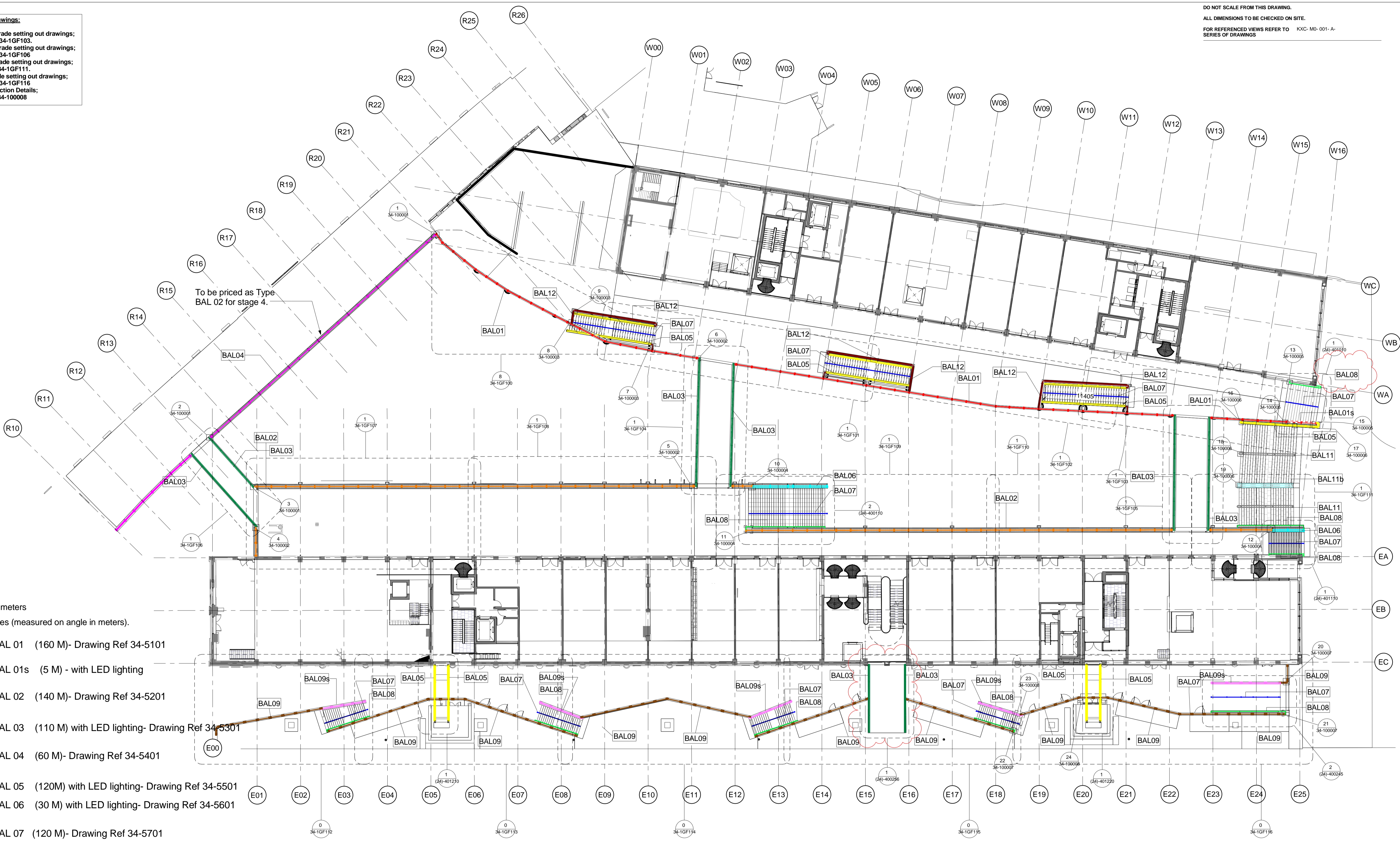


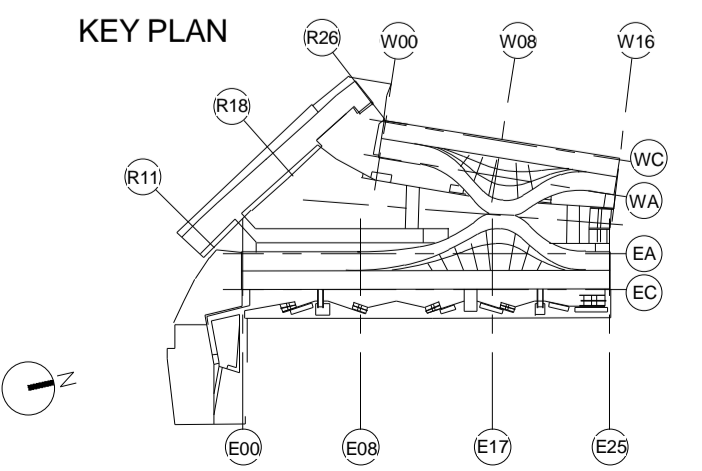
Reference Drawings:
 WCDV Balustrade setting out drawings;
 34-1GF100 to 34-1GF103.
 Bridge Balustrade setting out drawings;
 34-1GF104 to 34-1GF106
 ECDV Balustrade setting out drawings;
 34-1GF107 to 34-1GF111.
 LSS Balustrade setting out drawings;
 34-1GF112 to 34-1GF116
 Balustrade Junction Details;
 34-100001 to 34-100008

DO NOT SCALE FROM THIS DRAWING.
 ALL DIMENSIONS TO BE CHECKED ON SITE.
 FOR REFERENCED VIEWS REFER TO SERIES OF DRAWINGS KXC-M0-001-A-



- Key**
 Balustrades in meters
 Stair Balustrades (measured on angle in meters).
- BAL 01 (160 M)- Drawing Ref 34-5101
 - - - BAL 01s (5 M) - with LED lighting
 - BAL 02 (140 M)- Drawing Ref 34-5201
 - BAL 03 (110 M) with LED lighting- Drawing Ref 34-5301
 - BAL 04 (60 M)- Drawing Ref 34-5401
 - BAL 05 (120M) with LED lighting- Drawing Ref 34-5501
 - BAL 06 (30 M) with LED lighting- Drawing Ref 34-5601
 - BAL 07 (120 M)- Drawing Ref 34-5701
 - BAL 08 (70 M) with LED lighting- Drawing Ref 34-5801
 - BAL 09 (200 M)- Drawing Ref 34-5901
 - BAL 09s (45m) with LED lighting- Drawing Ref 34-5902
 - BAL 11 (20 M) - Drawing Ref 34-51201
 - - - BAL 11B (10 M) -With Led Lighting Drawing Ref 34-51201
 - BAL 12 (42M) - Similar to BAL03 without handrail/LED lighting

rev	by	chk	date	description
012	VH	DGW	23/06/17	Updated to suit comments. Access bridge changed to Type 05. WCD M1 stair 1 changed to BAL08
011	VH	DGW	05/05/17	Updated to suit comments dated 16.02.17. BAL12 added, junction detail numbers amended.
010	TM	MB	09/03/17	Updated as clouded. Added type 11B and 01B. Removed led lighting from type 11
009	VH	MB	03-02-17	Updated further to instruction to Change - Type 5B added - Type 10 omitted, legend amended.



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project COAL DROPS YARD

Proposed Viaduct Level - Public Realm Balustrade Types

Construction

As indicated @ A1

date 13/10/15

checked MWB

design 4389

KXC-M0-001-BD4389-A-34-1GF

BAM job no. 4389

drawn PD

checked MWB

design 4389

rev S4

012

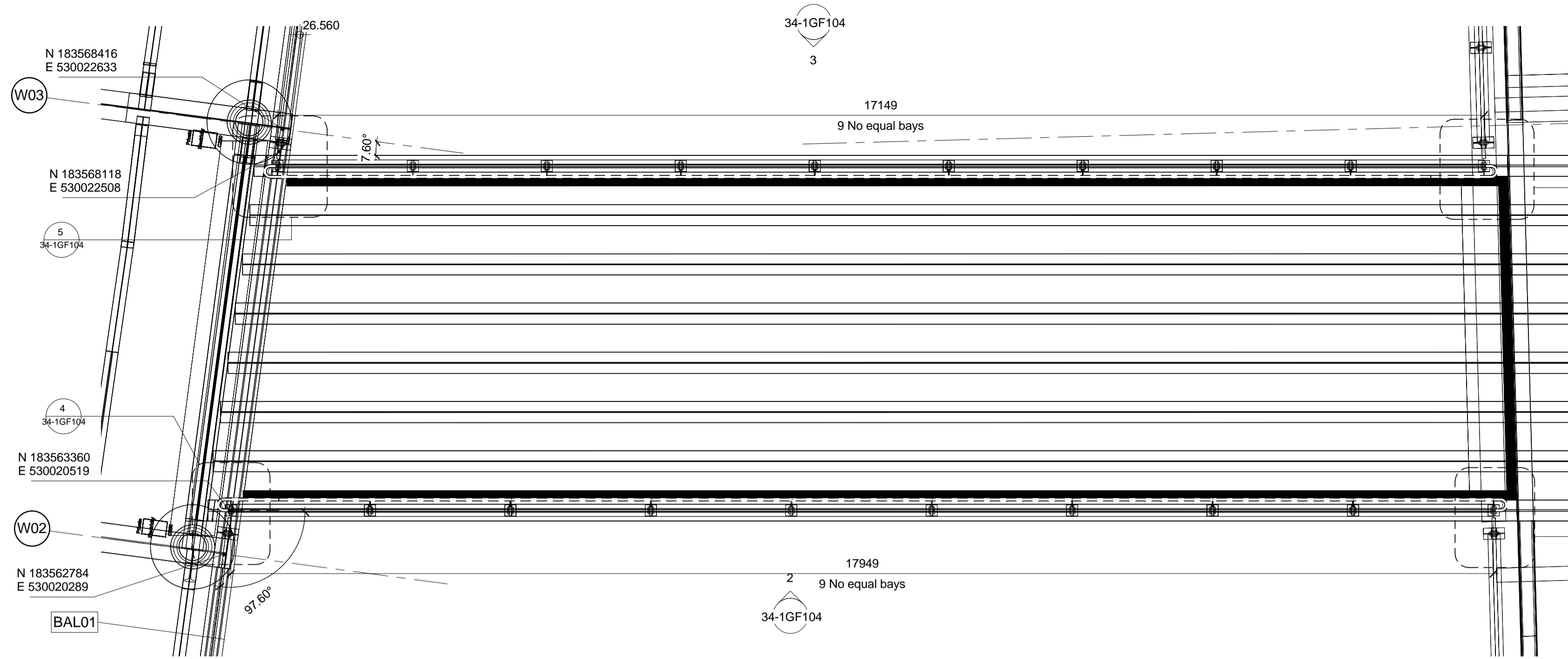
purpose of issue

dig. status

0127 864200

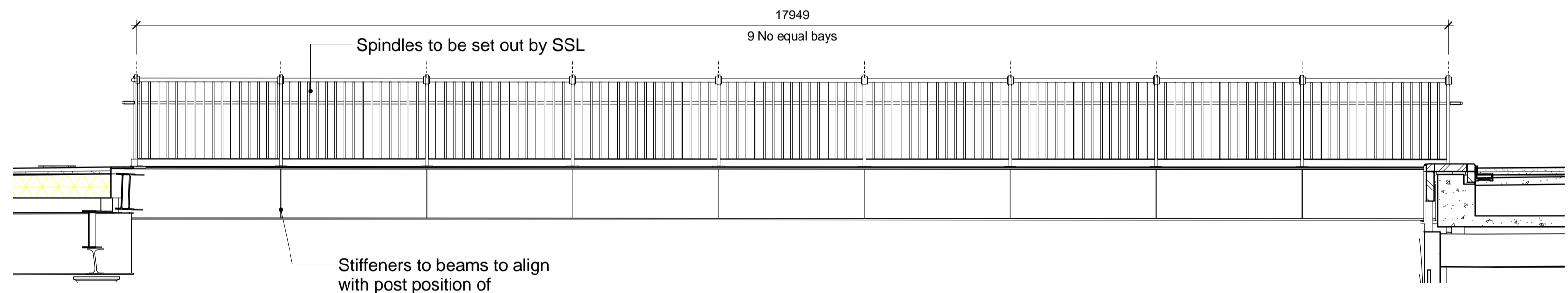
design@bam.co.uk

www.bam.co.uk



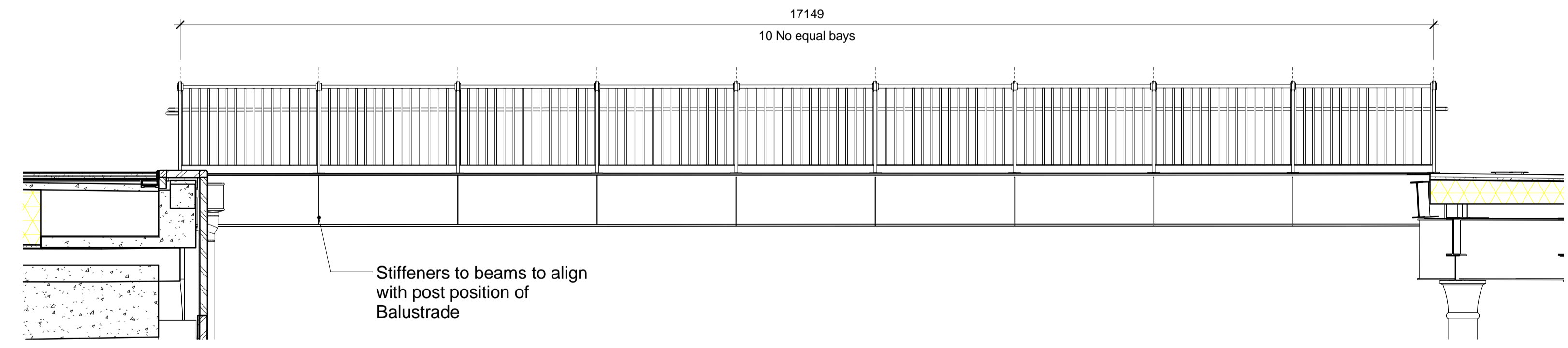
GF VIADUCT LEVEL - South Bridge Balustrade Set out

1
1 : 50



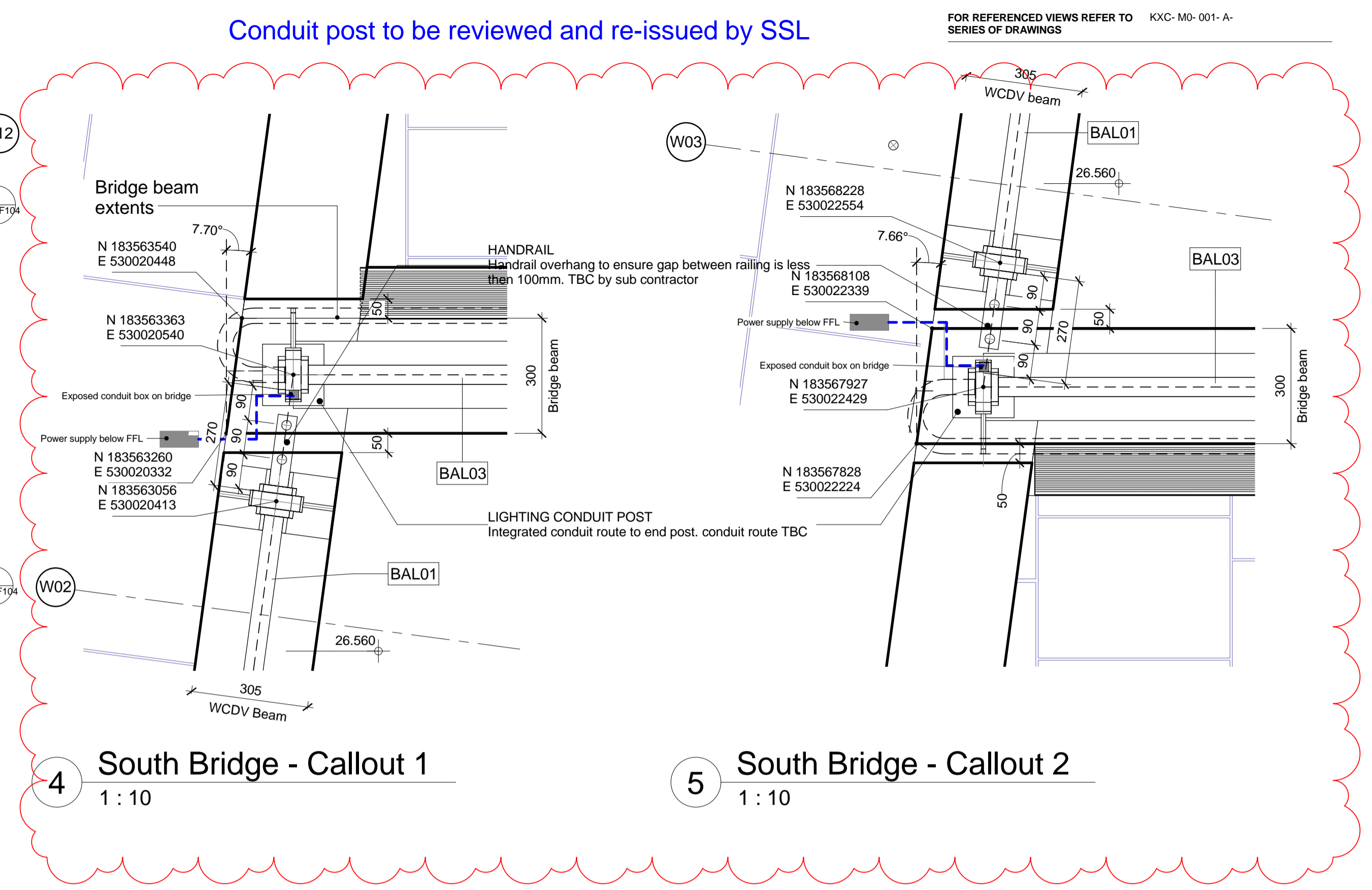
SOUTH BRIDGE - South Elevation

2
1 : 50



SOUTH BRIDGE - North Elevation

3
1 : 50

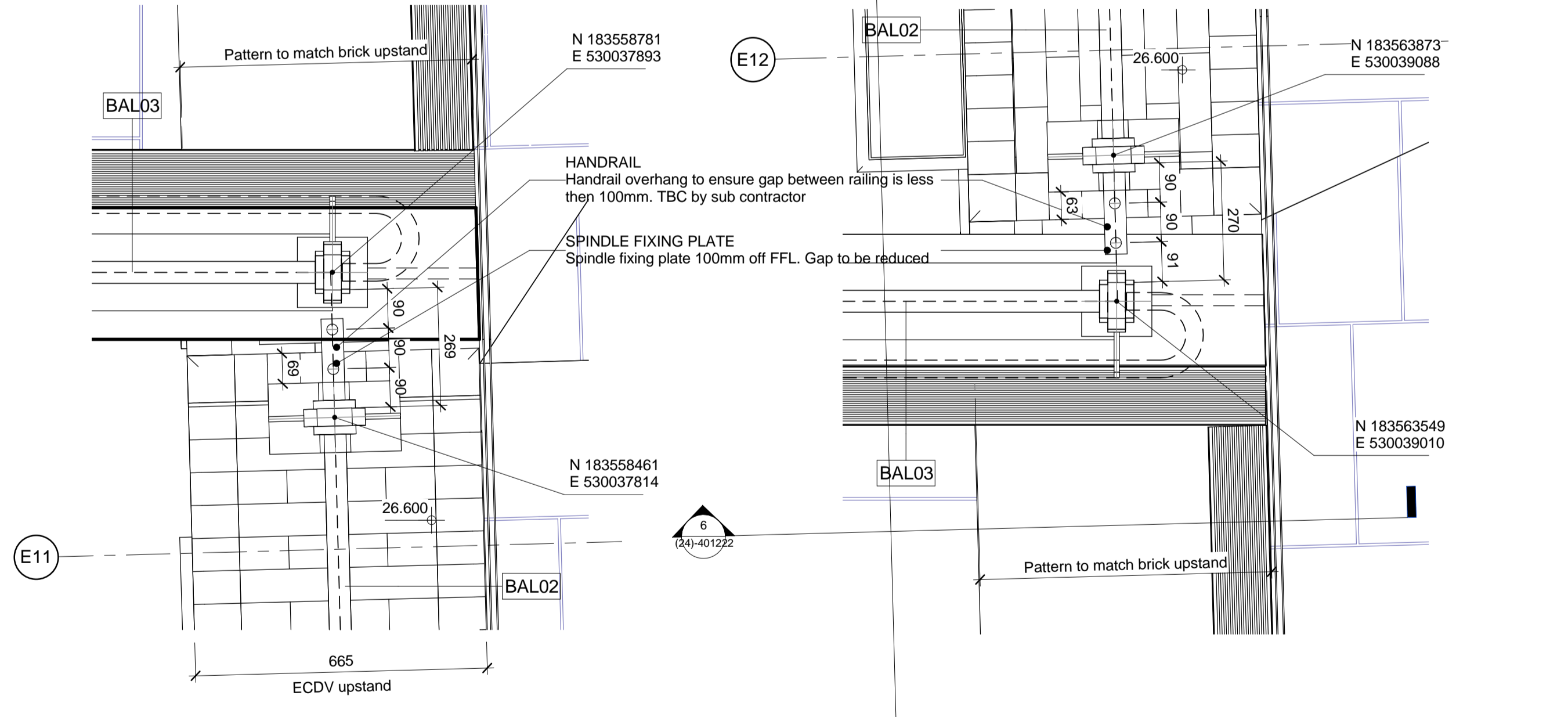


South Bridge - Callout 1

4
1 : 10

South Bridge - Callout 2

5
1 : 10



South Bridge - Callout 3

6
1 : 10

South Bridge - Callout 4

7
1 : 10

Status Code (as defined in BS1192)
 D3 - Issued for contractor design
 D4 - Issued for manufacture/procurement

Work In Progress (WIP)
 S0 - Initial Status or WIP

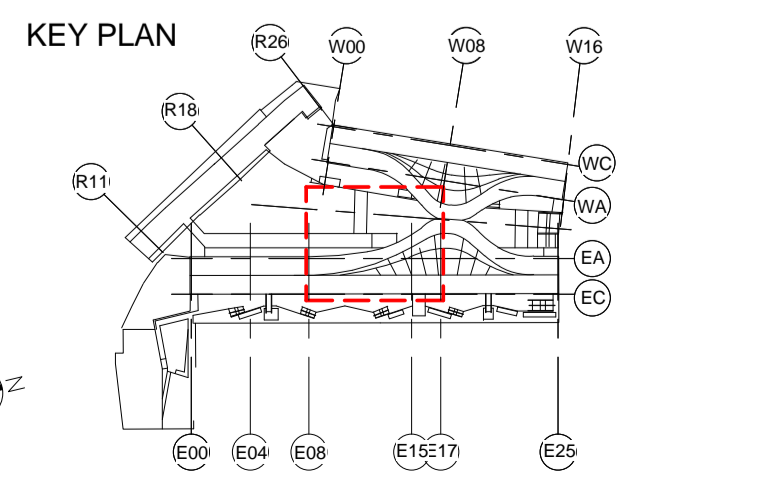
Shared
 S1 - Issued for co-ordination
 S2 - Issued for information
 S3 - Issued for internal review
 S4 - Issued for construction approval

Documentation (Pre-construction)
 D1 - Issued for costing
 D2 - Issued for tender

Documentation (Contractual)
 A - Issued for construction
 B - Issued for construction but with comments
 C - Comprehensive revision required

Archive
 AB - Record Drawing

rev	by	chkd	date	description
003	VH	JC	04.07.17	Updated to suit comments 08.06.17 spindle dims amended to 90mm as general bridge rule
002	VH	JC	23.05.17	Updated to suit comments 06.04.17. cantilevered handrail added to junctions



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 01727 898200
 design@bam.co.uk
 www.bam.co.uk

project **COAL DROPS YARD**

title **M0-Viaduct Bridge Balustrade set out - South Bridge**

purpose of issue **CONSTRUCTION**

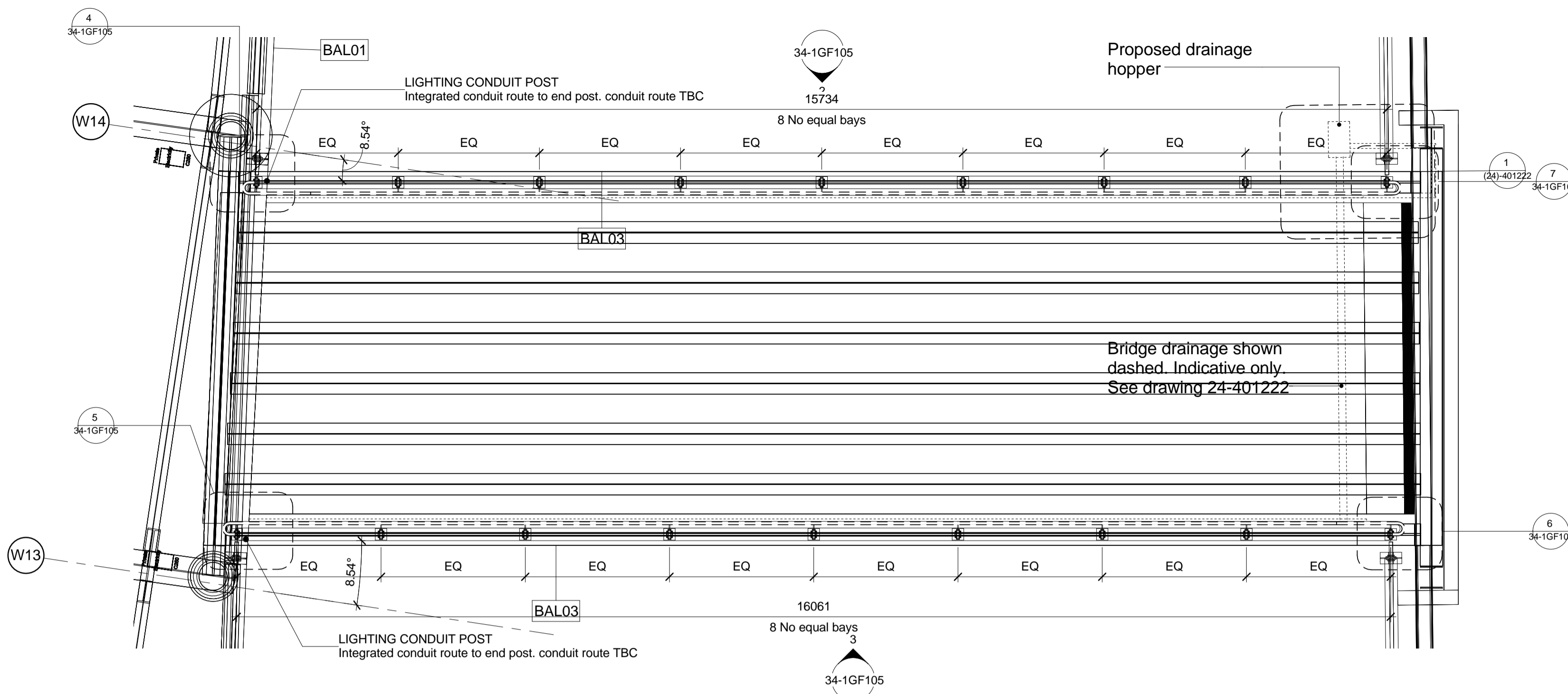
scale **As indicated @ A1** draw **AM** BAM job no. dig. status

date **03/24/17** checked **DW** **4389** **S4**

site **KXC-M0-001-BD4389-A-34-1GF104** rev

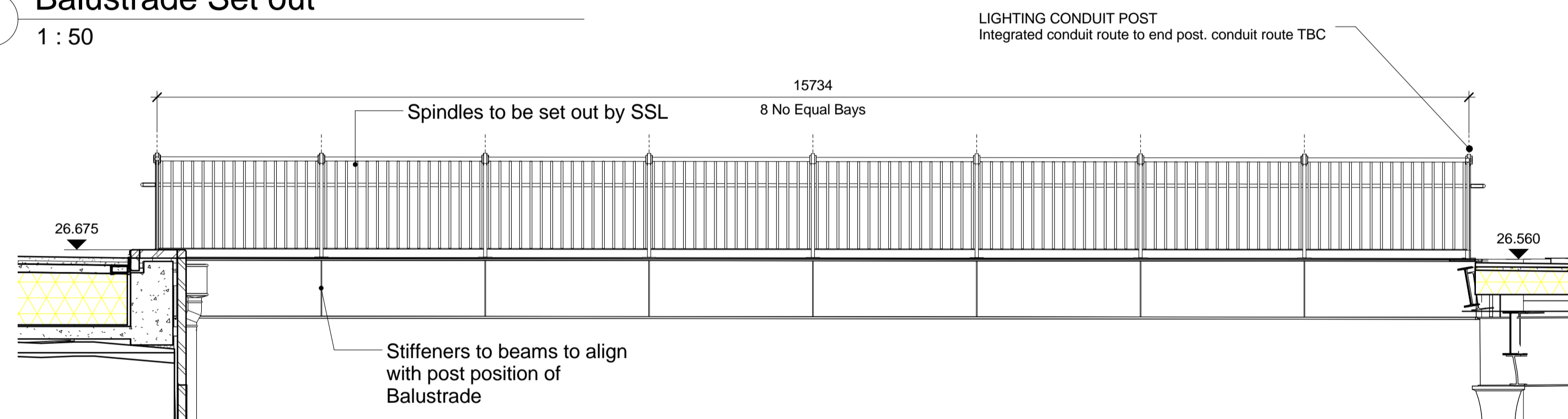
design/ doc. ref **003**

Conduit post to be reviewed and re-issued by SSL



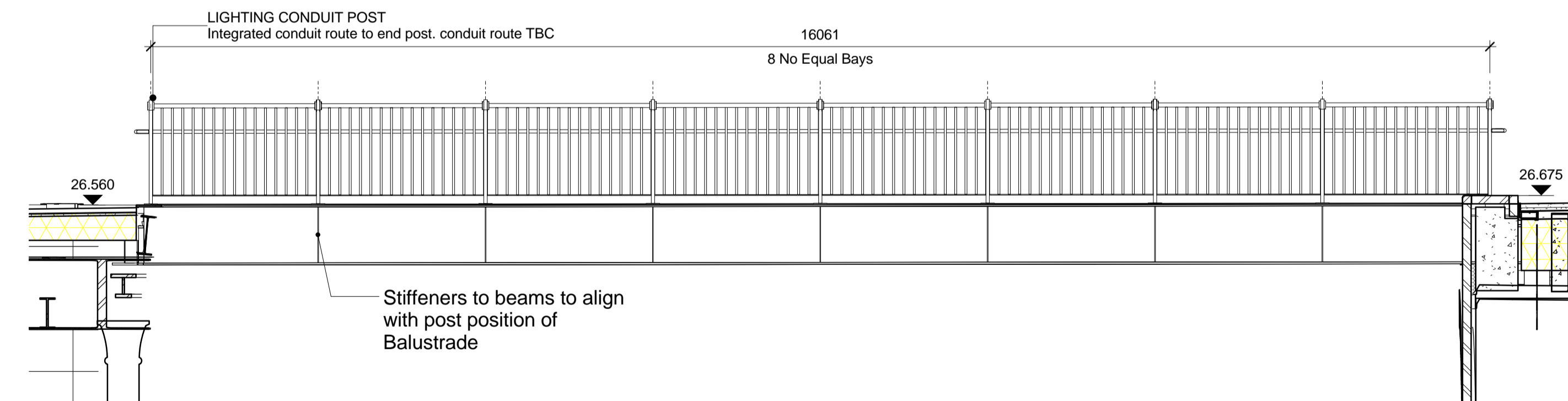
**GF VIADUCT LEVEL - North Bridge
 Balustrade Set out**

1 : 50



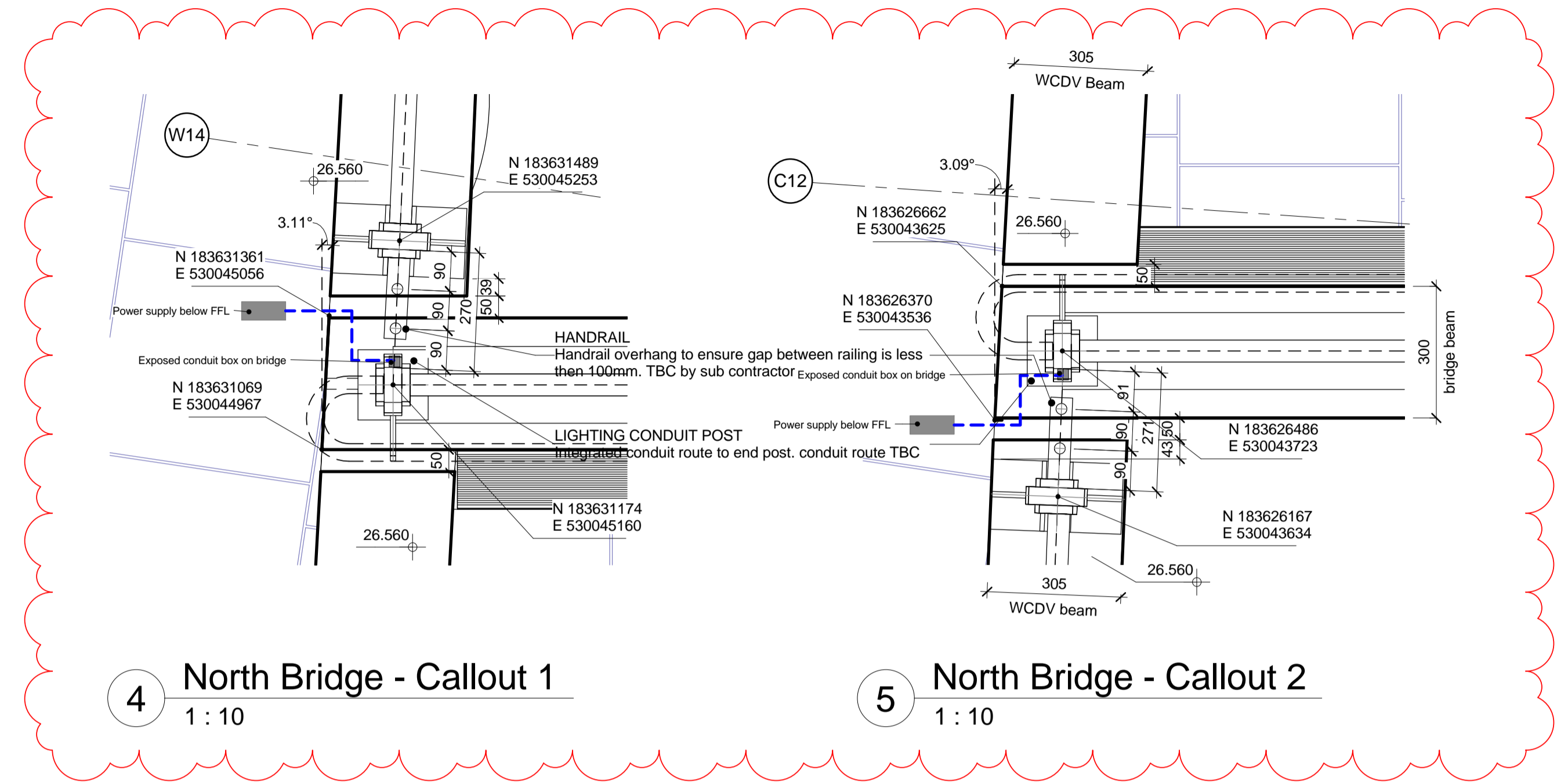
NORTH BRIDGE - South Elevation

1 : 50



NORTH BRIDGE - North Elevation

1 : 50

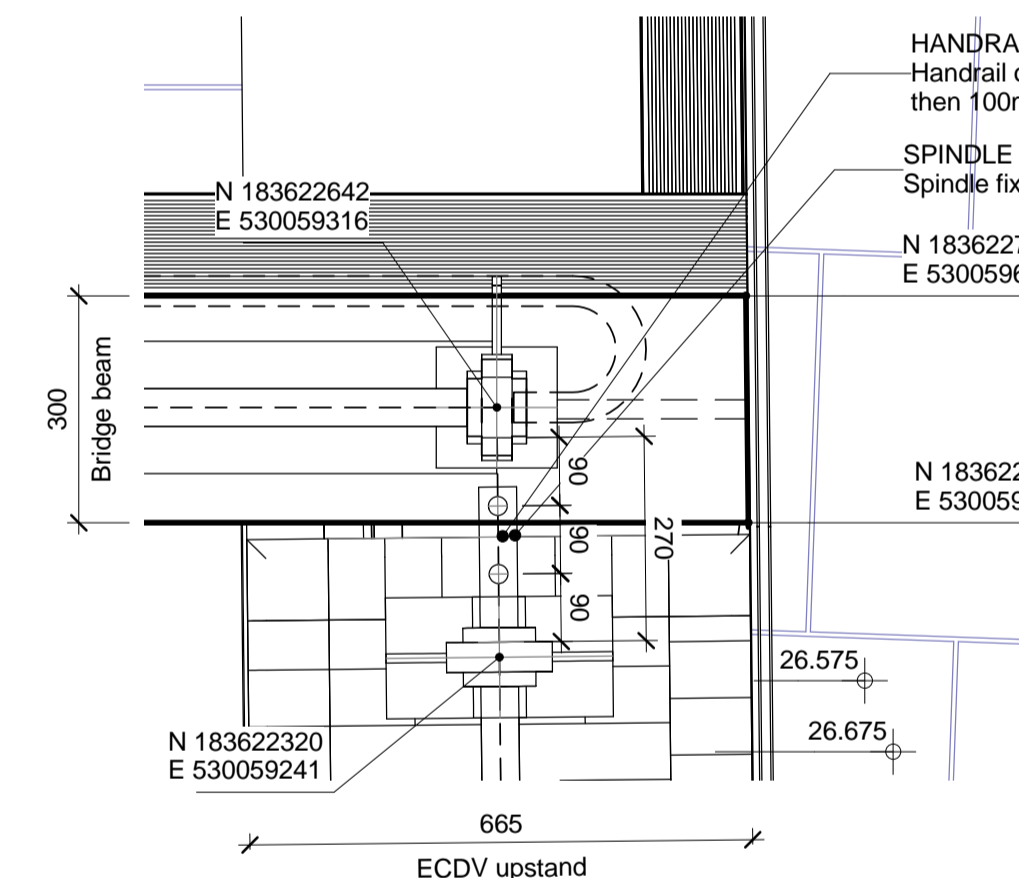


North Bridge - Callout 1

1 : 10

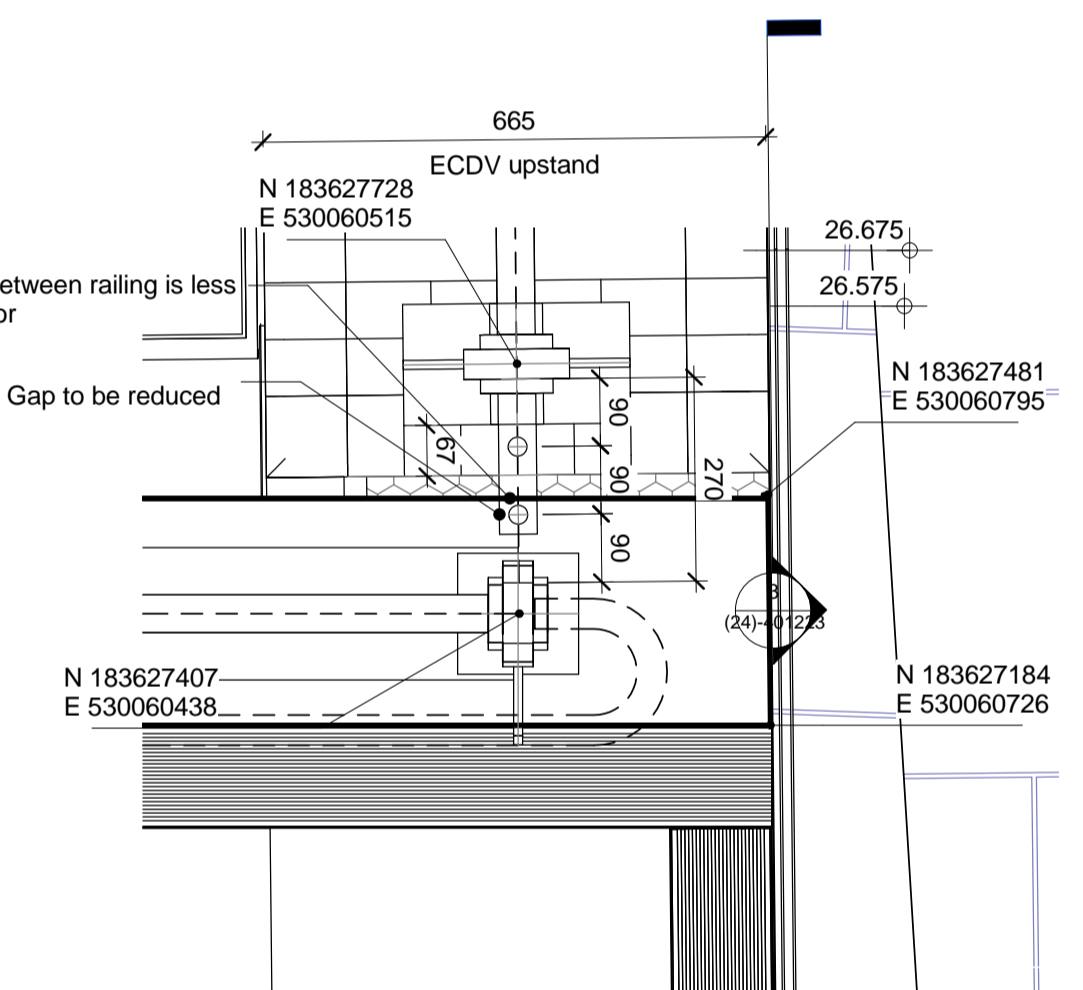
North Bridge - Callout 2

1 : 10



North Bridge - Callout 3

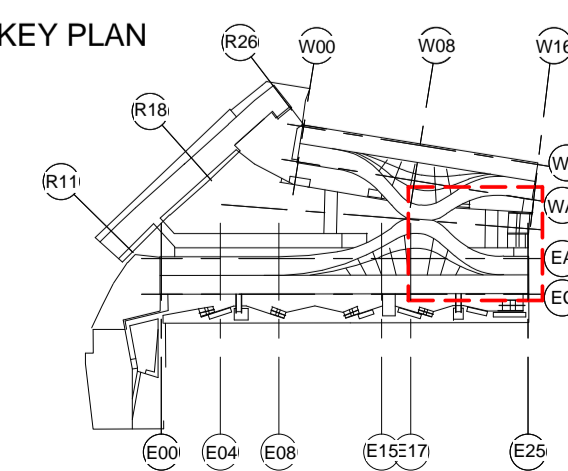
1 : 10



North Bridge - Callout 4

1 : 10

KEY PLAN



rev	by	chkd	date	description
003	VH	JC	04.07.17	Updated to suit comments 08.06.17 spindle dims amended to 90mm as general bridge rule
002	VH	JC	23.05.17	Updated to suit comments 06.04.17. cantilevered handrail added to junctions



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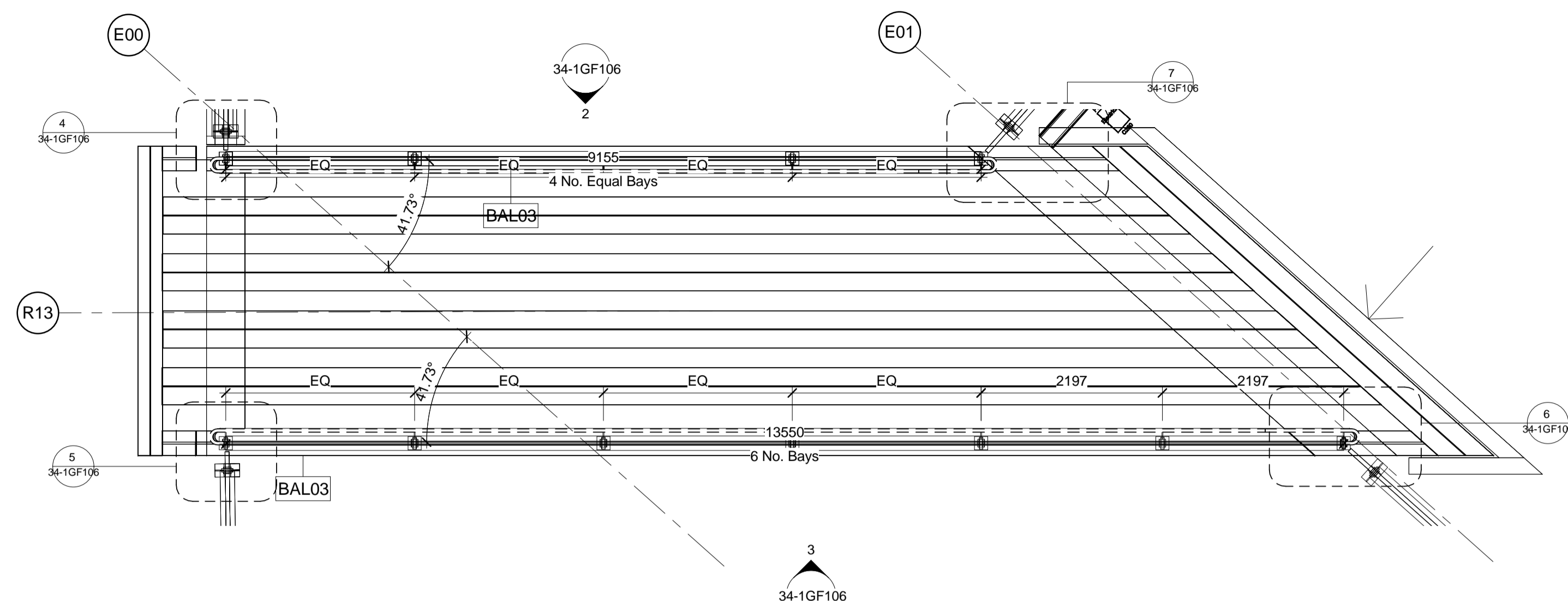
project COAL DROPS YARD

M0-Viaduct Bridge Balustrade set out - North Bridge

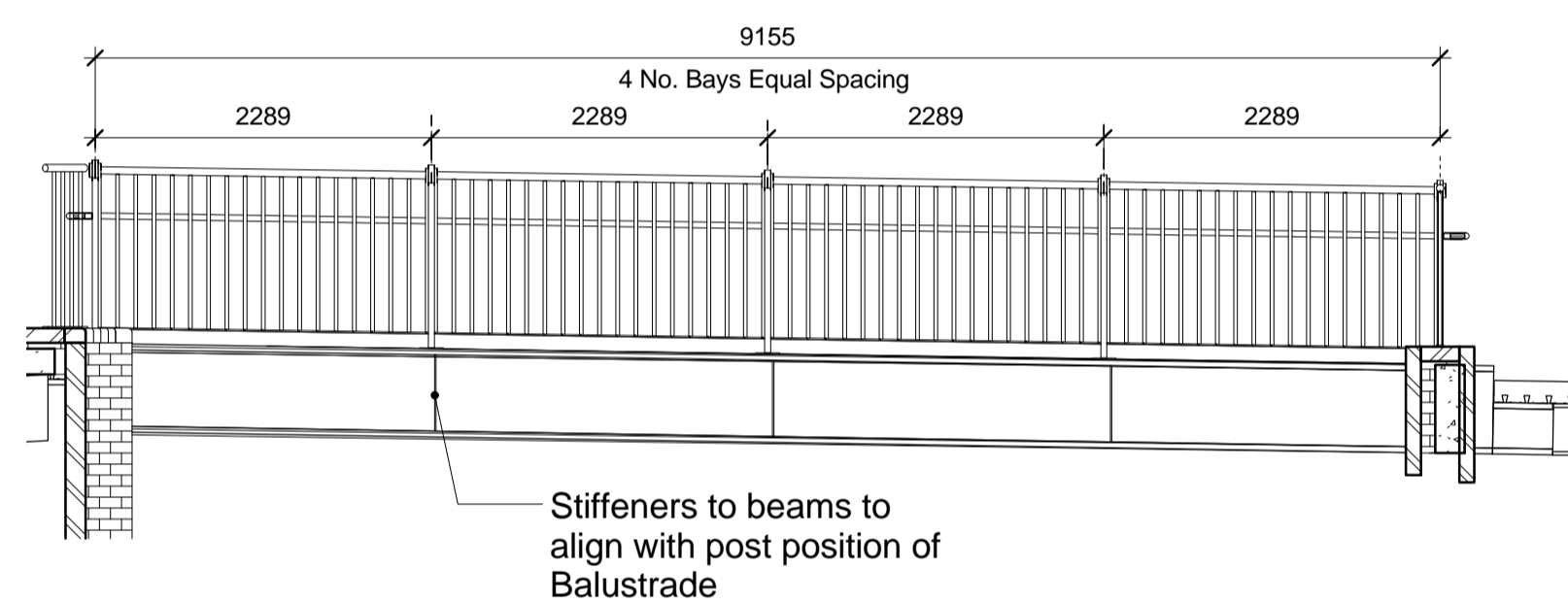
CONSTRUCTION

scale As indicated @ A1
 date 03/27/17
 drafter AM
 checker DW
 BMM job no. 4389
 rev S4
 design@bam.co.uk
 KXC-M0-001-BD4389-A-34-1GF105 003

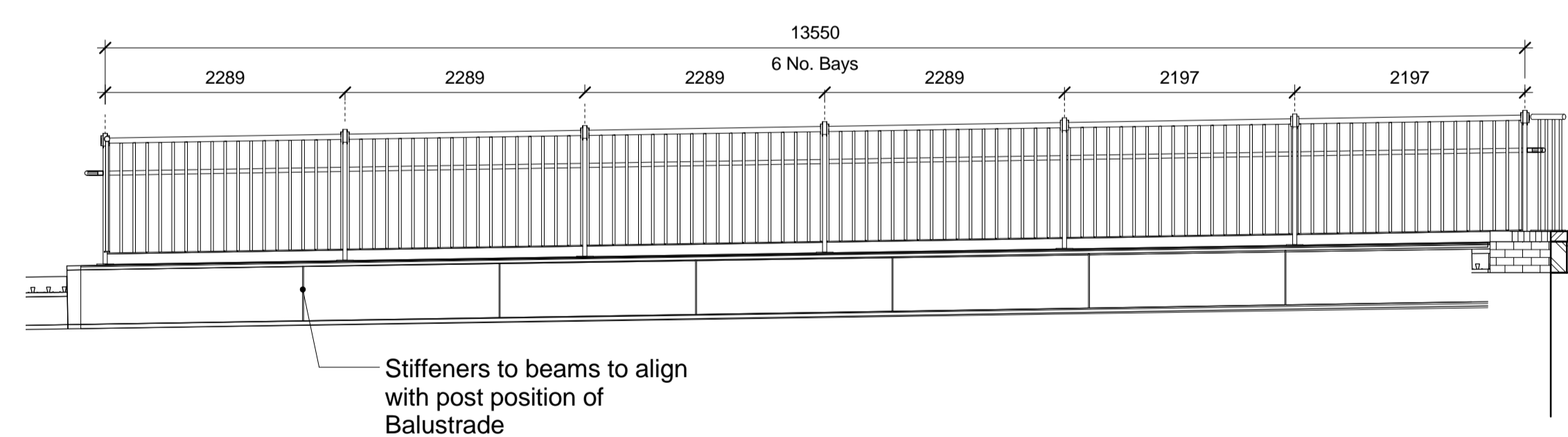
Conduit post to be reviewed and re-issued by SSL



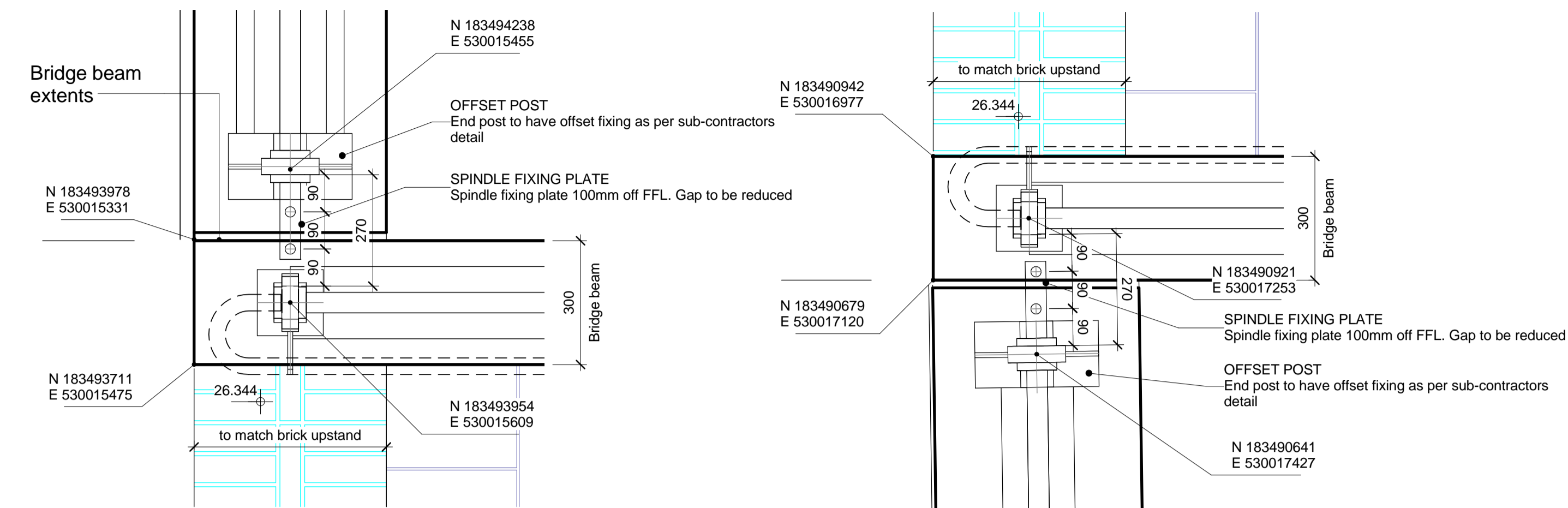
1 GF VIADUCT LEVEL -Yard Bridge Balustrade Set out
 1 : 50



2 YARD BRIDGE - South East Elevation
 1 : 50

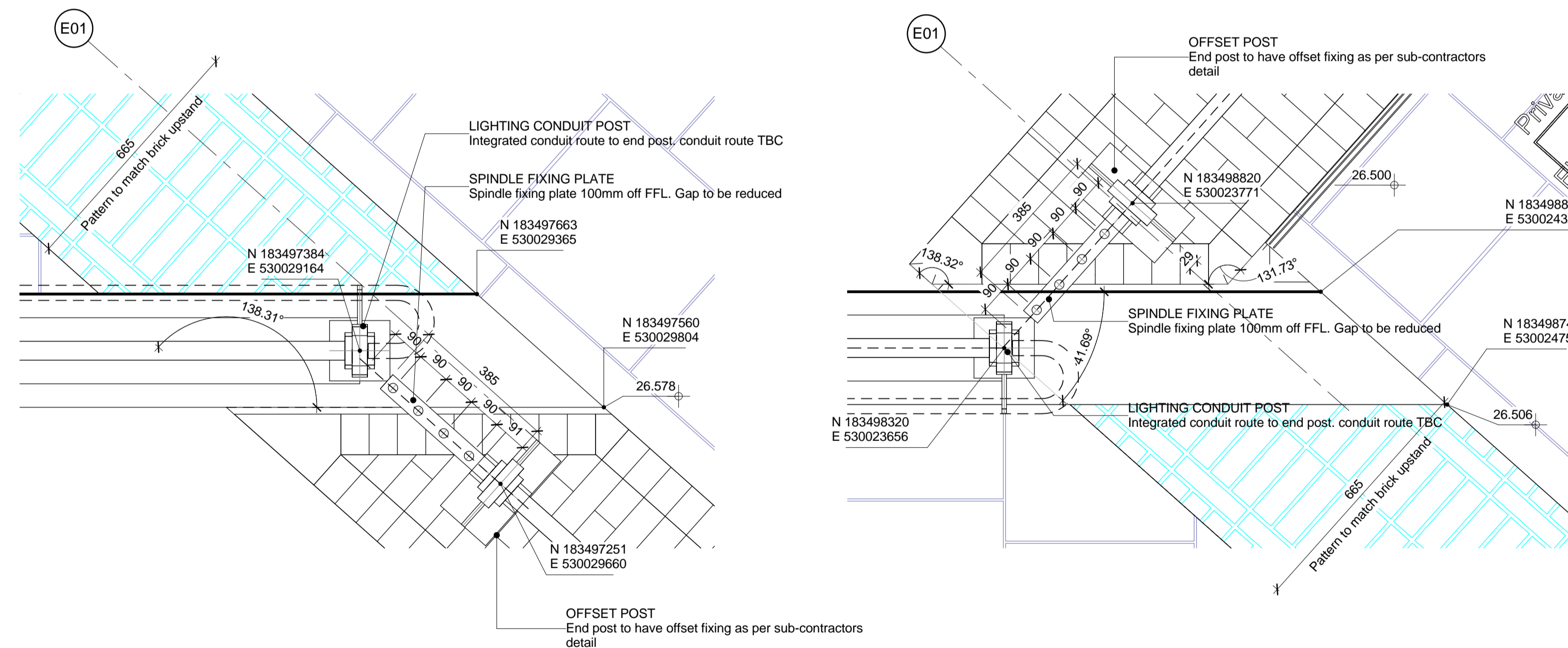


3 YARD BRIDGE - North West Elevation
 1 : 50



4 Yard Bridge - Callout 1
 1 : 10

5 Yard Bridge - Callout 2
 1 : 10



6 Yard Bridge - Callout 3
 1 : 10

7 Yard Bridge - Callout 4
 1 : 10

rev	by	chkd	date	description
003	VH	JC	04.07.17	Updated to suit comments 23.05.17 spindle dims amended to 90mm as general bridge rule
002	VH	JC	15.05.17	Updated to suit comments 06.04.17. cantilevered handrail added to junctions



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project COAL DROPS YARD
 title M0-Viaduct Bridge Balustrade set out - Yard Bridge
 purpose of issue CONSTRUCTION
 scale As indicated @ A1
 drawn AM
 BMM job no.
 date 03/27/17
 checked DW
 4389
 S4
 rev
 design@bam.co.uk
 KXC-M0-001-BD4389-A-34-1GF106 003

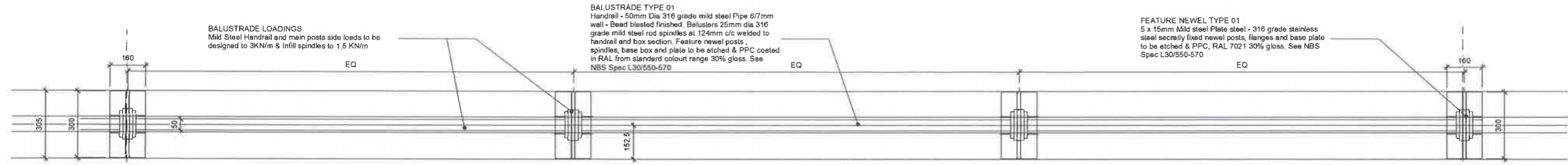
DO NOT SCALE FROM THIS DRAWING.
 ALL DIMENSIONS TO BE CHECKED ON SITE.
 FOR REFERENCED VIEWS REFER TO: KXC-MO-001-A-SERIES OF DRAWINGS

GENERAL NOTES:

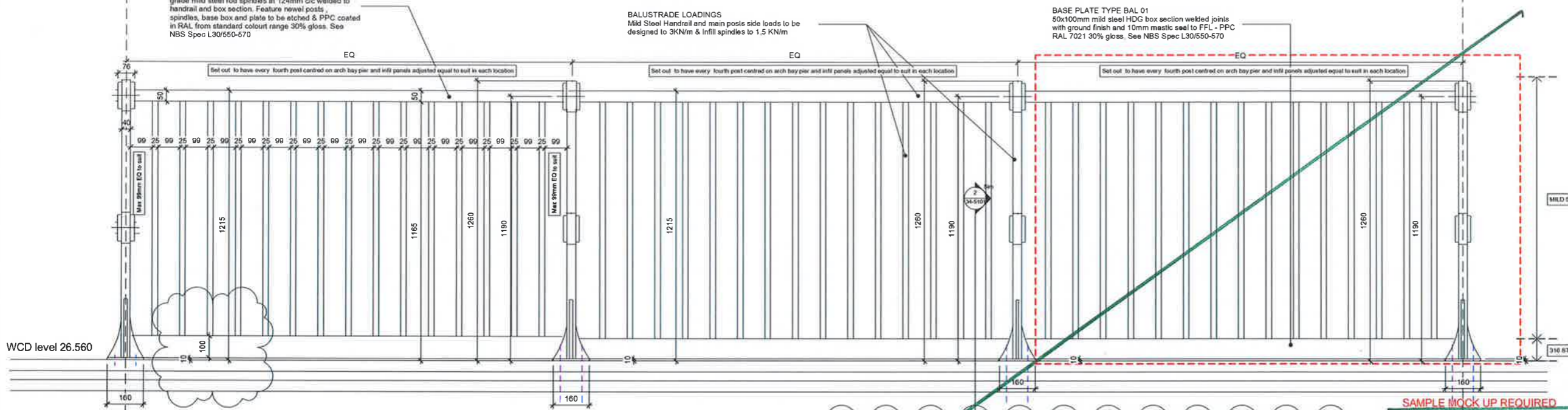
- All fixings are to be by specialist sub-contractor to provided the side loadings of 3kN/m for handrails, posts, infill spindles to 1.5kN/m.
- Handrails to be tubular mild steel with PPC bead blasted finish. RAL 7021
- Bead blasted finish to mild steel guarding and balustrades - surfaces to be etched and PPC, colour RAL 7021 and to be taken from the standard colour range 30% gloss.
- Stair and balustrade design and fixings to be by specified by specialist sub contractor to comply with required loadings, copy of calculations are required to be submitted to BCO.
- All buried support stainless steel to be 316 grade
- Sub contractor to provided adequate protection / separation between different metal types to prevent galvanic or bimetallic action taking place.

WATERPROOFING: KEY LEGEND

- Hydrotech MM6125 system
- Hydrogard 40 protection sheet
- Hot bituminous bonding layer
- Fomglas T4+ layered to fall bonded taped at every layer
- Derbigum Black cap with Hi tec underlay



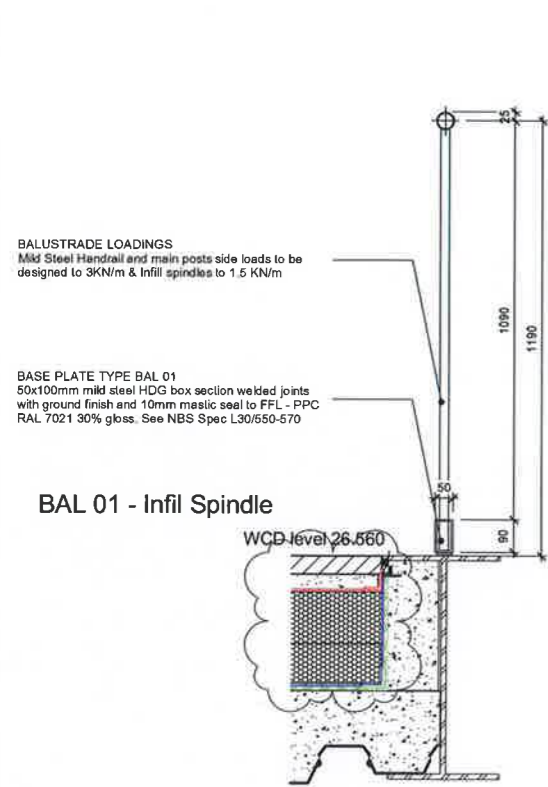
BAL 01 - Plan



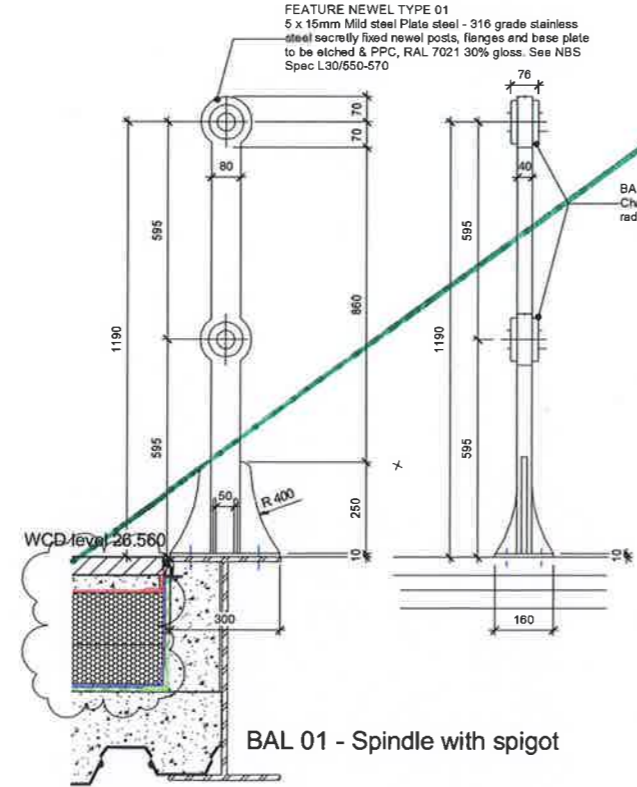
BAL 01 - Elevation

SAMPLE MOCK UP REQUIRED

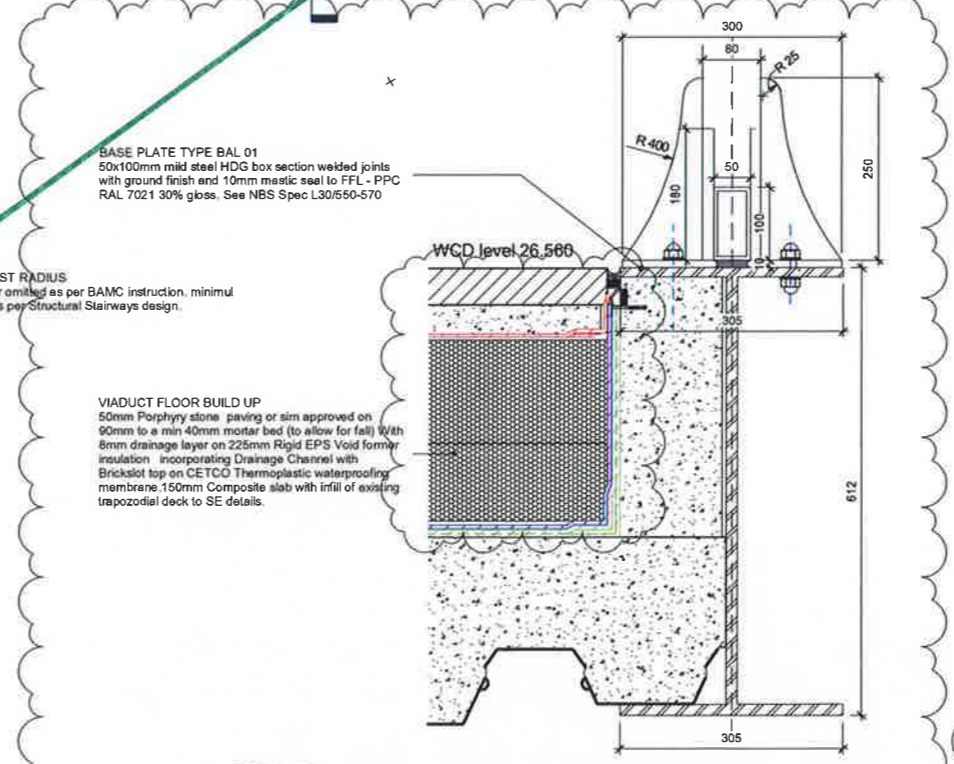
Refer to Structural stairways drawing
 KXC-CDY-MO-001-Y-SSL-'
 34-500



BAL 01 - Infil Spindle

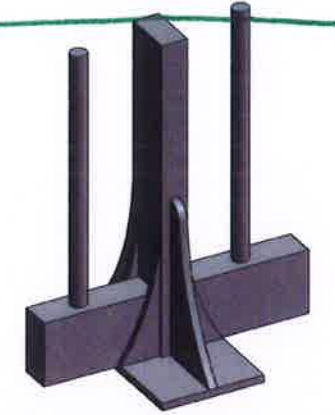


BAL 01 - Spindle with spigot



BAL 01 - Base

3 BAL Base Detail



1 Balustrade Type BAL 01
 1 : 10

008	VH	MB	25/11/16	Updated to suit comments dated 03.08.16.
008	VH	MB	11/08/16	Updated to suit comments dated 28.07.16



PROJECT: COAL DROPS YARD

As Indicated @ A1

Construction

scale: As indicated @ A1
 date: 16/10/15
 checked: MB
 drawn: PD
 BAM job no: 4389
 rev: S4
 009

ARGENT

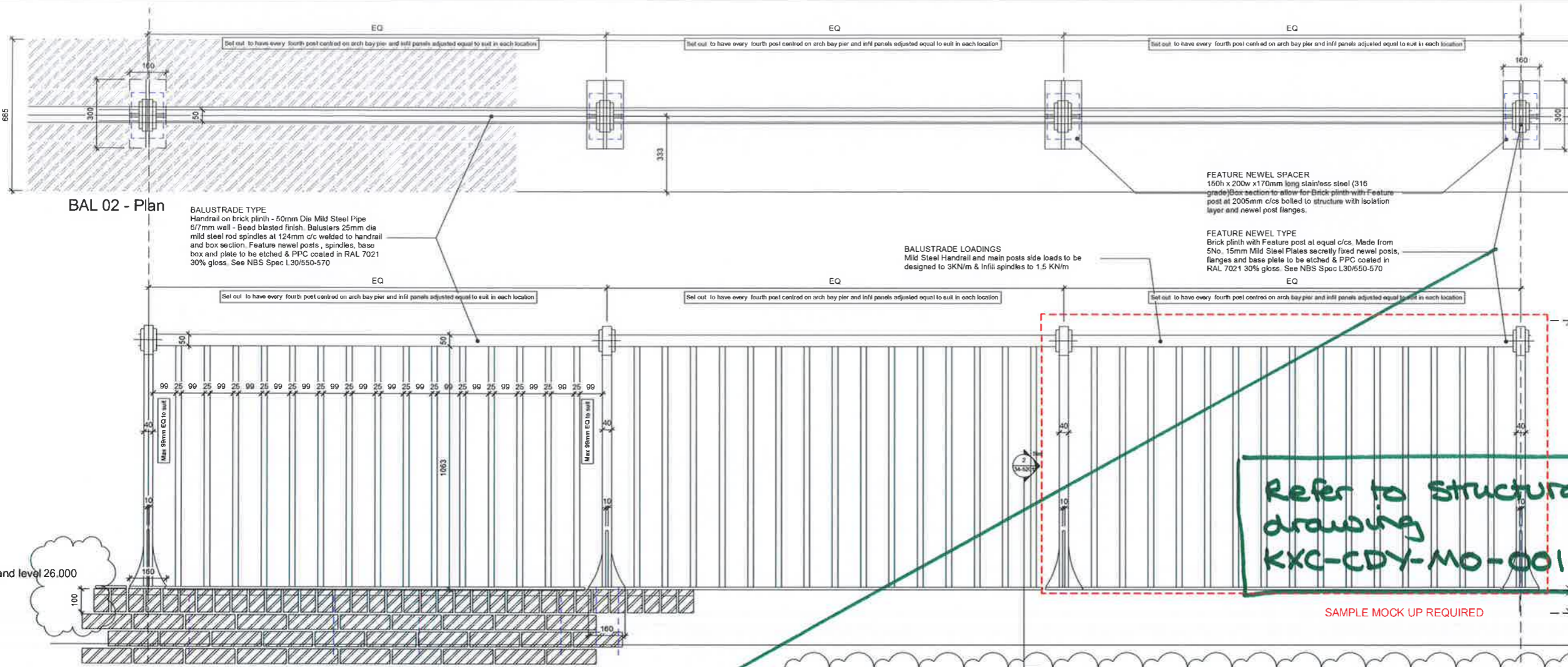
DO NOT SCALE FROM THIS DRAWING.
 ALL DIMENSIONS TO BE CHECKED ON SITE.
 FOR REFERENCED VIEWS REFER TO SERIES OF DRAWINGS

- GENERAL NOTES:**
- All fixings are to be by specialist sub-Contractor provided the side loadings of 3kN/m for handrails, posts, infill spindles to 1.5kN/m.
 - Handrails to be tubular mild steel with PPC bead blasted finish RAL 7021
 - Bead blasted finish to mild steel guarding and balustrades - surfaces to be etched and PPC, colour RAL 7021 and to be taken from the standard colour range 30% gloss.
 - Stair and balustrade design and fixings to be by specialist sub contractor to comply with required loadings, copy of calculations are required to be submitted to BCO.
 - All buried support stainless steel to be 316 grade
 - Sub contractor to provide adequate protection / separation between different material types to prevent electrolysis of bimetallic action taking place.

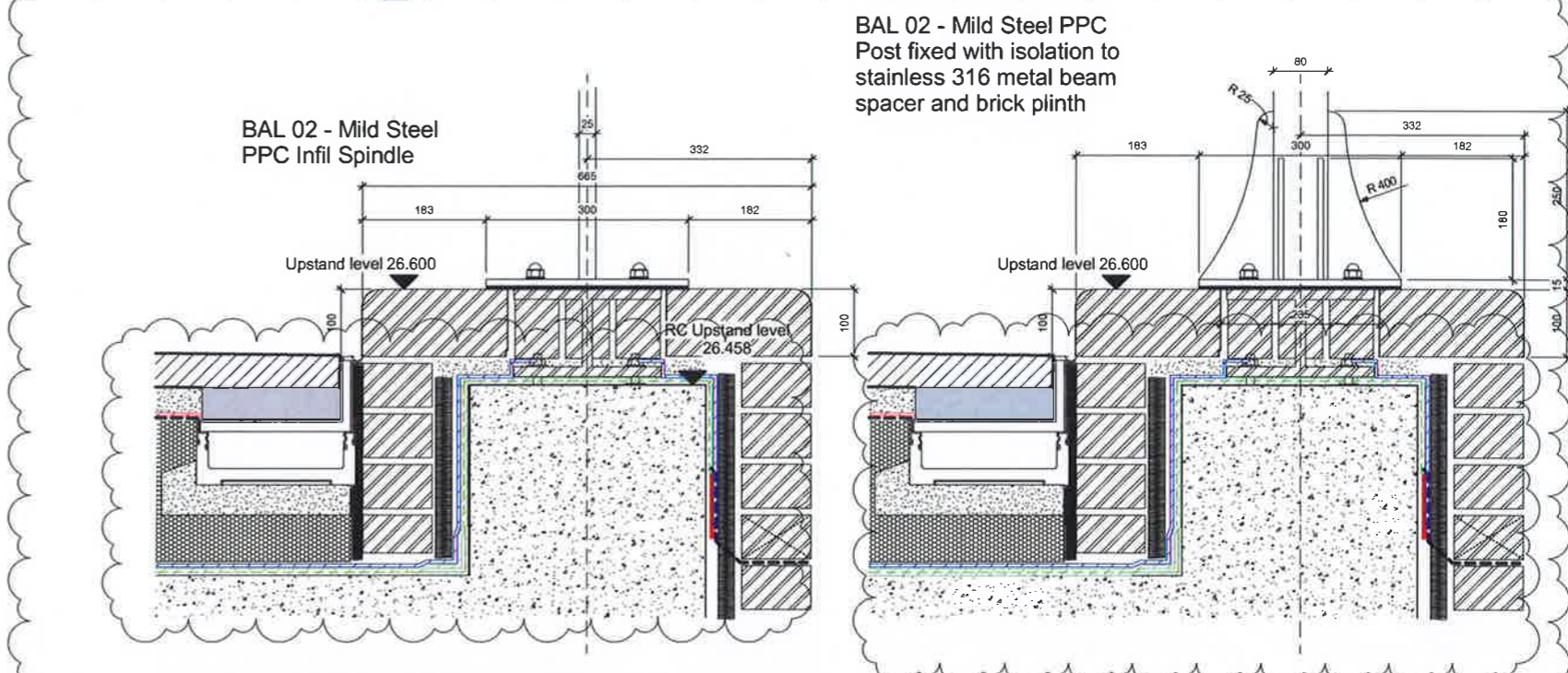
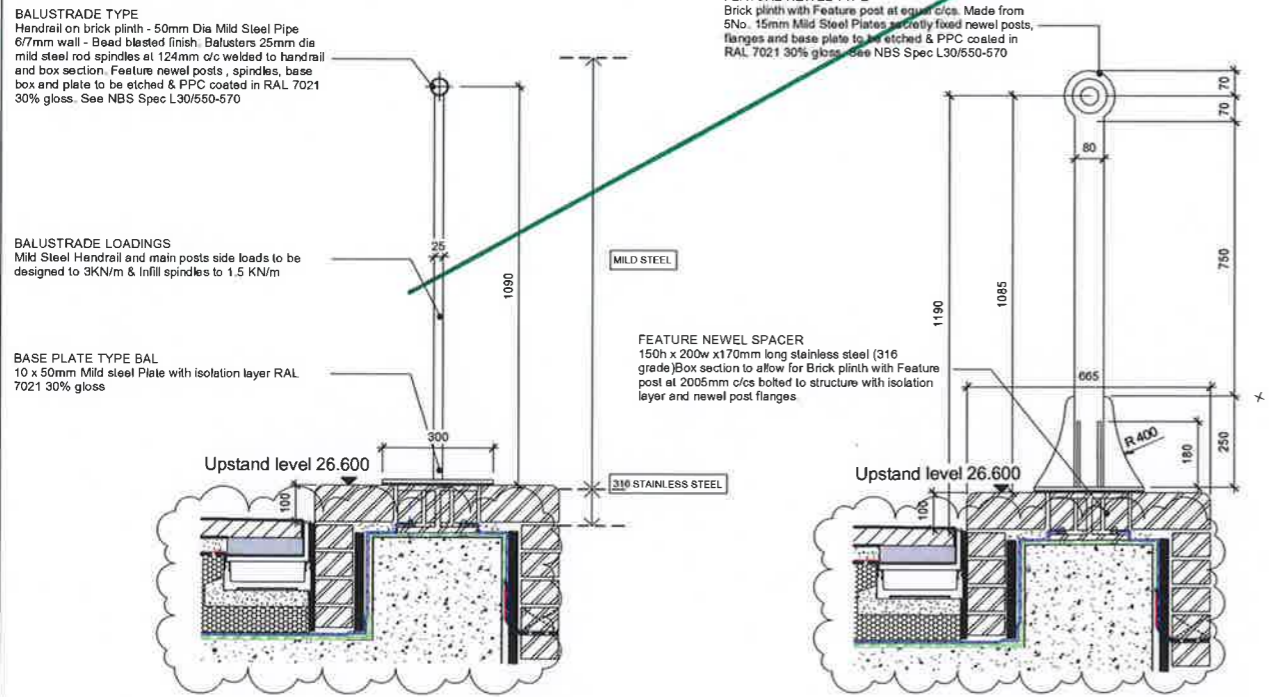
WATERPROOFING: KEY LEGEND

- Hyrotech MM6125 system
- Hydrogard 40 protection sheet
- Hot bituminous bonding layer
- Foamgels T4+ layed to fall bonded lapped at every layer
- Derbigum Black cap with Hi loc underlay

Refer to Structural Stairways drawing
 KXC-CDY-MO-001-SSL-34-501

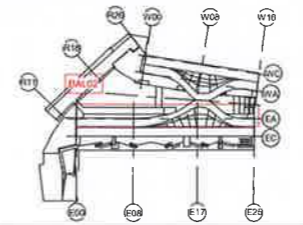


1 Balustrade Type BAL 02
 1:10



2 Balustrade Type BAL 02 base
 1:5

007	VH	MB	26/1/16	Updated to suit comments dated 08.08.16.
008	VH	MB	11/10/16	Updated to suit comments dated 03.08.16.



project COAL DROPS YARD

101 Proposed Viaduct Level - Public Realm - Balustrade Guarding - Types BAL 02

purpose of issue **CONSTRUCTION**

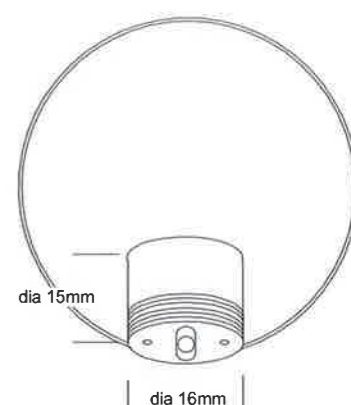
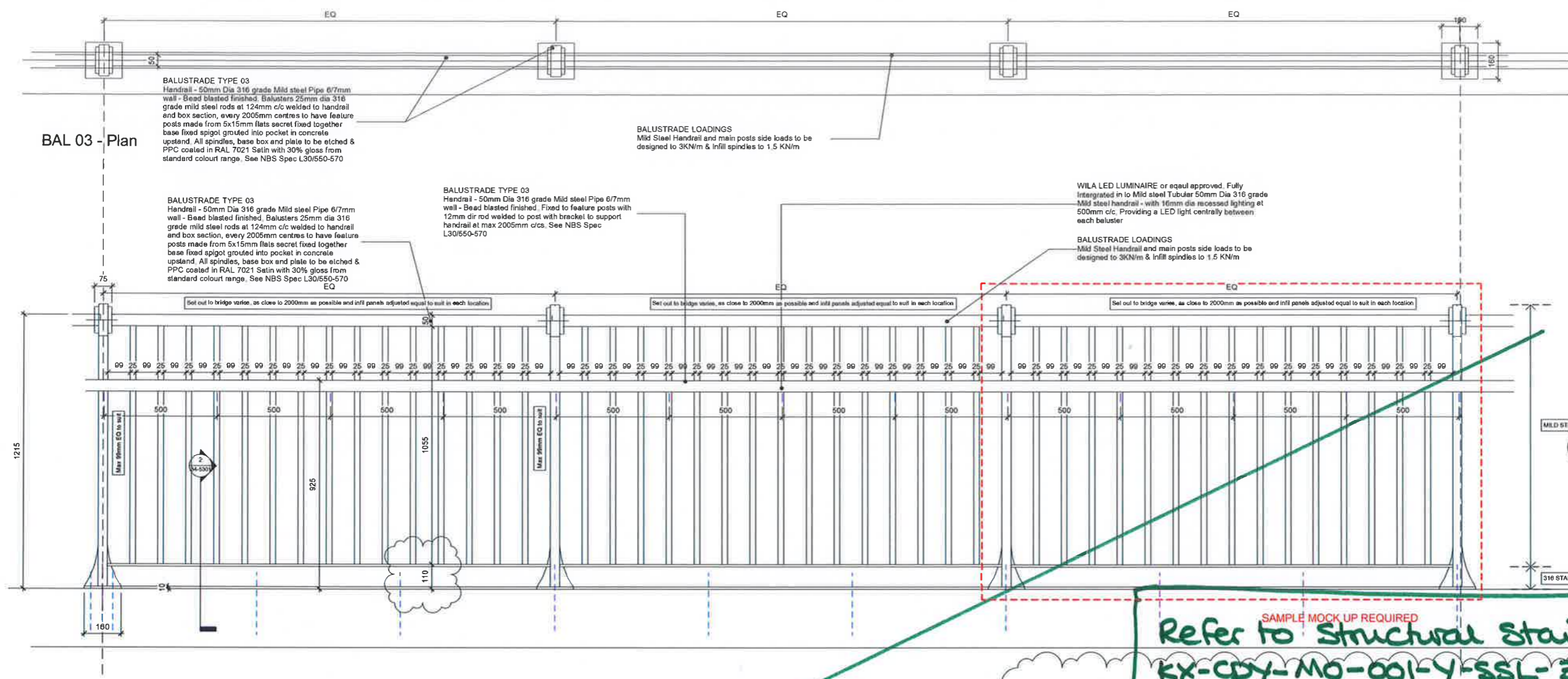
As indicated @ A1 drawn PD BAM pb no

13/10/16 checked MB 4389 **S4**

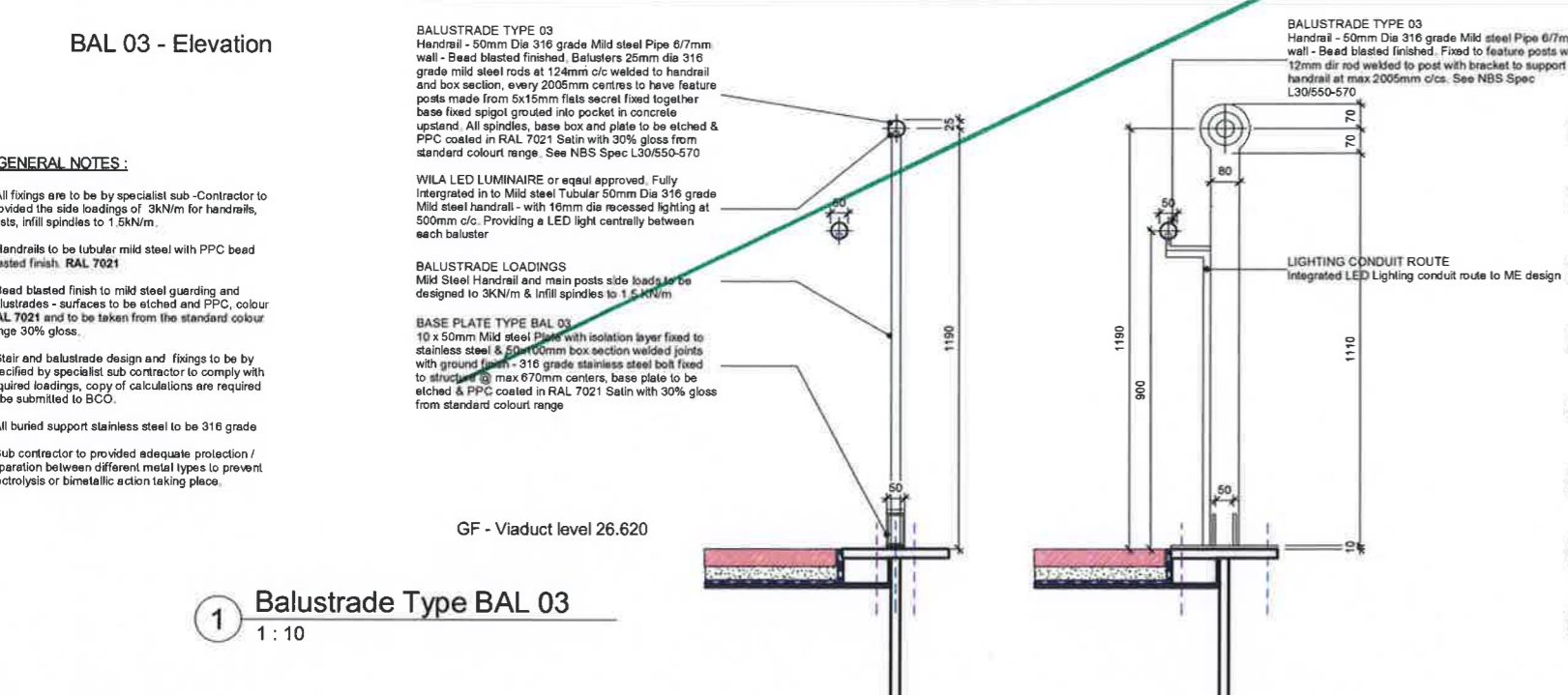
10/11/16

KXC-MO- 001-BD4389-A-34-5201 007

DO NOT SCALE FROM THIS DRAWING
ALL DIMENSIONS TO BE CHECKED ON SITE
FOR REFERENCED VIEWS REFER TO KXC-M0-001-A-SERIES OF DRAWINGS



34 - Handrail with LED
1 : 50



SAMPLE MOCK UP REQUIRED
Refer to Structural Stairways drawing
KX-CDY-M0-001-Y-SSL-34-503

- GENERAL NOTES:**
- All fixings are to be by specialist sub-contractor to provided the side loadings of 3kN/m for handrails, posts, infill spindles to 1.5kN/m.
 - Handrails to be tubular mild steel with PPC bead blasted finish. RAL 7021
 - Bead blasted finish to mild steel guarding and balustrades - surfaces to be etched and PPC, colour RAL 7021 and to be taken from the standard colour range 30% gloss.
 - Stair and balustrade design and fixings to be specified by specialist sub contractor to comply with required loadings, copy of calculations are required to be submitted to BCO.
 - All buried support stainless steel to be 316 grade
 - Sub contractor to provided adequate protection / separation between different metal types to prevent electrolysis or bimetallic action taking place.

BALUSTRADE TYPE 03
Handrail - 50mm Dia 316 grade Mild steel Pipe 6/7mm wall - Bead blasted finished. Balusters 25mm dia 316 grade mild steel rods at 124mm c/c welded to handrail and box section, every 2005mm centres to have feature posts made from 5x15mm flats secret fixed together base fixed spigot grouted into pocket in concrete upstand. All spindles, base box and plate to be etched & PPC coated in RAL 7021 Satin with 30% gloss from standard colour range. See NBS Spec L30/650-570

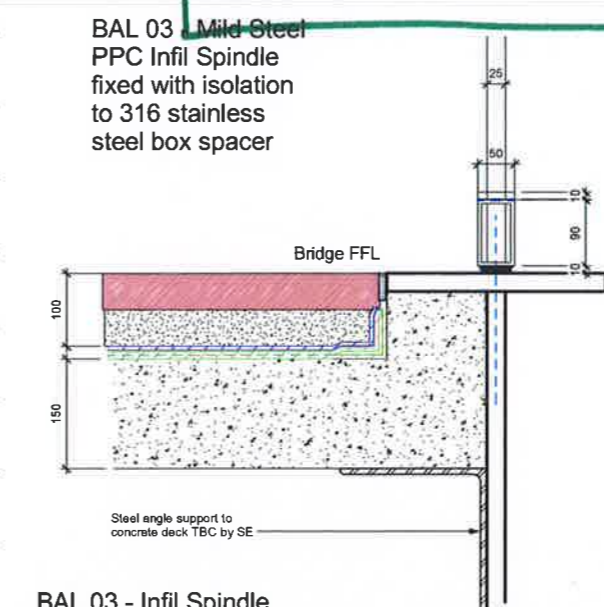
BALUSTRADE LOADINGS
Mild Steel Handrail and main posts side loads to be designed to 3kN/m & infill spindles to 1.5 kN/m

BASE PLATE TYPE BAL 03
10 x 50mm Mild steel Plate with isolation layer fixed to stainless steel & 60x100mm box section welded joints with ground fasten - 316 grade stainless steel bolt fixed to structure @ max 670mm centers, base plate to be etched & PPC coated in RAL 7021 Satin with 30% gloss from standard colour range

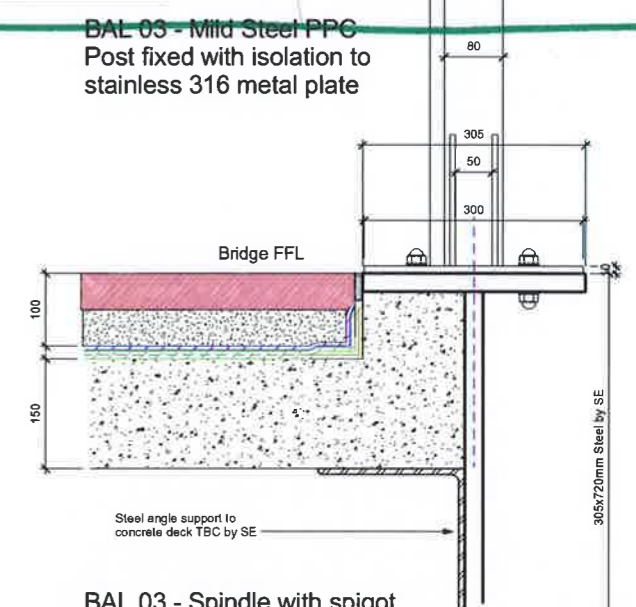
WILA LED LUMINAIRE or equal approved. Fully integrated in to Mild steel Tubular 50mm Dia 316 grade Mild steel handrail - with 16mm dia recessed lighting at 500mm c/c. Providing a LED light centrally between each baluster

GF - Viaduct level 26.620

1 Balustrade Type BAL 03
1 : 10



BAL 03 - Infill Spindle



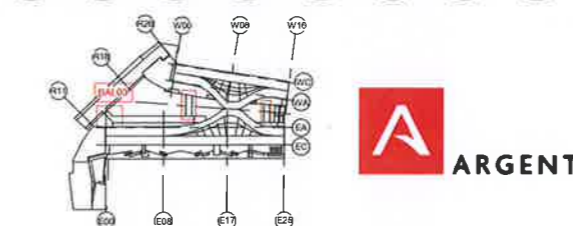
BAL 03 - Spindle with spigot

2 Balustrade Type BAL 03 base
1 : 5

WATERPROOFING KEY LEGEND

	Hydrotech MM6125 system
	Hydrogard 40 protection sheet
	Hot bitumenous bonding layer
	Foamglas T4+ layered to fall bonded taped at every layer
	Derbigum Black cap with HI tec underlay

008	V1	MB	05/01/17	Sample mockup added
007	V1	MB	25/11/16	Updated to suit comments dated 08.08.16.
006	V1	MB	02/08/16	Updated to suit comments dated 28.07.16.



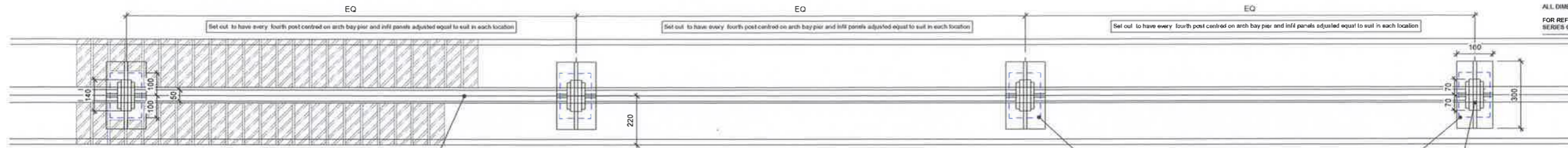
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ARGENT

project COAL DROPS YARD

As Indicated @ A1
date 10/13/15
checked MB
Rise 035/8
Consultant
Rev 035/8
Contract
KXC-M0- 001-BD4389-A- 34-5301

purpose of issue
Construction
BAM job no
4389
S4
008



BAL 04 - Plan

BALUSTRADE TYPE
Handrail on brick plinth - 50mm Dia Mild Steel Pipe 6/7mm wall - Bead blasted finish. Balusters 25mm dia mild steel rod spindles at 124mm c/c welded to handrail and box section. Feature newel posts, spindles, base box and plate to be etched & PPC coated in RAL 7021 30% gloss. See NBS Spec L30/550-570

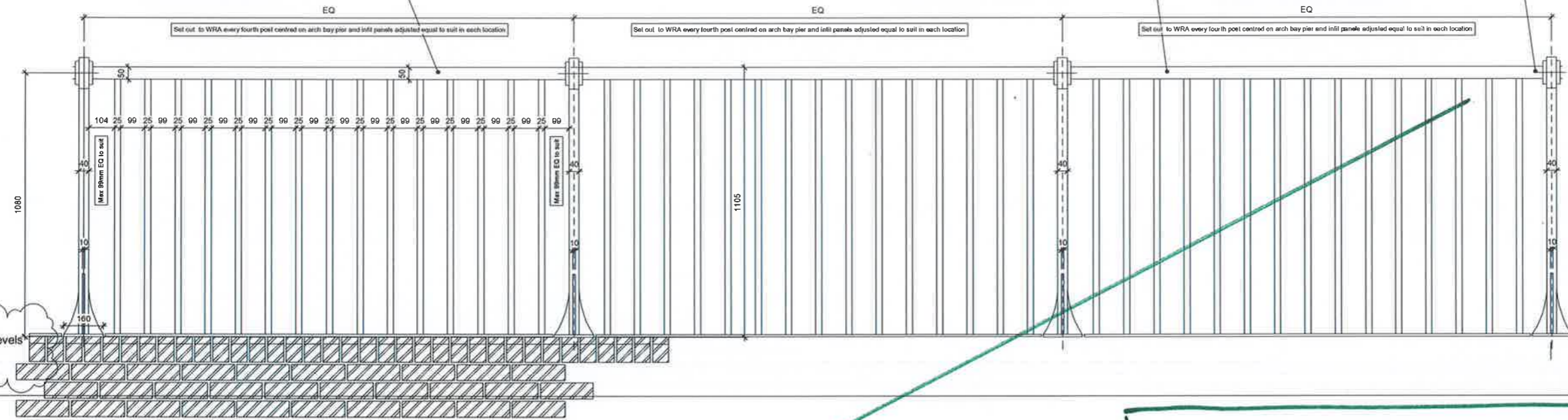
BALUSTRADE LOADINGS
Mild Steel Handrail and main posts side loads to be designed to 3KN/m & infill spindles to 1.5 KN/m

FEATURE NEWEL SPACER
150h x 200w x 170mm long stainless steel (316 grade) Box section to allow for Brick plinth with Feature post at 2005mm c/cs bolted to structure with isolation layer and newel post flanges.

FEATURE NEWEL TYPE
Brick plinth with Feature post at equal c/cs. Made from 5No. 15mm Mild Steel Plates securely fixed newel posts, flanges and base plate to be etched & PPC coated in RAL 7021 30% gloss. See NBS Spec L30/550-570

GENERAL NOTES :

- All fixings are to be by specialist sub-contractor to provided the side loadings of 3kN/m for handrails, posts, infill spindles to 1.5kN/m.
- Handrails to be tubular mild steel with PPC bead blasted finish. RAL 7021
- Bead blasted finish to mild steel guarding and balustrades - surfaces to be etched and PPC, colour RAL 7021 and to be taken from the standard colour range 30% gloss.
- Stair and balustrade design and fixings to be by specified by specialist sub contractor to comply with required loadings, copy of calculations are required to be submitted to BCO.
- All buried support stainless steel to be 316 grade
- Sub contractor to provided adequate protection / separation between different metal types to prevent electrolysis or bimetallic action taking place.



BAL 04 - Elevation

BALUSTRADE TYPE
Handrail on brick plinth - 50mm Dia Mild Steel Pipe 6/7mm wall - Bead blasted finish. Balusters 25mm dia mild steel rod spindles at 124mm c/c welded to handrail and box section. Feature newel posts, spindles, base box and plate to be etched & PPC coated in RAL 7021 30% gloss. See NBS Spec L30/550-570

BALUSTRADE LOADINGS
Mild Steel Handrail and main posts side loads to be designed to 3KN/m & Infill spindles to 1.5 KN/m

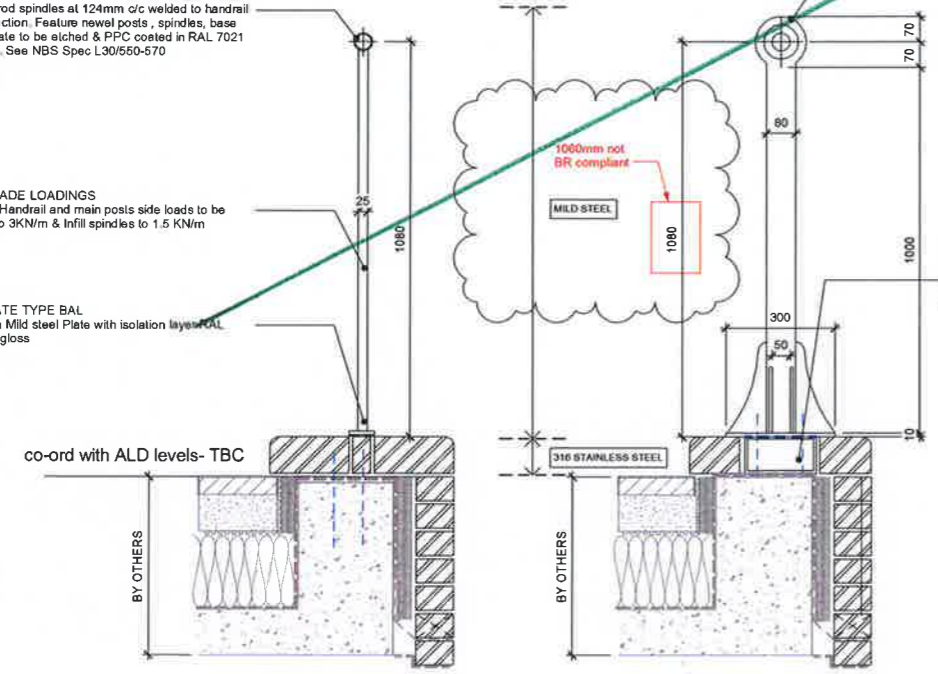
BASE PLATE TYPE BAL
10 x 50mm Mild steel Plate with isolation layer RAL 7021 30% gloss

FEATURE NEWEL TYPE
Brick plinth with Feature post at equal c/cs. Made from 5No. 15mm Mild Steel Plates securely fixed newel posts, flanges and base plate to be etched & PPC coated in RAL 7021 30% gloss. See NBS Spec L30/550-570

FEATURE NEWEL SPACER
150h x 200w x 170mm long stainless steel (316 grade) Box section to allow for Brick plinth with Feature post at 2005mm c/cs bolted to structure with isolation layer and newel post flanges.

Refer to structural stairways drawings
KXC-COY-MO-001-Y-SSL-34-532, 533 & 534

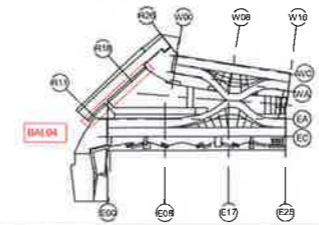
Please see drawings from
ALD, Wharf Road Viaduct
Contractor for Construction
Information and Levels



BAL 02 - Mild Steel PPC Infill Spindle fixed with isolation to 316 stainless steel box spacer

BAL 02 - Mild Steel PPC Post fixed with isolation to stainless 316 metal box spacer and brick plinth

008	VH	MB	25/11/18	Updated to suit comments dated 08.08.18.
007	VH	MB	02/05/16	Updated to suit comments dated 28.07.16



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project: COAL DROPS YARD

As indicated @ A1

draw: PD

date: 20/10/15

checked: MB

drawn: MB

checked: MB

date: 20/10/15

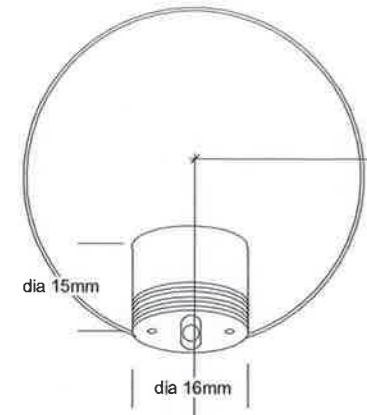
project: KXC-MO- 001-BD4389-A- 34-5401

revision: 008

sheet: S2

DO NOT SCALE FROM THIS DRAWING.
 ALL DIMENSIONS TO BE CHECKED ON SITE.
 FOR REFERENCED VIEWS REFER TO SERIES OF DRAWINGS KXC-M0-001-A-

34 - Handrail with LED
 1 : 50



Integrated LED Lighting to be fixed flush into handrail at 500 c/cs

For stair setting out & details see BAMD external stair drawings 24-400010, 401010, 400525

EXTERNAL STEEL STAIR WITH STONE INFILL
 Steel pan to take stone infill handrail to be fixed to steel pan and stone to be cut round, tread to be infilled with square holed mesh infill. 55mm nosings to be nickle bronze SNG. See NBS Spec L30/250

- GENERAL NOTES:**
- All fixings are to be by specialist sub-Contractor to provided the side loadings of 3kNm for handrails, posts, infill spindles to 1.5kNm/m.
 - Handrails to be tubular mild steel with PPC bead blasted finish, RAL 7021
 - Bead blasted finish to mild steel guarding and balustrades - surfaces to be etched and PPC, colour RAL 7021 and to be taken from the standard colour range 30% gloss.
 - Stair and balustrade design and fixings to be specified by specialist sub contractor to comply with required loadings, copy of calculations are required to be submitted to BCO
 - All buried support stainless steel to be 316 grade
 - Sub contractor to provide adequate protection / separation between different metal types to prevent electrolysis or bimetallic action taking place.

Top of stair details see BAMD external stair drawings 24-400010, 400011, 400523

BALUSTRADE LOADINGS
 Mild Steel Handrail and main posts side loads to be designed to 3kNm/m & infill spindles to 1.5 kN/m

BALUSTRADE TYPE 05s
 Handrail - 50mm Dia 316 grade Mild steel Pipe 6/7mm wall - Bead blasted finished. Balusters 25mm dia 316 grade mild steel rod spindles at 124mm c/c or as indicated in detailed sections welded to metal stair string. Feature newel posts with base plate fixed to string, spindles, base box and plate to be etched & PPC coated in RAL 7021 30% gloss. See NBS Spec L30/550-570

BALUSTRADE TYPE 05s HANDRAIL
 Handrail - 50mm Dia 316 grade Mild steel Pipe 6/7mm wall - Bead blasted finished. Fixed to feature posts with 12mm dia rod welded to post with bracket to support handrail at max 2005mm c/cs. On handrail to stairs - WILA LED LUMINAIRE - Fully integrated in to mild steel Tubular 50mm Dia handrail - with 16mm dia recessed lighting at 500mm c/c. Providing a LED light centrally between each baluster

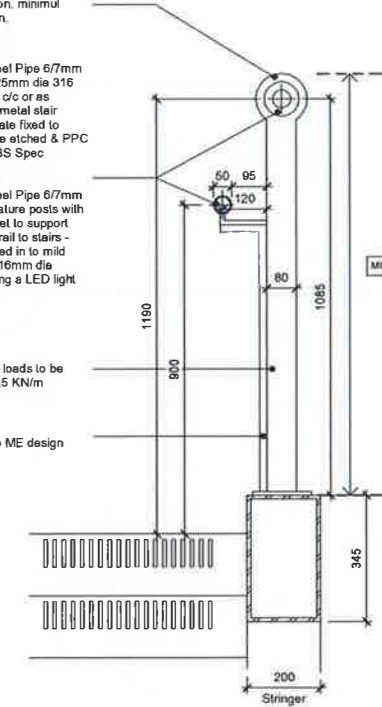
BAL POST RADIUS
 Chamfer omitted as per BAMC instruction, minimal radii as per Structural Stairways design.

BALUSTRADE TYPE 05s
 Handrail - 50mm Dia 316 grade Mild steel Pipe 6/7mm wall - Bead blasted finished. Balusters 25mm dia 316 grade mild steel rod spindles at 124mm c/c or as indicated in detailed sections welded to metal stair string. Feature newel posts with base plate fixed to string, spindles, base box and plate to be etched & PPC coated in RAL 7021 30% gloss. See NBS Spec L30/550-570

BALUSTRADE TYPE 05s HANDRAIL
 Handrail - 50mm Dia 316 grade Mild steel Pipe 6/7mm wall - Bead blasted finished. Fixed to feature posts with 12mm dia rod welded to post with bracket to support handrail at max 2005mm c/cs. On handrail to stairs - WILA LED LUMINAIRE - Fully integrated in to mild steel Tubular 50mm Dia handrail - with 16mm dia recessed lighting at 500mm c/c. Providing a LED light centrally between each baluster

BALUSTRADE LOADINGS
 Mild Steel Handrail and main posts side loads to be designed to 3kNm/m & infill spindles to 1.5 kN/m

LIGHTING CONDUIT ROUTE
 Integrated LED Lighting conduit route to ME design



Refer to Structural Stairways drawings
 KXC-CDV-M0-001-Y-SSL-24-504 to 507 & 516

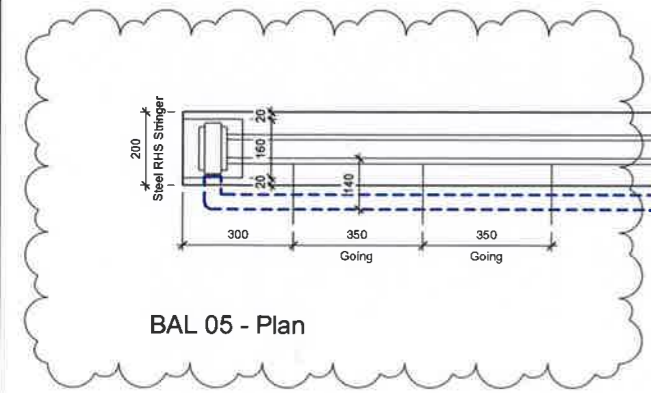
BAL 05s - Elevation

BAL 05s - Mild Steel PPC Post fixed with isolation to box section

2 Balustrade Type BAL 05 base
 1 : 5

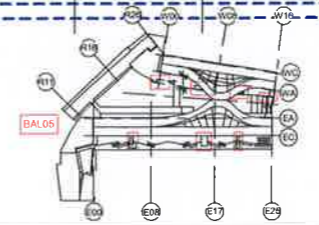
BAL 05 - Balustrade to stair edge

Stringers and head junction to be further developed with sub-contractor



BAL 05 - Plan

007	VH	MB	25/11/16	Updated to suit comments dated 08.08.16.
006	VH	MB	02/08/16	Updated to suit comments dated 28.07.16

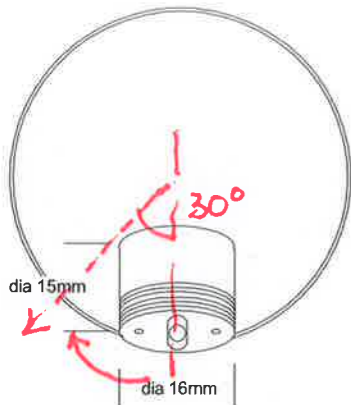


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project COAL DROPS YARD

As indicated @ A1
 date 20/10/15
 checked MWB
 4389
 KXC-M0-001-BD4389-A-34-5501

purpose of issue
 Construction
 BAM job no
 4389
 S4
 007



For stair setting out & details see BAMD external stair drawings 24-400110, 400120, 401110

EXTERNAL STAIR
Precast concrete stair to stair manufacturers detail. See External stair drawings 24-400000 series for more detail

BALUSTRADE LOADINGS
Mild Steel Handrail and main posts side loads to be designed to 3kN/m & infill spindles to 1.5 kN/m

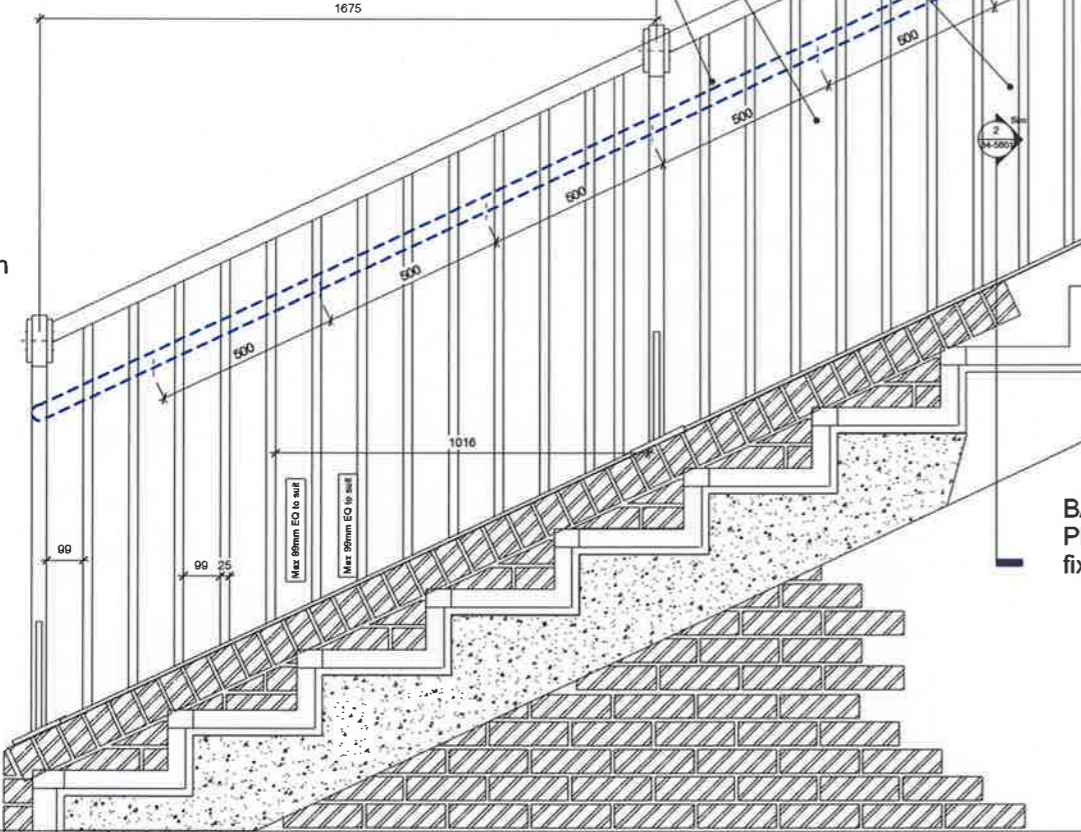
On handrail to stairs - WILA LED LUMINAIRE - Fully Integrated in to Stainless steel Tubular 50mm Dia handrail - with 16mm dia recessed lighting at 500mm c/c. Providing a LED light centrally between each baluster

BALUSTRADE TYPE 06
Handrail - 50mm Dia 316 grade Mild steel Pipe 6/7mm wall - Bead blasted finished. Balusters 25mm dia 316 grade stainless steel rod spindles at 124mm c/c welded to metal angle to allow fixing to concrete stair with Brickwork string. Feature newel posts, spindles, base box and plate to be etched & PPC coated in RAL 7021 30% gloss. See NBS Spec L30/650-570

Integrated LED Lighting to be fixed flush into handrail at 500 c/cs

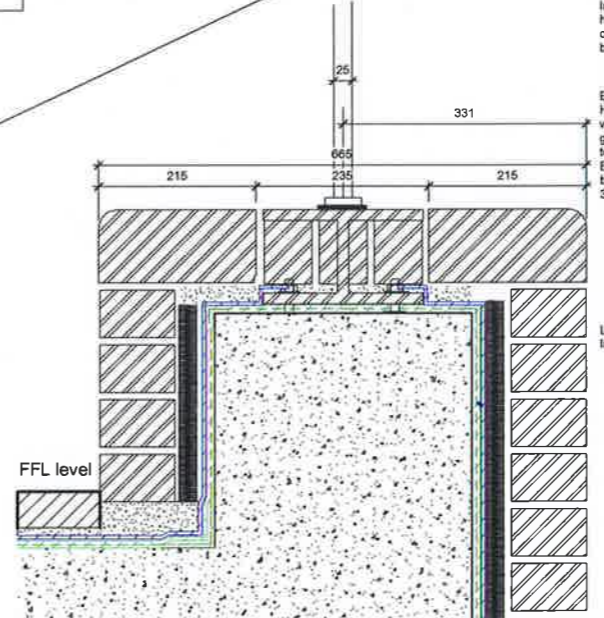
34 - Handrail with LED
1 : 50

BAL 06 - Elevation

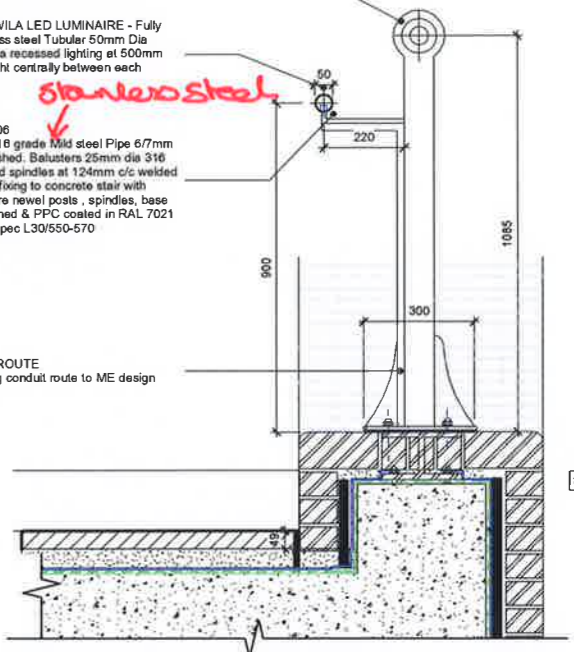


BAL 06 - Mild Steel
PPC Infill Spindle
fixed to brick upstand

2 - Balustrade Type BAL 06 base
1:5



BAL 06 - Balustrade to concrete Stair



DO NOT SCALE FROM THIS DRAWING.
ALL DIMENSIONS TO BE CHECKED ON SITE.
FOR REFERENCED VIEWS REFER TO SERIES OF DRAWINGS KXC-M0-001-A

GENERAL NOTES:

- All fixings are to be by specialist sub - Contractor to provide the side loadings of 3kN/m for handrails, posts, infill spindles to 1.5kN/m.
- Handrails to be tubular mild steel with PPC bead blasted finish. **stainless steel**
- Bead blasted finish to mild steel guarding and balustrades - surfaces to be etched and PPC, colour RAL 7021 and to be taken from the standard colour range 30% gloss.
- Stair and balustrade design and fixings to be by specified by specialist sub contractor to comply with required loadings, copy of calculations are required to be submitted to BCO.
- All buried support stainless steel to be 316 grade
- Sub contractor to provide adequate protection / separation between different metal types to prevent electrolysis or bimetallic action taking place.

Note: part to be on landing

stainless steel

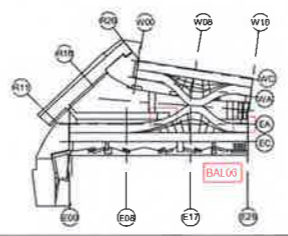
MILD STEEL

316 STAINLESS STEEL

WATERPROOFING: KEY LEGEND

	Hydrotech MM6125 system
	Hydrogard 40 protection sheet
	Hot bitumen bonding layer
	Foamglas T4+ layed to fall bonded taped at every layer
	Derbigum Black cap with Hi tec underlay

007	VH	MB	25/11/10	Updated to suit comments dated 08.08.10.
000	VH	MB	02/08/16	Updated to suit comments dated 28.07.16



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project COAL DROPS YARD
no Proposed Viaduct Level - Public Realm - Staircase Balustrade - Type BAL 06
purpose of use Construction
scale As indicated @ A1
drawn PD
checked MWB
date 20/10/15
revision 4389
sheet 54
drawing no KXC-M0-001-BD4389-A-34-5601
rev 007

For stair setting out & details see
BAMD external stair drawings 24-
400010, 400110, 401010, 401110,
400210, 400220, 400230, 400240,
400245

DO NOT SCALE FROM THIS DRAWING.
ALL DIMENSIONS TO BE CHECKED ON SITE.
FOR REFERENCED VIEWS REFER TO
SERIES OF DRAWINGS

CENTRAL BALUSTRADE LOADINGS
Mild Steel Handrail and main posts loads to be designed
to 1.5kN/m & Infill spindles to 1.5 kN/m

EXTERNAL STEEL STAIR WITH STONE INFILL
Steel pan to take stone infill handrail to be fixed to steel
pan and stone to be cut round, tread to be infilled with
square holed mesh infill. 55mm nosings to be nickel
bronze SN9. See NBS Spec L30/250

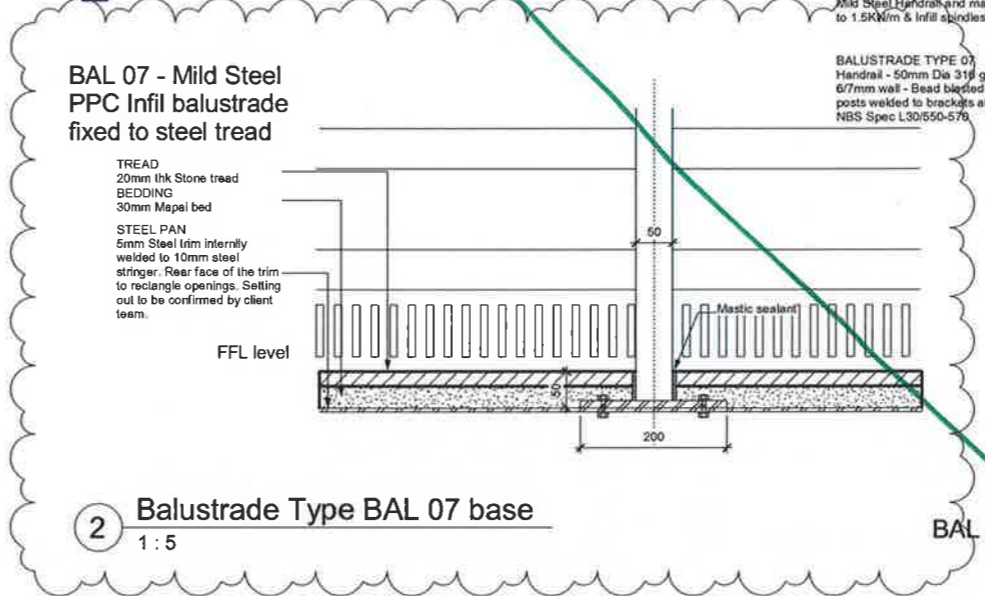
BALUSTRADE TYPE 07
Handrail - 50mm Dia 316 grade Stainless steel Pipe
67mm wall - Bead blasted finished. Fixed to 40mm dia
posts welded to brackets at max 2005mm c/c. See
NBS Spec L30/550-570

EXTERNAL STEEL STAIR WITH STONE INFILL
Steel pan to take stone infill handrail to be fixed to steel
pan and stone to be cut round, tread to be infilled with
square holed mesh infill. 55mm nosings to be nickel
bronze SN9. See NBS Spec L30/250

soft corner finish to all corners and joints

Refer to structural stairways
drawings
KXC-COY-MO-001-Y-SSL-34-
504, 505, 506, 507

- GENERAL NOTES:**
- All fixings are to be by specialist sub-Contractor to provide the side loadings of 3kN/m for handrails, posts, infill spindles to 1.5kN/m.
 - Handrails to be tubular mild steel with PPC bead blasted finish. RAL 7021
 - Bead blasted finish to mild steel guarding and balustrades - surfaces to be etched and PPC, colour RAL 7021 and to be taken from the standard colour range 30% gloss.
 - Stair and balustrade design and fixings to be by specified by specialist sub contractor to comply with required loadings, copy of calculations are required to be submitted to BCO.
 - All buried support stainless steel to be 316 grade
 - Sub contractor to provide adequate protection / separation between different metal types to prevent electrolysis or bimetallic action taking place.



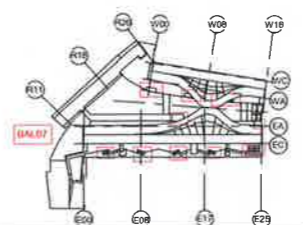
21.400 YARD FFL
21.260 SSL

Concrete base to support stairbase and balustrade by SE see drawing KXC-MO-001-ARP219870-S-(W)6101

BAL 07 - Elevation

Stringers and head junction to be further developed with sub-contractor

006	VH	MB	25/11/10	Updated to suit comments dated 08.08.10.
005	VH	MB	02/08/10	Updated to suit comments dated 26.07.10



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project COAL DROPS YARD

no Proposed Viaduct Level - Public Realm - Staircase Balustrade - Type BAL 07 Construction

date 22/10/15

checked MWB 4389

drawn PD 644

scale 1:5

project no KXC-MO-001-BD4389-A-34-5701

sheet no 006

For stair setting out & details see BAMD external stair drawings 24-400110, 400120, 401010, 401110, 400210, 400220, 400230, 400240, 400245

DO NOT SCALE FROM THIS DRAWING.
ALL DIMENSIONS TO BE CHECKED ON SITE.
FOR REFERENCED VIEWS REFER TO KXC-M0-001-A-SERIES OF DRAWINGS

GENERAL NOTES:

- All fixings are to be by specialist sub-contractor provided the side loadings of 3kN/m for handrails, posts, infill spindles to 1.5kN/m
- Handrails to be tubular mild steel with PPC bead blasted finish **RAL 7021**
- Bead blasted finish to mild steel guarding and balustrades - surfaces to be etched and PPC, colour **RAL 7021** and to be taken from the standard colour range 30% gloss
- Stair and balustrade design and fixings to be by specified by specialist sub-contractor to comply with required loadings, copy of calculations are required to be submitted to BCO
- All buried support stainless steel to be 316 grade
- Sub contractor to provide adequate protection / separation between different metal types to prevent electrolysis or bimetallic action taking place.

EXTERNAL STAIR
Precast concrete stair to stair manufacturers detail. See External stair drawings 24-400000 series for more detail

WILA LED LUMINAIRE - Fully Integrated in to Stainless steel tubular handrail - with 16mm dia recessed lighting at 500mm c/c. Providing a LED light central between each baluster

BALUSTRADE TYPE 08
Handrail - 50mm Dia 316 grade Mild steel Pipe 6/7mm wall - Bead blasted finished. Fixed to wall with 12mm dia rod & square fixing plate @ max 2100 c/c's. Handrail connections to be mitred. See NBS Spec L30/550-570

WILA LED LUMINAIRE - Fully Integrated in to Stainless steel tubular handrail - with 16mm dia recessed lighting at 500mm c/c. Providing a LED light central between each baluster

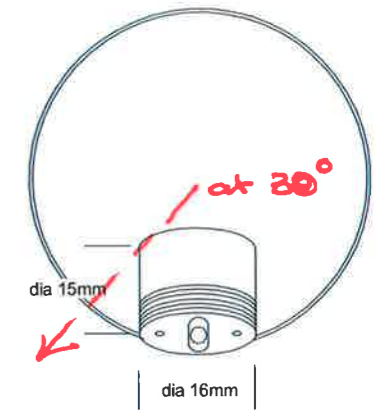
BALUSTRADE TYPE 08
Handrail - 50mm Dia 316 grade Mild steel Pipe 6/7mm wall - Bead blasted finished. Fixed to wall with 12mm dia rod & square fixing plate @ max 2100 c/c's. Handrail connections to be mitred. See NBS Spec L30/550-570

WILA LED LUMINAIRE - Fully Integrated in to Stainless steel tubular handrail - with 16mm dia recessed lighting at 500mm c/c. Providing a LED light central between each baluster

BALUSTRADE TYPE 08
Handrail - 50mm Dia 316 grade Mild steel Pipe 6/7mm wall - Bead blasted finished. Fixed to wall with 12mm dia rod & square fixing plate @ max 2100 c/c's. Handrail connections to be mitred. See NBS Spec L30/550-570

BAL 08 - Stainless Steel PPC handrail fixed to wall

2 Balustrade Type BAL 08 base
1:5



Integrated LED Lighting to be fixed flush into handrail at 500 c/c's

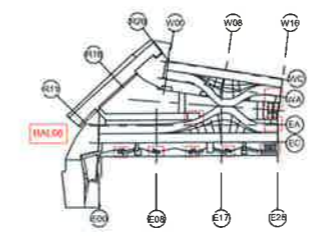
34 - Handrail with LED
1:50

BAL 08 - Elevation

BAL 08 - Typical Section

BAL 08 - Plan

000	VH	MB	25/1/10	Updated to suit comments dated 08.08.10.
005	VH	MB	02/08/16	Updated to suit comments dated 28.07.16



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PROJECT COAL DROPS YARD

Proposed Viaduct Level - Public Realm - Staircase Balustrade - Type BAL 08 Construction

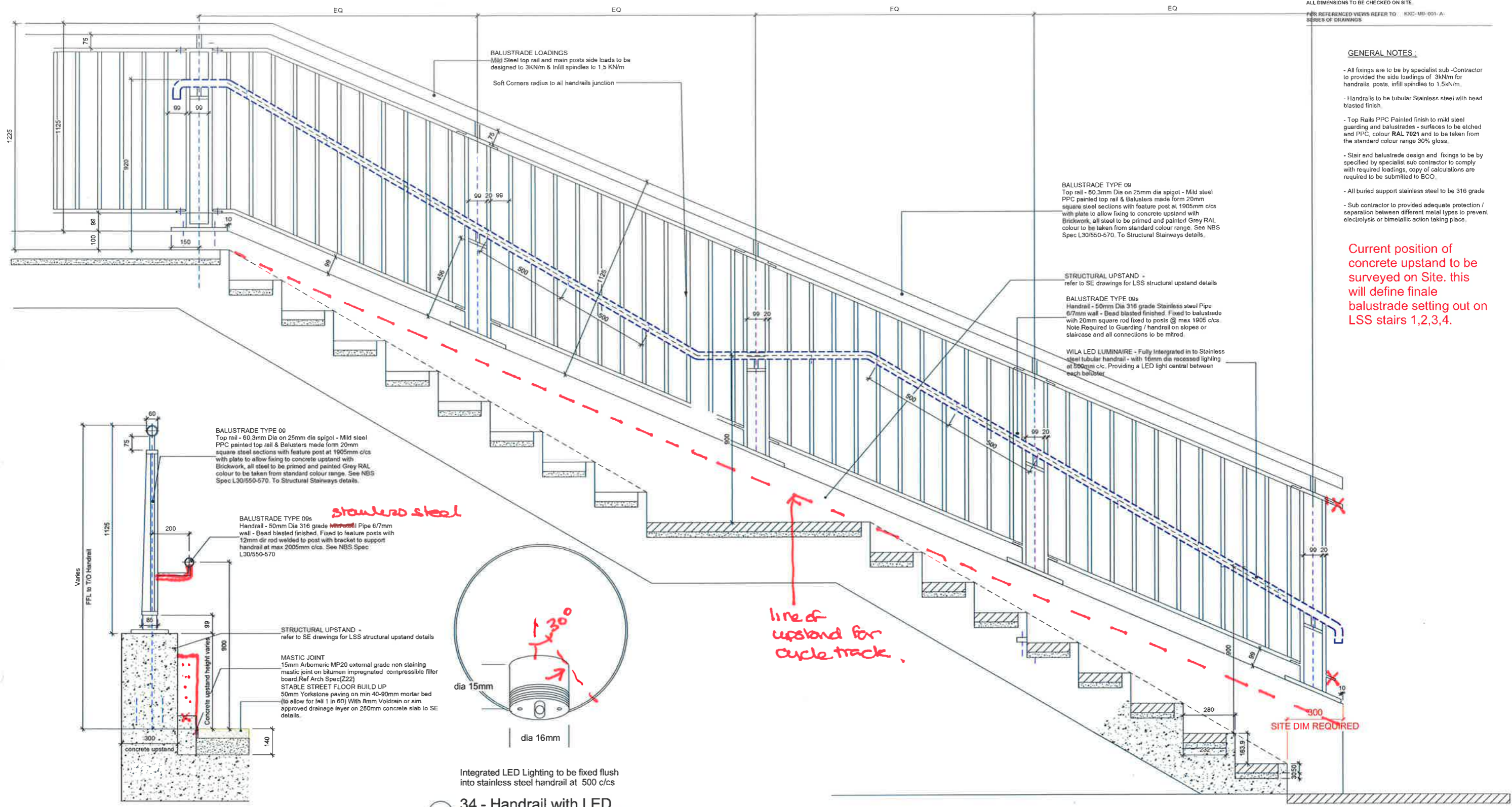
scale As indicated @ A1
date 10/22/15
drawn PD
checked MWB
designed MWB
approved RLB
checked CMB
date 10/22/15
drawn PD
checked MWB
designed MWB
approved RLB
checked CMB

BAM job no 4389
sheet 4
of 4
KXC-M0- 001-BD4389-A- 34-5801 006

DO NOT SCALE FROM THIS DRAWING.
 ALL DIMENSIONS TO BE CHECKED ON SITE.
 FOR REFERENCED VIEWS REFER TO: KXC-M0-001-A-
 SERIES OF DRAWINGS

- GENERAL NOTES:**
- All fixings are to be by specialist sub -Contractor to provided the side loadings of 3kN/m for handrails, posts, infill spindles to 1.5kN/m.
 - Handrails to be tubular Stainless steel with bead blasted finish.
 - Top Rails PPC Painted finish to mild steel guarding and balustrades - surfaces to be elched and PPC colour: RAL 7021 and to be taken from the standard colour range 30% gloss.
 - Stair and balustrade design and fixings to be by specified by specialist sub contractor to comply with required loadings, copy of calculations are required to be submitted to ECO.
 - All buried support stainless steel to be 316 grade
 - Sub contractor to provided adequate protection / separation between different metal types to prevent electrolysis or bimetallic action taking place.

Current position of concrete upstand to be surveyed on Site. this will define finale balustrade setting out on LSS stairs 1,2,3,4.

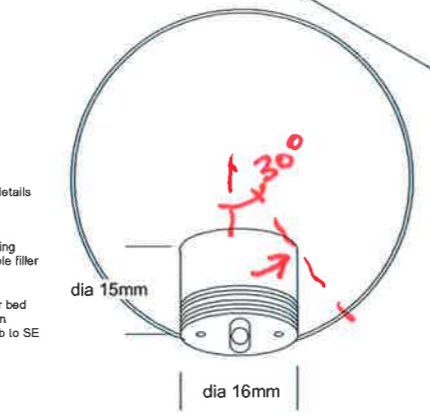


BALUSTRADE TYPE 00
 Top rail - 60.3mm Dia on 25mm dia spigot - Mild steel
 PPC painted top rail & Balusters made form 20mm
 square steel sections with feature post at 1905mm c/c's
 with plate to allow fixing to concrete upstand with
 Brickwork, all steel to be primed and painted Grey RAL
 colour to be taken from standard colour range. See NBS
 Spec L30/550-570. To Structural Stairways details.

BALUSTRADE TYPE 00s
 Handrail - 50mm Dia 316 grade Stainless steel Pipe 6/7mm
 wall - Bead blasted finished. Fixed to feature posts with
 12mm dia rod welded to post with bracket to support
 handrail at max 2005mm c/c's. See NBS Spec
 L30/550-570

STRUCTURAL UPSTAND -
 refer to SE drawings for LSS structural upstand details

MASTIC JOINT
 15mm Arbormec MP20 external grade non staining
 mastic joint on bitumen impregnated compressible filler
 board Ref Arch Spec(Z22)
 STABLE STREET FLOOR BUILD UP
 50mm Yorkstone paving on min 40-90mm mortar bed
 (to allow for fall 1 in 60) With 8mm Voldrain or sim
 approved drainage layer on 250mm concrete slab to SE
 details.

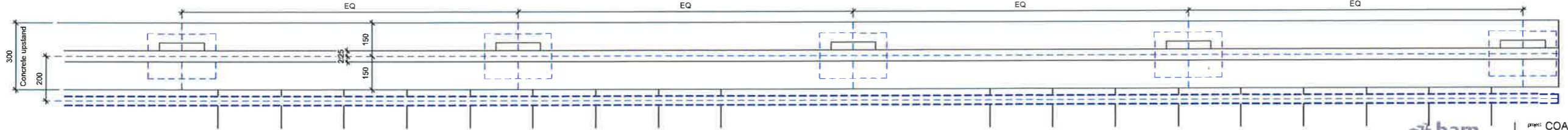


Integrated LED Lighting to be fixed flush
 into stainless steel handrail at 500 c/c's

34 - Handrail with LED
 1 : 50

BAL 09s - Section

BAL 09s - Elevation



BAL 09s - Plan

1 Balustrade Type BAL 09s - LSS Stair
 1 : 10

001	VH	MB	07.00.17	Issued for Construction
no	to	date	date	description



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project: COAL DROPS YARD

title: Proposed Viaduct Level - Public Realm - Staircase Balustrade - Type BAL 09s

purpose of issue: CONSTRUCTION

scale: As indicated @ A1	drawn: VH	BAM job no:	dg: (16/1)
date: 01/16/17	checked: MWB	4389	S4
site: KXC-M0-001-BD4389-A-34-5902	author: (16/1)	re: (16/1)	no: (16/1)
dg / doc ref:			001

For stair setting out & details see
BAMD external stair drawings 24-400120

DO NOT SCALE FROM THIS DRAWING.
ALL DIMENSIONS TO BE CHECKED ON SITE.
FOR REFERENCED VIEWS REFER TO
SERIES OF DRAWINGS

GENERAL NOTES:

- All fixings are to be by specialist sub-Contractor to provided the side loadings of 3kN/m for handrails, posts, infill spirals to 1.5kN/m.
- Handrails to be tubular mild steel with PPC bead blasted finish. RAL 7021
- Bead blasted finish to mild steel guarding and balustrades - surfaces to be etched and PPC, colour RAL 7021 and to be taken from the standard colour range 30% gloss.
- Stair and balustrade design and fixings to be by specified by specialist sub contractor to comply with required loadings, copy of calculations are required to be submitted to BCO.
- All buried support stainless steel to be 316 grade
- Sub contractor to provide adequate protection / separation between different metal types to prevent electrolysis or bimetallic action taking place.

WATERPROOFING: KEY LEGEND

- Hydrtech MM6125 system
- Hydrogard 40 protection sheet
- Hot bituminous bonding layer
- Foamglas T4+ layed to fall bonded taped at every layer
- Derbigum Black cap with Hi Lec underlay

EXTERNAL STAIR
Precast concrete stair to stair manufacturers detail. See External stair drawings 24-400000 series for more detail

WILA LED LUMINAIRE - Fully integrated in to Stainless steel tubular handrail - with 10mm dia recessed lighting at 500mm c/c. Providing a LED light central between each baluster

BALUSTRADE
Handrail - 50mm Dia 316 grade Mild steel Pipe 6/7mm wall - Bead blasted finished, Mild steel post ppc RAL to be taken from standard colour range 30% gloss bolt fixed to stair with base plate, fixings by Specialist subcontractor.

BALUSTRADE TYPE 11
Handrail - 50mm Dia 316 grade Stainless steel Pipe 6/7mm wall - Bead blasted finished. Post fixed to stair with plate fixings by specialist subcontractor to suit required side loadings. See NBS Spec L30/550-570

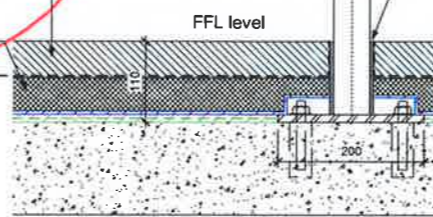
BALUSTRADE
Handrail - 50mm Dia 316 grade Mild steel Pipe 6/7mm wall - Bead blasted finished, Mild steel post ppc RAL to be taken from standard colour range 30% gloss bolt fixed to stair with base plate, fixings by Specialist subcontractor

**BAL 11 - Mild Steel
PPC balustrade fixed
to concrete tread**

CRYSTAL BLACK Q3453 FLAMED FINISH
GRANITE STONE NOSING BY MILLER
DRUCK OR EQUAL AND APPROVED

LENGTH 900MM X 400M WIDTH X 50MM
DEPTH FLAMED MILLENNIUM MAUVE
GRANITE STONE CLADDED STEPS BY
MILLER DRUCK OR EQUAL AND APPROVED

40MM DEPTH TUFFBED MORTAR BY
STEINTEC OR EQUAL AND
APPROVED



2 Balustrade Type BAL 11 base
1:5

Refer to submission for condition 3d.

*stainless steel
bead blast
finish*

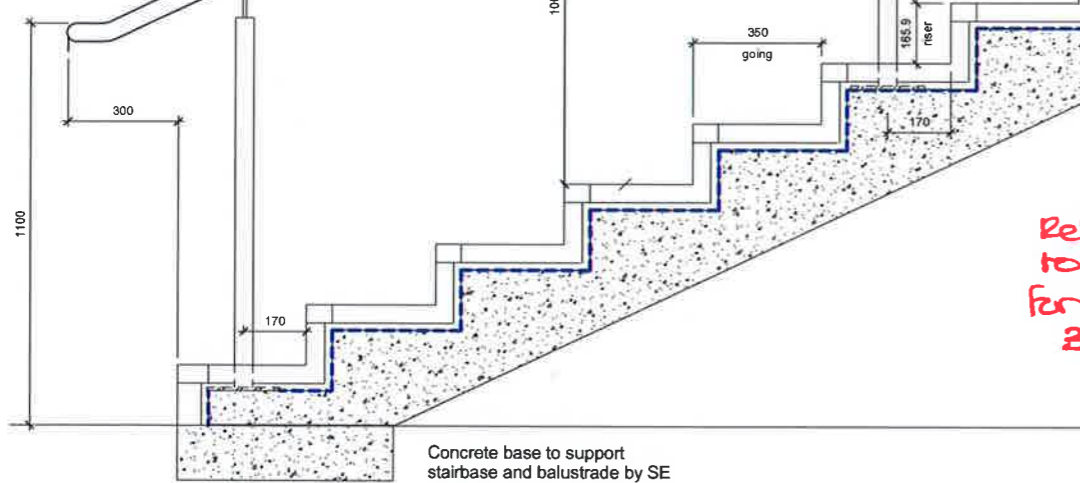
No lighting to handrail

stainless steel

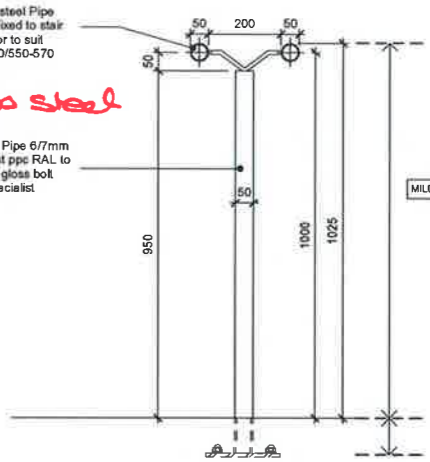
stainless steel

posts

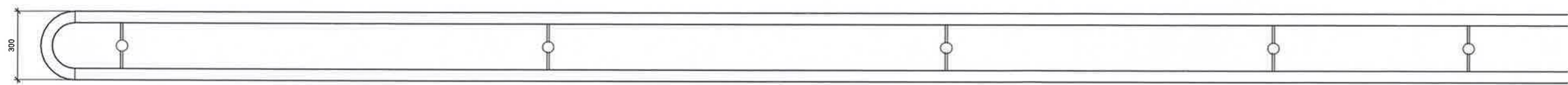
Stringers and head junction to be further developed with sub-contractor



BAL 11 - Elevation



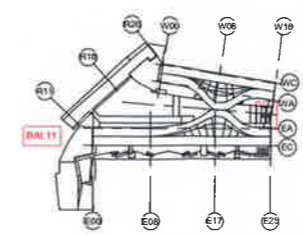
BAL 11 - Typical Section



BAL 11- Plan

1 Balustrade Type BAL 11
1:10

000	VH	MB	25/11/10	Updated to suit comments dated 08.08.10.
005	VH	MB	02/08/10	Updated to suit comments dated 28.07.10



project: COAL DROPS YARD

As indicated @ A1

09/12/15

09/12/15

KXC-MO-001-BD4389-A-34-51201

ARGENT

ARGENT logo

As indicated @ A1

09/12/15

09/12/15

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Construction

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