

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	Mid Length Sheath Gap Fibre	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	Manhole details: Cross-To be used Filled-In use Clear-Empty	Manhole	FTN Access Node	Cabinet Routeworks	Sheath Gap Copper	Tunnel	Pedestrian Access Point	Platform
	1988m Cable	2034m Cable	Manhole	FTN Access Node with GSM-R Colocated	Fibre Joint Routeworks	Earth Form	Buffer Stop	Telephone	Cable Pull

Notes

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

Contractor(s)

Status
As-Built

Scale(s)
ELR & Mileage: RDG1

Designed	Sign.	Date
Drawn	Sign.	Date
Checked	Sign.	Date
Approved	Sign.	Date
Project	FTN/GSM-R Project	
Project	Staines Station (2126) to Bedfont Lakes (6347)	

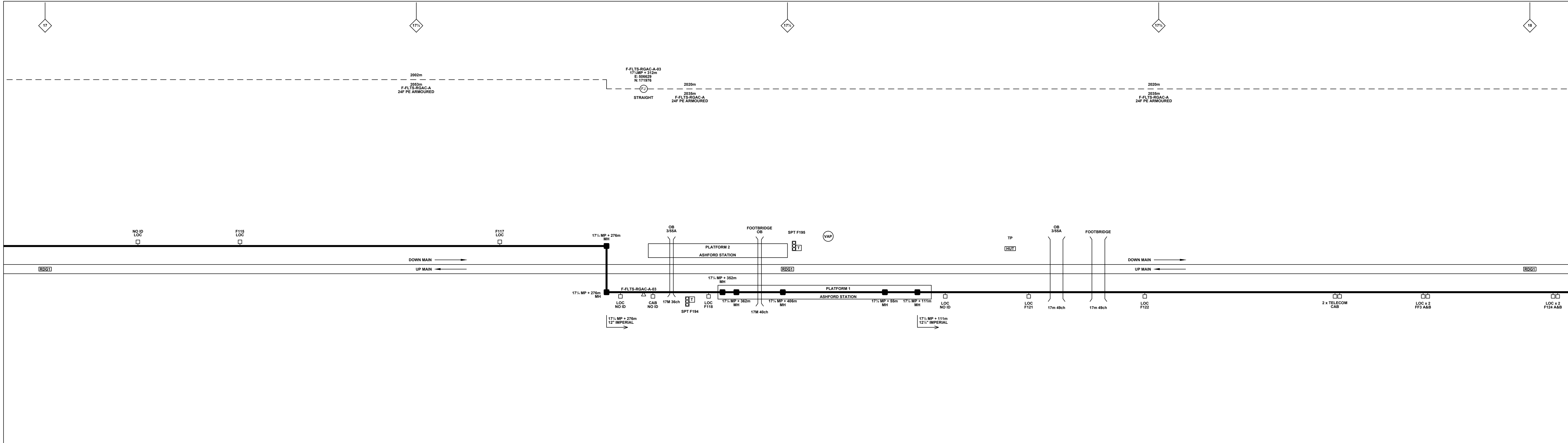
Network Rail

FTN/GSM-R Project
Tournament House
Passington
London
W12 1HA

Alternative Reference: See Layout Tab A3 Sheets 1 and 2

Drawing Number: NTPO\SLD\2126\6347\001

Sheet 1 of 4
Revision A



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		HV Cable		LV Cable		Sewer		Telecoms		Water		Copper Blue		Red Screen		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		Underbridge		Vehicle Access Point		Mile Post		Gantry		Sewer		LV Cable		Sewer		Telecoms		Water		Copper Blue		Red Screen		Mast				
	KEY: Proposed Fibre & Civils Elements are shown in RED		KEY: Proposed Copper Elements are shown in BLUE		KEY: Proposed Screening Elements are shown in MAGENTA		KEY: All Existing Elements are shown in BLACK		KEY: Existing Fibre Cable		KEY: Existing Copper Cable		KEY: Existing Screen Cable		KEY: Manhole details: Cross-To be used		KEY: Overbridge		KEY: Signal		KEY: Engineer's Line Reference		KEY: Crossing		KEY: Gas Line		KEY: HV Cable		KEY: LV Cable		KEY: Sewer		KEY: Telecoms		KEY: Water		KEY: Copper Blue		KEY: Red Screen		KEY: Mast

Notes

ndc consultants
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Contractor(s)

Status
As-Built

Scale(s)
ELR & Mileage
RDG1

Designed	Sign.	Date
Drawn	Sign.	Date
Checked	Sign.	Date
Approved	Sign.	Date
Project	FTN/GSM-R Project Stage 2 As-Built	
Drawing Title	Staines Station (2126) to Bedford Lakes (6347)	

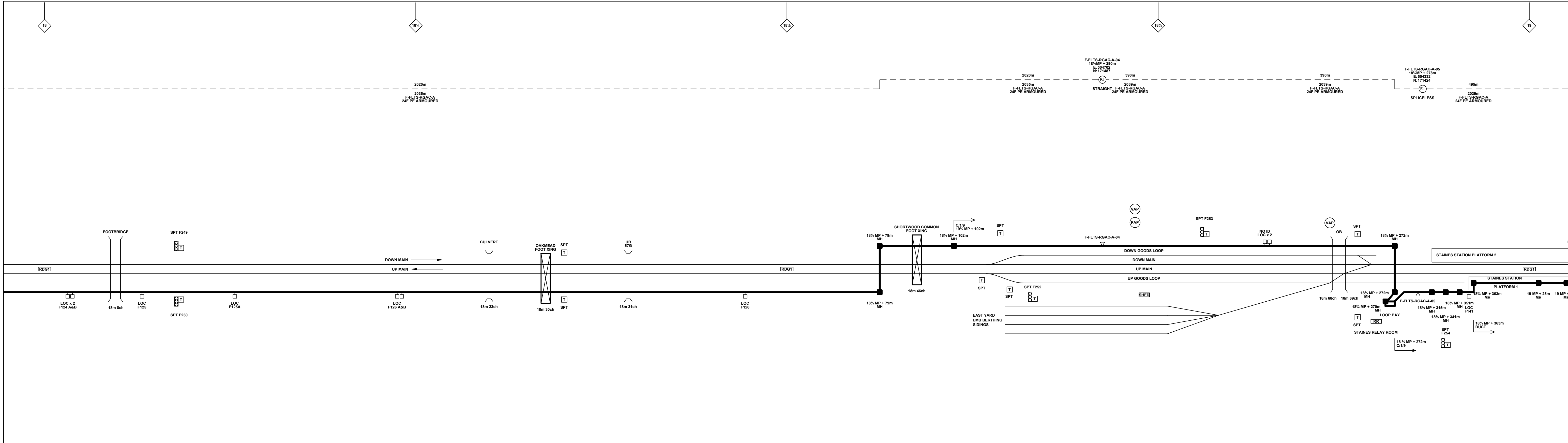
Network Rail

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

Alternative Reference
See Layout Tab A3 Sheets 3 and 4

Sheet
2 of 4

Revision
A



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		Electrical Control Room		Manhole		Core Node with GSM-R Colocated		Copper Joint Routeworks		Tunnel		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		Cable - Type Identified by FTN Code Status - as per Key Below		Mid Length Sheath Gap Fibre		FTN Access Node		Cabinet Routeworks		Manhole		Platform		Pedestrian Access Point		Telephone		Crossing
	Existing Fibre Cable		Existing Copper Cable		Existing Screen Cable		Sheath Gap Copper		FTN Access Node with GSM-R Colocated		Fibre Joint Routeworks		Earth Form		Buffer Stop		Cable Pull		Mast		Gas Line
	Gas Line		HV Cable		LV Cable		Sewer		Telecoms		Water										Gas Line

Notes

Rev	Date	Description of Revisions	Drawn	Chkd	Appr
A	07/09/12	Stage 2 As-Built (redrafted from NTPOSLD2126FLTS001AB1.dwg and NTPOSLD21262391001AB1.dwg)	OW	RP	CT

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

As-Built
ELR & Mileage
RDG1

Contractor(s)

Status

Designed	Sign.	Date
Drawn	Sign.	Date
Checked	Sign.	Date
Approved	Sign.	Date

Project: FTN/GSM-R Project
Drawing Title: Staines Station (2126) to Bedford Lakes (6347)

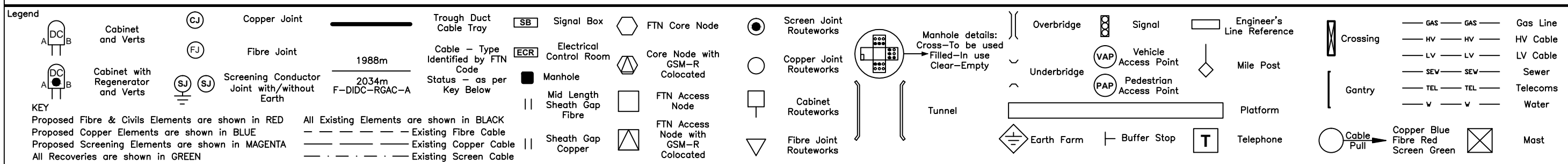
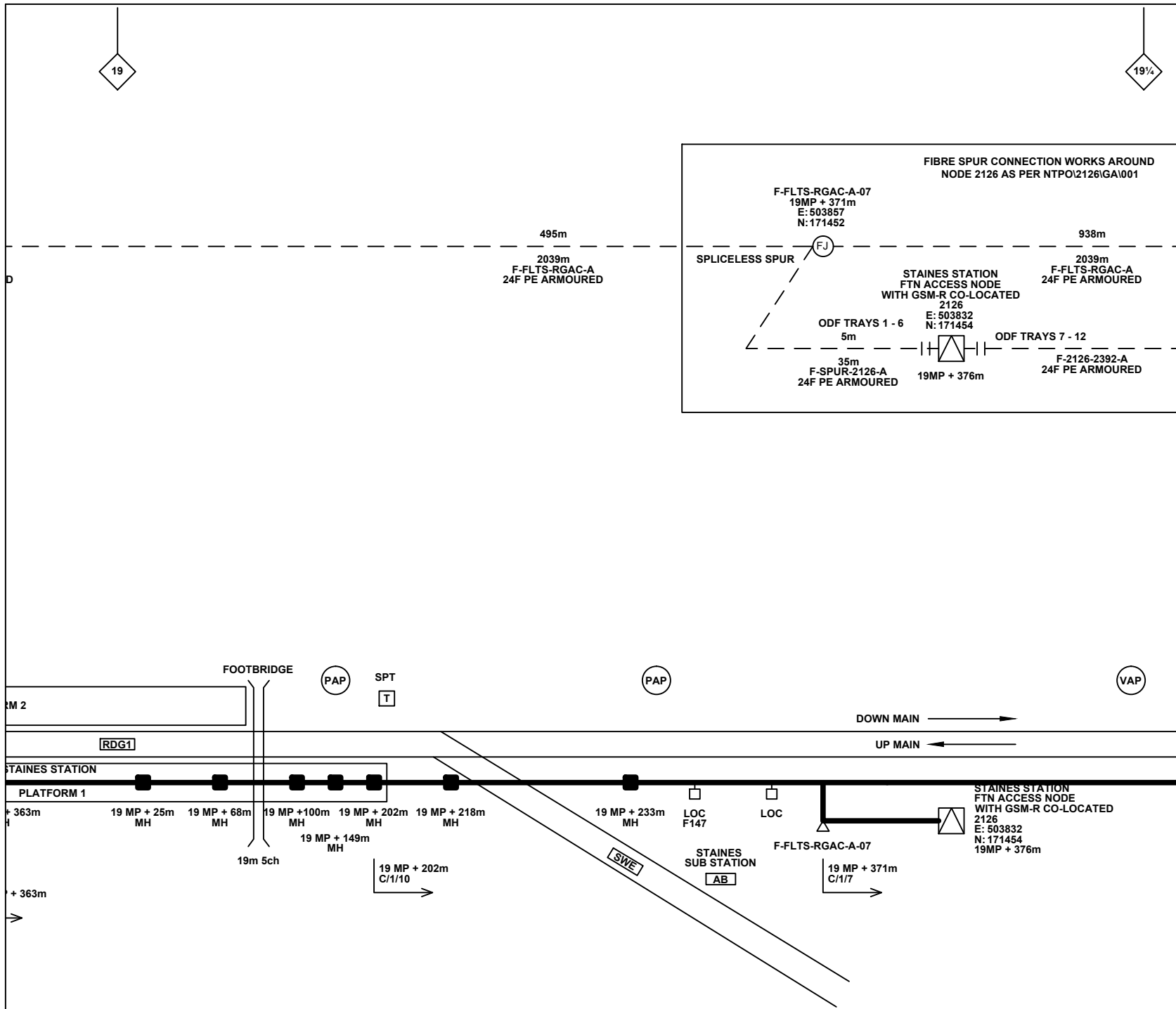
Network Rail

FTN/GSM-R Project
Tournament House
Passington
London
W12 1HA

Alternative Reference: See Layout Tab A3 Sheets 5 and 6

Drawing Number: NTPOSLD\2126\6347\001

Sheet: 3 of 4
Revision: A



Notes

Rev	Date	Description of Revisions	Drawn	Chkd	Appr
A	07/09/12	Stage 2 As-Built (redrafted from NTPOSLD2126FLTS001AB1.dwg and NTPOSLD21262391001AB1.dwg)	OW	RP	CT

Contractor(s)

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

Status: **As-Built**

Scale(s): ELR & Mileage: RDG1

Designed	Drawn	Checked	Approved	Project
Oliver Wright	Robert Pugh	Robert Pugh	Chris Tappenden	FTN/GSM-R Project Stage 2 As-Built

Sign.	Date
[Signature]	07/09/2012
[Signature]	07/09/2012
[Signature]	07/09/2012

Drawing Title: **Staines Station (2126) to Bedford Lakes (6347)**

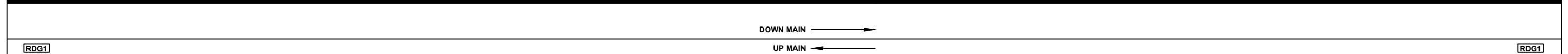
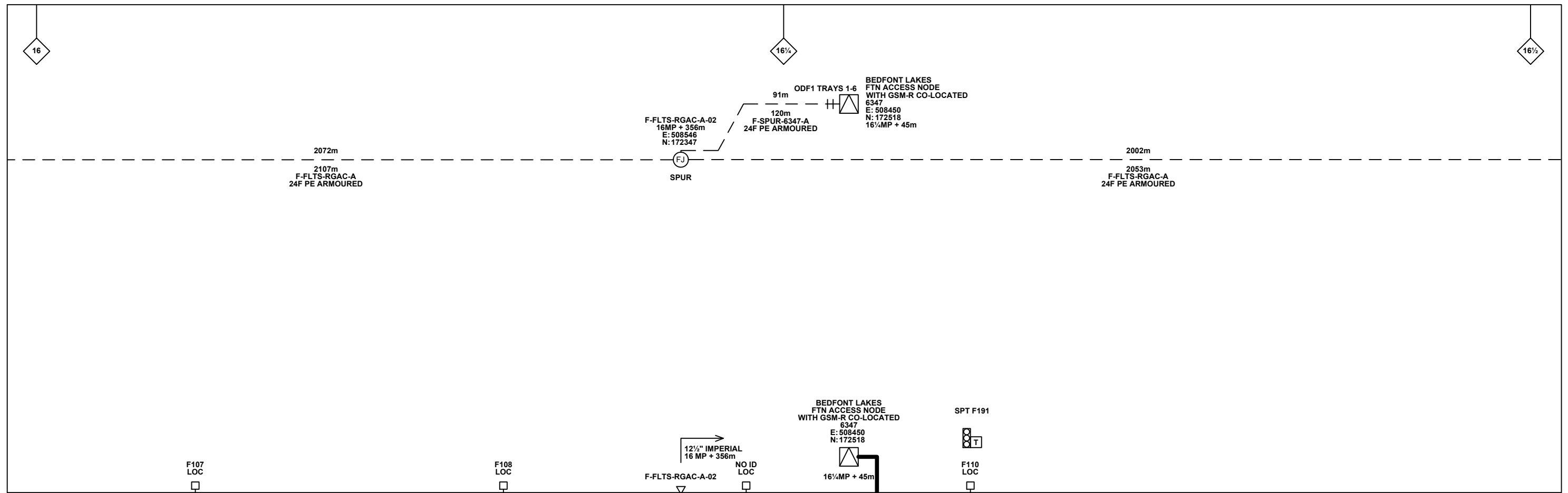
Network Rail

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

Alternative Reference: See Layout Tab A3 Sheet 7

Drawing Number: NTPQ\SLD\2126\6347\001

Sheet: 4 of 4
Revision: A



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 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	Status - as per Key Below	Mid Length Sheath Gap Fibre	FTN Access Node	Cabinet Routeworks	Manhole details: Cross-To be used, Filled-In use, Clear-Empty	Pedestrian Access Point	Platform	Sewer	Telecoms
All Existing Elements are shown in BLACK	Existing Fibre Cable	Existing Copper Cable	Sheath Gap Copper	FTN Access Node with GSM-R Colocated	Fibre Joint Routeworks	Tunnel	Earth Farm	Buffer Stop	Water	Mast

Notes

Rev	Date	Description of Revisions	Drawn	Chkd	Appr
A	07/09/12	Stage 2 As-Built (redrafted from NTPOS\LD2126\FLTS001AB1.dwg and NTPOS\LD21262391001AB1.dwg)	OW	RP	CT

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	Oliver Wright	Sign.		Date	07/09/2012
Checked	Robert Pugh	Sign.		Date	07/09/2012
Approved	Chris Tappenden	Sign.		Date	07/09/2012
Project	FTN/GSM-R Project Stage 2 As-Built				
Drawing Title	Staines Station (2126) to Bedford Lakes (6347)				

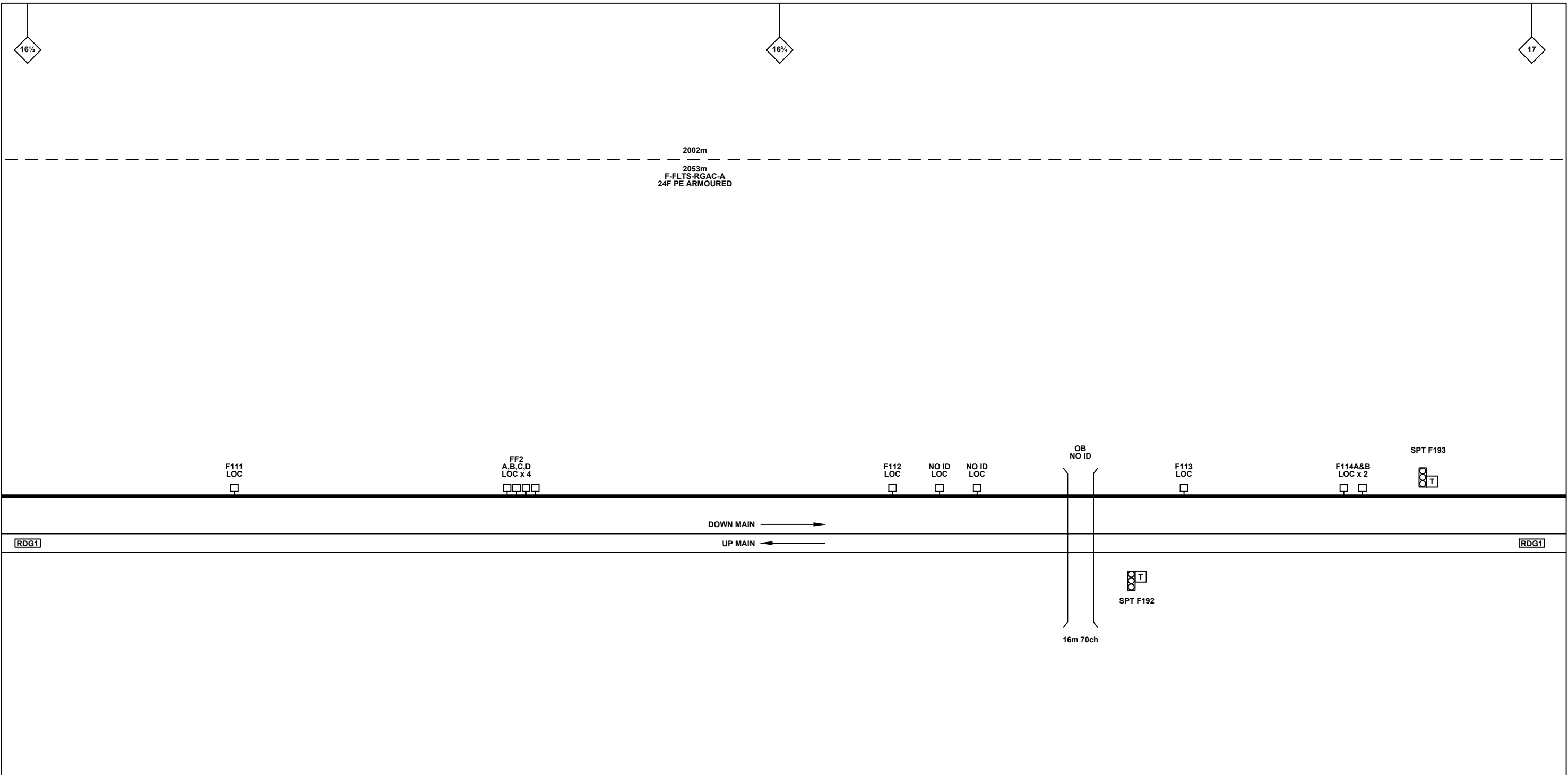
FTN/GSM-R Project
Tournament House
Paddington
London
W2 1HA

Alternative Reference: See Layout Tab 841 x 297 Sheet 1

Drawing Number: NTPO\SLD\2126\6347\001

Sheet: 1 of 7

Revision: A



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 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	Status - as per Key Below	Mid Length Sheath Gap Fibre	FTN Access Node	Cabinet Routeworks	Manhole details: Cross-To be used, Filled-In use, Clear-Empty	Pedestrian Access Point	Platform	Sewer	Telecoms
	Existing Fibre Cable	Existing Copper Cable	Sheath Gap Copper	FTN Access Node with GSM-R Colocated	Fibre Joint Routeworks	Tunnel	Earth Farm	Buffer Stop	Water	Cable Pull
	Existing Screen Cable							Mast		

Notes

Rev	Date	Description of Revisions	Drawn	Chkd	Appr
A	07/09/12	Stage 2 As-Built (redrafted from NTPOSLD2126FLTS001AB1.dwg and NTPOSLD21262391001AB1.dwg)	OW	RP	CT

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	Oliver Wright	Sign.		Date	07/09/2012
Checked	Robert Pugh	Sign.		Date	07/09/2012
Approved	Chris Tappenden	Sign.		Date	07/09/2012
Project	FTN/GSM-R Project Stage 2 As-Built				
Drawing Title	Staines Station (2126) to Bedfont Lakes (6347)				

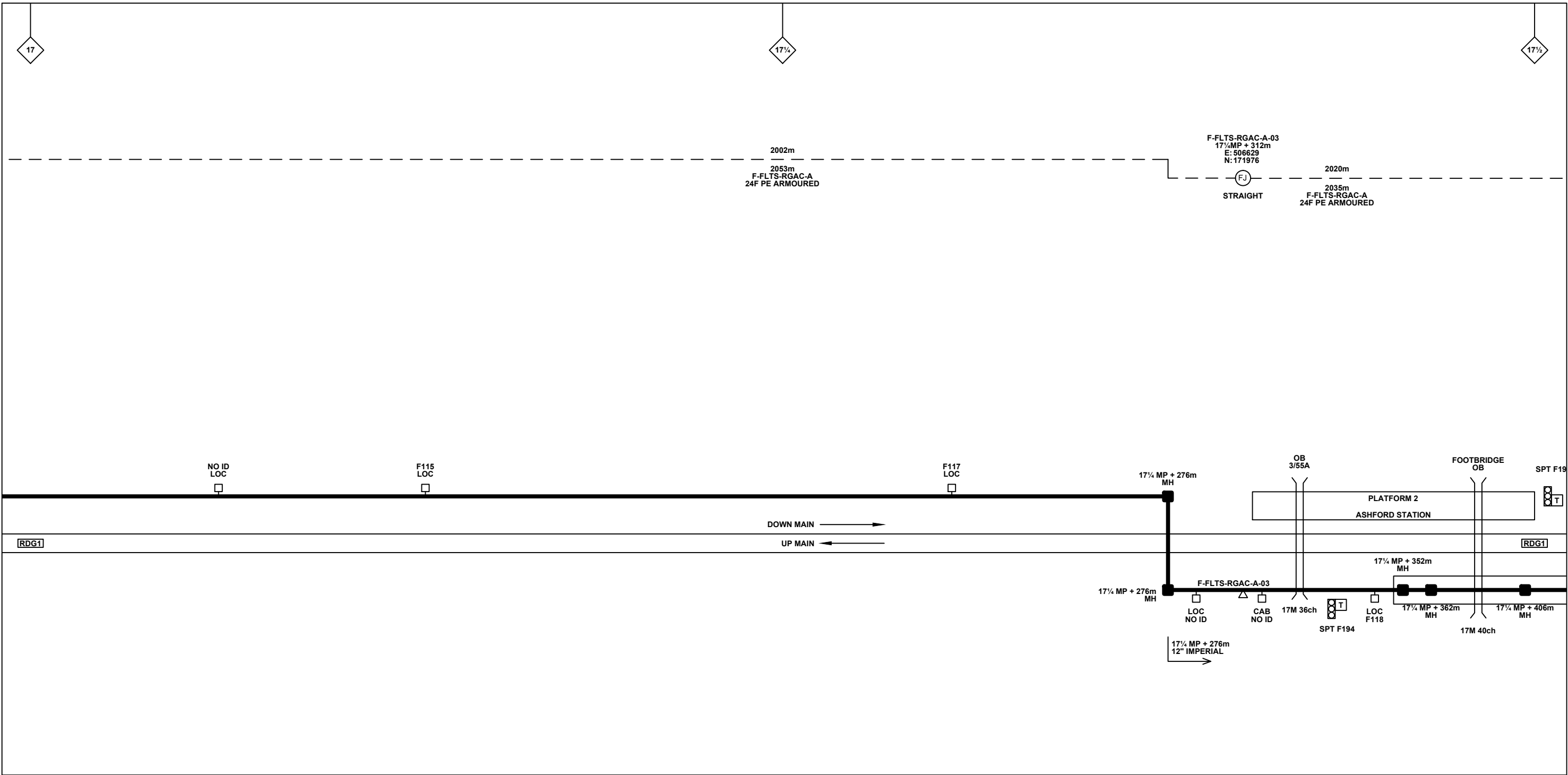
FTN/GSM-R Project
Tournament House
Paddington
London
W2 1HA

Alternative Reference: See Layout Tab 841 x 297 Sheet 1

Drawing Number: NTPO\SLD\2126\6347\001

Sheet: 2 of 7

Revision: A



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	Underbridge	Vehicle Access Point	Mile Post	HV Cable
Proposed Fibre & Civils Elements are shown in RED	All Existing Elements are shown in BLACK	Manhole	Mid Length Sheath Gap Fibre	FTN Access Node	Cabinet Routeworks	Tunnel	Pedestrian Access Point	Platform	LV Cable
Proposed Copper Elements are shown in BLUE	Existing Fibre Cable	Sheath Gap Copper	FTN Access Node with GSM-R Colocated	Fibre Joint Routeworks	Earth Farm	Buffer Stop	Telephone	Sewer	Water
Proposed Screening Elements are shown in MAGENTA	Existing Copper Cable							Crossing	Telecoms
All Recoveries are shown in GREEN	Existing Screen Cable							Gantry	Mast

Notes

Rev	Date	Description of Revisions	Drawn	Chkd	Appr
A	07/09/12	Stage 2 As-Built (redrafted from NTPOSLD2126FLTS001AB1.dwg and NTPOSLD21262391001AB1.dwg)	OW	RP	CT

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	Oliver Wright	Sign.		Date	07/09/2012
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Project	FTN/GSM-R Project Stage 2 As-Built				
Drawing Title	Staines Station (2126) to Bedford Lakes (6347)				

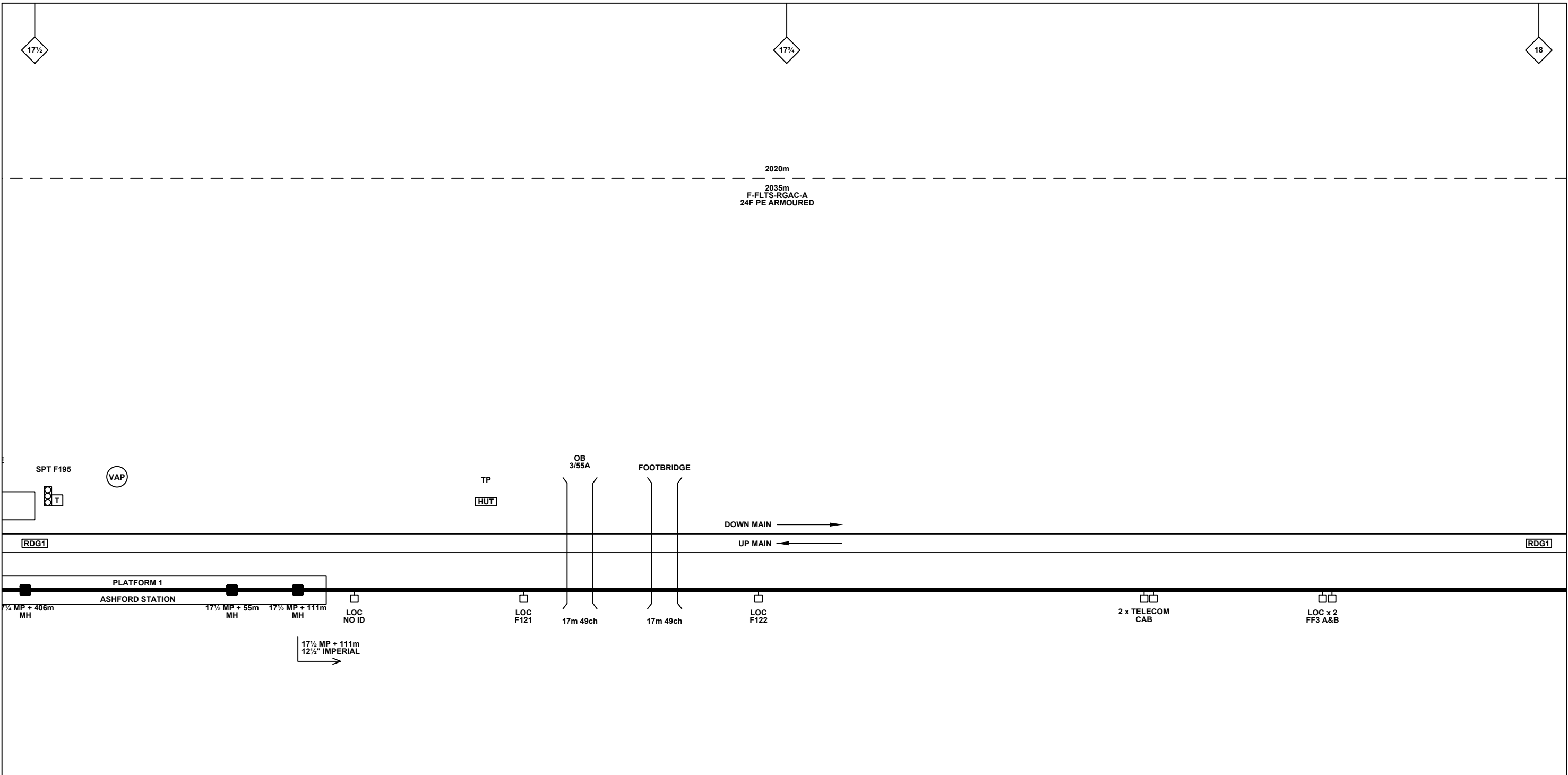
FTN/GSM-R Project
Tournament House
Paddington
London
W2 1HA

Alternative Reference: See Layout Tab 841 x 297 Sheet 2

Drawing Number: NTPO\SLD\2126\6347\001

Sheet: 3 of 7

Revision: A



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	Sewer
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	Status - as per Key Below	Mid Length Sheath Gap Fibre	FTN Access Node	Cabinet Routeworks	Manhole details: Cross-To be used, Filled-In use, Clear-Empty	Pedestrian Access Point	Platform	LV Cable	Telecoms
	Existing Fibre Cable	Existing Copper Cable	Sheath Gap Copper	FTN Access Node with GSM-R Colocated	Fibre Joint Routeworks	Tunnel	Earth Farm	Gantry	Water	Mast

Notes

Rev	Date	Description of Revisions	Drawn	Chkd	Appr
A	07/09/12	Stage 2 As-Built (redrafted from NTPOSLD2126FLTS001AB1.dwg and NTPOSLD21262391001AB1.dwg)	OW	RP	CT

Contractor(s)

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

Status: **As-Built**

Scale(s): NTS (NTS), ELR & Mileage (RDG1)

Designed		Sign.		Date	
Drawn	Oliver Wright	Sign.		Date	07/09/2012
Checked	Robert Pugh	Sign.		Date	07/09/2012
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Project	FTN/GSM-R Project Stage 2 As-Built				
Drawing Title	Staines Station (2126) to Bedfont Lakes (6347)				

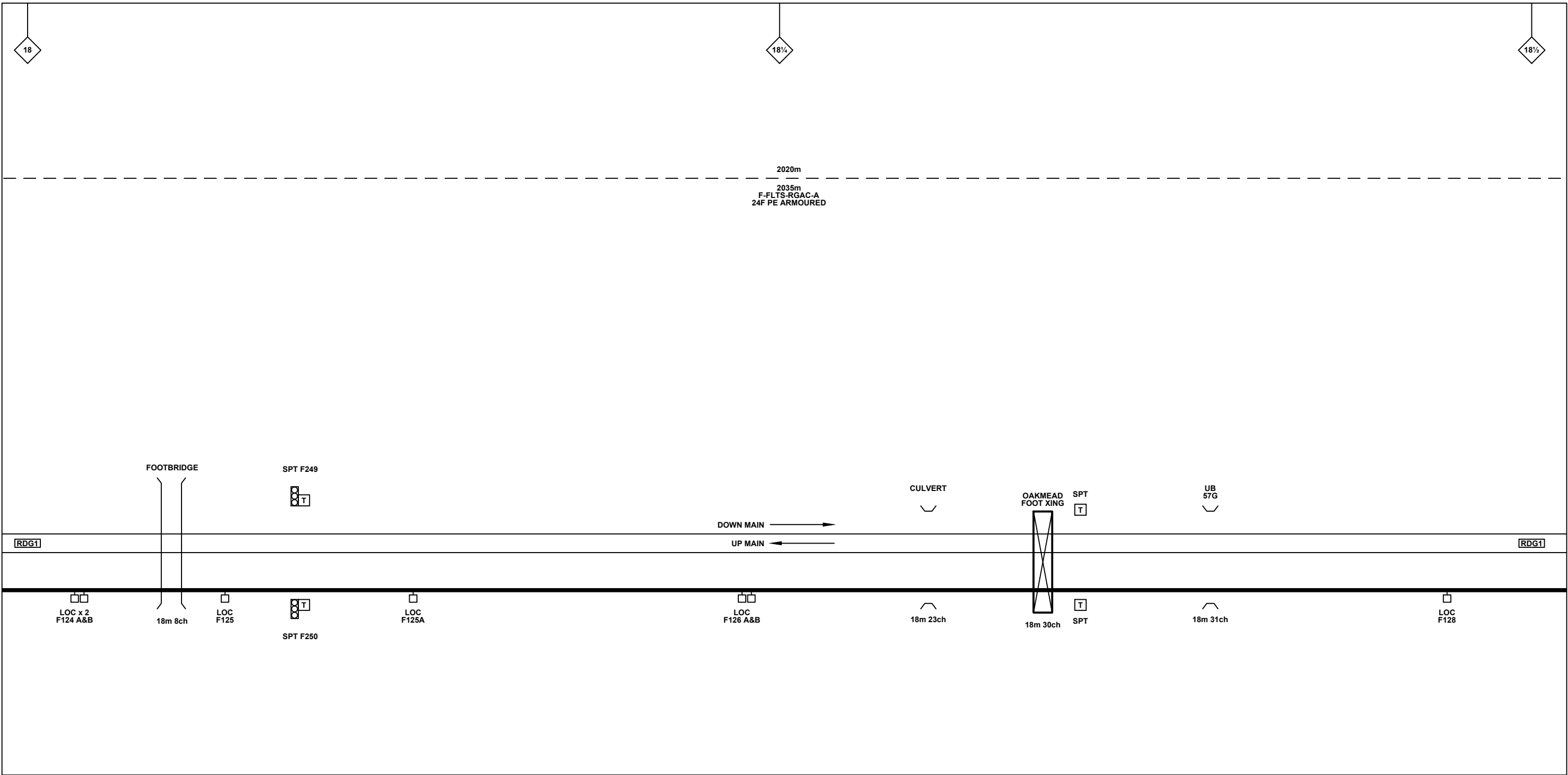
FTN/GSM-R Project
Tournament House
Paddington
London
W2 1HA

Alternative Reference: See Layout Tab 841 x 297 Sheet 2

Drawing Number: NTPO\SLD\2126\6347\001

Sheet: 4 of 7

Revision: A



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
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	Existing Fibre Cable	Existing Copper Cable	Sheath Gap Copper	FTN Access Node with GSM-R Colocated	Fibre Joint Routeworks	Tunnel	Earth Farm	Buffer Stop	Water	Mast

Notes

Rev	Date	Description of Revisions	Drawn	Chkd	Appr
A	07/09/12	Stage 2 As-Built (redrafted from NTPOSLD2126FLTS001AB1.dwg and NTPOSLD21262391001AB1.dwg)	OW	RP	CT

Contractor(s)

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

Status: **As-Built**

Scale(s): NTS

ELR & Mileage: RDG1

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Drawing Title	Staines Station (2126) to Bedfont Lakes (6347)				

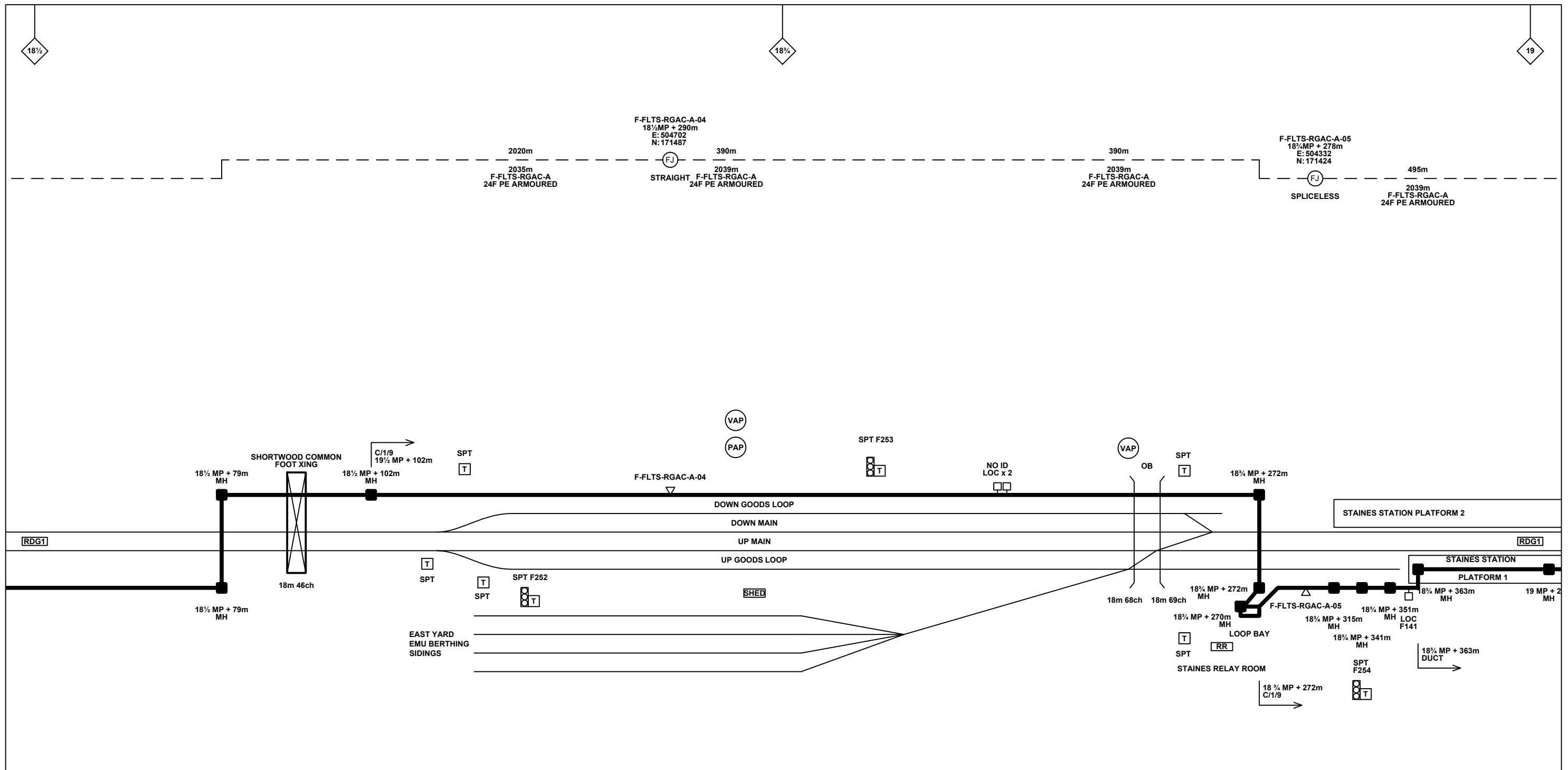
FTN/GSM-R Project
Tournament House
Paddington
London
W2 1HA

Alternative Reference: See Layout Tab 841 x 297 Sheet 3

Drawing Number: NTPO\SLD\2126\6347\001

Sheet: 5 of 7

Revision: A



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	Underbridge	Vehicle Access Point	Mile Post	HV Cable
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	Manhole	Mid Length Sheath Gap Fibre	FTN Access Node	Cabinet Routeworks	Manhole details: Cross-To be used, Filled-In use, Clear-Empty	Pedestrian Access Point	Platform	LV Cable
All Existing Elements are shown in BLACK	Existing Fibre Cable	Sheath Gap Copper	FTN Access Node with GSM-R Colocated	Fibre Joint Routeworks	Tunnel	Earth Farm	Buffer Stop	Telephone	Sewer
1988m	Existing Copper Cable								Water
2034m	Existing Screen Cable								Copper Blue Fibre Red Screen Green
F-DIDC-RGAC-A									Mast

Notes

Rev	Date	Description of Revisions	Drawn	Chkd	Appr
A	07/09/12	Stage 2 As-Built (redrafted from NTPOSLD2126FLTS001AB1.dwg and NTPOSLD21262391001AB1.dwg)	OW	RP	CT

Contractor(s)

ndcconsultants
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: Oliver Wright	Sign.	Date: 07/09/2012
Checked: Robert Pugh	Sign.	Date: 07/09/2012
Approved: Chris Tappenden	Sign.	Date: 07/09/2012
Project: FTN/GSM-R Project Stage 2 As-Built		
Drawing Title: Staines Station (2126) to Bedford Lakes (6347)		

Network Rail

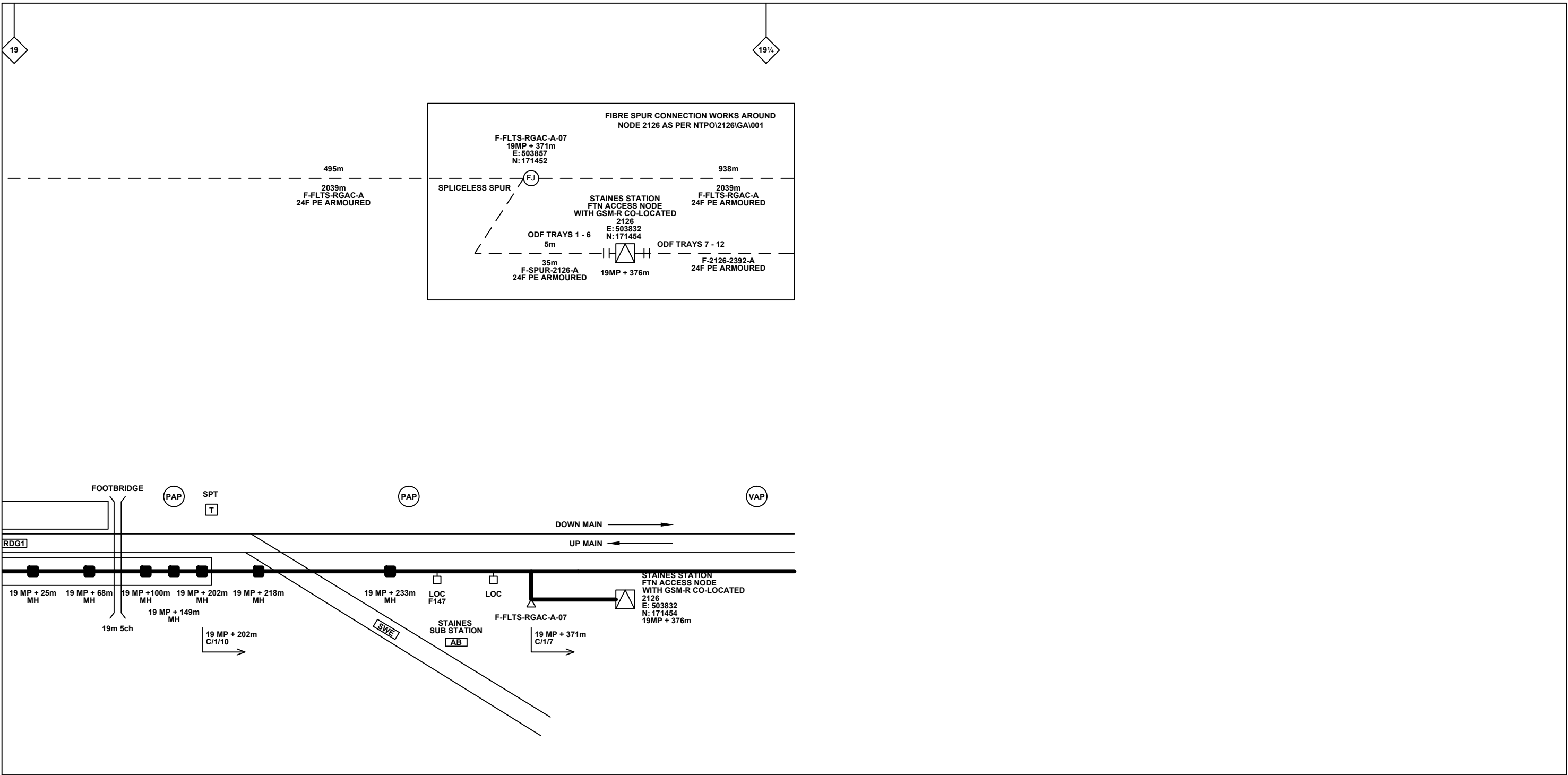
FTN/GSM-R Project
Tournament House
Paddington
London
W2 1HA

Alternative Reference: See Layout Tab 841 x 297 Sheet 3

Drawing Number: NTPO\SLD\2126\6347\001

Sheet: 6 of 7

Revision: A



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	VAP Access Point	Mile Post	HV — HV — HV Cable	Manhole
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	Status - as per Key Below	Mid Length Sheath Gap Fibre	FTN Access Node	Cabinet Routeworks	Manhole details: Cross-To be used, Filled-In use, Clear-Empty	PAP Access Point	Platform	LV — LV — LV Cable	Sheath Gap Copper
		Existing Fibre Cable	FTN Access Node with GSM-R Colocated	Fibre Joint Routeworks	Tunnel	Earth Farm	Buffer Stop	Telephone	SEW — SEW — Sewer	Existing Copper Cable
		Existing Screen Cable							v — v — Water	Cable Pull
									Mast	

Notes		Contractor(s)		Designed		Sign.		Date			
		 Unit 4 Apex Park, Wainwright Road, Worcester, Worcestershire, WR4 9FN. Tel: 01905 756000		Drawn		Sign.		Date			
				Checked		Sign.		Date			
				Approved		Sign.		Date			
Status				As-Built				Project			
Scale(s)				ELR & Mileage				FTN/GSM-R Project Stage 2 As-Built			
Rev				Drawing Title				Staines Station (2126) to Bedfont Lakes (6347)			
A 07/09/12 Stage 2 As-Built (redrafted from NTPOSLD2126FLTS001AB1.dwg and NTPOSLD21262391001AB1.dwg)				NTS				See Layout Tab 841 x 297 Sheet 4 NTPO\SLD\2126\6347\001			
Drawn				CT				Alternative Reference			
OW				RP				Sheet			
Appr				RDG1				7 of 7			
								Revision			
								A			