

Legend

	Cabinet and Verts		Copper Joint		Trough Duct Cable Tray		Signal Box		FTN Core Node		Screen Joint Routeworks		Manhole details: Cross-To be used Filled-In use Clear-Empty		Overbridge		Signal		Engineer's Line Reference
	Cabinet with Regenerator and Verts		Fibre Joint		Cable - Type Identified by FTN Code Status - as per Key Below		Electrical Control Room		Core Node with GSM-R Colocated		Copper Joint Routeworks		Manhole		Underbridge		Vehicle Access Point		Mile Post
	KEY Proposed Fibre & Civils Elements are shown in RED Proposed Copper Elements are shown in BLUE Proposed Screening Elements are shown in MAGENTA All Recoveries are shown in GREEN		Screening Conductor Joint with/without Earth		Existing Fibre Cable		Manhole		FTN Access Node		Cabinet Routeworks		Manhole		Platform		Pedestrian Access Point		Telephone
			Existing Copper Cable		Existing Screen Cable		Mid Length Sheath Gap Fibre		FTN Access Node with GSM-R Colocated		Fibre Joint Routeworks		Manhole		Earth Form		Buffer Stop		Cable Pull
			Manhole		Manhole		Manhole		Manhole		Manhole		Manhole		Manhole		Manhole		Manhole

Notes

B	15/11/12	As Built	RM	JH	IA				
A	07/10/11	Redrafted from 2090-2103 FTN001_01430_DRAB_0003 Rev C.dwg & 2102-2103 FTN001_01430_DRAB_0002 Rev C.dwg	MB	JW	CT				
Rev	Date	Description of Revisions	Drawn	Chkd	Appr				

Contractor(s)

Status
As Built

Scale(s)
ELR & Mileage
RPE

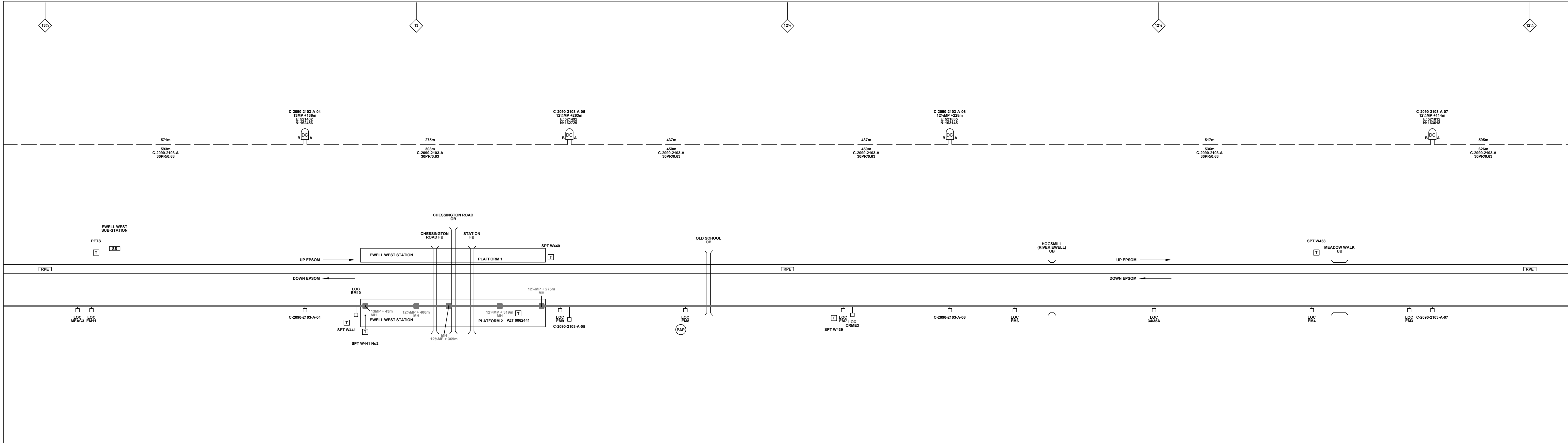
Designed	Mike Bonner	Sign.		Date	07/10/2011
Checked	Joe Winter	Sign.		Date	07/10/2011
Approved	Chris Tappenden	Sign.		Date	07/10/2011
Project	FTN/GSM-R Project Stage 2				
Drawing Title	Epsom Station (2090) to Stoneleigh Station (2103)				

Alternative Reference
See Layout Tab A3 Sheets 1 and 2

Drawing Number
NTPO\SLD\2090\2103\001

Revision
1 of 3
Revision B

Sheet Size 841x297



Legend

Cabinet and Verts	Fibre Joint	Copper Joint	Trough Duct Cable Tray	Signal Box	FTN Core Node	Screen Joint Routeworks	Manhole details: Cross-To be used Filled-In use Clear-Empty	Overbridge	Signal	Engineer's Line Reference	Crossing	GAS — GAS — Gas Line
Cabinet with Regenerator and Verts	Screening Conductor Joint with/without Earth	Fibre Joint	Cable - Type Identified by FTN Code Status - as per Key Below	Electrical Control Room	Core Node with GSM-R Colocated	Copper Joint Routeworks	Manhole	Underbridge	Vehicle Access Point	Mile Post	Gantry	HV — HV — HV Cable
KEY			1988m F-DIDC-RGAC-A	Manhole	FTN Access Node	Cabinet Routeworks	Mid Length Sheath Gap Fibre	Tunnel	Pedestrian Access Point	Platform	SEW — SEW — Sewer	LV — LV — LV Cable
Proposed Fibre & Civils Elements are shown in RED			All Existing Elements are shown in BLACK	Sheath Gap Copper	FTN Access Node with GSM-R Colocated	Fibre Joint Routeworks	Earth Form	Buffer Stop	Telephone	Mast	TEL — TEL — Telecoms	W — W — Water
Proposed Copper Elements are shown in BLUE			Existing Fibre Cable									
Proposed Screening Elements are shown in MAGENTA			Existing Copper Cable									
All Recoveries are shown in GREEN			Existing Screen Cable									

Notes

B	15/11/12	As Built	RM	JH	IA
A	07/10/11	Redrafted from 2090-2103 FTN001_01430_DRAB_0003 Rev C.dwg & 2102-2103 FTN001_01430_DRAB_0002 Rev C.dwg	MB	JW	CT
Rev	Date	Description of Revisions	Drawn	Chkd	Appr

Contractor(s)

As Built

ELR & Mileage
RPE

Designed	Mike Bonner	Sign.	Date	07/10/2011
Checked	Joe Winter	Sign.	Date	07/10/2011
Approved	Chris Tappenden	Sign.	Date	07/10/2011
Project	FTN/GSM-R Project Stage 2			
Drawing Title	Epsom Station (2090) to Stoneleigh Station (2103)			

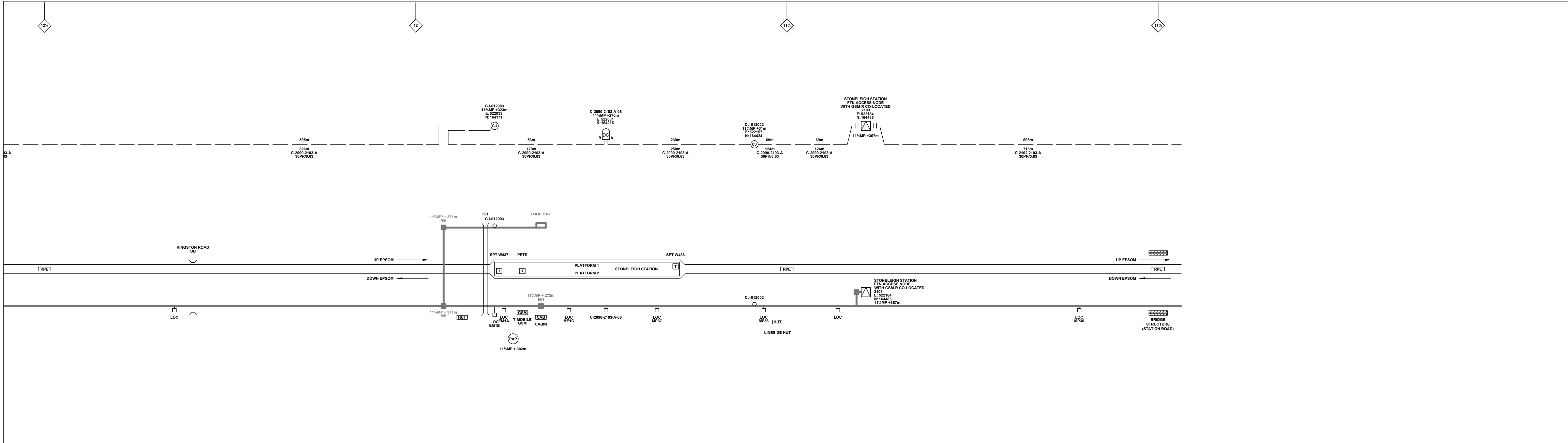
FTN/GSM-R Project
Tournament House
Passington
London
W2 1HA

Alternative Reference
See Layout Tab A3 Sheets 3 and 4

Drawing Number
NTPO\SLD\2090\2103\001

Sheet
2 of 3

Revision
B



Legend

	Cabinet and Verts		Copper Joint		Trough Duct Cable Tray		Signal Box		FTN Core Node		Screen Joint Routeworks		Manhole		Overbridge		Signal		Engineer's Line Reference
	Cabinet with Regenerator and Verts		Fibre Joint		Cable - Type Identified by FTN Code		Electrical Control Room		Core Node with GSM-R Colocated		Copper Joint Routeworks		Manhole details: Cross-To be used Filled-In use Clear-Empty		Underbridge		Vehicle Access Point		Mile Post
	KEY: Proposed Fibre & Civils Elements are shown in RED		Screening Conductor Joint with/without Earth		Cable Status - as per Key Below		Mid Length Sheath Gap Fibre		FTN Access Node		Cabinet Routeworks		Tunnel		Earth Form		Pedestrian Access Point		Platform
	KEY: Proposed Copper Elements are shown in BLUE		Existing Fibre Cable		Existing Copper Cable		Sheath Gap Copper		FTN Access Node with GSM-R Colocated		Fibre Joint Routeworks		Copper Blue Fibre Red Screen Green		Buffer Stop		Telephone		Mast
	KEY: Proposed Screening Elements are shown in MAGENTA		Existing Screen Cable																
	KEY: All Recoveries are shown in GREEN																		

Notes

B	15/11/12	As Built	RM	JH	IA
A	07/10/11	Redrafted from 2090-2103 FTN001_01430_DRAB_0003 Rev C.dwg & 2102-2103 FTN001_01430_DRAB_0002 Rev C.dwg	MB	JW	CT
Rev	Date	Description of Revisions	Drawn	Chkd	Appr

Contractor(s)

Status
As Built

Scale(s)
ELR & Mileage
RPE

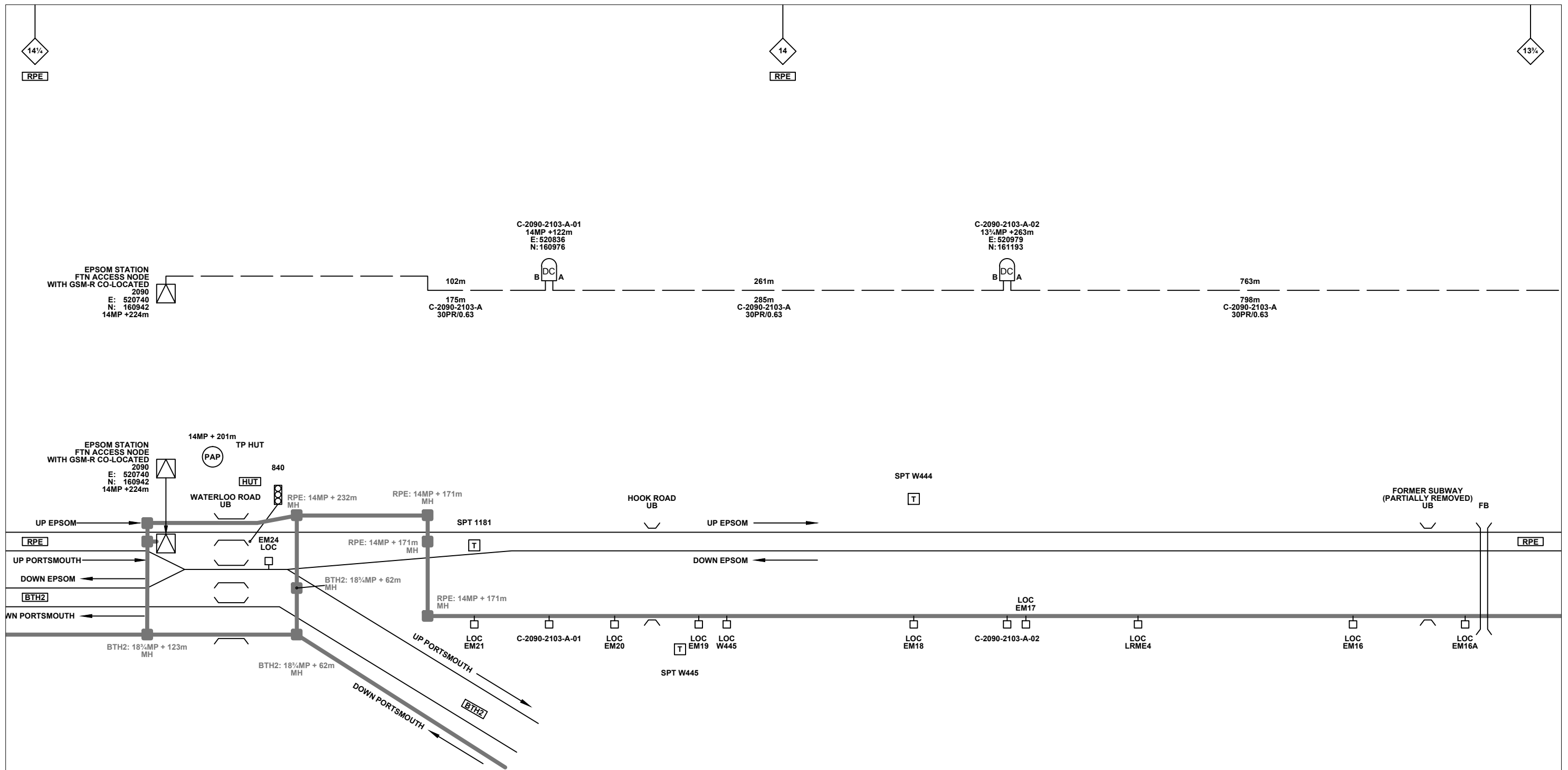
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Checked	Joe Winter	Sign.		Date	07/10/2011
Approved	Chris Tappenden	Sign.		Date	07/10/2011
Project	FTN/GSM-R Project Stage 2				
Drawing Title	Epsom Station (2090) to Stoneleigh Station (2103)				

FTN/GSM-R Project
Tournament House
Passington
London
W2 1HA

Alternative Reference
See Layout Tab A3 Sheets 5 and 6

Sheet
3 of 3

Revision
B



Legend

Cabinet and Verts	Copper Joint	Trough Duct Cable Tray	Signal Box	FTN Core Node	Screen Joint Routeworks	Overbridge	Signal	Engineer's Line Reference	Crossing	GAS — GAS — GAS —	HV — HV — HV —	Mast
Cabinet with Regenerator and Verts	Fibre Joint	Cable - Type Identified by FTN Code	Electrical Control Room	Core Node with GSM-R Colocated	Copper Joint Routeworks	Manhole	Vehicle Access Point	Mile Post	Gantry	LV — LV — LV —	SEW — SEW — SEW —	Cable Pull
KEY	Screening Conductor Joint with/without Earth	Status - as per Key Below	Mid Length Sheath Gap Fibre	FTN Access Node	Cabinet Routeworks	Sheath Gap Copper	Pedestrian Access Point	Platform	v — v — v —	Buffer Stop	Telephone	Copper Blue Fibre Red Screen Green
Proposed Fibre & Civils Elements are shown in RED		All Existing Elements are shown in BLACK		FTN Access Node with GSM-R Colocated	Fibre Joint Routeworks		Tunnel	Earth Farm				

Notes

Rev	Date	Description of Revisions	Drawn	Chkd	Appr
B	15/11/12	As Built	RM	JH	IA
A	07/10/11	Redrafted from 2090-2103 FTN001_01430_DRAB_0003 Rev C.dwg & 2102-2103 FTN001_01430_DRAB_0002 Rev C.dwg	MB	JW	CT

Contractor(s)

Status: **As Built**

Scale(s): NTS

ELR & Mileage: RPE

Designed		Sign.		Date	
Drawn	Mike Bonner	Sign.	<i>M.L.</i>	Date	07/10/2011
Checked	Joe Winter	Sign.	<i>[Signature]</i>	Date	07/10/2011
Approved	Chris Tappenden	Sign.	<i>[Signature]</i>	Date	07/10/2011
Project	FTN/GSM-R Project Stage 2				
Drawing Title	Epsom Station (2090) to Stoneleigh Station (2103)				

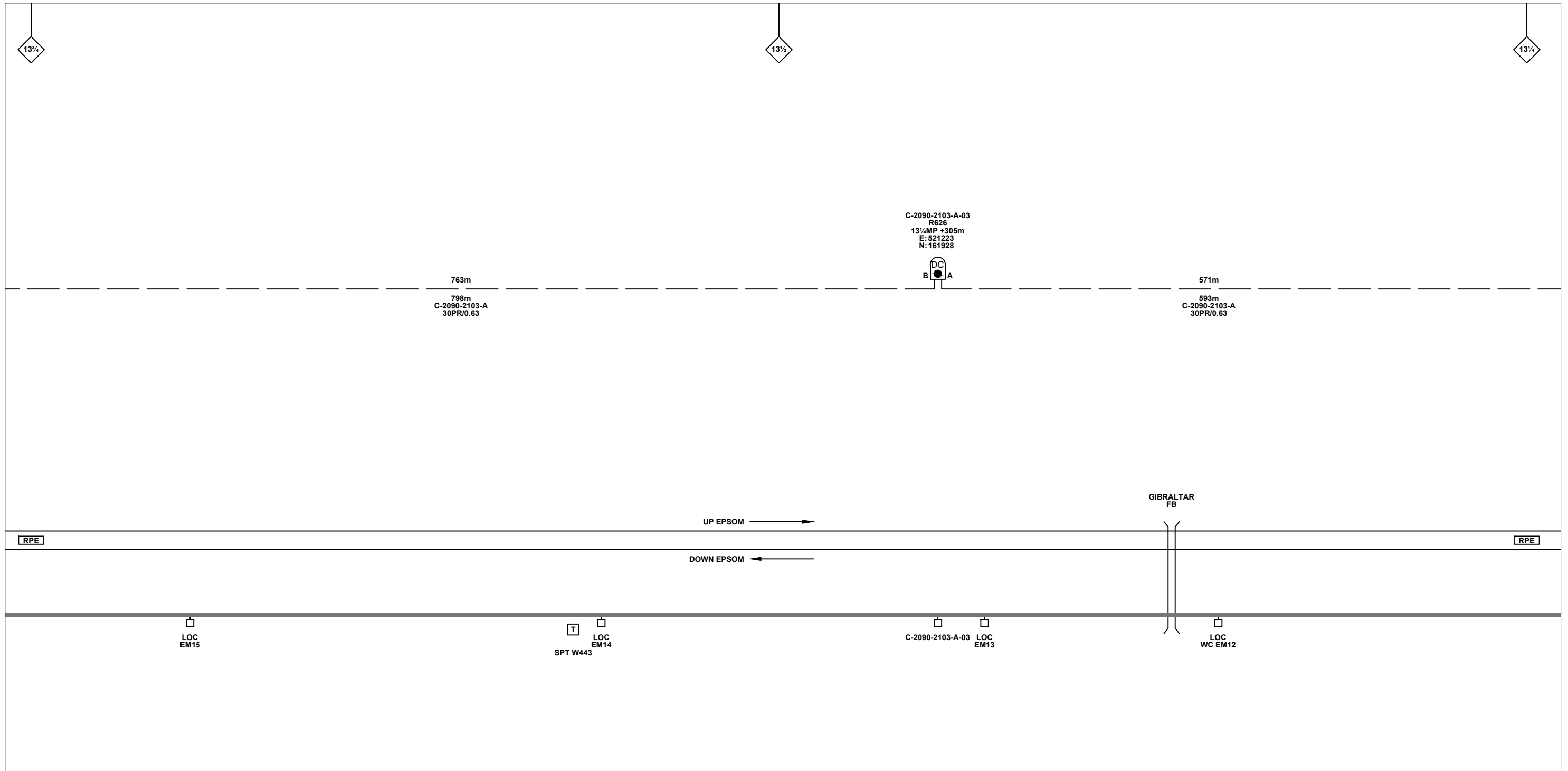
FTN/GSM-R Project
Tournament House
Paddington
London
W2 1HA

Alternative Reference: See Layout Tab 841 x 297 Sheet 1

Drawing Number: NTPO\SLD\2090\2103\001

Sheet: 1 of 6

Revision: B



Legend

Cabinet and Verts	Copper Joint	Trough Duct Cable Tray	Signal Box	FTN Core Node	Screen Joint Routeworks	Overbridge	Signal	Engineer's Line Reference	Crossing	Gas Line
Cabinet with Regenerator and Verts	Fibre Joint	Cable - Type Identified by FTN Code	Electrical Control Room	Core Node with GSM-R Colocated	Copper Joint Routeworks	Manhole	Vehicle Access Point	Mile Post	HV Cable	LV Cable
KEY	Screening Conductor Joint with/without Earth	Status - as per Key Below	Mid Length Sheath Gap Fibre	FTN Access Node	Cabinet Routeworks	Sheath Gap Copper	Pedestrian Access Point	Platform	Sewer	Water
Proposed Fibre & Civils Elements are shown in RED		All Existing Elements are shown in BLACK	Tunnel	FTN Access Node with GSM-R Colocated	Fibre Joint Routeworks		Earth Farm	Buffer Stop	Telephone	Copper Blue
Proposed Copper Elements are shown in BLUE		Existing Fibre Cable	Manhole details: Cross-To be used				Underbridge			Fibre Red
Proposed Screening Elements are shown in MAGENTA		Existing Copper Cable	Manhole details: Filled-In use							Screen Green
All Recoveries are shown in GREEN		Existing Screen Cable	Manhole details: Clear-Empty							Mast

Notes

Rev	Date	Description of Revisions	Drawn	Chkd	Appr
B	15/11/12	As Built	RM	JH	IA
A	07/10/11	Redrafted from 2090-2103 FTN001_01430_DRAB_0003 Rev C.dwg & 2102-2103 FTN001_01430_DRAB_0002 Rev C.dwg	MB	JW	CT

Contractor(s)

Status: **As Built**

Scale(s): NTS

ELR & Mileage: RPE

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Drawn	Mike Bonner	Sign.		Date	07/10/2011
Checked	Joe Winter	Sign.		Date	07/10/2011
Approved	Chris Tappenden	Sign.		Date	07/10/2011
Project	FTN/GSM-R Project Stage 2				
Drawing Title	Epsom Station (2090) to Stoneleigh Station (2103)				

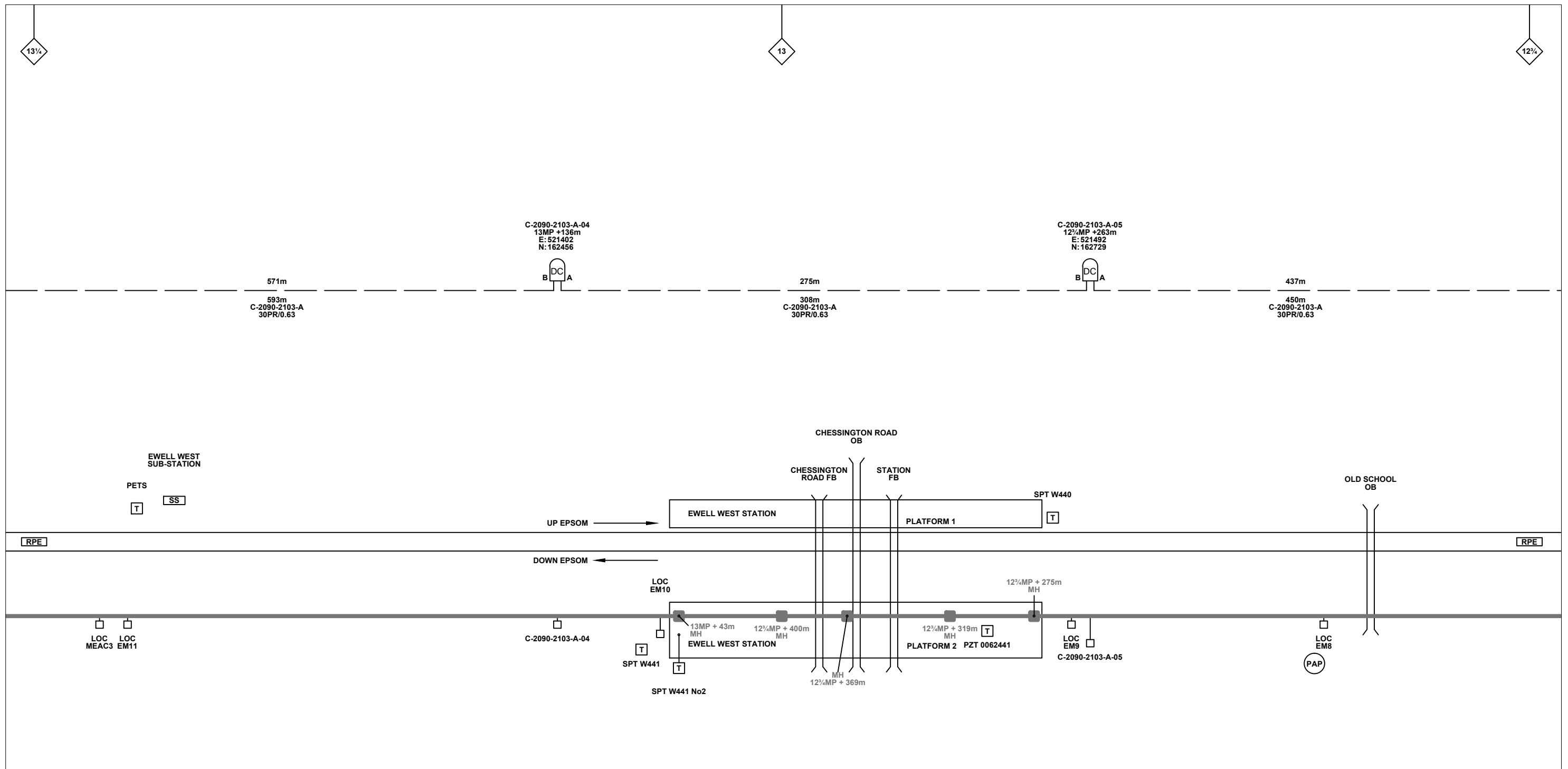
FTN/GSM-R Project
Tournament House
Paddington
London
W2 1HA

Alternative Reference: See Layout Tab 841 x 297 Sheet 1

Drawing Number: NTPO\SLD\2090\2103\001

Sheet: 2 of 6

Revision: B




Legend

Cabinet and Verts	Copper Joint	Signal Box	FTN Core Node	Screen Joint Routeworks	Overbridge	Signal	Engineer's Line Reference	Crossing	Gas Line
Cabinet with Regenerator and Verts	Fibre Joint	Electrical Control Room	Core Node with GSM-R Colocated	Copper Joint Routeworks	Underbridge	Vehicle Access Point	Mile Post	Gantry	HV Cable
KEY	Screening Conductor Joint with/without Earth	Manhole	FTN Access Node	Cabinet Routeworks	Manhole details: Cross-To be used Filled-In use Clear-Empty	Pedestrian Access Point	Platform	Sewer	LV Cable
Proposed Fibre & Civils Elements are shown in RED	1988m Cable - Type Identified by FTN Code	Mid Length Sheath Gap Fibre	FTN Access Node with GSM-R Colocated	Fibre Joint Routeworks	Tunnel	Earth Farm	Buffer Stop	Water	Mast
Proposed Copper Elements are shown in BLUE	2034m Cable - Type Identified by FTN Code	Sheath Gap Copper	Existing Fibre Cable	Fibre Joint Routeworks					
Proposed Screening Elements are shown in MAGENTA	Existing Screen Cable		Existing Copper Cable						
All Recoveries are shown in GREEN			Existing Fibre Cable						

Notes

Rev	Date	Description of Revisions	Drawn	Chkd	Appr
B	15/11/12	As Built	RM	JH	IA
A	07/10/11	Redrafted from 2090-2103 FTN001_01430_DRAB_0003 Rev C.dwg & 2102-2103 FTN001_01430_DRAB_0002 Rev C.dwg	MB	JW	CT

Contractor(s)



Status: **As Built**

Scale(s): NTS

ELR & Mileage: RPE

Designed		Sign.		Date	
Drawn	Mike Bonner	Sign.		Date	07/10/2011
Checked	Joe Winter	Sign.		Date	07/10/2011
Approved	Chris Tappenden	Sign.		Date	07/10/2011
Project	FTN/GSM-R Project Stage 2				
Drawing Title	Epsom Station (2090) to Stoneleigh Station (2103)				



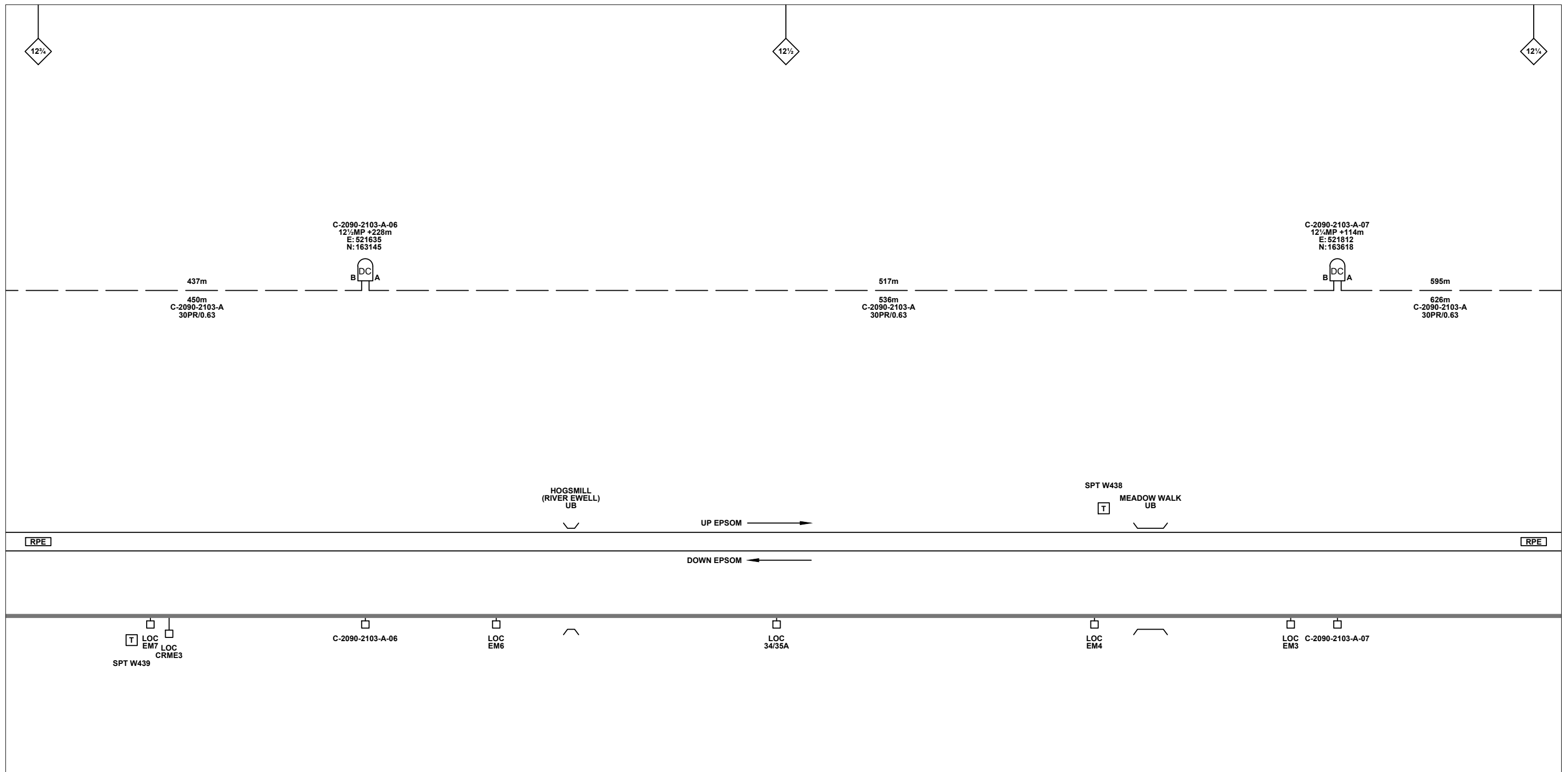
FTN/GSM-R Project
Tournament House
Paddington
London
W2 1HA

Alternative Reference: See Layout Tab 841 x 297 Sheet 2

Drawing Number: NTPO\SLD\2090\2103\001

Sheet: 3 of 6

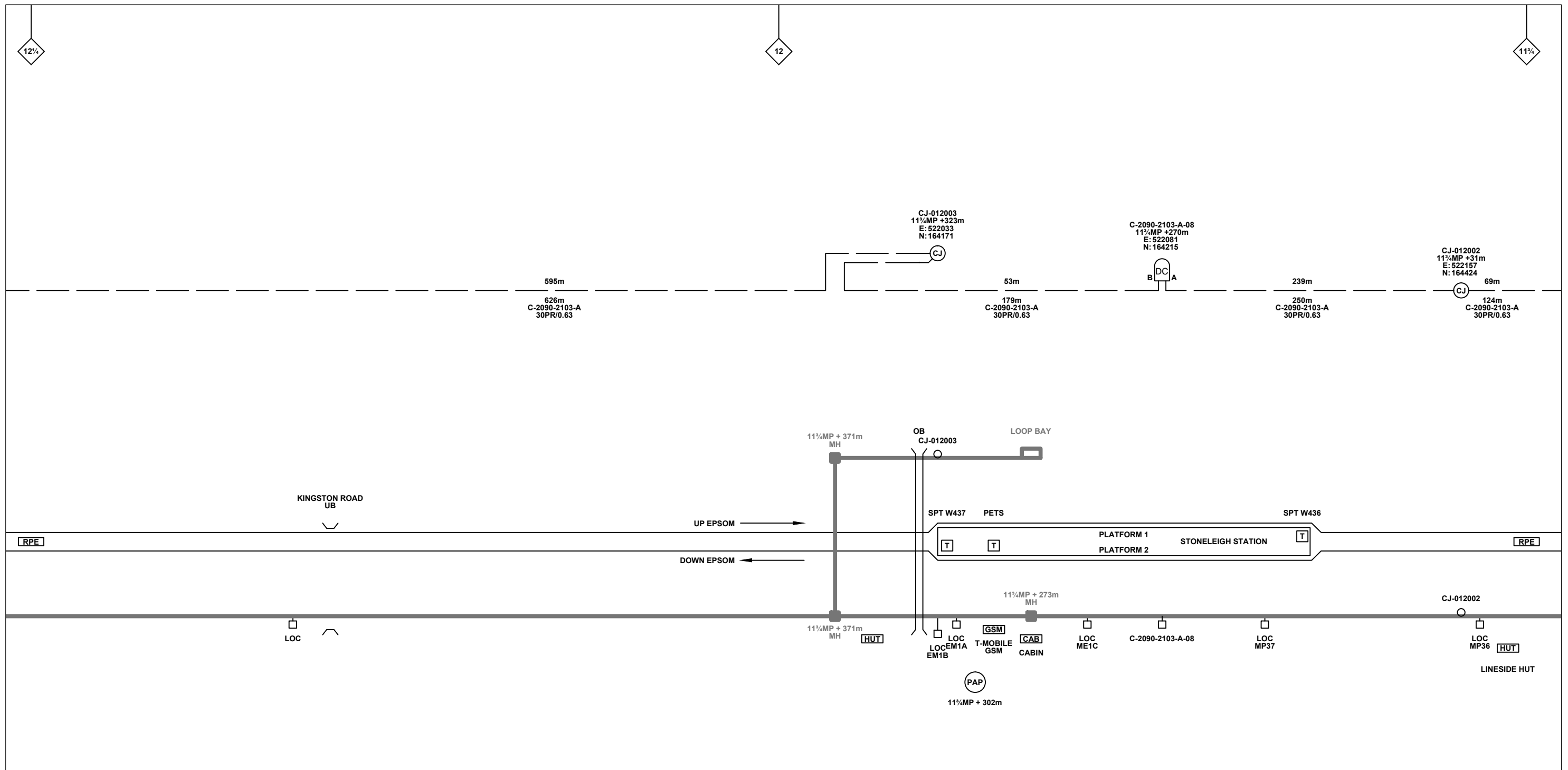
Revision: B



Legend

KEY									
Proposed Fibre & Civils Elements are shown in RED	All Existing Elements are shown in BLACK								
Proposed Copper Elements are shown in BLUE	Existing Fibre Cable								
Proposed Screening Elements are shown in MAGENTA	Existing Copper Cable								
All Recoveries are shown in GREEN	Existing Screen Cable								

			Contractor(s)			Designed: Sign. Date Drawn: Mike Bonner Sign. M.L. Date 07/10/2011 Checked: Joe Winter Sign. Date 07/10/2011 Approved: Chris Tappenden Sign. Date 07/10/2011					
Status: As Built			Drawing Title: Epsom Station (2090) to Stoneleigh Station (2103)			Project: FTN/GSM-R Project Stage 2			FTN/GSM-R Project Tournament House Paddington London W2 1HA		
Drawing Number: NTPO\SLD\2090\2103\001			Alternative Reference: See Layout Tab 841 x 297 Sheet 2			Sheet: 4 of 6			Revision: B		
Drawing Title: Epsom Station (2090) to Stoneleigh Station (2103)			Scale(s): NTS			ELR & Mileage: RPE			Drawing Number: NTPO\SLD\2090\2103\001		
Revision History:			Contractor(s):			Drawing Title:			Drawing Number:		
Rev	Date	Description of Revisions	Drawn	Chkd	Appr						
B	15/11/12	As Built	RM	JH	IA						
A	07/10/11	Redrafted from 2090-2103 FTN001_01430_DRAB_0003 Rev C.dwg & 2102-2103 FTN001_01430_DRAB_0002 Rev C.dwg	MB	JW	CT						



Legend

Cabinet and Verts	Copper Joint	Trough Duct Cable Tray	Signal Box	FTN Core Node	Screen Joint Routeworks	Overbridge	Signal	Engineer's Line Reference	Gas Line
Cabinet with Regenerator and Verts	Fibre Joint	Cable - Type Identified by FTN Code	Electrical Control Room	Core Node with GSM-R Colocated	Copper Joint Routeworks	Manhole	Vehicle Access Point	Mile Post	HV Cable
KEY	Screening Conductor Joint with/without Earth	Status - as per Key Below	Mid Length Sheath Gap Fibre	FTN Access Node	Cabinet Routeworks	Manhole details: Cross-To be used	Pedestrian Access Point	Platform	LV Cable
Proposed Fibre & Civils Elements are shown in RED		All Existing Elements are shown in BLACK	Sheath Gap Copper	FTN Access Node with GSM-R Colocated	Fibre Joint Routeworks	Tunnel	Earth Farm	Gantry	Sewer
Proposed Copper Elements are shown in BLUE		Existing Fibre Cable					Buffer Stop	Telephone	Telecoms
Proposed Screening Elements are shown in MAGENTA		Existing Copper Cable						Cable Pull	Water
All Recoveries are shown in GREEN		Existing Screen Cable							Mast

Notes

Rev	Date	Description of Revisions	Drawn	Chkd	Appr
B	15/11/12	As Built	RM	JH	IA
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Contractor(s)

Status: **As Built**

Scale(s): NTS

ELR & Mileage: RPE

Designed		Sign.		Date	
Drawn	Mike Bonner	Sign.		Date	07/10/2011
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Project	FTN/GSM-R Project Stage 2				
Drawing Title	Epsom Station (2090) to Stoneleigh Station (2103)				

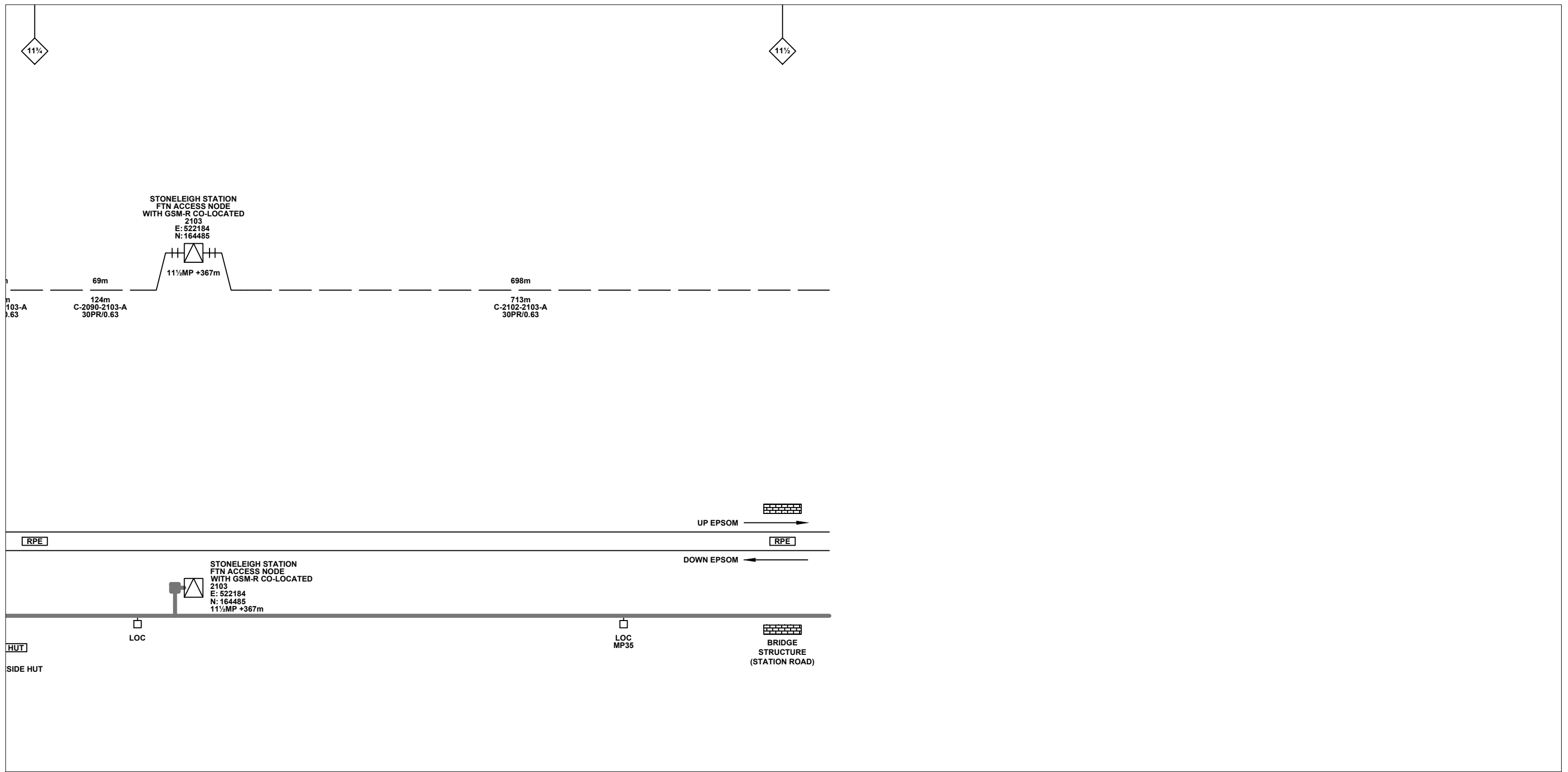
FTN/GSM-R Project
Tournament House
Paddington
London
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Alternative Reference: See Layout Tab 841 x 297 Sheet 3

Drawing Number: NTPO\SLD\2090\2103\001

Sheet: 5 of 6

Revision: B



Legend

Cabinet and Verts	Copper Joint	Trough Duct Cable Tray	Signal Box	FTN Core Node	Screen Joint Routeworks	Overbridge	Signal	Engineer's Line Reference	Crossing	GAS — GAS — Gas Line
Cabinet with Regenerator and Verts	Fibre Joint	Cable - Type Identified by FTN Code	Electrical Control Room	Core Node with GSM-R Colocated	Manhole	Underbridge	VAP Vehicle Access Point	Mile Post	Gantry	HV — HV — HV Cable
KEY	Screening Conductor Joint with/without Earth	Status - as per Key Below	Mid Length Sheath Gap Fibre	FTN Access Node	Copper Joint Routeworks	Manhole details: Cross-To be used, Filled-In use, Clear-Empty	PAP Pedestrian Access Point	Platform	SEW — SEW — Sewer	LV — LV — LV Cable
Proposed Fibre & Civils Elements are shown in RED	Existing Fibre Cable	Existing Copper Cable	Sheath Gap Copper	FTN Access Node with GSM-R Colocated	Cabinet Routeworks	Tunnel	Earth Farm	Buffer Stop	TEL — TEL — Telecoms	W — W — Water
Proposed Copper Elements are shown in BLUE	Existing Screen Cable	Copper Blue Fibre	Mast	Telephone	Fibre Joint Routeworks	Cable Pull	Mast			
Proposed Screening Elements are shown in MAGENTA										
All Recoveries are shown in GREEN										

Rev	Date	Description of Revisions	Drawn	Chkd	Appr
B	15/11/12	As Built	RM	JH	IA
A	07/10/11	Redrafted from 2090-2103 FTN001_01430_DRAB_0003 Rev C.dwg & 2102-2103 FTN001_01430_DRAB_0002 Rev C.dwg	MB	JW	CT

Contractor(s)

Status: **As Built**

Scale(s): NTS

ELR & Mileage: RPE

Designed		Sign.		Date	
Drawn	Mike Bonner	Sign.	<i>M.L.</i>	Date	07/10/2011
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FTN/GSM-R Project
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Alternative Reference: See Layout Tab 841 x 297 Sheet 3

Drawing Number: NTPO\SLD\2090\2103\001

Sheet: 6 of 6

Revision: B