

1. ALL DIMENSIONS IN MM UNLESS OTHERWISE NOTED.



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AL10 9BW

Tel: 01707 315000
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Email: info@ktl.ie

Site ID: 1205960

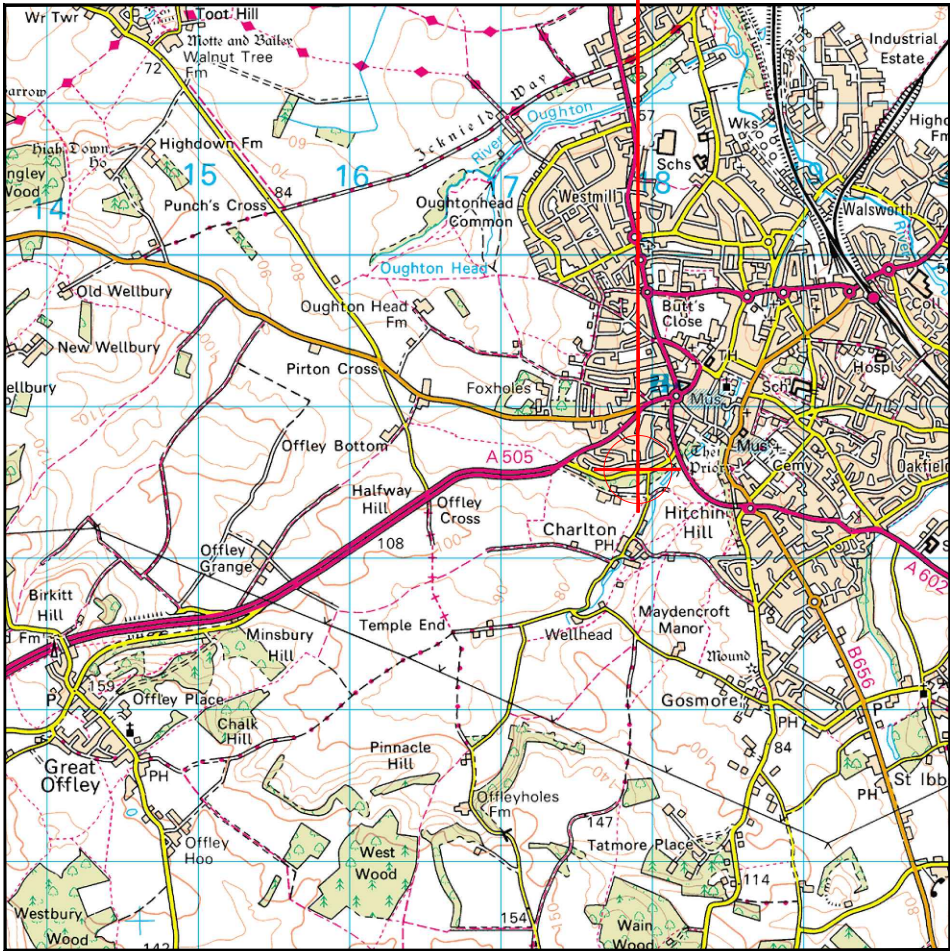
Title: 001 DRAWING REGISTER

Project: **VENDOR SWAP**

Purpose of Issue: **DETAILED DESIGN**

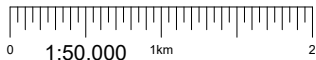
y3.0

SITE LOCATION

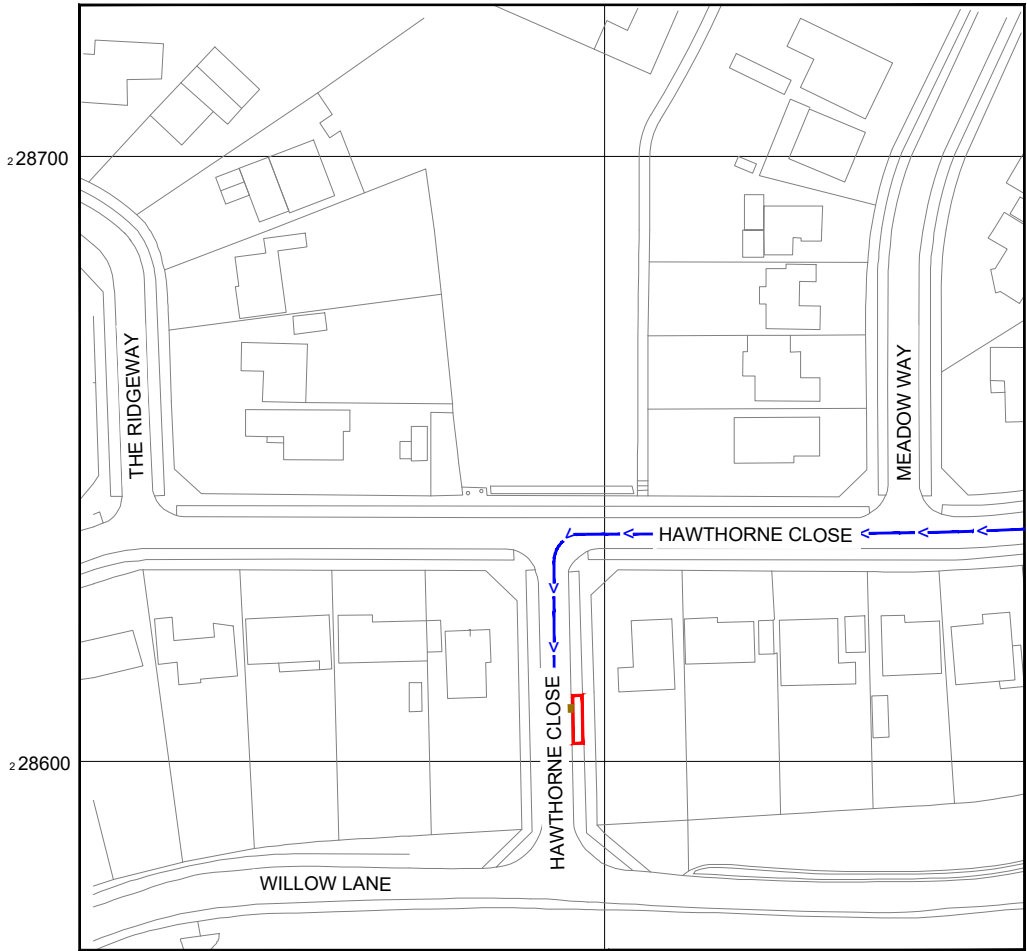


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SITE AREA PLAN



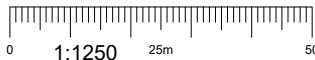
SITE PHOTOGRAPH



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NGR E: 517896 N: 228607

SITE LOCATION PLAN



GOOGLE MAPS QR CODE

GOOGLE MAPS -<https://goo.gl/maps/UGsHKj6saJbH6dkk7>

GOOGLE STREET VIEW -<https://goo.gl/maps/Bv2Qr4M6U7FFbfKa8>

NOTES:

1. ALL DIMENSIONS IN MM UNLESS OTHERWISE NOTED.

DIRECTIONS TO SITE:
HEAD SOUTHEAST ON M1, AT JUNCTION 10, TAKE THE A1081 EXIT TO AIRPORT, SLIGHT LEFT ONTO NEW AIRPORT WAY/A1081, KEEP RIGHT TO CONTINUE ON NEW AIRPORT WAY/A505, AT THE ROUNDABOUT, TAKE THE 2ND EXIT ONTO VAUXHALL WAY/A505, AT THE ROUNDABOUT, TAKE THE 2ND EXIT AND STAY ON VAUXHALL WAY/A505, TURN RIGHT ONTO HITCHIN RD/STOPSLEY WAY/A505, AT THE ROUNDABOUT, TAKE THE 2ND EXIT ONTO HITCHIN RD/A505, AT THE ROUNDABOUT, TAKE THE 2ND EXIT ONTO BEECH HILL/A505, TURN RIGHT ONTO WILLOW LN, CONTINUE ONTO CHARLTON RD, TURN LEFT ONTO HAWTHORN CL, TURN LEFT TO STAY ON HAWTHORN CL, TURN LEFT ONTO HAWTHORN CL/HAWTHORNE CL SITE WILL BE ON LEFT SIDE.

Demise:



Access Route To Site:



Access Route:



Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M004	MBNL	Vendor Swap	Detailed Design	A3
Date:	12.02.26	Revision / Upgrade Description:		
Drawn:	BKM	Proposed Pole Detail Amended		
Checked:	KA			
Approved:	DC			
Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M003	MBNL	Vendor Swap	Detailed Design	A2
Date:	26.11.25	Revision / Upgrade Description:		
Drawn:	BKM	ICNIRP Blocks Changed / Pole setting out Added		
Checked:	KA			
Approved:	DC			
Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M002	MBNL	Vendor Swap	Detailed Design	A1
Date:	12.11.25	Revision / Upgrade Description:		
Drawn:	BKM	Detailed Design		
Checked:	KA			
Approved:	DC			
Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M001	MBNL	Vendor Swap	Planning	A
Date:	15.02.25	Revision / Upgrade Description:		
Drawn:	RMA	First Issue		
Checked:	KS			
Approved:	HG			



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Birmingham Business Park, B37 7YU

Tel: +44 (0)1908 377 766
Email: info@ktl.ie

Site Name:

LP HAWTHORN AVENUE

Site ID:

1205960

Address:

OPPOSITE 53 HAWTHORN CLOSE
HITCHIN
HERTFORDSHIRE
SG5 2BP

Title:

002 SITE LOCATION PLAN

Project:

VENDOR SWAP

Purpose of Issue:

DETAILED DESIGN

EE Cell ID:

16912

MBNL Cell ID:

NHE089

3UK Cell ID:

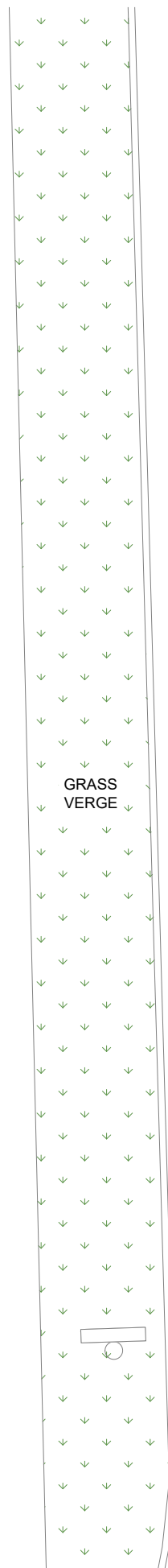
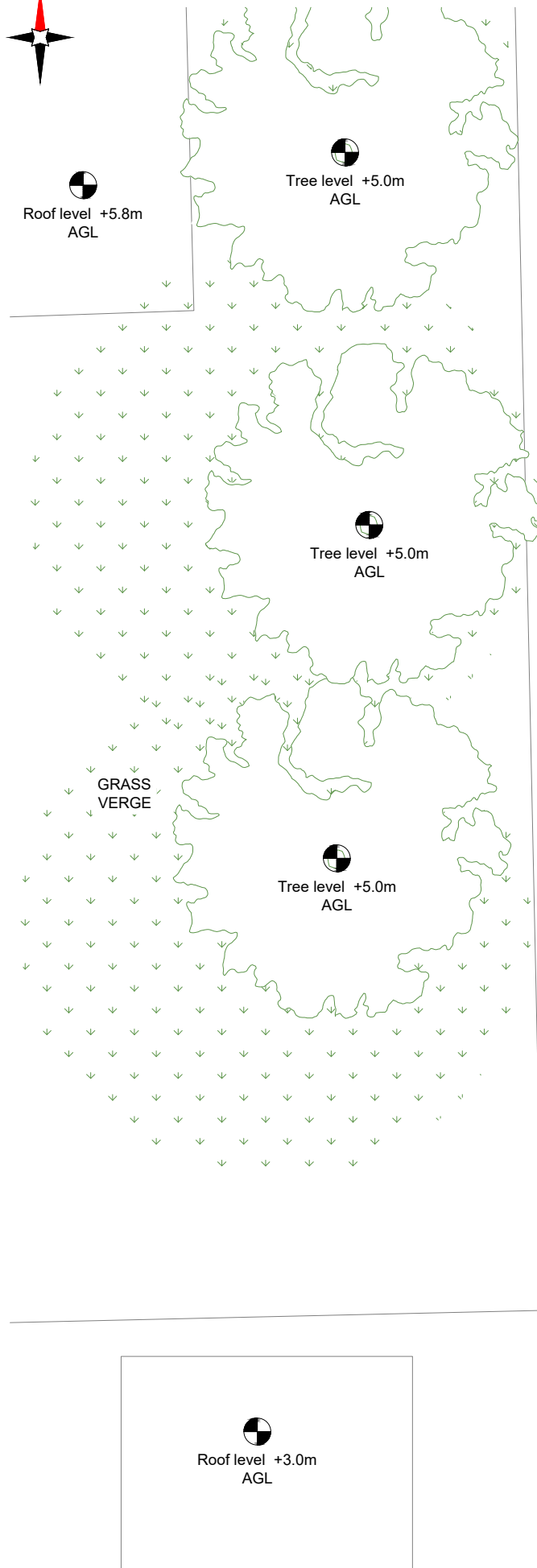
SG0302

Master Drawing No:

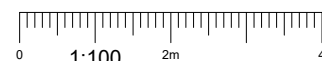
1205960_NHE089_16912_SG0302_M004

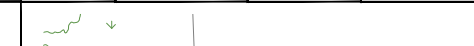
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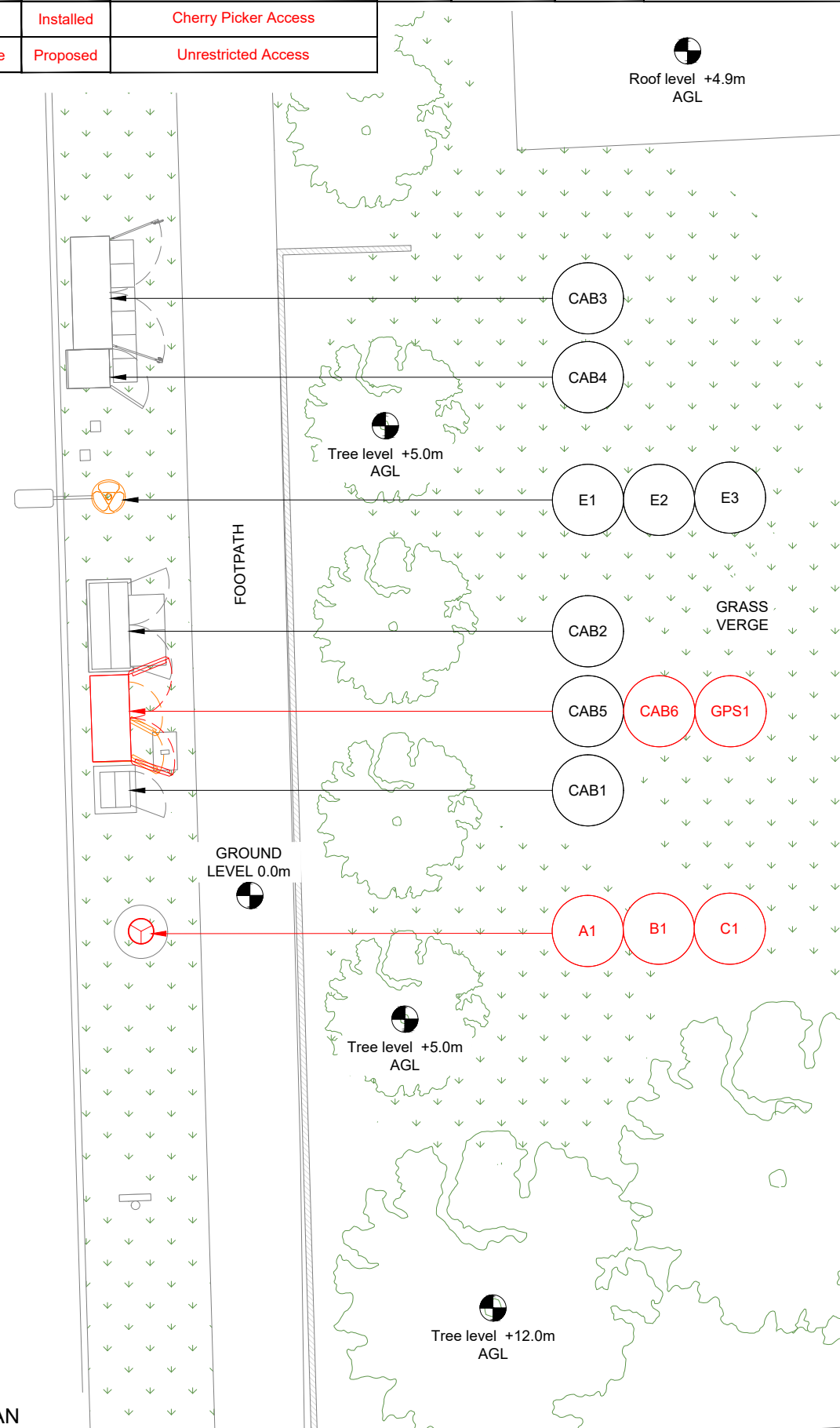
A3



HAWTHORN CLOSE
Speed limit (50mph)



Asset Reference	Asset Description:	Asset Status:	Access Description:	Asset Reference	Asset Description:	Asset Status:	Access Description:
E1	Antenna	Remove	Cherry Picker Access	CAB1-4	Cabinets	Installed	Unrestricted Access
E2	Antenna	Remove	Cherry Picker Access	CAB5	Cabinet	Remove	Unrestricted Access
E3	Antenna	Remove	Cherry Picker Access	CAB6	Cabinet	Proposed	Unrestricted Access
A1/B1/C1	Antenna	Installed	Cherry Picker Access				
GPS 1	GPS Node	Proposed	Unrestricted Access				



NOTES:

1. ALL DIMENSIONS IN MM UNLESS OTHERWISE NOTED.

DEFINED ACCESS ROUTE DESCRIPTION FROM SITE ENTRANCE
TO THE EQUIPMENT:

Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M004	MBNL	Vendor Swap	Detailed Design	A3
Date:	12.02.26	Revision / Upgrade Description:		
Drawn:	BKM	Proposed Pole Detail Amended		
Checked:	KA			
Approved:	DC			
Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M003	MBNL	Vendor Swap	Detailed Design	A2
Date:	26.11.25	Revision / Upgrade Description:		
Drawn:	BKM	ICNIRP Blocks Changed / Pole setting out Added		
Checked:	KA			
Approved:	DC			
Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M002	MBNL	Vendor Swap	Detailed Design	A1
Date:	12.11.25	Revision / Upgrade Description:		
Drawn:	BKM	Detailed Design		
Checked:	KA			
Approved:	DC			
Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M001	MBNL	Vendor Swap	Planning	A
Date:	15.02.25	Revision / Upgrade Description:		
Drawn:	RMA	First Issue		
Checked:	KS			
Approved:	HG			



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Email: info@ktl.ie

Site Name:

LP HAWTHORN AVENUE

Site ID:

1205960

Address:

OPPOSITE 53 HAWTHORN CLOSE
HITCHIN
HERTFORDSHIRE
SG5 2BP

Title:

003 ACCESS PLAN

Project:

VENDOR SWAP

	Purpose of Issue:

DETAILED DESIGN

EE Cell ID:
16912

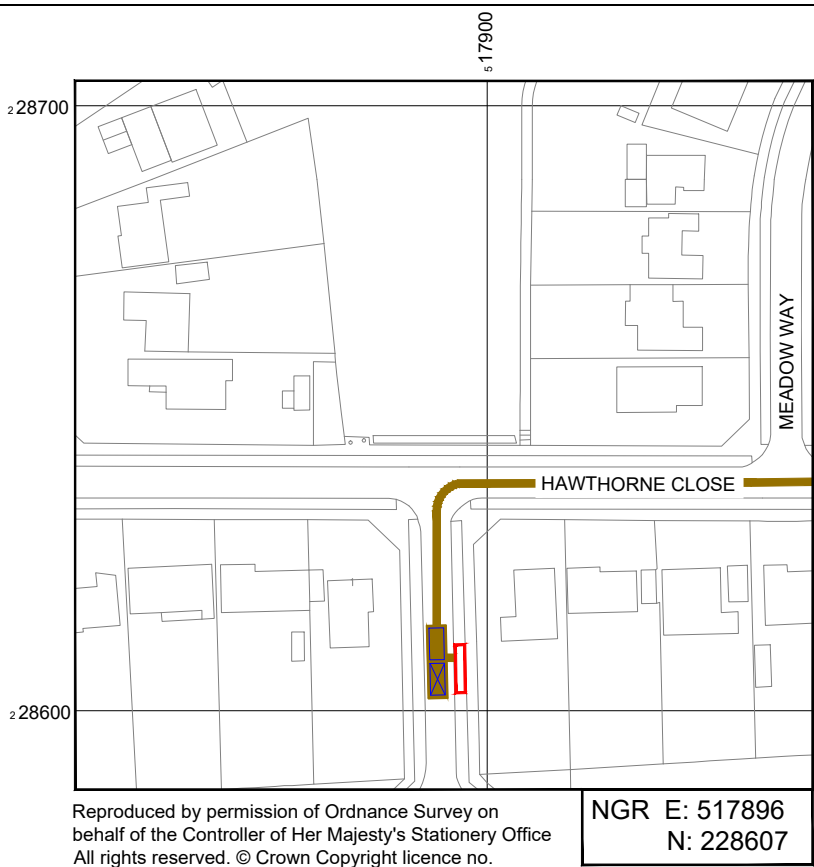
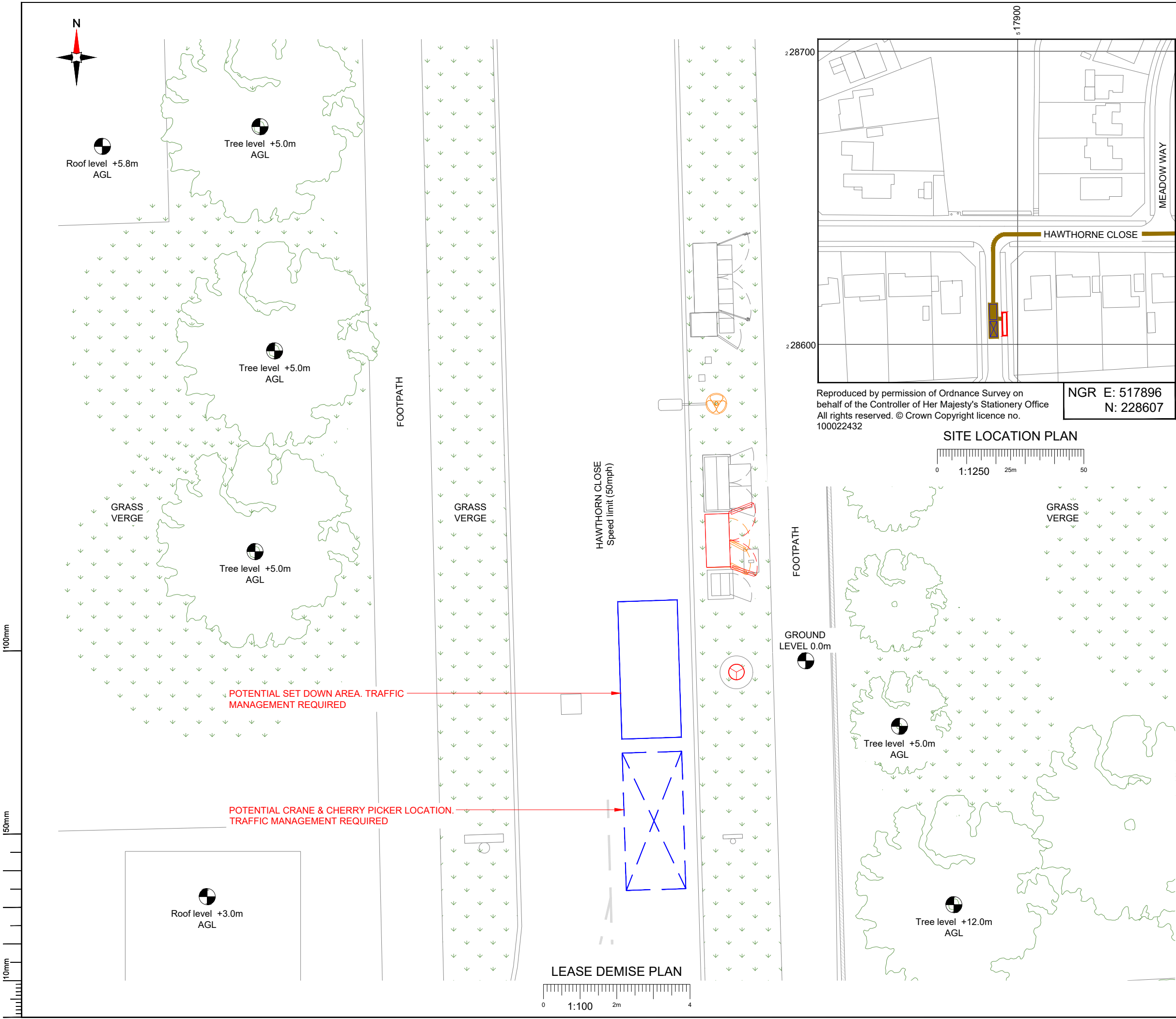
MBNL Cell ID:
NHE089

3UK Cell ID:
SG0302

Master Drawing No:

1205960 NHE089 16912 SG0302 M004

Issue:
A3



NEW CODE:

Demise: Outlined in Red

Access Route: Solid Brown

Set Down Area: Outlined in Blue

Crane Area: Dashed in Blue

Master: M004	MBNL / EE / H3G: MBNL	Project: Vendor Swap	Purpose of Issue: Detailed Design	Issue: A3
Date: 12.02.26	Drawn: BKM	Revision / Upgrade Description: Proposed Pole Detail Amended		
Checked: KA	Approved: DC			
Master: M003	MBNL / EE / H3G: MBNL	Project: Vendor Swap	Purpose of Issue: Detailed Design	Issue: A2
Date: 26.11.25	Drawn: BKM	Revision / Upgrade Description: ICNIRP Blocks Changed / Pole setting out Added		
Checked: KA	Approved: DC			
Master: M002	MBNL / EE / H3G: MBNL	Project: Vendor Swap	Purpose of Issue: Detailed Design	Issue: A1
Date: 12.11.25	Drawn: BKM	Revision / Upgrade Description: Detailed Design		
Checked: KA	Approved: DC			
Master: M001	MBNL / EE / H3G: MBNL	Project: Vendor Swap	Purpose of Issue: Planning	Issue: A
Date: 15.02.25	Drawn: RMA	Revision / Upgrade Description: First Issue		
Checked: KS	Approved: HG			

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Email: info@ktl.ie

Site Name: LP HAWTHORN AVENUE

Site ID: 1205960

Address: OPPOSITE 53 HAWTHORN CLOSE
HITCHIN
HERTFORDSHIRE
SG5 2BP

Title: 004 LEASE DEMISE

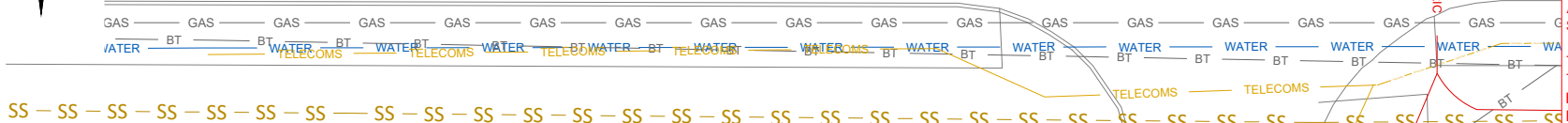
Project: VENDOR SWAP

Purpose of Issue: DETAILED DESIGN

EE Cell ID: 16912	MBNL Cell ID: NHE089	3UK Cell ID: SG0302
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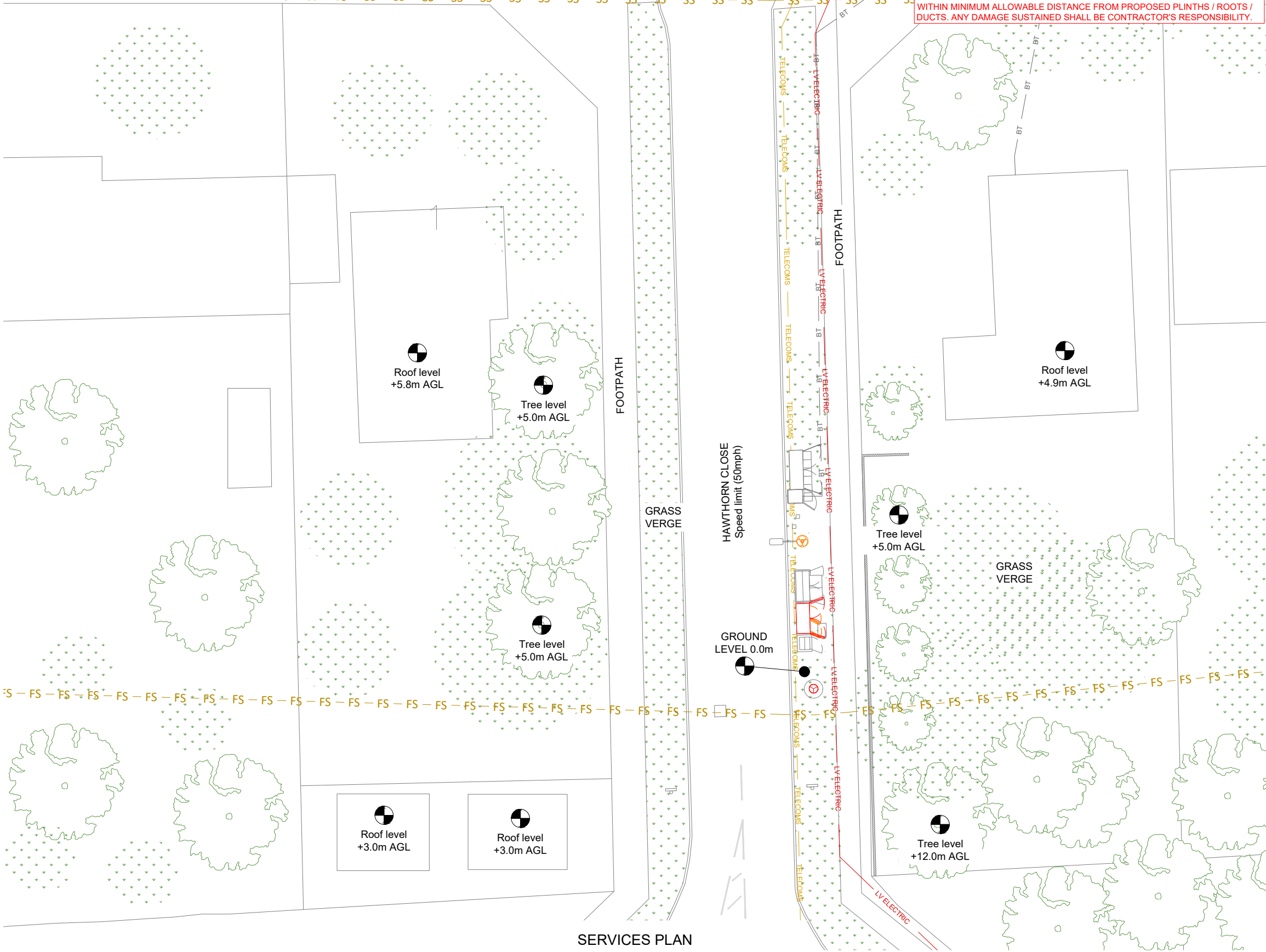
Master Drawing No: 1205960_NHE089_16912_SG0302_M004

Issue: A3

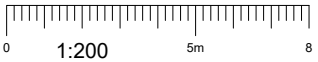


NOTE:
ALL SERVICE LOCATIONS SHOWN ON THIS DRAWING ARE SHOWN INDICATIVELY AND HAVE BEEN TAKEN FROM INFORMATION RECEIVED FROM THE RELEVANT STATUTORY AUTHORITIES. IN NO WAY SHOULD THIS INFORMATION BE TAKEN AS THE EXACT LOCATION OF THE SERVICES, AND ALL RELEVANT AUTHORITIES SHOULD BE CONTACTED BEFORE ANY EXCAVATION TAKES PLACE.

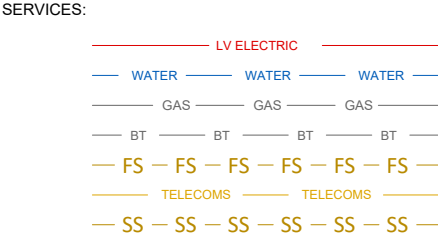
THE AREA OF WORK IS TO BE INVESTIGATED USING A C.A.T (CABLE AVOIDING TOOL) PRIOR TO ANY WORK ON SITE ALL SERVICES ARE TO BE LOCATED BY HAND DIGGING. PROTECTED AND CLEARLY MARKED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT ANY EXISTING SERVICES ARE NOT WITHIN MINIMUM ALLOWABLE DISTANCE FROM PROPOSED PLINTHS / ROOTS / DUCTS. ANY DAMAGE SUSTAINED SHALL BE CONTRACTOR'S RESPONSIBILITY.



SERVICES PLAN



NOTES:
1. ALL DIMENSIONS IN MM UNLESS OTHERWISE NOTED.



Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M004	MBNL	Vendor Swap	Detailed Design	A3
Date:	12.02.26	Revision / Upgrade Description:		
Drawn:	BKM	Proposed Pole Detail Amended		
Checked:	KA			
Approved:	DC			
Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M003	MBNL	Vendor Swap	Detailed Design	A2
Date:	26.11.25	Revision / Upgrade Description:		
Drawn:	BKM	ICNIRP Blocks Changed / Pole setting out Added		
Checked:	KA			
Approved:	DC			
Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M002	MBNL	Vendor Swap	Detailed Design	A1
Date:	12.11.25	Revision / Upgrade Description:		
Drawn:	BKM	Detailed Design		
Checked:	KA			
Approved:	DC			
Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M001	MBNL	Vendor Swap	Planning	A
Date:	15.02.25	Revision / Upgrade Description:		
Drawn:	RMA	First Issue		
Checked:	KS			
Approved:	HG			



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Birmingham Business Park, B37 7YU

Tel: +44 (0)1908 377 766
Email: info@ktl.ie

Site Name:	LP HAWTHORN AVENUE		
Site ID:	1205960		
Address:	OPPOSITE 53 HAWTHORN CLOSE HITCHIN HERTFORDSHIRE SG5 2BP		
Title:	005 SERVICES PLAN		
Project:	VENDOR SWAP		
Purpose of Issue:	DETAILED DESIGN		
EE Cell ID:	MBNL Cell ID:	3UK Cell ID:	
16912	NHE089	SG0302	
Master Drawing No:			Issue:
1205960_NHE089_16912_SG0302_M004			A3

Live Technologies	Proposed Config	Achievable Config	Proposed MIMO Config	Achievable MIMO Config	CR Status
GSM; LTE1800 Carrier 1;	18/18/21/26/26/26/80/70/35	18/18/21/26/26/80/70	18/21/26@4X4 70/80 @2X2 3500 @32X32	18/21/26@2X2 70/80 @2X2	Approved

FIXITS			
FIXIT TYPE	STATUS	FIXIT NUMBER	COMMENTS
Feeder Insertion Loss	Approved	114430	Feeder losses exceed permitted -3.0 limit as set in TD52000

DEPENDENCY	STATUS	COMMENTS			
Asbestos	N/A	-			
Building Regulations Approval	N/A	-			
Planning Conditions	Ok	-			
RF Compliance TD54000 v11.0	Pass / Fail:	Sector A	MBNL-0030-DS-STD-001 BLOCK OPTION 11_37.5M		
	Pass	Sector B	MBNL-0030-DS-STD-001 BLOCK OPTION 11_37.5M		
		Sector C	MBNL-0030-DS-STD-001 BLOCK OPTION 11_37.5M		
Global Design Check	N/A	-			
Geotech Report	N/A	-			
Structural Calculations	N/A	-			
Intrusive Building Survey	N/A	-			
Rigging Survey	N/A	-			
Power	Upgrade Required: Y	Existing Single phase 100A REC supply within Mk4 link AC cabinet Proposed DNO Isolator to be installed			
Line of Sight Survey	N/A	-			
Cooling Solution	Indoor/outdoor: Outdoor	kW: -	Status: -	System: -	Upgrade Required: -
Services Search	Completed	-			
Trial Hole	Completed	-			
Temporary Site	N/A	-			
Other	-				
Other	-				

Note:
V1CR Approved for new pole and antenna height increase

NOTE:
Existing EE/H3G Jaybeam 6173000 antenna height (9.00m) in nemesis is incorrect. Existing EE/H3G Jaybeam 6173000 antenna height (8.50m) in existing drawing file (ADC Build) matches with photo. Nemesis data needs to be updated. Diff raised

STATUS KEY:

Installed: Existing

Retain: Existing and to remain

Relocate: Existing and to be relocated

Remove: Existing to be removed from site

Proposed: New on site

LOCATION KEY:

Outdoor: Located outside

Indoor: Located within an equipment cabin or equipment room

Internal: located inside a cabinet or item of equipment

Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M004	MBNL	Vendor Swap	Detailed Design	A3
Date:	12.02.26	Revision / Upgrade Description:		
Drawn:	BKM	Proposed Pole Detail Amended		
Checked:	KA			
Approved:	DC			
Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M003	MBNL	Vendor Swap	Detailed Design	A2
Date:	26.11.25	Revision / Upgrade Description:		
Drawn:	BKM	ICNIRP Blocks Changed / Pole setting out Added		
Checked:	KA			
Approved:	DC			
Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M002	MBNL	Vendor Swap	Detailed Design	A1
Date:	12.11.25	Revision / Upgrade Description:		
Drawn:	BKM	Detailed Design		
Checked:	KA			
Approved:	DC			
Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M001	MBNL	Vendor Swap	Planning	A
Date:	15.02.25	Revision / Upgrade Description:		
Drawn:	RMA	First Issue		
Checked:	KS			
Approved:	HG			



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Site Name:
LP HAWTHORN AVENUE

Site ID:
1205960

Address:
OPPOSITE 53 HAWTHORN CLOSE
HITCHIN
HERTFORDSHIRE
SG5 2BP

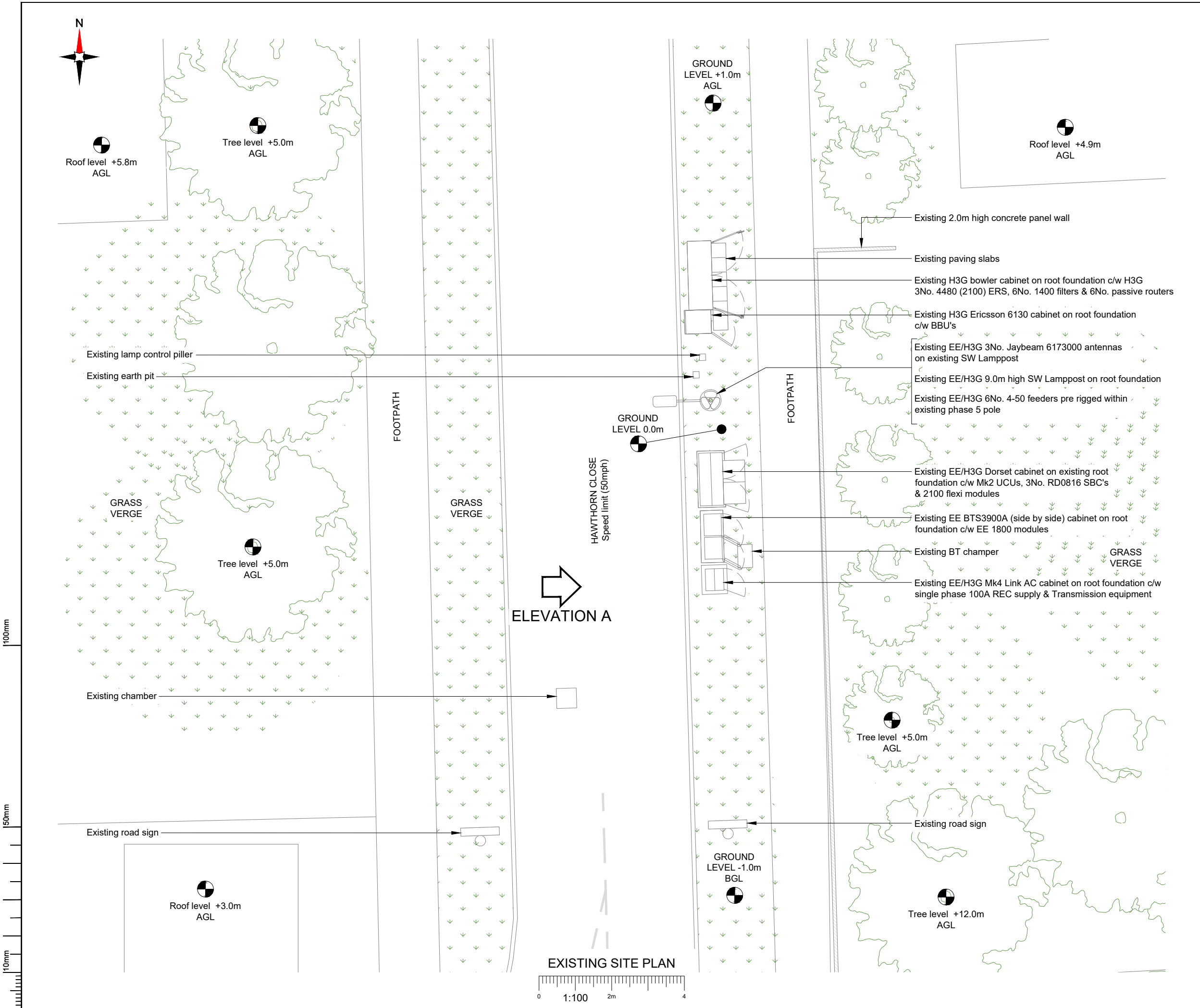
Title:
006 FIXIT's & PROJECT DEPENDENCIES

Project:
VENDOR SWAP

Purpose of Issue:
DETAILED DESIGN

EE Cell ID: 16912	MBNL Cell ID: NHE089	3UK Cell ID: SG0302
Master Drawing No: 1205960_NHE089_16912_SG0302_M004		Issue: A3

Note:
Page is for Internal Distribution Only



- NOTES:
- ALL DIMENSIONS IN MM UNLESS OTHERWISE NOTED.

Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M004	MBNL	Vendor Swap	Detailed Design	A3
Date:	12.02.26	Revision / Upgrade Description:		
Drawn:	BKM	Proposed Pole Detail Amended		
Checked:	KA			
Approved:	DC			
Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M003	MBNL	Vendor Swap	Detailed Design	A2
Date:	26.11.25	Revision / Upgrade Description:		
Drawn:	BKM	ICNIRP Blocks Changed / Pole setting out Added		
Checked:	KA			
Approved:	DC			
Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M002	MBNL	Vendor Swap	Detailed Design	A1
Date:	12.11.25	Revision / Upgrade Description:		
Drawn:	BKM	Detailed Design		
Checked:	KA			
Approved:	DC			
Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M001	MBNL	Vendor Swap	Planning	A
Date:	15.02.25	Revision / Upgrade Description:		
Drawn:	RMA	First Issue		
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Approved:	HG			



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Site Name:
LP HAWTHORN AVENUE

Site ID:
1205960

Address:
OPPOSITE 53 HAWTHORN CLOSE
HITCHIN
HERTFORDSHIRE
SG5 2BP

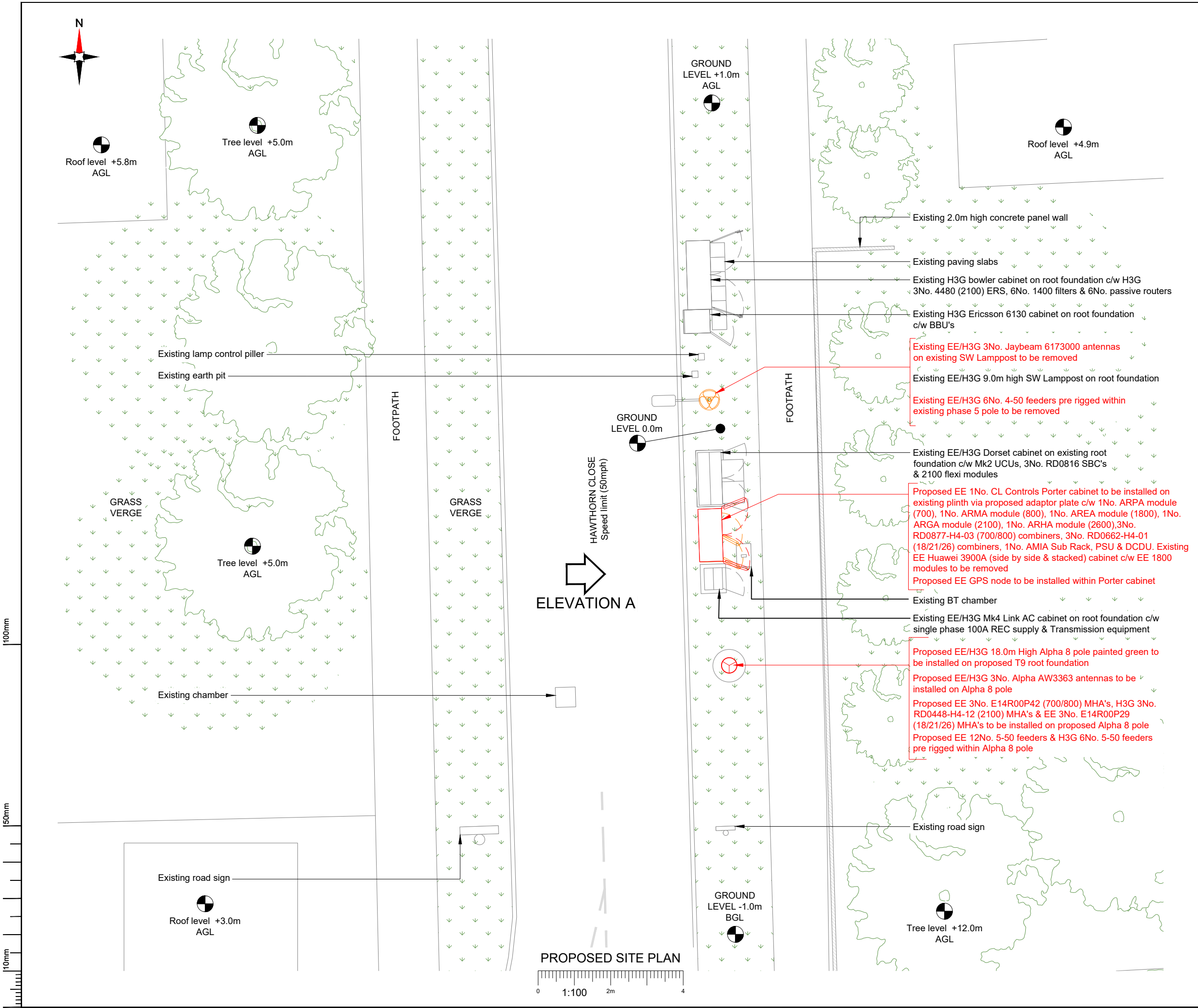
Title:
100 EXISTING SITE PLAN

Project:
VENDOR SWAP

Purpose of Issue:
DETAILED DESIGN

EE Cell ID: 16912	MBNL Cell ID: NHE089	3UK Cell ID: SG0302
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Master Drawing No: 1205960_NHE089_16912_SG0302_M004	Issue: A3
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NOTES:

1. ALL DIMENSIONS IN MM UNLESS OTHERWISE NOTED.

Note;
All existing feeder cables to be re-used. Subject to testing.

Master: M004	MBNL / EE / H3G: MBNL	Project: Vendor Swap	Purpose of Issue: Detailed Design	Issue: A3
Date: 12.02.26	Drawn: BKM	Revision / Upgrade Description: Proposed Pole Detail Amended		
Checked: KA	Approved: DC			
Master: M003	MBNL / EE / H3G: MBNL	Project: Vendor Swap	Purpose of Issue: Detailed Design	Issue: A2
Date: 26.11.25	Drawn: BKM	Revision / Upgrade Description: ICNIRP Blocks Changed / Pole setting out Added		
Checked: KA	Approved: DC			
Master: M002	MBNL / EE / H3G: MBNL	Project: Vendor Swap	Purpose of Issue: Detailed Design	Issue: A1
Date: 12.11.25	Drawn: BKM	Revision / Upgrade Description: Detailed Design		
Checked: KA	Approved: DC			
Master: M001	MBNL / EE / H3G: MBNL	Project: Vendor Swap	Purpose of Issue: Planning	Issue: A
Date: 15.02.25	Drawn: RMA	Revision / Upgrade Description: First Issue		
Checked: KS	Approved: HG			

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Site Name: LP HAWTHORN AVENUE

Site ID: 1205960

Address: OPPOSITE 53 HAWTHORN CLOSE
HITCHIN
HERTFORDSHIRE
SG5 2BP

Title: 150 PROPOSED SITE PLAN

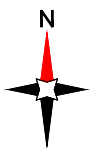
Project: VENDOR SWAP

Purpose of Issue: DETAILED DESIGN

EE Cell ID: 16912	MBNL Cell ID: NHE089	3UK Cell ID: SG0302
-------------------	----------------------	---------------------

Master Drawing No: 1205960_NHE089_16912_SG0302_M004

Issue: A3



Tree level +5.0m
AGL

Tree level +5.0m
AGL

FOOTPATH

GRASS
VERGE

HAWTHORN CLOSE
Speed limit (50mph)

Proposed 3No. Ø150mm
feeder ducts

GROUND
LEVEL 0.0m

Tree level +12.0m
AGL

Tree level +12.0m
AGL

GRASS
VERGE

Proposed 1No. Ø150mm feeder
duct for H3G 2100 tails
Existing power duct from MK4 Link AC to
proposed Porter cabinet

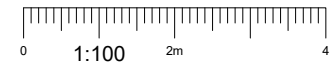
Existing incoming power duct

Existing incoming TX duct

Existing TX duct from MK4 Link AC to
proposed Porter cabinet

Note:
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AS THE EXACT LOCATION OF THE SERVICES, AND ALL RELEVANT AUTHORITIES
SHOULD BE CONTACTED BEFORE ANY EXCAVATION TAKES PLACE.
THE AREA OF WORK IS TO BE INVESTIGATED USING A C.A.T (CABLE AVOIDING
PRIOR TO ANY WORK ON SITE ALL SERVICES ARE TO BE LOCATED BY
HAND DIGGING. PROTECTED AND CLEARLY MARKED. THE CONTRACTOR SHALL
BE RESPONSIBLE FOR ENSURING THAT ANY EXISTING SERVICES ARE NOT
WITHIN MINIMUM ALLOWABLE DISTANCE FROM PROPOSED PLINTHS / ROOTS /
DUCTS. ANY DAMAGE SUSTAINED SHALL BE CONTRACTOR'S RESPONSIBILITY.

PROPOSED DUCTING PLAN



DUCT KEY

Line Style	Duct Name	Size Ø
	Proposed Power	100
	Proposed Tx	75
	Proposed Feeders	150
	Existing underground ducts	N/A

NOTES:

1. ALL DIMENSIONS IN MM UNLESS OTHERWISE NOTED.

LV ELECTRIC

WATER

GAS

BT

FS

TELECOMS

WATERGASBTFSTELECOMSWATERGASBTFSTELECOMS

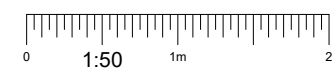
NORTH

90° HATCH 1

PROPOSED POLE ROOT KEY

POLE TYPE	ROOT TYPE	HATCH ORIENTATION 1	HATCH ORIENTATION 2	BOLT HOLE
Alpha 8 pole	T-9 ROOT	90°	-	0°

PROPOSED HATCH-ORIENTATION PLAN



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Hatfield
Hertfordshire
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Birmingham Business Park, B37 7YU

Tel: +44 (0)1908 377 766
Email: info@ktl.ie

Site Name: LP HAWTHORN AVENUE

Site ID: 1205960

Address: OPPOSITE 53 HAWTHORN CLOSE
HITCHIN
HERTFORDSHIRE
SG5 2BP

Title: 155 PROPOSED DUCTING PLAN

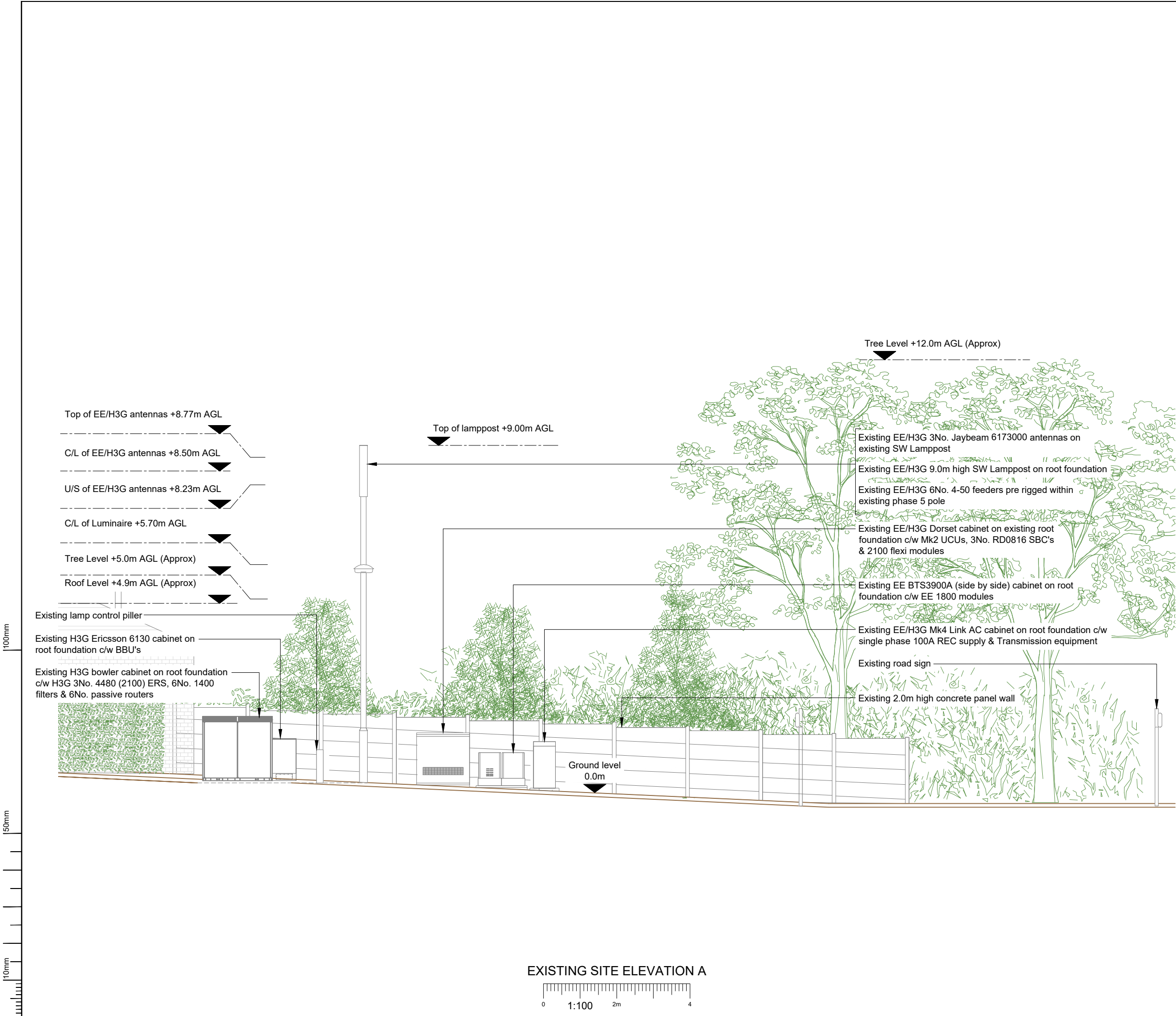
Project: VENDOR SWAP

Purpose of Issue: DETAILED DESIGN

EE Cell ID: 16912	MBNL Cell ID: NHE089	3UK Cell ID: SG0302
----------------------	-------------------------	------------------------

Master Drawing No: 1205960_NHE089_16912_SG0302_M004

Issue: A3



NOTES:

1. ALL DIMENSIONS IN MM UNLESS OTHERWISE NOTED.

NOTE:
Existing EE/H3G Jaybeam 6173000 antenna height (9.00m) in nemesis is incorrect. Existing EE/H3G Jaybeam 6173000 antenna height (8.50m) in existing drawing file (ADC Build) matches with photo. Nemesis data needs to be updated. Diff raised

Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M004	MBNL	Vendor Swap	Detailed Design	A3
Date:	12.02.26	Revision / Upgrade Description:		
Drawn:	BKM	Proposed Pole Detail Amended		
Checked:	KA			
Approved:	DC			
Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M003	MBNL	Vendor Swap	Detailed Design	A2
Date:	26.11.25	Revision / Upgrade Description:		
Drawn:	BKM	ICNIRP Blocks Changed / Pole setting out Added		
Checked:	KA			
Approved:	DC			
Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M002	MBNL	Vendor Swap	Detailed Design	A1
Date:	12.11.25	Revision / Upgrade Description:		
Drawn:	BKM	Detailed Design		
Checked:	KA			
Approved:	DC			
Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M001	MBNL	Vendor Swap	Planning	A
Date:	15.02.25	Revision / Upgrade Description:		
Drawn:	RMA	First Issue		
Checked:	KS			
Approved:	HG			

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Tel: +44 (0)1908 377 766
Email: info@ktl.ie

Site Name:

LP HAWTHORN AVENUE

Site ID:

1205960

Address:

OPPOSITE 53 HAWTHORN CLOSE
HITCHIN
HERTFORDSHIRE
SG5 2BP

Title:

200 EXISTING SITE ELEVATION A

Project:

VENDOR SWAP

Purpose of Issue:

DETAILED DESIGN

EE Cell ID:	MBNL Cell ID:	3UK Cell ID:
16912	NHE089	SG0302

Master Drawing No:
1205960_NHE089_16912_SG0302_M004

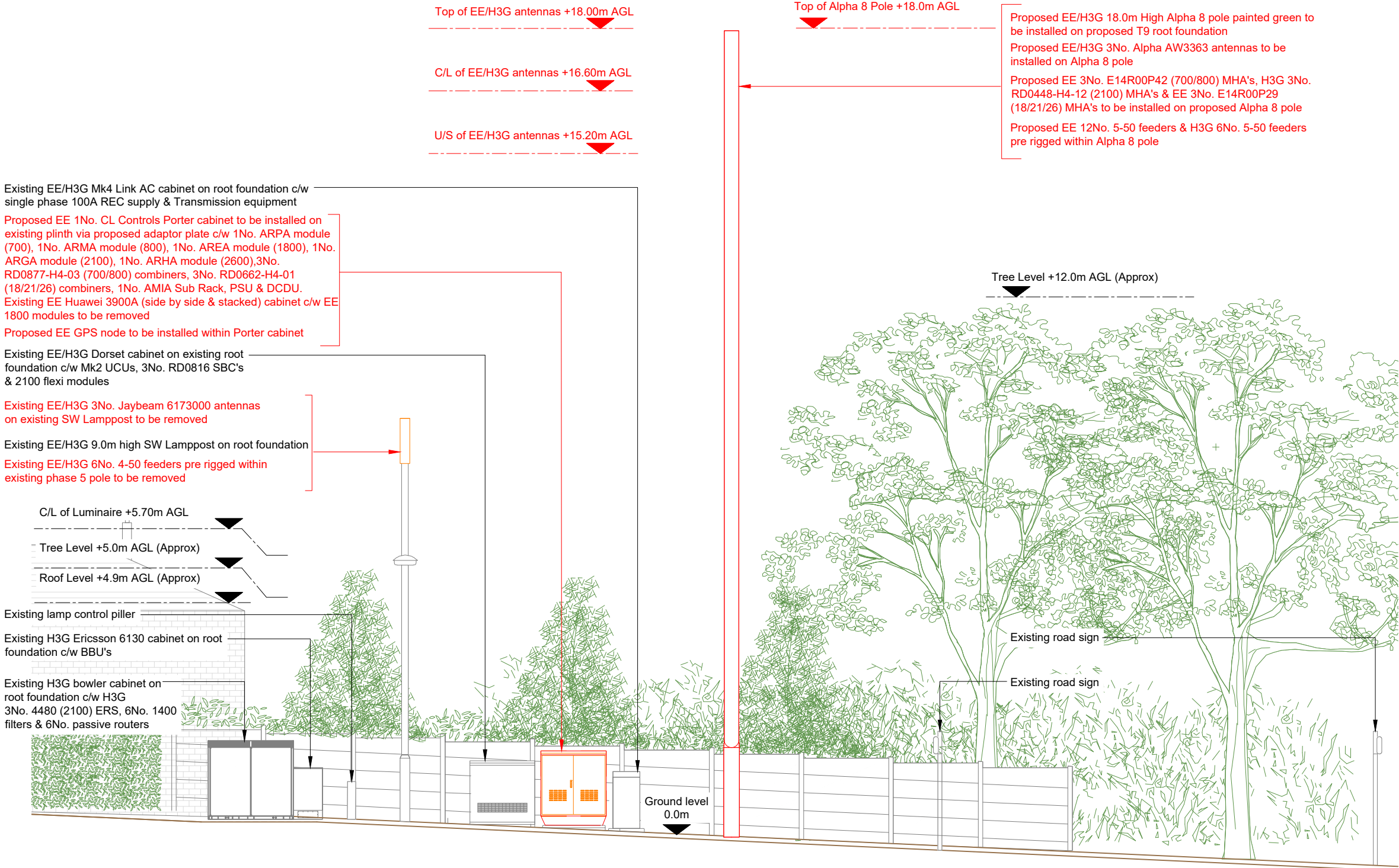
Issue:
A3

v3.0

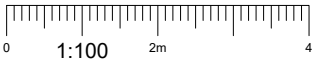
100mm

50mm

10mm



PROPOSED SITE ELEVATION A



NOTES:

1. ALL DIMENSIONS IN MM UNLESS OTHERWISE NOTED.

Note;
All existing feeder cables to be re-used. Subject to testing.

Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M004	MBNL	Vendor Swap	Detailed Design	A3
Date:	12.02.26	Revision / Upgrade Description:		
Drawn:	BKM	Proposed Pole Detail Amended		
Checked:	KA			
Approved:	DC			
Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M003	MBNL	Vendor Swap	Detailed Design	A2
Date:	26.11.25	Revision / Upgrade Description:		
Drawn:	BKM	ICNIRP Blocks Changed / Pole setting out Added		
Checked:	KA			
Approved:	DC			
Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M002	MBNL	Vendor Swap	Detailed Design	A1
Date:	12.11.25	Revision / Upgrade Description:		
Drawn:	BKM	Detailed Design		
Checked:	KA			
Approved:	DC			
Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M001	MBNL	Vendor Swap	Planning	A
Date:	15.02.25	Revision / Upgrade Description:		
Drawn:	RMA	First Issue		
Checked:	KS			
Approved:	HG			



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KTL

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Tel: +44 (0)1908 377 766
Email: info@ktl.ie

Site Name:

LP HAWTHORN AVENUE

Site ID:

1205960

Address:

OPPOSITE 53 HAWTHORN CLOSE
HITCHIN
HERTFORDSHIRE
SG5 2BP

Title:

250 PROPOSED SITE ELEVATION A

Project:

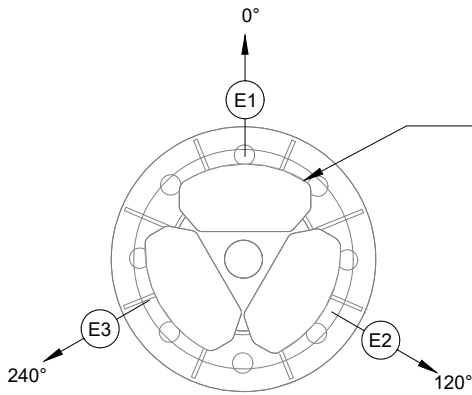
VENDOR SWAP

Purpose of Issue:

DETAILED DESIGN

EE Cell ID:	MBNL Cell ID:	3UK Cell ID:
16912	NHE089	SG0302

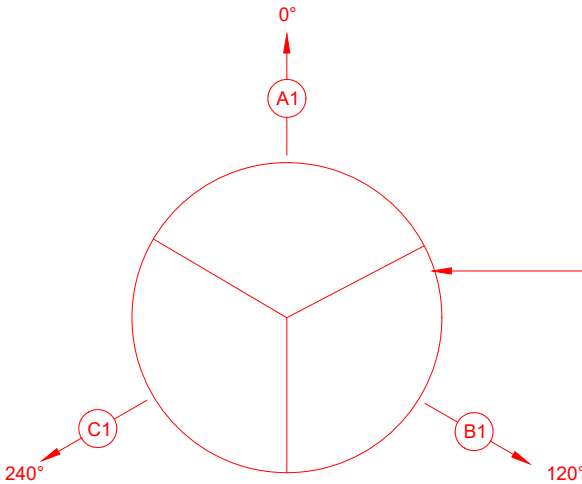
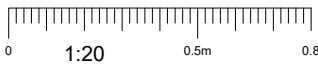
Master Drawing No:	Issue:
1205960_NHE089_16912_SG0302_M004	A3



Existing EE/H3G 3No. Jaybeam 6173000 antennas
on existing SW Lamppost

Existing EE/H3G 9.0m high SW Lamppost on root foundation

EXISTING ANTENNA PLAN

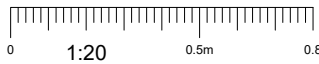


Proposed EE/H3G 18.0m High Alpha 8 pole painted green to
be installed on proposed T9 root foundation

Proposed EE/H3G 3No. Alpha AW3363 antennas to be
installed on Alpha 8 pole

Proposed EE 3No. E14R00P42 (700/800) MHA's, H3G 3No.
RD0448-H4-12 (2100) MHA's & EE 3No. E14R00P29
(18/21/26) MHA's to be installed on proposed Alpha 8 pole

PROPOSED ANTENNA PLAN



- NOTES:
- ALL DIMENSIONS IN MM UNLESS OTHERWISE NOTED.

Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M004	MBNL	Vendor Swap	Detailed Design	A3
Date:	12.02.26	Revision / Upgrade Description:		
Drawn:	BKM	Proposed Pole Detail Amended		
Checked:	KA			
Approved:	DC			
Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M003	MBNL	Vendor Swap	Detailed Design	A2
Date:	26.11.25	Revision / Upgrade Description:		
Drawn:	BKM	ICNIRP Blocks Changed / Pole setting out Added		
Checked:	KA			
Approved:	DC			
Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M002	MBNL	Vendor Swap	Detailed Design	A1
Date:	12.11.25	Revision / Upgrade Description:		
Drawn:	BKM	Detailed Design		
Checked:	KA			
Approved:	DC			
Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M001	MBNL	Vendor Swap	Planning	A
Date:	15.02.25	Revision / Upgrade Description:		
Drawn:	RMA	First Issue		
Checked:	KS			
Approved:	HG			



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Tel: +44 (0)1908 377 766
Email: info@ktl.ie

Site Name:
LP HAWTHORN AVENUE

Site ID:
1205960

Address:
OPPOSITE 53 HAWTHORN CLOSE
HITCHIN
HERTFORDSHIRE
SG5 2BP

Title:
310 ANTENNA PLAN

Project:
VENDOR SWAP

Purpose of Issue:
DETAILED DESIGN

EE Cell ID: 16912	MBNL Cell ID: NHE089	3UK Cell ID: SG0302
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Master Drawing No: 1205960_NHE089_16912_SG0302_M004	Issue: A3
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EXISTING ANTENNA SCHEDULE																									
ANTENNAS							FEEDER/FIBRE							BOBS / MHA's / RRU's / JUMPERS / ROUTERS										Antenna Status / Additional comments	
Antenna ID	Antenna Manufacturer & Type	Antenna AGL (m) TOP C/L U/S	Antenna Bearing (°)	Operator	Spectrum Port number	Tech Deployed	Type & Length(m)					Main Feeder Type (COAX or Fibre)	Main Feeders QTY	Fibre Trunk Length	BOB Low Level QTY / TYPE	BBU to BOB length (m)	BOB High Level QTY / Type	BOB to RRU / AAU Length (m)	RFU / RRU / AAU (RRU Type to be called off)	RRU to Antenna Length (m)	MHA Type	Passive Router (Low Level)	Active Router (High Level)		COAX Feeder Loss (db)
							Low level Jumper	Main Feeder	High Level Jumper 1 (MHA)	Low Level Jumper 2 (router/combiner)	Total														
E1	JAYBEAM 6173000	8.77 8.50 8.23	0°	EE	1-2	1800	4-50=2m	4-50=8m	4-50=1m	4-50=3m	14m	Coax	2No. Existing	-	-	-	-	-	RFU	-	-	MK2 UCU	-	-1.41	Remove
				H3G		2100				4-50=6m/ 4-50=1m	18m								4480 ERS			MK2 UCU/ RD0816		-2.87	
E2	JAYBEAM 6173000	8.77 8.50 8.23	120°	EE	1-2	1800	4-50=2m	4-50=8m	4-50=1m	4-50=3m	14m	Coax	2No. Existing	-	-	-	-	-	RFU	-	-	MK2 UCU	-	-1.41	Remove
				H3G		2100				4-50=6m/ 4-50=1m	18m								4480 ERS			MK2 UCU/ RD0816		-2.87	
E3	JAYBEAM 6173000	8.77 8.50 8.23	240°	EE	1-2	1800	4-50=2m	4-50=8m	4-50=1m	4-50=3m	14m	Coax	2No. Existing	-	-	-	-	-	RFU	-	-	MK2 UCU	-	-1.41	Remove
				H3G		2100				4-50=6m/ 4-50=1m	18m								4480 ERS			MK2 UCU/ RD0816		-2.87	

NOTE:
Existing EE/H3G Jaybeam 6173000 antenna height (9.00m) in nemesis is incorrect. Existing EE/H3G Jaybeam 6173000 antenna height (8.50m) in existing drawing file (ADC Build) matches with photo. Nemesis data needs to be updated. Diff raised

Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M004	MBNL	Vendor Swap	Detailed Design	A3
Date:	12.02.26	Revision / Upgrade Description:		
Drawn:	BKM	Proposed Pole Detail Amended		
Checked:	KA			
Approved:	DC			
Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M003	MBNL	Vendor Swap	Detailed Design	A2
Date:	26.11.25	Revision / Upgrade Description:		
Drawn:	BKM	ICNIRP Blocks Changed / Pole setting out Added		
Checked:	KA			
Approved:	DC			
Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M002	MBNL	Vendor Swap	Detailed Design	A1
Date:	12.11.25	Revision / Upgrade Description:		
Drawn:	BKM	Detailed Design		
Checked:	KA			
Approved:	DC			
Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M001	MBNL	Vendor Swap	Planning	A
Date:	15.02.25	Revision / Upgrade Description:		
Drawn:	RMA	First Issue		
Checked:	KS			
Approved:	HG			



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Design & Principal Consultant:



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Tel: +44 (0)1908 377 766
Email: info@ktl.ie

Site Name:
LP HAWTHORN AVENUE

Site ID:
1205960

Address:
OPPOSITE 53 HAWTHORN CLOSE
HITCHIN
HERTFORDSHIRE
SG5 2BP

Title:
320 EXISTING ANTENNA SCHEDULE

Project:
VENDOR SWAP

Purpose of Issue:
DETAILED DESIGN

EE Cell ID:	MBNL Cell ID:	3UK Cell ID:
16912	NHE089	SG0302

Master Drawing No:	Issue:
1205960_NHE089_16912_SG0302_M004	A3

100mm

50mm

10mm

100mm

50mm

10mm



JAYBEAM
6173000

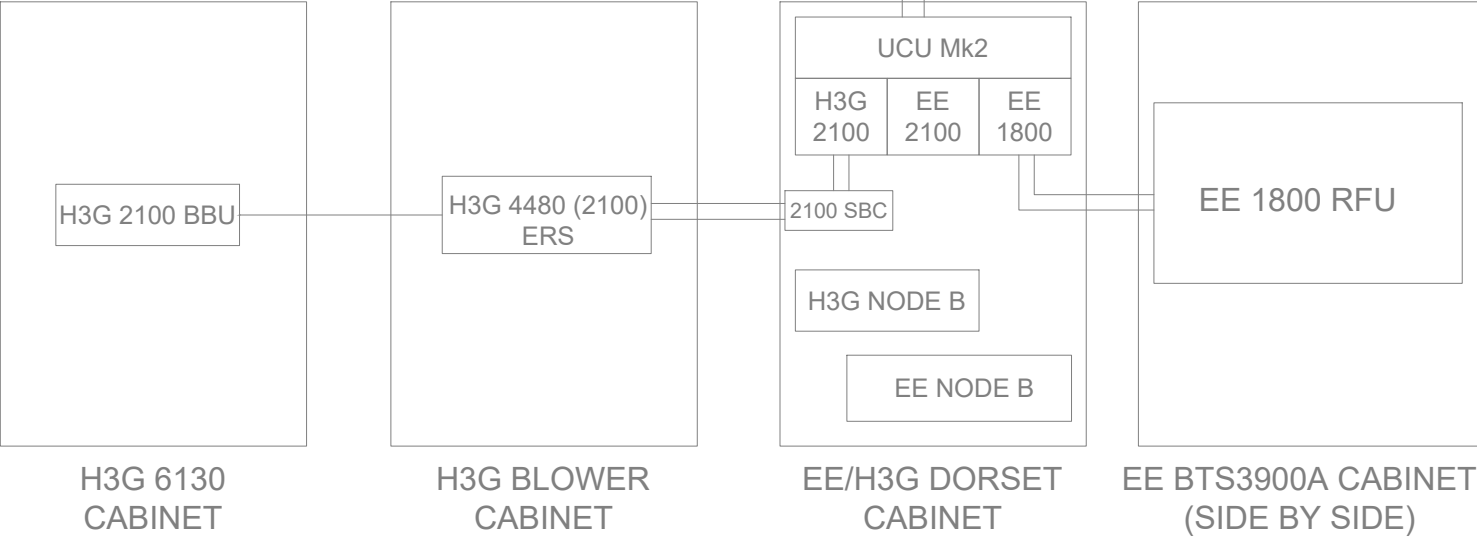
X
1
7
1
0
-
2
1
7
0
X

HIGH LEVEL EQUIPMENT

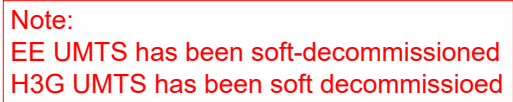
LOW LEVEL EQUIPMENT

EXISTING
4-50 COAX

Note:
EE UMTS has been soft-decommissioned
H3G UMTS has been soft decommissioed



Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M004	MBNL	Vendor Swap	Detailed Design	A3
Date:	12.02.26	Revision / Upgrade Description:		
Drawn:	BKM	Proposed Pole Detail Amended		
Checked:	KA			
Approved:	DC			
Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M003	MBNL	Vendor Swap	Detailed Design	A2
Date:	26.11.25	Revision / Upgrade Description:		
Drawn:	BKM	ICNIRP Blocks Changed / Pole setting out Added		
Checked:	KA			
Approved:	DC			
Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M002	MBNL	Vendor Swap	Detailed Design	A1
Date:	12.11.25	Revision / Upgrade Description:		
Drawn:	BKM	Detailed Design		
Checked:	KA			
Approved:	DC			
Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M001	MBNL	Vendor Swap	Planning	A
Date:	15.02.25	Revision / Upgrade Description:		
Drawn:	RMA	First Issue		
Checked:	KS			
Approved:	HG			
		Hatfield Business Park Hatfield Hertfordshire AL10 9BW Tel: 01707 315000 Fax: 01707 319001		
Design & Principal Consultant:				
				
UK Office: UBC Building, 1310 Solihull Parkway, Birmingham Business Park, B37 7YU		Tel: +44 (0)1908 377 766 Email: info@ktl.ie		
Site Name:				
LP HAWTHORN AVENUE				
Site ID:				
1205960				
Address:				
OPPOSITE 53 HAWTHORN CLOSE HITCHIN HERTFORDSHIRE SG5 2BP				
Title:				
325 EXISTING ANTENNA LINE CONFIGURATION				
Project:				
VENDOR SWAP				
Purpose of Issue:				
DETAILED DESIGN				
EE Cell ID: 16912		MBNL Cell ID: NHE089		3UK Cell ID: SG0302
Master Drawing No: 1205960_NHE089_16912_SG0302_M004				Issue: A3



Master Drawing No:	Issue:
1205960_NHE089_16912_SG0302_M004	A3

Proposed Operators Carrier Count	
<u>Frequency</u>	<u>Count:</u>
700	1
800	1
1800	2
2100	1
2600	3
3500	0

100mm

150mm

10mm



Support Structure Schedule											STATUS KEY: Installed: Existing Retain: Existing and to remain Relocate: Existing and to be relocated Remove: Existing to be removed from site Proposed: New on site LOCATION KEY: Outdoor: Located outside Indoor: Located within an equipment cabin or equipment room Internal: located inside a cabinet or item of equipment				
Structure ID	Status	Height / Length AGL (m)	Structure Manufacturer	Description / Type	Colour / Finishing (RAL Colour)	Size (mm)	Foundation / Support Grillage / Host Structure Details	Comments							
ST1	Existing	9.00m	-	LAMPPOST SW	Galvanised	-	Root Foundation	-							
ST2	Proposed	18.0m	Hutchinson	Alpha 8	RAL 6009	-	T9 Root	-							
Equipment Schedule											Master: M004 Date: 12.02.26 Drawn: BKM Checked: KA Approved: DC Master: M003 Date: 26.11.25 Drawn: BKM Checked: KA Approved: DC Master: M002 Date: 12.11.25 Drawn: BKM Checked: KA Approved: DC Master: M001 Date: 15.02.25 Drawn: RMA Checked: KS Approved: HG Hatfield Business Park Hatfield Hertfordshire AL10 9BW Tel: 01707 315000 Fax: 01707 319001 Design & Principal Consultant: K T L UK Office: UBC Building, 1310 Solihull Parkway, Birmingham Business Park, B37 7YU Tel: +44 (0)1908 377 766 Email: info@ktl.ie Site Name: LP HAWTHORN AVENUE Site ID: 1205960 Address: OPPOSITE 53 HAWTHORN CLOSE HITCHIN HERTFORDSHIRE SG5 2BP Title: 400 EQUIPMENT SUPPORT STRUCTURE SCHEDULES Project: VENDOR SWAP Purpose of Issue: DETAILED DESIGN EE Cell ID: 16912 MBNL Cell ID: NHE089 3UK Cell ID: SG0302 Master Drawing No: 1205960_NHE089_16912_SG0302_M004 Issue: A3				
Equipment ID	Operator	Quantity	Status	Equipment Manufacturer	Equipment Description / Type	Dimensions (H x W x D)	Weight (kg)	Colour (RAL Colour)	Location	Comments					
CAB1	EE/H3G	1	Existing	Commscope	MK4 Link AC	1531x600x500	150kg	RAL 6009	Ground Level	c/w TX equipment					
CAB2	EE/H3G	1	Existing	CL Controls	Dorset Cabinet	1400x1450 x650	340kg	RAL 6009	Ground Level	c/w Mk2 UCUs, 3No. RD0816 SBC's & 2100 flexi modules					
CAB3	H3G	1	Existing	Commscope	Bowler cabinet	1752x1900x660	250kg	RAL 7035	Ground Level	c/w H3G 3No. 4480 (2100) ERS					
CAB4	H3G	1	Existing	Ericsson	RBS 6130 Cabinet	950x650x700	250kg	RAL 7035	Ground Level	c/w BBU's					
CAB5	EE	1	Remove	Huawei	BTS 3900A (Side by Side)	700x1280x480	207kg	RAL 7035	Ground Level	c/w EE 1800 modules					
CAB6	EE	1	Proposed	CL Controls	Porter Cabinet	1452x1450x650	330kg	RAL 7035	Ground Level	1018944 c/w EE 1No. ARPA (700), 1No. ARMA (800), 2No. AREA (1800), 2No. ARGA (2100), 2No. ARHA (2600), PSU, DCDU, 3No. RD0662-H4-01 combiners & 3No. RD0800-H4-03 (700/800) Combiners					
AMP1-3	EE	3	Proposed	Commscope	E14R00P42	140x177x260	11kg	RAL 7035	Structure High Level	1017247 For 700/800 Technology					
AMP4-6	EE	3	Proposed	Commscope	E14R00P29	326x245x125	14.2kg	RAL 7035	Structure High Level	1016162 For 1800/2100/2600 Technology					
AMP7-9	H3G	3	Proposed	Radio Design	RD0448-H4-12	168x96x230	5kg	RAL 7035	Structure High Level	1016056 For 1800 Technology					
COM1-3	EE	3	Existing	Radio Design	RD0816-H4-01	445x320x54.5	10.5kg	RAL 7035	Within Cabinet	2100 Technology					
COM4-9	EE	6	Proposed	Radio Design	RD0662-H4-01	116x164x195	5.8kg	RAL 7035	Within Cabinet	1047084 For 1800/2100/2600 Technology within Wiltshire cabinet					
COM10-12	EE	3	Proposed	Radio Design	RD0877-H4-03	203X177X123	5.8kg	RAL 7035	Within Cabinet	1018856 For 700/800 Technology					
ERS1-3	H3G	3	Existing	Ericsson	4480 ERS	553x398x151	32.0kg	RAL 7035	Within Cabinet	For 1800/2100 Technology					
RF1-2	EE	2	Proposed	Nokia	AREA	118x441x402	23kg	RAL 7035	Within Cabinet	1017370 1800 Technology within Porter cabinet					
RF3-4	EE	2	Proposed	Nokia	ARGA	118x441x402	23kg	RAL 7035	Within Cabinet	1017362 2100 Technology within Porter cabinet					
RF5-6	EE	2	Proposed	Nokia	ARHA	118x441x402	23kg	RAL 7035	Within Cabinet	1017363 2600 Technology within Porter cabinet					
RF7	EE	1	Proposed	Nokia	ARMA	118x441x402	23kg	RAL 7035	Within Cabinet	1017939 800 Technology within Porter cabinet					
RF8	EE	1	Proposed	Nokia	ARPA	118x441x402	23kg	RAL 7035	Within Cabinet	1017350 700 Technology within Porter cabinet					
BBU1	EE	1	Proposed	Nokia	AMIA Subrack	129x447x400	5.1kg	RAL 7035	Within Cabinet	BBU within Porter cabinet					
GPS 1	EE	1	Proposed	Nokia	GPS Node	72.5xØ95	0.2kg	RAL 7035	Within Cabinet	1019960					
GPS NODE Schedule															
Equipment ID	Supply Status	Operator	Height (C/L) AGL	Cable Length	Cable type	Location	Comments								
GPS1	Proposed	EE	1.0m	1m	FTSE	Within cabinet	Within Porter Cabinet								

AC Power Schedule								
Equipment ID	Supply Status	Operator	Type	Incoming Supply Type	Meter / Service head / location	Distribution Board Manufacturer (cabins / internal rooms)	Upgrade Required (Y / N / TBC at DD)	Comments
CAB1	Existing	EE/H3G	REC	Single phase 100A	Mk4 Link AC	Doepke	Y	Proposed DNO isolator & SPD to be installed
DC Power Schedule								
Supply Status	Operator	Enclosure / Location	Model	Rectifier		Upgrade Required (Y/ N / TBC at DD)	Comments	
				QTY	Size (kw)			
Existing	EE/H3G	Dorset	Flatpack2	4	2	N	-	
Existing	EE/H3G	Link AC Mk4	Minipack	2	1.8	N	-	
Proposed	EE	Porter	PSU	3	3.0	-	-	
Transmission Supply Schedule								
Equipment ID	Supply Status	Operator	Enclosure	Type:	Supplier Name	U-Space Available	Comments	
CAB1	Existing	EE/H3G	Mk4 Link AC	Fibre Only	BT	1U	-	

STATUS KEY:

Installed: Existing
Retain: Existing and to remain
Relocate: Existing and to be relocated
Remove: Existing to be removed from site
Proposed: New on site

LOCATION KEY:

Outdoor: Located outside
Indoor: Located within an equipment cabin or equipment room
Internal: located inside a cabinet or item of equipment

Master: M004	MBNL / EE / H3G: MBNL	Project: Vendor Swap	Purpose of Issue: Detailed Design	Issue: A3
Date: 12.02.26	Revision / Upgrade Description: Proposed Pole Detail Amended			
Drawn: BKM				
Checked: KA				
Approved: DC				
Master: M003	MBNL / EE / H3G: MBNL	Project: Vendor Swap	Purpose of Issue: Detailed Design	Issue: A2
Date: 26.11.25	Revision / Upgrade Description: ICNIRP Blocks Changed / Pole setting out Added			
Drawn: BKM				
Checked: KA				
Approved: DC				
Master: M002	MBNL / EE / H3G: MBNL	Project: Vendor Swap	Purpose of Issue: Detailed Design	Issue: A1
Date: 12.11.25	Revision / Upgrade Description: Detailed Design			
Drawn: BKM				
Checked: KA				
Approved: DC				
Master: M001	MBNL / EE / H3G: MBNL	Project: Vendor Swap	Purpose of Issue: Planning	Issue: A
Date: 15.02.25	Revision / Upgrade Description: First Issue			
Drawn: RMA				
Checked: KS				
Approved: HG				



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Email: info@ktl.ie

Site Name:
LP HAWTHORN AVENUE

Site ID:
1205960

Address:
OPPOSITE 53 HAWTHORN CLOSE
HITCHIN
HERTFORDSHIRE
SG5 2BP

Title:
401 POWER & TRANSMISSION SCHEDULE

Project:
VENDOR SWAP

Purpose of Issue:
DETAILED DESIGN

EE Cell ID: 16912	MBNL Cell ID: NHE089	3UK Cell ID: SG0302
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Master Drawing No: 1205960_NHE089_16912_SG0302_M004	Issue: A3
--	--------------

100mm

50mm

10mm

Sector A	MBNL-0030-DS-STD-001 BLOCK OPTION 11_37.5M
Sector B	MBNL-0030-DS-STD-001 BLOCK OPTION 11_37.5M
Sector C	MBNL-0030-DS-STD-001 BLOCK OPTION 11_37.5M

Operators on site (or within 100m)	
EE	Yes
H3G	Yes
CTIL	
UKBB	
Airwave	
Broadcast	
Other	

NOTES:

2. REFER TO TD54000 v11.0 FOR MBNL RF COMPLIANCE GUIDANCE.

Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M004	MBNL	Vendor Swap	Detailed Design	A3
Date:	12.02.26	Revision / Upgrade Description:		
Drawn:	BKM	Proposed Pole Detail Amended		
Checked:	KA			
Approved:	DC			
Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M003	MBNL	Vendor Swap	Detailed Design	A2
Date:	26.11.25	Revision / Upgrade Description:		
Drawn:	BKM	ICNIRP Blocks Changed / Pole setting out Added		
Checked:	KA			
Approved:	DC			
Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M002	MBNL	Vendor Swap	Detailed Design	A1
Date:	12.11.25	Revision / Upgrade Description:		
Drawn:	BKM	Detailed Design		
Checked:	KA			
Approved:	DC			
Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M001	MBNL	Vendor Swap	Planning	A
Date:	15.02.25	Revision / Upgrade Description:		
Drawn:	RMA	First Issue		
Checked:	KS			
Approved:	HG			



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Site Name:

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Site ID:

1205960

Address:

OPPOSITE 53 HAWTHORN CLOSE
HITCHIN
HERTFORDSHIRE
SG5 2BP

Title:

500 PROPOSED RF COMPLIANCE PLAN

Project:

VENDOR SWAP

Purpose of Issue:

DETAILED DESIGN

EE Cell ID:

16912

MBNL Cell ID

NHE089

UK Cell ID:

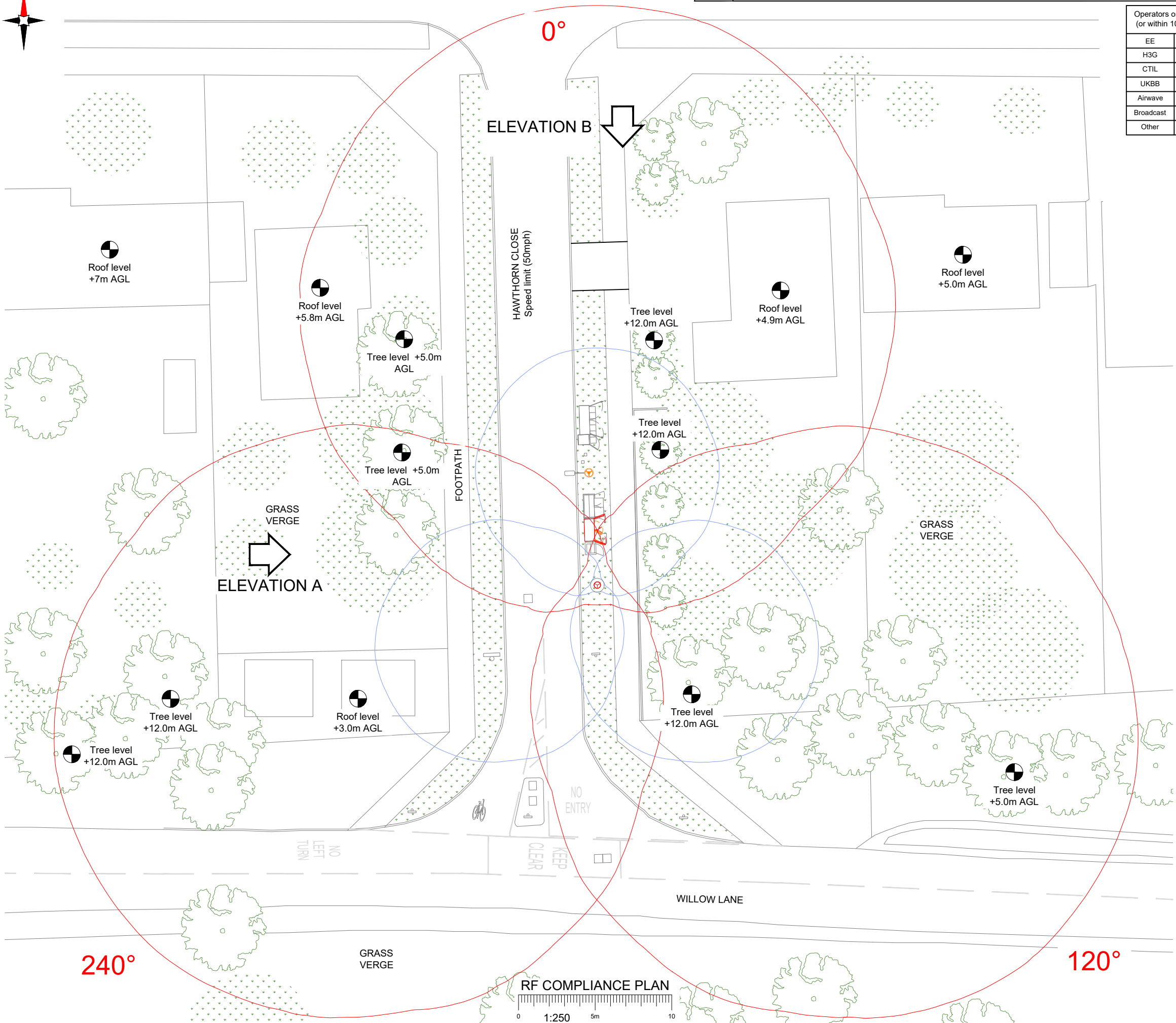
SG0302

Master Drawing No.

1205960_NHE089_16912_SG0302_M004

Issue:

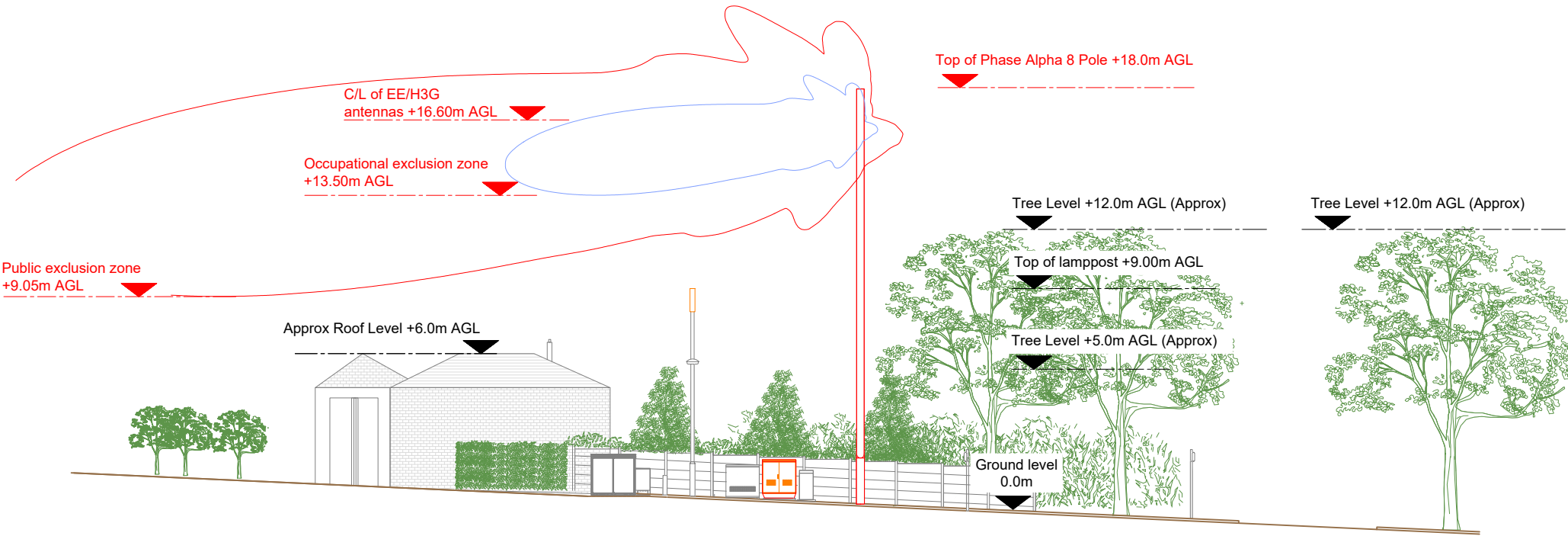
A3



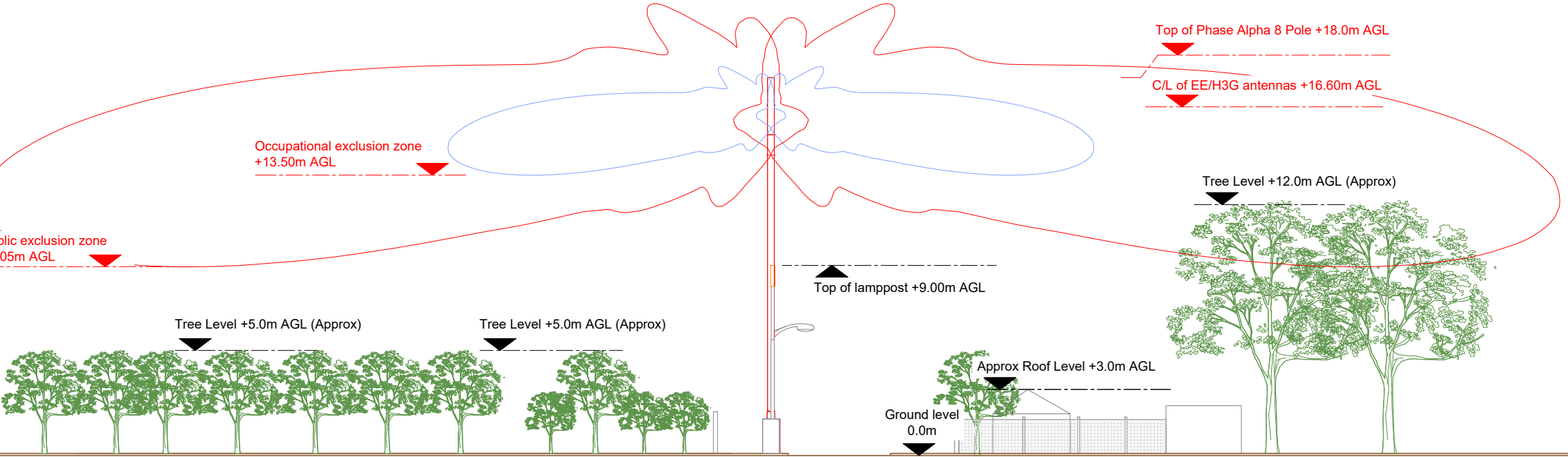
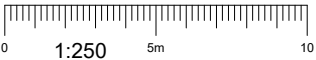
Sector A	MBNL-0030-DS-STD-001 BLOCK OPTION 11_37.5M
Sector B	MBNL-0030-DS-STD-001 BLOCK OPTION 11_37.5M
Sector C	MBNL-0030-DS-STD-001 BLOCK OPTION 11_37.5M

Operators on site (or within 100m)	
EE	Yes
H3G	Yes
CTIL	
UKBB	
Airwave	
Broadcast	
Other	

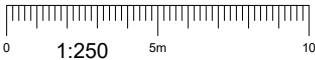
- NOTES:
- ALL DIMENSIONS IN MM UNLESS OTHERWISE NOTED.
 - REFER TO TD54000 v11.0 FOR MBNL RF COMPLIANCE GUIDANCE.



RF COMPLIANCE ELEVATION A



RF COMPLIANCE ELEVATION B



Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M004	MBNL	Vendor Swap	Detailed Design	A3
Date:	12.02.26	Revision / Upgrade Description:		
Drawn:	BKM	Proposed Pole Detail Amended		
Checked:	KA			
Approved:	DC			
Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M003	MBNL	Vendor Swap	Detailed Design	A2
Date:	26.11.25	Revision / Upgrade Description:		
Drawn:	BKM	ICNIRP Blocks Changed / Pole setting out Added		
Checked:	KA			
Approved:	DC			
Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M002	MBNL	Vendor Swap	Detailed Design	A1
Date:	12.11.25	Revision / Upgrade Description:		
Drawn:	BKM	Detailed Design		
Checked:	KA			
Approved:	DC			
Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M001	MBNL	Vendor Swap	Planning	A
Date:	15.02.25	Revision / Upgrade Description:		
Drawn:	RMA	First Issue		
Checked:	KS			
Approved:	HG			



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Site Name:
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Site ID:
1205960

Address:
OPPOSITE 53 HAWTHORN CLOSE
HITCHIN
HERTFORDSHIRE
SG5 2BP

Title:
510 PROPOSED RF COMPLIANCE
ELEVATION A & B

Project:
VENDOR SWAP

Purpose of Issue:
DETAILED DESIGN

EE Cell ID: 16912	MBNL Cell ID: NHE089	3UK Cell ID: SG0302
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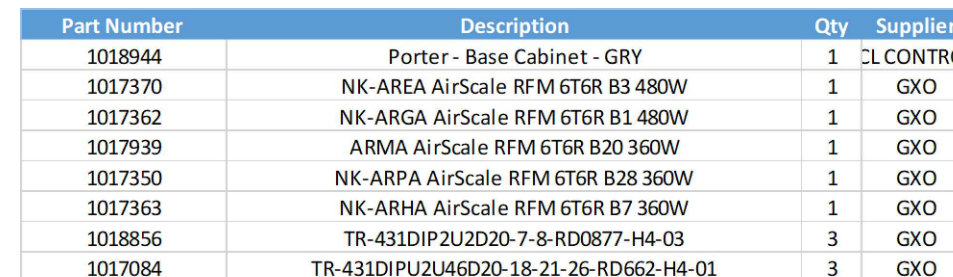
Master Drawing No: 1205960_NHE089_16912_SG0302_M004	Issue: A3
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Proposed porter cabinet on new adaptor plate

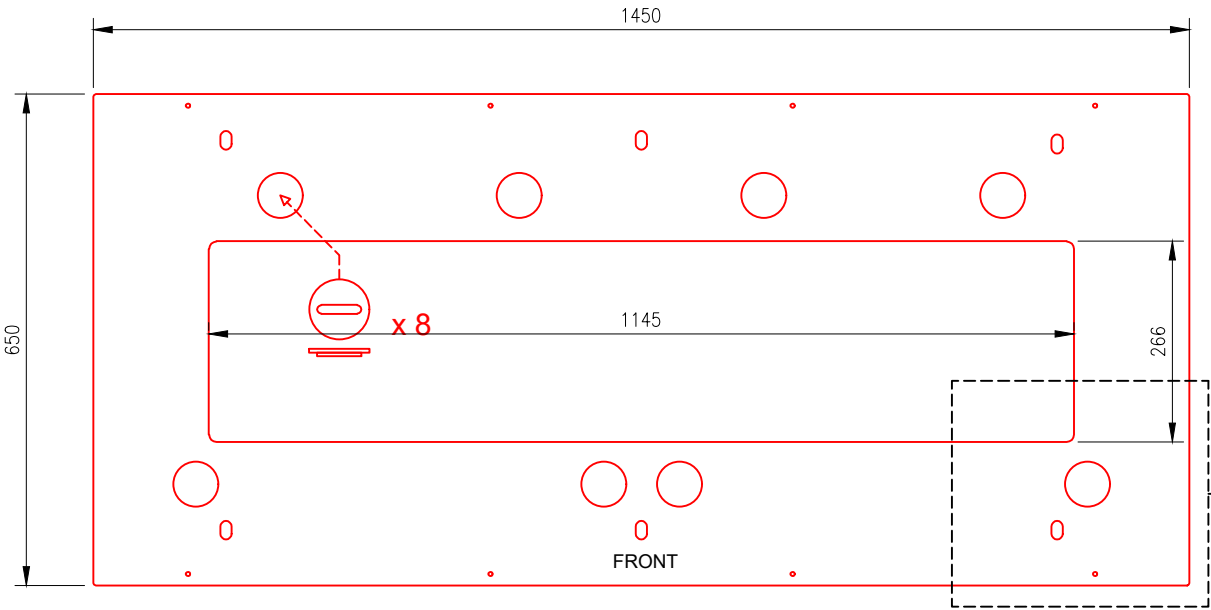
Proposed Porter cabinet skirt

The diagram illustrates the proposed assembly for the Porter cabinet. It shows a large, white, rectangular cabinet (labeled 'Proposed porter cabinet on new adaptor plate') positioned above a smaller, white, rectangular adaptor plate (labeled 'Proposed Porter cabinet skirt'). The adaptor plate is shown with a cross-hatched pattern on its sides, indicating it is a separate component. The cabinet is shown with a red outline, and the adaptor plate is shown with a red outline. The diagram is a cross-section view, showing the internal structure of the components.

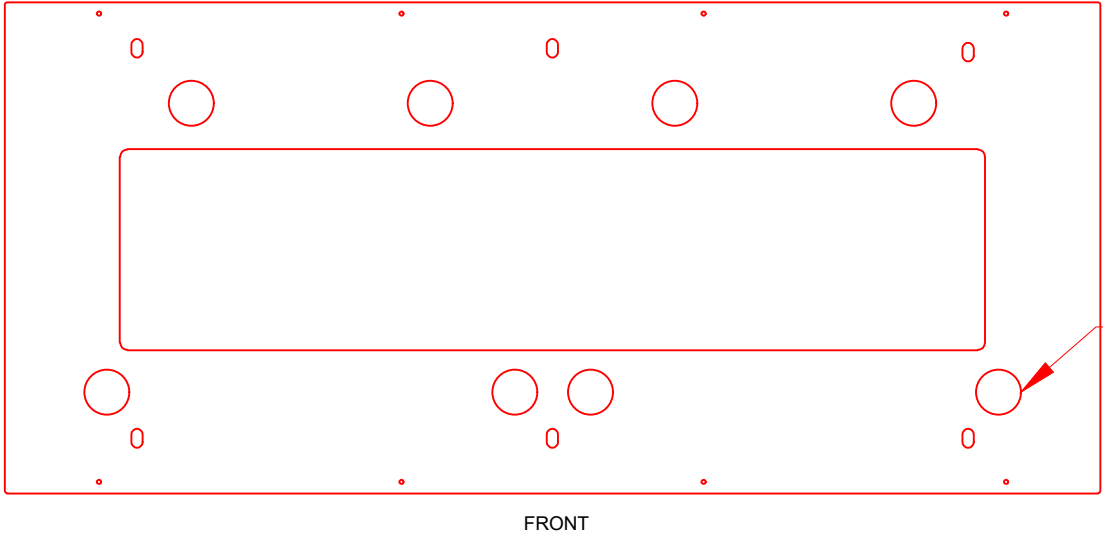
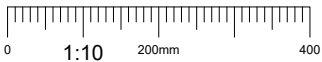


Master Drawing No:	Issue:
1205960 NHE089 16912 SG0302 M004	A3

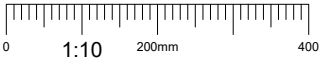
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Date:	12.02.26	Revision / Upgrade Description:		
Drawn:	BKM	Proposed Pole Detail Amended		
Checked:	KA			
Approved:	DC			
Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M003	MBNL	Vendor Swap	Detailed Design	A2
Date:	26.11.25	Revision / Upgrade Description:		
Drawn:	BKM	ICNIRP Blocks Changed / Pole setting out Added		
Checked:	KA			
Approved:	DC			
Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M002	MBNL	Vendor Swap	Detailed Design	A1
Date:	12.11.25	Revision / Upgrade Description:		
Drawn:	BKM	Detailed Design		
Checked:	KA			
Approved:	DC			
Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M001	MBNL	Vendor Swap	Planning	A
Date:	15.02.25	Revision / Upgrade Description:		
Drawn:	RMA	First Issue		
Checked:	KS			
Approved:	HG			



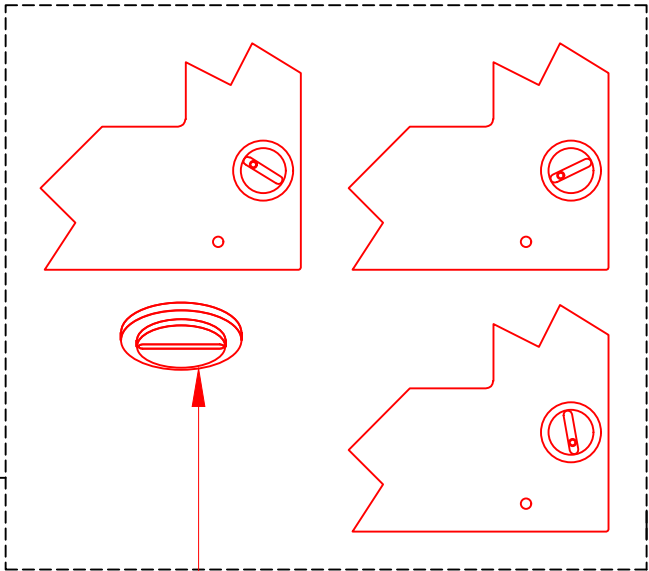
PORTER TO HUAWEI ADAPTOR PLATE PLAN



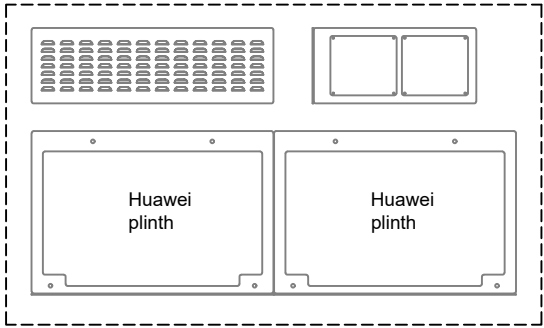
PORTER TO HUAWEI ADAPTOR PLATE FRONT VIEW



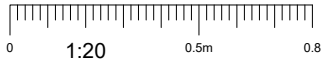
ADAPTOR PLATE DETAIL SIDE BY SIDE CABINET



Slotted disks allow adjustable fixing of the plate to existing root



HUAWEI CABINET PLINTH DETAILS



NOTES:

1. ALL DIMENSIONS IN MM UNLESS OTHERWISE NOTED.

Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M004	MBNL	Vendor Swap	Detailed Design	A3
Date:	12.02.26	Revision / Upgrade Description:		
Drawn:	BKM	Proposed Pole Detail Amended		
Checked:	KA			
Approved:	DC			
Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M003	MBNL	Vendor Swap	Detailed Design	A2
Date:	26.11.25	Revision / Upgrade Description:		
Drawn:	BKM	ICNIRP Blocks Changed / Pole setting out Added		
Checked:	KA			
Approved:	DC			
Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M002	MBNL	Vendor Swap	Detailed Design	A1
Date:	12.11.25	Revision / Upgrade Description:		
Drawn:	BKM	Detailed Design		
Checked:	KA			
Approved:	DC			
Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M001	MBNL	Vendor Swap	Planning	A
Date:	15.02.25	Revision / Upgrade Description:		
Drawn:	RMA	First Issue		
Checked:	KS			
Approved:	HG			



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Site Name:
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Site ID:
1205960

Address:
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HITCHIN
HERTFORDSHIRE
SG5 2BP

Title:
601 DETAILED DESIGN

Project:
VENDOR SWAP

Purpose of Issue:
DETAILED DESIGN

EE Cell ID: 16912	MBNL Cell ID: NHE089	3UK Cell ID: SG0302
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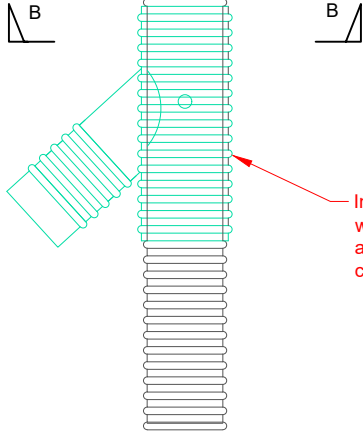
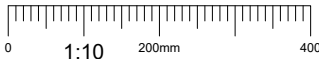
Master Drawing No: 1205960_NHE089_16912_SG0302_M004	Issue: A3
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Existing Ø50mm power/Ø100mm BT
fibre/Ø150mm feeder ducts

Carefully cut new aperture in the wall of the existing
duct with hand tools only ensure shallow cutting
strokes are used. Install new power cable and push
through to meter cabinet.

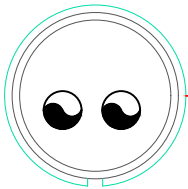
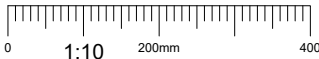
Carefully make a 'pilot' hole in top of the duct so
existing power cable can be seen/located. Using
a rod or long screwdriver, move and hold the
power cable off to the opposite where new
aperture is to be cut.

DUCT TIE-IN DETAIL



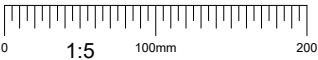
Install new 45° junction 'split' duct over existing duct
with thick bead of mastic sealant to ends of split duct
and to both side of split. Tie in place with plastic
cable ties until mastic goes off.

PROPOSED DUCT TIE-IN DETAIL



INSTALL NEW 45° JUNCTION 'SPLIT'
DUCT OVER EXISTING DUCT WITH THICK
BEAD OF MASTIC SEALANT TO ENDS OF
SPLIT DUCT AND TO BOTH SIDE OF
SPLIT. TIE IN PLACE WITH PLASTIC
CABLE TIES UNTIL MASTIC GOES OFF.

SECTION B-B



NOTES:

1. ALL DIMENSIONS IN MM UNLESS OTHERWISE NOTED.

Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M004	MBNL	Vendor Swap	Detailed Design	A3
Date:	12.02.26	Revision / Upgrade Description:		
Drawn:	BKM	Proposed Pole Detail Amended		
Checked:	KA			
Approved:	DC			
Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M003	MBNL	Vendor Swap	Detailed Design	A2
Date:	26.11.25	Revision / Upgrade Description:		
Drawn:	BKM	ICNIRP Blocks Changed / Pole setting out Added		
Checked:	KA			
Approved:	DC			
Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M002	MBNL	Vendor Swap	Detailed Design	A1
Date:	12.11.25	Revision / Upgrade Description:		
Drawn:	BKM	Detailed Design		
Checked:	KA			
Approved:	DC			
Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M001	MBNL	Vendor Swap	Planning	A
Date:	15.02.25	Revision / Upgrade Description:		
Drawn:	RMA	First Issue		
Checked:	KS			
Approved:	HG			



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SG5 2BP

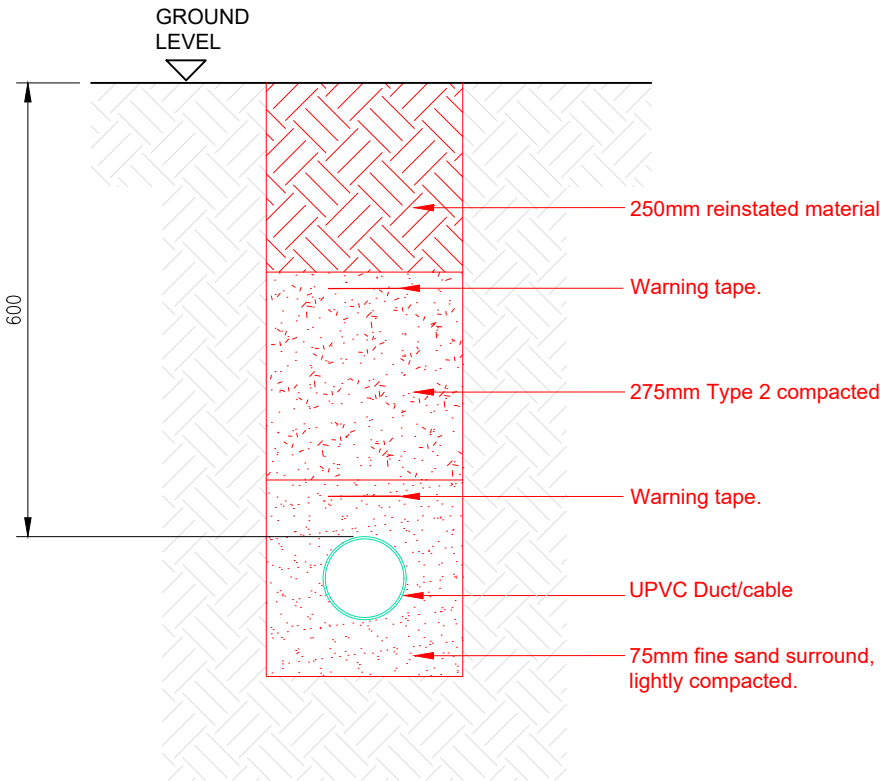
Title:
602 DETAILED DESIGN

Project:
VENDOR SWAP

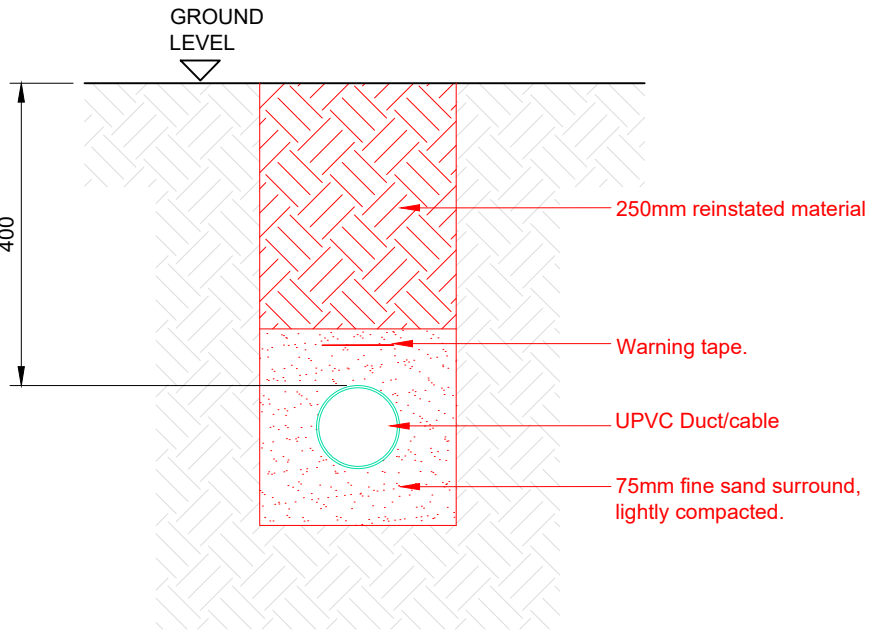
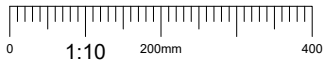
Purpose of Issue:
DETAILED DESIGN

EE Cell ID: 16912	MBNL Cell ID: NHE089	3UK Cell ID: SG0302
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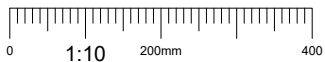
Master Drawing No: 1205960_NHE089_16912_SG0302_M004	Issue: A3
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TRENCH DETAILS - DUCT IN A TRAFFIC ZONE AREA



TRENCH DETAILS - DUCT IN A NON-TRAFFIC ZONE AREA



DUCTING NOTES

- 100mm Dia ducts to have 350mm min. ground cover and 600mm under trafficked areas. feeder cable duct to have 600mm radius bends. all ducts not encased in concrete to have min. 75mm bed and surround with pea gravel or sand material. comms and feeder cable ducts to be colour coded light grey, and electrical power / earthing ducts to be black.
- All ducts shall be sealed with expanded foam after cable installation.
- 2No. draw cords to be marked at ground level with timber markers. spare feeder ducts to be capped 25mm below ground level and covered with concrete.

Information on Significant Residual Risks

Construction	Maintenance	Decommissioning
On the basis of information available to the designer at the time of design production, there are no unobvious, unusual or difficult to manage significant risks associated with this design	On the basis of information available to the designer at the time of design production, there are no unobvious, unusual or difficult to manage significant risks associated with this design	On the basis of information available to the designer at the time of design production, there are no unobvious, unusual or difficult to manage significant risks associated with this design

NOTES:

- ALL DIMENSIONS IN MM UNLESS OTHERWISE NOTED.

Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M004	MBNL	Vendor Swap	Detailed Design	A3
Date:	12.02.26	Revision / Upgrade Description:		
Drawn:	BKM	Proposed Pole Detail Amended		
Checked:	KA			
Approved:	DC			
Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M003	MBNL	Vendor Swap	Detailed Design	A2
Date:	26.11.25	Revision / Upgrade Description:		
Drawn:	BKM	ICNIRP Blocks Changed / Pole setting out Added		
Checked:	KA			
Approved:	DC			
Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M002	MBNL	Vendor Swap	Detailed Design	A1
Date:	12.11.25	Revision / Upgrade Description:		
Drawn:	BKM	Detailed Design		
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Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M001	MBNL	Vendor Swap	Planning	A
Date:	15.02.25	Revision / Upgrade Description:		
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HERTFORDSHIRE
SG5 2BP

Title:
603 DETAILED DESIGN

Project:
VENDOR SWAP

Purpose of Issue:
DETAILED DESIGN

EE Cell ID: 16912	MBNL Cell ID: NHE089	3UK Cell ID: SG0302
----------------------	-------------------------	------------------------

Master Drawing No: 1205960_NHE089_16912_SG0302_M004	Issue: A3
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NOTES:

1. ALL DIMENSIONS IN MM UNLESS OTHERWISE NOTED.

Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M004	MBNL	Vendor Swap	Detailed Design	A3
Date:	12.02.26	Revision / Upgrade Description:		
Drawn:	BKM	Proposed Pole Detail Amended		
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Approved:	DC			
Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M003	MBNL	Vendor Swap	Detailed Design	A2
Date:	26.11.25	Revision / Upgrade Description:		
Drawn:	BKM	ICNIRP Blocks Changed / Pole setting out Added		
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Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M002	MBNL	Vendor Swap	Detailed Design	A1
Date:	12.11.25	Revision / Upgrade Description:		
Drawn:	BKM	Detailed Design		
Checked:	KA			
Approved:	DC			
Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M001	MBNL	Vendor Swap	Planning	A
Date:	15.02.25	Revision / Upgrade Description:		
Drawn:	RMA	First Issue		
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Approved:	HG			



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Address:

OPPOSITE 53 HAWTHORN CLOSE
HITCHIN
HERTFORDSHIRE
SG5 2BP

Title:

604 DETAILED DESIGN

Project:

VENDOR SWAP

Purpose of Issue:

DETAILED DESIGN

EE Cell ID:	MBNL Cell ID:	3UK Cell ID:
16912	NHE089	SG0302

Master Drawing No:	Issue:
1205960_NHE089_16912_SG0302_M004	A3

COLUMN TYPE TO BE SPECIFIED ON ORDER

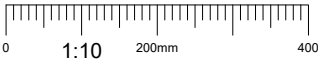
HUTCHINSON T9 ROOT TSL_A_1042
(ASSEMBLY WEIGHT APX. 320 Kg.)

RE-BAR CAGE TO BE TIED TO BARS ON THE ROOT ASSEMBLY

12 OFF - M30 x 220 LONG SET SCREWS COMPLETE WITH 12 SETS OF :-
4 OFF - M30 FORM 'A' WASHERS
3 OFF - M30 HEX. HUTS
3 OFF - M30 HALF NUTS

MAXIMUM OUT OF LEVEL FOR CAST ROOT IS 0.7° (OR 10MM IN HEIGHT WHEN MEASURED ACROSS FLATS OF ROOT FLANGE). MAXIMUM GAP BETWEEN FLANGES WHEN OUT OF LEVEL = 100mm

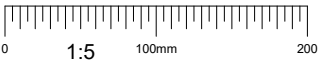
DETAIL SECTION A



VERTICAL BARS OF REBAR CAGE - TSL_F_2026 TO BE LOCATED INTO SLOTS ON THE BOTTOM FLANGE OF THE WELDED ROOT - TSL_A_1042



DETAIL SECTION B



NOTES:

1. ALL DIMENSIONS IN MM UNLESS OTHERWISE NOTED.

Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M004	MBNL	Vendor Swap	Detailed Design	A3
Date:	12.02.26	Revision / Upgrade Description:		
Drawn:	BKM	Proposed Pole Detail Amended		
Checked:	KA			
Approved:	DC			
Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M003	MBNL	Vendor Swap	Detailed Design	A2
Date:	26.11.25	Revision / Upgrade Description:		
Drawn:	BKM	ICNIRP Blocks Changed / Pole setting out Added		
Checked:	KA			
Approved:	DC			
Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M002	MBNL	Vendor Swap	Detailed Design	A1
Date:	12.11.25	Revision / Upgrade Description:		
Drawn:	BKM	Detailed Design		
Checked:	KA			
Approved:	DC			
Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M001	MBNL	Vendor Swap	Planning	A
Date:	15.02.25	Revision / Upgrade Description:		
Drawn:	RMA	First Issue		
Checked:	KS			
Approved:	HG			



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Title:
605 DETAILED DESIGN

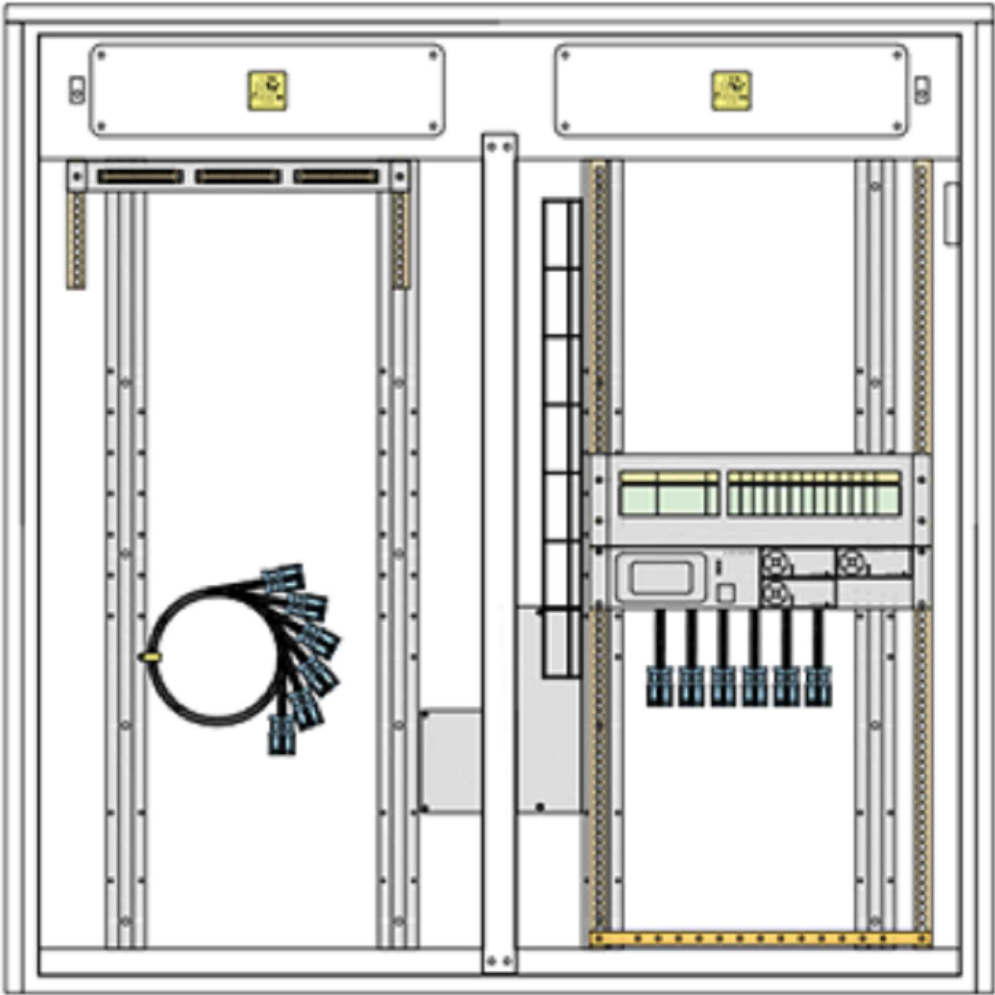
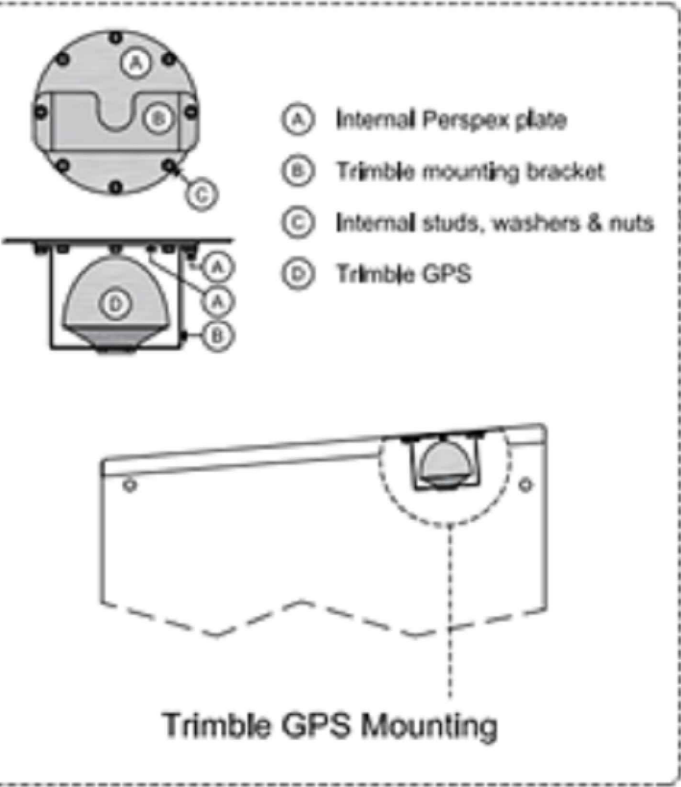
Project:
VENDOR SWAP

Purpose of Issue:
DETAILED DESIGN

EE Cell ID: 16912	MBNL Cell ID: NHE089	3UK Cell ID: SG0302
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Master Drawing No: 1205960_NHE089_16912_SG0302_M004	Issue: A3
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PARTS LIST		
SAP NUMBER	DESCRIPTION	QTY
1019870	AYGE GNSS Dual Band Receiver w/ Antenna	1
1019869	AYGD GNSS Dual Band Receiver	1
1019960	Trimble GPS Kit	1



GPS TRIMBLE SOLUTION

- NOTES:
- ALL DIMENSIONS IN MM UNLESS OTHERWISE NOTED.

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M004	MBNL	Vendor Swap	Detailed Design	A3
Date:	12.02.26	Revision / Upgrade Description:		
Drawn:	BKM	Proposed Pole Detail Amended		
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Approved:	DC			
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M003	MBNL	Vendor Swap	Detailed Design	A2
Date:	26.11.25	Revision / Upgrade Description:		
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M002	MBNL	Vendor Swap	Detailed Design	A1
Date:	12.11.25	Revision / Upgrade Description:		
Drawn:	BKM	Detailed Design		
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Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M001	MBNL	Vendor Swap	Planning	A
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Site ID:
1205960

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HERTFORDSHIRE
SG5 2BP

Title:
606 DETAILED DESIGN

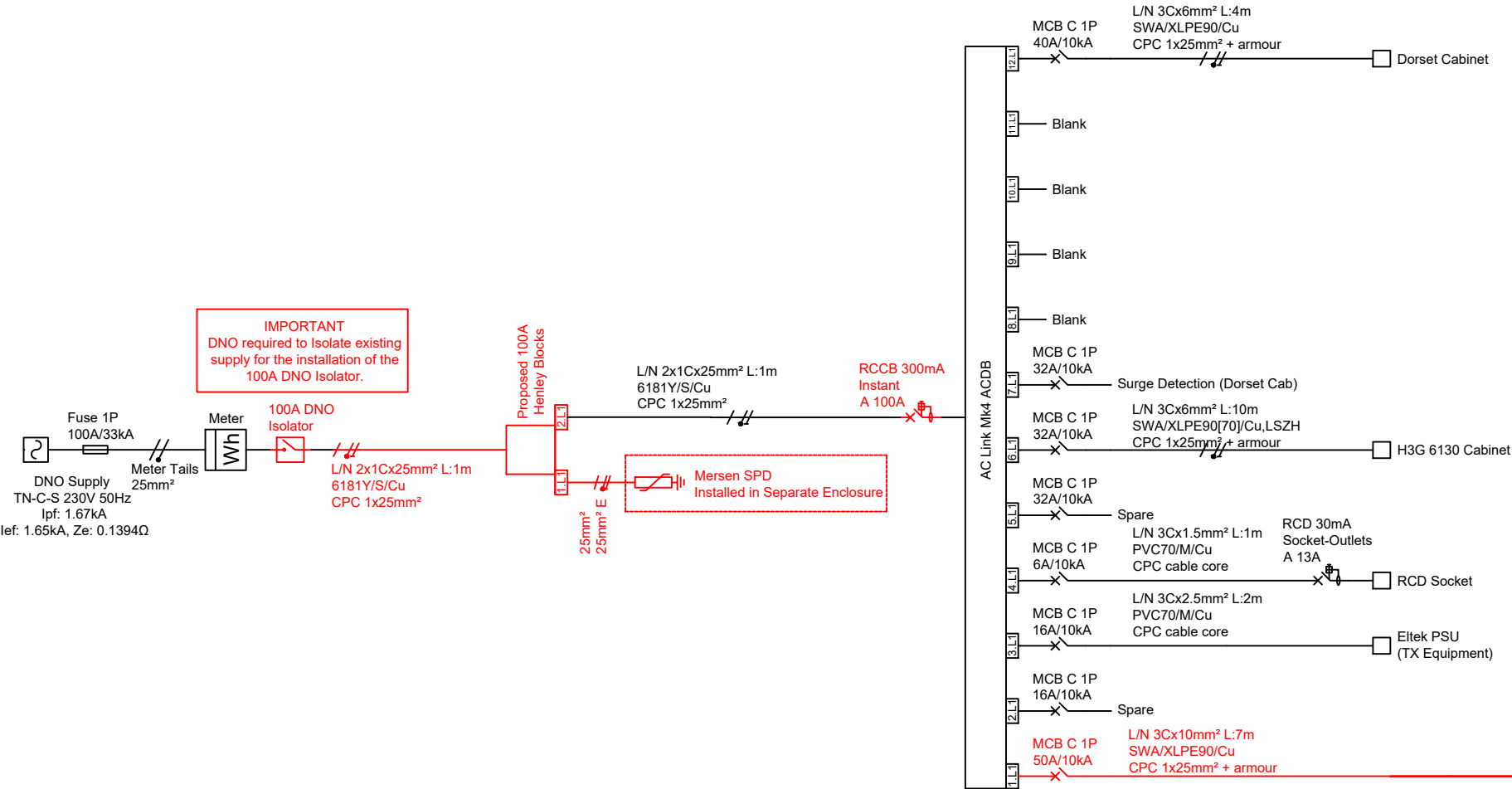
Project:
VENDOR SWAP

Purpose of Issue:
DETAILED DESIGN

EE Cell ID:	MBNL Cell ID:	3UK Cell ID:
16912	NHE089	SG0302

Master Drawing No:	Issue:
1205960_NHE089_16912_SG0302_M004	A3

AC Link Mk4 Cabinet

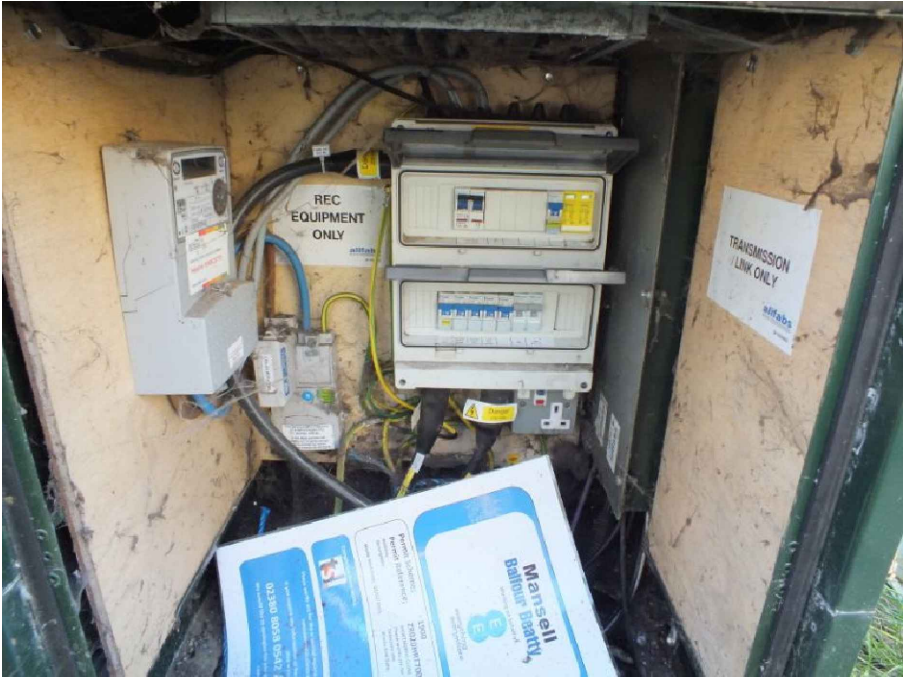
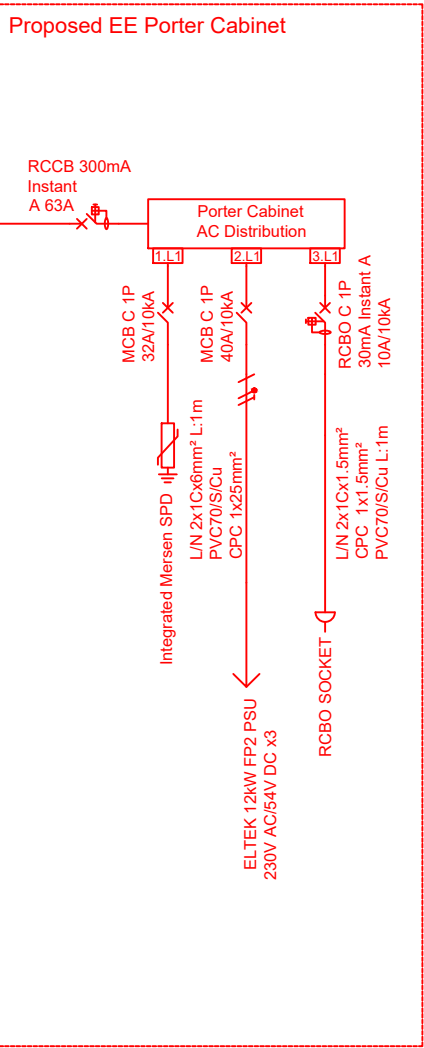
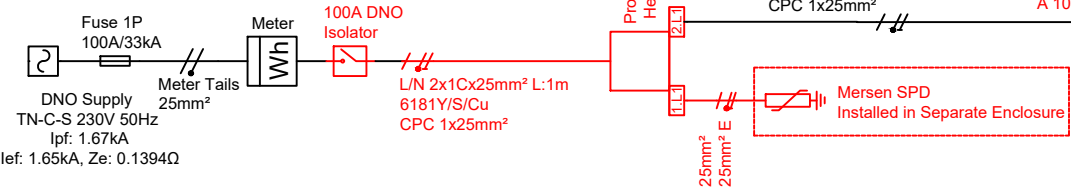


Existing Equipment

Proposed Equipment

Design Notes

IMPORTANT
DNO required to isolate existing supply for the installation of the 100A DNO Isolator.



Design Notes:
1) DNO required to isolate the incoming supply to allow for the installation of the proposed 100A DNO isolator.
2) Hager MCB's to be replaced with Doepke equivalent MCB's in accordance with BS7671 536.4.203.
3) The H3G/EE 3G Flexi has been sunset.

AC ELECTRICAL SCHEMATIC
N.T.S.

- NOTES:
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M004	MBNL	Vendor Swap	Detailed Design	A3
Date:	12.02.26	Revision / Upgrade Description:		
Drawn:	BKM	Proposed Pole Detail Amended		
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Approved:	DC			
Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M003	MBNL	Vendor Swap	Detailed Design	A2
Date:	26.11.25	Revision / Upgrade Description:		
Drawn:	BKM	ICNIRP Blocks Changed / Pole setting out Added		
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Approved:	DC			
Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M002	MBNL	Vendor Swap	Detailed Design	A1
Date:	12.11.25	Revision / Upgrade Description:		
Drawn:	BKM	Detailed Design		
Checked:	KA			
Approved:	DC			
Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M001	MBNL	Vendor Swap	Planning	A
Date:	15.02.25	Revision / Upgrade Description:		
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Site ID:
1205960

Address:
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HERTFORDSHIRE
SG5 2BP

Title:
700 AC ELECTRICAL SCHEMATIC

Project:
VENDOR SWAP

Purpose of Issue:
DETAILED DESIGN

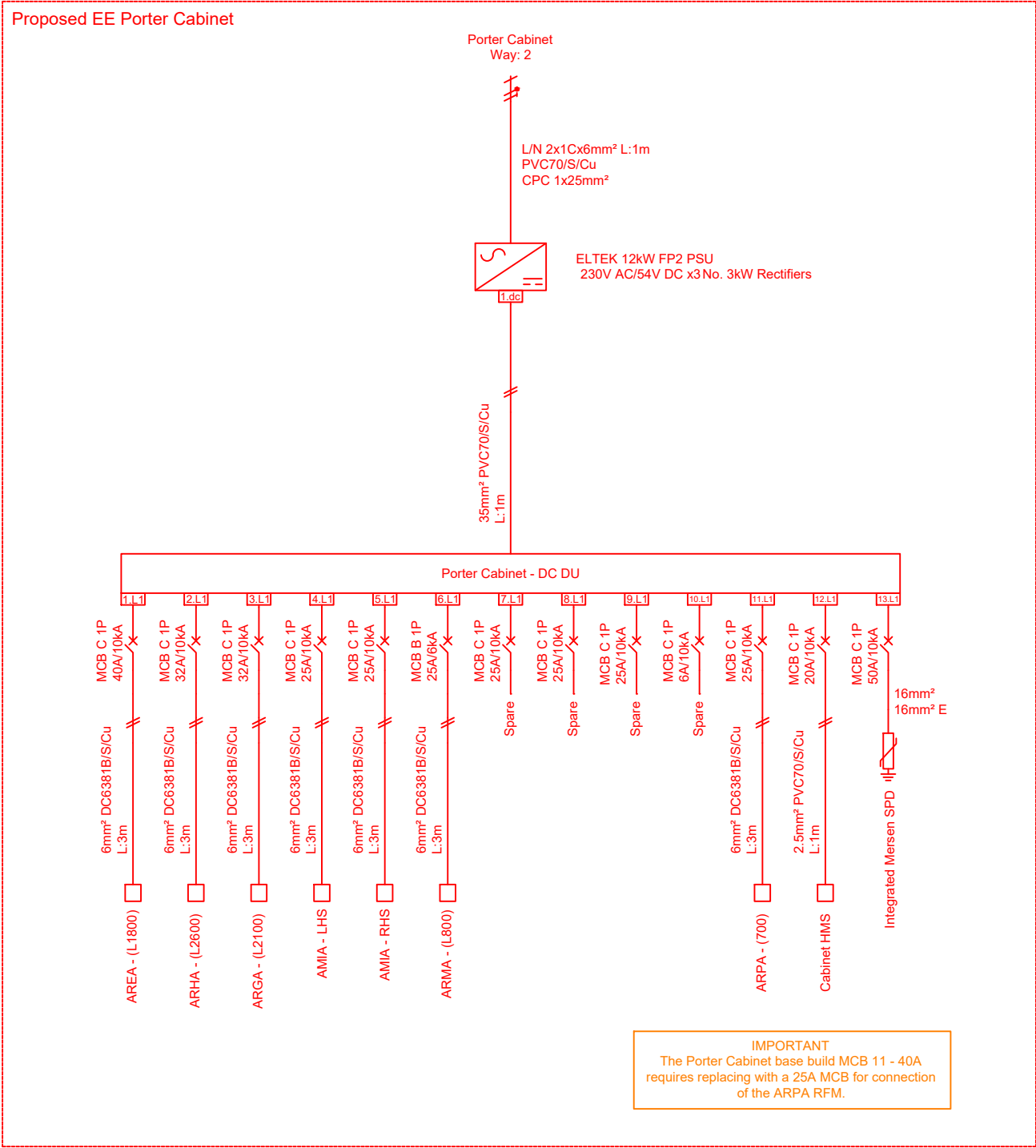
EE Cell ID: 16912	MBNL Cell ID: NHE089	3UK Cell ID: SG0302
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Master Drawing No: 1205960_NHE089_16912_SG0302_M004	Issue: A3
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100mm

50mm

10mm



DC ELECTRICAL SCHEMATIC
N.T.S.

- NOTES:
- ALL DIMENSIONS IN MM UNLESS OTHERWISE NOTED.

Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M004	MBNL	Vendor Swap	Detailed Design	A3
Date:	12.02.26	Revision / Upgrade Description:		
Drawn:	BKM	Proposed Pole Detail Amended		
Checked:	KA			
Approved:	DC			
Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M003	MBNL	Vendor Swap	Detailed Design	A2
Date:	26.11.25	Revision / Upgrade Description:		
Drawn:	BKM	ICNIRP Blocks Changed / Pole setting out Added		
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Approved:	DC			
Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M002	MBNL	Vendor Swap	Detailed Design	A1
Date:	12.11.25	Revision / Upgrade Description:		
Drawn:	BKM	Detailed Design		
Checked:	KA			
Approved:	DC			
Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M001	MBNL	Vendor Swap	Planning	A
Date:	15.02.25	Revision / Upgrade Description:		
Drawn:	RMA	First Issue		
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Approved:	HG			



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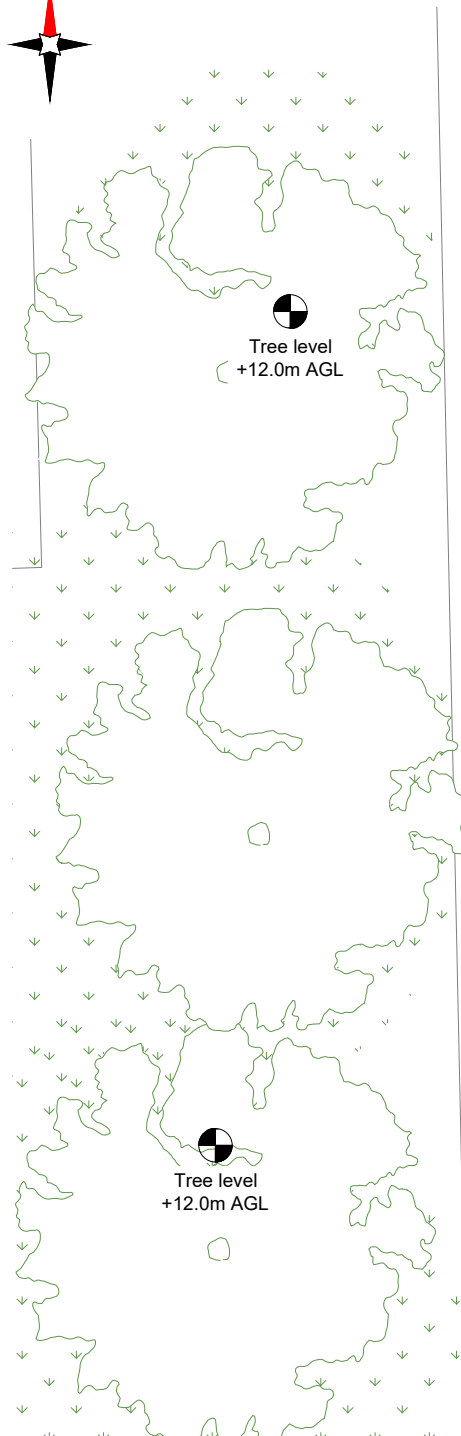
Title:
701 DC ELECTRICAL SCHEMATIC

Project:
VENDOR SWAP

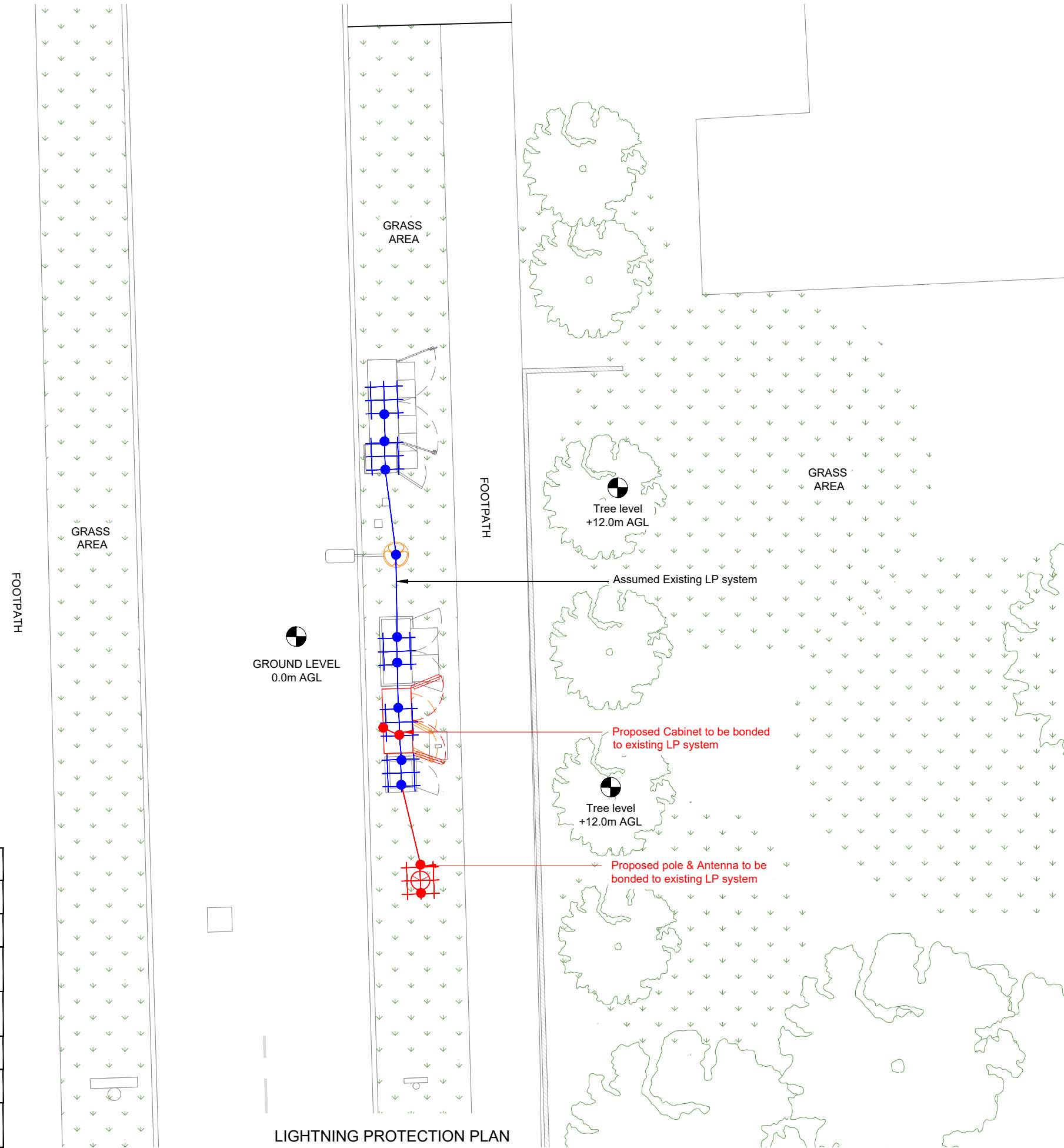
Purpose of Issue:
DETAILED DESIGN

EE Cell ID: 16912	MBNL Cell ID: NHE089	3UK Cell ID: SG0302
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Master Drawing No: 1205960_NHE089_16912_SG0302_M004	Issue: A3
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SYMBOL	DESCRIPTION
	Existing earth tape bond connection to equipment
	Existing lightning protection tape
	Existing Earth Pit
	Existing Earth Mats
	Proposed earth tape bond connection to equipment
	Proposed lightning protection tape
	Proposed Earth Pit
	Proposed Earth Mats



LIGHTNING PROTECTION PLAN

Scale 1:50

1. ALL DIMENSIONS IN MM UNLESS OTHERWISE NOTED.

Note:
All Equipment/Cabinets to be bonded as per manufacture installation guidelines, for more information refer to TD & TDEE documentation

Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M004	MBNL	Vendor Swap	Detailed Design	A3
Date:	12.02.26	Revision / Upgrade Description: Proposed Pole Detail Amended		
Drawn:	BKM			
Checked:	KA			
Approved:	DC			
Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M003	MBNL	Vendor Swap	Detailed Design	A2
Date:	26.11.25	Revision / Upgrade Description: ICNIRP Blocks Changed / Pole setting out Added		
Drawn:	BKM			
Checked:	KA			
Approved:	DC			
Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M002	MBNL	Vendor Swap	Detailed Design	A1
Date:	12.11.25	Revision / Upgrade Description: Detailed Design		
Drawn:	BKM			
Checked:	KA			
Approved:	DC			
Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M001	MBNL	Vendor Swap	Planning	A
Date:	15.02.25	Revision / Upgrade Description: First Issue		
Drawn:	RMA			
Checked:	KS			
Approved:	HG			



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Site ID:

1205960

Address:

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Title:

705 LIGHTNING PROTECTION

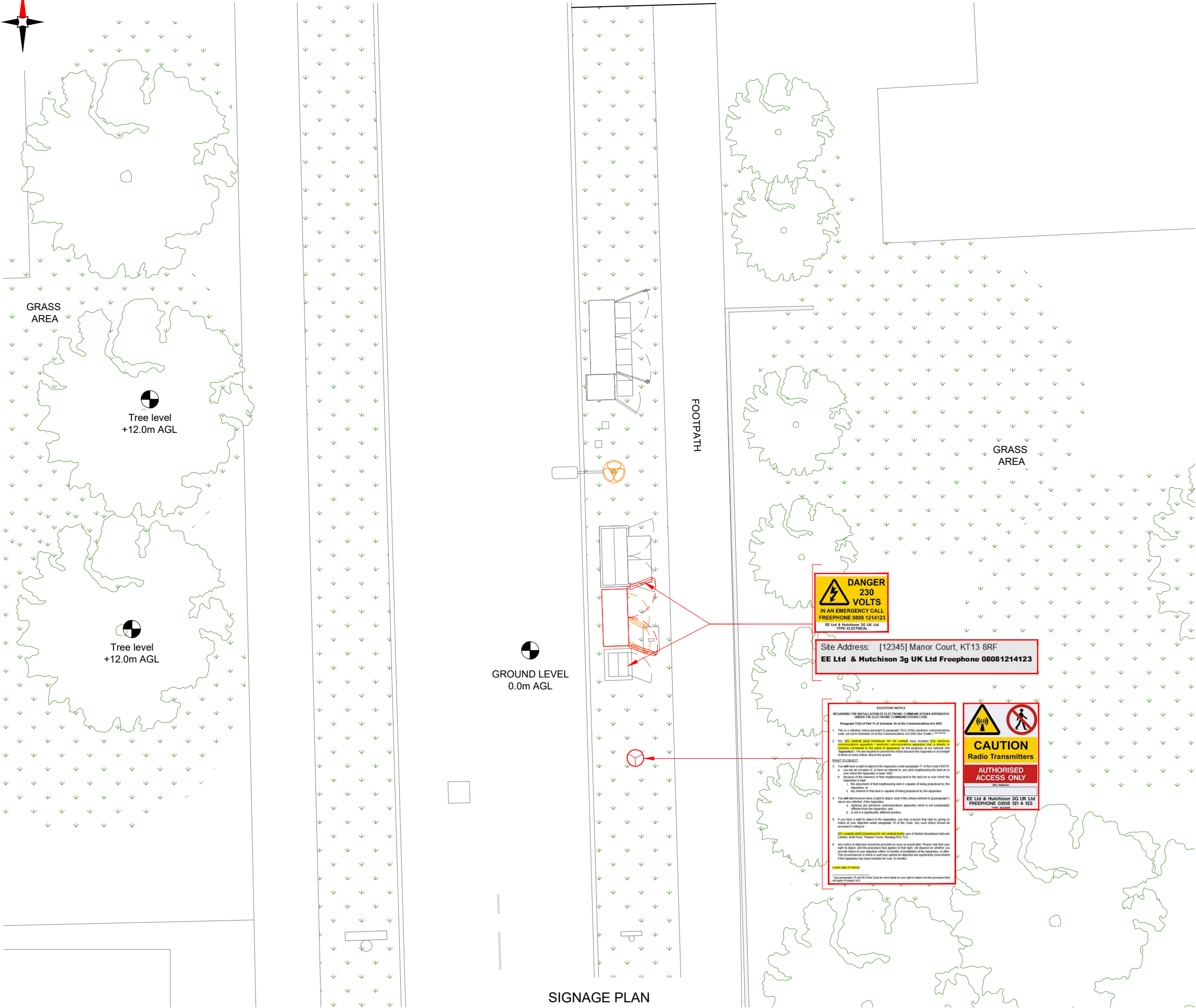
Project:

VENDOR SWAP

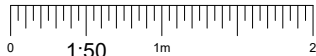
Purpose of Issue:	
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DETAILED DESIGN

EE Cell ID: 16912	MBNL Cell ID: NHE089	3UK Cell ID: SG0302
Master Drawing No: 1205960_NHE089_16912_SG0302_M004		Issue: A3



SIGNAGE PLAN



- NOTES:
- ALL DIMENSIONS IN MM UNLESS OTHERWISE NOTED.
 - THIS DRAWING TO BE READ IN CONJUNCTION WITH:
TD40007

Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M004	MBNL	Vendor Swap	Detailed Design	A3
Date:	12.02.26	Revision / Upgrade Description:		
Drawn:	BKM	Proposed Pole Detail Amended		
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Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M003	MBNL	Vendor Swap	Detailed Design	A2
Date:	26.11.25	Revision / Upgrade Description:		
Drawn:	BKM	ICNIRP Blocks Changed / Pole setting out Added		
Checked:	KA			
Approved:	DC			
Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M002	MBNL	Vendor Swap	Detailed Design	A1
Date:	12.11.25	Revision / Upgrade Description:		
Drawn:	BKM	Detailed Design		
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Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M001	MBNL	Vendor Swap	Planning	A
Date:	15.02.25	Revision / Upgrade Description:		
Drawn:	RMA	First Issue		
Checked:	KS			
Approved:	HG			



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Site ID:
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Address:
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HITCHIN
HERTFORDSHIRE
SG5 2BP

Title:
800 SIGNAGE PLAN

Project:
VENDOR SWAP

Purpose of Issue:
DETAILED DESIGN

EE Cell ID: 16912	MBNL Cell ID: NHE089	3UK Cell ID: SG0302
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Master Drawing No: 1205960_NHE089_16912_SG0302_M004	Issue: A3
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ELECTRICAL, LIGHTNING PROTECTION AND EARTHING NOTES

1. All electrical works including AC distribution, DC distribution, PSU and battery installations shall comply with current legislation including but not limited to the following:

- BS7671:2018 - Requirement for electrical installations (As amended)
- Electricity at Work Regulations 1989
- Health and Safety at work ACT 1974
- Electricity supply, Quality and Continuity Regulations 2002
- BS 7430: Code of Practice for Earthing
- BS6701 Section 5.2 (BS EN 50310)
- BS EN 62305: Protection against Lightning Parts 1 - 4
- GUIDANCE NOTE 3 - Inspection and Testing
- All other relevant British standards
- CDM Regulations
- Local Authority Requirements
- Building Regulations (as applicable)
- HSR25 - Memorandum of guidance on the electricity at work regulations 1989
- GS38 - Electrical test equipment for use by electricians
- HSG85 - Electricity at work. safe working practices
- HSG107 - Maintaining portable electrical equipment
- HSG230 - Keeping electrical switchgear safe
- INDG139 - Using electric storage batteries safely
- INDG231 - Electrical safety and you. a brief guide
- INDG354 - Safety in electrical testing at work
- HSE & CIBSE electrical best practice guides

2. Earthing and bonding works shall comply with BS 7430:2011+A1:2015 and all relevant updates including BS7671: 2018 (542.1.201; 542.2.2 & 542.3.1).

3. The following mechanical and electrical services shall inter-connect directly with the 'designer nominated' main earth terminal as applicable.

- Supplementary or TT dedicated earth electrode.
- Combined protective / functional earth
- Lightning protection
- Main protective bonding conductor
- Supplementary protective bonding conductors (where applicable)
- Other earth bars
- Telecom masts, towers and antenna supports
- Feeders and other coaxial copper services
- Extraneous conductive parts
- HVAC & COPPER SERVICES

NB this is not an exhaustive list and as an example does not include indirect bonding connections or cross bonding associated with remote equipment and other conductive parts not normally associated with the telecom installation. As such, all conductive parts located within the equipotential zone shall be cross-bonded and tied to earth. This shall include non telecom specific equipment that may affect the telecom equipment or any personnel under fault conditions.

4. All DNO Installations (regardless of earth configuration) shall benefit from the inclusion of an independent earth electrode to be located in the electrical proximity of the DNO service head. This 'supplementary' electrode and its associated installation shall comply with regulation 542.2.201 as stated above and complement (not replace) the DNO earth facility if provided.

5. The lightning protection installation shall be supplied, installed, tested, commissioned and set to work in keeping with BS EN 62305. Works shall encompass best working practices by suitably experienced and qualified personnel.

Where inter-connected with existing LP services new test certificates must reflect the conjoined or entire lightning protection system installation.

6. Connection of existing or insitu equipment, normally not associated with the installation shall be kept to a minimum. This does not include existing services that may affect the integrity of the equipment under fault conditions. Material's used shall be the proprietary type as defined in the project specification and/ or construction drawings.

7. The composite lightning protection system shall achieve a resistivity value < 10 OHMS. This value shall be recorded in isolation to any other external influences.

8. Where an existing or part existing lightning protection system is adopted for telecom purposes, the specialist contractor shall verify in advance that it is both compliant (date installed) and fit for purpose. Verification shall be achieved by a combination of existing test certification, valid to within 1 year and visual inspection. Where existing test certification is not available or has exceeded the due expiry date then the specialist contractor shall arrange to inspect and re-test the 'entire' system in line with BS EN 62305. Details of any departures from BS7671: 2018 or any conflicts arising from equipment compatibility including SPD'S shall be duly advised.

9. Where in contact with other dissimilar metals such as CU electrodes or ferrous supports then bi-metallic connectors shall be used. Where the use of bi-metallic connectors is not possible, all conductors including al tapes will be duly protected and / or treated to negate deterioration. Where consumables such as transfer paste or other similar compounds are used to negate deterioration or require regular routine maintenance then the contractor shall indicate those area's on the hand over documents.

10. Tapes below ground level shall normally be the bare cu type 25X3mm. Where buried within pedestrian area's, cu services shall be located a minimum 1 metre below finished ground level and insulated up to finished ground level to negate step potentials as far a electrically possible. Within other area's tape conductors shall normally be located 600mm below finished ground level.

11. All ring conductors shall be complete with a continuous line of marker tape located 300mm below finished ground level. Where installed electrodes shall be complete with a flush fitting concrete inspection chamber / lid and be readily accessible for testing purposes in isolation to other connected electrodes.

12. All down-conductors shall be complete with test link facility and identified in line with the project specification/ drawings.

13. Lightning protection systems shall be in place and fully functional prior to the erection of any masts, towers, antennas or other such equipment that may increase the likelihood of a direct or residual lightning strike to the host or adjacent structures.

14. Soil preparation agents should be avoided where possible. where considered necessary the KTL design engineer must be duly advised in advance of their use.

15. Where lightning protection tapes connect to other services, connection shall "preferably be achieved via a proprietary mechanical connection suitable for the purpose intended. This shall include flexible or braided connections where the connection may be subject to mechanical stress. Lightning protection tapes shall not be drilled out or penetrated to achieve connection. All terminations shall be suitably protected to negate deterioration.
* Chemical jointing by permission of the KTL Design engineer

16. Surface fixed tapes shall be secured at 600mm centres via proprietary PVC insulated clips. clips shall generally be the self-adhesive type so as to avoid penetrating the building fabric. Screw/cavity fixings shall only be considered where the self-adhesive type are unsuitable and their use will not damage the building fabric.

17. All lightning protection equipment shall be duly identified and signage posted in keeping with BS EN 62305. Detailed wording as per the project specification.

18. Continuous containment system runs shall be bonded directly to the lightning protection system at a maximum 20 metre interval. Where bonded directly to the lightning protection system bond's shall be 25x3mm CU. Tape or braid as required. Parallel or dissimilar tray runs shall be cross-bonded, as should conductive fences and gates. 25x3mm cu. tape or braid as required.

19. Cables shall calculated, specified and supplied in accordance with the following specification and BS criteria :
a) Earth cables shall be single core ref. 6491X to BS 6004.
b) Power & swa type cables including 3 or 5 core ref. 6943X TO BS 5467.
c) Mic alarm cable 2 pair 1/0.50MM CEL-PE/PJF/PE/SWA/PE BLACK TO CS1128/1198 (EG BATT CABLES P/N 42125).
d) Where specified operator 'preferred' conductor types including hybrid cables shall be fully compliant with BS7671:2018 in all aspects of their performance, including environmental and electrical withstands, protective device compatibility and suitability relative to parallel services.

20. Cables shall be identified and labelled in keeping with BS7671.

21. Where buried electrical cables shall be installed in keeping with the construction drawings, project specification and best working practices. Prior to the opening of any trenches the contractor shall demonstrate that the area to be excavated is free from other services and all necessary safeguards have been put in place to negate risk to site personnel, building fabric, members of the public and site provider employee's. Unless directed otherwise all such cable excavations & associated installations shall include advance h&s / permit to work notifications.

22. Containment systems shall be the proprietary type as detailed on the construction drawings i.e. Roofpro or approved. They shall take cognisance of cable classifications and segregation as defined in section / chapter 52 of BS7671: 2018 and be complete prior to any cable installation.

23. Bends offsets and other accessories shall be the proprietary type. site fabricated installations in lieu of manufacturers equipment shall be avoided where practically possible.

24. Where the host building is complete with a fire alarm system, that system shall be extended and / or modified via the in situ specialist contractor to provide both audible indication of fire alarm activation and call point activation. Where practical db levels shall be 65DB (A) or 5DB (A) above prevailing background noise. associated cables shall be the MICC or FP200 type 1.5mm 2 core with red xlpe outer sheath. Clips shall be proprietary cu insulated type fixed directly to building fabric and/ or dedicated containment. Fire alarm works shall be restricted to the MBNL installation but are deemed to include modification as required to the existing fire alarms. Fire alarm works shall only be under taken on approval from the building officer or his nominated specialist contractor.

25. Where required cable service penetrations shall be agreed in advance with the relevant authority including ktl structural and electrical design engineers and the site provider. Fire sealing and reinstatement works will reflect and as a minimum maintain the specified fire integrity of the work area. BS7671: 2018 REGULATION 525.2.

26. External lighting shall be provided to the cabin / radio area via the agreed access route only. fittings shall be the switchable maintained / non-maintained and dual function variety and be both physically and aesthetically suitable for the area installed. They shall be complete with a minimum and integral 3 hour battery back-up facility in the event of mains power failure. Switching shall generally be achieved via a combination of 2 way and 2 way and intermediate switches positioned in such a way as to facilitate safe operation from the cabin / radio position and the nominated build or facility entry / exit point.

27. Accessories and sundry items shall be supplied in accordance with the following:
a) Warning labels shall be supplied to BS 5378 and client guidance
b) Single PVC back box for alarm connections shall be supplied to BS 5733.
c) Single blank plate engraved alarm contacts for back box shall be supplied to BS 5733.
A) AMP connector strip shall be supplied to BS 5733.

28. When occupying an escape route or part there-of, all electrical materials including all cables, fixings and containment shall be non combustible and 'low (in the case of conductors) smoke zero halogen'. Where cables are not installed in containment they shall be run and installed in such a way as to negate drooping or sagging during fire or abnormally high heat conditions. Additionally all line conductors occupying the above area's shall be RCD protected in keeping with BS7671: 2018. This includes main and sub-main cables, and sub-circuits such as access, emergency lighting and small power where applicable.

29. All equipment to be bonded to LP system as per manufacture guidelines.

30. All submain cable route that deviate from existing, or are not shown or called off on design, are to be confirmed during PSM. If the route is not accessible the contractor shall be responsible for any deviations between design and on-site solution. These are to be brought to the attention of the engineer for comment and resolution

Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M004	MBNL	Vendor Swap	Detailed Design	A3
Date:	12.02.26	Revision / Upgrade Description:		
Drawn:	BKM	Proposed Pole Detail Amended		
Checked:	KA			
Approved:	DC			
Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M003	MBNL	Vendor Swap	Detailed Design	A2
Date:	26.11.25	Revision / Upgrade Description:		
Drawn:	BKM	ICNIRP Blocks Changed / Pole setting out Added		
Checked:	KA			
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Master:	MBNL / EE / H3G:	Project:	Purpose of Issue:	Issue:
M002	MBNL	Vendor Swap	Detailed Design	A1
Date:	12.11.25	Revision / Upgrade Description:		
Drawn:	BKM	Detailed Design		
Checked:	KA			
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M001	MBNL	Vendor Swap	Planning	A
Date:	15.02.25	Revision / Upgrade Description:		
Drawn:	RMA	First Issue		
Checked:	KS			
Approved:	HG			
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Design & Principal Consultant:				
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Site Name:				
LP HAWTHORN AVENUE				
Site ID:				
1205960				
Address:				
OPPOSITE 53 HAWTHORN CLOSE HITCHIN HERTFORDSHIRE SG5 2BP				
Title:				
900 STANDARD NOTES				
Project:				
VENDOR SWAP				
Purpose of Issue:				
DETAILED DESIGN				
EE Cell ID:		MBNL Cell ID:		3UK Cell ID:
16912		NHE089		SG0302
Master Drawing No:				Issue:
1205960_NHE089_16912_SG0302_M004				A3

1.0 General

1.1. Do not scale drawings.

1.2. All dimensions in mm unless noted otherwise.

1.3. The contractor shall be responsible for confirming dimensions and levels on site prior to the commencement of construction or fabrication.

1.4. The contractor shall be responsible for any additional health and safety deviations between design and on site. Any additional handrailing, fencing, ladders, cable management, earthing and steelwork. All the above to be confirmed during the PSM prior commencement of construction or fabrication. Details to those shown on the drawings shall be brought to the attention of the Engineer for comment and resolution.

1.5 All necessary certification to be provided by the contractor at the end of the construction period in accordance with the design guide including, as built drawings and photo's, 18th edition, l/p cert, duct cert, RET and ant. details, rigging results, concrete cube test results, resin anchor test results, etc.

The contractor is to provide photographic evidence for the handover documentation on completion.

1.6. All equipment to be installed as per manufacture details and All works are to be carried out strictly in accordance with the design guidelines.

1.7. The contractor shall be responsible for setting out the project on site.

1.8. The contractor shall be responsible for the stability and integrity of existing structures and ground profiles within and adjacent to the works, from the date of taking possession of the site until practical completion of the works. The contractor shall be responsible for the design, installation and maintenance of all necessary temporary works to comply with this requirement.

1.9. The contractor shall ensure that tolerances are integrated and co-ordinated throughout the works to ensure the efficient implementation of the works.

1.10. Where the existing weatherproof envelope is pierced to implement the works, the contractor shall be responsible for ensuring that ingress of water does not occur during the construction period.

1.11. Deviations between site dimensions, levels or existing details to those shown on the drawings shall be brought to the attention of the Engineer for comment and resolution prior to commencement of the works.

1.12. Preparation, handling and application of the proprietary products shall be all in accordance with the recommendations of the product manufacturer, Health and Safety legislation and the specifications and details of the Engineer. Where contradictions occur between these requirements, reference should be made to the Engineer for resolution.

1.13. Where specific proprietary products are referenced an equal product approved by the engineer may be substituted, unless noted otherwise.

1.14. Any deviations from the details on these drawings or the design guides must be approved by KTL Design / Client prior to commencement of the works.

1.15 Any equipment stock issues be brought to the attention of the Engineer for comment and resolution prior to commencement of the works as this may result in new Structural, Electrical or redesign works

1.16 No equipment to be fixed to handrailing or any safety access protection without structural calculations

2.0. Fasteners and Connections - Steel to Steel

2.1. All bolts shall be M16 grade 8.8 unless noted otherwise.

Incorporating fully threaded length bolts :
Bolt to BS EN ISO 4017, nut to BS EN ISO 4032 (Class 8) and washer to BS EN ISO 7091 (100HV).

Incorporating part threaded length bolts:
Bolt to BS EN ISO 4014, nut to BS EN ISO 4032 (Class 8) and washer to BS EN ISO 7091 (100HV).

2.2. All bolts shall be Galvanised finish in accordance with BS EN ISO 10684.

2.3. All bolts shall be sized in length to give a minimum extension beyond the nut of three threads.

2.4 Welds to be 6mm continuous fillet, unless noted otherwise.

2.5 Contractor must verify all dimensions on site before commencing any work or making any shop drawings. No dimensions to be scaled from drawings. Discrepancies must be reported to the engineer prior to proceeding.

2.6. Where connections are made using dissimilar materials, all connections shall be provided with neoprene, 'top-hat' washers, spring washers or other approved barrier between connector and main material, to minimise the risk of bi-metallic (electrolytic) corrosion.

2.7. Where appropriate, taper washers shall be used in bolted connections.

2.8. Where a connection is subject to vibration or cyclic loading use shall be made of locknuts, lockwashers or spring washers or other approved methods at locations indicated on the drawing by the Engineer to minimise the risk of loosening of the connectors.

2.9 All temporary erection bracings & lifting points to be provided by the steelwork contractor prior to lifting & erection. Steelwork contractor is to ensure that new pole is installed to tolerances specified in BS5950 for steelwork erection. ie. within 1/600 of vertical.

2.10 Structural steel to be Grade S355 steel to BS EN 10025.

3.0. Fasteners and Connections - Steel to Concrete or Masonry

3.1. The preferred method of fixing structural fixings into solid concrete or masonry walls shall be through-bolt fixings unless specified otherwise. Where the through-bolt fixings cannot be achieved resin anchor fixings should be utilised upon consultation with engineer.

3.2 All resin anchors for minor structural items eg. cabinets, gantry poles, cable management, etc. to be tested to 1.0KN pullout force.

3.3 All resin anchors for major structural items to be tested in accordance with manufacturers recommendations and Structural Engineers calculated pullout force and provide photographic evidence for the handover documentation on completion.

3.4 Where a connection is made between dissimilar metals, all connections shall be provided with neoprene, 'top-hat' washers/spring washers or other approved barrier between connector and main material, to minimise the risk of bi-metallic (electrolytic) corrosion.

3.6. Where appropriate, taper washers shall be used in bolted connections.

3.7. Where a connection is subject to vibration or cyclic loading use shall be made of locknuts, lockwashers, spring washers or other approved methods, as indicated on the drawing by the Engineer, to minimise the risk of loosening of the connectors.

3.8. Anchors shall be tested in accordance with 'Construction Fixings Association Guidance Note : Procedure for Testing Construction Fixings' and BS 5080-1:1993 - Structural fixings in concrete and masonry
BS 5080-2:1986 Structural Fixings in concrete and masonry. Method for determination of resistance to loading in shear or manufacturers recommendations.

3.9. Code of Practice for the design, selection, installation use and maintenance of anchor devices conforming to BS EN795:2012 refer to BS 7883:2019

3.10. The Engineer shall be advised a minimum of 48 hours in advance to afford the opportunity of witnessing the test.

3.11 All tests shall be documented with location sketches and unique references for each bolt tested, in such a manner that each test location can be identified on site from the documentation.

3.12. All nuts, bolts and studdings used in connections to porous materials shall be stainless steel.

3.14 Code of practice for the selection and installation of post-installed anchors in concrete and masonry refer to BS 8539:2012+A1:2021

3.15 If Voids are encountered when drilling brickwork suitable mesh sleeves are to be installed in accordance with manufacturers recommendations

3.16 All resin anchors to be positioned to avoid joints in masonry. additional holes to be provided in steel if necessary

Duct notes

4.1 The contractor shall be responsible for confirming all proposed/existing ducting sizes, lengths and routes prior to build. All existing ducting within design is assumed and called off to the best of knowledge as per the design survey, any deviations on site prior to the commencement of civils works and details to those shown on the drawings shall be brought to the attention of the KTL Design Engineer for comment and resolution prior to build.

4.2 All ducts to be laid with draw cords to enable cables to be pulled through ducts.

4.3 All ducts to be sealed with expanding foam after cable installation.

4.4 Where possible all ducts to be laid with a minimum bend radius of 450mm.

4.5 Telecom and power ducts to be kept separate.

4.6 All ducts to be 600mm min below ground level.

4.7 All ducts to be layout as per manufacture guidelines

4.0. Concrete

4.1. Unless noted otherwise all concrete shall be:

Concrete grade: C28/35
Minimum cement content: 330 kg.m²

Nominal aggregate size: 20mm
Maximum free water/cement ratio: 0.5

4.2. Unless noted otherwise all reinforcement shall be:
(a) High yield (f_y = 500 Nmm²) type 2 deformed bar reinforcement to BS 4449:2005 +A2:2009
(b) Mild steel (f_y = 250 Nmm²) plain round reinforcement bars to BS 4449:2005 +A2:2009
(c) Welded steel mesh reinforcement to BS EN 10080:2005
(d) Scheduled and dimensioned to BS 8666:2005

4.3. All tower holding down bolts and anchorage assemblies, their setting out and any relevant templates shall be supplied by the tower manufacturer.

4.4. The main contractor shall be responsible for setting out, fixing and checking the installation of the tower anchorage assembly in accordance with the details supplied by the tower manufacturer.

4.5. The mix design certificate shall be submitted to the Engineer, for the opportunity to comment, a minimum of 72 hours prior to commencement of casting.

4.6. Concrete cube testing to be carried out in accordance with BS EN 12390-1:2021. The results to be forwarded to the Engineer for evaluation.

4.7. All concrete reinforcement and cast in items shall be positively located in position prior to casting of the concrete.

4.8. Where concrete is to be cast against an existing concrete surface, the existing surface shall be scabbled to remove laitance and other deleterious materials. Scabbling shall expose the aggregate and sound material. A bonding agent is to be applied to the scabbled surface a maximum of two days before casting.

4.9. Concrete in each base shall be cast in a single continuous operation.

4.10. Cover to reinforcement as noted on detail drawing.

4.11. Concrete shall not be cast where the ambient temperature is 6 degrees centigrade and falling or less than 2 degrees on a rising thermometer.

4.12. Finishes where stated shall be :

4.12.1. Formed finish - basic as struck.
4.12.2. Worked finish - brush finish.

4.13 The contractor shall be responsible for setting out foundations prior build. Deviations on site prior to the commencement of civils works and details to those shown on the drawings shall be brought to the attention of the KTL Design Engineer for comment and resolution prior to build.

5.0. Steelwork

5.1 All welds to be minimum 6mm fillet weld unless noted otherwise. Welds at tube to tube connections to be full penetration butt welds.

5.2 All steelwork to be galvanised to BS EN 1S0 1461:2022.

5.3 Minor site erection damage to be made good with brush applied Galvafruid.

5.4 BS EN 1090 - 1 - 2009+A1:2011 CE Marking:
Execution of Steel Structures and Aluminium Structures for all fabricated steelwork to be compliant with CE Marking specifications. All fabricated steel must be designed and fabricated to the requirements of Execution Class 2 as a minimum unless noted otherwise.
In order for fabricated steelwork to comply with BS EN 1090, Designers must state the Execution Class requirements on the drawings if not Execution Class 2 and the Principal Contractors must ensure that any third party fabricator is appropriately accredited.

5.5 Galvanized nuts and bolts to be used (U.N.O.).

Master: M004	MBNL / EE / H3G: MBNL	Project: Vendor Swap	Purpose of Issue: Detailed Design	Issue: A3
Date: 12.02.26	Drawn: BKM	Revision / Upgrade Description: Proposed Pole Detail Amended		
Checked: KA	Approved: DC			
Master: M003	MBNL / EE / H3G: MBNL	Project: Vendor Swap	Purpose of Issue: Detailed Design	Issue: A2
Date: 26.11.25	Drawn: BKM	Revision / Upgrade Description: ICNIRP Blocks Changed / Pole setting out Added		
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Date: 12.11.25	Drawn: BKM	Revision / Upgrade Description: Detailed Design		
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Date: 15.02.25	Drawn: RMA	Revision / Upgrade Description: First Issue		
Checked: KS	Approved: HG			
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Site Name: LP HAWTHORN AVENUE				
Site ID: 1205960				
Address: OPPOSITE 53 HAWTHORN CLOSE HITCHIN HERTFORDSHIRE SG5 2BP				
Title: 901 STANDARD NOTES				
Project: VENDOR SWAP				
Purpose of Issue: DETAILED DESIGN				
EE Cell ID: 16912		MBNL Cell ID: NHE089		3UK Cell ID: SG0302
Master Drawing No: 1205960_NHE089_16912_SG0302_M004				Issue: A3

100mm

50mm

10mm