

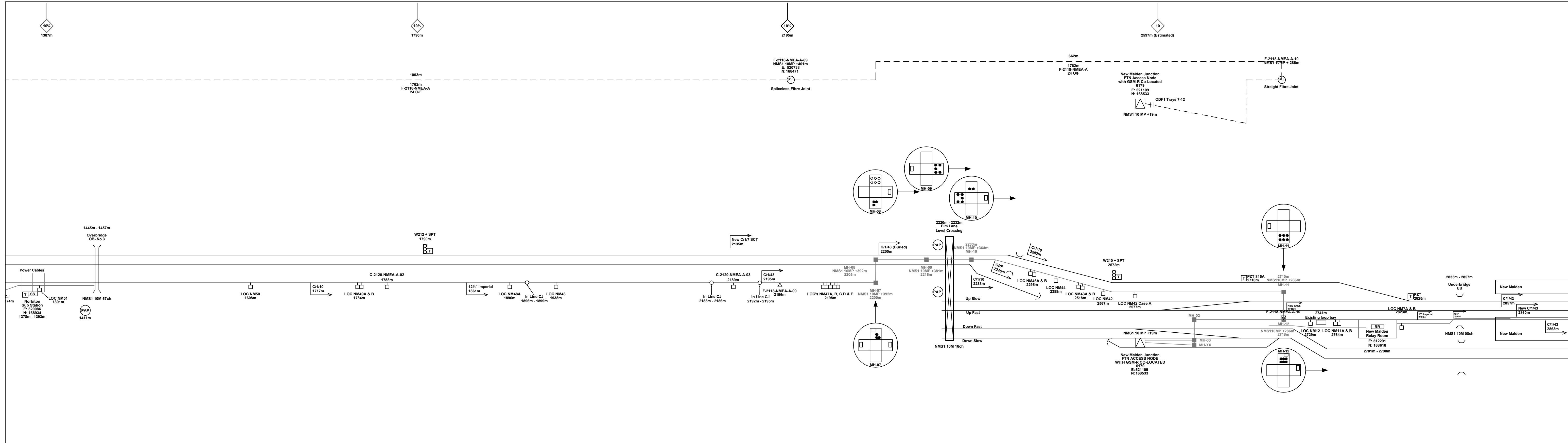
Rev	Date	Description of Revisions	Drawn	Chkd	Appr
C	21-03-13	As Built	RM	JH	IA
B	05-11-09	Amended Issue	MT	AEL	SW
DA	19-06-08	1st Issue	MT	AEL	SW

Notes		Contractor(s)	
		Linbrooke Total Network Solutions	

Design		Sign		Date	
Drawn	Alan Littlefair	Sign		Date	18-08-08
Checked	Michal Taraj	Sign		Date	18-08-08
Approved	Alan Littlefair	Sign		Date	18-08-08
Project	Steve Witt	Sign		Date	18-08-08

Drawing Title		Alternative Reference	
FTN / GSM-R Project Stage 2			
Norbiton (2120) to New Malden Junction (6179)		See Layout 1	

Status		Drawing Number	
As Built		NTPO\SLD\2120	



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	Copper Cable	Electrical Control Room	Core Node with GSM-R Colocated	Copper Joint Routeworks	Underbridge	Vehicle Access Point	Mile Post	Gantry	HV Cable
523m Cable Description Copper	Screening Conductor Joint with/without Earth	Fibre Cable	Manhole	FTN Access Node	Cabinet Routeworks	Manhole details: Green-To be used, Red-In use, Clear-Empty	Pedestrian Access Point	Platform	Cable Pull	LV Cable
540m Cable Description RGAC-A 30PR/0.63mm	1988m Cable Description Fibre	Screening Conductor	Mid Length Sheath Gap Fibre	FTN Access Node with GSM-R Colocated	Fibre Joint Routeworks	Tunnel	Earth Farm	Telephone	Copper Blue Fibre Red Screen Green	Sewer
2034m Cable Description F-DIC-RCAC-A 24 Optic Fibre	484m Cable Description Screening Conductor	Sheath Gap Copper	Buffer Stop				AC Stanchion		Water	

Notes

C	21-03-13	As Built	RM	JH	IA
B	05-11-09	Amended Issue	MT	AEL	SW
DA	16-08-08	1st Issue	MT	AEL	SW
Rev	Date	Description of Revisions	Drawn	Chkd	Appr

Linbrooke
Total Network Solutions

As Built
ELR & Mileage
NMS1

Designed	Alan Littlefair	Sign.		Date	18-08-08
Drawn	Michal Taraj	Sign.		Date	18-08-08
Checked	Alan Littlefair	Sign.		Date	18-08-08
Approved	Steve Witt	Sign.		Date	18-08-08
Project	FTN / GSM-R Project Stage 2				
Drawing Title	Norbiton (2120) to New Malden Junction (6179)				

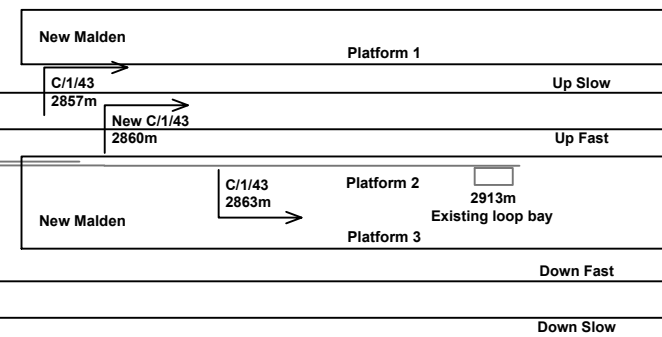
Network Rail

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

Alternative Reference: See Layout Tab A3 Sheets 3 and 4

Drawing Number: NTPO\SLD\2120\6179\001

Sheet: 2 of 3
Revision: C



Legend	
	Cabinet and Verts
	Cabinet with Regenerator and Verts
	Copper Joint
	Fibre Joint
	Screening Conductor Joint with/without Earth
	Trough Duct Cable Tray
	Copper Cable
	Fibre Cable
	Screening Conductor
	Screening Conductor
	Signal Box
	Electrical Control Room
	Manhole
	Mid Length Sheath Gap Fibre
	Sheath Gap Copper
	FTN Core Node
	Core Node with GSM-R Colocated
	FTN Access Node
	FTN Access Node with GSM-R Colocated
	Screen Joint Routeworks
	Copper Joint Routeworks
	Cabinet Routeworks
	Fibre Joint Routeworks
	Manhole details: Green-To be used Red-in use Clear-Empty
	Overbridge
	Underbridge
	Tunnel
	Earth Farm
	Buffer Stop
	Telephone
	Signal
	Vehicle Access Point
	Pedestrian Access Point
	Platform
	Engineer's Line Reference
	Mile Post
	Crossing
	Gantry
	Cable Pull
	Gas Line
	HV Cable
	LV Cable
	Sewer
	Telecoms
	Water
	Copper Blue Fibre Red Screen Green
	AC Stanchion

Notes					
C	21-03-13	As Built	RM	JH	IA
B	05-11-09	Amended Issue	MT	AEL	SW
DA	16-08-08	1st Issue	MT	AEL	SW
Rev	Date	Description of Revisions	Drawn	Chkd	Appt

Contractor(s)

As Built

ELR & Mileage: NMS1

Designed		Sign.		Date	
Alan Littlefair	18-08-08				
Michal Taraj	18-08-08				
Alan Littlefair	18-08-08				
Steve Witt	18-08-08				

Project: FTN / GSM-R Project Stage 2

Drawing Title: Norbiton (2120) to New Malden Junction (6179)

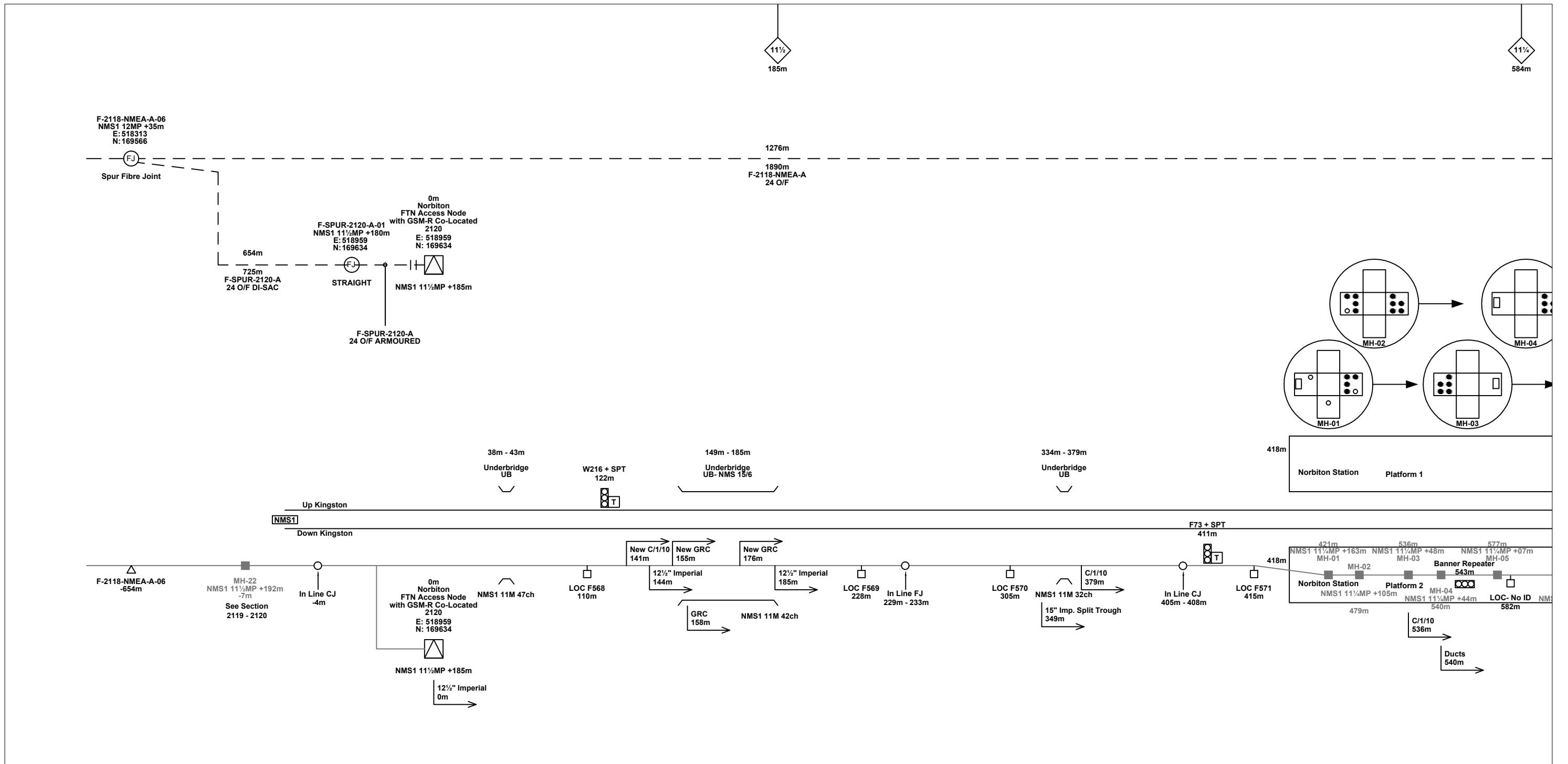
FTN/GSM-R Project
Tournament House
Paddington
London
W2 1HA

Alternative Reference: See Layout Tab A3 Sheets 5

Drawing Number: NTPO\SLD\2120\6179\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	Copper Cable	Electrical Control Room	Core Node with GSM-R Colocated	Copper Joint Routeworks	Underbridge	Vehicle Access Point	Mile Post	Gantry	HV Cable
523m Cable Description Copper	Screening Conductor Joint with/without Earth	Fibre Cable	Manhole	FTN Access Node	Cabinet Routeworks	Tunnel	Pedestrian Access Point	Platform	Sewer	LV Cable
1988m Cable Description Fibre	484m Cable Description Screening Conductor	492m Cable Description Screening Conductor	Mid Length Sheath Gap Fibre	FTN Access Node with GSM-R Colocated	Fibre Joint Routeworks	Earth Farm	Buffer Stop	Telephone	Water	AC Stanchion
540m Cable Description Copper	2034m Cable Description Fibre	218435-517828/314821-519242 Cable Description Screening Conductor	Sheath Gap Copper							

Manhole details: Green - To be used, Red - In use, Clear - Empty

Notes

C	21-03-13	As Built	RM	JH	IA
B	05-11-09	Amended Issue	MT	AEL	SW
DA	18-08-08	1st Issue	MT	AEL	SW
Rev	Date	Description of Revisions	Drawn	Chkd	Appr

Contractor(s)

Status: **As Built**

Scale(s): NTS, ELR & Mileage, NMS1

Designed	Alan Littlefair	Sign.	Date	18-08-08
Drawn	Michal Taraj	Sign.	Date	18-08-08
Checked	Alan Littlefair	Sign.	Date	18-08-08
Approved	Steve Witt	Sign.	Date	18-08-08
Project	FTN / GSM-R Project Stage 2			
Drawing Title	Norbiton (2120) to New Malden Junction (6179)			

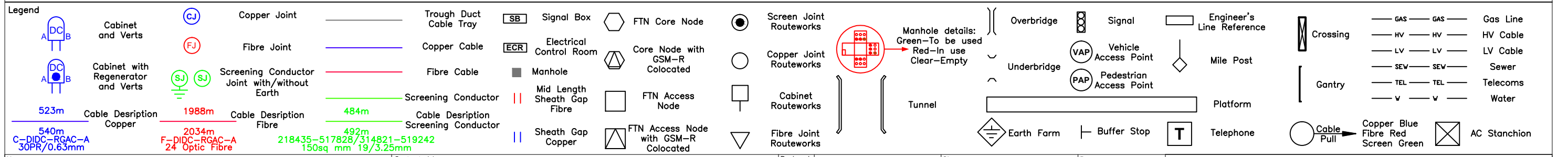
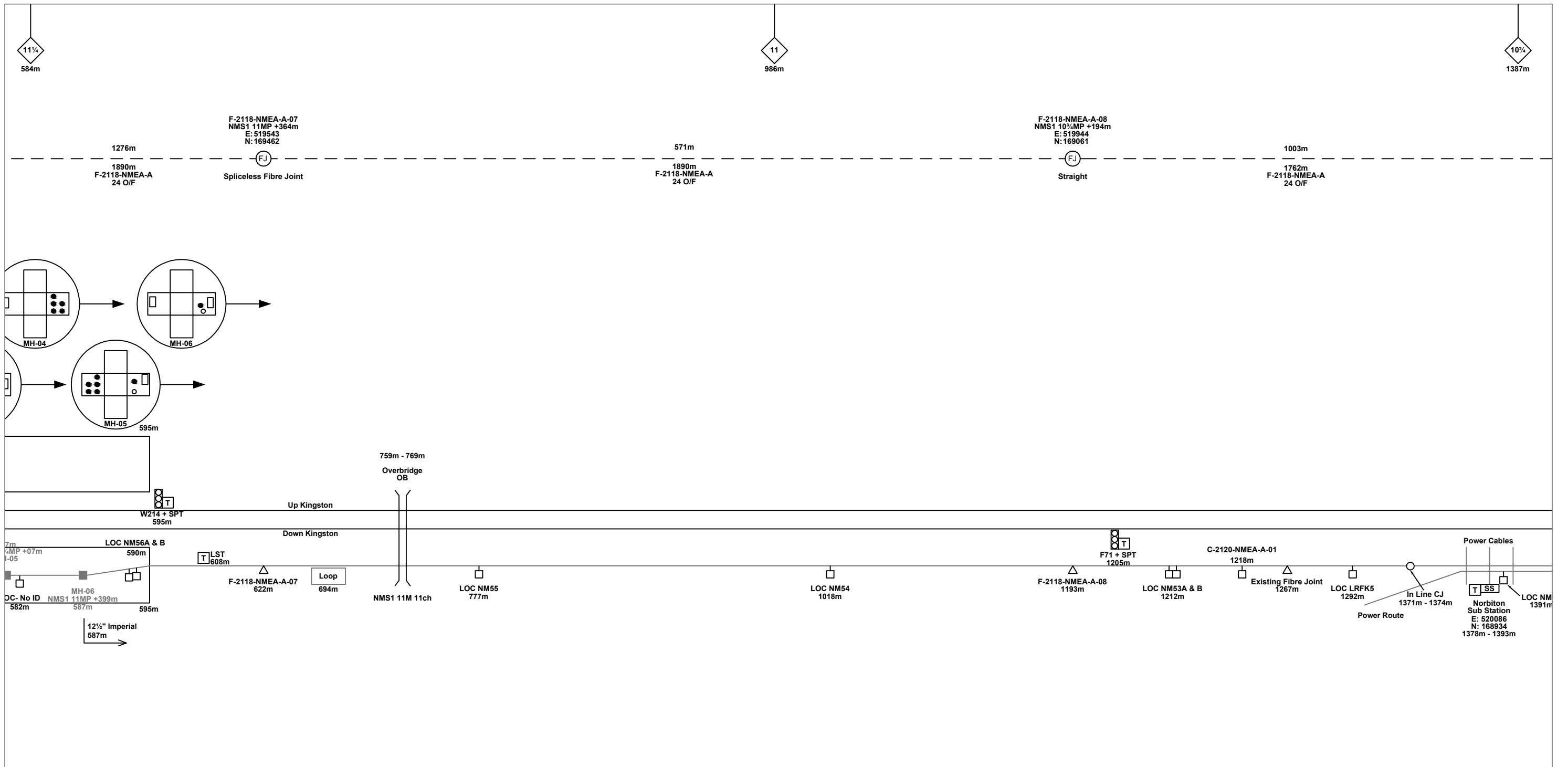
FTN/GSM-R Project
Tournament House
Paddington
London
W2 1HA

Alternative Reference: See Layout Tab 841 x 297 Sheet 1

Drawing Number: NTPO\SLD\2120\6179\001

Sheet: 1 of 5

Revision: C



Notes

C	21-03-13	As Built	RM	JH	IA
B	05-11-09	Amended Issue	MT	AEL	SW
DA	18-08-08	1st Issue	MT	AEL	SW
Rev	Date	Description of Revisions	Drawn	Chkd	Appr

Contractor(s)

Status: **As Built**

Scale(s): NTS

ELR & Mileage: NMS1

Designed	Alan Littlefair	Sign.	Date	18-08-08
Drawn	Michal Taraj	Sign.	Date	18-08-08
Checked	Alan Littlefair	Sign.	Date	18-08-08
Approved	Steve Witt	Sign.	Date	18-08-08
Project	FTN / GSM-R Project Stage 2			
Drawing Title	Norbiton (2120) to New Malden Junction (6179)			

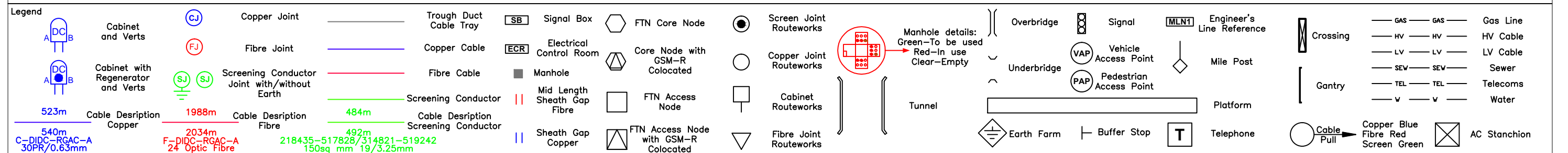
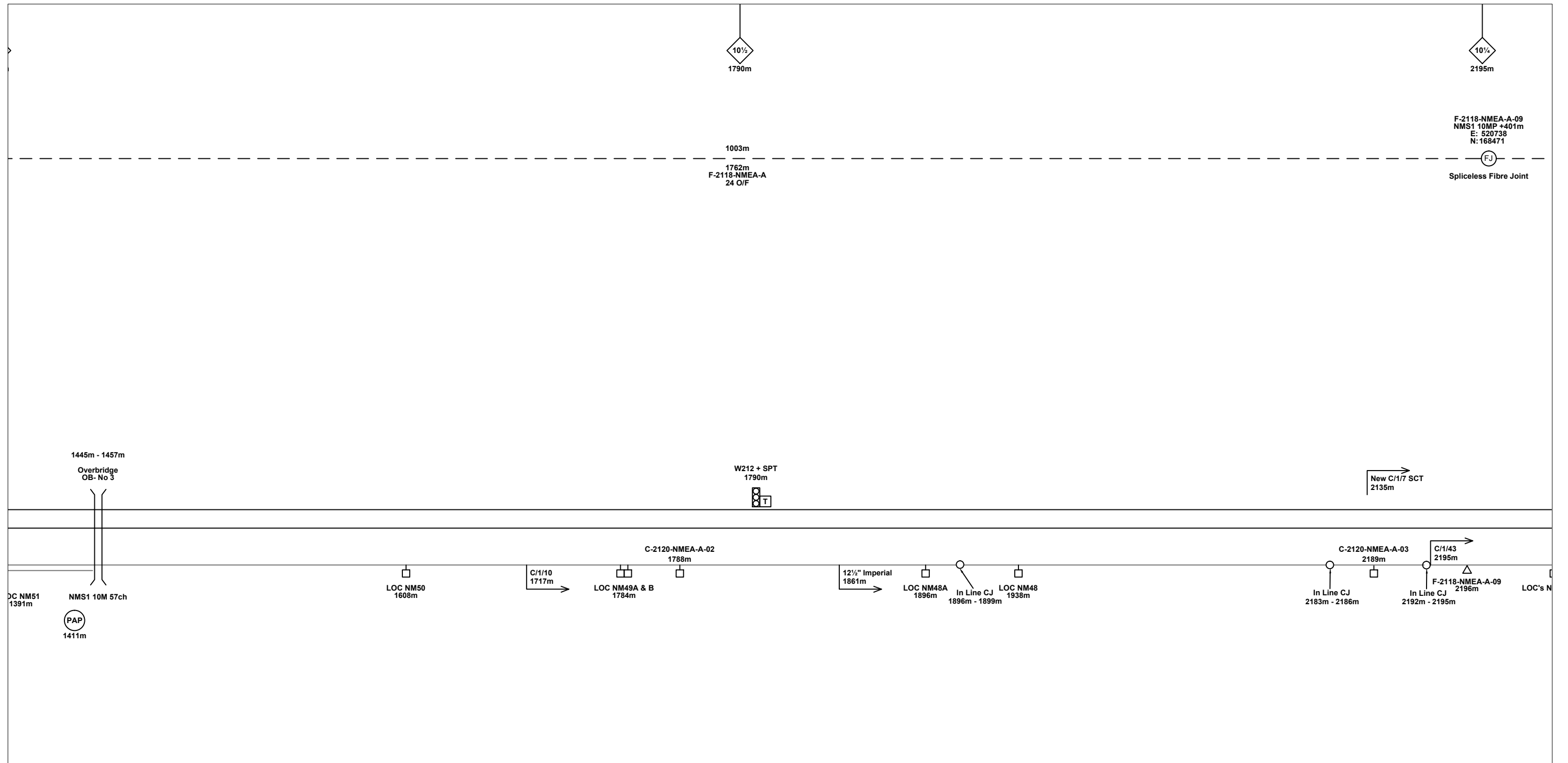
FTN/GSM-R Project
Tournament House
Paddington
London
W2 1HA

Alternative Reference: See Layout Tab 841 x 297 Sheet 1

Sheet: 2 of 5

Drawing Number: NTPO\SLD\2120\6179\001

Revision: C



Notes

Rev	Date	Description of Revisions	Drawn	Chkd	Appr
C	21-03-13	As Built	RM	JH	IA
B	05-11-09	Amended Issue	MT	AEL	SW
DA	18-08-08	1st Issue	MT	AEL	SW

Contractor(s)

Status: **As Built**

Scale(s): NTS

ELR & Mileage: NMS1

Designed	Alan Littlefair	Sign.	Date	18-08-08
Drawn	Michal Taraj	Sign.	Date	18-08-08
Checked	Alan Littlefair	Sign.	Date	18-08-08
Approved	Steve Witt	Sign.	Date	18-08-08
Project	FTN / GSM-R Project Stage 2			
Drawing Title	Norbiton (2120) to New Malden Junction (6179)			

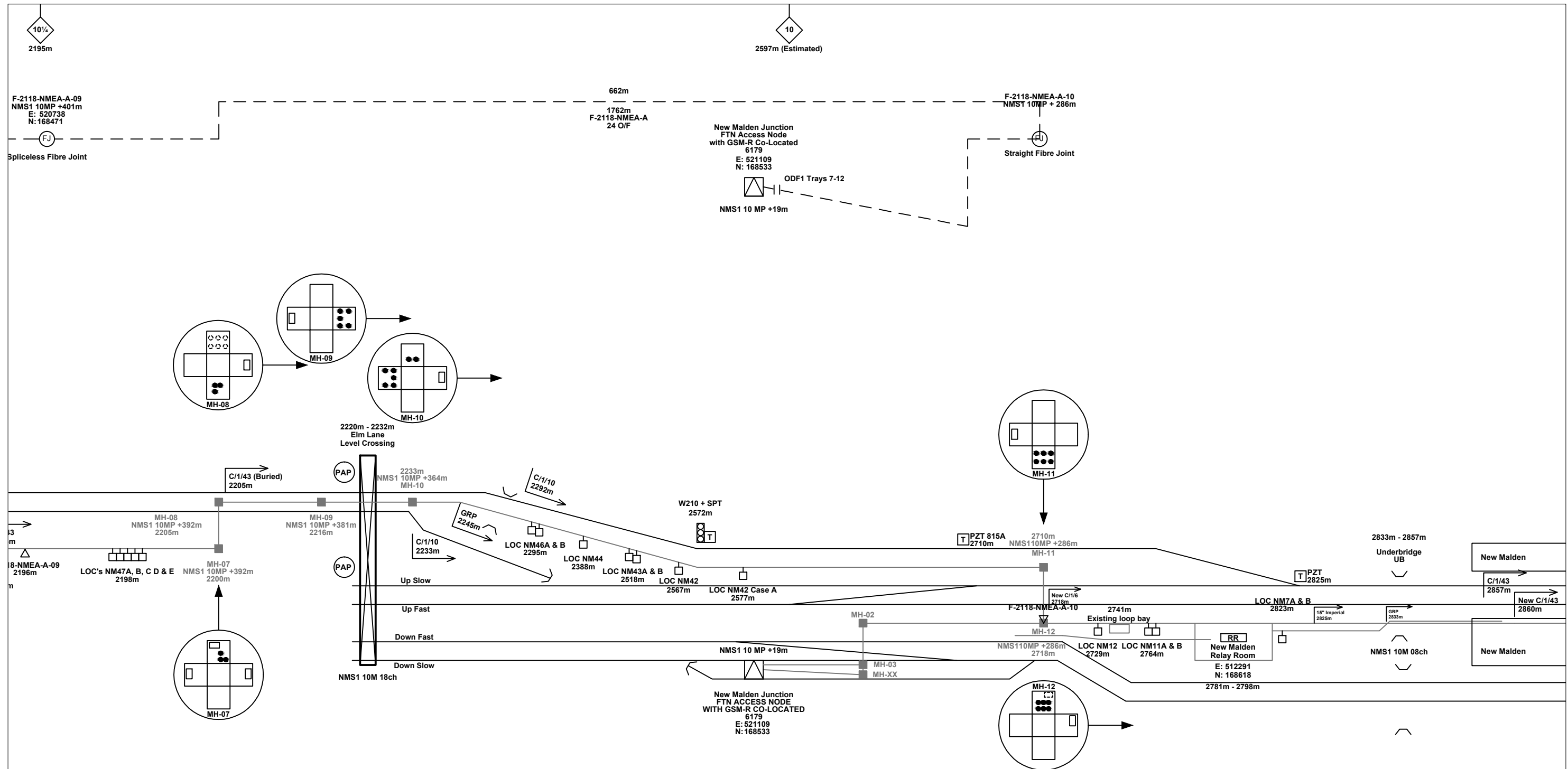
FTN/GSM-R Project
Tournament House
Paddington
London
W2 1HA

Alternative Reference: See Layout Tab 841 x 297 Sheet 2

Drawing Number: NTPO\SLD\2120\6179\001

Sheet: 3 of 5

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	Copper Cable	Electrical Control Room	Core Node with GSM-R Colocated	Copper Joint Routeworks	Underbridge	Vehicle Access Point	Mile Post	Gantry	HV Cable
523m Cable Description Copper	Screening Conductor Joint with/without Earth	Fibre Cable	Manhole	FTN Access Node	Cabinet Routeworks		Pedestrian Access Point	Platform	Sewer	LV Cable
2034m Cable Description Fibre	Screening Conductor	Screening Conductor	Mid Length Sheath Gap Fibre	FTN Access Node with GSM-R Colocated	Fibre Joint Routeworks			Telephone	Water	AC Stanchion

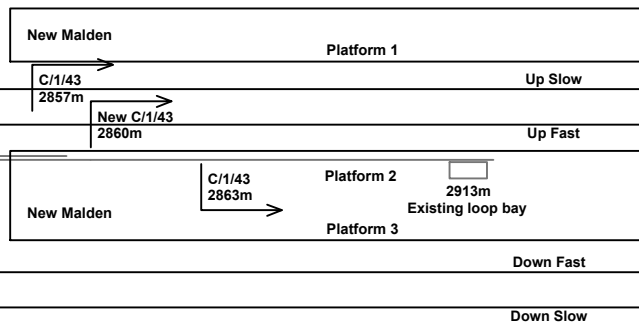
Contractor(s)	Linbrooke Total Network Solutions				
Status	As Built				
Scale(s)	NTS				
Rev	Date	Description of Revisions	Drawn	Chkd	Appr
C	21-03-13	As Built	RM	JH	IA
B	05-11-09	Amended Issue	MT	AEL	SW
DA	18-08-08	1st Issue	MT	AEL	SW

Designed	Alan Littlefair	Sign.		Date	18-08-08
Drawn	Michal Taraj	Sign.		Date	18-08-08
Checked	Alan Littlefair	Sign.		Date	18-08-08
Approved	Steve Witt	Sign.		Date	18-08-08
Project	FTN / GSM-R Project Stage 2				
Drawing Title	Norbiton (2120) to New Malden Junction (6179)				
Alternative Reference	See Layout Tab 841 x 297 Sheet 2				
Drawing Number	NTPO\SLD\2120\6179\001				
Revision	C				

Contractor(s)	Linbrooke Total Network Solutions				
Status	As Built				
Scale(s)	NTS				
Rev	Date	Description of Revisions	Drawn	Chkd	Appr
C	21-03-13	As Built	RM	JH	IA
B	05-11-09	Amended Issue	MT	AEL	SW
DA	18-08-08	1st Issue	MT	AEL	SW

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

Sheet 4 of 5



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	HV	LV	SEW	TEL	Water
Cabinet with Regenerator and Verts	Fibre Joint	Copper Cable	Electrical Control Room	Core Node with GSM-R Colocated	Copper Joint Routeworks	Underbridge	Vehicle Access Point	Mile Post	Gantry	Copper Blue Fibre Red Screen Green	AC Stanchion				
523m Cable Description Copper	1988m Cable Description Fibre	484m Cable Description Fibre	Manhole	FTN Access Node	Cabinet Routeworks	Tunnel	Pedestrian Access Point	Platform							
540m C-DIDC-RGAC-A 30PR/0.63mm	2034m F-DIDC-RGAC-A 24 Optic Fibre	492m 218435-517828/314821-519242 150sq mm 19/3.25mm	Mid Length Sheath Gap Fibre	FTN Access Node with GSM-R Colocated	Fibre Joint Routeworks	Earth Farm	Buffer Stop	Telephone							
Screening Conductor Joint with/without Earth	Screening Conductor	Cable Description Screening Conductor	Sheath Gap Copper												

Manhole details:
 Green - To be used
 Red - In use
 Clear - Empty

Notes

Rev	Date	Description of Revisions	Drawn	Chkd	Appr
C	21-03-13	As Built	RM	JH	IA
B	05-11-09	Amended Issue	MT	AEL	SW
DA	18-08-08	1st Issue	MT	AEL	SW

Contractor(s)

Status: **As Built**

Scale(s): NTS

ELR & Mileage: NMS1

Designed	Alan Littlefair	Sign.	Date	18-08-08
Drawn	Michal Taraj	Sign.	Date	18-08-08
Checked	Alan Littlefair	Sign.	Date	18-08-08
Approved	Steve Witt	Sign.	Date	18-08-08
Project	FTN / GSM-R Project Stage 2			
Drawing Title	Norbiton (2120) to New Malden Junction (6179)			

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

Alternative Reference: See Layout Tab 841 x 297 Sheet 3

Drawing Number: NTPO\SLD\2120\6179\001

Sheet: 5 of 5

Revision: C