and Best Practicable Means and should protect the occupants of 10 New Bridge Lane from significant operational noise, particularly from the HGV movements associated with the proposed Energy from Waste Facility.

Giles Hine MIOA
Associate

(2) Photograph of the existing fence and garden (prior to tree felling)

(3) Photograph of the existing fence and garden (prior to tree felling)



(1) Photograph of the existing fence (trees felled)

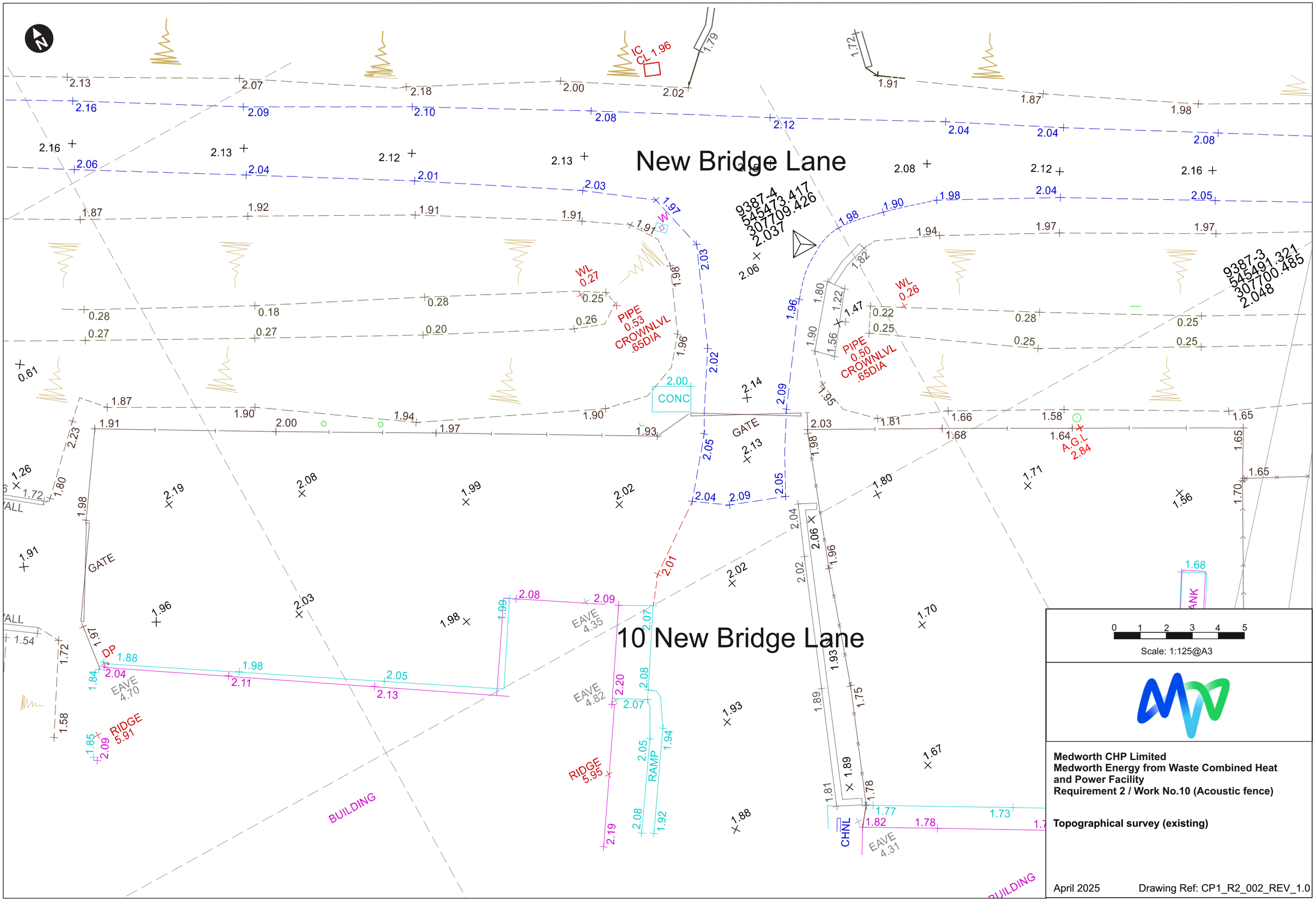
0 12.5 25 37.5 50 m

Scale 1:1250 @A4

Medworth CHP Limited
Medworth Energy from Waste Combined Heat and Power Facility
Requirement 2 / Work No.10 (Acoustic fence)

Location Plan

April 2025 Drawing Ref: CP1_R2_001_REV_1.0


New Bridge Lane
10 New Bridge Lane
IC
CL 1.96
1.79
1.72
1.91
WL
0.27
PIPE
0.53
CROWNLVL
.65DIA
9387-4
545473.417
307709.426
2.037
WL
0.26
PIPE
0.50
CROWNLVL
.65DIA
9387-3
545491.321
307700.485
2.048
2.00
CONC
GATE
2.14
2.13
A.G.L
2.84
1.68
DP
RIDGE
5.91
RIDGE
5.95
EAVE
4.70
EAVE
4.35
EAVE
4.82
EAVE
4.31
RAMP
BUILDING
CHNL
0 1 2 3 4 5
Scale: 1:125@A3
Medworth CHP Limited
Medworth Energy from Waste Combined Heat and Power Facility
Requirement 2 / Work No.10 (Acoustic fence)
Topographical survey (existing)
April 2025
Drawing Ref: CP1_R2_002_REV_1.0

New Bridge Lane

10 New Bridge Lane

ACOUSTIC FENCE
(see drawing ref:CP1_R02_05 to 07)

MANUAL GATE
(see drawing ref:CP1_R02_09)

AUTOMATED GATE
(see drawing ref:CP1_R02_08)

GRP ELECTRICAL ENCLOSURE BOX
(see drawing ref:CP1_R02_08)

NOTES:
1) FENCE CONSTRUCTED TO EXISTING GROUND LEVELS
2) GATES TO RUN ON METAL RUNNER FIXED TO CONCRETE BASE

0 1 2 3 4 5

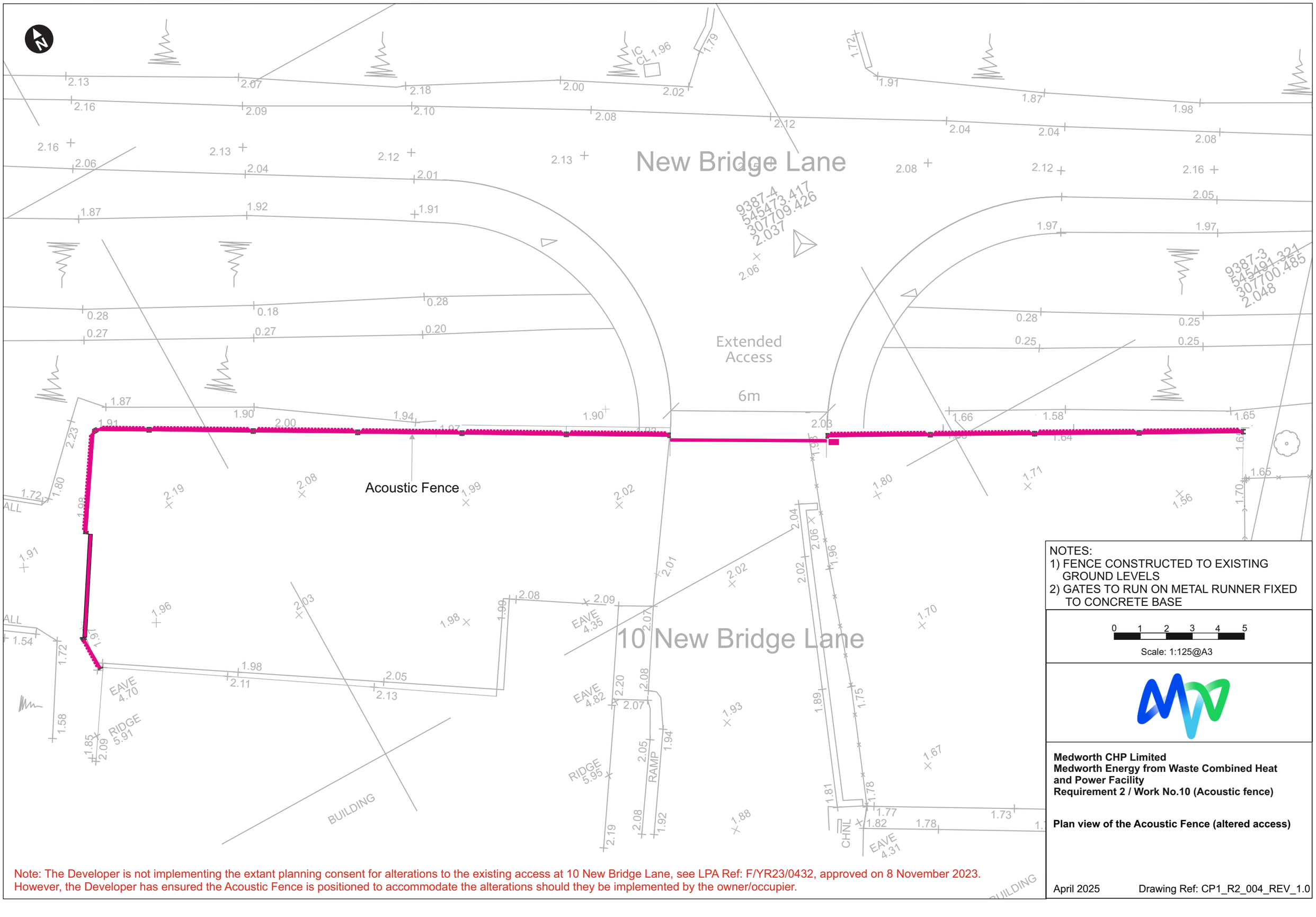
Scale: 1:125@A3

Medworth CHP Limited
Medworth Energy from Waste Combined Heat and Power Facility
Requirement 2 / Work No.10 (Acoustic fence)

Plan view of the Acoustic Fence (existing access)

April 2025

Drawing Ref: CP1_R2_003_REV_1.0



NOTES:
1) FENCE CONSTRUCTED TO EXISTING GROUND LEVELS
2) GATES TO RUN ON METAL RUNNER FIXED TO CONCRETE BASE

0 1 2 3 4 5

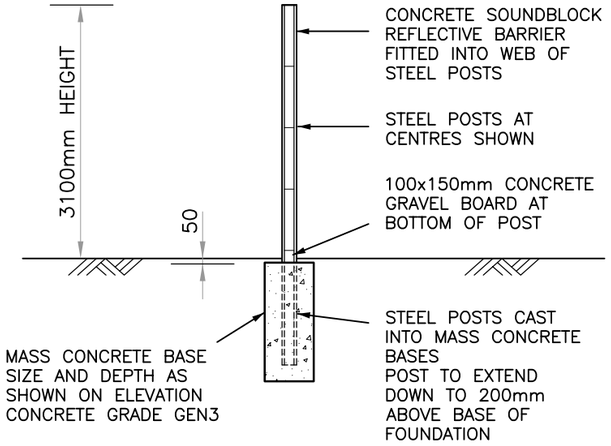
Scale: 1:125@A3

Medworth CHP Limited
Medworth Energy from Waste Combined Heat and Power Facility
Requirement 2 / Work No.10 (Acoustic fence)

Plan view of the Acoustic Fence (altered access)

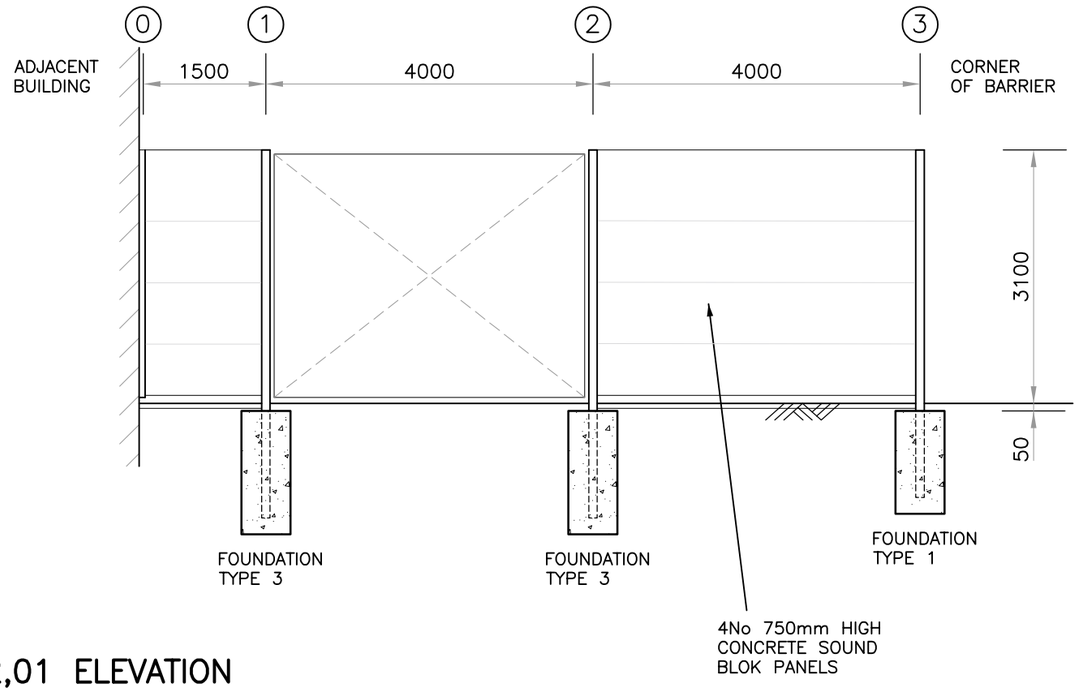
April 2025 Drawing Ref: CP1_R2_004_REV_1.0

Note: The Developer is not implementing the extant planning consent for alterations to the existing access at 10 New Bridge Lane, see LPA Ref: F/YR23/0432, approved on 8 November 2023. However, the Developer has ensured the Acoustic Fence is positioned to accommodate the alterations should they be implemented by the owner/occupier.



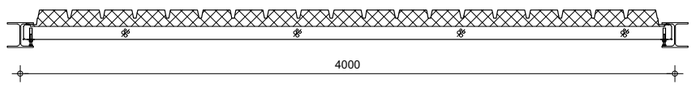
02,02 TYPICAL SECTION

NOISE BARRIER POSTS

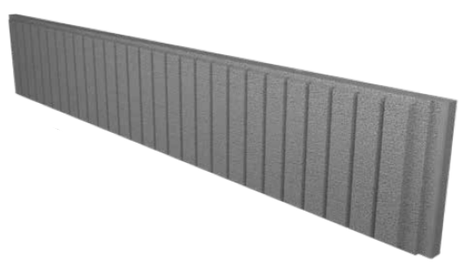


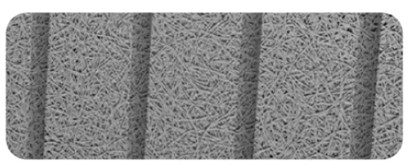
02,01 ELEVATION

RETURN LENGTH OF BARRIER



CONCRETE SOUNDBLOK VERT 100 FINISH TO FIELD SIDE.
THE REAR FINISH (FACING PROPERTY) IS A SMOOTH CONCRETE FINISH PAINTED RAL 6003.





SCHEDULE OF POSTS

POST REF	POST SIZE
ALL POSTS	178x102x19kg UB

SCHEDULE OF BASE SIZES

BASE REF	CIRCULAR BASE	CIRCULAR BASE
TYPE 1	MASS CONCRETE 450mm DIA ROUND DEPTH 1350mm	MASS CONCRETE 600mm DIA ROUND DEPTH 1200mm
TYPE 3	MASS CONCRETE 450mm DIA ROUND DEPTH 1600mm	MASS CONCRETE 600mm DIA ROUND DEPTH 1450mm

NOTES:

ALL STEEL COLUMNS AND FIXINGS TO BE GALVANISED

STEEL COLUMNS TO EXTEND DOWN TO 200mm ABOVE BOTTOM OF CONCRETE FOUNDATIONS

GRAVEL BOARD HEIGHT- 100MM
FENCE HEIGHT - 3000MM

FENCE PANEL COLOUR: RAL 6003 OLIVE GREEN

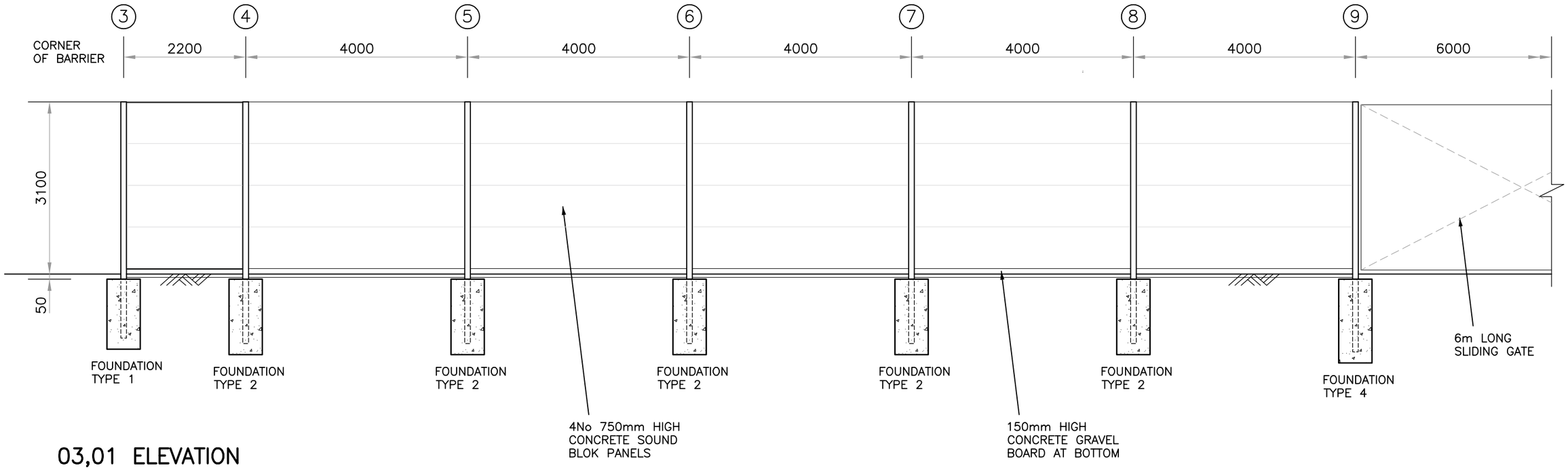
0 1 2 3 4 5

Scale: 1:75@A3

Medworth CHP Limited
Medworth Energy from Waste Combined Heat and Power Facility
Requirement 2 / Work No.10 (Acoustic fence)

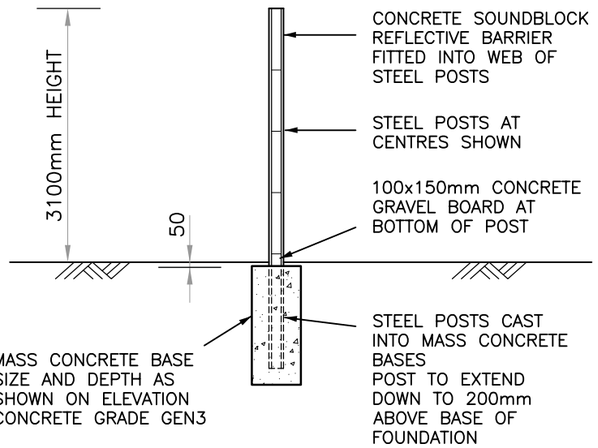
Acoustic Fence (including side gate)

April 2025 Drawing Ref: CP1_R2_005_REV_1.0



03,01 ELEVATION

AT CORNER IN BARRIER



03,02 TYPICAL SECTION

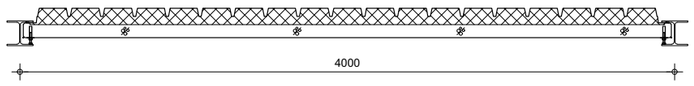
NOISE BARRIER POSTS

SCHEDULE OF POSTS

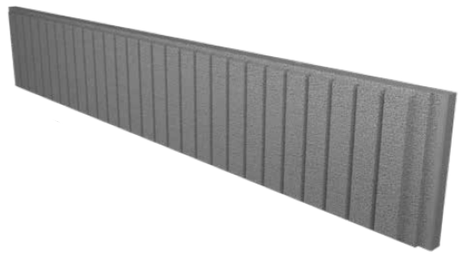
POST REF	POST SIZE
ALL POSTS	178x102x19kg UB

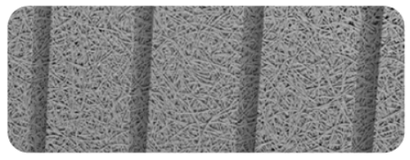
SCHEDULE OF BASE SIZES

BASE REF	CIRCULAR BASE	CIRCULAR BASE
TYPE 1	MASS CONCRETE 450mm DIA ROUND DEPTH 1350mm	MASS CONCRETE 600mm DIA ROUND DEPTH 1200mm
TYPE 2	MASS CONCRETE 450mm DIA ROUND DEPTH 1550mm	MASS CONCRETE 600mm DIA ROUND DEPTH 1400mm
TYPE 4	MASS CONCRETE 450mm DIA ROUND DEPTH 1750mm	MASS CONCRETE 600mm DIA ROUND DEPTH 1550mm



CONCRETE SOUNDBLOK VERT 100 FINISH TO ROAD SIDE. THE REAR FINISH (FACING PROPERTY) IS A SMOOTH CONCRETE FINISH PAINTED RAL 6003.





NOTES:

ALL STEEL COLUMNS AND FIXINGS TO BE GALVANISED

STEEL COLUMNS TO EXTEND DOWN TO 200mm ABOVE BOTTOM OF CONCRETE FOUNDATIONS

GRAVEL BOARD HEIGHT- 100MM
FENCE HEIGHT - 3000MM

FENCE PANEL COLOUR: RAL 6003 OLIVE GREEN

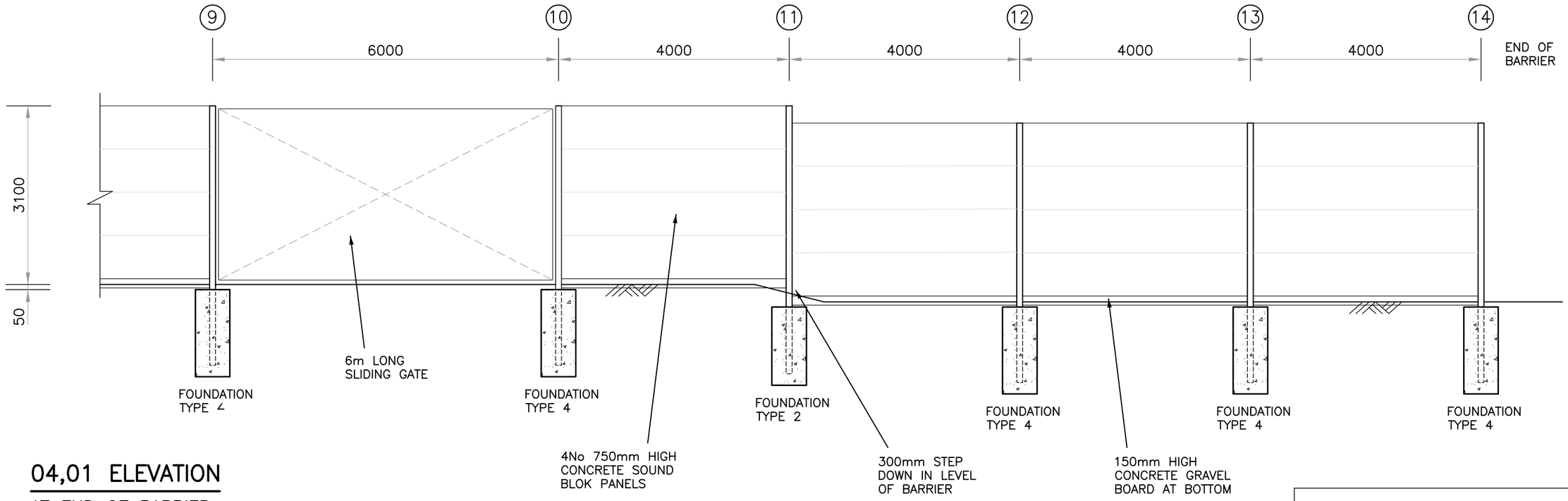
0 1 2 3 4 5

Scale: 1:75@A3

Medworth CHP Limited
Medworth Energy from Waste Combined Heat and Power Facility - Requirement 2 / Work No.10 (Acoustic fence)

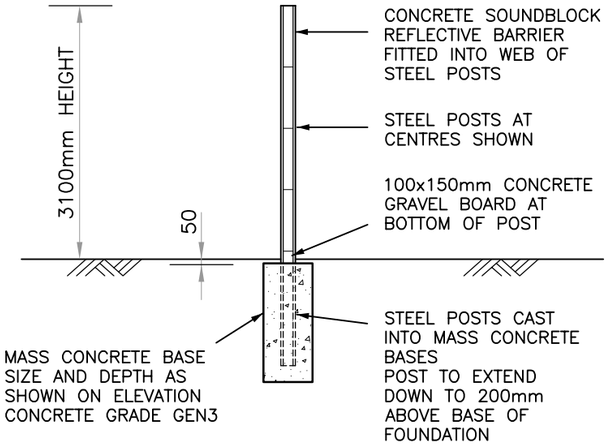
Acoustic Fence (including entrance gate) 1 of 2

April 2025 Drawing Ref: CP1_R2_006_REV_1.0



04,01 ELEVATION

AT END OF BARRIER



04,02 TYPICAL SECTION

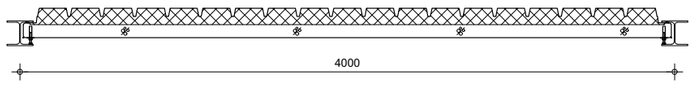
NOISE BARRIER POSTS

SCHEDULE OF POSTS

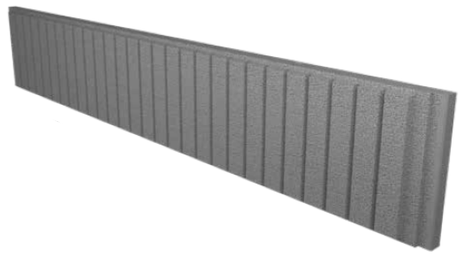
POST REF	POST SIZE
ALL POSTS	178x102x19kg UB

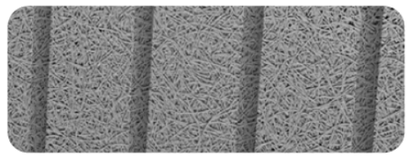
SCHEDULE OF BASE SIZES

BASE REF	CIRCULAR BASE	CIRCULAR BASE
TYPE 2	MASS CONCRETE 450mm DIA ROUND DEPTH 1550mm	MASS CONCRETE 600mm DIA ROUND DEPTH 1400mm
TYPE 4	MASS CONCRETE 450mm DIA ROUND DEPTH 1750mm	MASS CONCRETE 600mm DIA ROUND DEPTH 1550mm



CONCRETE SOUNDBLOK VERT 100 FINISH TO ROAD SIDE.
THE REAR FINISH (FACING PROPERTY) IS A SMOOTH CONCRETE FINISH PAINTED RAL 6003.





NOTES:

ALL STEEL COLUMNS AND FIXINGS TO BE GALVANISED

STEEL COLUMNS TO EXTEND DOWN TO 200mm ABOVE BOTTOM OF CONCRETE FOUNDATIONS

GRAVEL BOARD HEIGHT- 100MM
FENCE HEIGHT - 3000MM

FENCE PANEL COLOUR: RAL 6003 OLIVE GREEN

0 1 2 3 4 5

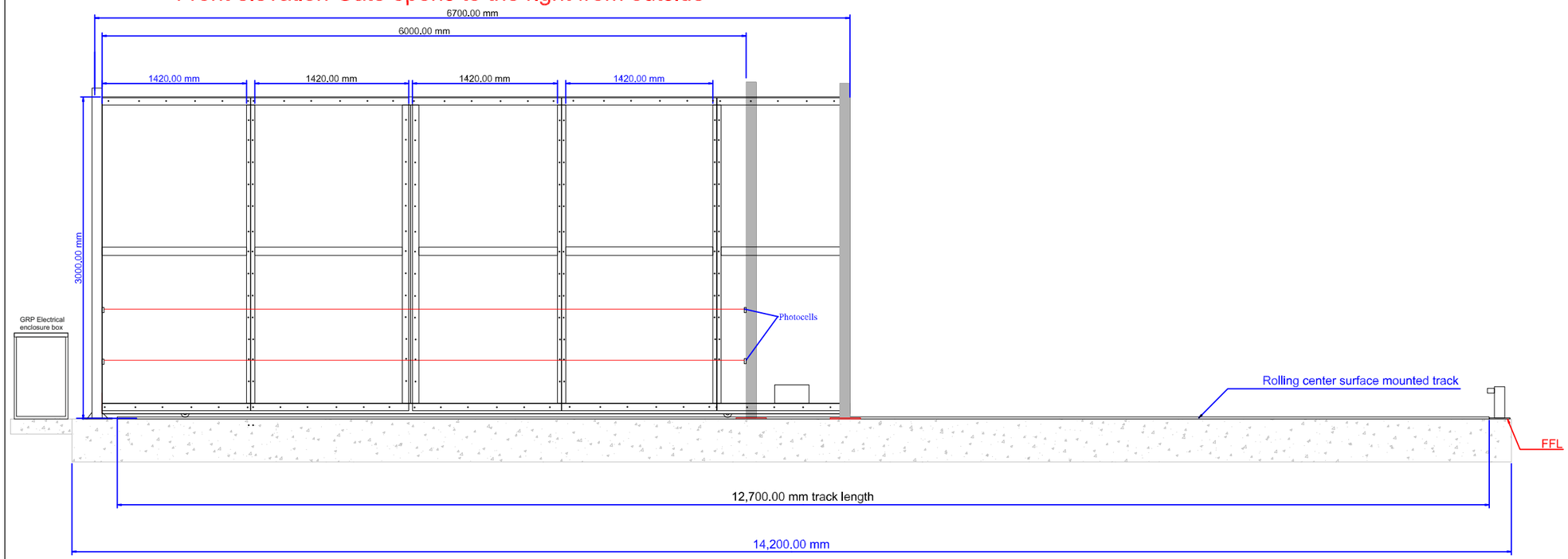
Scale: 1:75@A3

Medworth CHP Limited
Medworth Energy from Waste Combined Heat and Power Facility
Requirement 2 / Work No.10 (Acoustic fence)

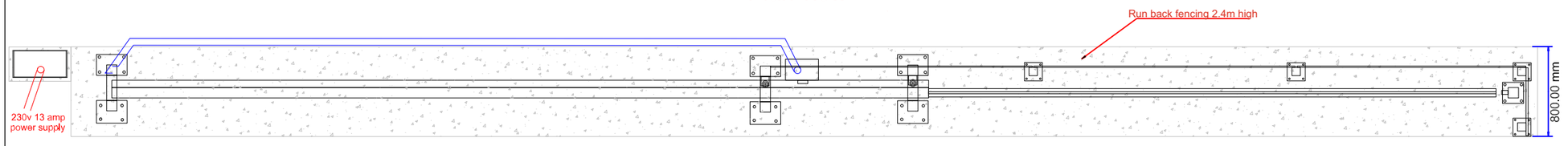
Acoustic Fence (including entrance gate) 2 of 2

April 2025 Drawing Ref: CP1_R2_007_REV_1.0

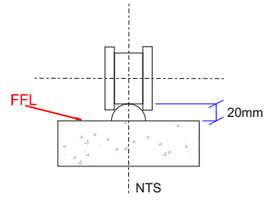
Front elevation Gate opens to the right from outside



Plan view



Gate runner detail



Gate specification

80x80 gate frame
3mm galvanised sheets
120x80 bottom bar
50x50 guide angle
120x120 support post
120x120 catch post

Automation

Compliant to BS/EN 12453
NICE Run 2500I Drive Motor
3no Safety edges/ ASO 65mm
2no Set of safety photocells
GRP Electrical enclosure box (green)
230V 13A power supply

Finish: HD Galv and PPC

Colour: RAL 6003 OLIVE GREEN

Material: Mild steel

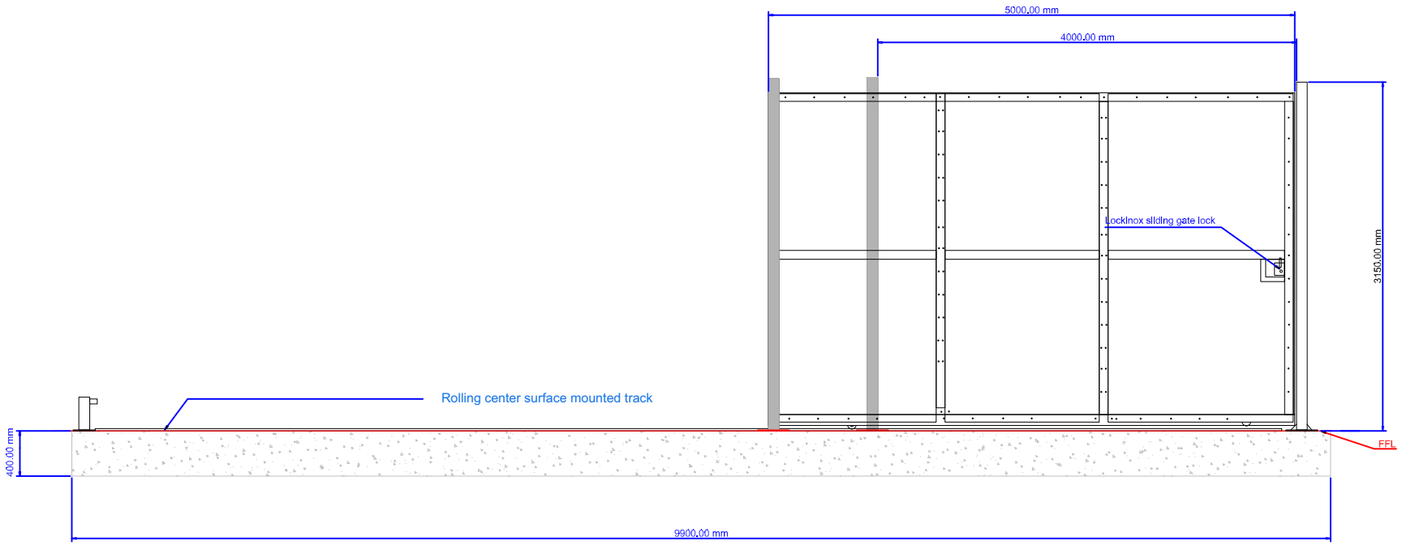
FFL - FINISHED FLOOR LEVEL
(TO EXISTING GROUND LEVELS)

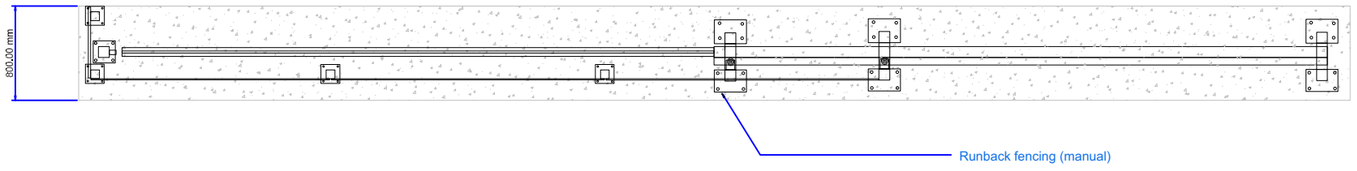
Medworth CHP Limited
Medworth Energy from Waste Combined Heat and Power Facility
Requirement 2 / Work No.10 (Acoustic fence)

Automated track sliding entrance gate

April 2025 Drawing Ref: CP1_R2_008_REV_1.0

Side elevation Gate opens to the left from outside





Plan view

Gate specification

80x80 gate frame
3mm galvanised sheets
120x80 bottom bar
50x50 guide angle
120x120 support post
120x120 catch post

Locking: Lockinox sliding gate lock

Finish: HD Galv and PPC

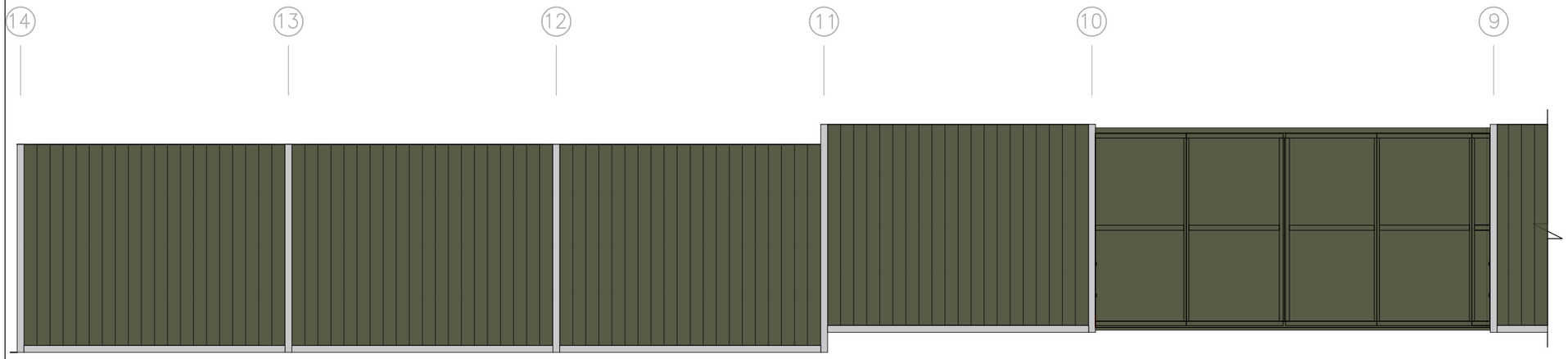
Colour: RAL 6003 OLIVE GREEN

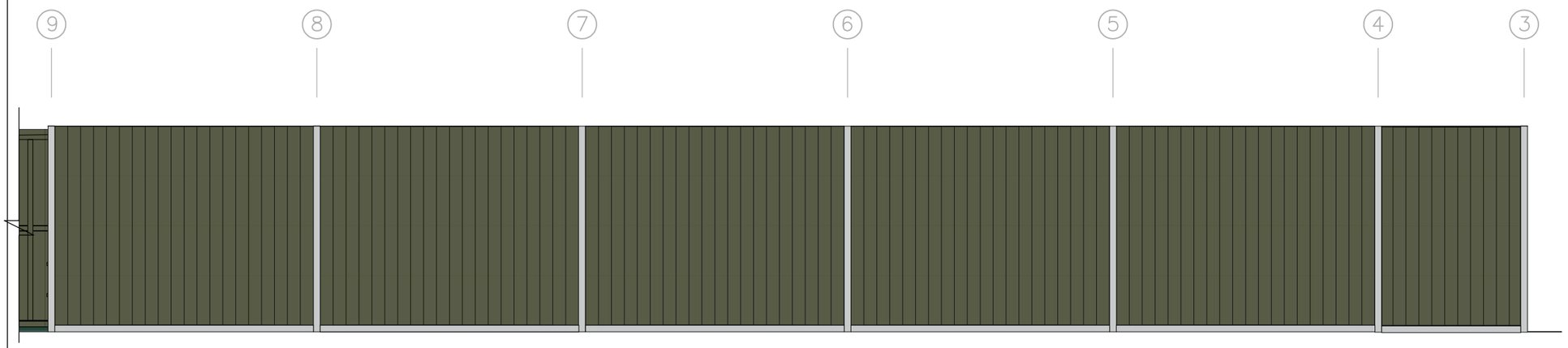
Material: Mild steel

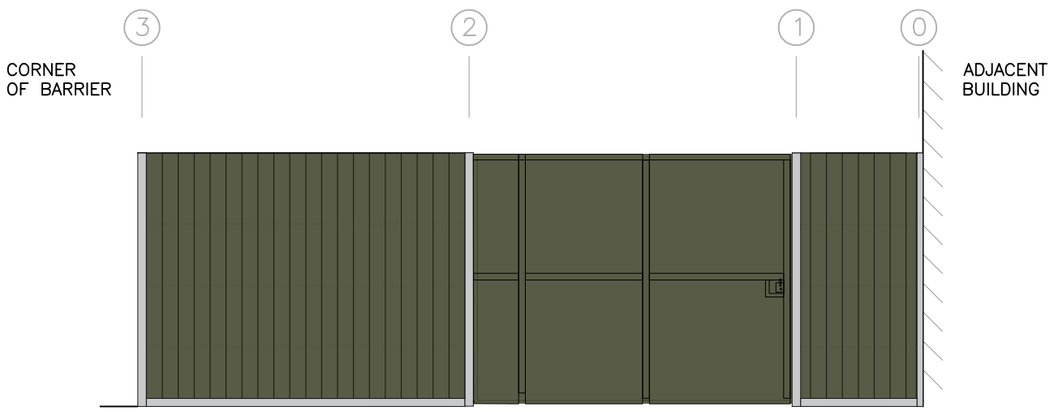
Medworth CHP Limited
Medworth Energy from Waste Combined Heat and Power Facility
Requirement 2 / Work No.10 (Acoustic fence)

Manual tracked sliding side gate

April 2025 Drawing Ref: CP1_R2_009_REV_1.0







NOTES:
FENCE PANELS AND GATE COLOUR:
RAL 6005 MOSS GREEN

ALL STEEL BARRIER POSTS, GATES AND GATE FRAMES TO BE HOT DIP GALVANIZED FINISH TO BS STANDARDS.

STEEL SHEET CLADDING TO GATES TO BE POWDER COATED RAL 6003 OLIVE GREEN TO MATCH CONCRETE ACOUSTIC FENCE

SHADES/COLOURS MAY DIFFER SLIGHTLY DUE TO THE DIFFERENCE IN FINISH ON CONCRETE PRODUCTS AND STEEL

SEE DRAWING REF: CP1_R2_001_REV_1.0 FOR POST NUMBER REFERENCES

0 1 2 3 4 5

Scale: 1:75@A3

Medworth CHP Limited
Medworth Energy from Waste Combined Heat and Power Facility
Requirement 2 / Work No.10 (Acoustic fence)

Appearance from New Bridge Lane

April 2025 Drawing Ref: CP1_R2_010_REV_1.0