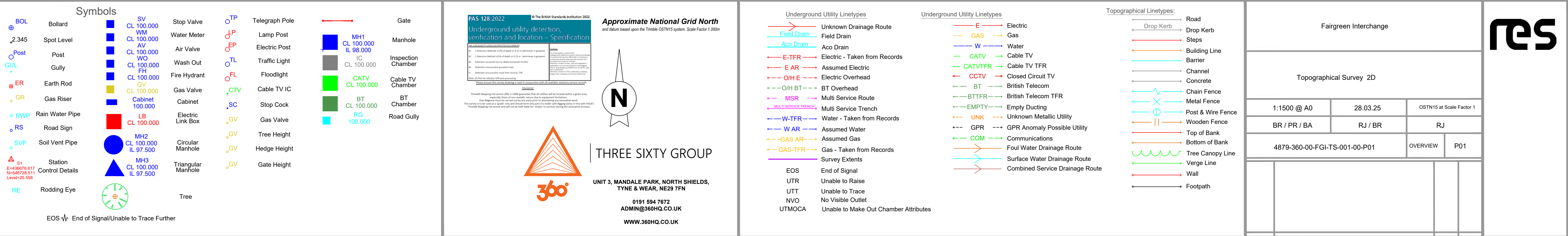
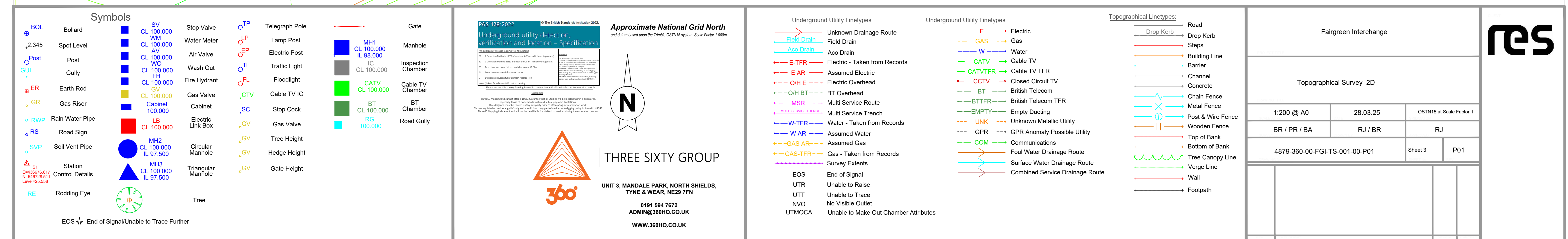
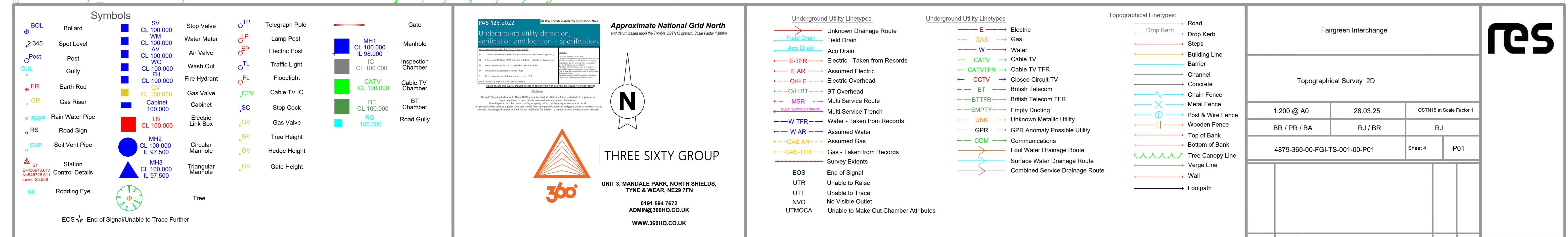


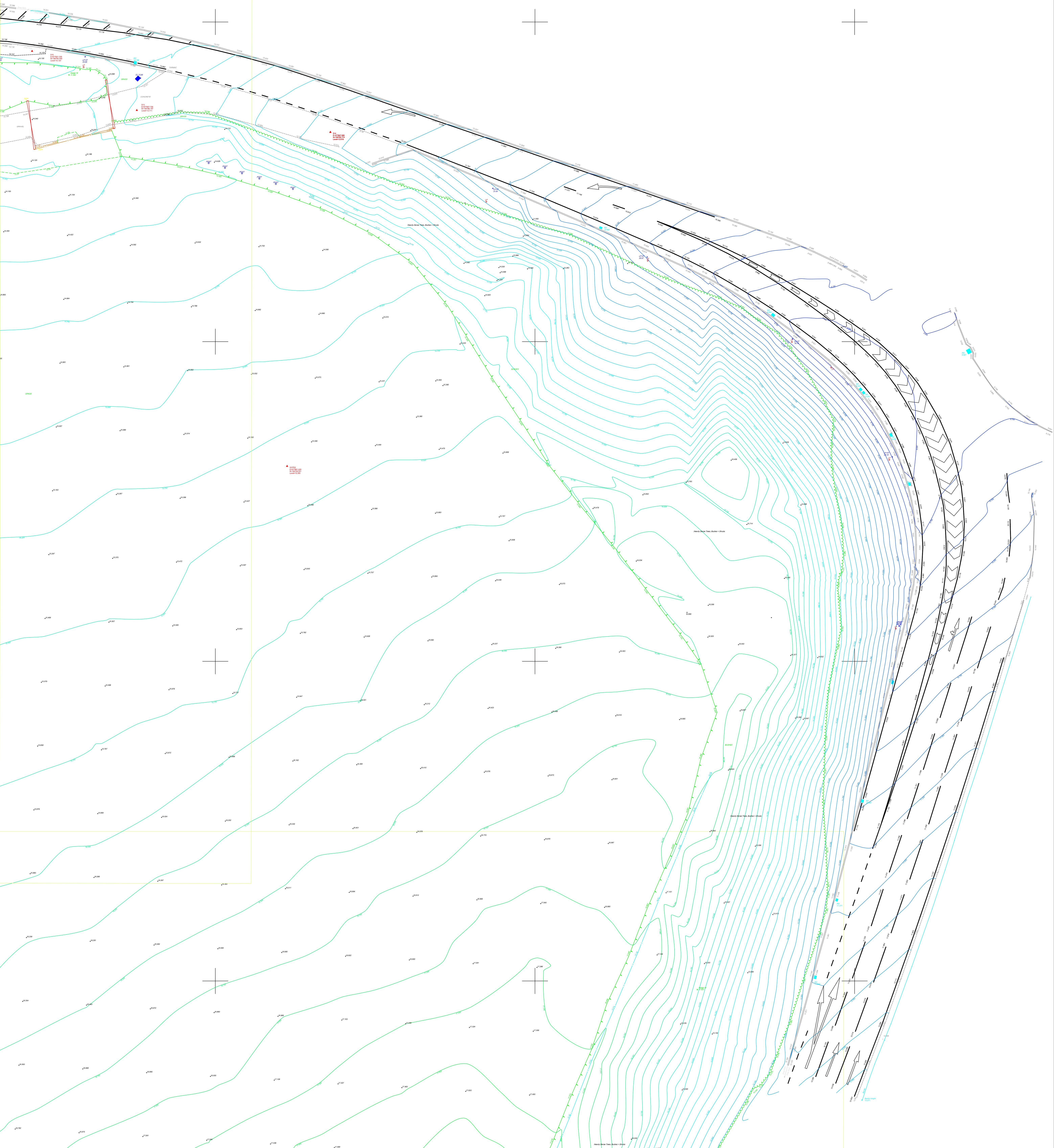


Appendix A1: Topographic Survey









Symbols

BOL

Boltard

Post

Spot Level

GUL

Gully

ER

Earth Rod

GR

Gas Riser

RWP

Rain Water Pipe

RS

Road Sign

SVP

Soil Vent Pipe

Station

Control Details

RE

Rodding Eye

SV

Stop Valve

WM

Water Meter

AV

Air Valve

WO

Wash Out

FI

Fire Hydrant

GV

Gas Valve

CAB

Cabinet

LB

Electric Link Box

MH2

Circular Manhole

MH3

Triangular Manhole

TP

Telegraph Pole

LP

Lamp Post

EP

Electric Post

TL

Traffic Light

FL

Floodlight

CTV

Cable TV IC

SC

Stop Cock

GV

Gas Valve

GV

Tree Height

GV

Hedge Height

GV

Gate Height

Gate

Gate

Manhole

Manhole

IC

Inspection Chamber

IC

Inspection Chamber

BT

BT Chamber

RG

Road Gully

Gate

Gate

Manhole

Manhole

IC

Inspection Chamber

BT

BT Chamber

RG

Road Gully

PAS 128:2022

Underground utility detection, verification and location - Specification

Underground utility detection, verification and location - Specification

Underground utility detection, verification and location - Specification

Approximate National Grid North

and sheet based upon the Ordnance Survey datum. Scale Factor 1.000

THREE SIXTY GROUP

UNIT 3, MANDALE PARK, NORTH SHIELDS, TYNE & WEAR, NE28 7FN

0191 684 7672

ADMIN@360HQ.CO.UK

WWW.360HQ.CO.UK

Underground Utility Linetypes

Unknown Drainage Route

Field Drain

Aso Drain

E-TFR

Electric - Taken from Records

E-AR

Assumed Electric

OH E

Electric Overhead

OH BT

BT Overhead

MSR

Multi Service Route

W-TFR

Water - Taken from Records

W-AR

Assumed Water

GAS-AR

Assumed Gas

GAS-TFR

Gas - Taken from Records

Survey Extents

EOS

End of Signal

UTR

Unable to Raise

UTT

Unable to Trace

NVO

No Visible Outlet

UTMOCA

Unable to Make Out Chamber Attributes

Underground Utility Linetypes

E

Electric

GAS

Gas

W

Water

CATV

Cable TV

CATVTR

Cable TV TFR

CCTV

Closed Circuit TV

BT

British Telecom

BTTR

British Telecom TFR

EMPTY

Empty Ducting

LNK

Unknown Metallic Utility

GPR

GPR Anomaly Possible Utility

COM

Communications

Foul

Foul Water Drainage Route

Surface

Surface Water Drainage Route

Combined

Combined Service Drainage Route

Topographical Linetypes

Road

Drop Kerb

Drop Kerb

Steps

Building Line

Barner

Channel

Concrete

Chain Fence

Metal Fence

Post & Wire Fence

Wooden Fence

Top of Bank

Bottom of Bank

Tree Canopy Line

Verge Line

Wall

Footpath

Fairgreen Interchange

Topographical Survey 2D

1:200 @ A0

28.03.25

OSTN15 at Scale Factor 1

BR / PR / BA

RJ / BR

RJ

4879-360-00-FGI-TS-001-00-P01

Sheet 5

P01

res

Symbols

EOS End of Signal/Unable to Trace Further

Legend

Approximate National Grid North

OS 128-2022
Underground utility detection, verification and location - Specification

THREE SIXTY GROUP

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TYNE & WEAR, NE29 7PN

0191 594 7672
ADMIN@360HQ.CO.UK
WWW.360HQ.CO.UK

Legend

Underground Utility Linetypes	Underground Utility Linetypes	Topographical Linetypes:

Legend

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Topographical Survey 2D

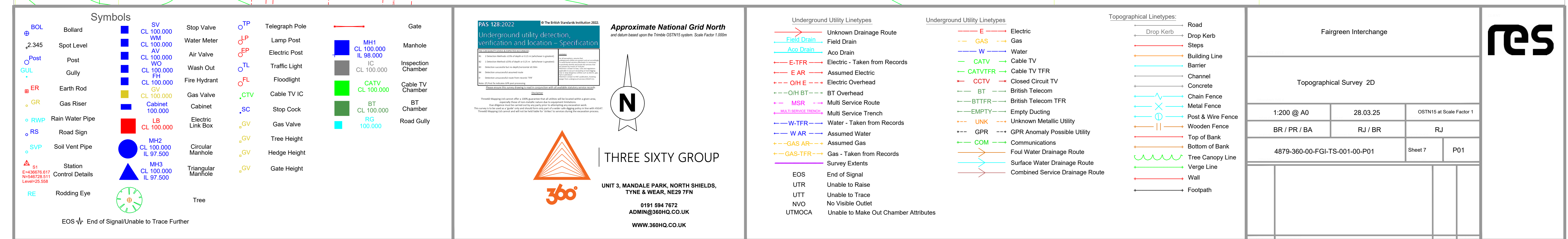
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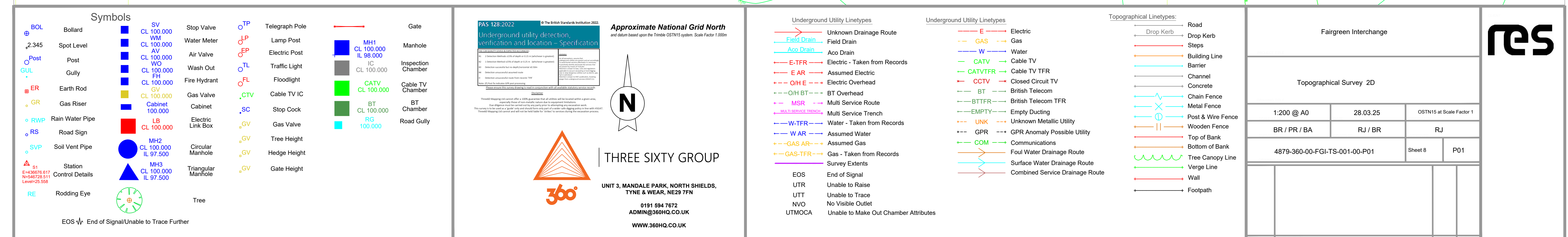
28.03.25

OSTN15 at Scale Factor 1

BR / PR / BA	RJ / BR	RJ
4879-360-00-FGI-TS-001-00-P01	Sheet 6	P01

Fairgreen Interchange





Symbols

	Bollard		SV	Stop Valve		Telegraph Pole
	Spot Level		CL 100,000	Water Meter		Lamp Post
	Post		AV	Air Valve		Electric Post
	Gully		WQ	Wash Out		Traffic Light
	Earth Rod		FH	Fire Hydrant		Floodlight
	Gas Riser		GV	Gas Valve		Cable TV IC
	Rain Water Pipe		Cabinet 100,000	Cabinet		Stop Cock
	Road Sign		CL 100,000	Electric Link Box		Gas Valve
	Soil Vent Pipe		MH2	Circular Manhole		Tree Height
	Station Control Details		MH3	Triangular Manhole		Hedge Height
	Roding Eye		End of Signal/Unable to Trace Further			Gate Height

Approximate National Grid North

For details based upon the British 2015/16 datum. Based 1948 = 10000

THREE SIXTY GROUP

UNIT 3, MANDALE PARK, NORTH SIELDS, TYNE & WEAR, NE29 7FN

0191 584 7472
ADMIN@THESG.CO.UK
WWW.360HQ.CO.UK

Underground Utility Linetypes

	Electric		British Telecom
	Gas		British Telecom TFR
	Water		Empty Ducting
	Cable TV		Unknown Metallic Utility
	Cable TV TFR		GPR - Invisibly Possible Utility
	Closed Circuit TV		Communications
	Overhead		Foul Water Drainage Route
	BT Overhead		Surface Water Drainage Route
	Multi Service Route		Combined Service Drainage Route
	Multi Service Trench		
	Water - Taken from Records		
	Assumed Water		
	Assumed Gas		
	Gas - Taken from Records		
	Survey Eos		
	End of Signal		
	Unable to Raise		
	Unable to Trace		
	No Visible Outlet		
	Unable to Make Out Chamber Attributes		

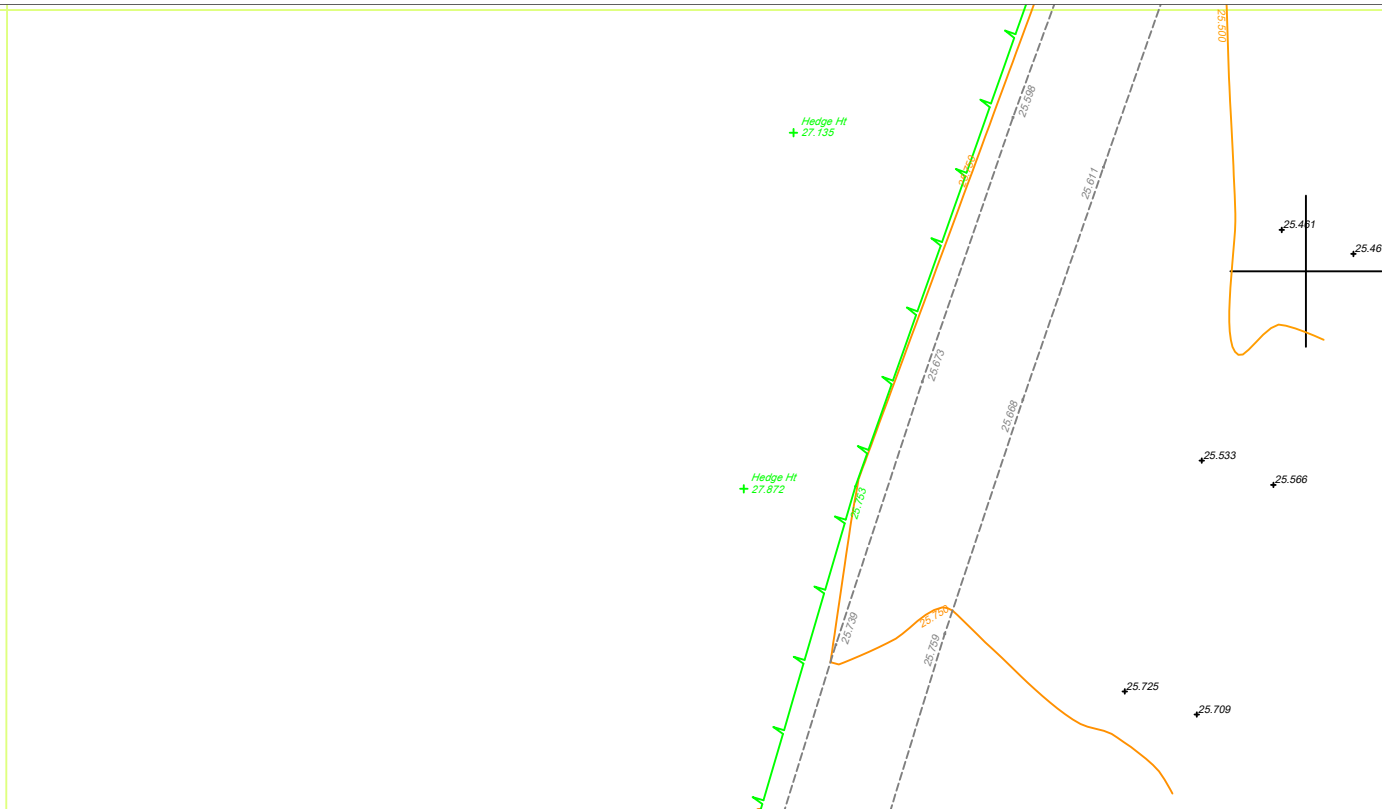
Topographical Linetypes:

	Drop Kerb
	Road
	Steps
	Building Line
	Banner
	Channel
	Concrete
	Chain Fence
	Metal Fence
	Post & Wire Fence
	Wooden Fence
	Top of Bank
	Bottom of Bank
	Tree Canopy Line
	Verge Line
	Wall
	Footpath

Fairgreen Interchange

Topographical Survey 2D

1:200 @ A0		28.03.25	OSTN15 at Scale Factor 1
BR / PR / BA	RJ / BR	RJ	
4879-360-00-FGI-TS-001-00-P01		Show 9	P01



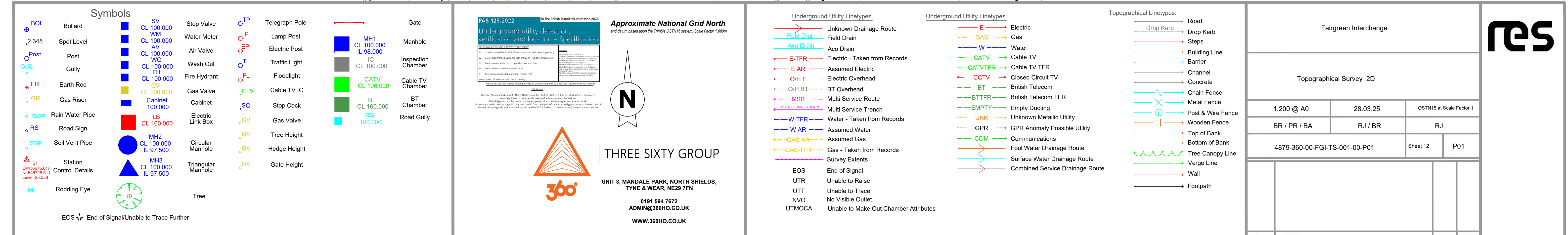
Underground Utility Linetypes

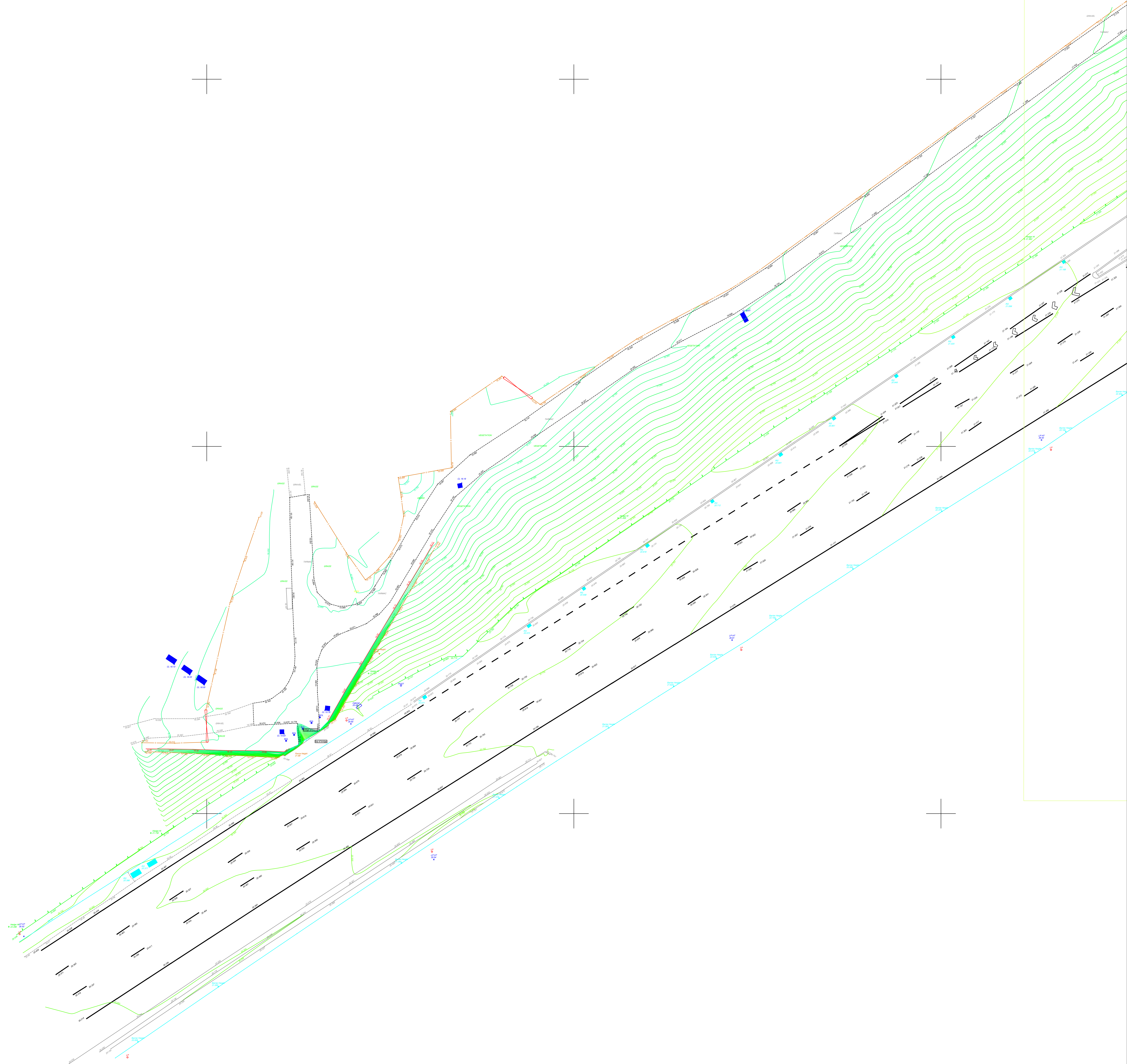
	E	Electric
	GAS	Gas
	W	Water
	CATV	Cable TV
	CATVTR	Cable TV TFR
	CCTV	Closed Circuit TV
	BT	British Telecom
	BTFR	British Telecom TFR
	EMPTY	Empty Ducting
	UNK	Unknown Metallic Utility
	GPR	GPR Anomaly Possible Utility
	COM	Communications
		Foul Water Drainage Route
		Surface Water Drainage Route
		Combined Service Drainage Route

Topographical Linetypes:

- Road
- Drop Kerb
- Steps
- Building Line
- Barrier
- Channel
- Concrete
- Chain Fence
- Metal Fence
- Post & Wire Fence
- Wooden Fence
- Top of Bank
- Bottom of Bank
- Tree Canopy Line
- Verge Line
- Wall
- Footpath

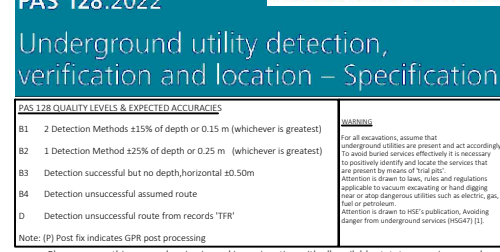
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Symbols

BOL Bolt	SV Stop Valve	TP Telegraph Pole
2345 Spot Level	WM Water Meter	LP Lamp Post
Post Post	AV Air Valve	EP Electric Post
GUL Gully	WO Wash Out	TL Traffic Light
ER Earth Road	FD Fire Hydrant	FL Floodlight
GR Gas Riser	GV Gas Valve	CTV Cable TV IC
RWP Rain Water Pipe	CB Cabinet	SC Stop Cock
RS Road Sign	LB Electric Link Box	GV Gas Valve
SVP Soil Vent Pipe	MH2 Circular Manhole	GV Tree Height
Station Control Details	MH3 Triangular Manhole	GV Gate Height
RE Rodding Eye	Tree	



Approximate National Grid North
and above based upon the British OSN15 system. Scale Factor 1.0001

THREE SIXTY GROUP

UNIT 3, MANDALE PARK, NORTH SHIELDS,
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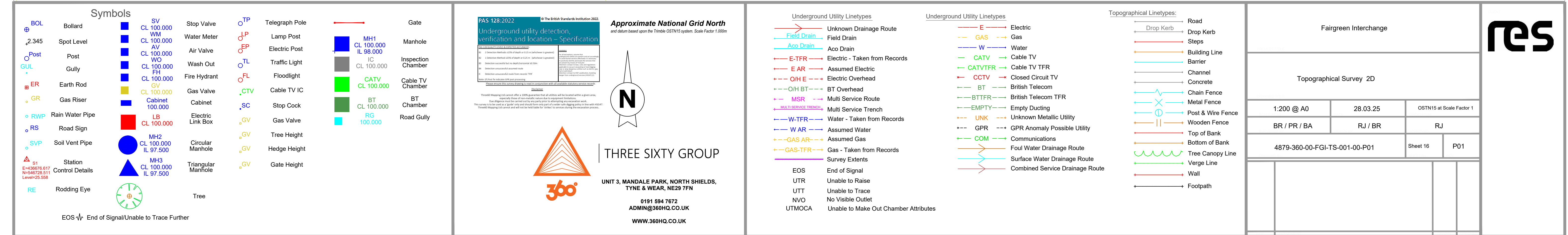
0191 684 7672
ADMIN@360HQ.CO.UK
WWW.360HQ.CO.UK

Underground Utility Linetypes	Underground Utility Linetypes
Unknown Drainage Route	Electric
Field Drain	GAS
Aso Drain	Water
E-TFR	CATV
E-AR	CATV TFR
OH E	CCTV
BT Overhead	BT
MSR	BT TFR
Multi Service Route	Empty Ducting
Water - Taken from Records	Unknown Metallic Utility
W-TFR	GPR
W-AR	GPR Anomaly Possible Utility
Assumed Gas	Communications
Assumed Water	Foul Water Drainage Route
GAS-AR	Surface Water Drainage Route
GAS-TFR	Combined Service Drainage Route
Survey Extents	
EOS	End of Signal
UTR	Unable to Raise
UTT	Unable to Trace
NVO	No Visible Outlet
UTMOCA	Unable to Make Out Chamber Attributes

Topographical Linetypes:	Topographical Linetypes:
Road	Drop Kerb
Drop Kerb	Steps
Building Line	Barrier
Channel	Concrete
Chain Fence	Metal Fence
Post & Wire Fence	Wooden Fence
Top of Bank	Bottom of Bank
Tree Canopy Line	Verge Line
Wall	Footpath

Fairgreen Interchange			
Topographical Survey 2D			
1:200 @ A0	28.03.25	OSTN15 at Scale Factor 1	
BR / PR / BA	RJ / BR	RJ	
4879-360-00-FGI-TS-001-00-P01		Sheet 13	P01





Symbols

	Bollard		SV CL 100,000		Stop Valve		Telegraph Pole		Gate
	Spot Level		WV CL 100,000		Water Meter		Lamp Post		MH1 CL 100,000 IL 98,000
	Post		AV CL 100,000		Air Valve		Electric Post		IC CL 100,000
	Gully		WO CL 100,000		Wash Out		Traffic Light		Floodlight
	Earth Rod		GV CL 100,000		Fire Hydrant		Floodlight		Cable TV IC CL 100,000
	Gas Riser		CB CL 100,000		Gas Valve		Stop Cock		BT CL 100,000
	Rain Water Pipe		LN CL 100,000		Electric Link Box		Gas Valve		BT CL 100,000
	Road Sign		MH2 CL 100,000 IL 97,500		Circular Manhole		Tree Height		BT CL 100,000
	Soil Vent Pipe		MH3 CL 100,000 IL 97,500		Triangular Manhole		Hedge Height		BT CL 100,000
	Station Control Details		Tree		Gate		Gate Height		BT CL 100,000
	Rodding Eye		EOS End of Signal/Unable to Trace Further						

Approximate National Grid North

and datum based upon the British OSTN15 system. Scale Factor 1.0001

UNIT 3, MANDALE PARK, NORTH SHIELDS,
TYNE & WEAR, NE29 1TN

0191 364 1672
ADMIN@36HQ.CO.UK
WWW.36HQ.CO.UK

Underground Utility Linetypes

	Field Drain		Water		Cable TV TFR
	Ass Drain		Cable TV		Closed Circuit TV
	Electric - Taken from Records		British Telecom		British Telecom TFR
	Electric - Assumed		British Telecom TFR		Empty Ducting
	Electric Overhead		Unknown Metallic Utility		GPR Annually Possible Utility
	Electric Overhead		Communications		Foul Water Drainage Route
	Multi Service Route		Survey Extents		Surface Water Drainage Route
	Multi Service Route		End of Signal		Combined Service Drainage Route
	Water - Taken from Records		Unable to Raise		
	Assumed Water		Unable to Trace		
	Assumed Gas		No Visible Outlet		
	Gas - Taken from Records		Unable to Make Out Chamber Attributes		

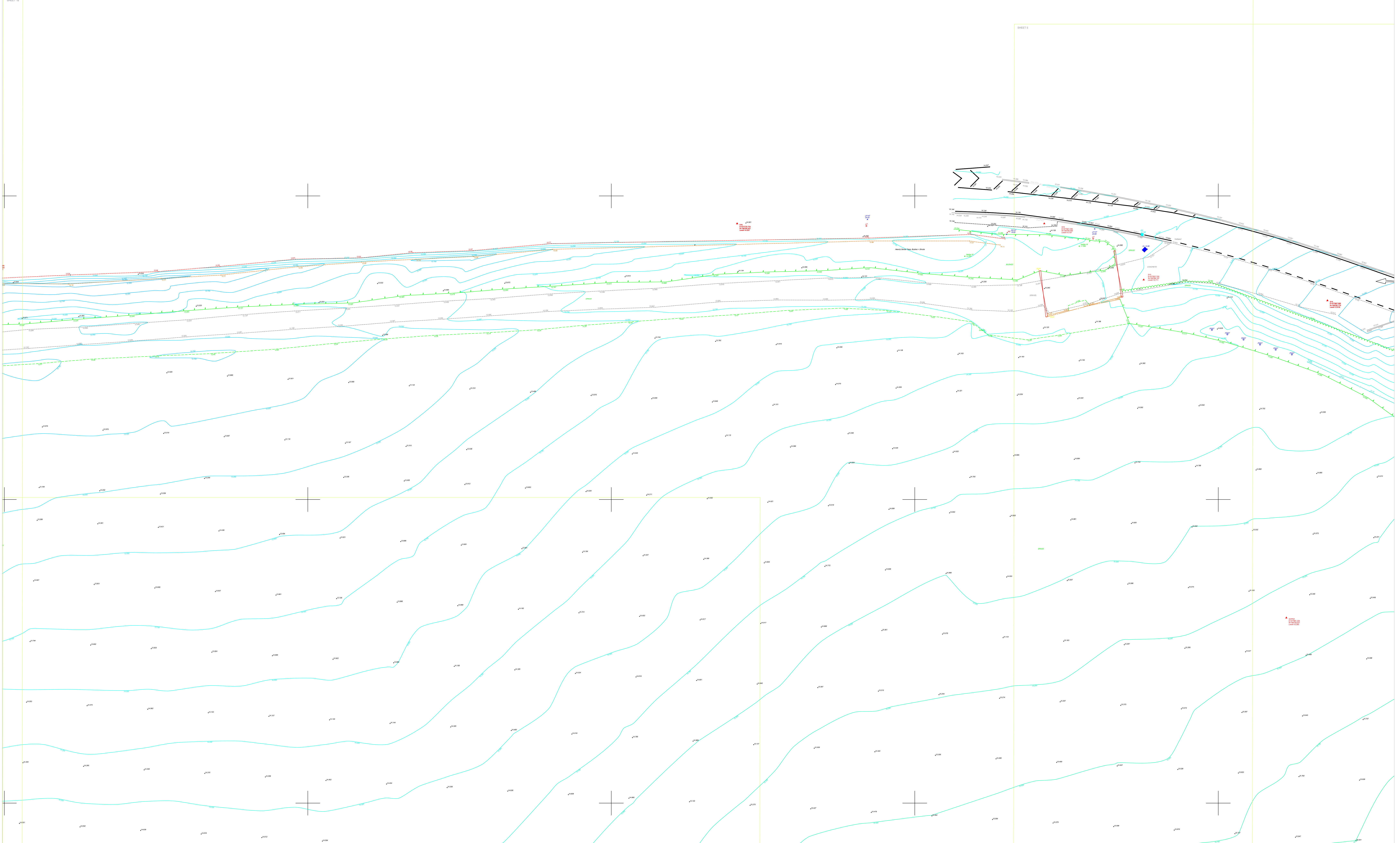
Topographical Linetypes

	Drop Kerb		Road
	Field Drain		Steps
	Building Line		Barrier
	Channel		Concrete
	Chain Fence		Metal Fence
	Post & Wire Fence		Wooden Fence
	Top of Bank		Bottom of Bank
	Tree Canopy Line		Verge Line
	Wall		Footpath

Fairgreen Interchange

Topographical Survey 2D

1:200 @ A0		28.03.25	OSTN15 at Scale Factor 1
BR / PR / BA	RJ / BR	RJ	
4879-360-00-FGL-TS-001-00-P01		Sheet 17	P01



Symbols

BOL Bollard	SV Stop Valve	CTP Telegraph Pole	Gate
2.345 Spot Level	WM Water Meter	EP Electric Post	MH1 Manhole
Point Post	AV Air Valve	FL Floodlight	IC Inspection Chamber
GUL Gully	WO Wash Out	TL Traffic Light	CL 100.000 Cable TV Chamber
ER Earth Rod	FI Fire Hydrant	CTV Cable TV IC	BT Chamber
GR Gas Riser	CV Gas Valve	SC Stop Cock	RG Road Gully
RWP Rain Water Pipe	Cabinet Cabinet	GV Gas Valve	
RS Road Sign	LB Electric Link Box	GV Hedge Height	
SVP Soil Vent Pipe	MB2 Circular Manhole	GV Tree Height	
AS Station	MB3 Triangular Manhole	GV Gate Height	
RE Rodding Eye	Tree		

EOS - End of Signal/Unable to Trace Further

Underground Utility Linetypes

Field Drain	Unknown Drainage Route
Ass. Drain	Assumed Drain
E-TFR	Electric - Taken from Records
E-AR	Assumed Electric
OH E	Electric Overhead
BT	BT Overhead
MSR	Multi Service Route
MSR	Multi Service Trench
W-TFR	Water - Taken from Records
W-AR	Assumed Water
GAS-AR	Assumed Gas
GAS-TFR	Gas - Taken from Records
Survey Extents	Survey Extents
End of Signal	End of Signal
UTR	Unable to Raise
UTT	Unable to Trace
NVO	No Visible Outlet
UTMOCA	Unable to Make Out Chamber Attributes

Underground Utility Linetypes

E	Electric
GAS	Gas
W	Water
CATV	Cable TV
CATV-TFR	Cable TV TFR
CCTV	Closed Circuit TV
BT	British Telecom
BT-TFR	British Telecom TFR
EMPTY	Empty Ducting
UNK	Unknown Metallic Utility
GPR	GPR Anomaly Possible Utility
COM	Communications
Foul Water Drainage Route	Foul Water Drainage Route
Surface Water Drainage Route	Surface Water Drainage Route
Combined Service Drainage Route	Combined Service Drainage Route

Topographical Linetypes

Road	Road
Drop Kerb	Drop Kerb
Steps	Steps
Building Line	Building Line
Barrier	Barrier
Channel	Channel
Concrete	Concrete
Metal Fence	Metal Fence
Post & Wire Fence	Post & Wire Fence
Wooden Fence	Wooden Fence
Top of Bank	Top of Bank
Bottom of Bank	Bottom of Bank
Tree Canopy Line	Tree Canopy Line
Verge Line	Verge Line
Wall	Wall
Footpath	Footpath

Fairgreen Interchange

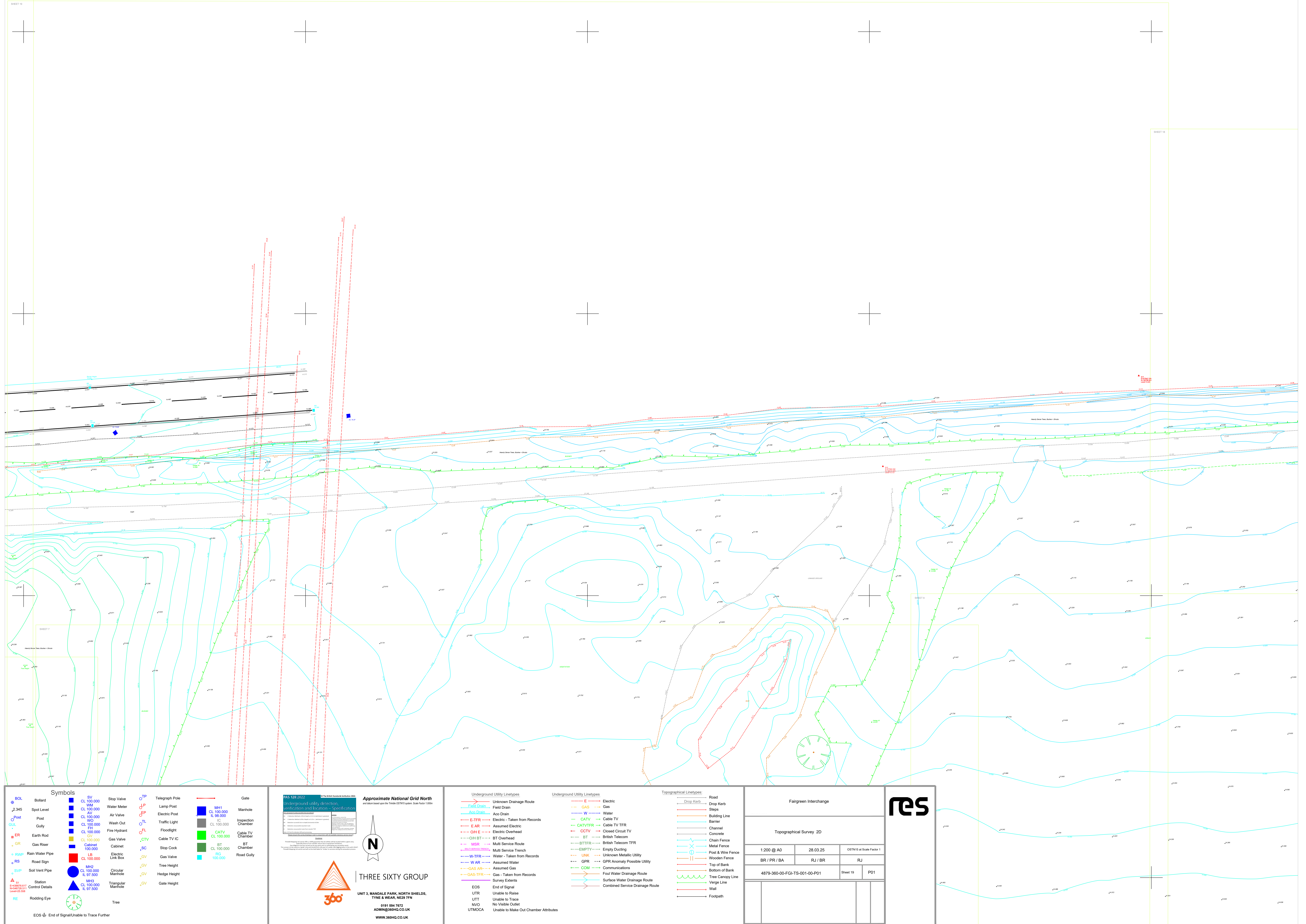
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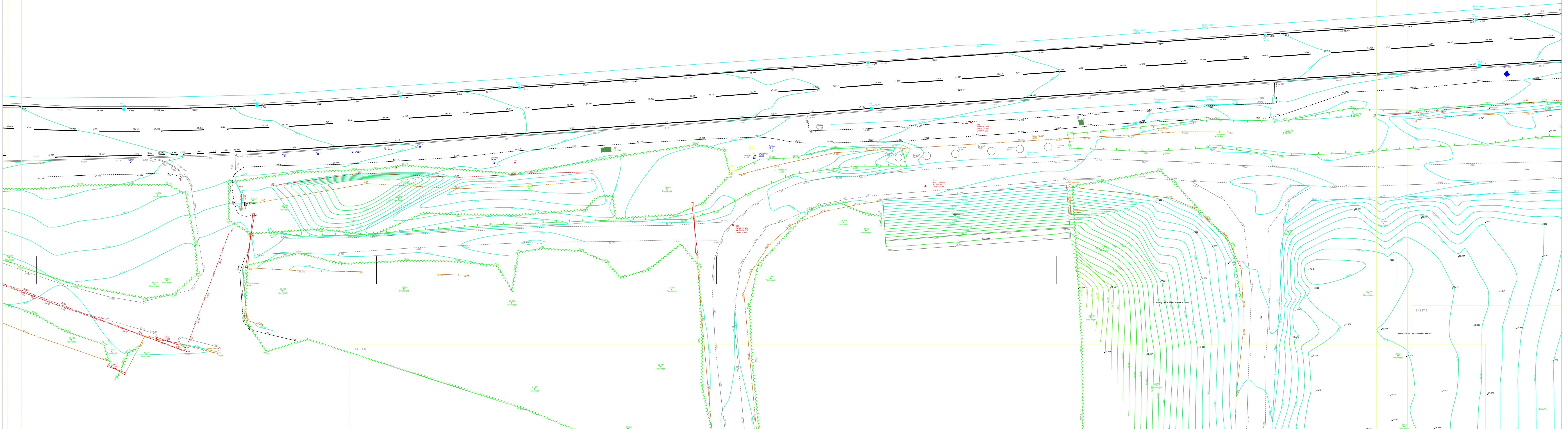
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BR / PR / BA	RJ / BR	RJ
4879-360-00-FGI-TS-001-00-P01		Sheet 18 P01

THREE SIXTY GROUP

UNIT 3, MANDALE PARK, NORTH SHIELDS,
TYNE & WEAR, NE29 7FN

0191 594 7672
ADMIN@360HQ.CO.UK
WWW.360HQ.CO.UK





Symbols

BOL Bollard	SV Stop Valve	CTP Telegraph Pole	Gate
2.345 Spot Level	WM Water Meter	EP Electric Post	MH1 Manhole
Post	AV Air Valve	FL Floodlight	IC Inspection Chamber
GUL Gully	WO Wash Out	TL Traffic Light	CL 100,000 Cable TV Chamber
ER Earth Rod	FI Fire Hydrant	FL Floodlight	BT Chamber
GR Gas Riser	GV Gas Valve	CTV Cable TV IC	RG Road Gully
RWP Rain Water Pipe	CAB Cabinet	SC Stop Cook	
RS Road Sign	LB Electric Link Box	GV Gas Valve	
SVP Soil Vent Pipe	MH2 Circular Manhole	GV Hedge Height	
Station	MH3 Triangular Manhole	GV Gate Height	
Control Details	MH4 Tree		
Rodding Eye			
EOS End of Signal/Unable to Trace Further			

Underground Utility Linetypes

Field Drain	Unknown Drainage Route	E	Electric
Acc Drain	Acc Drain	GAS	Gas
E-TFR	Electric - Taken from Records	W	Water
E-AR	Assumed Electric	CATV	Cable TV
OH E	Electric Overhead	CATV TFR	Cable TV TFR
BT	BT Overhead	CCTV	Closed Circuit TV
MSR	Multi Service Route	BT	British Telecom
MSR TFR	Multi Service Trench	BT TFR	British Telecom TFR
W-TFR	Water - Taken from Records	EMPTY	Empty Ducting
W-AR	Assumed Water	UNK	Unknown Metallic Utility
GAS-AR	Assumed Gas	GPR	GPR Anomaly Possible Utility
GAS-TFR	Gas - Taken from Records	COM	Communications
Survey Extents	Survey Extents	Foul Water Drainage Route	Foul Water Drainage Route
End of Signal	End of Signal	Surface Water Drainage Route	Surface Water Drainage Route
Unable to Raise	Unable to Raise	Combined Service Drainage Route	Combined Service Drainage Route
No Visible Outlet	No Visible Outlet		
Unable to Make Out Chamber Attributes	Unable to Make Out Chamber Attributes		

Topographical Linetypes

Road	Road
Drop Kerb	Drop Kerb
Steps	Steps
Building Line	Building Line
Barrier	Barrier
Channel	Channel
Concrete	Concrete
Chain Fence	Chain Fence
Metal Fence	Metal Fence
Post & Wire Fence	Post & Wire Fence
Wooden Fence	Wooden Fence
Top of Bank	Top of Bank
Bottom of Bank	Bottom of Bank
Tree Canopy Line	Tree Canopy Line
Verge Line	Verge Line
Wall	Wall
Footpath	Footpath

Fairgreen Interchange

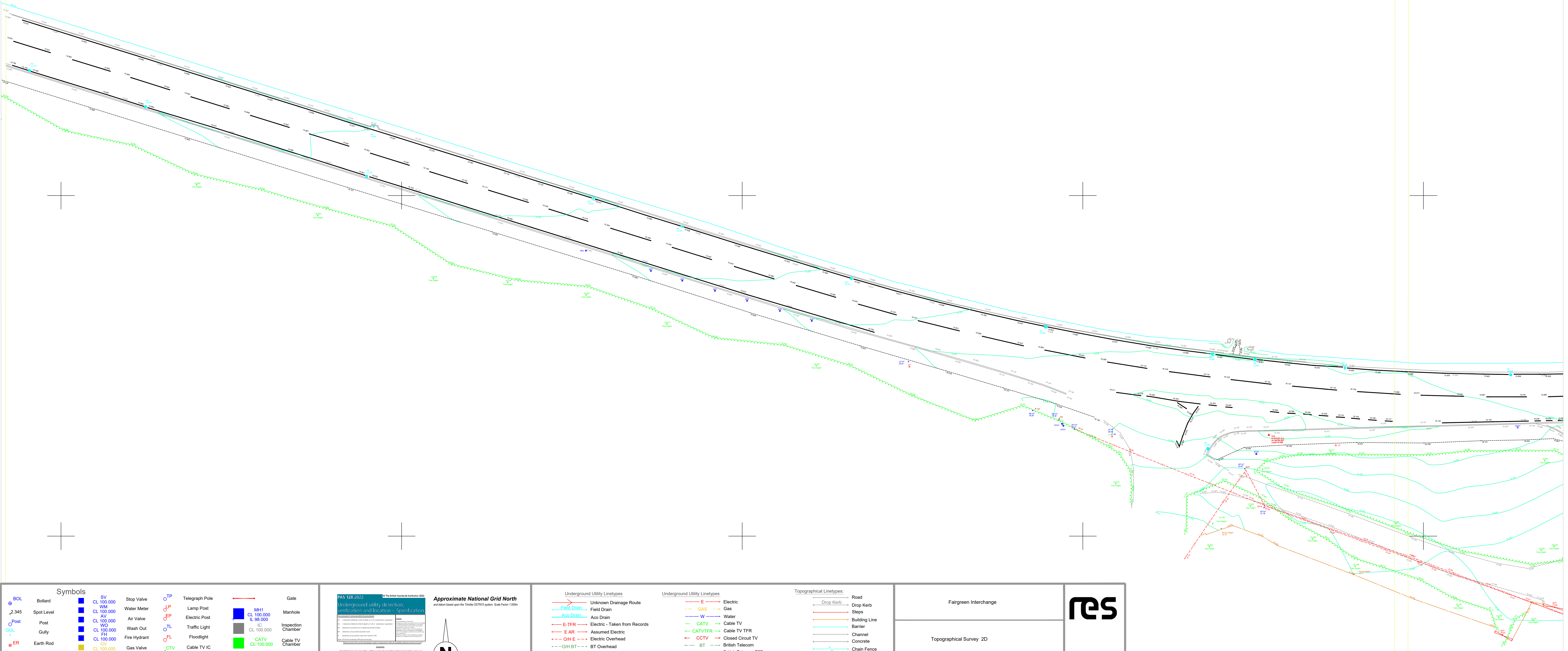
Topographical Survey 2D

1:200 @ A0	28.03.25	OSTM10 at Scale Factor 1
BR / PR / BA	RJ / BR	RJ
4879-360-00-FGI-TS-001-00-P01	Sheet 21	P01

THREE SIXTY GROUP

UNIT 3, MANDALE PARK, NORTH SHIELDS,
TYNE & WEAR, NE29 7FN

0191 594 7672
ADMIN@360HQ.CO.UK
WWW.360HQ.CO.UK



Symbols

BOL Bollard	SV Stop Valve	CTP Telegraph Pole	Gate
Spot Level 2.345	WM Water Meter	EP Electric Post	Manhole
Post	AV Air Valve	FL Floodlight	IC Inspection Chamber
GUL Gully	WO Wash Out	FL Floodlight	BT Chamber
ER Earth Rod	FI Fire Hydrant	FL Floodlight	RG Road Gully
GR Gas Riser	CV Cabinet	CTV Cable TV IC	
RWP Rain Water Pipe	LB Electric Link Box	SC Stop Cock	
RS Road Sign	MB Circular Manhole	GV Gas Valve	
SVP Soil Vent Pipe	MB Circular Manhole	GV Gas Valve	
Station E145206.617 N445228.811 U445235.568	MB Circular Manhole	GV Gas Valve	
RE Rodding Eye	MB Circular Manhole	GV Gas Valve	
End of Signal/Unable to Trace Further	MB Circular Manhole	GV Gas Valve	

Approximate National Grid North
and datum based upon the Ordnance Survey datum. Scale Factor 1.0000

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UNIT 3, MANDALE PARK, NORTH SHIELDS,
TYNE & WEAR, NE29 7FN
0191 594 7672
ADMIN@360HQ.CO.UK
WWW.360HQ.CO.UK

Underground Utility Linetypes

Unknown Drainage Route	E Electric
Field Drain	GAS Gas
Aco Drain	W Water
E-TFR Electric - Taken from Records	CATV Cable TV
E-AR Assumed Electric	CATV-TFR Cable TV TFR
OH-E Electric Overhead	CCTV Closed Circuit TV
BT BT Overhead	BT British Telecom
MSR Multi Service Route	BT-TFR British Telecom TFR
MSR-TFR Multi Service Trench	EMPTY Empty Ducting
W-AR Water - Taken from Records	UNK Unknown Metallic Utility
W-AR Assumed Water	GPR GPR Anomaly Possible Utility
GAS-AR Assumed Gas	COM Communications
GAS-TFR Gas - Taken from Records	Foul Water Drainage Route
Survey Extents	Surface Water Drainage Route
End of Signal	Combined Service Drainage Route
UTR Unable to Raise	
UTT Unable to Trace	
NVO No Visible Outlet	
UTMOCA Unable to Make Out Chamber Attributes	

Topographical Linetypes

Road	Drop Kerb
Drop Kerb	Steps
Building Line	Barrier
Channel	Concrete
Chain Fence	Metal Fence
Post & Wire Fence	Wooden Fence
Top of Bank	Bottom of Bank
Tree Canopy Line	Verge Line
Wall	Footpath

Fairgreen Interchange

Topographical Survey 2D

1:200 @ A0	28.03.25	OSTN10 at Scale Factor 1
BR / PR / BA	RJ / BR	RJ
4879-360-00-FGI-TS-001-00-P01	Sheet 21	P01