

Legend

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

Notes

C	13/08/12	As Built	JO	JB	PH
B	01/02/11	Redrafted from NTPOSLD21262391001DA & NTPOSLD23912398001A for Stage 2 Design	DA	JW	CT
A	20/06/08	Amended Issue	AEL		
DA	09/06/08	1st Issue	AEL		
Rev	Date	Description of Revisions	Drawn	Chkd	Appr

Contractor(s)

Unit 4 Apex Park, Wainwright Road, Worcester, Worcestershire, WR4 9FN. Tel: 01905 756000

ndcconsultants

As Built

ELR & Mileage: RDG1

Designed	Sign.	Date
Drawn	Sign.	Date
Checked	Sign.	Date
Approved	Sign.	Date
Project		
Drawing Title		

FTN/GSM-R Project
Stage 2 As Built

Egham (2391) to
Virginia Water Station (2398)

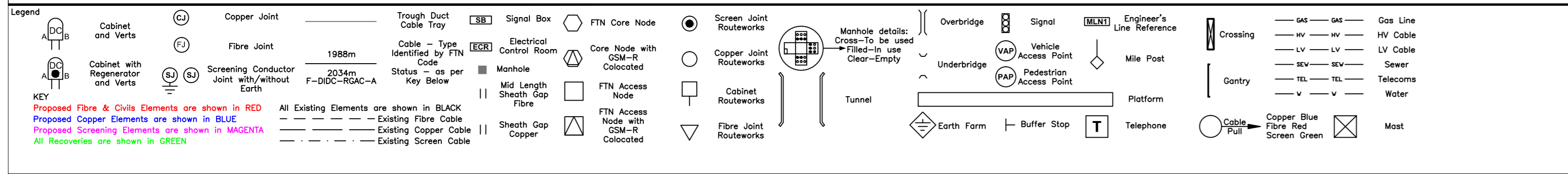
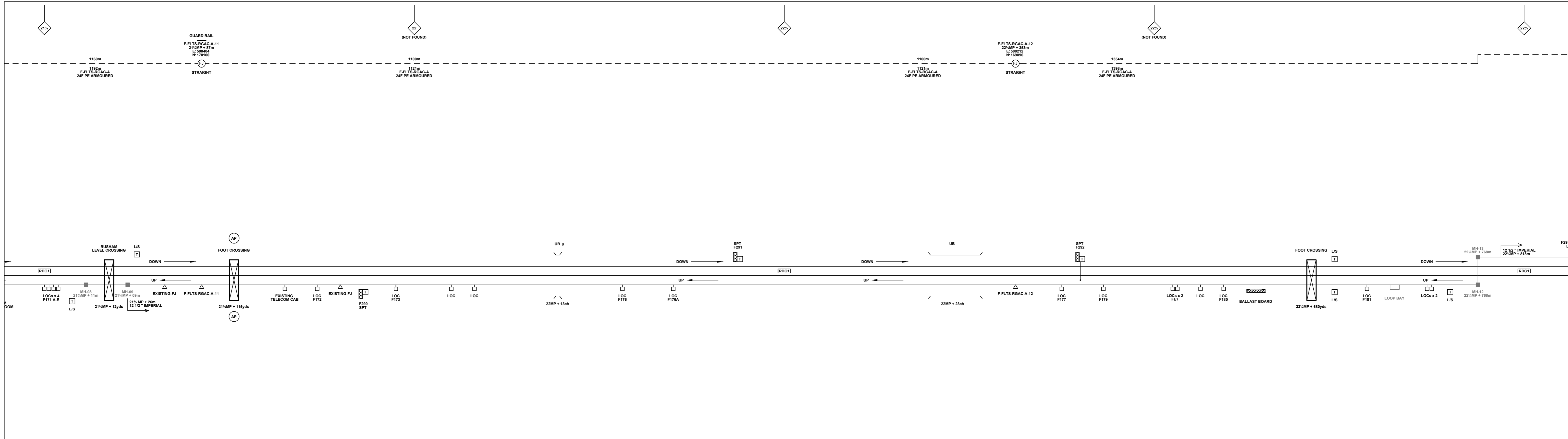
FTN/GSM-R Project
Tournament House
Reading
London
WZ 194

Alternative Reference: See Layout Tab A3 Sheets 1 and 2

Drawing Number: NTPO\SLD\2391\2398\001

Sheet 1 of 3

Revision C



Notes

C	13/08/12	As Built	JO	JB	PH
B	01/02/11	Redrafted from NTP08LD21262391001DA & NTP08LD23912398001A for Stage 2 Design	DA	JW	CT
A	20/06/08	Amended Issue	AEL		
DA	09/06/08	1st Issue	AEL		
Rev	Date	Description of Revisions	Drawn	Chkd	Appr

Contractor(s)

Unit 4 Apex Park, Wainwright Road, Worcester, Worcestershire, WR4 9FN. Tel: 01905 756000

As Built

ELR & Message
NTS RDG1

Designed	Sign.	Date
Drawn	Sign.	Date
Checked	Sign.	Date
Approved	Sign.	Date
Project		
Drawing Title		

FTN/GSM-R Project
Stage 2 As Built

Egham (2391) to
Virginia Water Station (2398)

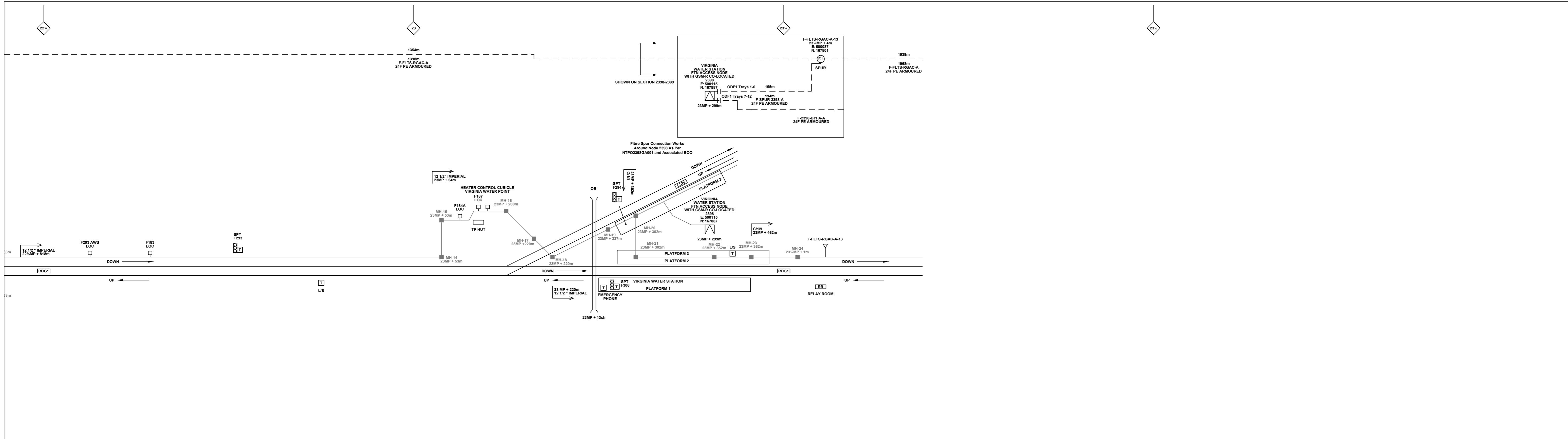
FTN/GSM-R Project
Tournament House
Paddington
London
W2 1HS

Alternative Reference
See Layout Tab A3 Sheets 3 and 4

Drawing Number
NTP0\SLD\2391\2398\001

Sheet
2 of 3

Revision
C



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	Crossing	Gas Line
Cabinet with Regenerator and Verts	Fibre Joint	Electrical Control Room	Manhole	Core Node with GSM-R Colocated	Copper Joint Routeworks	Tunnel	Underbridge	Vehicle Access Point	Mile Post	Gantry	HV Cable
KEY	Screening Conductor Joint with/without Earth	Cable Type identified by FTN Code Status - as per Key Below	Mid Length Sheath Gap Fibre	FTN Access Node	Cabinet Routeworks	Manhole with Sheath Gap Copper	Earth Farm	Pedestrian Access Point	Platform	Cable Pull	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		Buffer Stop	Telephone	Copper Blue Fibre	Sewer	
Proposed Copper Elements are shown in BLUE		Existing Fibre Cable							Fibre Red	Telecoms	
Proposed Screening Elements are shown in MAGENTA		Existing Copper Cable							Screen Green	Water	
All Recoveries are shown in GREEN		Existing Screen Cable									

Notes

C	13/08/12	As Built	JO	JB	PH
B	01/02/11	Redrafted from NTP08LD21262391001DA & NTP08LD23912398001A for Stage 2 Design	DA	JW	CT
A	20/06/08	Amended Issue		AEL	
DA	09/06/08	1st Issue		AEL	
Rev	Date	Description of Revisions	Drawn	Chkd	Appr

Contractor(s)

Unit 4 Apex Park, Wainwright Road, Worcester, Worcestershire, WR4 9FN. Tel: 01905 756000

ndcconsultants

As Built

Scale(s) ELR & Message

NTS RDG1

Designed	Sign.	Date
Drawn	Sign.	Date
Checked	Sign.	Date
Approved	Sign.	Date
Project		
Drawing Title		

FTN/GSM-R Project
Stage 2 As Built

Egham (2391) to
Virginia Water Station (2398)

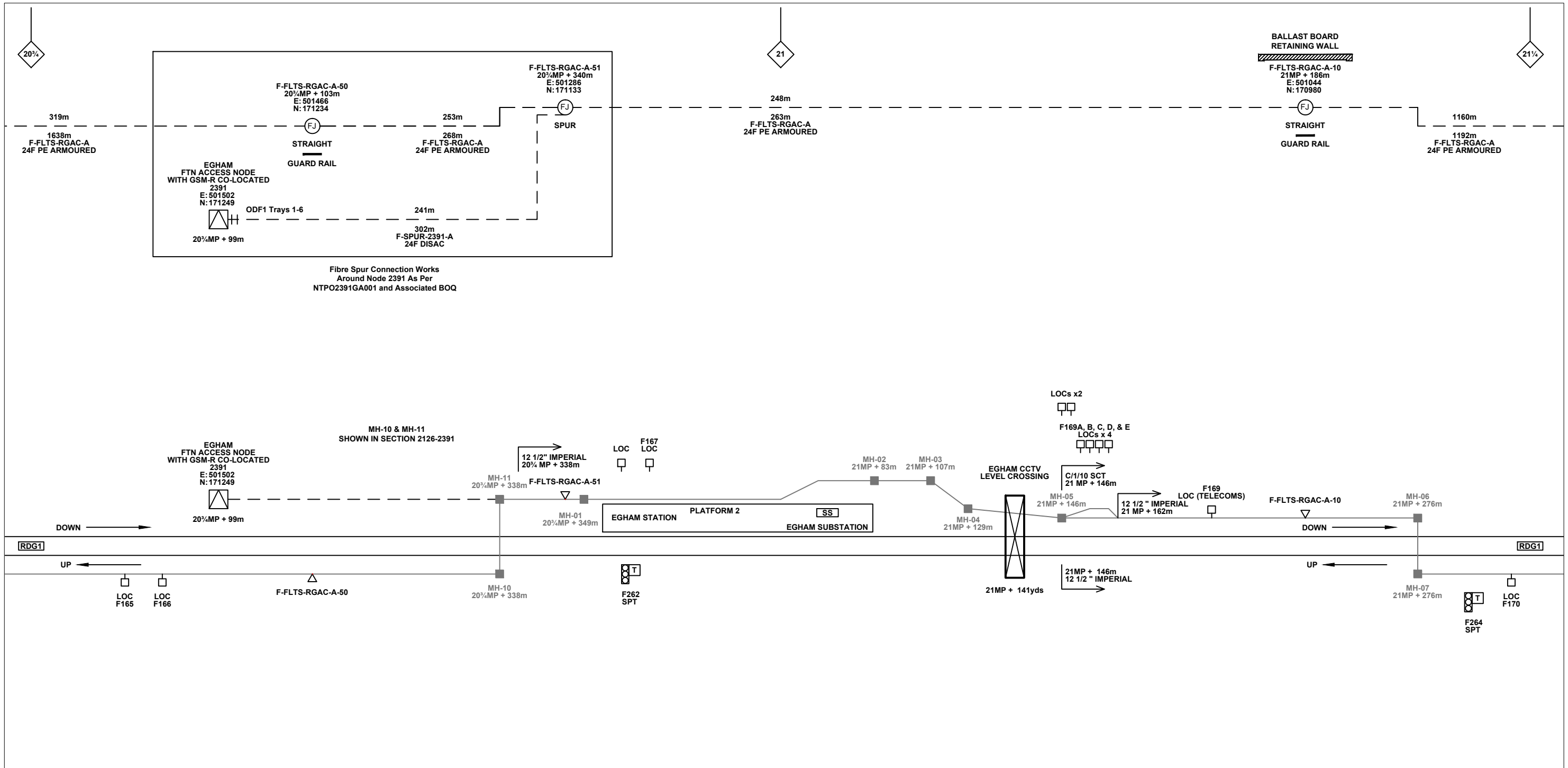
FTN/GSM-R Project
Tournament House
Passington
London
W2 1HS

Alternative Reference See Layout Tab A3 Sheets 5 and 6

Drawing Number NTP08LD2391\2398\001

Sheet 3 of 3

Revision C



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		Electrical Control Room		Manhole		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		Cable - Type Identified by FTN Code		Mid Length Sheath Gap Fibre		FTN Access Node		Cabinet Routeworks		Tunnel		Pedestrian Access Point		Platform		Water		LV Cable
	Proposed Fibre & Civils Elements are shown in RED				Status - as per Key Below		Sheath Gap Copper		FTN Access Node with GSM-R Colocated		Fibre Joint Routeworks		Earth Farm		Buffer Stop		Telephone		Mast		Sewer
	Proposed Copper Elements are shown in BLUE				Existing Fibre Cable																Telecoms
	Proposed Screening Elements are shown in MAGENTA				Existing Copper Cable																Copper Blue Fibre Red Screen Green
	All Recoveries are shown in GREEN				Existing Screen Cable																

Notes

C	13/08/12	As Built	JO	JB	PH
B	01/02/11	Redrafted from NTPOSLD21262391001DA & NTPOSLD23912398001A for Stage 2 Design	DA	JW	CT
A	20/06/08	Amended Issue		AEL	
DA	09/06/08	1st Issue		AEL	
Rev	Date	Description of Revisions	Drawn	Chkd	Appr

Contractor(s)

Unit 4 Apex Park, Wainwright Road, Worcester, Worcestershire, WR4 9FN. Tel: 01905 756000

Status: **As Built**

Scale(s): NTS, ELR & Mileage RDG1

Designed	Sign.	Date
Drawn	Sign. <i>D. Andres</i>	Date 01/02/2011
Checked	Sign. <i>Joe Winter</i>	Date 01/02/2011
Approved	Sign. <i>Chris Tappenden</i>	Date 01/02/2011
Project		
FTN/GSM-R Project Stage 2 As Built		
Drawing Title		
Egham (2391) to Virginia Water Station (2398)		

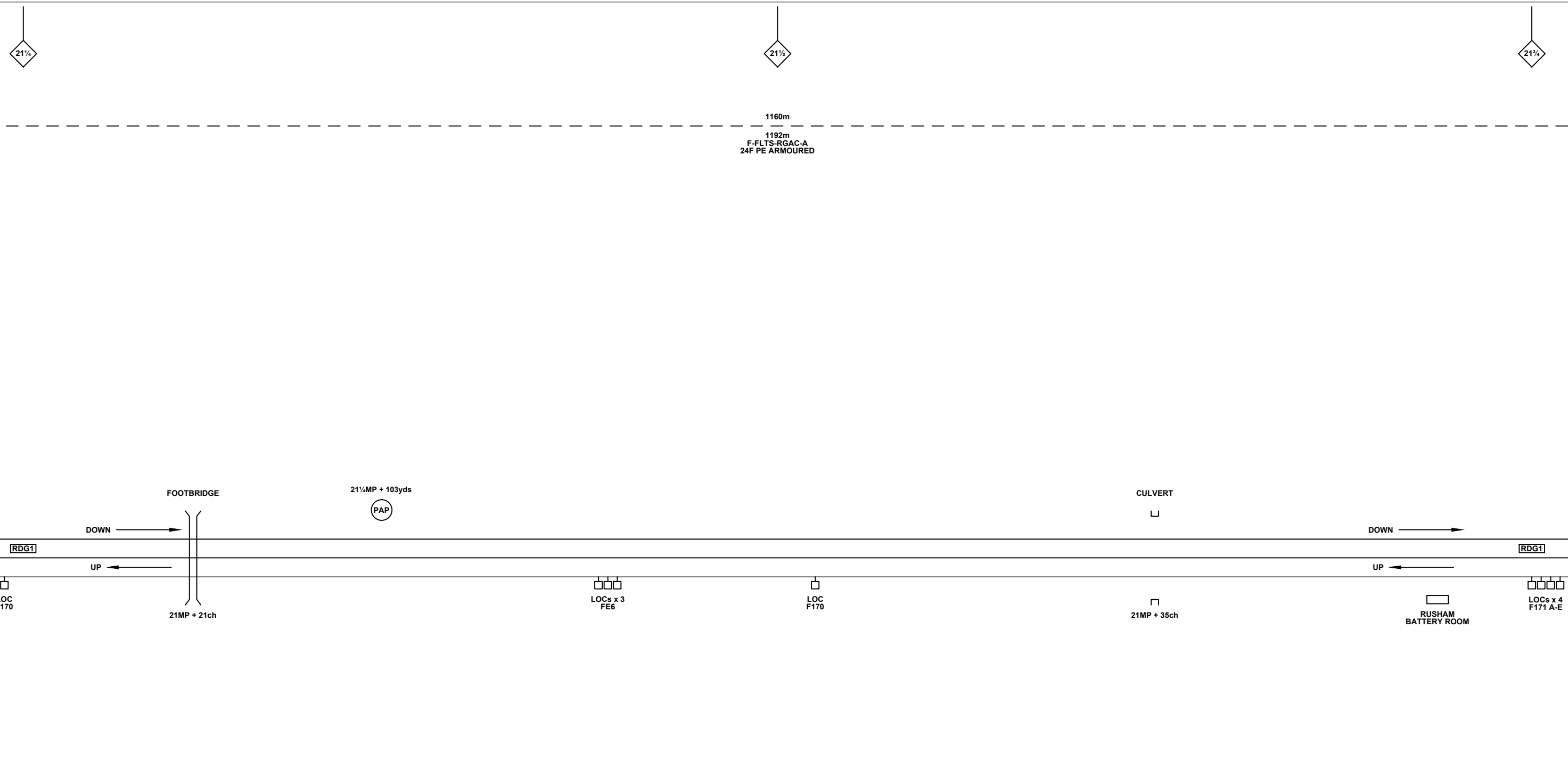
FTN/GSM-R Project
Tournament House
Paddington
London
W2 1HA

Alternative Reference: See Layout Tab 841 x 297 Sheet 1

Drawing Number: NTPO\SLD\2391\2398\001

Sheet: 1 of 6

Revision: C



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	Underbridge	Vehicle Access Point	Mile Post	HV Cable	Manhole
KEY	Screening Conductor Joint with/without Earth	Status - as per Key Below	Mid Length Sheath Gap Fibre	FTN Access Node	Cabinet Routeworks	Tunnel	Pedestrian Access Point	Platform	LV Cable	Sheath Gap Copper
Proposed Fibre & Civils Elements are shown in RED		1988m		FTN Access Node with GSM-R Colocated	Fibre Joint Routeworks		Earth Farm	Telephone	Sewer	Existing Fibre Cable
Proposed Copper Elements are shown in BLUE		2034m F-DIDC-RGAC-A					Buffer Stop	Cable Pull	Telecoms	Existing Copper Cable
Proposed Screening Elements are shown in MAGENTA									Water	Existing Screen Cable
All Recoveries are shown in GREEN									Mast	

Notes

C	13/08/12	As Built	JO	JB	PH
B	01/02/11	Redrafted from NTPOSLD21262391001DA & NTPOSLD23912398001A for Stage 2 Design	DA	JW	CT
A	20/06/08	Amended Issue		AEL	
DA	09/06/08	1st Issue		AEL	
Rev	Date	Description of Revisions	Drawn	Chkd	Appr

Contractor(s)

Unit 4 Apex Park, Wainwright Road, Worcester, Worcestershire, WR4 9FN. Tel: 01905 756000

Status: **As Built**

Scale(s): NTS

ELR & Mileage: RDG1

Designed	Sign.	Date
Drawn	Sign. <i>D. Andres</i>	Date 01/02/2011
Checked	Sign. <i>Joe Winter</i>	Date 01/02/2011
Approved	Sign. <i>Chris Tappenden</i>	Date 01/02/2011
Project: FTN/GSM-R Project Stage 2 As Built		
Drawing Title: Egham (2391) to Virginia Water Station (2398)		

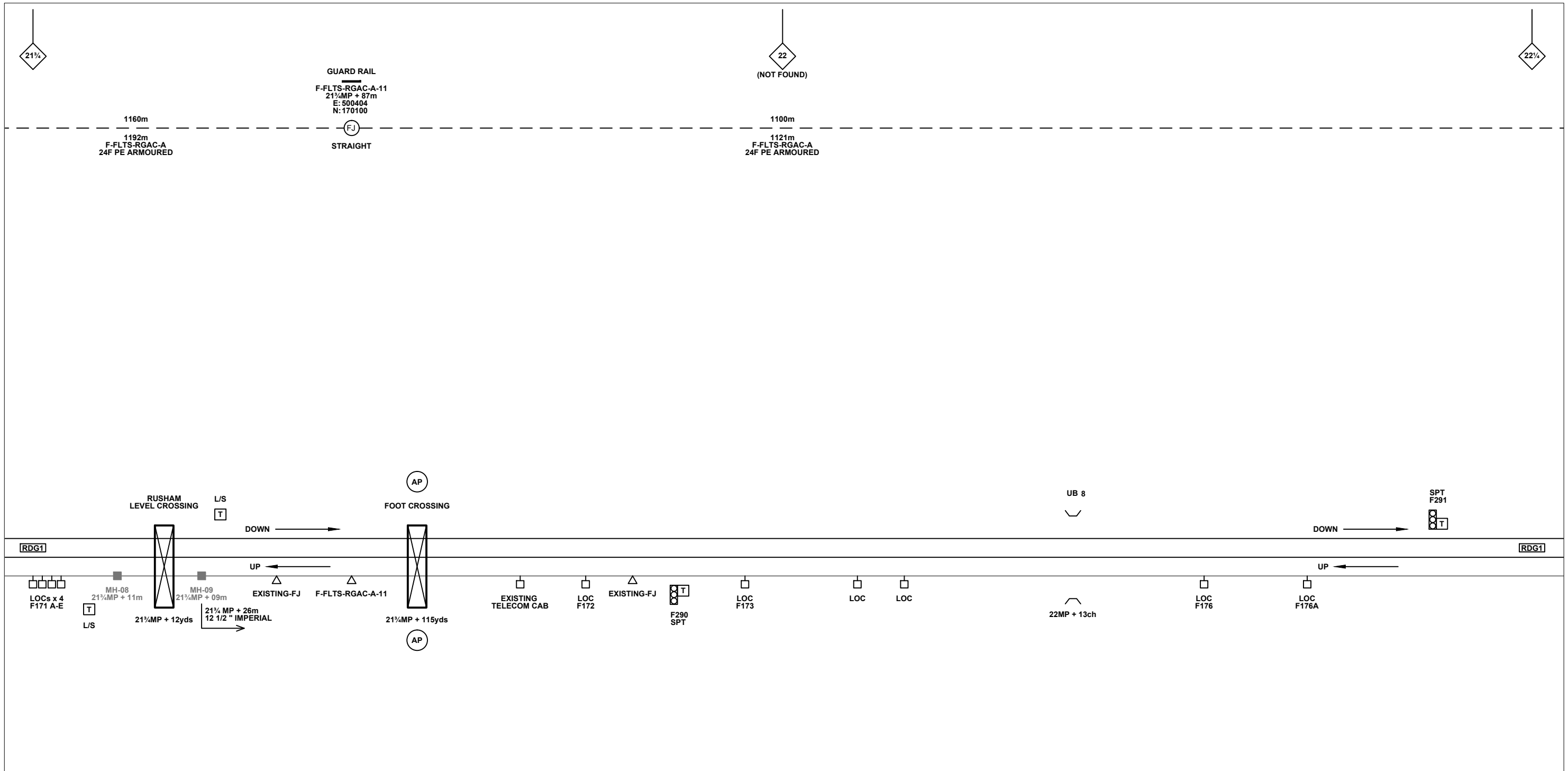
FTN/GSM-R Project
Tournament House
Paddington
London
W2 1HA

Alternative Reference: See Layout Tab 841 x 297 Sheet 1

Drawing Number: NTPO\SLD\2391\2398\001

Sheet: 2 of 6

Revision: C



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	Copper Joint Routeworks	Underbridge	Vehicle Access Point	Mile Post	Gantry	HV — HV — HV Cable
KEY	Screening Conductor Joint with/without Earth	Manhole	Mid Length Sheath Gap Fibre	FTN Access Node	Cabinet Routeworks	Tunnel	Pedestrian Access Point	Platform	Water	Mast
Proposed Fibre & Civils Elements are shown in RED	Existing Fibre Cable	Manhole	Sheath Gap Copper	FTN Access Node with GSM-R Colocated	Fibre Joint Routeworks	Earth Farm	Buffer Stop	Telephone	Cable Pull	Copper Blue Fibre Red Screen Green
Proposed Copper Elements are shown in BLUE	Existing Copper Cable	Manhole	Manhole	Manhole	Manhole	Manhole	Manhole	Manhole	Manhole	Manhole
Proposed Screening Elements are shown in MAGENTA	Existing Screen Cable	Manhole	Manhole	Manhole	Manhole	Manhole	Manhole	Manhole	Manhole	Manhole
All Recoveries are shown in GREEN	Manhole	Manhole	Manhole	Manhole	Manhole	Manhole	Manhole	Manhole	Manhole	Manhole

Notes

C	13/08/12	As Built	JO	JB	PH
B	01/02/11	Redrafted from NTPOSLD21262391001DA & NTPOSLD23912398001A for Stage 2 Design	DA	JW	CT
A	20/06/08	Amended Issue		AEL	
DA	09/06/08	1st Issue		AEL	
Rev	Date	Description of Revisions	Drawn	Chkd	Appr

Contractor(s)

Unit 4 Apex Park, Wainwright Road, Worcester, Worcestershire, WR4 9FN. Tel: 01905 756000

Status: **As Built**

Scale(s): NTS

ELR & Mileage: RDG1

Designed	Sign.	Date
Drawn	Sign. <i>D. Andres</i>	Date 01/02/2011
Checked	Sign. <i>[Signature]</i>	Date 01/02/2011
Approved	Sign. <i>[Signature]</i>	Date 01/02/2011
Project: FTN/GSM-R Project Stage 2 As Built		
Drawing Title: Egham (2391) to Virginia Water Station (2398)		

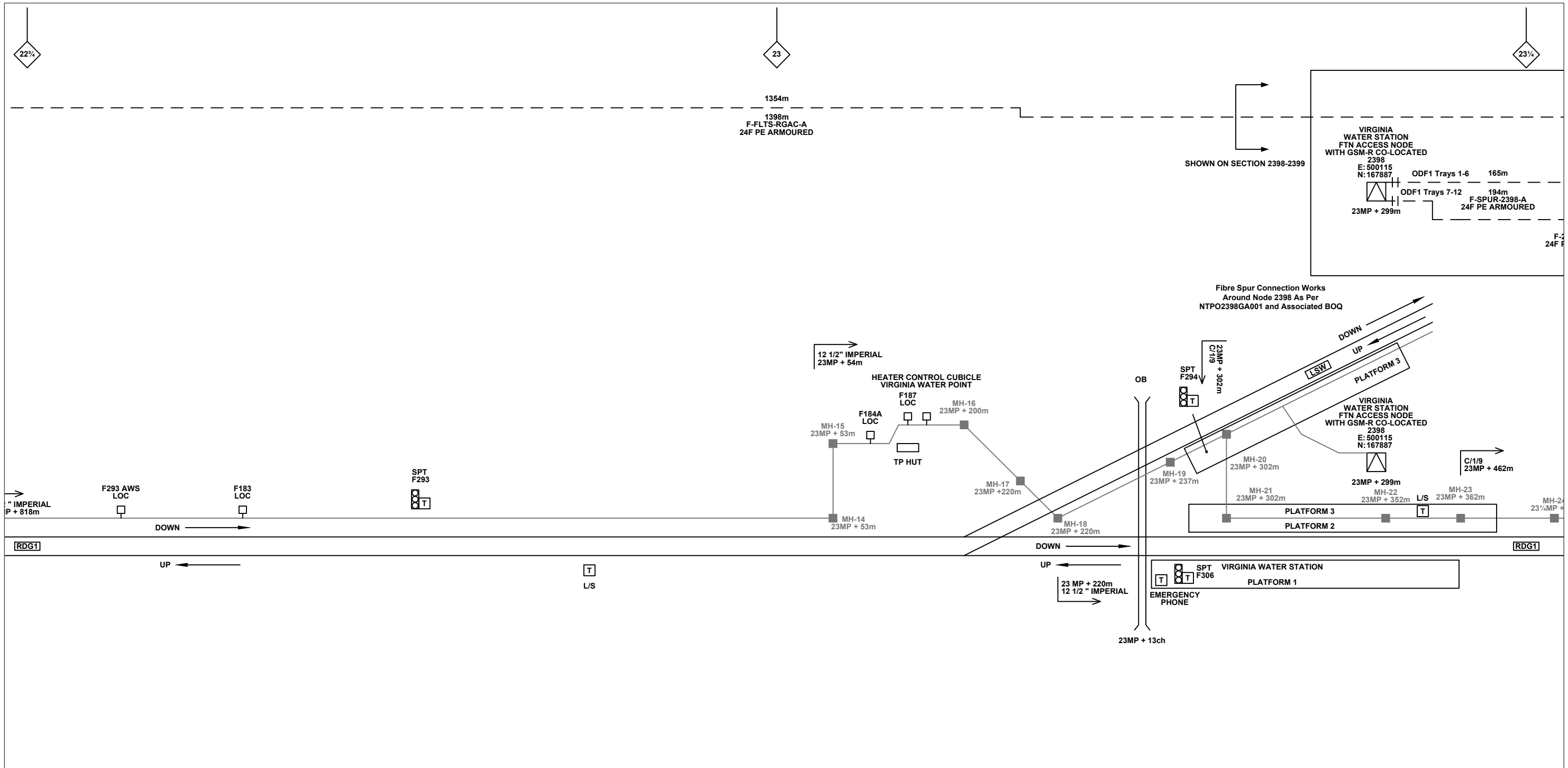
FTN/GSM-R Project
Tournament House
Paddington
London
W2 1HA

Alternative Reference: See Layout Tab 841 x 297 Sheet 2

Drawing Number: NTPO\SLD\2391\2398\001

Sheet: 3 of 6

Revision: C



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	Copper Joint Routeworks	Manhole	Vehicle Access Point	Mile Post	HV — HV — HV Cable	LV — LV — LV Cable
KEY	Screening Conductor Joint with/without Earth	Status - as per Key Below	Manhole	FTN Access Node	Cabinet Routeworks	Mid Length Sheath Gap Fibre	Pedestrian Access Point	Platform	SEW — SEW — Sewer	TEL — TEL — Telecoms
Proposed Fibre & Civils Elements are shown in RED		Existing Fibre Cable	Sheath Gap Copper	FTN Access Node with GSM-R Colocated	Fibre Joint Routeworks	Tunnel	Earth Farm	Buffer Stop	W — W — Water	Mast
Proposed Copper Elements are shown in BLUE		Existing Copper Cable								
Proposed Screening Elements are shown in MAGENTA		Existing Screen Cable								
All Recoveries are shown in GREEN										

Notes

C	13/08/12	As Built	JO	JB	PH
B	01/02/11	Redrafted from NTPOSLD21262391001DA & NTPOSLD23912398001A for Stage 2 Design	DA	JW	CT
A	20/06/08	Amended Issue		AEL	
DA	09/06/08	1st Issue		AEL	
Rev	Date	Description of Revisions	Drawn	Chkd	Appr

Contractor(s)

Unit 4 Apex Park, Wainwright Road, Worcester, Worcestershire, WR4 9FN. Tel: 01905 756000

Status: **As Built**

Scale(s): NTS

ELR & Mileage: RDG1

Designed	Sign.	Date
Drawn	Sign. <i>D. Andres</i>	Date 01/02/2011
Checked	Sign. <i>[Signature]</i>	Date 01/02/2011
Approved	Sign. <i>[Signature]</i>	Date 01/02/2011
Project		
FTN/GSM-R Project Stage 2 As Built		
Drawing Title		
Egham (2391) to Virginia Water Station (2398)		

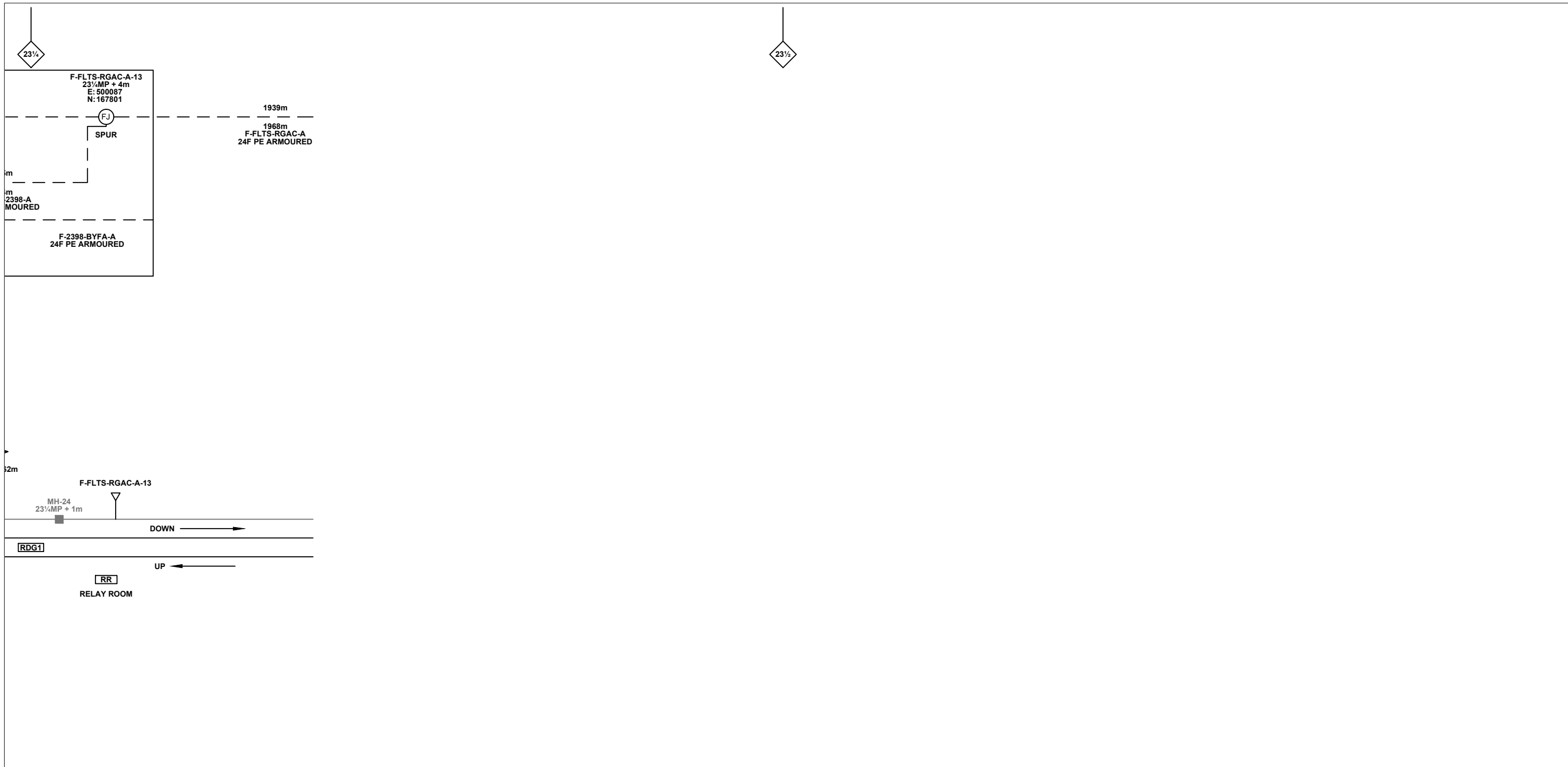
FTN/GSM-R Project
Tournament House
Paddington
London
W2 1HA

Alternative Reference: See Layout Tab 841 x 297 Sheet 3

Drawing Number: NTPO\SLD\2391\2398\001

Sheet: 5 of 6

Revision: C



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	MLN1 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	Copper Joint Routeworks	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	Cabinet Routeworks	Sheath Gap Copper	Tunnel	PAP Pedestrian Access Point	Platform	W — W — Water	Mast
Proposed Fibre & Civils Elements are shown in RED		All Existing Elements are shown in BLACK	Existing Fibre Cable	FTN Access Node with GSM-R Colocated	Fibre Joint Routeworks		Earth Farm	Buffer Stop	Telephone	Cable Pull	
Proposed Copper Elements are shown in BLUE		Existing Copper Cable	Existing Copper Cable								
Proposed Screening Elements are shown in MAGENTA		Existing Screen Cable	Existing Screen Cable								
All Recoveries are shown in GREEN											

Notes

Rev	Date	Description of Revisions	Drawn	Chkd	Appr
C	13/08/12	As Built	JO	JB	PH
B	01/02/11	Redrafted from NTPOSLD21262391001DA & NTPOSLD23912398001A for Stage 2 Design	DA	JW	CT
A	20/06/08	Amended Issue		AEL	
DA	09/06/08	1st Issue		AEL	

Contractor(s)

Unit 4 Apex Park, Wainwright Road, Worcester, Worcestershire, WR4 9FN. Tel: 01905 756000

Status: **As Built**

Scale(s): NTS

ELR & Mileage: RDG1

Designed	Sign.	Date
Drawn	Sign. <i>D. Andres</i>	Date 01/02/2011
Checked	Sign. <i>[Signature]</i>	Date 01/02/2011
Approved	Sign. <i>[Signature]</i>	Date 01/02/2011
Project: FTN/GSM-R Project Stage 2 As Built		
Drawing Title: Egham (2391) to Virginia Water Station (2398)		

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

Alternative Reference: See Layout Tab 841 x 297 Sheet 3

Drawing Number: NTPO\SLD\2391\2398\001

Sheet: 6 of 6

Revision: C