

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		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		Mast		Mast		Mast		Mast
	KEY		Existing Fibre Cable		Existing Copper Cable		Existing Screen Cable		FTN Access Node		Cabinet Routeworks		Fibre Joint Routeworks		Earth Form		Buffer Stop		Telephone		Cable Pull		Mast		Mast		Mast		Mast		Mast		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	

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

FTN/GSM-R Project Stage 2 As-Built

Winnersh Triangle Station (2404) to Reading (RGAC)

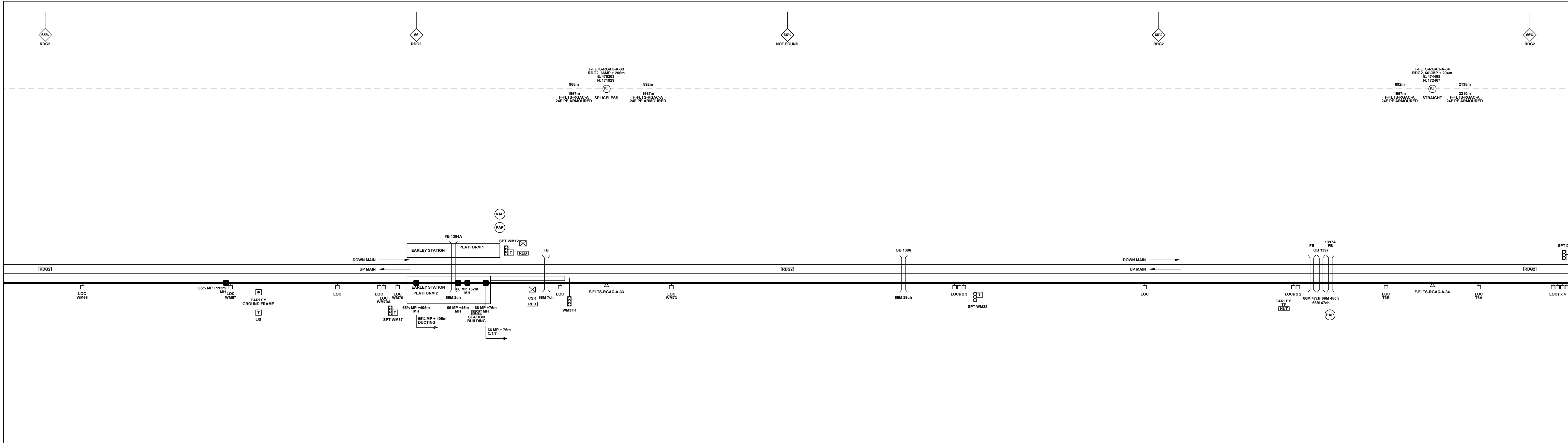
Network Rail

FTN/GSM-R Project
 Tournament House
 Reading
 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		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
			Screening Conductor Joint with/without Earth		Cable - Status as per Key Below		Mid Length Sheath Gap Fibre		FTN Access Node		Cabinet Routeworks		Tunnel		Earth Form		Pedestrian Access Point		Platform
			F-DIDC-RGAC-A		Manhole		Sheath Gap Copper		FTN Access Node with GSM-R Colocated		Fibre Joint Routeworks		Mast		Crossing		Gas Line		Gantry

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

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)

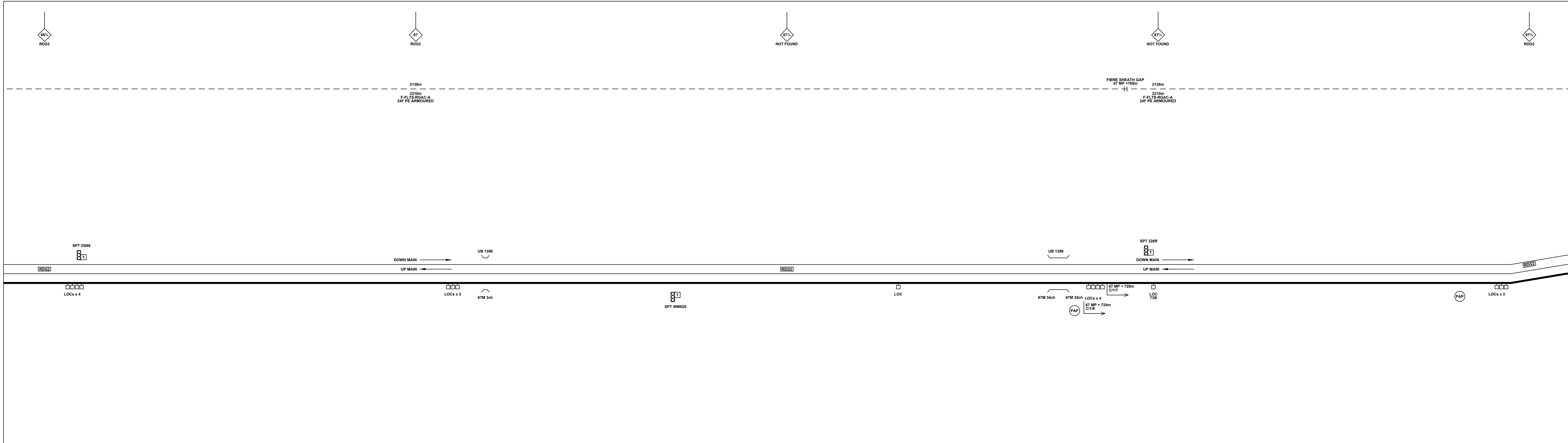
Network Rail

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
	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		Screening Conductor Joint with/without Earth		Manhole		FTN Access Node		FTN Access Node with GSM-R Colocated		Cabinet Routeworks		Earth Form		Buffer Stop		Pedestrian Access Point		Platform
	KEY: Proposed Copper Elements are shown in BLUE		Manhole		Manhole		FTN Access Node		FTN Access Node with GSM-R Colocated		Fibre Joint Routeworks		Cable Pull		Mast		Crossing		Gantry
	KEY: Proposed Screening Elements are shown in MAGENTA		Manhole		Manhole		Manhole		Manhole		Manhole		Manhole		Manhole		Manhole		Manhole
	KEY: All Recoveries are shown in GREEN		Manhole		Manhole		Manhole		Manhole		Manhole		Manhole		Manhole		Manhole		Manhole

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

Designed	Deborah Stubbs	Sign.	[Signature]	Date	15/02/2013
Checked	Robert Pugh	Sign.	[Signature]	Date	15/02/2013
Approved	Chris Tappenden	Sign.	[Signature]	Date	15/02/2013

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

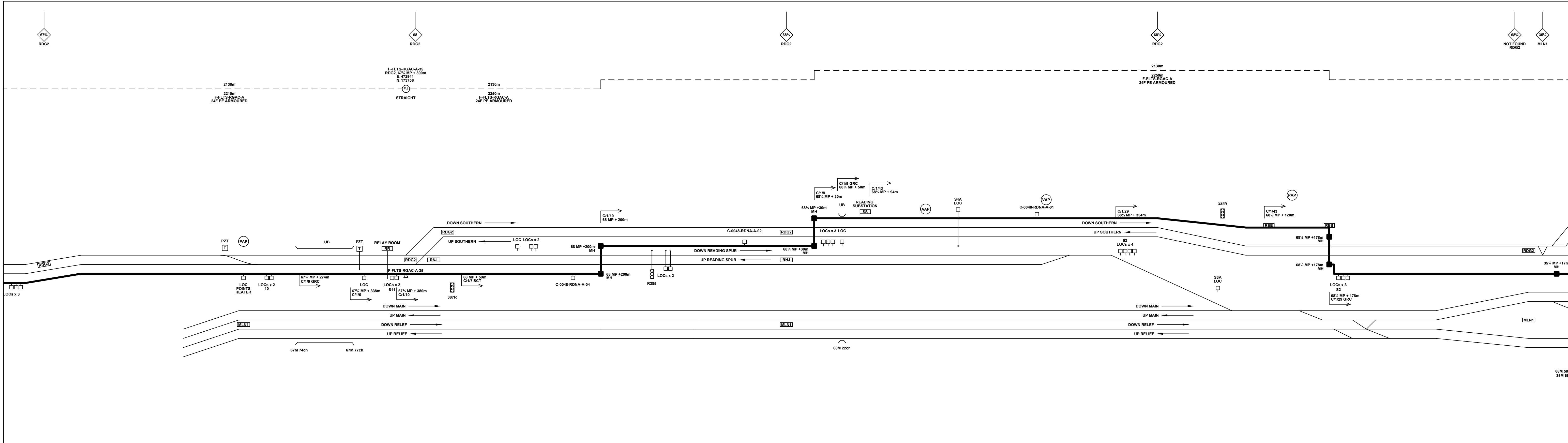
Winnersh Triangle Station (2404) to Reading (RGAC)

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 details: Cross-To be used Filled-In use Clear-Empty		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		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		Existing Fibre Cable		Existing Copper Cable		Sheath Gap Copper		FTN Access Node with GSM-R Colocated		Fibre Joint Routeworks		Cable Pull		Buffer Stop		Telephone		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	Designated	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

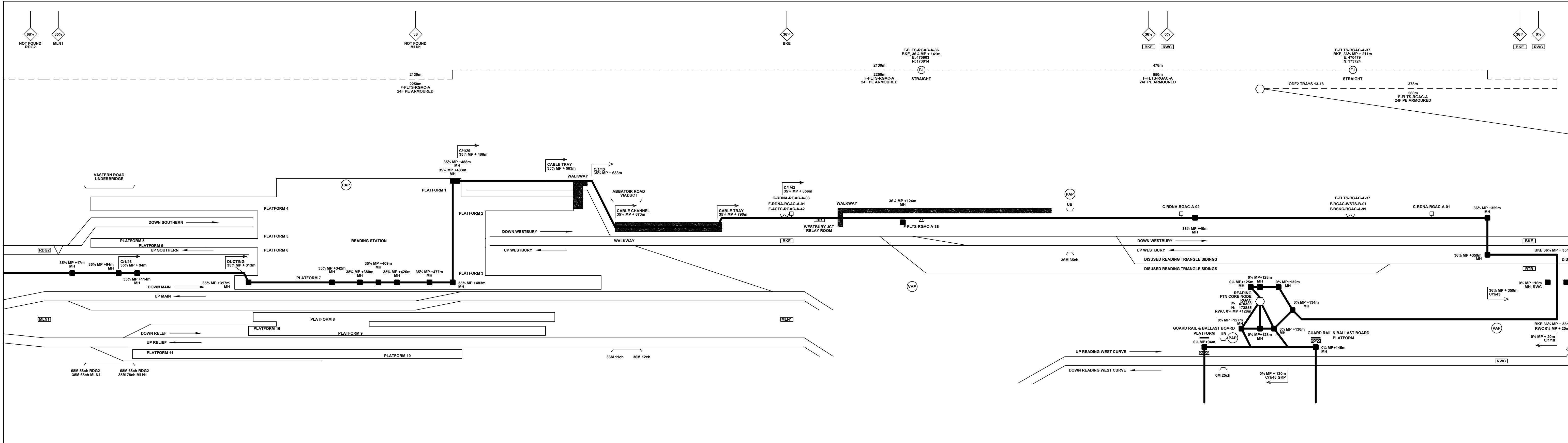
Alternative Reference: See Layout Tab A3 Sheets 7 and 8

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

Revision: **B**

Sheet: 4 of 6

Revision: **B**



Legend

Cabinet and Verts	Copper Joint	Trough Duct Cable Tray	Signal Box	FTN Core Node	Screen Joint Routeworks
Fibre Joint	Electrical Control Room	Cable - Type Identified by FTN Code Status - as per Key Below	Manhole	Core Node with GSM-R Colocated	Copper Joint Routeworks
Cabinet with Regenerator and Verts	Screening Conductor Joint with/without Earth	1988m	Mid Length Sheath Gap Fibre	FTN Access Node	Cabinet Routeworks
Cabinet with Regenerator and Verts	Screening Conductor Joint with/without Earth	2034m	Sheath Gap Copper	FTN Access Node with GSM-R Colocated	Fibre Joint Routeworks

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

Manhole details:
 Cross - To be used Filled - In use Clear - Empty

Other Symbols:
 Overbridge, Underbridge, Earth Form, Signal, Vehicle Access Point, Pedestrian Access Point, Engineer's Line Reference, Mile Post, Platform, Telephone, Crossing, Gantry, Cable Pull, 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

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Contractor(s)

As-Built

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

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

Project

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

Drawing Title

**Winnersh Triangle Station (2404) to
 Reading (RGAC)**

Network Rail

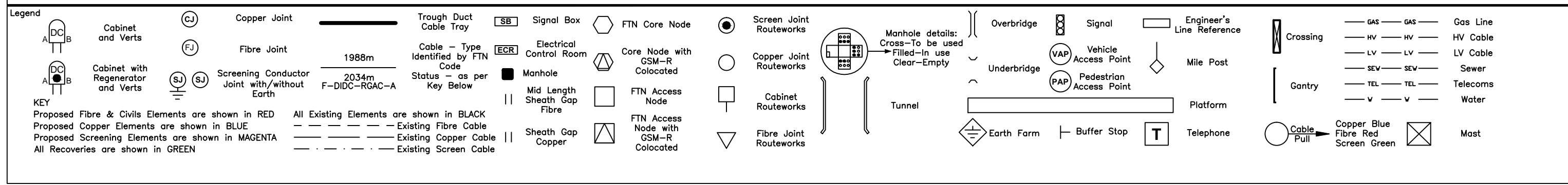
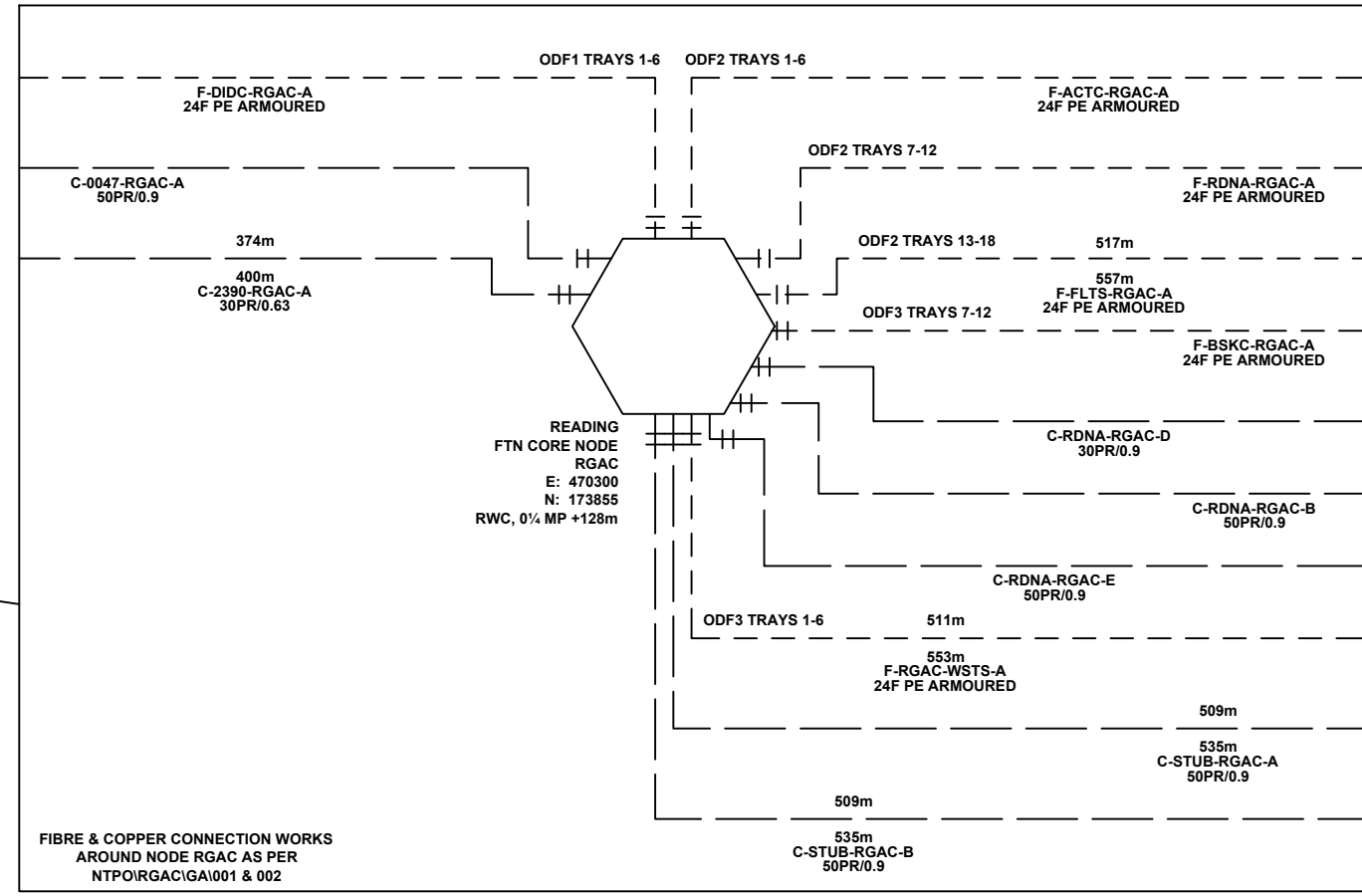
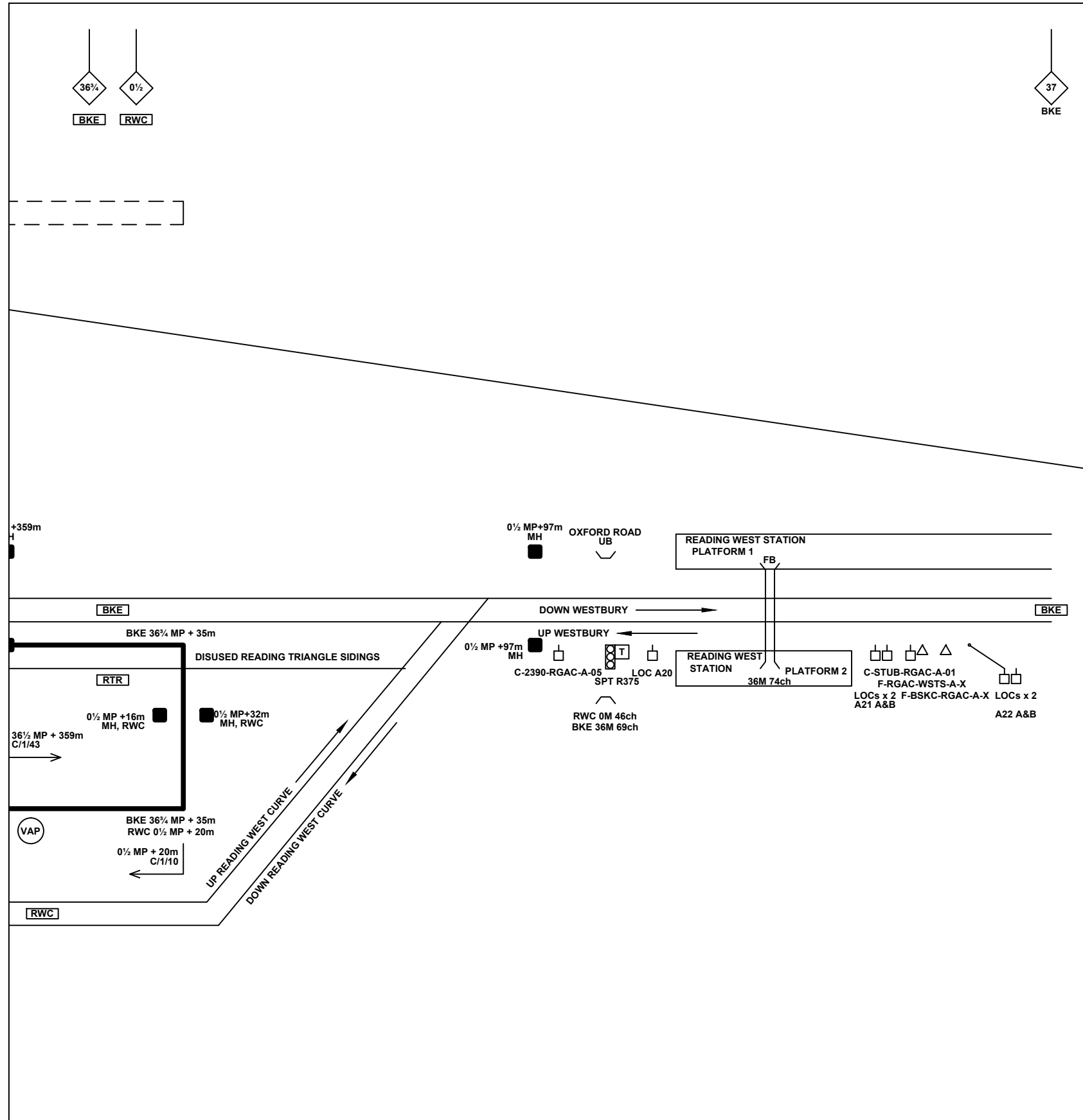
FTN/GSM-R Project
 Tournament House
 Passington
 London
 W2 1HA

Alternative Reference
 See Layout Tab A3 Sheets 9 and 10

Drawing Number
 NTP0\SLD\2404\RGAC\001

Sheet
 5 of 6

Revision
 B



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
			FTN/GSM-R Project Tournament House Reading London W2 1HA			15/02/2013
			FTN/GSM-R Project Tournament House Reading London W2 1HA			15/02/2013

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

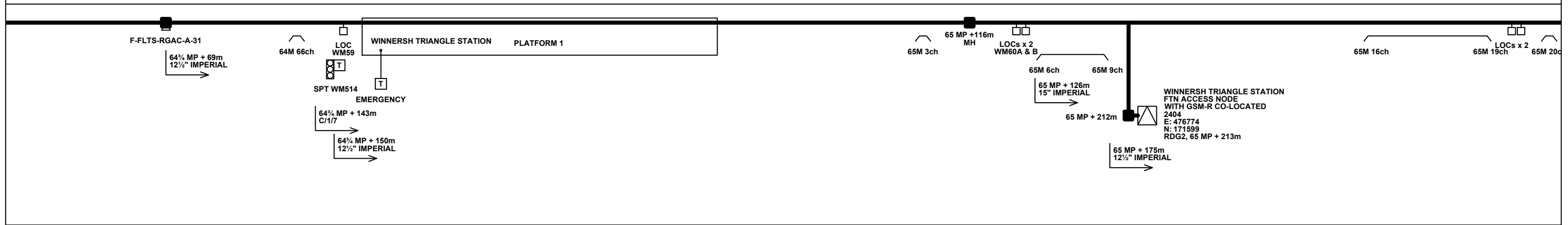
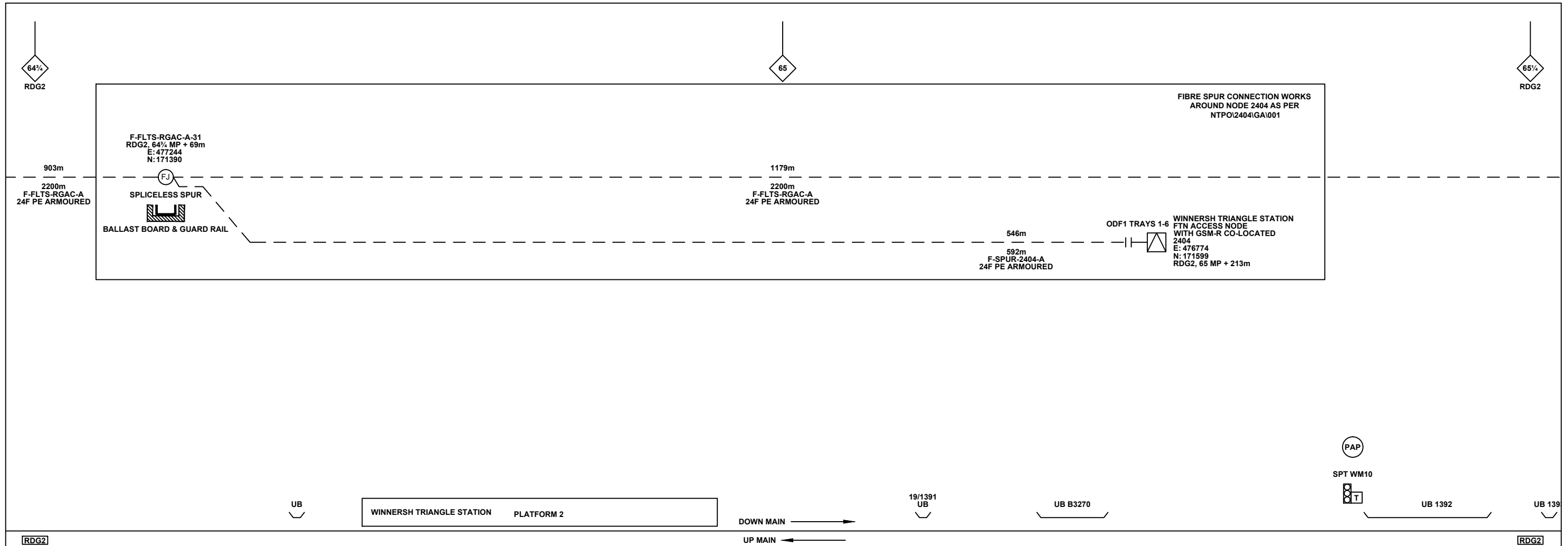
Drawing Title: Winnersh Triangle Station (2404) to Reading (RGAC)

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
	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	Widdersh Triangle Station (2404) to Reading (RGAC)				

Network Rail

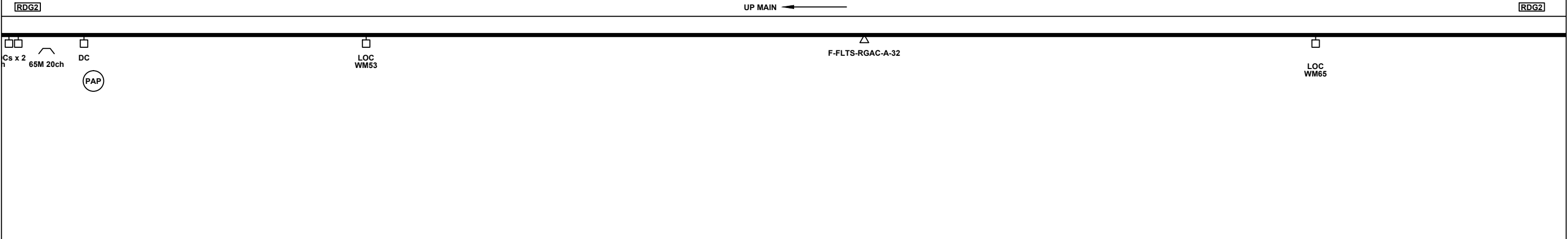
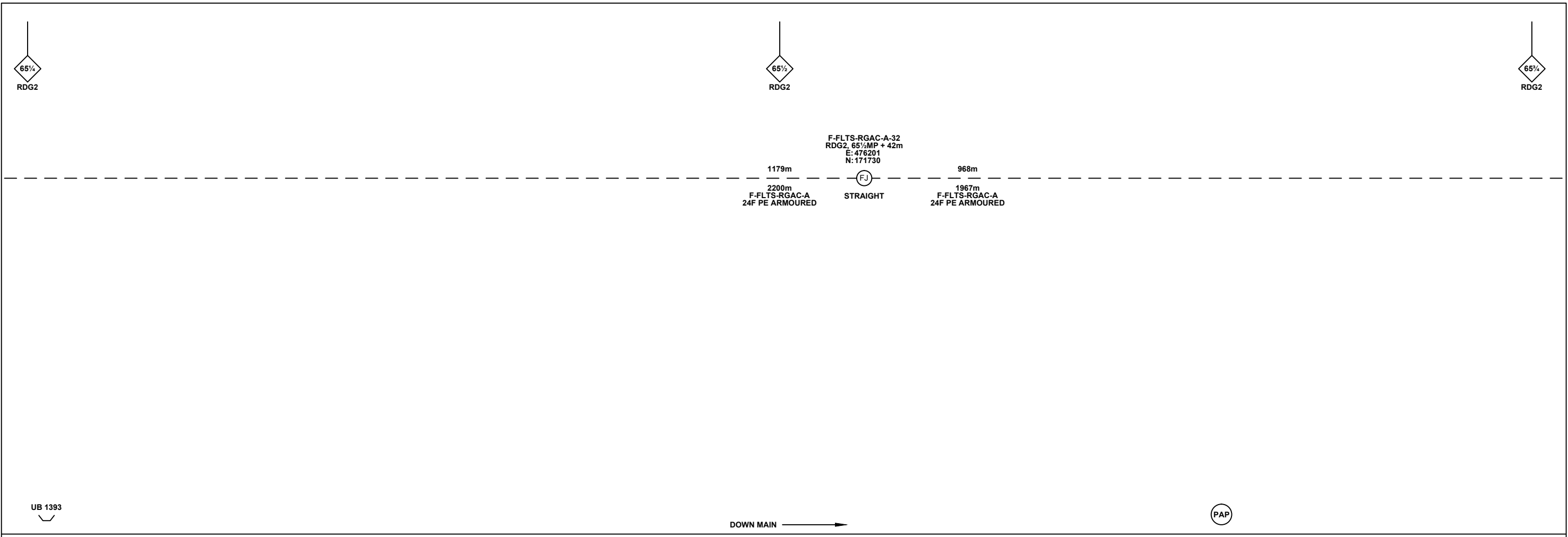
FTN/GSM-R Project
Tournament House
Paddington
London
W2 1HA

Alternative Reference: See Layout Tab 841 x 297 Sheet 1

Drawing Number: NTP0\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	Tunnel	Pedestrian Access Point	Platform	Water	LV Cable
	2034m F-DIDC-RGAC-A	Existing Fibre Cable	Sheath Gap Copper	FTN Access Node with GSM-R Colocated	Fibre Joint Routeworks	Earth Farm	Buffer Stop	Telephone	Gantry	Sewer
		Existing Copper Cable							Cable Pull	Mast
		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)

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)				

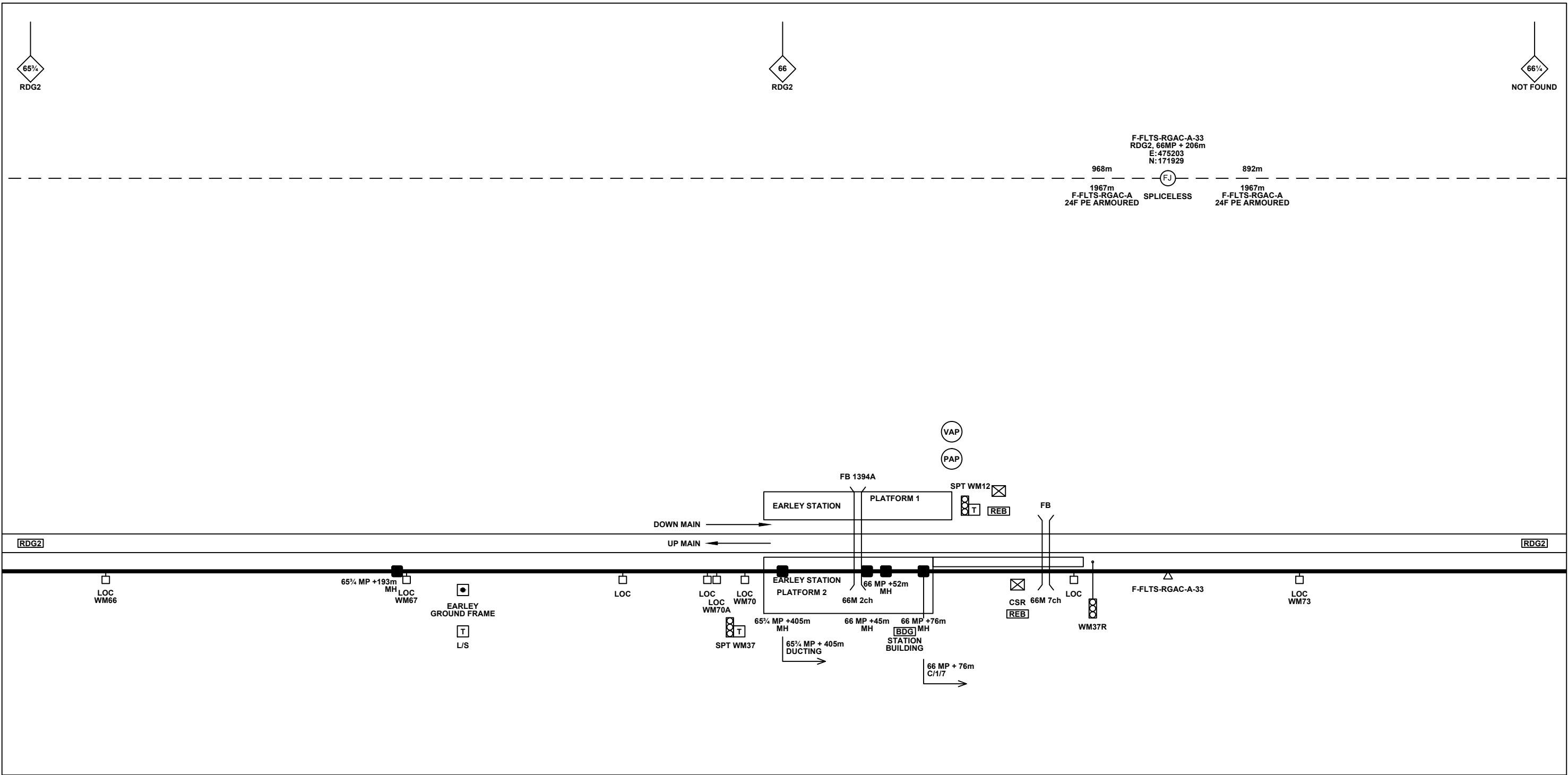
FTN/GSM-R Project
Tournament House
Paddington
London
W2 1HA

Alternative Reference: See Layout Tab 841 x 297 Sheet 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	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	Manhole details: Cross-To be used, Filled-In use, Clear-Empty	Pedestrian Access Point	Platform	Sewer	LV Cable
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

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

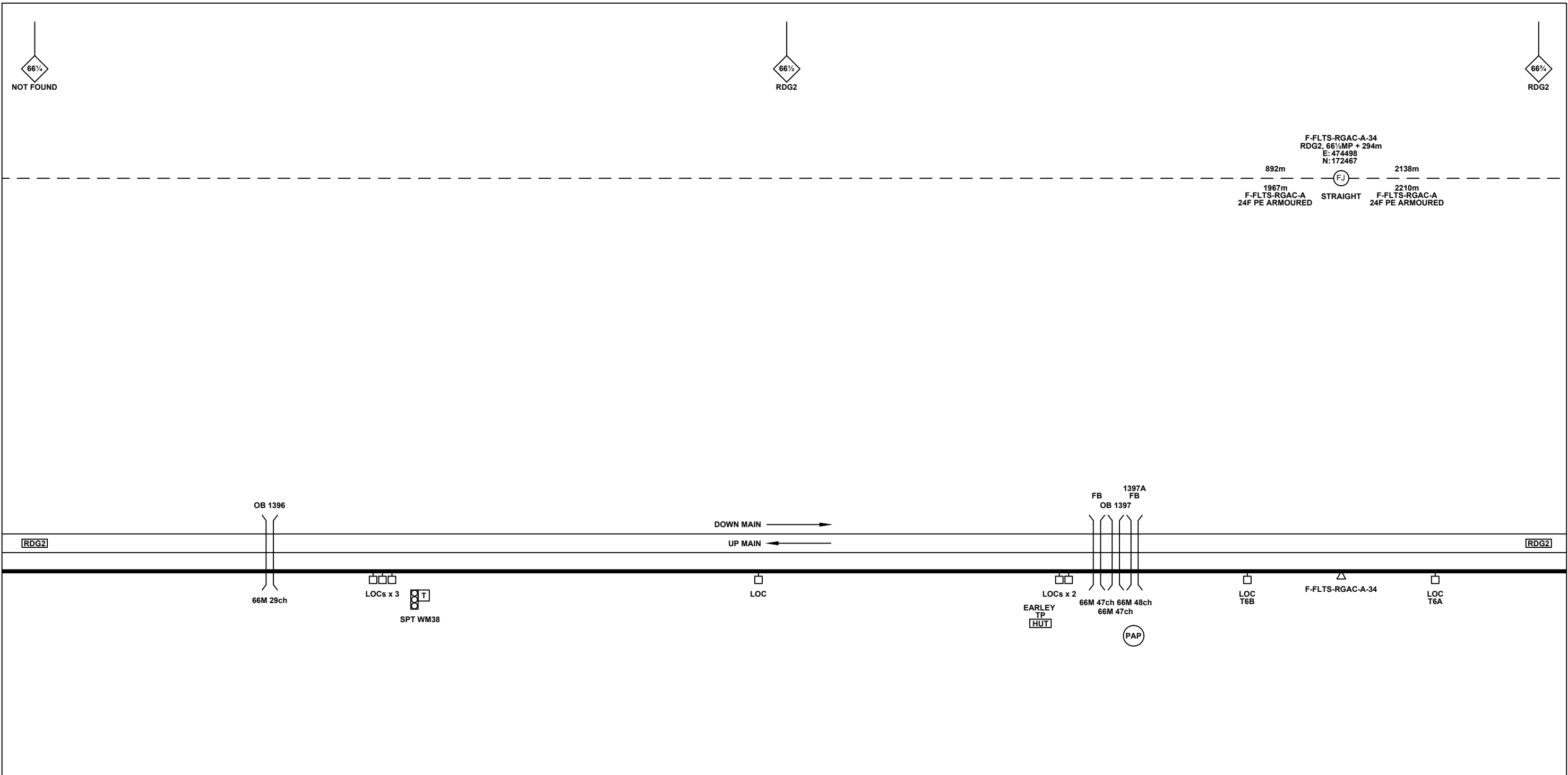
FTN/GSM-R Project
Tournament House
Paddington
London
W2 1HA

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	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	2034m F-DIDC-RGAC-A	Status - as per Key Below	FTN Access Node	Cabinet Routeworks	Mid Length Sheath Gap Fibre	Pedestrian Access Point	Platform	Sewer	Water
	1988m	Existing Fibre Cable	Sheath Gap Copper	FTN Access Node with GSM-R Colocated	Fibre Joint Routeworks	Tunnel	Earth Farm	Buffer Stop	Telephone	Cable Pull
	2034m F-DIDC-RGAC-A	Existing Copper Cable								Mast

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

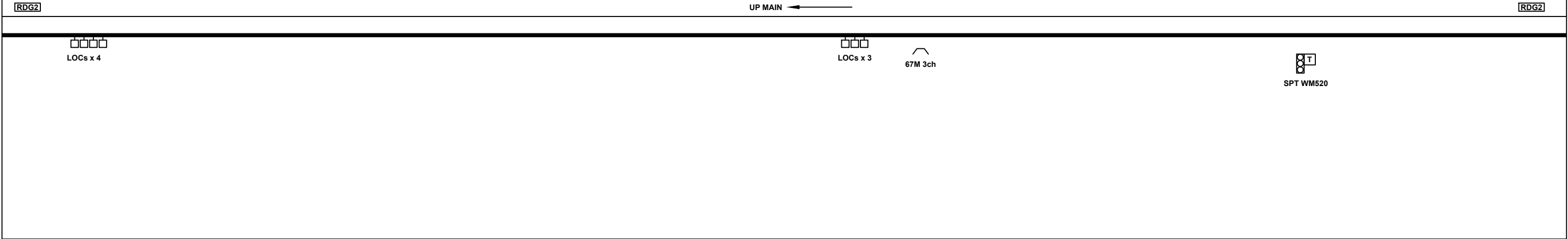
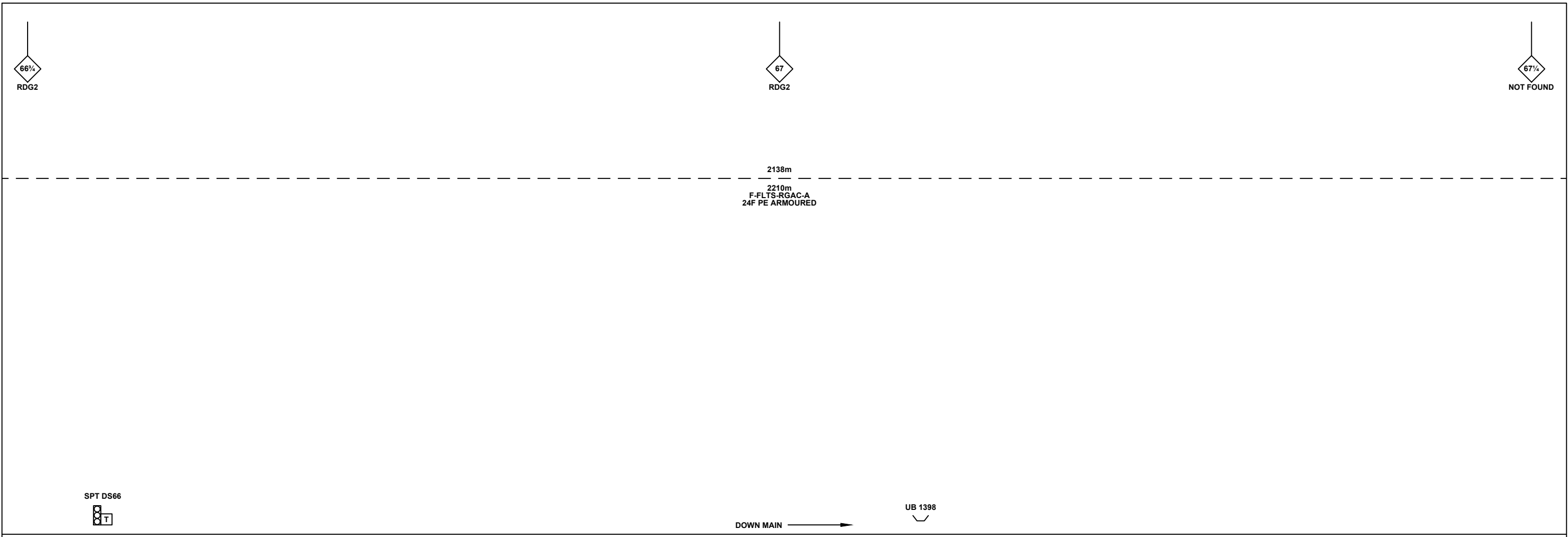
FTN/GSM-R Project
Tournament House
Paddington
London
W2 1HA

Alternative Reference: See Layout Tab 841 x 297 Sheet 2

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

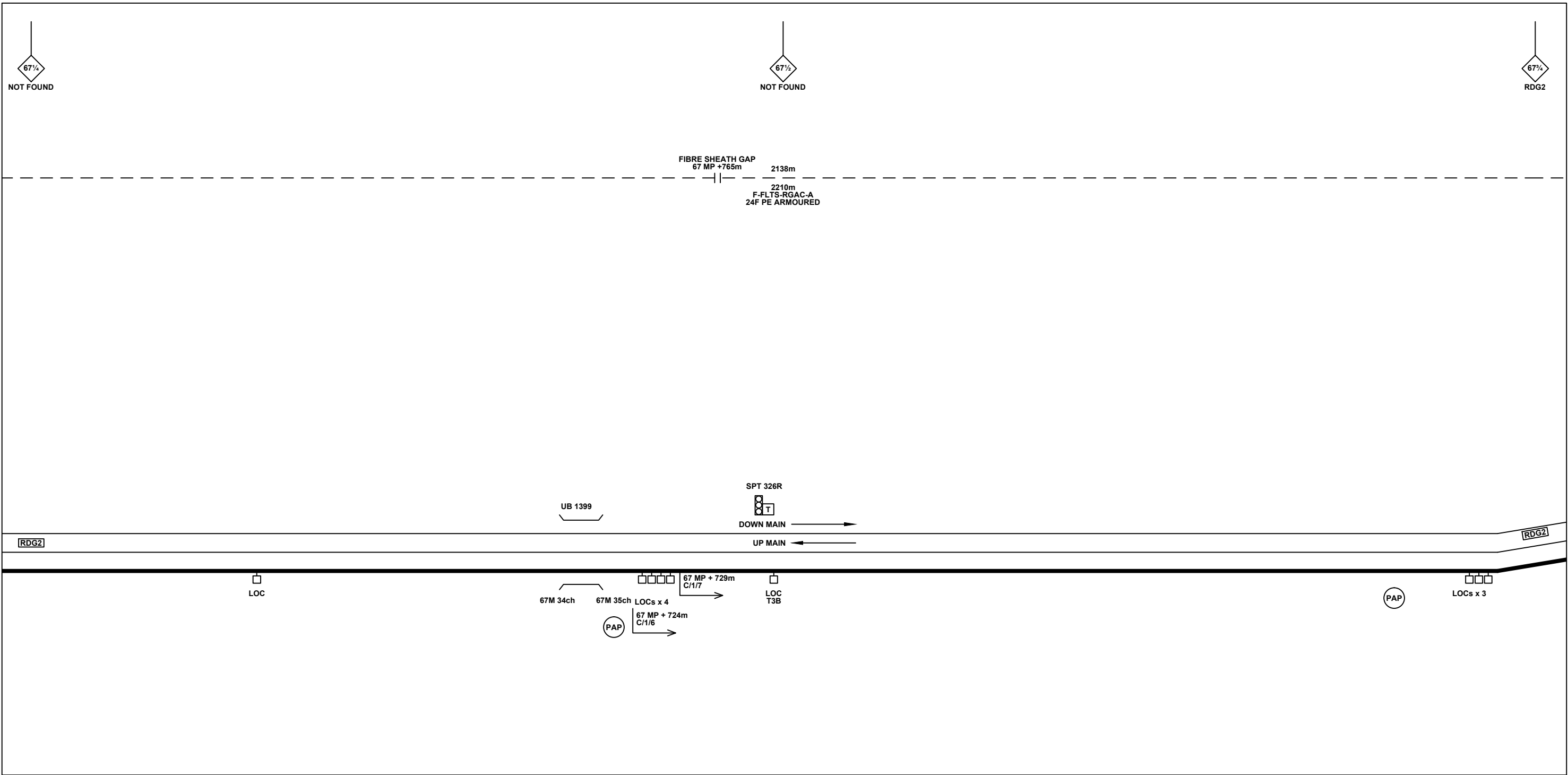
FTN/GSM-R Project
Tournament House
Paddington
London
W2 1HA

Alternative Reference: See Layout Tab 841 x 297 Sheet 3

Sheet: 5 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	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)

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

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

Network Rail

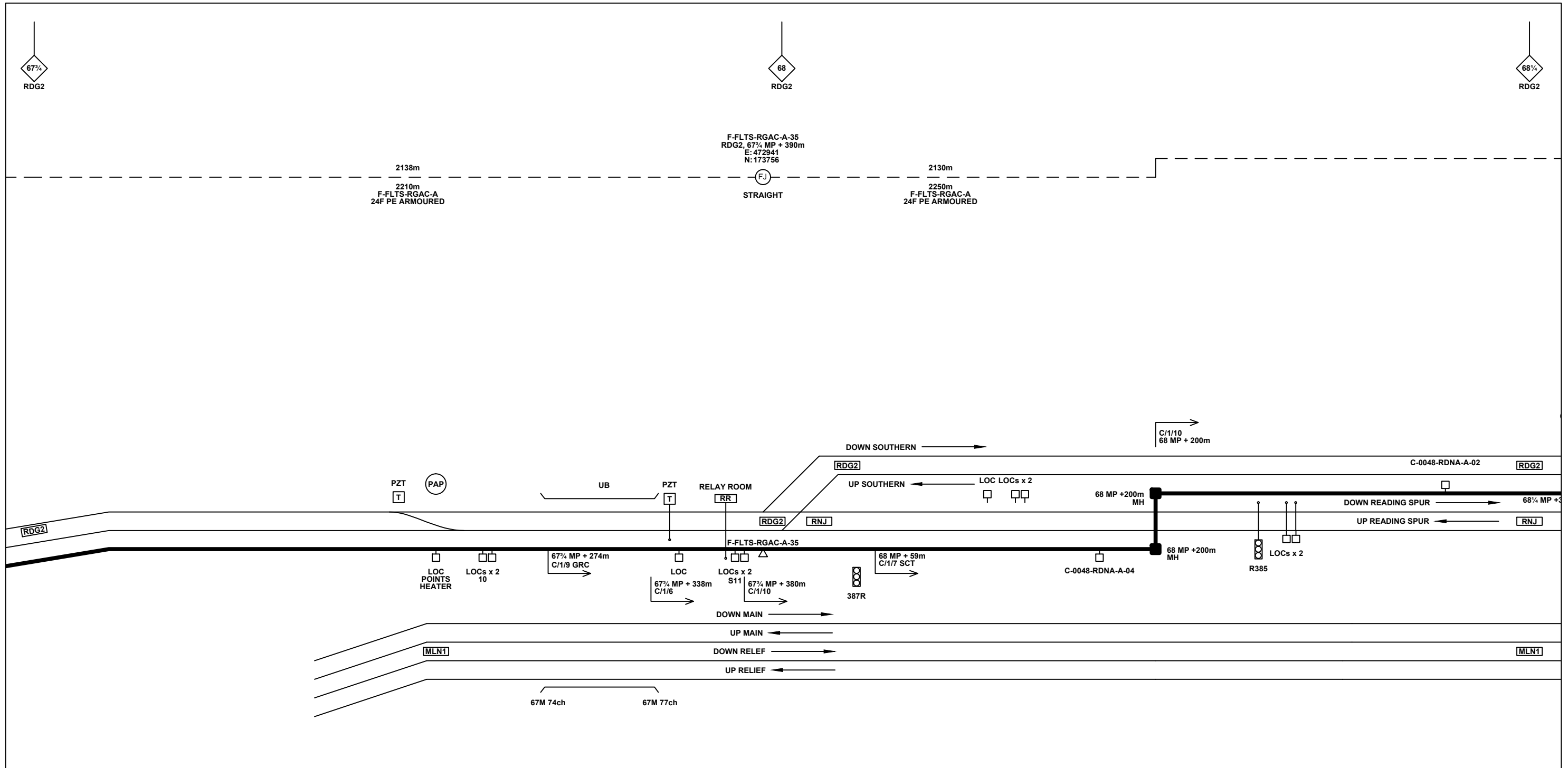
FTN/GSM-R Project
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Paddington
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W2 1HA

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	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	Manhole	Mid Length Sheath Gap Fibre	FTN Access Node	Cabinet Routeworks	Tunnel	Pedestrian Access Point	Platform	LV Cable	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	Copper Blue	Mast
Existing Fibre Cable	Existing Copper Cable								Fibre Red	
Existing Screen Cable	Existing Screen Cable								Screen Green	

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

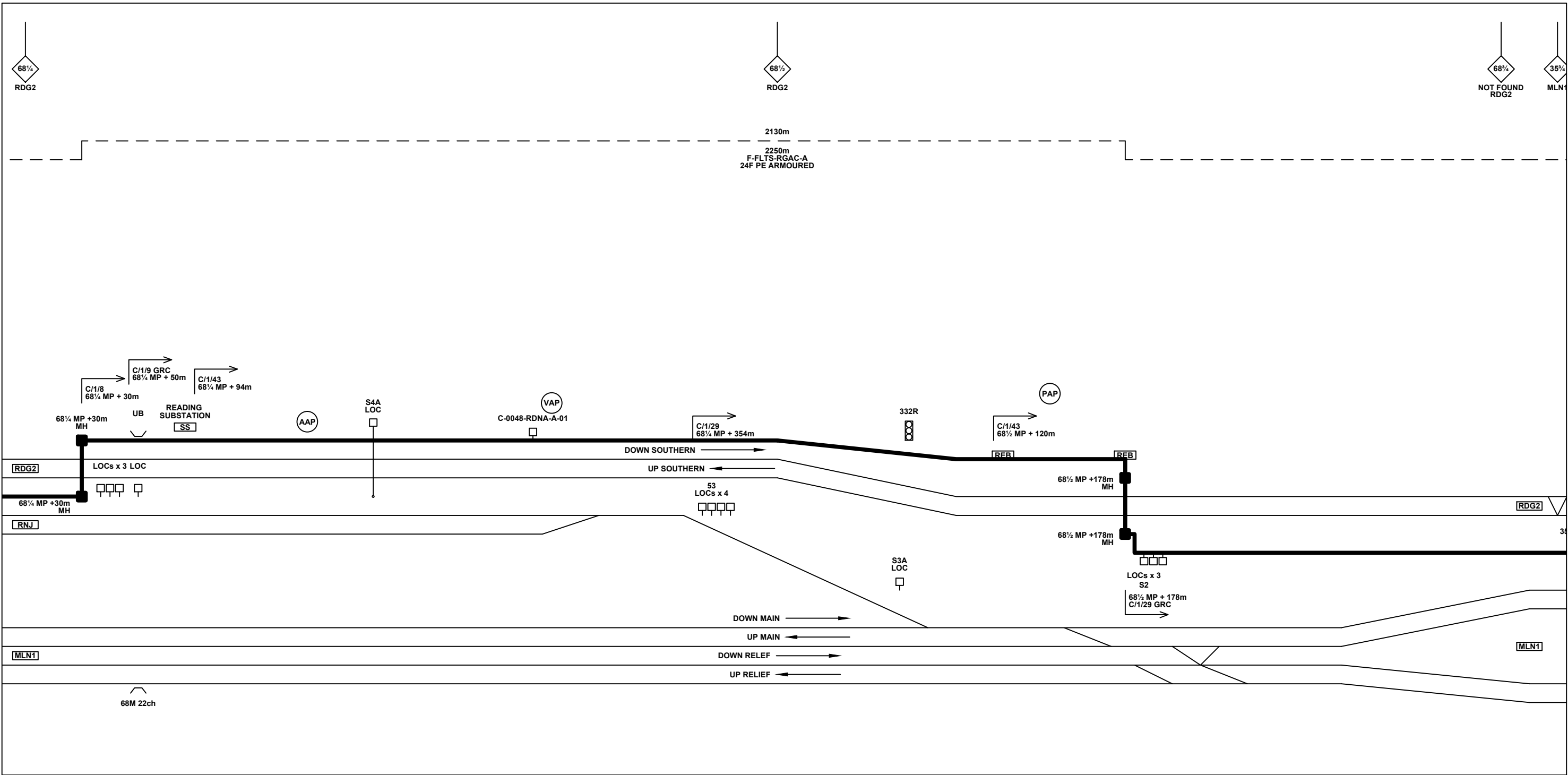
FTN/GSM-R Project
Tournament House
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Alternative Reference: See Layout Tab 841 x 297 Sheet 4

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

Sheet: 7 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	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
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Project	FTN/GSM-R Project Stage 2 As-Built				
Drawing Title	Winnersh Triangle Station (2404) to Reading (RGAC)				

Network Rail

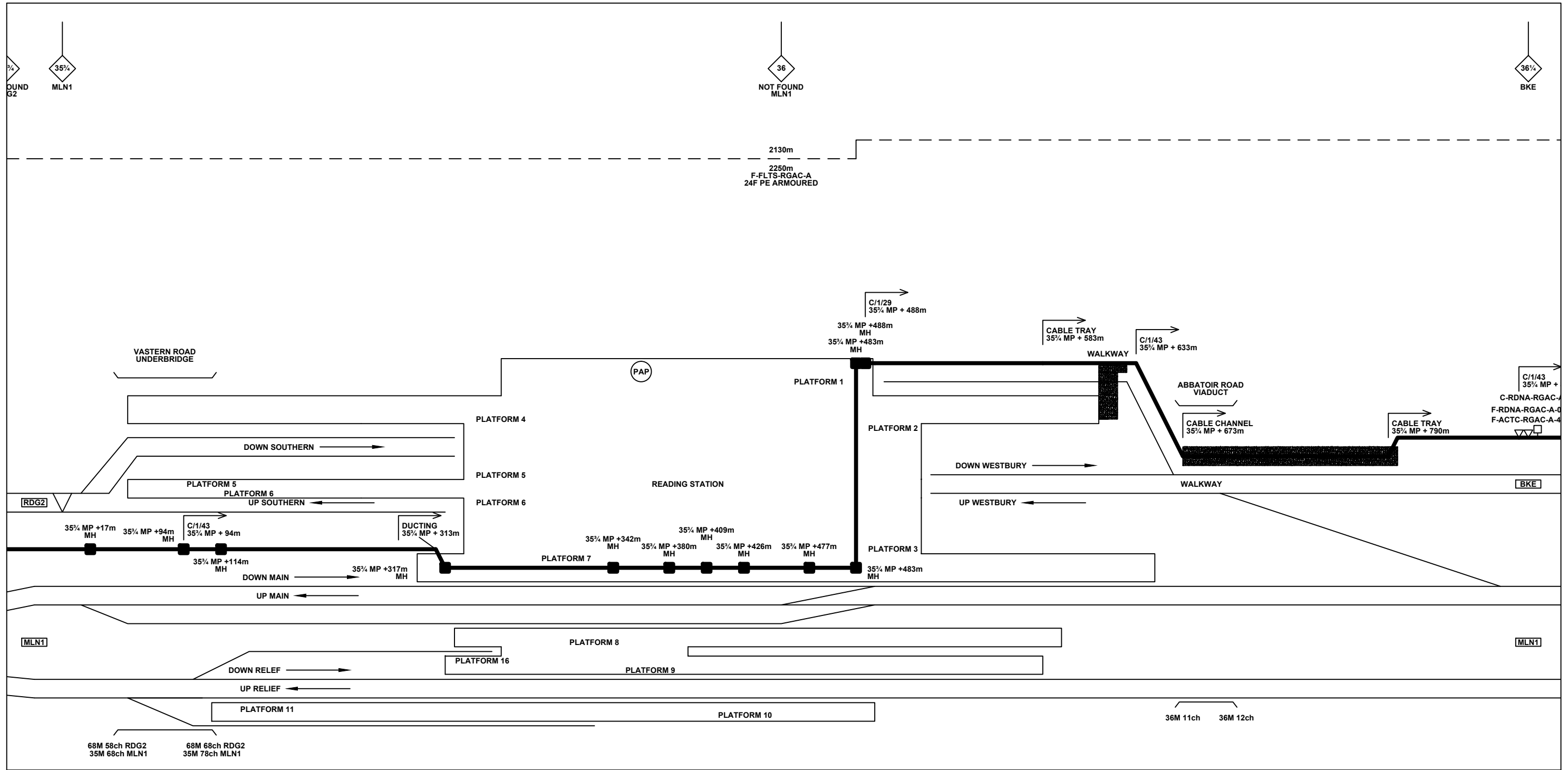
FTN/GSM-R Project
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Alternative Reference: See Layout Tab 841 x 297 Sheet 4

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

Notes

Rev	Date	Description of Revisions	Drawn	Chkd	Appr
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AB1	04/04/11	As-Built	AB	DP	PP
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Drawing Title	Winnersh Triangle Station (2404) to Reading (RGAC)				

Network Rail

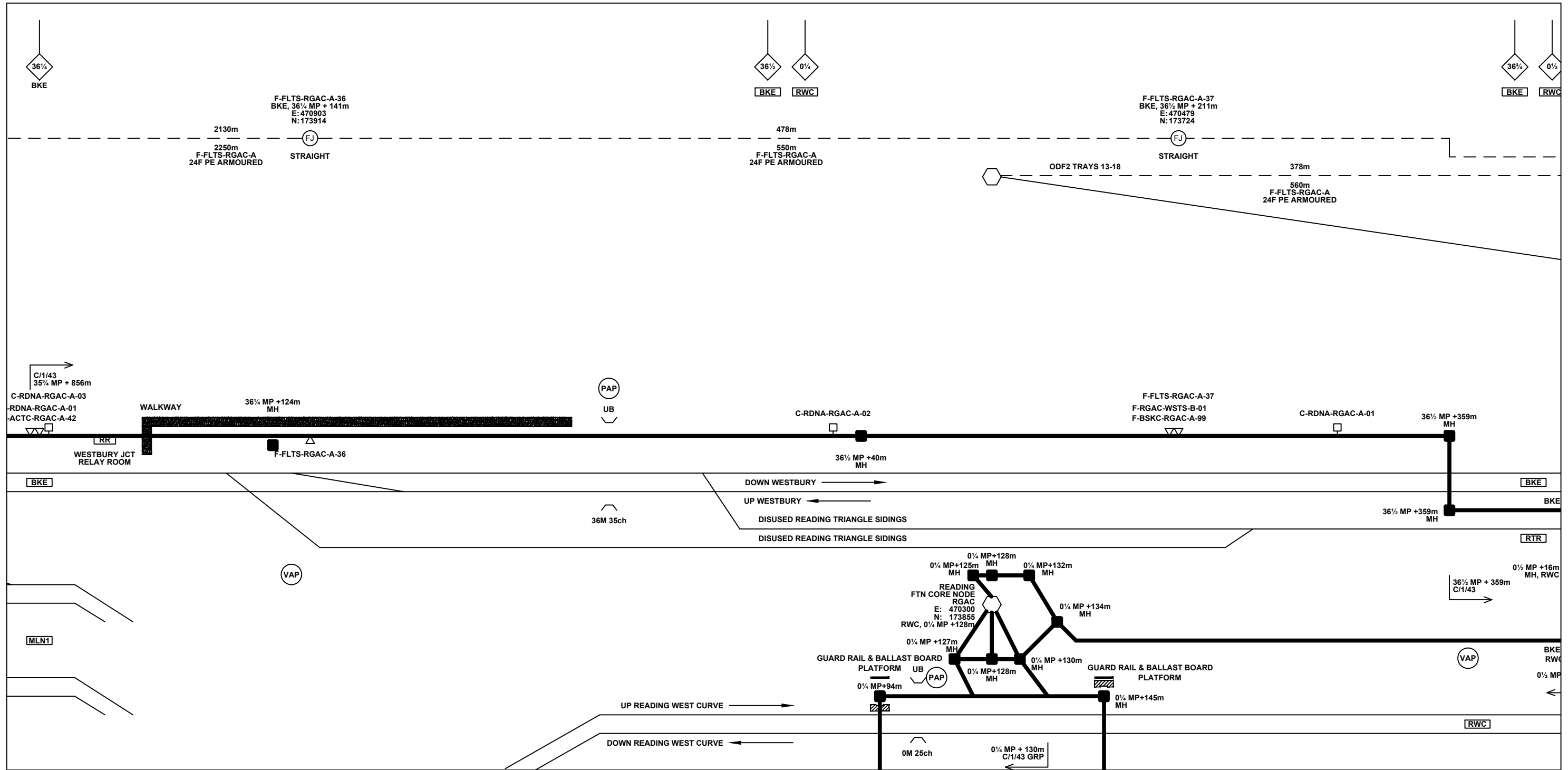
FTN/GSM-R Project
Tournament House
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London
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Alternative Reference: See Layout Tab 841 x 297 Sheet 5

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	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

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

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Network Rail

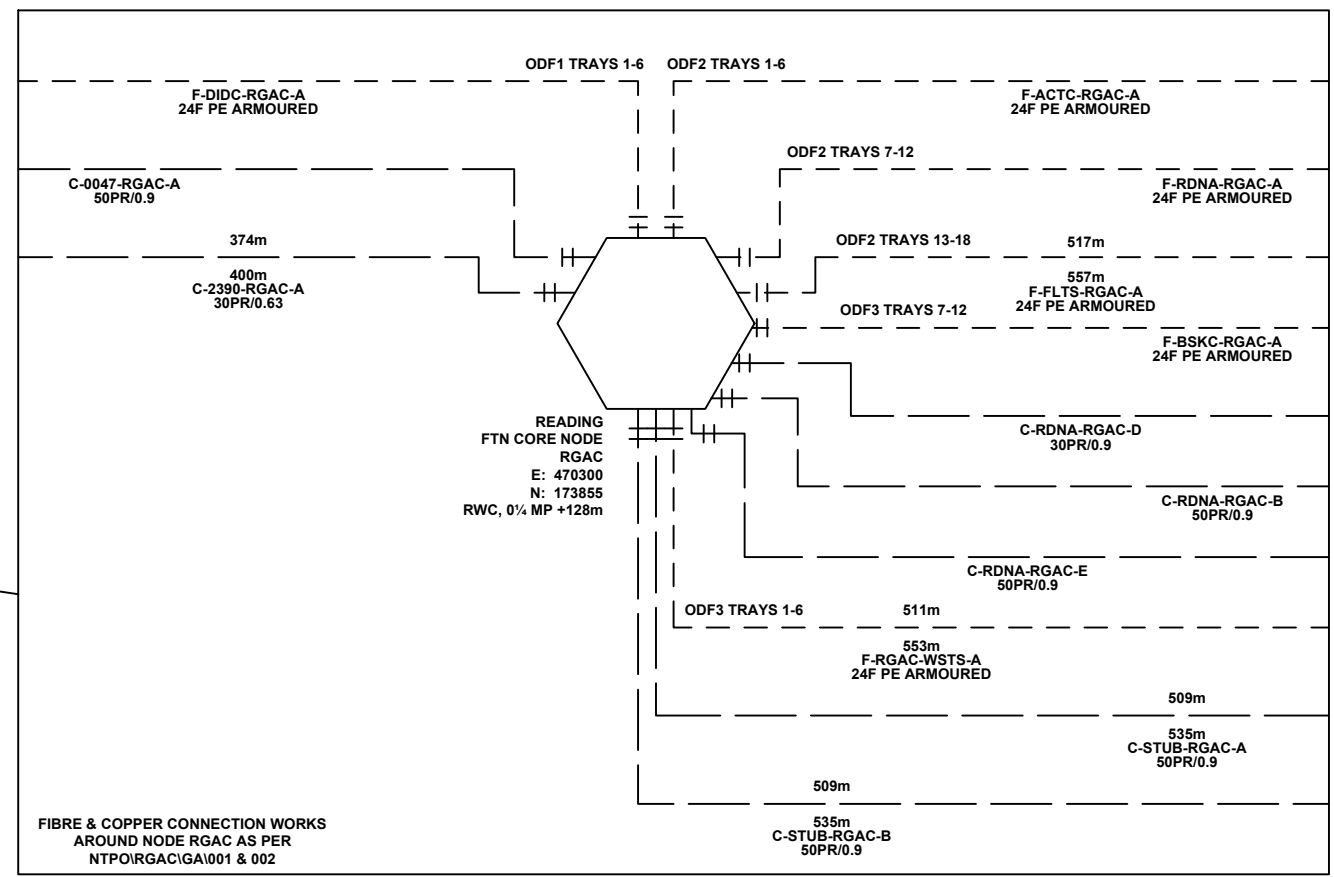
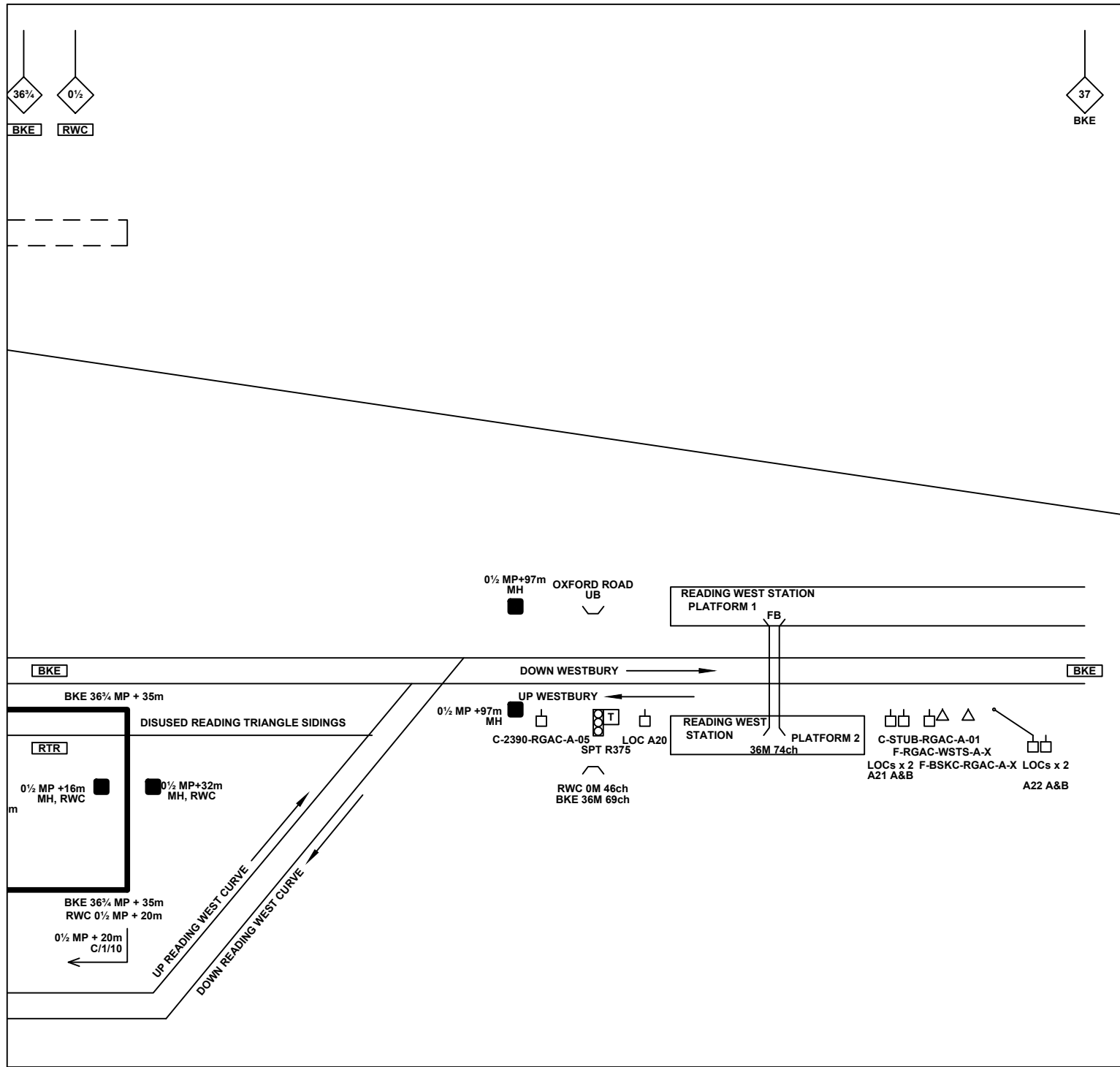
FTN/GSM-R Project
Tournament House
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London
W2 1HA

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 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
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Existing Fibre Cable	Existing Copper Cable	Existing Screen Cable						Mast	Copper Pull	Screen Green

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	
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Rev	Date	Description of Revisions	Drawn	Chkd	Appr

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Status: **As-Built**

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Network Rail

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Alternative Reference: See Layout Tab 841 x 297 Sheet 6

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

Sheet: 11 of 11

Revision: B