

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		HV Cable		LV Cable		Sewer		Telecoms		Water
	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		Copper Pull		Mast		Platform		Buffer Stop		Telephone		Earth Form
	KEY		Existing Fibre Cable		Existing Copper Cable		Existing Screen Cable		Manhole		Mid Length Sheath Gap Fibre		Sheath Gap Copper		Tunnel		Platform		Telephone		Cable Pull		Mast		Platform		Buffer Stop		Telephone		Earth Form		

Notes

Rev	Date	Description of Revisions	Drawn	Chkd	Appr
B	15/02/13	Stage 2 As-Built	DS	RP	CT
AB1	04/04/11	As-Built	AB	DP	PP
A	13/10/08	Amended Issue		AEL	
DA	19/05/08	First Issue		AEL	

Contractor(s)

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

As-Built

Scale(s): ELR & Mileage
RDG2, RNJ, MLN1, BKE, RWC

Drawn	Sign.	Date
Deborah Stubbs		15/02/2013
Checked	Sign.	Date
Robert Pugh		15/02/2013
Approved	Sign.	Date
Chris Tappenden		15/02/2013

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

Drawing Title
Winnersh Triangle Station (2404) to Reading (RGAC)

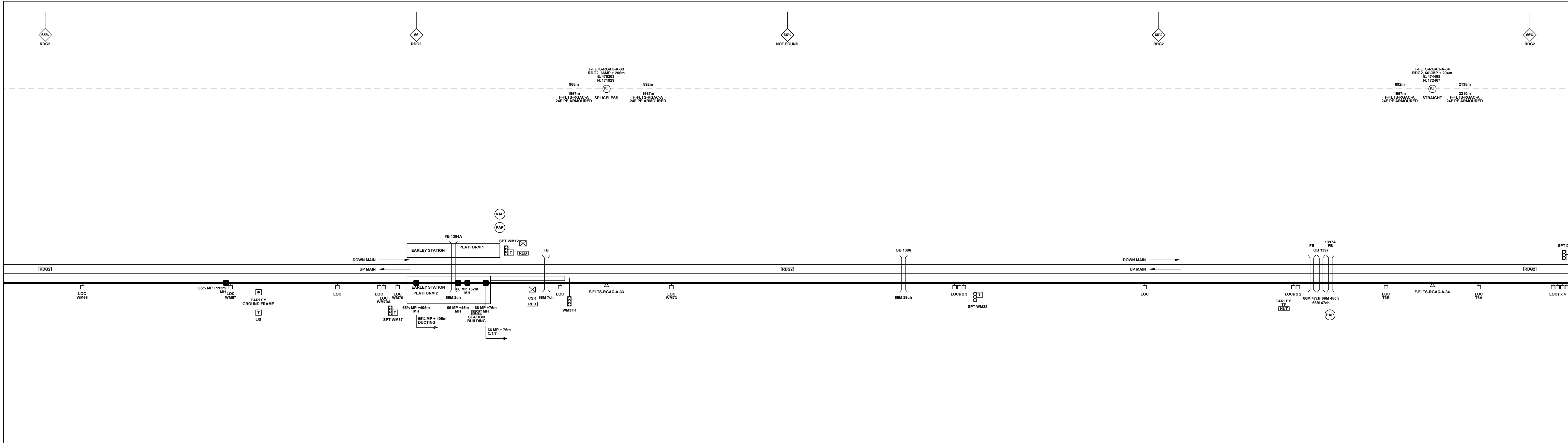
Network Rail

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

Alternative Reference: See Layout Tab A3 Sheets 1 and 2

Drawing Number: NTPO\SLD\2404\RGAC\001

Sheet 1 of 6
Revision B



Legend

- Cabinet and Verts**: DC, DC
- Cabinet with Regenerator and Verts**: DC, DC
- Copper Joint**: (Symbol)
- Fibre Joint**: (Symbol)
- Screening Conductor Joint with/without Earth**: (Symbol)
- Trough Duct Cable Tray**: (Symbol)
- Cable - Type Identified by FTN Code**: (Symbol)
- Status - as per Key Below**: (Symbol)
- Manhole**: (Symbol)
- Mid Length Sheath Gap Fibre**: (Symbol)
- Sheath Gap Copper**: (Symbol)
- Signal Box**: (Symbol)
- Electrical Control Room**: (Symbol)
- FTN Core Node**: (Symbol)
- Core Node with GSM-R Colocated**: (Symbol)
- FTN Access Node**: (Symbol)
- FTN Access Node with GSM-R Colocated**: (Symbol)
- Screen Joint Routeworks**: (Symbol)
- Copper Joint Routeworks**: (Symbol)
- Cabinet Routeworks**: (Symbol)
- Fibre Joint Routeworks**: (Symbol)
- Manhole details: Cross-To be used Filled-In use Clear-Empty**: (Symbol)
- Overbridge**: (Symbol)
- Underbridge**: (Symbol)
- Earth Form**: (Symbol)
- Signal**: (Symbol)
- Vehicle Access Point**: (Symbol)
- Pedestrian Access Point**: (Symbol)
- Platform**: (Symbol)
- Telephone**: (Symbol)
- Engineer's Line Reference**: (Symbol)
- Mile Post**: (Symbol)
- Gas Line**: (Symbol)
- HV Cable**: (Symbol)
- LV Cable**: (Symbol)
- Sewer**: (Symbol)
- Telecoms**: (Symbol)
- Water**: (Symbol)
- Copper Blue Fibre Red Screen Green**: (Symbol)
- Mast**: (Symbol)

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
- All Existing Elements are shown in BLACK
- Existing Fibre Cable
- Existing Copper Cable
- Existing Screen Cable

Notes

Rev	Date	Description of Revisions	Drawn	Chkd	Appr
B	15/02/13	Stage 2 As-Built	DS	RP	CT
AB1	04/04/11	As-Built	AB	DP	PP
A	13/10/08	Amended Issue		AEL	
DA	19/05/08	First Issue		AEL	

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

Contractor(s)

As-Built

ELR & Mileage
RDG2, RNJ, MLN1, BKE, RWC

Drawn	Checked	Approved	Project	Designated	Sign.	Date
Deborah Stubbs	Robert Pugh	Chris Tappenden	FTN/GSM-R Project Stage 2 As-Built			15/02/2013

Winnersh Triangle Station (2404) to Reading (RGAC)

Network Rail

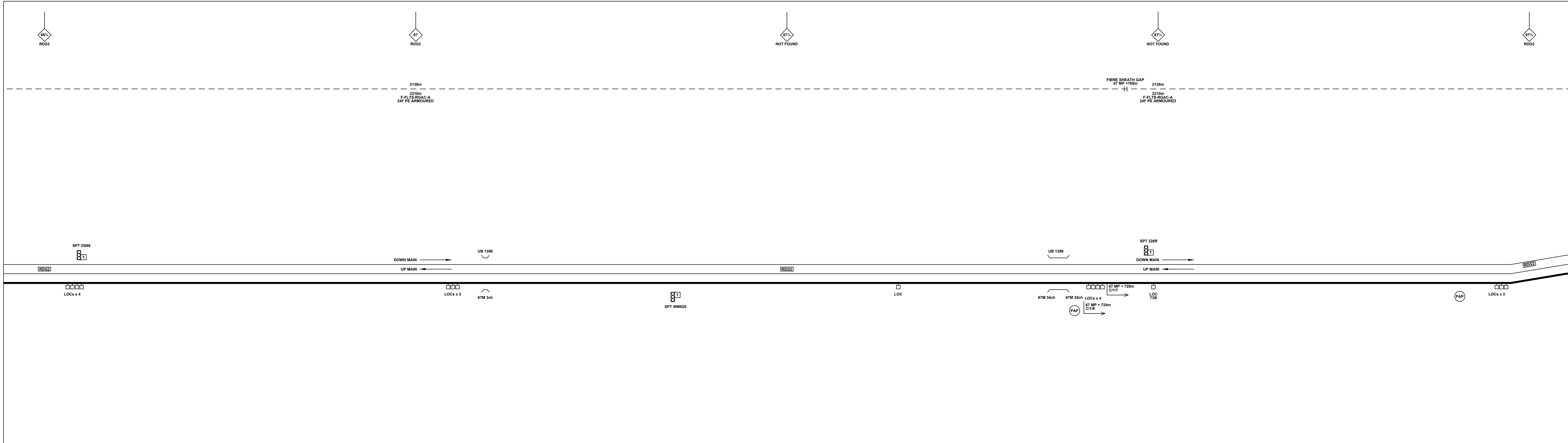
FTN/GSM-R Project
Tournament House
Passington
London
W2 1HA

Alternative Reference
See Layout Tab A3 Sheets 3 and 4

Drawing Number
NTPO\SLD\2404\RGAC\001

Sheet
2 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	GAS — GAS — 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	VAP 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	Earth Form	PAP Pedestrian Access Point	Platform	LV — LV — LV Cable
	F-DIDC-RGAC-A	Sheath Gap Copper	FTN Access Node with GSM-R Colocated	Fibre Joint Routeworks	Fibre Pull	Buffer Stop	Telephone	Cable Pull	Mast	SEW — SEW — Sewer
										TEL — TEL — Telecoms
										W — W — Water

Notes

Rev	Date	Description of Revisions	Drawn	Chkd	Appr
B	15/02/13	Stage 2 As-Built	DS	RP	CT
AB1	04/04/11	As-Built	AB	DP	PP
A	13/10/08	Amended Issue		AEL	
DA	19/05/08	First Issue		AEL	
Rev	Date	Description of Revisions	Drawn	Chkd	Appr

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

As-Built
ELR & Mileage
RDG2, RNJ, MLN1, BKE, RWC

Designed	Sign.	Date
Drawn	Deborah Stubbs	15/02/2013
Checked	Robert Pugh	15/02/2013
Approved	Chris Tappenden	15/02/2013
Project	FTN/GSM-R Project Stage 2 As-Built	
Drawing Title	Winnersh Triangle Station (2404) to Reading (RGAC)	

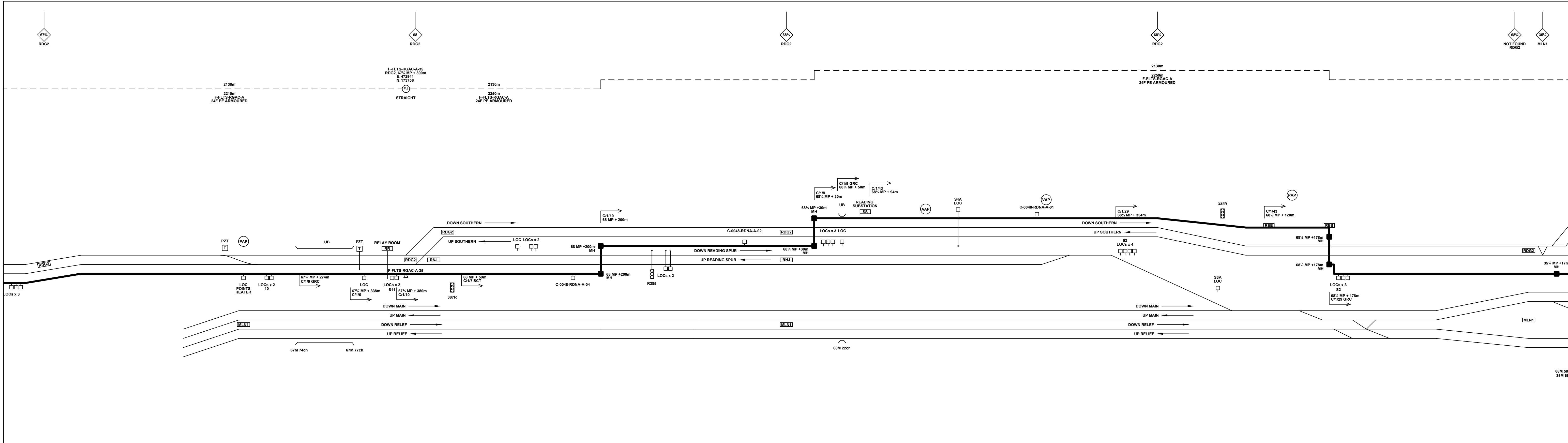
Network Rail

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

Alternative Reference: See Layout Tab A3 Sheets 5 and 6

Drawing Number: NTPO\SLD\2404\RGAC\001

Sheet 3 of 6
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		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		2034m F-DIDC-RGAC-A		Existing Fibre Cable		Sheath Gap Copper		FTN Access Node with GSM-R Colocated		Fibre Joint Routeworks		Crossing		Buffer Stop		Cable Pull		Telephone
	KEY: Proposed Screening Elements are shown in MAGENTA		Existing Copper Cable		Existing Screen Cable		Gas Line		HV Cable		LV Cable		Sewer		Telecoms		Water		Mast

Notes

Rev	Date	Description of Revisions	Drawn	Chkd	Appr
B	15/02/13	Stage 2 As-Built	DS	RP	CT
AB1	04/04/11	As-Built	AB	DP	PP
A	13/10/08	Amended Issue	AEL		
DA	19/05/08	First Issue	AEL		
Rev	Date	Description of Revisions	Drawn	Chkd	Appr

Contractor(s)

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

As-Built

ELR & Mileage
RDG2, RNJ, MLN1, BKE, RWC

Drawn	Checked	Approved	Project	Design	Sign.	Date
Deborah Stubbs	Robert Pugh	Chris Tappenden	FTN/GSM-R Project Tournament House Passington W2 1HA			15/02/2013

FTN/GSM-R Project Stage 2 As-Built

Winnersh Triangle Station (2404) to Reading (RGAC)

Network Rail

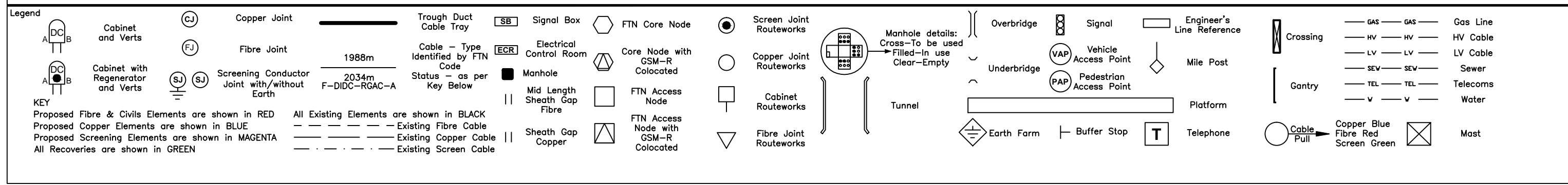
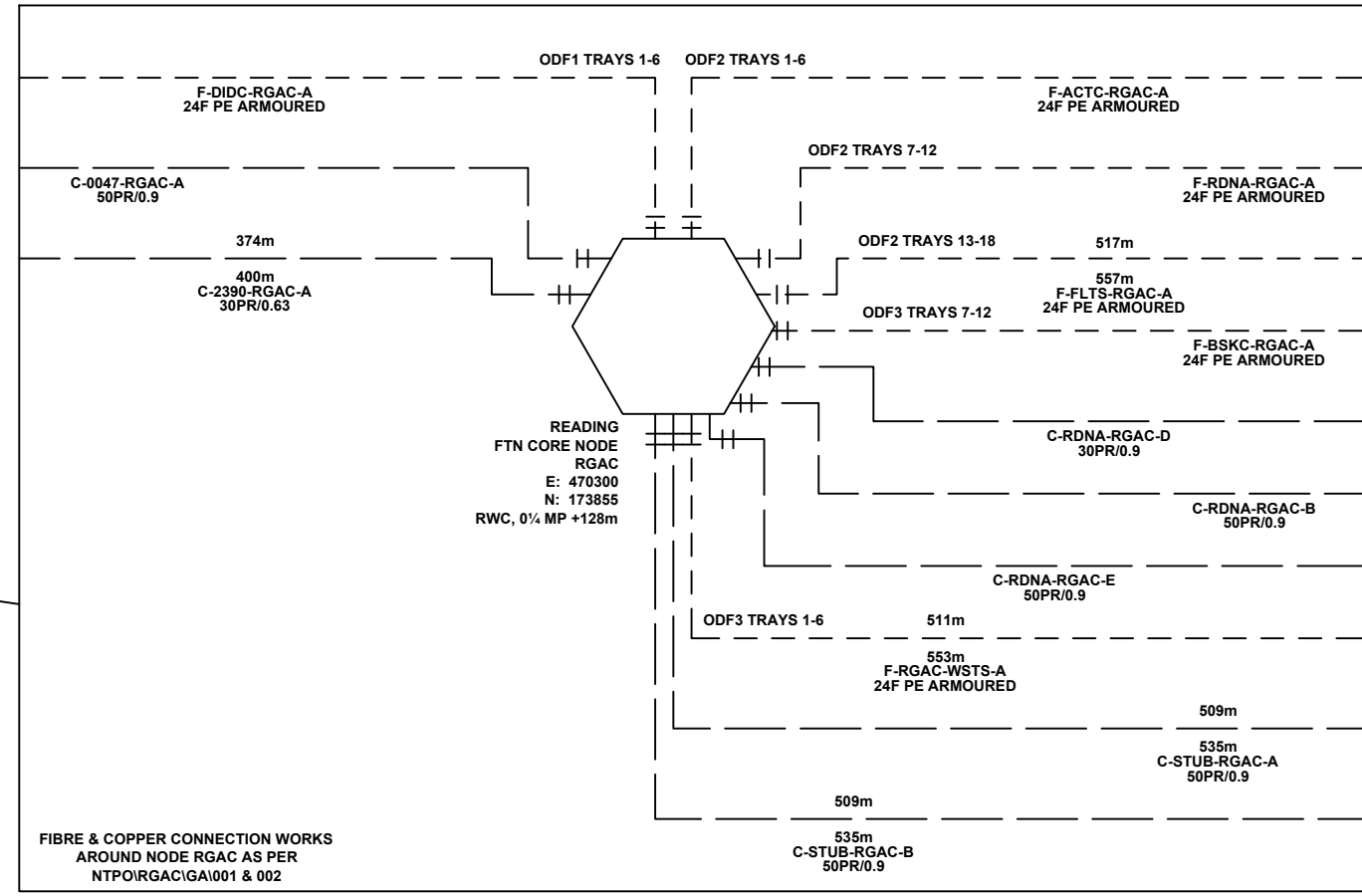
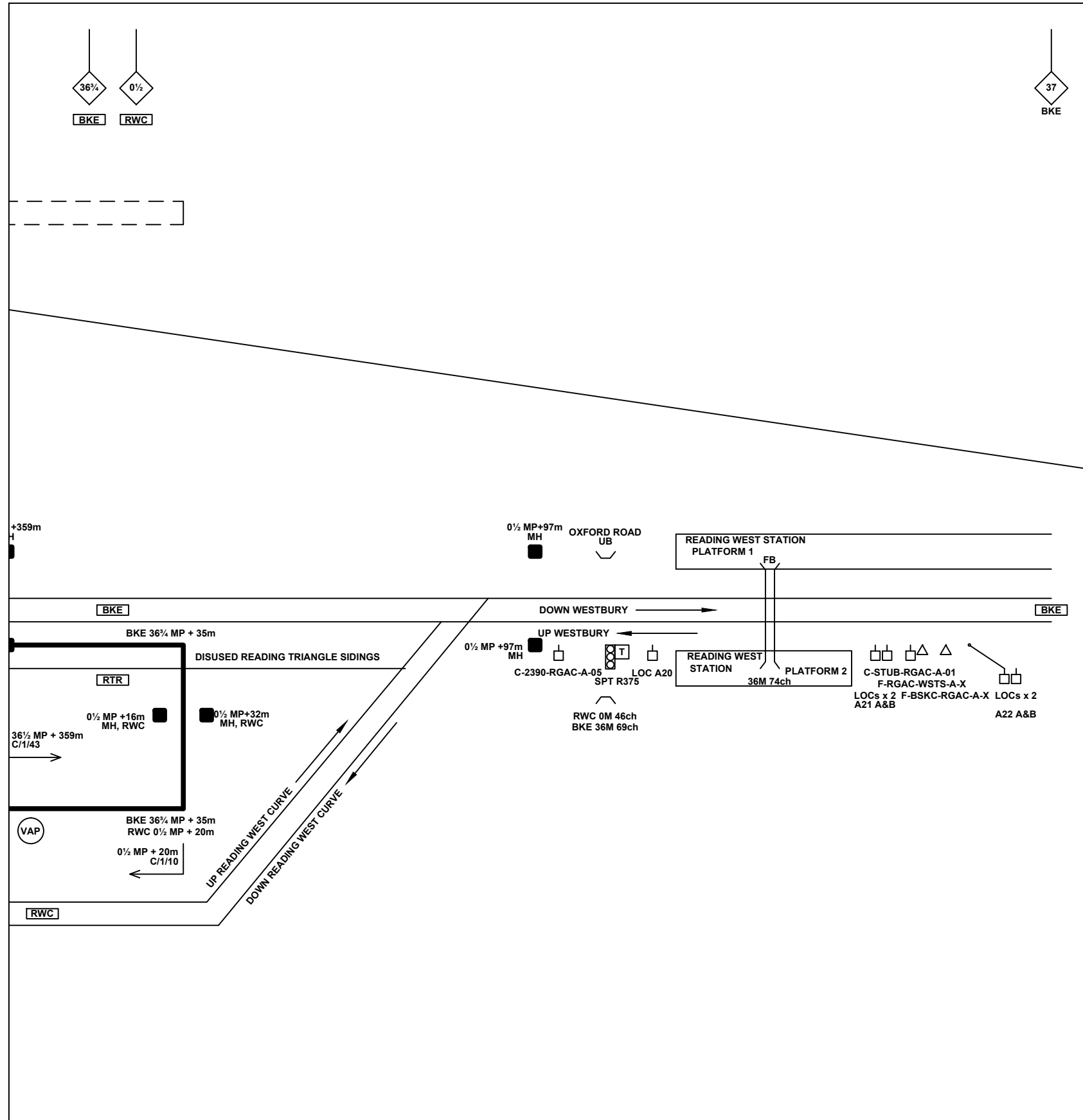
Alternative Reference: See Layout Tab A3 Sheets 7 and 8

Drawing Number: NTPO\SLD\2404\RGAC\001

Sheet: 4 of 6

Revision: B

Sheet Size 841x297



Notes

Rev	Date	Description of Revisions	Drawn	Chkd	Appr
B	15/02/13	Stage 2 As-Built	DS	RP	CT
AB1	04/04/11	As-Built	AB	DP	PP
A	13/10/08	Amended Issue		AEL	
DA	19/05/08	First Issue		AEL	
Rev	Date	Description of Revisions	Drawn	Chkd	Appr

Contractor(s)

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

Scale(s)
ELR & Mileage
RDG2, RNJ, MLN1, BKE, RWC

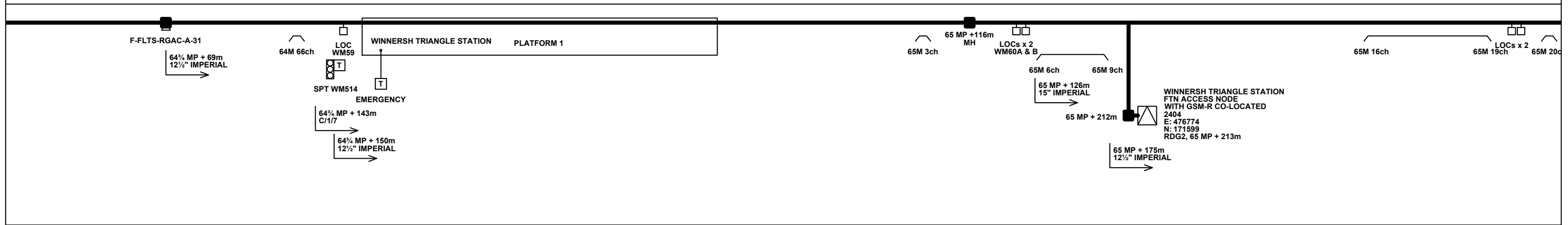
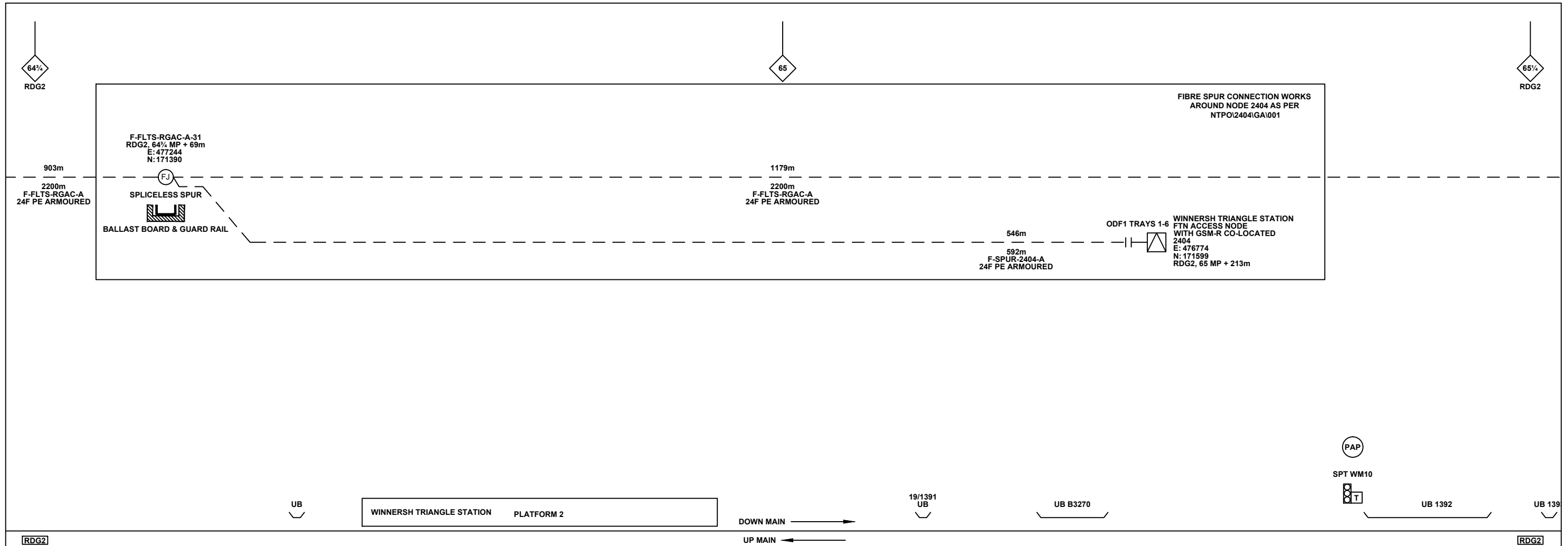
Drawn	Checked	Approved	Project	Designated	Sign.	Date
Deborah Stubbs	Robert Pugh	Chris Tappenden	FTN/GSM-R Project Tournament House Reading London W2 1HA			15/02/2013
			Winnersh Triangle Station (2404) to Reading (RGAC)			15/02/2013

Network Rail

Alternative Reference: See Layout Tab A3 Sheet 11

Drawing Number: NTPO\SLD\2404\RGAC\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 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
All Existing Elements are shown in BLACK	Existing Fibre Cable	Sheath Gap Copper	FTN Access Node with GSM-R Colocated	Fibre Joint Routeworks	Earth Farm	Buffer Stop	Telephone	Water	Cable Pull	Mast

Notes

B	15/02/13	Stage 2 As-Built	DS	RP	CT
AB1	04/04/11	As-Built	AB	DP	PP
A	13/10/08	Amended Issue		AEL	
DA	19/05/08	First Issue		AEL	
Rev	Date	Description of Revisions	Drawn	Chkd	Appr

Contractor(s)

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

Status: **As-Built**

Scale(s): NTS

ELR & Mileage: RDG2, RNJ, MLN1, BKE, RWC

Designed		Sign.		Date	
Drawn	Deborah Stubbs	Sign.		Date	15/02/2013
Checked	Robert Pugh	Sign.		Date	15/02/2013
Approved	Chris Tappenden	Sign.		Date	15/02/2013
Project	FTN/GSM-R Project Stage 2 As-Built				
Drawing Title	Winnersh Triangle Station (2404) to Reading (RGAC)				

Network Rail

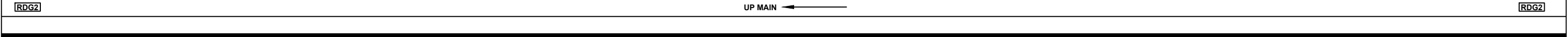
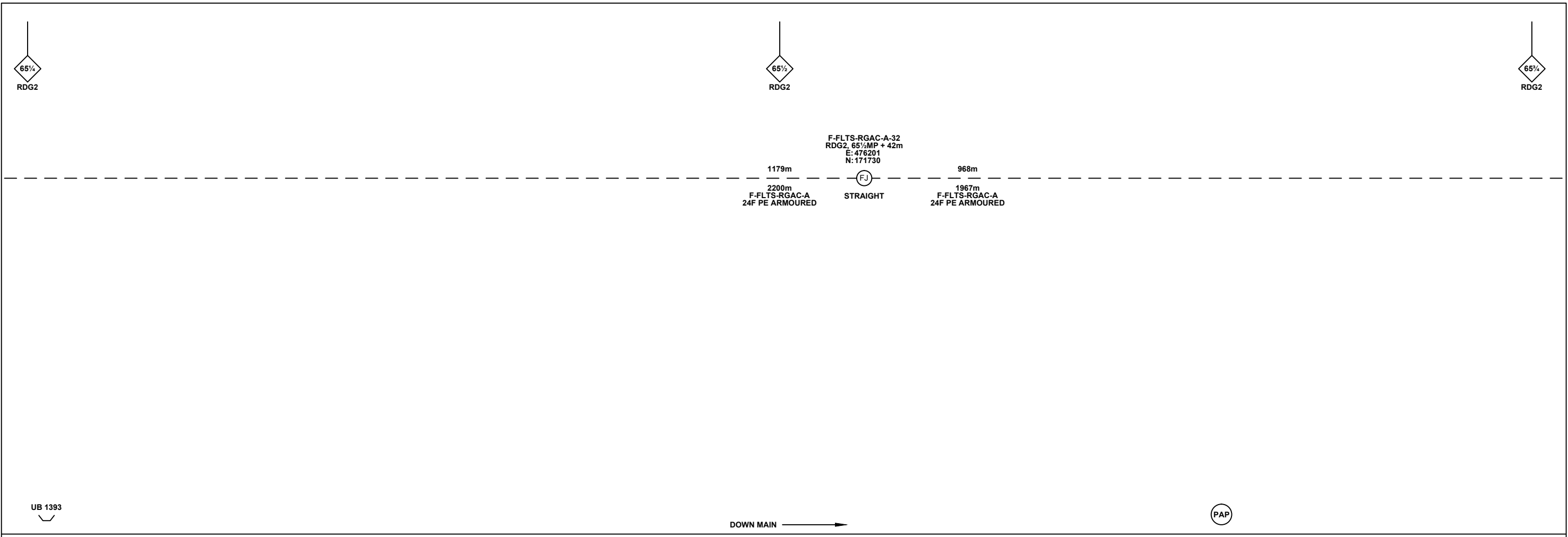
FTN/GSM-R Project
Tournament House
Paddington
London
W2 1HA

Alternative Reference: See Layout Tab 841 x 297 Sheet 1

Drawing Number: NTPO\SLD\2404\RGAC\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	Manhole	Vehicle Access Point	Mile Post	Sewer	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	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	LV Cable
	Existing Fibre Cable	Existing Copper Cable	Sheath Gap Copper	FTN Access Node with GSM-R Colocated	Fibre Joint Routeworks	Tunnel	Earth Farm	Gantry	Sewer	Water
	Existing Screen Cable						Buffer Stop	Telephone	Cable Pull	Mast

Notes

Rev	Date	Description of Revisions	Drawn	Chkd	Appr
B	15/02/13	Stage 2 As-Built	DS	RP	CT
AB1	04/04/11	As-Built	AB	DP	PP
A	13/10/08	Amended Issue		AEL	
DA	19/05/08	First Issue		AEL	

Contractor(s)

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

Status: **As-Built**

Scale(s): NTS

ELR & Mileage: RDG2, RNJ, MLN1, BKE, RWC

Designed		Sign.		Date	
Drawn	Deborah Stubbs	Sign.		Date	15/02/2013
Checked	Robert Pugh	Sign.		Date	15/02/2013
Approved	Chris Tappenden	Sign.		Date	15/02/2013
Project	FTN/GSM-R Project Stage 2 As-Built				
Drawing Title	Winnersh Triangle Station (2404) to Reading (RGAC)				

Network Rail

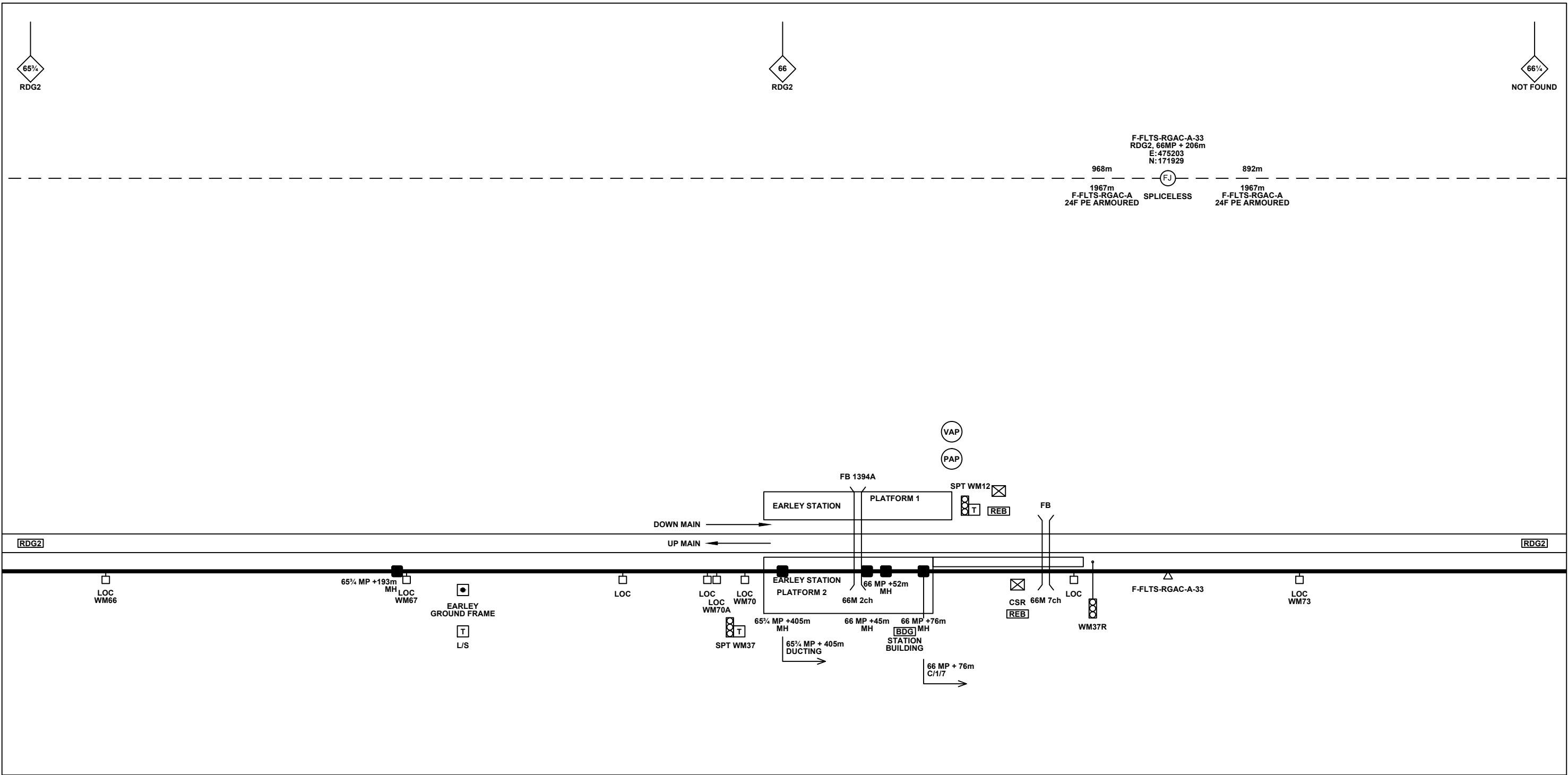
FTN/GSM-R Project
Tournament House
Paddington
London
W2 1HA

Alternative Reference: See Layout Tab 841 x 297 Sheet 1

Drawing Number: NTPO\SLD\2404\RGAC\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	Gantry	Water	Mast

Notes

Rev	Date	Description of Revisions	Drawn	Chkd	Appr
B	15/02/13	Stage 2 As-Built	DS	RP	CT
AB1	04/04/11	As-Built	AB	DP	PP
A	13/10/08	Amended Issue		AEL	
DA	19/05/08	First Issue		AEL	

Contractor(s)

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

Status: **As-Built**

Scale(s): NTS

ELR & Mileage: RDG2, RNJ, MLN1, BKE, RWC

Designed		Sign.		Date	
Drawn	Deborah Stubbs	Sign.		Date	15/02/2013
Checked	Robert Pugh	Sign.		Date	15/02/2013
Approved	Chris Tappenden	Sign.		Date	15/02/2013
Project	FTN/GSM-R Project Stage 2 As-Built				
Drawing Title	Winnersh Triangle Station (2404) to Reading (RGAC)				

Network Rail

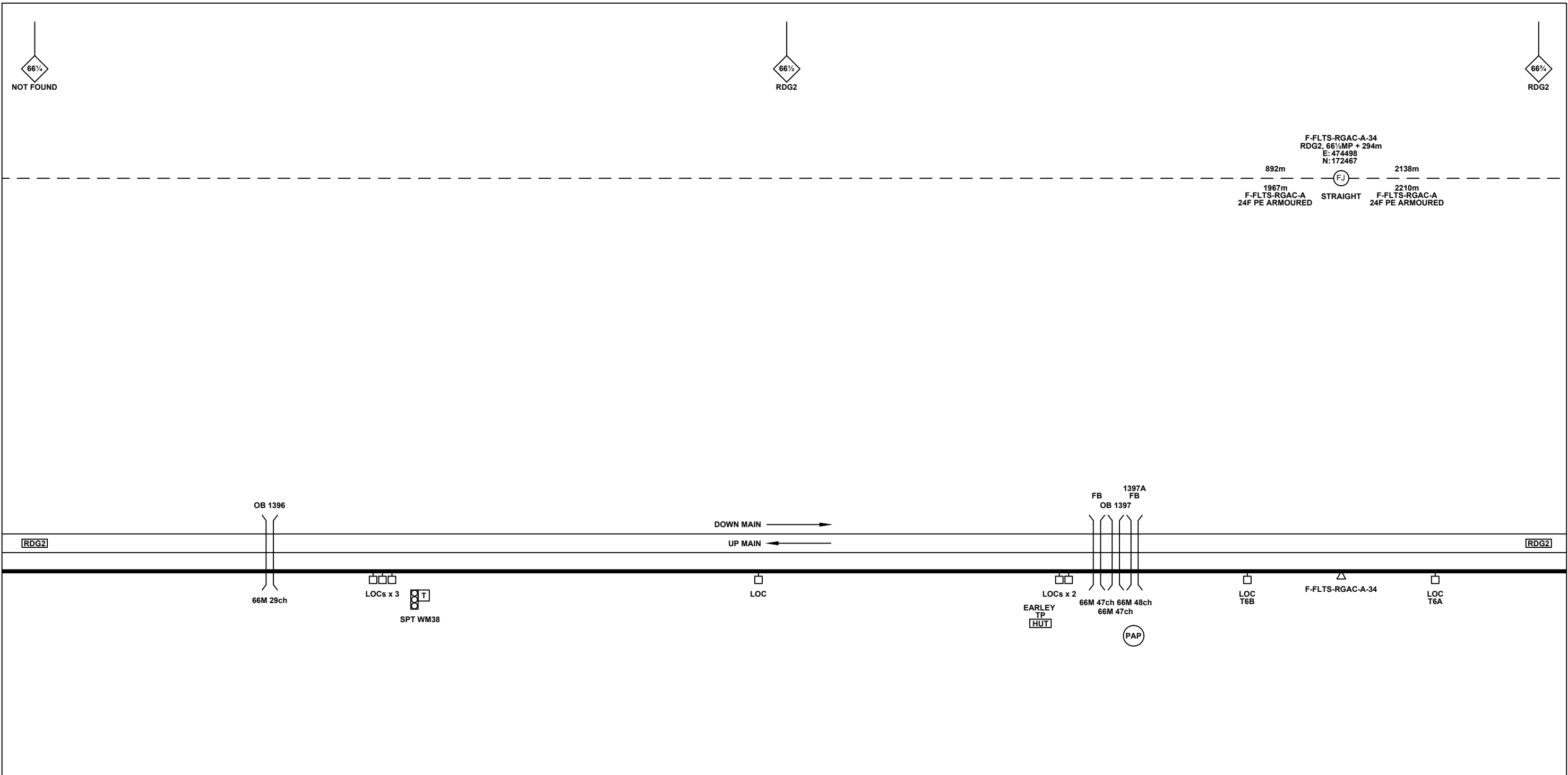
FTN/GSM-R Project
Tournament House
Paddington
London
W2 1HA

Alternative Reference: See Layout Tab 841 x 297 Sheet 2

Drawing Number: NTPO\SLD\2404\RGAC\001

Sheet: 3 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	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	Sheath Gap Copper	Pedestrian Access Point	Platform	LV Cable	Telecoms
	1988m F-DIDC-RGAC-A	Manhole	FTN Access Node with GSM-R Colocated	Fibre Joint Routeworks	Tunnel	Earth Farm	Buffer Stop	Telephone	Water	Cable Pull

Contractor(s)			
Designed		Sign.	Date
Drawn	Deborah Stubbs	Sign.	15/02/2013
Checked	Robert Pugh	Sign.	15/02/2013
Approved	Chris Tappenden	Sign.	15/02/2013
Project	FTN/GSM-R Project Stage 2 As-Built		
Drawing Title	Winnersh Triangle Station (2404) to Reading (RGAC)		
Alternative Reference	See Layout Tab 841 x 297 Sheet 2		Sheet 4 of 11
Drawing Number	NTPO\SLD\2404\RGAC\001		Revision B

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

As-Built

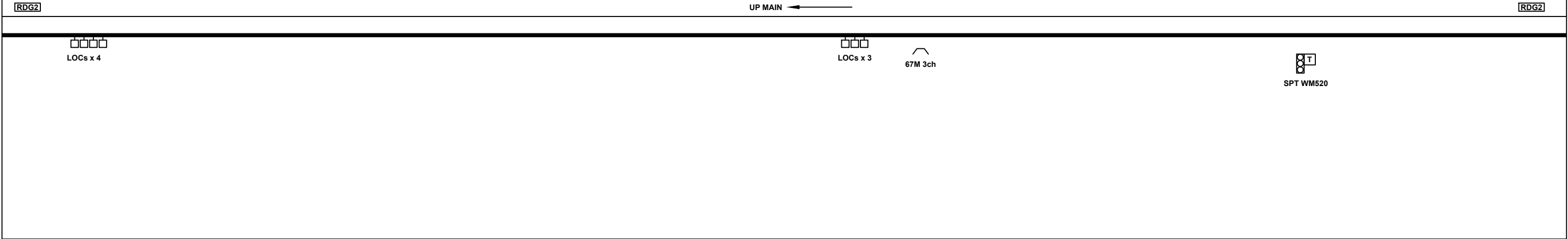
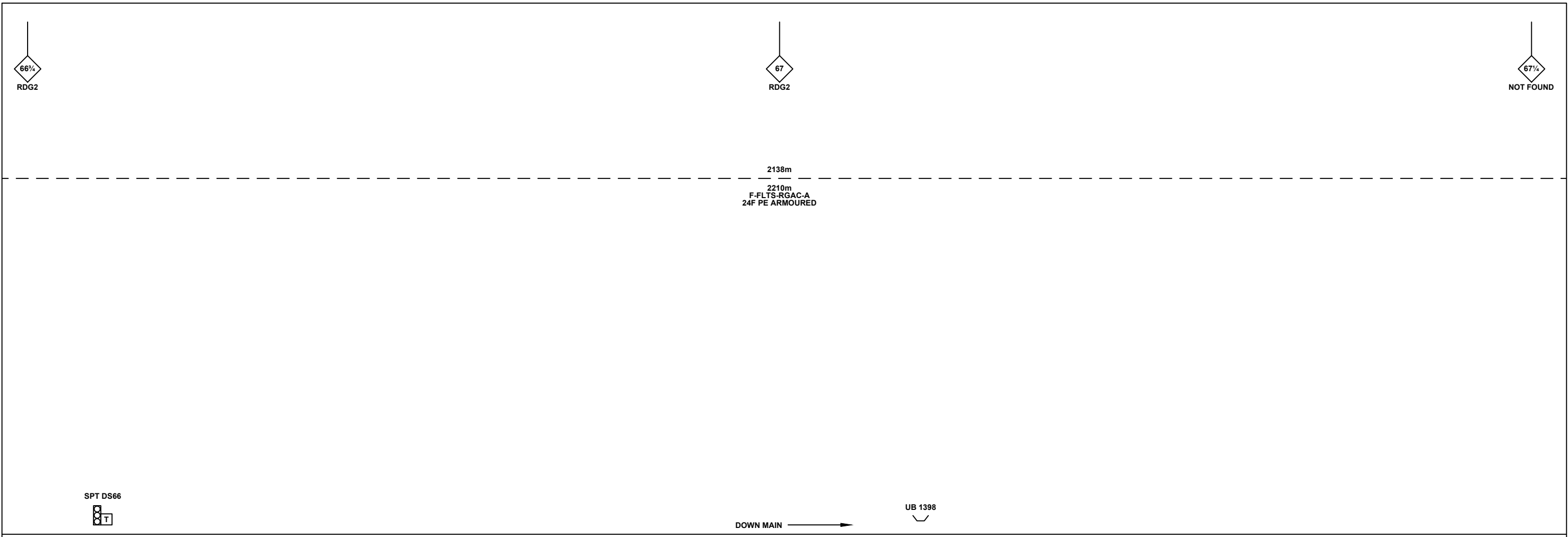
Scale(s) NTS

ELR & Mileage RDG2, RNJ, MLN1, BKE, RWC

Project	FTN/GSM-R Project Stage 2 As-Built		
Drawing Title	Winnersh Triangle Station (2404) to Reading (RGAC)		
Alternative Reference	See Layout Tab 841 x 297 Sheet 2		Sheet 4 of 11
Drawing Number	NTPO\SLD\2404\RGAC\001		Revision B

Network Rail

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



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	Mast

Notes

Rev	Date	Description of Revisions	Drawn	Chkd	Appr
B	15/02/13	Stage 2 As-Built	DS	RP	CT
AB1	04/04/11	As-Built	AB	DP	PP
A	13/10/08	Amended Issue		AEL	
DA	19/05/08	First 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: RDG2, RNJ, MLN1, BKE, RWC

Designed		Sign.		Date	
Drawn	Deborah Stubbs	Sign.		Date	15/02/2013
Checked	Robert Pugh	Sign.		Date	15/02/2013
Approved	Chris Tappenden	Sign.		Date	15/02/2013
Project	FTN/GSM-R Project Stage 2 As-Built				
Drawing Title	Winnersh Triangle Station (2404) to Reading (RGAC)				

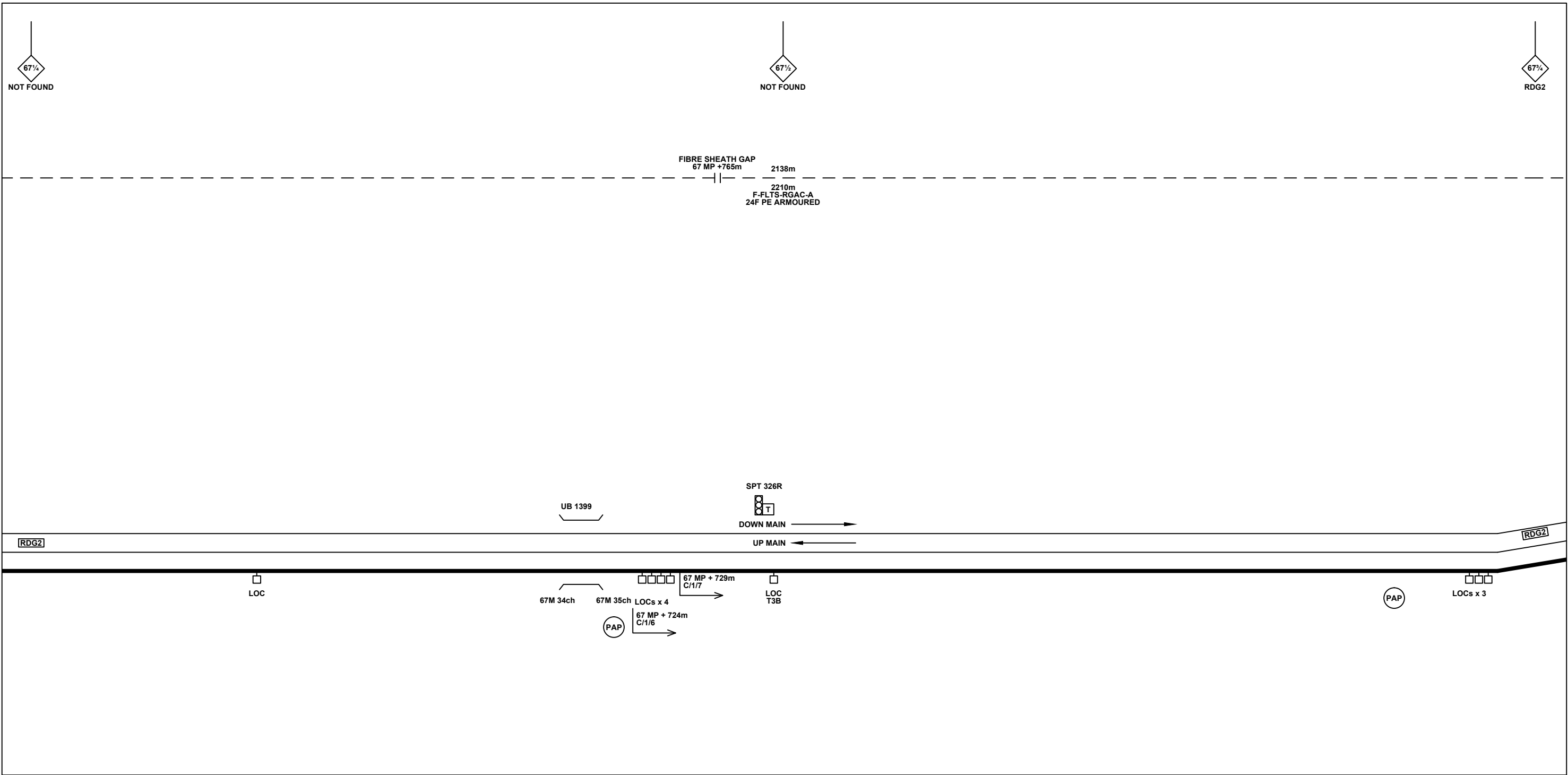
FTN/GSM-R Project
Tournament House
Paddington
London
W2 1HA

Alternative Reference: See Layout Tab 841 x 297 Sheet 3

Drawing Number: NTPO\SLD\2404\RGAC\001

Sheet: 5 of 11

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 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	FTN Access Node	Cabinet Routeworks	Manhole details: Cross-To be used Filled-In use Clear-Empty	Pedestrian Access Point	Platform	Sewer	LV Cable
	Trough Duct Cable Tray	Mid Length Sheath Gap Fibre	FTN Access Node with GSM-R Colocated	Fibre Joint Routeworks	Tunnel	Earth Farm	Buffer Stop	Water	Mast
	Cable - Type Identified by FTN Code Status - as per Key Below	Sheath Gap Copper							

Notes

Rev	Date	Description of Revisions	Drawn	Chkd	Appr
B	15/02/13	Stage 2 As-Built	DS	RP	CT
AB1	04/04/11	As-Built	AB	DP	PP
A	13/10/08	Amended Issue		AEL	
DA	19/05/08	First Issue		AEL	

Contractor(s)

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

Status: **As-Built**

Scale(s): NTS

ELR & Mileage: RDG2, RNJ, MLN1, BKE, RWC

Designed		Sign.		Date	
Drawn	Deborah Stubbs	Sign.		Date	15/02/2013
Checked	Robert Pugh	Sign.		Date	15/02/2013
Approved	Chris Tappenden	Sign.		Date	15/02/2013
Project	FTN/GSM-R Project Stage 2 As-Built				
Drawing Title	Winnersh Triangle Station (2404) to Reading (RGAC)				

Network Rail

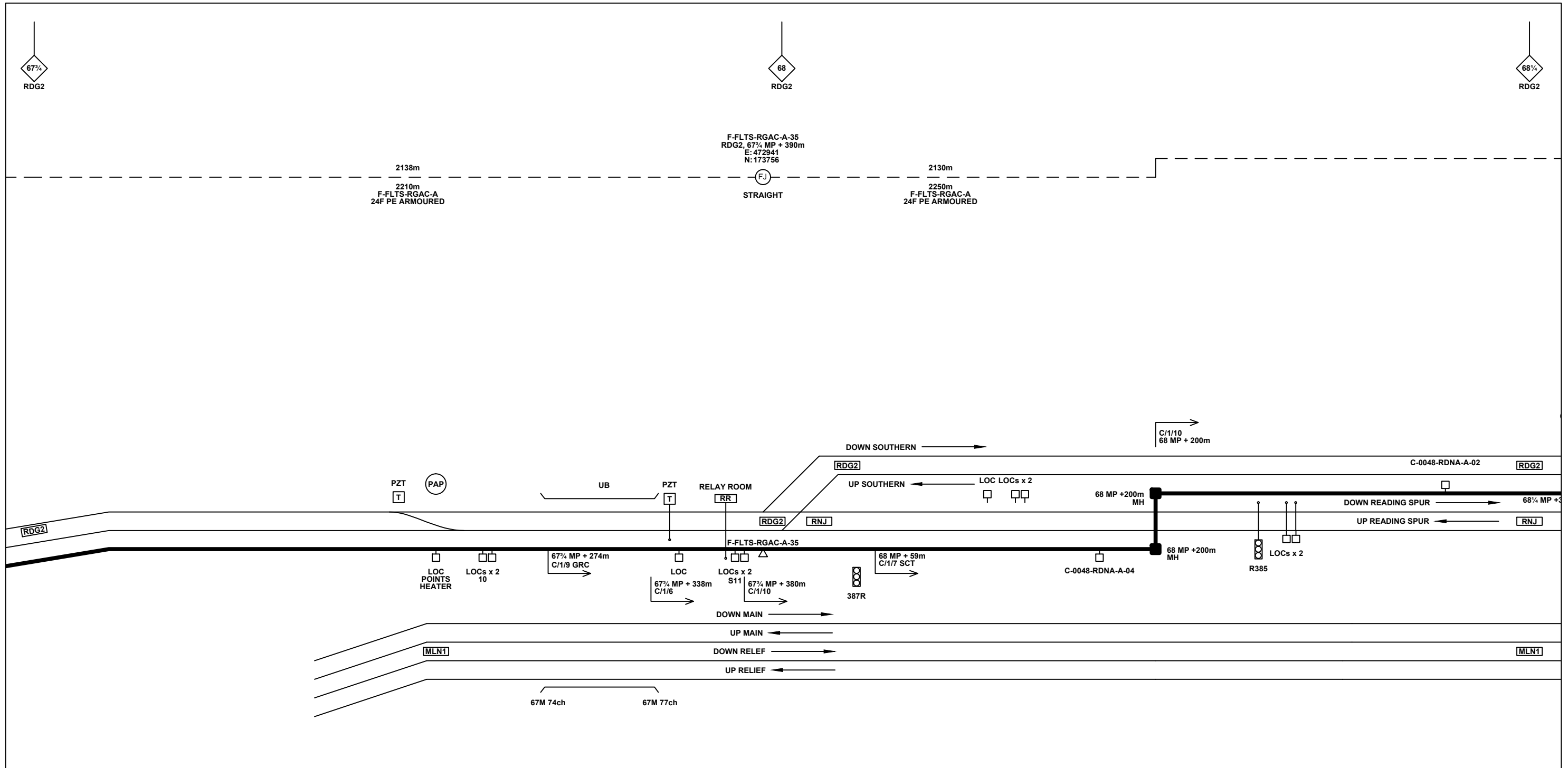
FTN/GSM-R Project
Tournament House
Paddington
London
W2 1HA

Alternative Reference: See Layout Tab 841 x 297 Sheet 3

Drawing Number: NTPO\SLD\2404\RGAC\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	Manhole	Mid Length Sheath Gap Fibre	FTN Access Node	Cabinet Routeworks	Tunnel	Pedestrian Access Point	Platform	Sewer	Telecoms
All Existing Elements are shown in BLACK	Existing Fibre Cable	Sheath Gap Copper	FTN Access Node with GSM-R Colocated	Fibre Joint Routeworks	Earth Farm	Buffer Stop	Telephone	Gantry	Water	Mast

Notes

Rev	Date	Description of Revisions	Drawn	Chkd	Appr
B	15/02/13	Stage 2 As-Built	DS	RP	CT
AB1	04/04/11	As-Built	AB	DP	PP
A	13/10/08	Amended Issue		AEL	
DA	19/05/08	First Issue		AEL	

Contractor(s)

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

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Project	FTN/GSM-R Project Stage 2 As-Built				
Drawing Title	Winnersh Triangle Station (2404) to Reading (RGAC)				

Network Rail

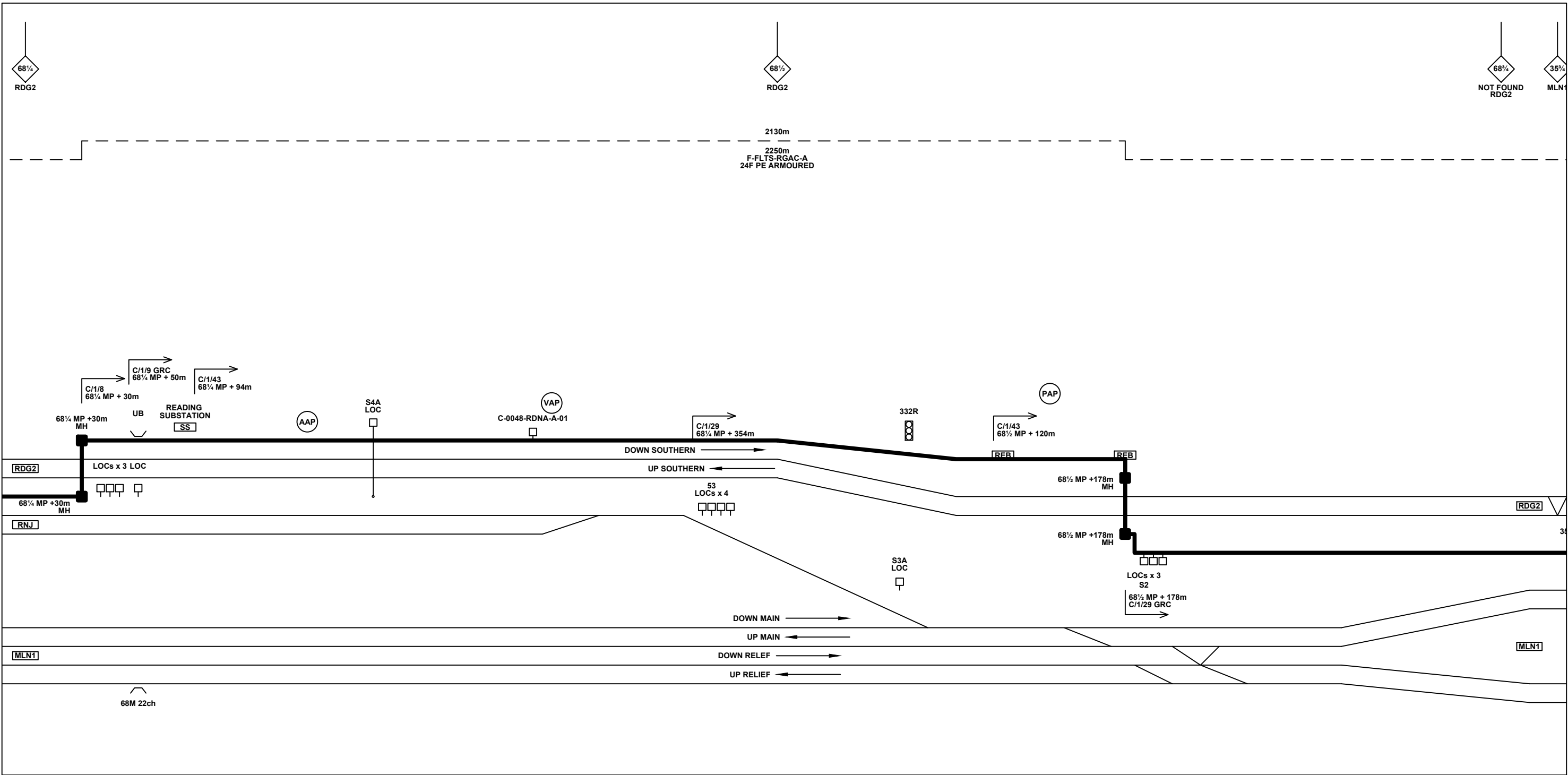
FTN/GSM-R Project
Tournament House
Paddington
London
W2 1HA

Alternative Reference: See Layout Tab 841 x 297 Sheet 4

Sheet: 7 of 11

Drawing Number: NTPO\SLD\2404\RGAC\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 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	Manhole details: Cross-To be used, Filled-In use, Clear-Empty	Pedestrian Access Point	Platform	Sewer	Telecoms
All Existing Elements are shown in BLACK	Status - as per Key Below	Sheath Gap Copper	FTN Access Node with GSM-R Colocated	Fibre Joint Routeworks	Tunnel	Earth Farm	Buffer Stop	Telephone	Water	Mast

Notes

B	15/02/13	Stage 2 As-Built	DS	RP	CT
AB1	04/04/11	As-Built	AB	DP	PP
A	13/10/08	Amended Issue		AEL	
DA	19/05/08	First Issue		AEL	
Rev	Date	Description of Revisions	Drawn	Chkd	Appr

Contractor(s)

ndc consultants
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Drawing Title	Winnersh Triangle Station (2404) to Reading (RGAC)				

Network Rail

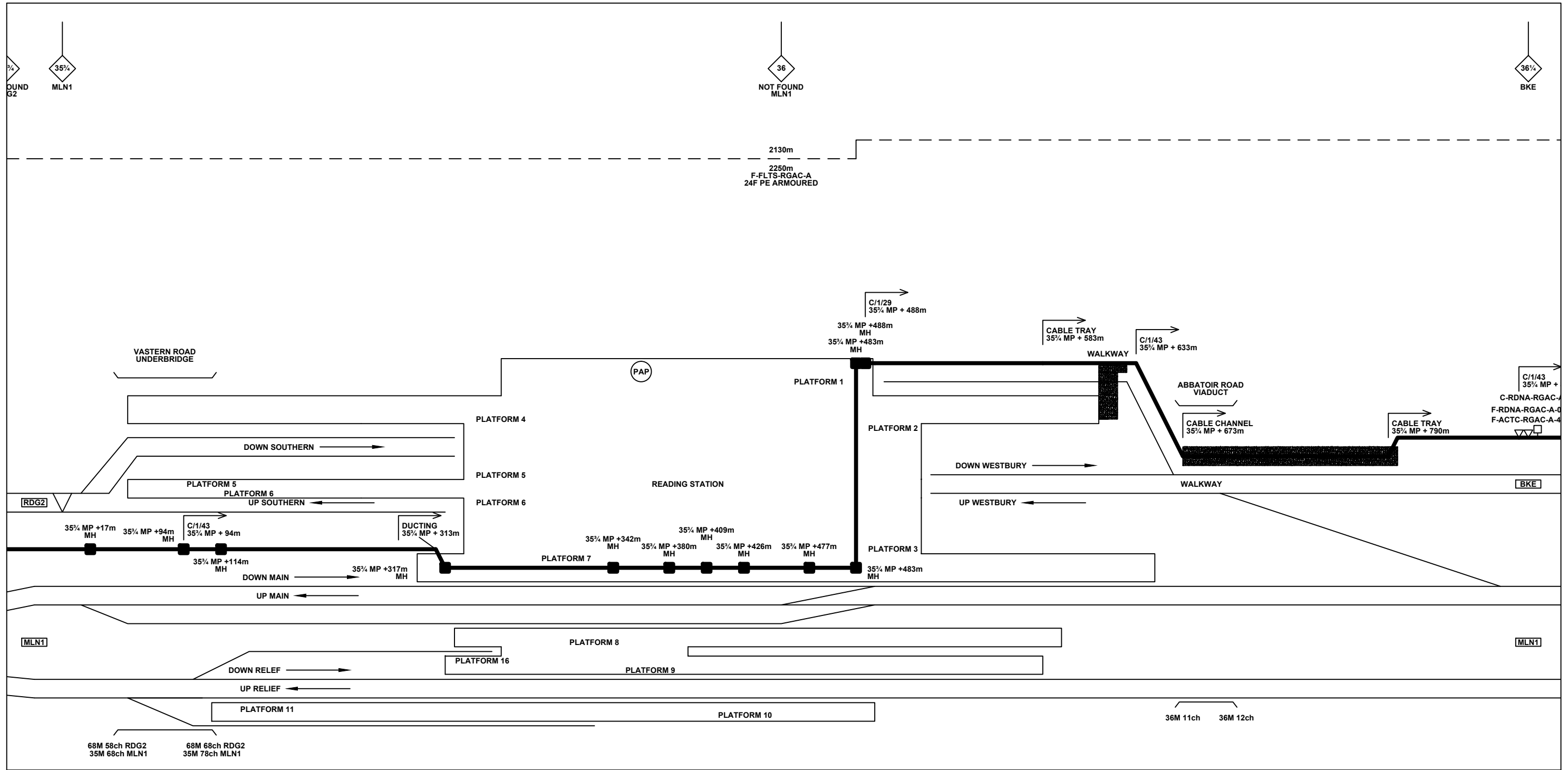
FTN/GSM-R Project
Tournament House
Paddington
London
W2 1HA

Alternative Reference: See Layout Tab 841 x 297 Sheet 4

Drawing Number: NTPO\SLD\2404\RGAC\001

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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 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 Cable	
			Screening Conductor Joint with/without Earth		Manhole		Mid Length Sheath Gap Fibre		FTN Access Node		Cabinet Routeworks		Tunnel		Pedestrian Access Point		Platform		SEW	Sewer		LV	LV Cable
			Manhole		Sheath Gap Copper		FTN Access Node with GSM-R Colocated		Fibre Joint Routeworks		Earth Farm		Buffer Stop		Telephone		Cable Pull		Mast		v	Water	

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
 All Existing Elements are shown in BLACK
 Existing Fibre Cable
 Existing Copper Cable
 Existing Screen Cable

Notes

Rev	Date	Description of Revisions	Drawn	Chkd	Appr
B	15/02/13	Stage 2 As-Built	DS	RP	CT
AB1	04/04/11	As-Built	AB	DP	PP
A	13/10/08	Amended Issue		AEL	
DA	19/05/08	First Issue		AEL	

Contractor(s)

ndc consultants
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Drawing Title	Winnersh Triangle Station (2404) to Reading (RGAC)				

Network Rail

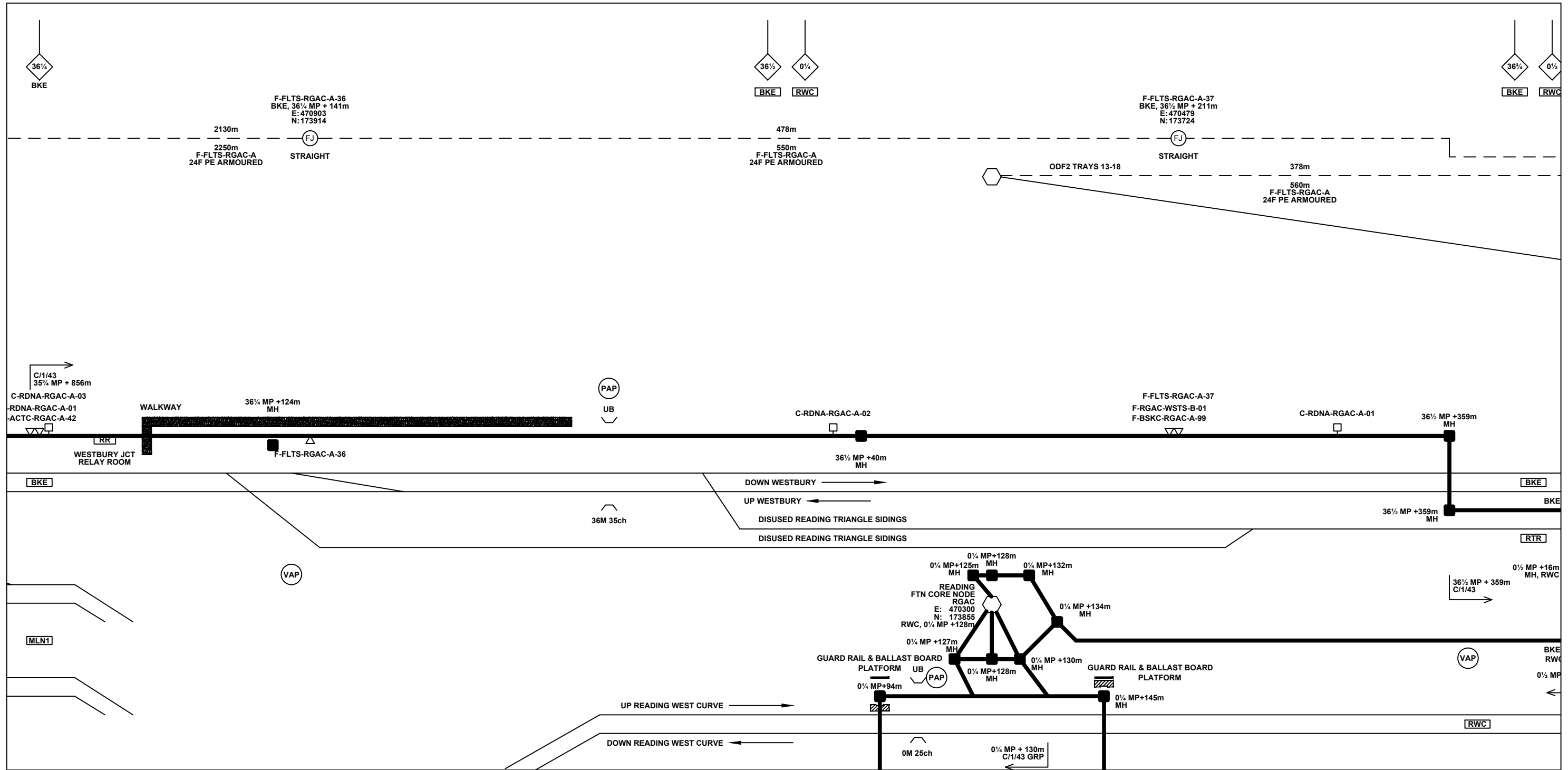
FTN/GSM-R Project
 Tournament House
 Paddington
 London
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Alternative Reference: See Layout Tab 841 x 297 Sheet 5

Drawing Number: NTPO\SLD\2404\RGAC\001

Sheet: 9 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	Manhole details: Cross-To be used	Vehicle Access Point	Gantry	HV Cable
KEY	Screening Conductor Joint with/without Earth	Status - as per Key Below	Mid Length Sheath Gap Fibre	FTN Access Node	Cabinet Routeworks	Tunnel	Underbridge	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	Earth Farm	Buffer Stop	Telephone	Cable Pull	Sewer
Proposed Copper Elements are shown in BLUE		Existing Fibre Cable							Mast	Telecoms
Proposed Screening Elements are shown in MAGENTA		Existing Copper Cable								Water
All Recoveries are shown in GREEN		Existing Screen Cable								

Notes

B	15/02/13	Stage 2 As-Built	DS	RP	CT
AB1	04/04/11	As-Built	AB	DP	PP
A	13/10/08	Amended Issue		AEL	
DA	19/05/08	First Issue		AEL	
Rev	Date	Description of Revisions	Drawn	Chkd	Appr

Contractor(s)

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

Status: **As-Built**

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ELR & Mileage: RDG2, RNJ, MLN1, BKE, RWC

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Project	FTN/GSM-R Project Stage 2 As-Built	
Drawing Title	Winnersh Triangle Station (2404) to Reading (RGAC)	

Network Rail

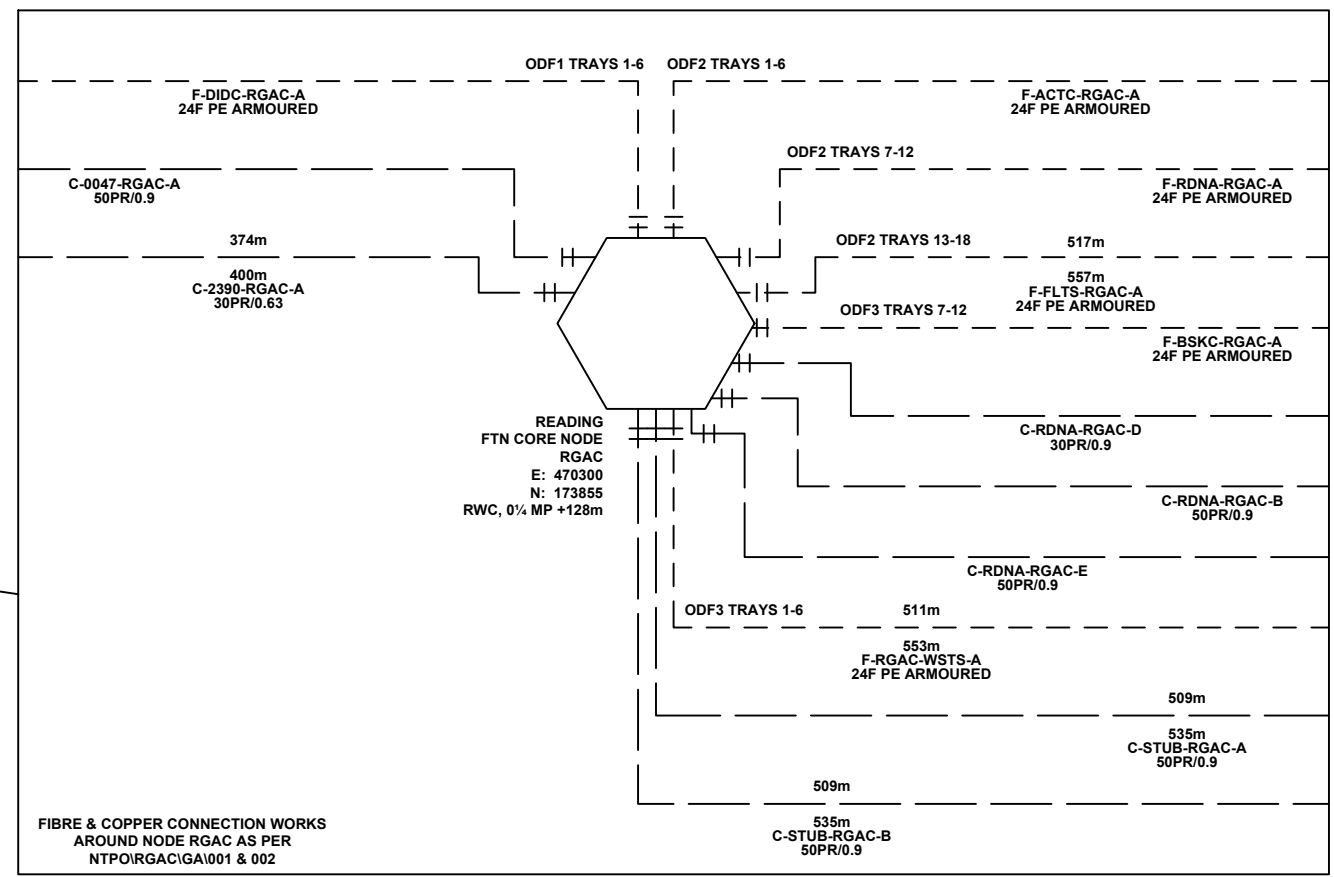
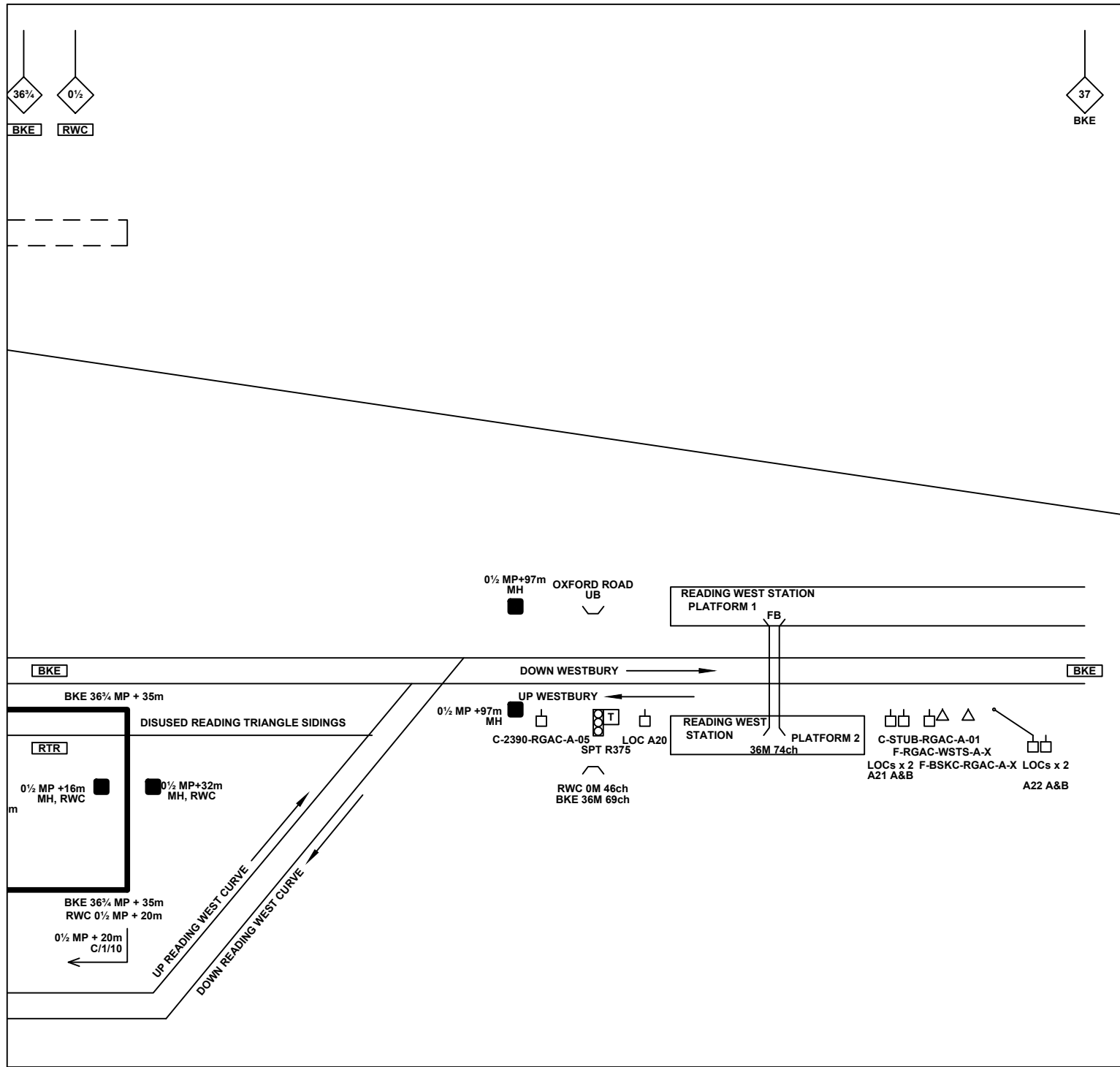
FTN/GSM-R Project
Tournament House
Paddington
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Alternative Reference: See Layout Tab 841 x 297 Sheet 5

Drawing Number: NTPO\SLD\2404\RGAC\001

Sheet: 10 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	VAP — Vehicle Access Point	Mile Post	— HV — HV — HV — HV Cable	
KEY	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	PAP — Pedestrian Access Point	Platform	— LV — LV — LV — LV Cable	
Proposed Fibre & Civils Elements are shown in RED	All Existing Elements are shown in BLACK	Status — as per Key Below	Sheath Gap Copper	FTN Access Node with GSM-R Colocated	Fibre Joint Routeworks	Tunnel	Earth Farm	Gantry	— SEW — SEW — SEW — Sewer	
Proposed Copper Elements are shown in BLUE	— — — — Existing Fibre Cable						Buffer Stop	— TEL — TEL — TEL — Telecoms	— v — v — v — Water	
Proposed Screening Elements are shown in MAGENTA	— — — — Existing Copper Cable						Telephone	Cable Pull	Mast	
All Recoveries are shown in GREEN	— · — · — · Existing Screen Cable									

Notes

Rev	Date	Description of Revisions	Drawn	Chkd	Appr
B	15/02/13	Stage 2 As-Built	DS	RP	CT
AB1	04/04/11	As-Built	AB	DP	PP
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Contractor(s)

ndc consultants
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Network Rail

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

Alternative Reference: See Layout Tab 841 x 297 Sheet 6

Drawing Number: NTPO\SLD\2404\RGAC\001

Sheet: 11 of 11

Revision: B