

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
	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		Overbridge
	Proposed Fibre & Civils Elements are shown in RED		Screening Conductor Joint with/without Earth		Manhole		Core Node with GSM-R Colocated		FTN Access Node		Cabinet Routeworks		Underbridge
	Proposed Copper Elements are shown in BLUE		Mid Length Sheath Gap Fibre		FTN Access Node Colocated		FTN Access Node with GSM-R Colocated		Screen Joint Routeworks		Signal		Gantry
	All Recoveries are shown in GREEN		Sheath Gap Copper		Tunnel		Mile Post		Cable Pull		Platform		Crossing

Notes

B	09-01-2013	Amended by NWR to incorporate final Stage 2 detail	PT	PB	GH
AB2	23/08/11	FJ 10, 14 & 15 Amended, Electronic Signatures Added, AS BUILT	AB	DP	PP
AB1	07/05/10	AS-BUILT	AB	DP	PP
A	26/11/09	Final Issue	MT	AEL	SW
DA	26/09/08	1st Issue	MT	AEL	SW
Rev	Date	Description of Revisions	Drawn	Chkd	Appr

Contractor(s)

As Built

ELR & Mileage
SDP1

Designed	Andy Bone	Sign.	Date	23.08.2011
Drawn	Andy Bone	Sign.	Date	23.08.2011
Checked	Dave Peakman	Sign.	Date	23.08.2011
Approved	Prakash Patel (C.R.E.)	Sign.	Date	23.08.2011

Project

FTN/GSM-R Project Stage 2 As Built

Drawing Title

Bursledon (1132) to Tichfield Park (1133)

Alternative Reference

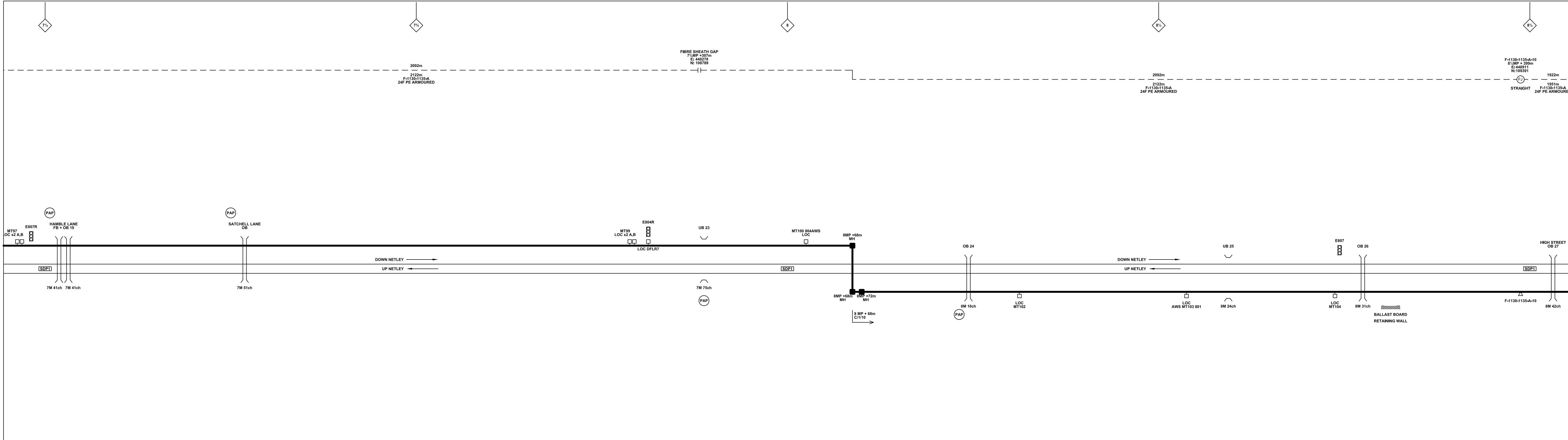
See Layout Tab A3 Sheets 1 and 2

Drawing Number

NTP01SLD\1132\1133\001

Revision

1 of 6
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	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 details: Cross-To be used, Filled-In use, Clear-Empty	Underbridge	Vehicle Access Point	Mile Post	HV Cable
KEY		Manhole	Mid Length Sheath Gap Fibre	FTN Access Node	Cabinet Routeworks	Tunnel	Earth Farm	Pedestrian Access Point	Platform	LV Cable
Proposed Fibre & Civils Elements are shown in RED	All Existing Elements are shown in BLACK	Manhole	Sheath Gap Copper	FTN Access Node with GSM-R Colocated	Fibre Joint Routeworks	Buffer Stop	Telephone	Cable Pull	Mast	Sewer
Proposed Copper Elements are shown in BLUE	Existing Fibre Cable	Manhole								Telecoms
Proposed Screening Elements are shown in MAGENTA	Existing Copper Cable									Water
All Recoveries are shown in GREEN	Existing Screen Cable									

Notes

B	09-01-2013	Amended by NWR to incorporate final Stage 2 detail	PT	PB	GH
AB2	23/08/11	FJ 10, 14 & 15 Amended, Electronic Signatures Added, AS BUILT	AB	DP	PP
AB1	07/05/10	AS-BUILT	AB	DP	PP
A	26/11/09	Final Issue	MT	AEL	SW
DA	26/09/08	1st Issue	MT	AEL	SW
Rev	Date	Description of Revisions	Drawn	Chkd	Appr

Contractor(s)

As Built

ELR & Mileage
SDP1

Designed	Andy Bone	Sign.	Date	23.08.2011
Drawn	Andy Bone	Sign.	Date	23.08.2011
Checked	Dave Peakman	Sign.	Date	23.08.2011
Approved	Prakash Patel (C.R.E.)	Sign.	Date	23.08.2011

Project

FTN/GSM-R Project
Stage 2 As Built

Drawing Title

Bursledon (1132) to
Tichfield Park (1133)

Alternative Reference

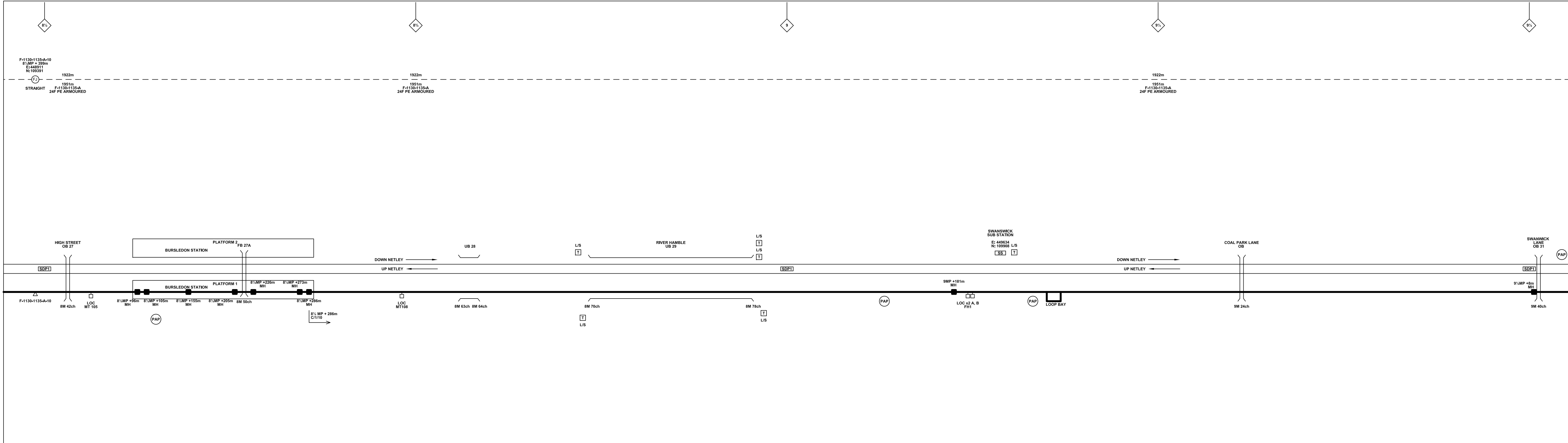
See Layout Tab A3 Sheets 3 and 4

Drawing Number

NTPO\SLD\1132\1133\001

Revision

2 of 6
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	Crossing	Gas Line
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 details: Cross-To be used Filled-In use Clear-Empty	Underbridge	Vehicle Access Point	Mile Post	Gantry	HV Cable
KEY		1988m Cable	ECR	FTN Access Node	Cabinet Routeworks	Tunnel	Earth Farm	Pedestrian Access Point	Platform	LV Cable	Sewer
Proposed Fibre & Civils Elements are shown in RED		2034m Cable	Manhole	FTN Access Node with GSM-R Colocated	Fibre Joint Routeworks	Manhole	Buffer Stop	Telephone	Cable Pull	Telecoms	Water
Proposed Copper Elements are shown in BLUE		F-DIDC-RGAC-A Cable	Mid Length Sheath Gap Fibre			Sheath Gap Copper			Copper Blue Fibre Red Screen Green	Mast	
Proposed Screening Elements are shown in MAGENTA		Existing Fibre Cable									
All Recoveries are shown in GREEN		Existing Copper Cable									
		Existing Screen Cable									

Notes

Rev	Date	Description of Revisions	Drawn	Chkd	Appr
B	09-01-2013	Amended by NWR to incorporate final Stage 2 detail	PT	PB	GH
AB2	23/08/11	FJ 10, 14 & 15 Amended, Electronic Signatures Added, AS BUILT	AB	DP	PP
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A	26/11/09	Final Issue	MT	AEL	SW
DA	26/09/08	1st Issue	MT	AEL	SW

Contractor(s)

As Built

ELR & Mileage
SDP1

Scale(s)
NTS

Designed	Andy Bone	Sign.	Date	23.08.2011
Drawn	Andy Bone	Sign.	Date	23.08.2011
Checked	Dave Peakman	Sign.	Date	23.08.2011
Approved	Prakash Patel (C.R.E.)	Sign.	Date	23.08.2011

Project
FTN/GSM-R Project
Stage 2 As Built

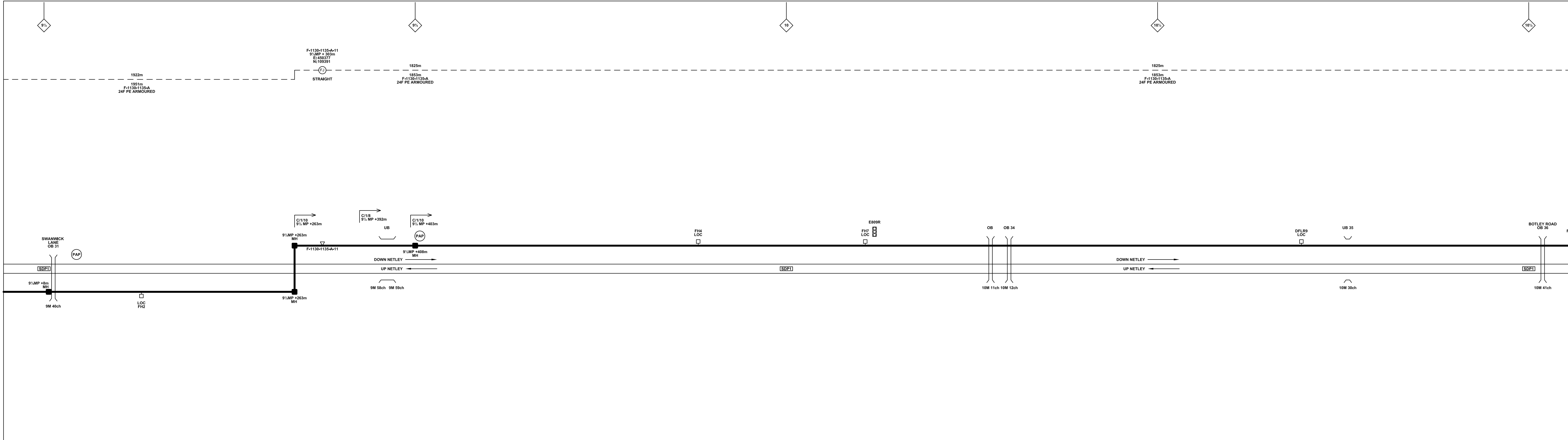
Drawing Title
Bursledon (1132) to
Tichfield Park (1133)

Alternative Reference
See Layout Tab A3 Sheets 5 and 6

Drawing Number
NTPO\SLD\1132\1133\001

Revision
B

Sheet
3 of 6



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	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 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	Mid Length Sheath Gap Fibre	Manhole	FTN Access Node	Cabinet Routeworks	Manhole	Platform	Pedestrian Access Point	Telephone	Sewer	LV Cable
	Sheath Gap Copper	Existing Fibre Cable	Manhole	FTN Access Node with GSM-R Colocated	Fibre Joint Routeworks	Manhole	Earth Farm	Buffer Stop	Cable Pull	Telecoms	Water
		Existing Copper Cable	Manhole			Manhole	Mast				

Notes

Rev	Date	Description of Revisions	Drawn	Chkd	Appr
B	09-01-2013	Amended by NWR to incorporate final Stage 2 detail	PT	PB	GH
AB2	23/08/11	FJ 10, 14 & 15 Amended, Electronic Signatures Added, AS BUILT	AB	DP	PP
AB1	07/05/10	AS-BUILT	AB	DP	PP
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DA	26/09/08	1st Issue	MT	AEL	SW
Rev	Date	Description of Revisions	Drawn	Chkd	Appr

Contractor(s)

As Built

ELR & Mileage
SDP1

Designed	Andy Bone	Sign.	Date	23.08.2011
Drawn	Andy Bone	Sign.	Date	23.08.2011
Checked	Dave Peakman	Sign.	Date	23.08.2011
Approved	Prakash Patel (C.R.E.)	Sign.	Date	23.08.2011

Project
FTN/GSM-R Project
Stage 2 As Built

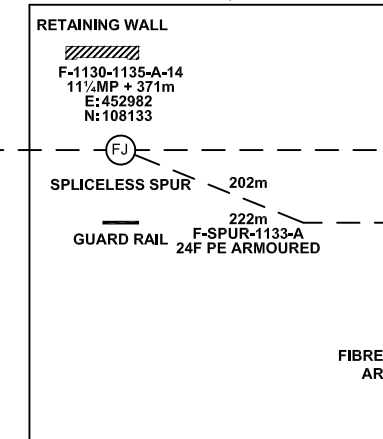
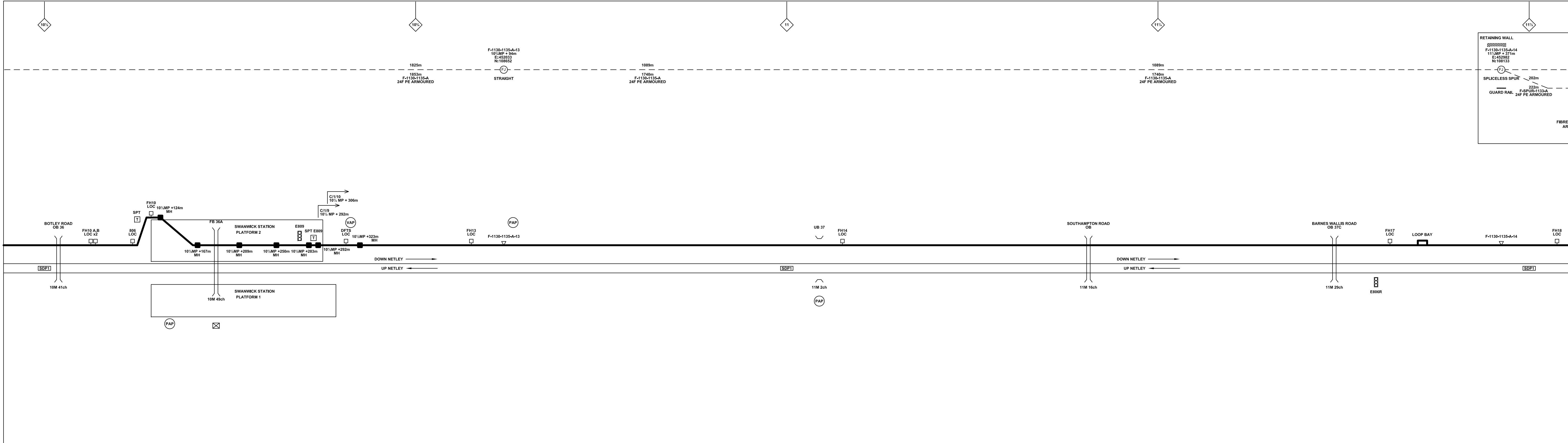
Drawing Title
Bursledon (1132) to
Tichfield Park (1133)

Alternative Reference
See Layout Tab A3 Sheets 7 and 8

Drawing Number
NTPO\SLD\1132\1133\001

Sheet
4 of 6

Revision
B



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		Cable Pull		Mast				
	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		Gantry		HV Cable		Copper Blue Fibre Red Screen Green		Earth Farm		Buffer Stop		Telephone
	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 Recoveries are shown in GREEN		KEY: All Existing Elements are shown in BLACK		KEY: Existing Fibre Cable		KEY: Existing Copper Cable		KEY: Existing Screen Cable		KEY: Mid Length Sheath Gap Fibre		KEY: Sheath Gap Copper		KEY: FTN Access Node		KEY: FTN Access Node with GSM-R Colocated		KEY: Cabinet Routeworks		KEY: Fibre Joint Routeworks		KEY: Tunnel		KEY: Platform

Notes

B	09-01-2013	Amended by NWR to incorporate final Stage 2 detail	PT	PB	GH
AB2	23/08/11	FJ 10, 14 & 15 Amended, Electronic Signatures Added, AS BUILT	AB	DP	PP
AB1	07/05/10	AS-BUILT	AB	DP	PP
A	26/11/09	Final Issue	MT	AEL	SW
DA	26/09/08	1st Issue	MT	AEL	SW
Rev	Date	Description of Revisions	Drawn	Chkd	Appr

Contractor(s)

As Built

ELR & Mileage
SDP1

Scale(s)
NTS

Designed	Andy Bone	Sign.	Date	23.08.2011
Drawn	Andy Bone	Sign.	Date	23.08.2011
Checked	Dave Peakman	Sign.	Date	23.08.2011
Approved	Prakash Patel (C.R.E.)	Sign.	Date	23.08.2011

Project
FTN/GSM-R Project
Stage 2 As Built

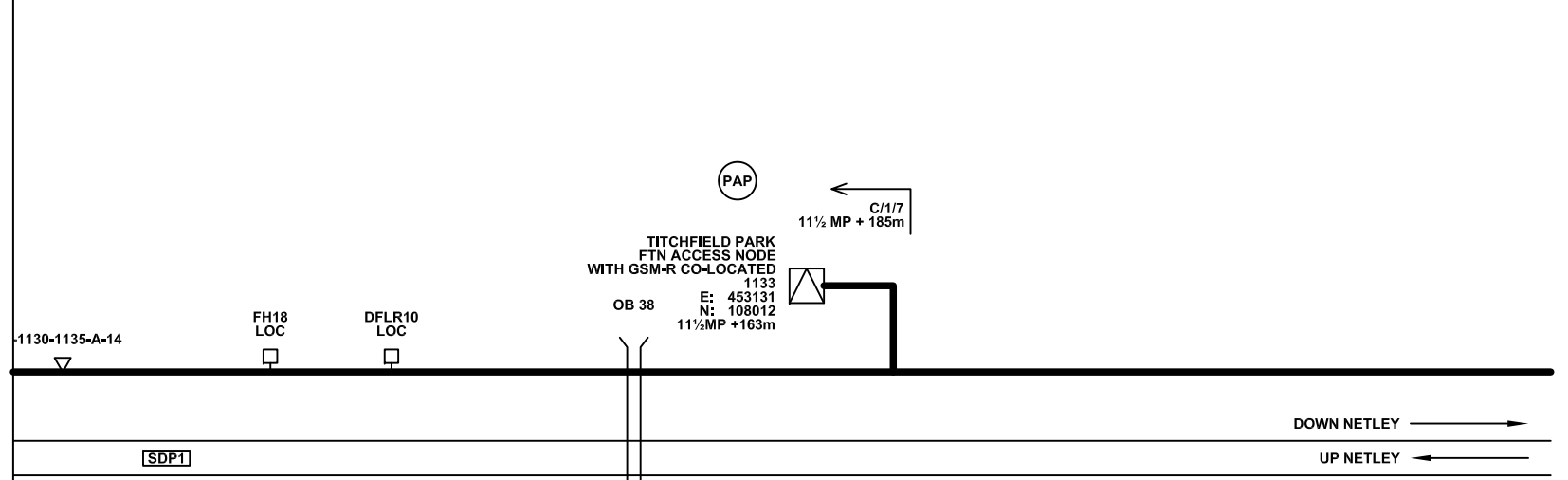
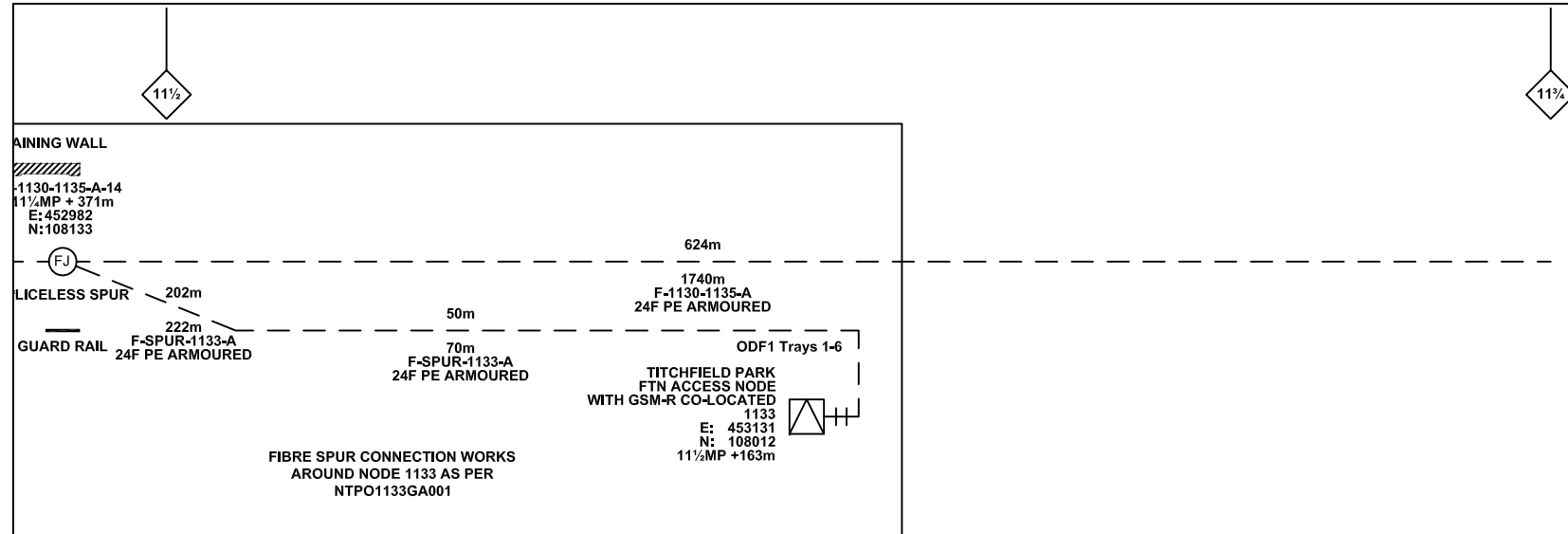
Drawing Title
Bursledon (1132) to
Tichfield Park (1133)

Alternative Reference
See Layout Tab A3 Sheets 9 and 10

Drawing Number
NTPO\SLD\1132\1133\001

Revision
B

Sheet
5 of 6



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	Crossing	Gas Line
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	Mid Length Sheath Gap Fibre	Underbridge	Vehicle Access Point	Mile Post	Gantry	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	Manhole	FTN Access Node	Cabinet Routeworks	Sheath Gap Copper	Tunnel	Pedestrian Access Point	Platform	Cable Pull	LV Cable
	Manhole	Manhole	Manhole	FTN Access Node with GSM-R Colocated	Fibre Joint Routeworks	Manhole	Earth Farm	Buffer Stop	Telephone	Copper Blue Fibre	Sewer
										Red Screen	Water
										Green Screen	Mast

Notes

Rev	Date	Description of Revisions	Drawn	Chkd	Appr
B	09-01-2013	Amended by NWR to incorporate final Stage 2 detail	PT	PB	GH
AB2	23/08/11	FJ 10, 14 & 15 Amended, Electronic Signatures Added, AS BUILT	AB	DP	PP
AB1	07/05/10	AS-BUILT	AB	DP	PP
A	26/11/09	Final Issue	MT	AEL	SW
DA	26/09/08	1st Issue	MT	AEL	SW
Rev	Date	Description of Revisions	Drawn	Chkd	Appr

Contractor(s)

As Built

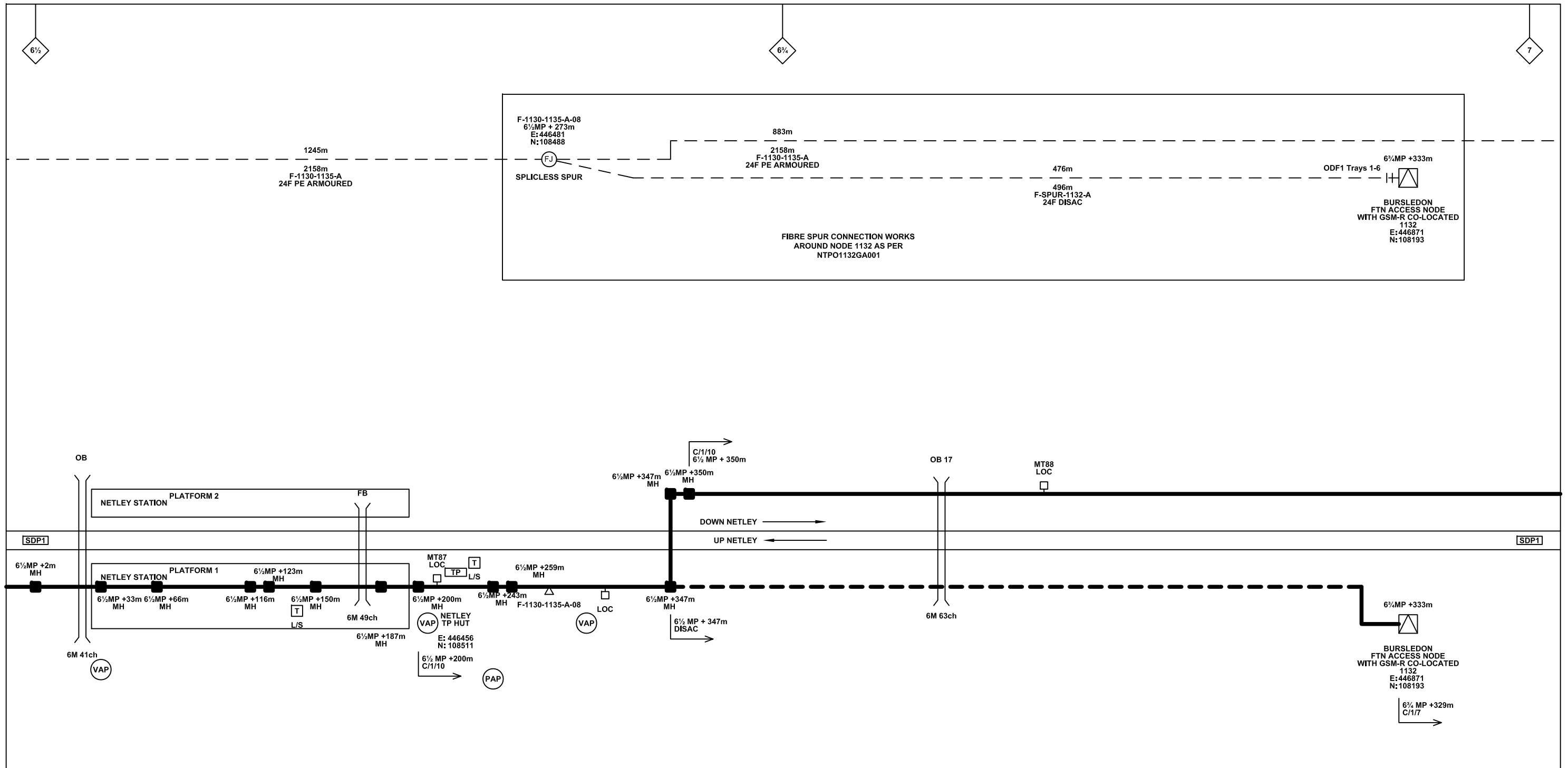
ELR & Mileage
SDP1

Designed	Andy Bone	Sign.		Date	23.08.2011
Drawn	Andy Bone	Sign.		Date	23.08.2011
Checked	Dave Peakman	Sign.		Date	23.08.2011
Approved	Prakash Patel (C.R.E.)	Sign.		Date	23.08.2011
Project	FTN/GSM-R Project Stage 2 As Built				
Drawing Title	Bursledon (1132) to Titchfield Park (1133)				

Alternative Reference: See Layout Tab A3 Sheet 11

Drawing Number: NTPO\SLD\1132\1133\001

Sheet: 6 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	Copper Joint Routeworks	Underbridge	Vehicle Access Point	Mile Post	HV — HV — 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	Tunnel	Pedestrian Access Point	Platform	LV — LV — LV Cable	
All Existing Elements are shown in BLACK --- Existing Fibre Cable --- Existing Copper Cable --- Existing Screen Cable	Sheath Gap Copper	FTN Access Node with GSM-R Colocated	Fibre Joint Routeworks	Earth Farm	Buffer Stop	Telephone	Cable Pull	Mast	SEW — SEW — Sewer	

Notes

B	09-01-2013	Amended by NWR to incorporate final Stage 2 detail	PT	PB	GH
AB2	23/08/11	FJ 10, 14 & 15 Amended, Electronic Signatures Added, AS BUILT	AB	DP	PP
AB1	07/05/10	AS-BUILT	AB	DP	PP
A	26/11/09	Final Issue	MT	AEL	SW
DA	26/09/08	1st Issue	MT	AEL	SW
Rev	Date	Description of Revisions	Drawn	Chkd	Appr

Contractor(s)

Status: **As Built**

Scale(s): NTS

ELR & Mileage: SDP1

Designed	Andy Bone	Sign.	Date	23.08.2011
Drawn	Andy Bone	Sign.	Date	23.08.2011
Checked	Dave Peakman	Sign.	Date	23.08.2011
Approved	Prakash Patel (C.R.E.)	Sign.	Date	23.08.2011
Project	FTN/GSM-R Project Stage 2 As Built			
Drawing Title	Bursledon (1132) to Tichfield Park (1133)			

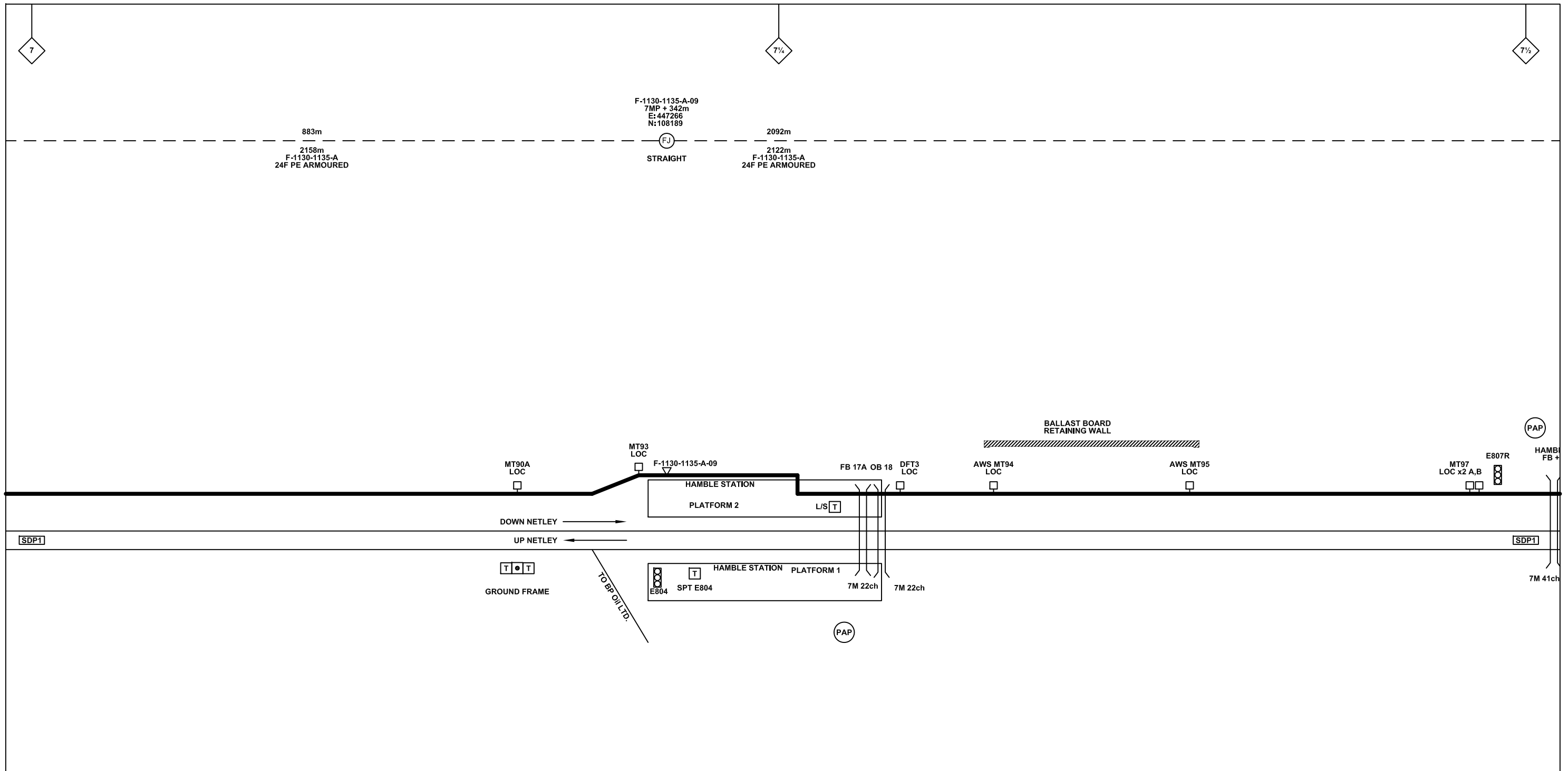
FTN/GSM-R Project
Tournament House
Paddington
London
W2 1HA

Alternative Reference: See Layout Tab 841 x 297 Sheet 1

Drawing Number: NTPO\SLD\1132\1133\001

Sheet: 1 of 11

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	Underbridge	Vehicle Access Point	Mile Post	Gantry	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	Tunnel	Pedestrian Access Point	Platform	Sewer	LV Cable
	Existing Fibre Cable	FTN Access Node with GSM-R Colocated	Sheath Gap Copper	Fibre Joint Routeworks	Earth Farm	Buffer Stop	Telephone	Cable Pull	Telecoms	Water
	Existing Copper Cable	Existing Screen Cable						Mast		

Notes

Rev	Date	Description of Revisions	Drawn	Chkd	Appr
B	09-01-2013	Amended by NWR to incorporate final Stage 2 detail	PT	PB	GH
AB2	23/08/11	FJ 10, 14 & 15 Amended, Electronic Signatures Added, AS BUILT	AB	DP	PP
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DA	26/09/08	1st Issue	MT	AEL	SW

Contractor(s)

Status: **As Built**

Scale(s): NTS

ELR & Mileage: SDP1

Designed	Andy Bone	Sign.	Date	23.08.2011
Drawn	Andy Bone	Sign.	Date	23.08.2011
Checked	Dave Peakman	Sign.	Date	23.08.2011
Approved	Prakash Patel (C.R.E.)	Sign.	Date	23.08.2011
Project	FTN/GSM-R Project Stage 2 As Built			
Drawing Title	Bursledon (1132) to Tichfield Park (1133)			

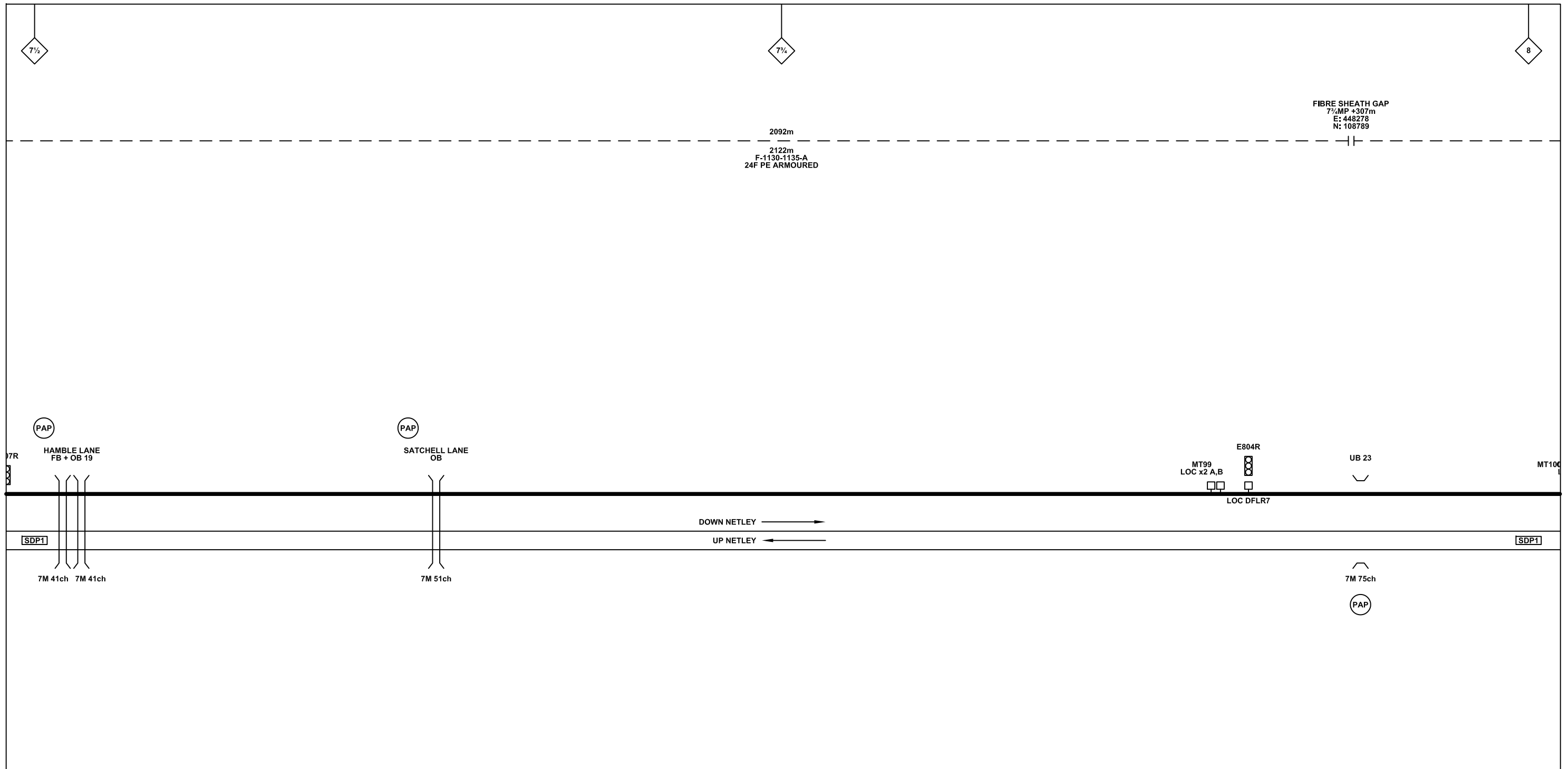
FTN/GSM-R Project
Tournament House
Paddington
London
W2 1HA

Alternative Reference: See Layout Tab 841 x 297 Sheet 1

Drawing Number: NTPO\SLD\1132\1133\001

Sheet: 2 of 11

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 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	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
B	09-01-2013	Amended by NWR to incorporate final Stage 2 detail	PT	PB	GH
AB2	23/08/11	FJ 10, 14 & 15 Amended, Electronic Signatures Added, AS BUILT	AB	DP	PP
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A	26/11/09	Final Issue	MT	AEL	SW
DA	26/09/08	1st Issue	MT	AEL	SW

Contractor(s)

Status: **As Built**

Scale(s): NTS

ELR & Mileage: SDP1

Designed	Andy Bone	Sign.	Date	23.08.2011
Drawn	Andy Bone	Sign.	Date	23.08.2011
Checked	Dave Peakman	Sign.	Date	23.08.2011
Approved	Prakash Patel (C.R.E.)	Sign.	Date	23.08.2011
Project	FTN/GSM-R Project Stage 2 As Built			
Drawing Title	Bursledon (1132) to Tichfield Park (1133)			

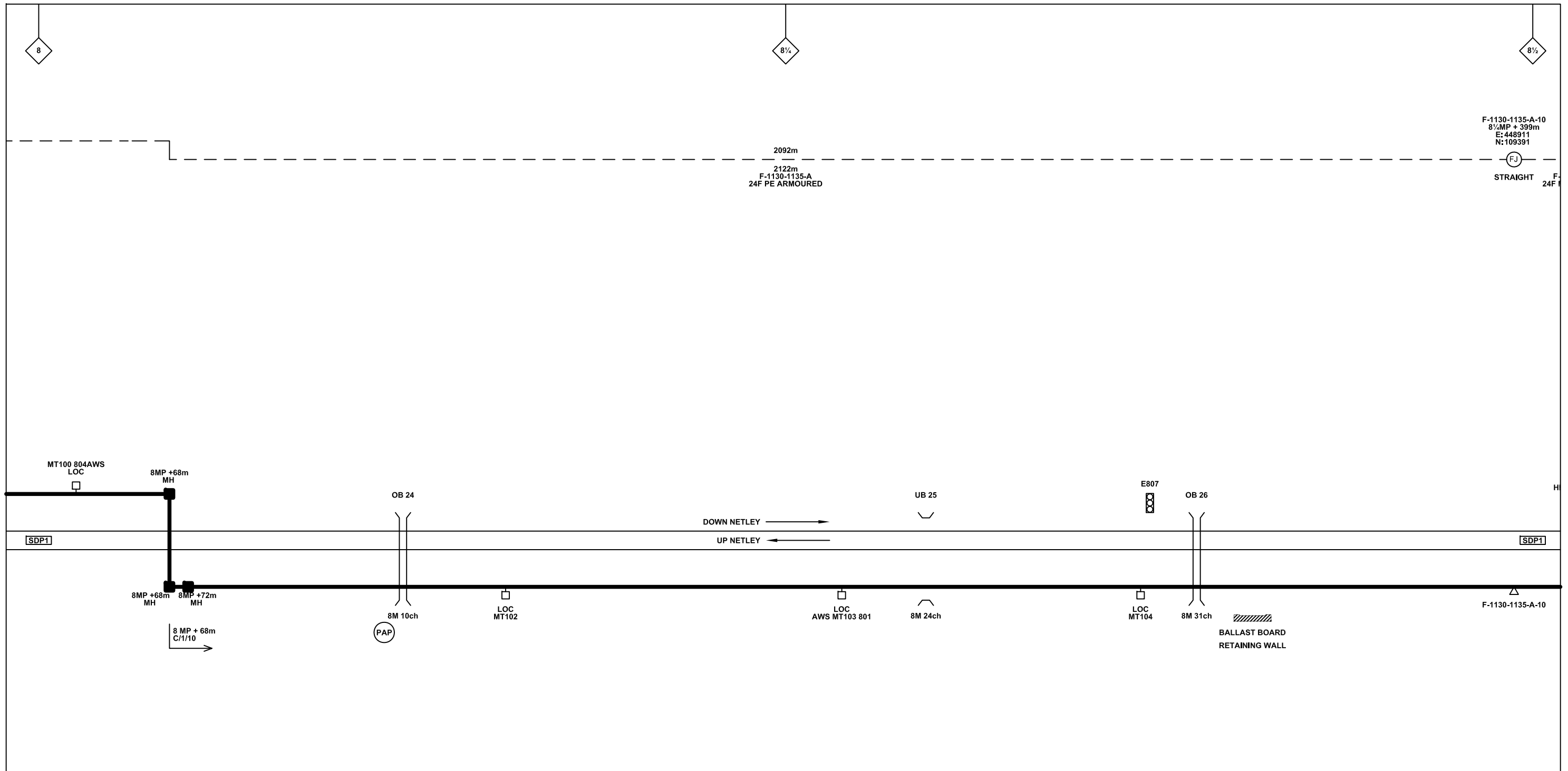
FTN/GSM-R Project
Tournament House
Paddington
London
W2 1HA

Alternative Reference: See Layout Tab 841 x 297 Sheet 2

Drawing Number: NTPO\SLD\1132\1133\001

Sheet: 3 of 11

Revision: B



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N: 109391

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 — 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 — HV — HV — HV Cable	LV — LV — LV — 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	Manhole	FTN Access Node	Cabinet Routeworks	Manhole details: Cross-To be used, Filled-In use, Clear-Empty	Pedestrian Access Point	Platform	SEW — SEW — SEW — Sewer	TEL — TEL — TEL — Telecoms
	Existing Fibre Cable	Existing Copper Cable	Mid Length Sheath Gap Fibre	FTN Access Node with GSM-R Colocated	Fibre Joint Routeworks	Tunnel	Earth Farm	Buffer Stop	Telephone	W — W — W — Water
	Existing Screen Cable		Sheath Gap Copper							Copper Blue, Fibre Red, Screen Green, Mast

Rev	Date	Description of Revisions	Drawn	Chkd	Appr
B	09-01-2013	Amended by NWR to incorporate final Stage 2 detail	PT	PB	GH
AB2	23/08/11	FJ 10, 14 & 15 Amended, Electronic Signatures Added, AS BUILT	AB	DP	PP
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DA	26/09/08	1st Issue	MT	AEL	SW

Contractor(s)

Status: **As Built**

Scale(s): NTS

ELR & Mileage: SDP1

Designed	Andy Bone	Sign.	Date	23.08.2011
Drawn	Andy Bone	Sign.	Date	23.08.2011
Checked	Dave Peakman	Sign.	Date	23.08.2011
Approved	Prakash Patel (C.R.E.)	Sign.	Date	23.08.2011
Project	FTN/GSM-R Project Stage 2 As Built			
Drawing Title	Bursledon (1132) to Tichfield Park (1133)			

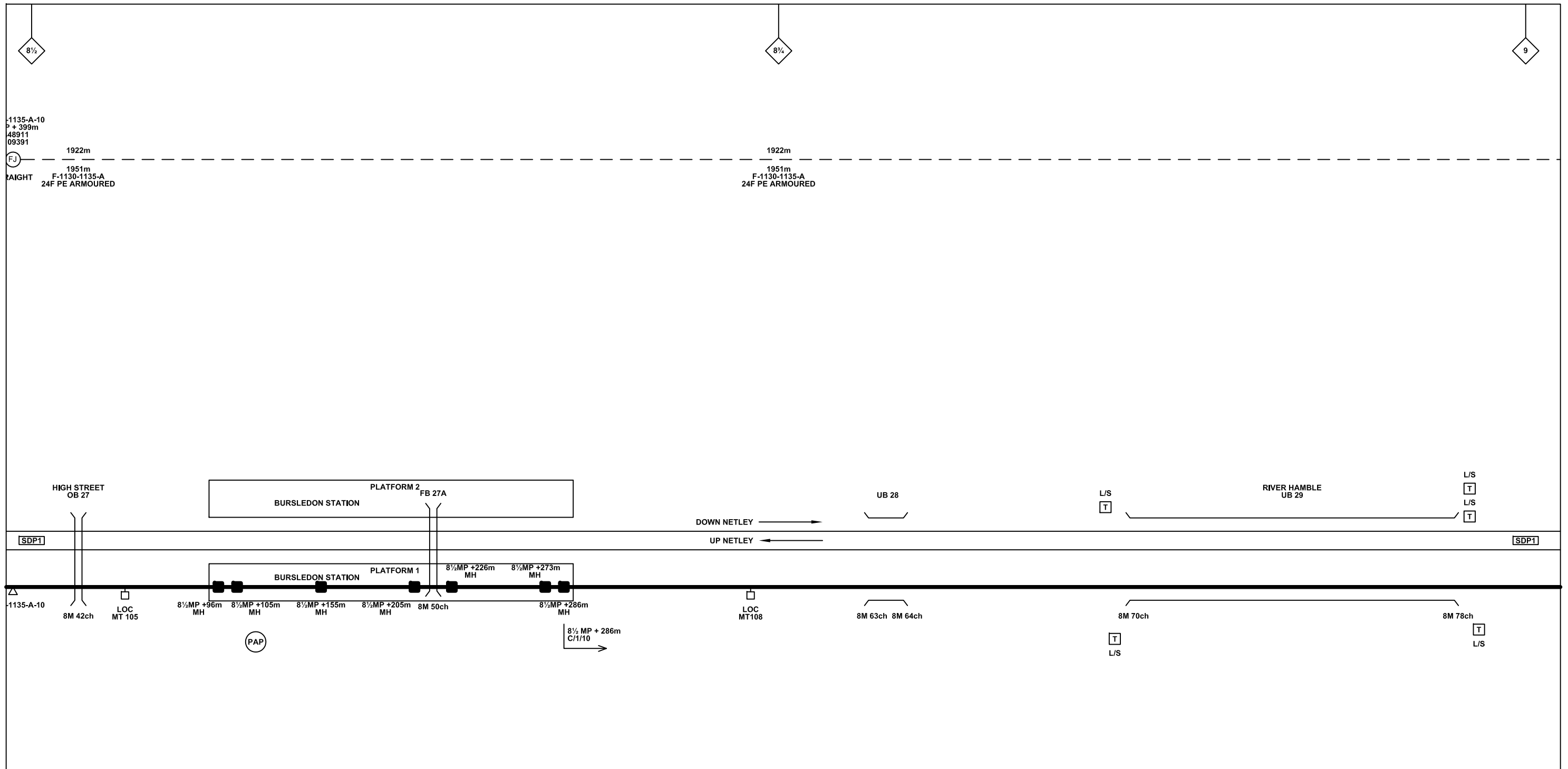
FTN/GSM-R Project
Tournament House
Paddington
London
W2 1HA

Alternative Reference: See Layout Tab 841 x 297 Sheet 2

Drawing Number: NTPO\SLD\1132\1133\001

Sheet: 4 of 11

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	Copper Joint Routeworks	Underbridge	Vehicle Access Point	Mile Post	HV — HV — HV Cable	LV — LV — 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	Manhole	FTN Access Node	Cabinet Routeworks	Manhole details: Cross-To be used, Filled-In use, Clear-Empty	Pedestrian Access Point	Platform	SEW — SEW — Sewer	TEL — TEL — Telecoms
		Existing Fibre Cable	Mid Length Sheath Gap Fibre	FTN Access Node with GSM-R Colocated	Fibre Joint Routeworks	Tunnel	Earth Farm	Buffer Stop	W — W — Water	Mast
		Existing Copper Cable	Sheath Gap Copper							

Notes

Rev	Date	Description of Revisions	Drawn	Chkd	Appr
B	09-01-2013	Amended by NWR to incorporate final Stage 2 detail	PT	PB	GH
AB2	23/08/11	FJ 10, 14 & 15 Amended, Electronic Signatures Added, AS BUILT	AB	DP	PP
AB1	07/05/10	AS-BUILT	AB	DP	PP
A	26/11/09	Final Issue	MT	AEL	SW
DA	26/09/08	1st Issue	MT	AEL	SW

Contractor(s)

bam nuttall

Status: **As Built**

Scale(s): NTS

ELR & Mileage: SDP1

Designed	Andy Bone	Sign.	Date	23.08.2011
Drawn	Andy Bone	Sign.	Date	23.08.2011
Checked	Dave Peakman	Sign.	Date	23.08.2011
Approved	Prakash Patel (C.R.E.)	Sign.	Date	23.08.2011
Project	FTN/GSM-R Project Stage 2 As Built			
Drawing Title	Bursledon (1132) to Tichfield Park (1133)			

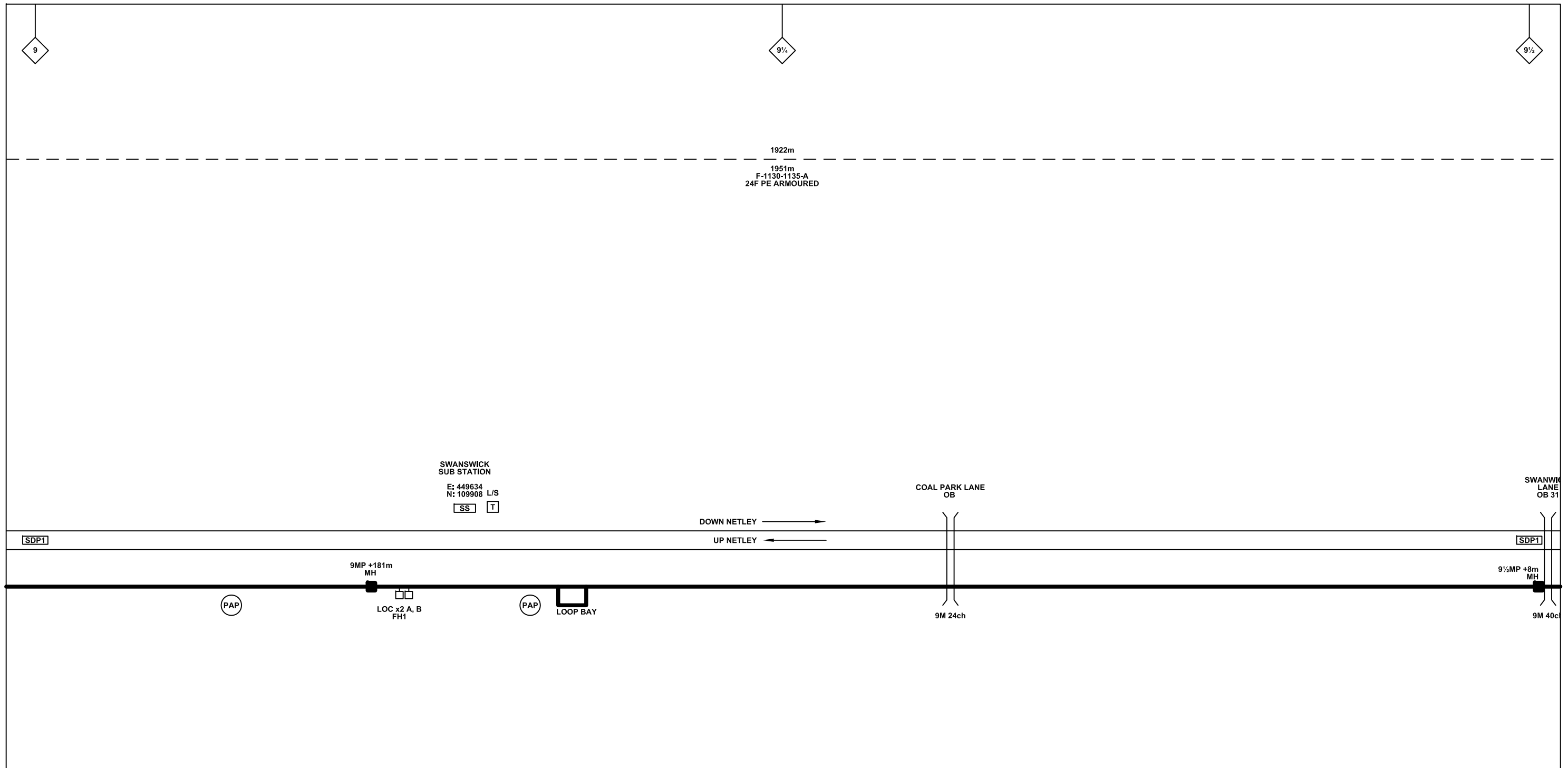
FTN/GSM-R Project
Tournament House
Paddington
London
W2 1HA

Alternative Reference: See Layout Tab 841 x 297 Sheet 3

Drawing Number: NTPO\SLD\1132\1133\001

Sheet: 5 of 11

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	Underbridge	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	Manhole	Mid Length Sheath Gap Fibre	FTN Access Node	Cabinet Routeworks	Tunnel	Pedestrian Access Point	Platform	Sewer	Telecoms
	Existing Fibre Cable	Sheath Gap Copper	FTN Access Node with GSM-R Colocated	Fibre Joint Routeworks	Earth Farm	Buffer Stop	Telephone	Cable Pull	Water	Mast

Notes

Rev	Date	Description of Revisions	Drawn	Chkd	Appr
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AB1	07/05/10	AS-BUILT	AB	DP	PP
A	26/11/09	Final Issue	MT	AEL	SW
DA	26/09/08	1st Issue	MT	AEL	SW

Contractor(s)

Status: **As Built**

Scale(s): NTS

ELR & Mileage: SDP1

Designed	Andy Bone	Sign.	Date	23.08.2011
Drawn	Andy Bone	Sign.	Date	23.08.2011
Checked	Dave Peakman	Sign.	Date	23.08.2011
Approved	Prakash Patel (C.R.E.)	Sign.	Date	23.08.2011
Project	FTN/GSM-R Project Stage 2 As Built			
Drawing Title	Bursledon (1132) to Tichfield Park (1133)			

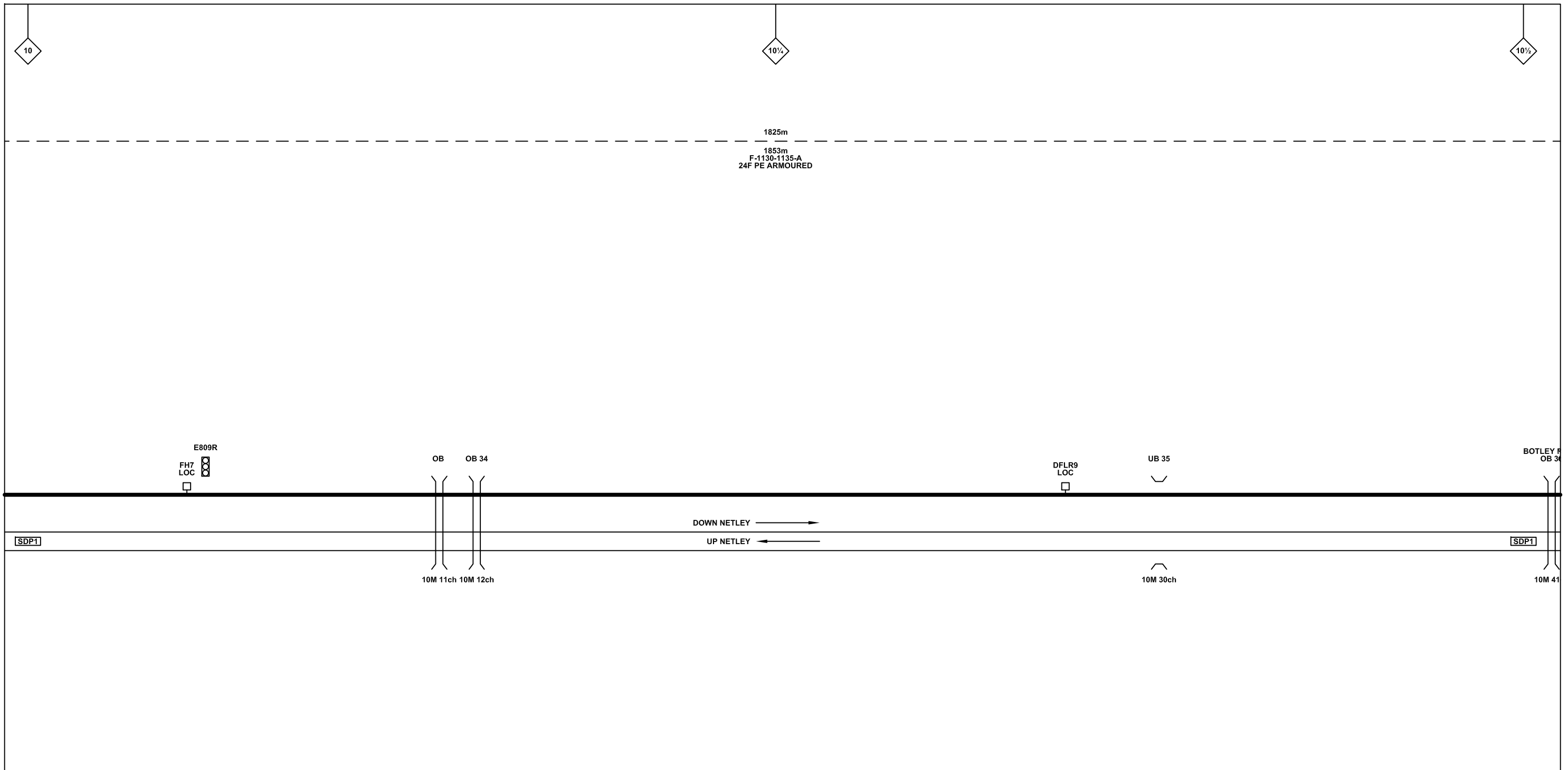
FTN/GSM-R Project
Tournament House
Paddington
London
W2 1HA

Alternative Reference: See Layout Tab 841 x 297 Sheet 3

Drawing Number: NTPO\SLD\1132\1133\001

Sheet: 6 of 11

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	Underbridge	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	Manhole	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	Mid Length Sheath Gap Fibre	FTN Access Node with GSM-R Colocated	Fibre Joint Routeworks	Tunnel	Earth Farm	Buffer Stop	Water	Mast
		Existing Copper Cable	Sheath Gap Copper					Telephone		
		Existing Screen Cable								

Notes

Rev	Date	Description of Revisions	Drawn	Chkd	Appr
B	09-01-2013	Amended by NWR to incorporate final Stage 2 detail	PT	PB	GH
AB2	23/08/11	FJ 10, 14 & 15 Amended, Electronic Signatures Added, AS BUILT	AB	DP	PP
AB1	07/05/10	AS-BUILT	AB	DP	PP
A	26/11/09	Final Issue	MT	AEL	SW
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Contractor(s)

Status: **As Built**

Scale(s): NTS

ELR & Mileage: SDP1

Designed	Andy Bone	Sign.	Date	23.08.2011
Drawn	Andy Bone	Sign.	Date	23.08.2011
Checked	Dave Peakman	Sign.	Date	23.08.2011
Approved	Prakash Patel (C.R.E.)	Sign.	Date	23.08.2011
Project	FTN/GSM-R Project Stage 2 As Built			
Drawing Title	Bursledon (1132) to Tichfield Park (1133)			

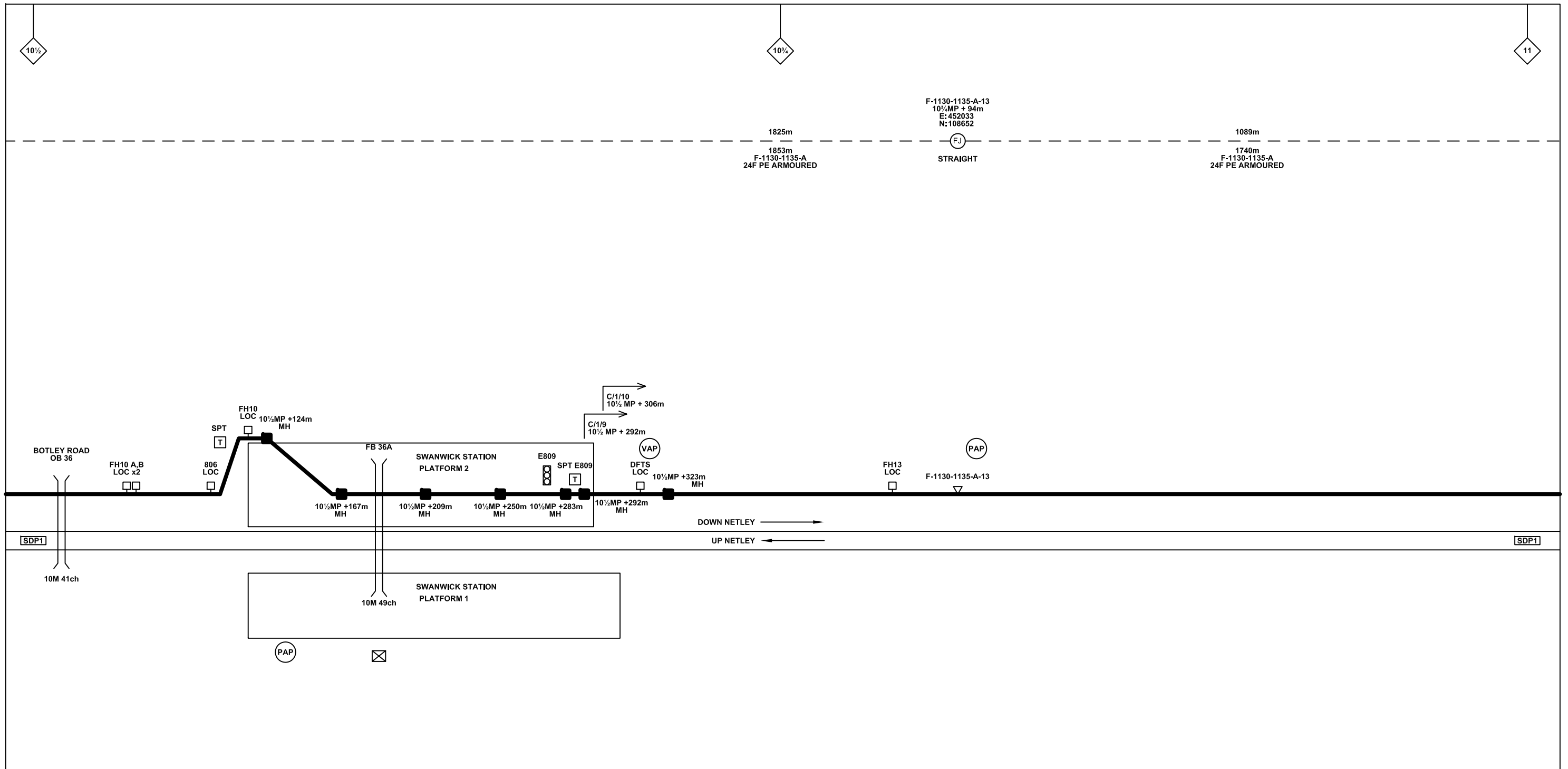
FTN/GSM-R Project
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London
W2 1HA

Alternative Reference: See Layout Tab 841 x 297 Sheet 4

Drawing Number: NTPO\SLD\1132\1133\001

Sheet: 8 of 11

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 — 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 — HV — HV — HV Cable	LV — LV — LV — 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	Manhole	Mid Length Sheath Gap Fibre	FTN Access Node	Cabinet Routeworks	Tunnel	Pedestrian Access Point	Platform	SEW — SEW — SEW — Sewer	TEL — TEL — TEL — Telecoms
		Sheath Gap Copper	FTN Access Node with GSM-R Colocated	Fibre Joint Routeworks	Earth Farm	Buffer Stop	Telephone	Gantry	v — v — v — Water	Cable Pull

Notes

Contractor(s) **bam nuttall**

Designed: Andy Bone, Sign., Date: 23.08.2011
 Drawn: Andy Bone, Sign., Date: 23.08.2011
 Checked: Dave Peakman, Sign., Date: 23.08.2011
 Approved: Prakash Patel (C.R.E.), Sign., Date: 23.08.2011

Project: **FTN/GSM-R Project Stage 2 As Built**

Drawing Title: **Bursledon (1132) to Tichfield Park (1133)**

Alternative Reference: See Layout Tab 841 x 297 Sheet 5

Sheet: 9 of 11

Drawing Number: NTPO\SLD\1132\1133\001

Revision: B

Rev	Date	Description of Revisions	Drawn	Chkd	Appr
B	09-01-2013	Amended by NWR to incorporate final Stage 2 detail	PT	PB	GH
AB2	23/08/11	FJ 10, 14 & 15 Amended, Electronic Signatures Added, AS BUILT	AB	DP	PP
AB1	07/05/10	AS-BUILT	AB	DP	PP
A	26/11/09	Final Issue	MT	AEL	SW
DA	26/09/08	1st Issue	MT	AEL	SW

Contractor(s)	bam nuttall
Status	As Built
Scale(s)	NTS
ELR & Mileage	SDP1

Designed	Andy Bone	Sign.	Date	23.08.2011
Drawn	Andy Bone	Sign.	Date	23.08.2011
Checked	Dave Peakman	Sign.	Date	23.08.2011
Approved	Prakash Patel (C.R.E.)	Sign.	Date	23.08.2011
Project	FTN/GSM-R Project Stage 2 As Built			
Drawing Title	Bursledon (1132) to Tichfield Park (1133)			

Network Rail

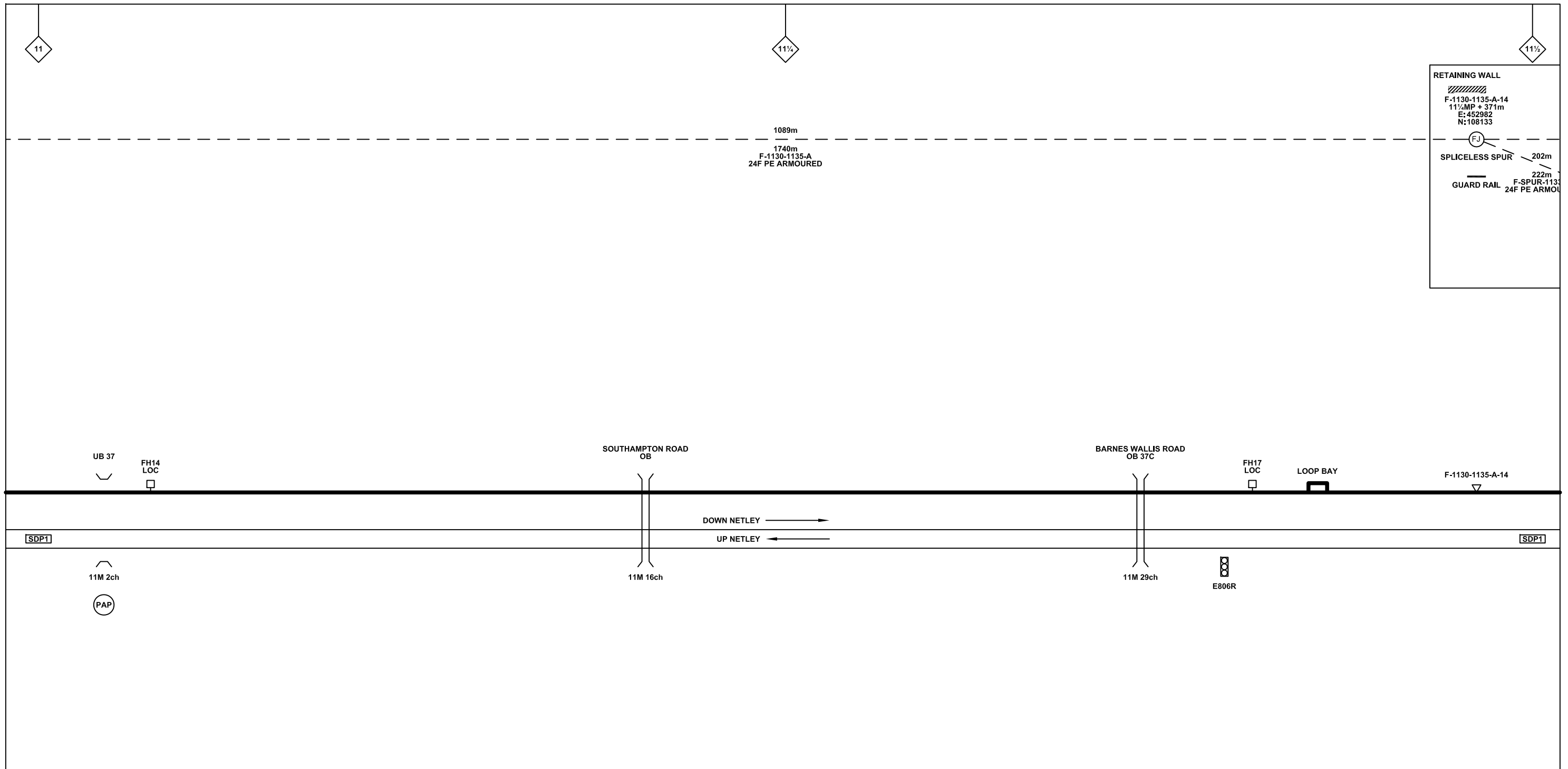
FTN/GSM-R Project
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Alternative Reference: See Layout Tab 841 x 297 Sheet 5

Sheet: 9 of 11

Drawing Number: NTPO\SLD\1132\1133\001

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	Copper Joint Routeworks	Manhole	VAP Vehicle Access Point	Mile Post	HV — HV — HV Cable	LV — LV — 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	PAP Pedestrian Access Point	Platform	SEW — SEW — Sewer	v — v — Water
		Existing Fibre Cable	Sheath Gap Copper	FTN Access Node with GSM-R Colocated	Fibre Joint Routeworks	Tunnel	Earth Farm	Buffer Stop	Telephone	Mast

Notes

Rev	Date	Description of Revisions	Drawn	Chkd	Appr
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AB1	07/05/10	AS-BUILT	AB	DP	PP
A	26/11/09	Final Issue	MT	AEL	SW
DA	26/09/08	1st Issue	MT	AEL	SW

Contractor(s)

Status: **As Built**

Scale(s): NTS

ELR & Mileage: SDP1

Designed	Andy Bone	Sign.	Date	23.08.2011
Drawn	Andy Bone	Sign.	Date	23.08.2011
Checked	Dave Peakman	Sign.	Date	23.08.2011
Approved	Prakash Patel (C.R.E.)	Sign.	Date	23.08.2011
Project	FTN/GSM-R Project Stage 2 As Built			
Drawing Title	Bursledon (1132) to Tichfield Park (1133)			

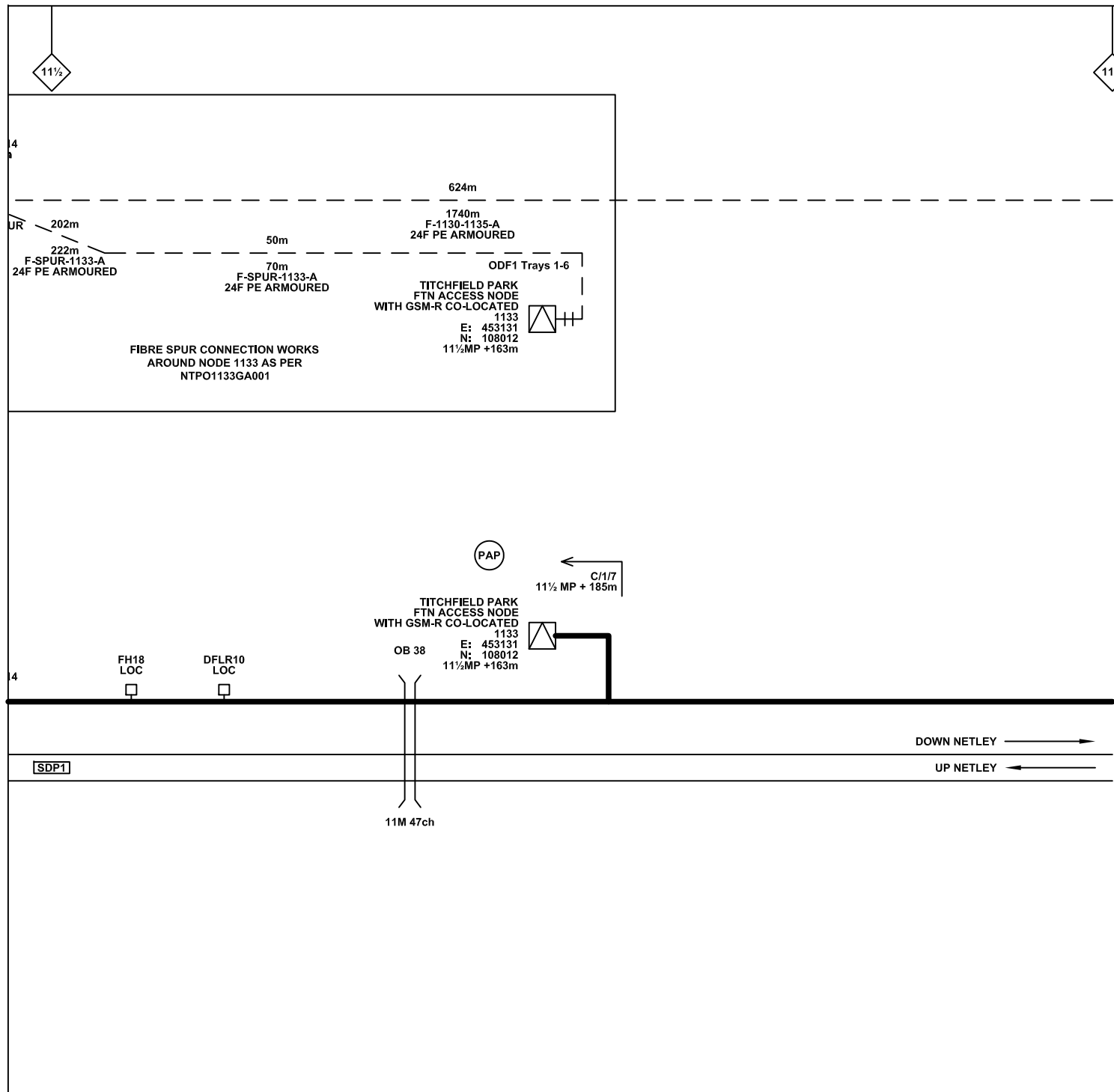
FTN/GSM-R Project
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Alternative Reference: See Layout Tab 841 x 297 Sheet 5

Drawing Number: NTPO\SLD\1132\1133\001

Sheet: 10 of 11

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

Notes

B	09-01-2013	Amended by NWR to incorporate final Stage 2 detail	PT	PB	GH
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A	26/11/09	Final Issue	MT	AEL	SW
DA	26/09/08	1st Issue	MT	AEL	SW
Rev	Date	Description of Revisions	Drawn	Chkd	Appr

Contractor(s)

bam nuttall

Status: **As Built**

Scale(s): NTS

ELR & Mileage: SDP1

Designed	Andy Bone	Sign.	Date	23.08.2011
Drawn	Andy Bone	Sign.	Date	23.08.2011
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Project	FTN/GSM-R Project Stage 2 As Built			
Drawing Title	Bursledon (1132) to Tichfield Park (1133)			

FTN/GSM-R Project
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W2 1HA

Alternative Reference: See Layout Tab 841 x 297 Sheet 6

Drawing Number: NTPO\SLD\1132\1133\001

Sheet: 11 of 11

Revision: B