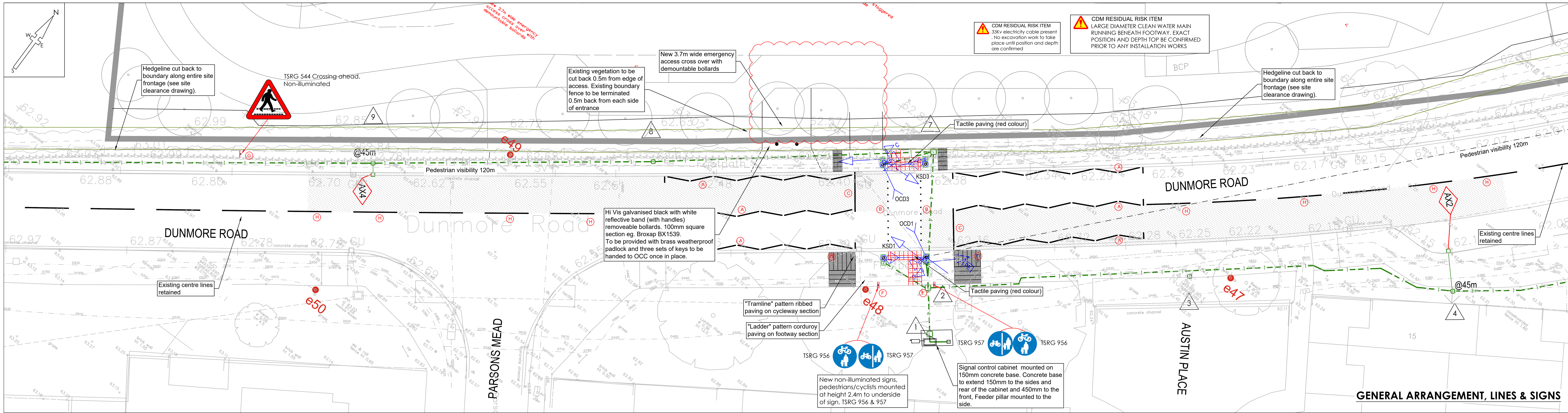
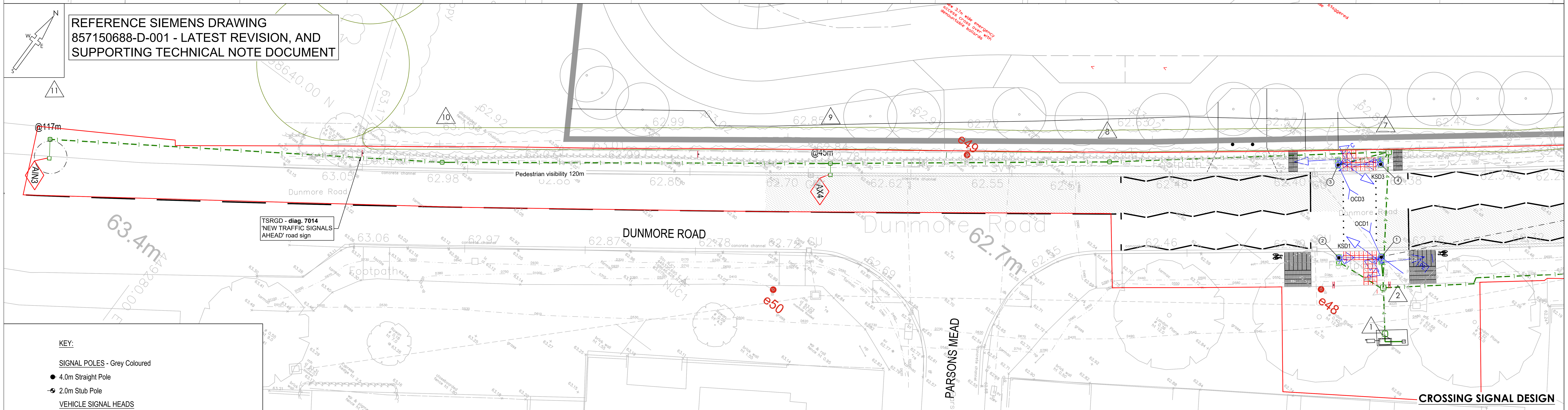




KEY:

SIGNAL POLES - Grey Coloured
- 4.0m Straight Pole
- 2.0m Stub Pole

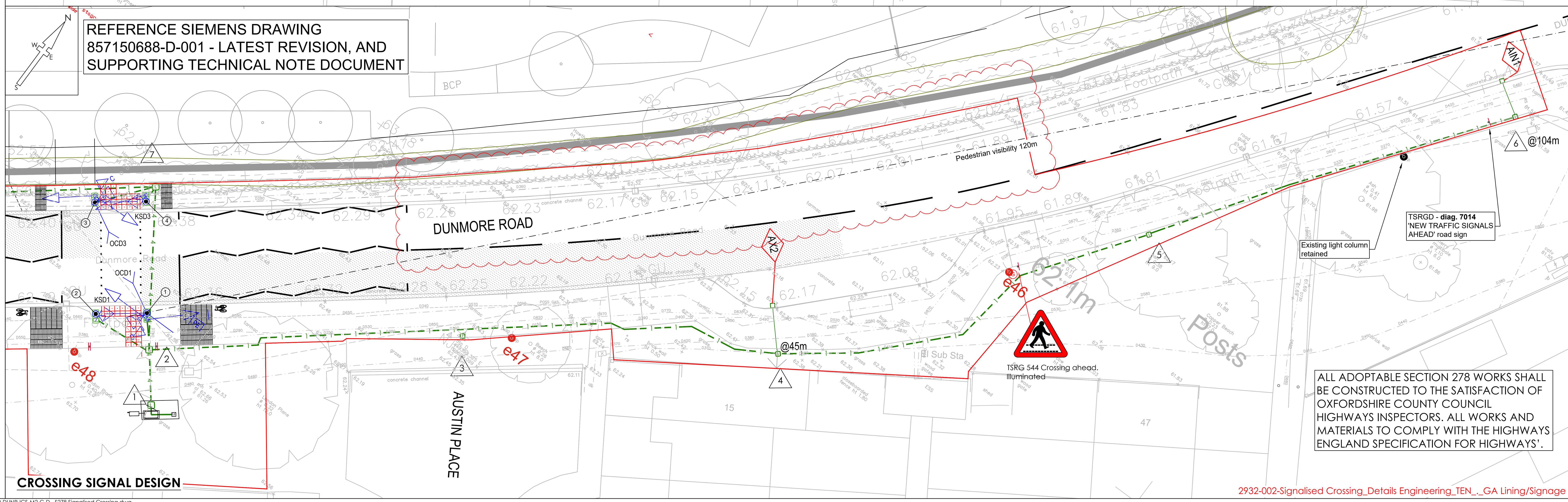
VEHICLE SIGNAL HEADS
- Primary ELV RAG LED Signal Head
- Signal Head Side-Mounted on Pole (not bracket)

SIGNAL EQUIPMENT
- ELV Pedestrian Controller with NAL Cabinet Base
- Electric Feeder Pillar (FP)
- Photo-Electric Cell (PE)
- GSM Cabinet Mounted Antenna
- MOVA Loops (IN / X)

PEDESTRIAN SIGNAL EQUIPMENT
- ELV Nearside Toucan Display, Combined Demand Unit + Tactile Cone and Audible Devices
- ELV Push Button Unit + Tactile Cone
- Kerbside Detector (KSD)
- On Crossing Detector (OCD)

CIVILS (Proposed)
- 1x50mm dia Black Duct
- 1x100mm dia Orange Traffic Signal Duct
- 4x100mm dia Orange Traffic Signal Duct
- Large Duct Box (600x600mm)
- Medium Duct Box (450x450mm)
- Carriageway Loop Box with 50mm dia under Kerb Duct
- Pole Retention Socket (NAL115/600DF)

MISCELLANEOUS
- Pole Number
- Duct Box Number
- Red Coloured Tactile Paving (400x400mm)
- Pedestrian Crossing Studs (100x100mm)
- +68 PSV wearing course surface or HFS



ALL ADOPTABLE SECTION 278 WORKS SHALL BE CONSTRUCTED TO THE SATISFACTION OF OXFORDSHIRE COUNTY COUNCIL HIGHWAYS INSPECTORS. ALL WORKS AND MATERIALS TO COMPLY WITH THE HIGHWAYS ENGLAND SPECIFICATION FOR HIGHWAYS'.

NOTES

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Convert lanterns to :-
Column No's e46, e47, e48, e49, e50

Lantern	DW Windsor Kirium Pro 2 - Green RAL 6013
Lantern ref	Kirium Pro 2 48 LED 3K CLO 500mA A1 optic - RAL 6013
Lamp	64 Watt 48 LED 3000K Colour temperature 9.3 klm
Switch	One piece photocell Nema 7 pin type (Zodion super 6) set at 35 / 18 lux Pre-set to dim to 75% between 00:00 to 6:00am
UMSUG Code	42 0064 0000 100
Switch Regime	D17

OCC REF - A 4 7 3 3

DPCS - Demountable pole chamber system with sliding pole adaptor set on 100mm ST4 concrete base with a minimum 150mm surround (semi dry workability)

DP - 450x 450mm draw pit chamber set on 100mm ST4 concrete base with a minimum 150mm surround (semi dry workability)

Refer to drawings 2932_022_Signalised Crossing_Typical Details 2 of 2 for construction and specification details

Where required existing road markings shall be removed mechanically (not using hot compressed air).eg 'Hydro blasting' or similar. Not to be burnt off.

Existing road markings within Section 278 works to be replenished as agreed with OCC on site.

Street furniture shall be painted grey to OCC lighting specification.

See drawing 2932_022_Signalised Crossing_Typical Details 2 of 2 for sign post installation details.

(A) TSRGD 1001.3 - 100mm wide Zig-Zag lines to indicate requirements of regulations 27 & 28 at signal controlled pedestrian crossing

(B) TSRGD 1055.1 - 100mmx100mm square thermoplastic pedestrian delineation spaced at 250mm ctrs

(C) TSRGD 1001 - 200mm wide stop line

(D) TSRGD 1057 - Cycle lane marking

(F) TSRGD 956 & 957 - Route comprising 2No. 300mmØ Two ways pedestrian and cycles only non-illuminated.
Clearance to underside of Cycleway Signs to be 2.4m Post size 89mmØ see drawing 2932_022_Signalised Crossing_Typical Details 2 of 2

(G) TSRGD 544 - Crossing ahead sign 600mm high Clearance to underside of Cycleway Signs to be 2.4m. Post size 89mmØ see drawing 2932_022_Signalised Crossing_Typical Details 2 of 2

(G) TSRGD 1004 - Centre line 4m mark 2m gap 100mm wide

Diag. 7014
Non-illuminated
To be erected minimum 45m in advance of the works. Erected on new post as directed by Highways Inspector. Date of erection is to be noted on the back of the 'New Road Layout Signs' TSRG 7014 and the developer has to removed the sign once three months after erection has elapsed.

REV	DRAWN	CHECK	REVISION COMMENTS	ISSUE DATE
P6	AC	DJ	Amended to address DWH comments as clouded	03/05/19
P5	AC	DJ	Amended to address DWH audit comments	12/02/19
P4	AC	DJ	Corduroy paving reference and bollards amended	07/01/19
P3	AC	DJ	Amended in accordance with 2nd OCC technical audit & street lighting added.	06/11/18
P2	SNN	DJ	Siemens Traffic Signal Design: 857150688/D/001 added to drawing	15/10/18
P1	NJ	DJ	Initial issue	22/01/18

DRAWING TITLE
General Arrangement & Lining/Signage
Signalised Pedestrian Crossing

SHEET NO. 1/1

PROJECT
Dunmore Road
Abingdon
Oxon

S2 - INFORMATION

CLIENT
Where quality lives
David Wilson Homes

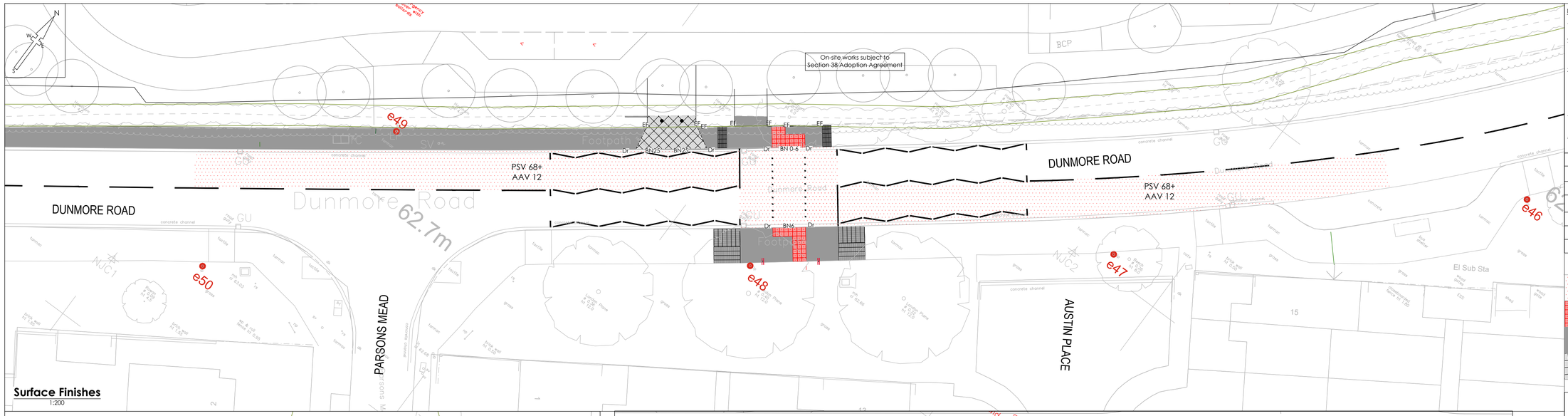
Infrastruct CS Ltd

SCALE @ A1	ENGINEER	DRAFT	APPROVED
1:200	DJ	NJ	TST

PROJECT NUMBER	STATUS	DATE
2932	S2	May 18

PROJECT	ORIGIN	PHASE	LEVEL	TYPE	ROLE	NO.	REVISION
DUNR	ICS	SC	XX	DR	C	002	P6

The Stables, High Cogges Farm, High Cogges, Witney, OX29 6UN - Tel: 01993 709709: info@infrastructcs.co.uk



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Kerb Legend

Kerb Ref	Type	Dimensions	Notes
HB2	HB2	125x255	125mm upstand
BN0	BN0	-	0-6mm upstand
CS0	CS2	150x150	Flush kerb laid with slight fall to channel eg Pedestrian crossings
Dr	-	125x255/150	Dropper kerb either left or right drop as required
EF	EF	50x150	Square edged path edging laid flush unless otherwise stated

Key

- Surface to be cold milled to depth of 40mm to accept 40mm overlay of HRA 35/14F surface 40/60 BS EN1208-4 PSV-68+ AAV 12 max
- Tactile paving (red)
- Footway construction see drg 2932_021_Signalised Crossing_Typical Details 1 of 2
- Vehicle crossover see drg 2932_021_Signalised Crossing_Typical Details 1 of 2

Column No's e46, e47, e48, e49, e50

Lantern	DW Windsor Kirium Pro 2 - Green RAL 6013
Lantern ref	Kirium Pro 2 4B LED 3K CLO 500mA A1 opto - RAL 6013
Lamp	64 Watt 4B LED 3000K Colour temperature 9.3 klm
Switch	One piece photocell Nema 7 pin type (Zodion super 6) set at 35 / 18 lux Pre-set to dim to 75% between 00:00 to 6:00am
UMSUG Code	42 0064 0000 100
Switch Regime	D17

OCC REF - A 4 7 3 3

REV	DRAWN	CHECK	REVISION COMMENTS	ISSUE DATE
P4	AC	DJ	Amended to address DWH comments, adjustments to vehicle crossover and dimensions added	03/05/19
P3	AC	DJ	Amended to address DWH audit comments	12/02/19
P2	AC	DJ	Amended to address 2nd technical audit	05/11/18
P1	NJ	DJ	Initial issue	15/10/18

DRAWING TITLE: Surface Finishes & Kerb Specifications Signalised Pedestrian Crossing

SHEET NO.: 1/1

PROJECT: Dunmore Road, Abingdon, Oxon

S2 - INFORMATION

CLIENT: Where quality lives — David Wilson Homes

Infrastruct CS Ltd

SCALE @ A1: As Noted

ENGINEER: DJ

DRAFT: NJ

APPROVED: TST

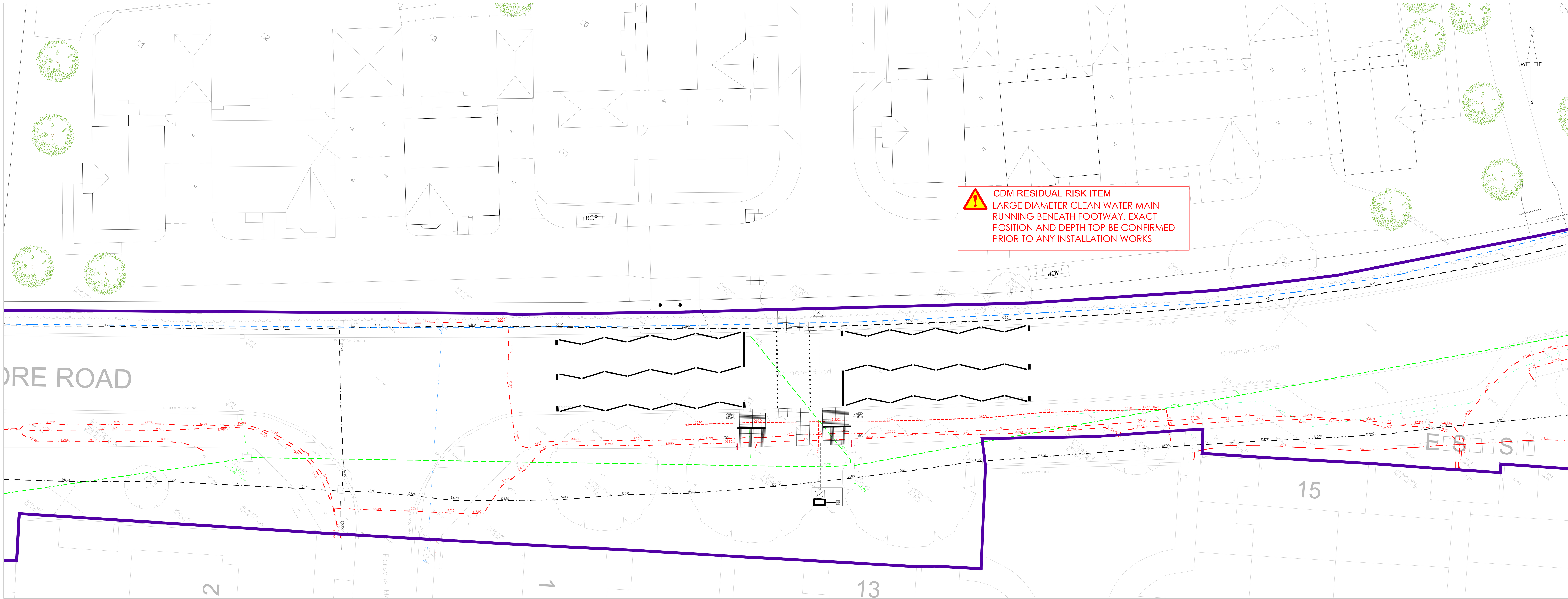
PROJECT NUMBER	STATUS	DATE
2932	S2	October 18

PROJECT	ORIGIN	PHASE	LEVEL	TYPE	ROLE	NO.	REVISION
DUNR	ICS	SC	XX	DR	C	003	P4

The Stables, High Cogges Farm, High Cogges, Witney, OX29 6UD. Tel: 01993 709709. info@infrastruct.co.uk

2932-003-Signalised Crossing_Details Engineering_TEN_..._Surface Finishes & Kerbs

X:\ICS Jobs\2900 Jobs\2932 - DUNR - Dunmore Rd, Abingdon (DW Homes)\01 - Drawings\01 - Design\B - S278\2932-DUNR-ICS-M2-C-D - S278 Signalised Crossing.dwg



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SERVICES

catv
communication
electric
foul water } drainage
storm water } drainage
fuel oil line
gas
GPR trace (unknown)
multiduct
power trace
radio trace (unknown)
service duct
street lighting
telecom
water

D850	approx depth (mm)
EOT	end of trace
RS	rod stops
UTT	unable to trace
UTTF	unable to trace further

REV	DRAWN	CHECK	REVISION COMMENTS	ISSUE DATE
P2	NJ	DJ	Minor amendments	
P1	NJ	DJ	Initial issue	04/06/18

DRAWING TITLE
Utilities
Signalised Pedestrian Crossing

SHEET NO. 1/1

PROJECT
Dunmore Road
Abingdon
Oxon

S2 - INFORMATION

CLIENT
Where quality lives
David Wilson Homes

Infrastruct CS Ltd

SCALE @ A1 1:200 (0m 5m 10.0m)

PROJECT NUMBER	STATUS	DATE
2932	S2	May 18

ENGINEER DJ
DRAFT NJ
APPROVED TST

PROJECT	ORIGIN	PHASE	LEVEL	TYPE	ROLE	NO.	REVISION
DUNR	ICS	SC	XX	DR	C	004	P2

The Stables, High Cogges Farm, High Cogges, Witney, OX29 6UN - Tel: 01993 709709: info@infrastructcs.co.uk

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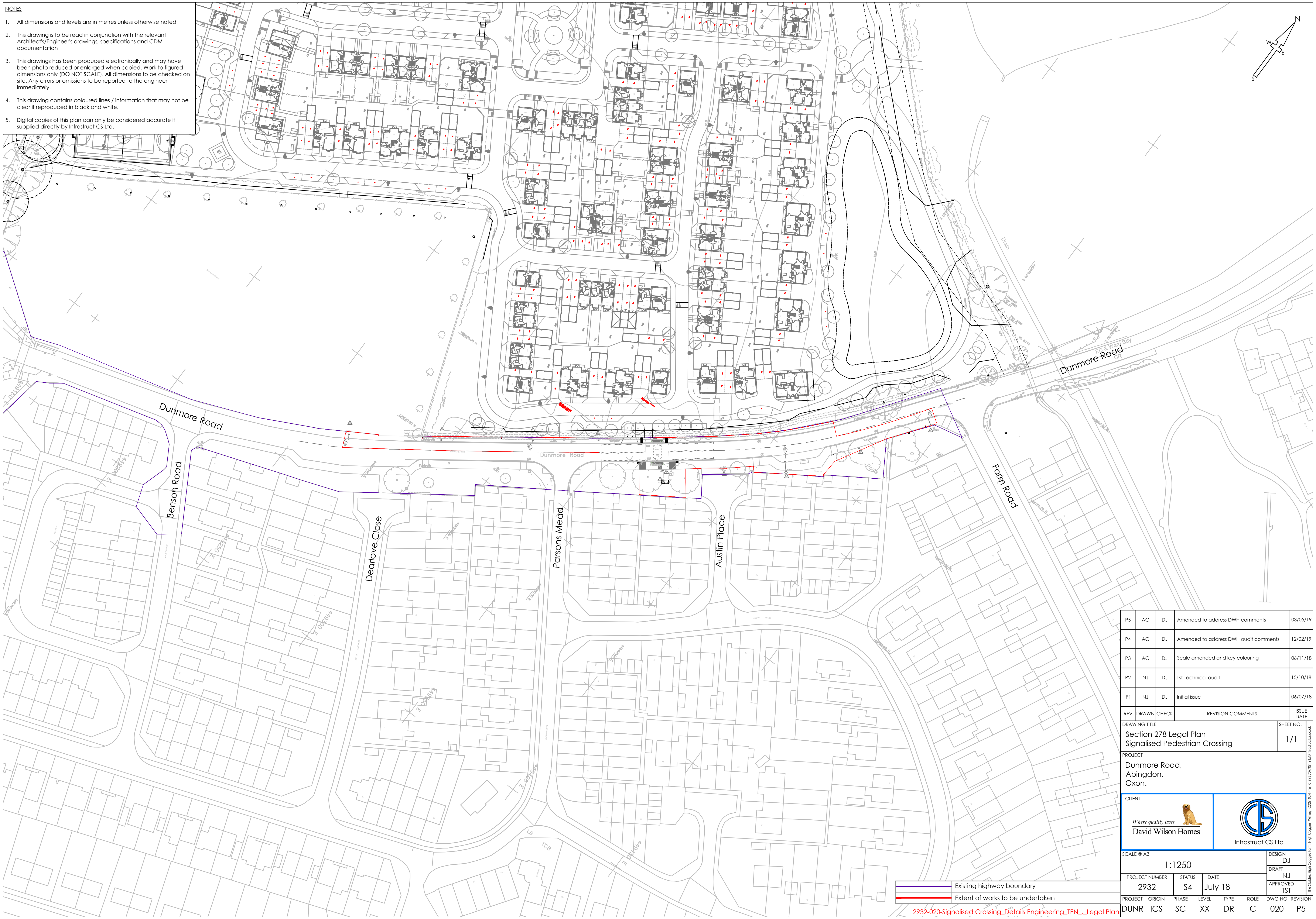


REV	DRAWN	CHECK	REVISION COMMENTS	ISSUE DATE
P5	AC	DJ	Amended to address DWH comments	03/05/19
P4	AC	DJ	Amended to address DWH audit comments	12/02/19
P3	AC	DJ	Scale amended and key colouring	06/11/18
P2	NJ	DJ	1st Technical audit	15/10/18
P1	NJ	DJ	Initial issue	06/07/18

DRAWING TITLE
Section 278 Legal Plan
Signalised Pedestrian Crossing

SHEET NO. 1/1

PROJECT
Dunmore Road,
Abingdon,
Oxon.

CLIENT
Where quality lives
David Wilson Homes

Infrastruct CS Ltd

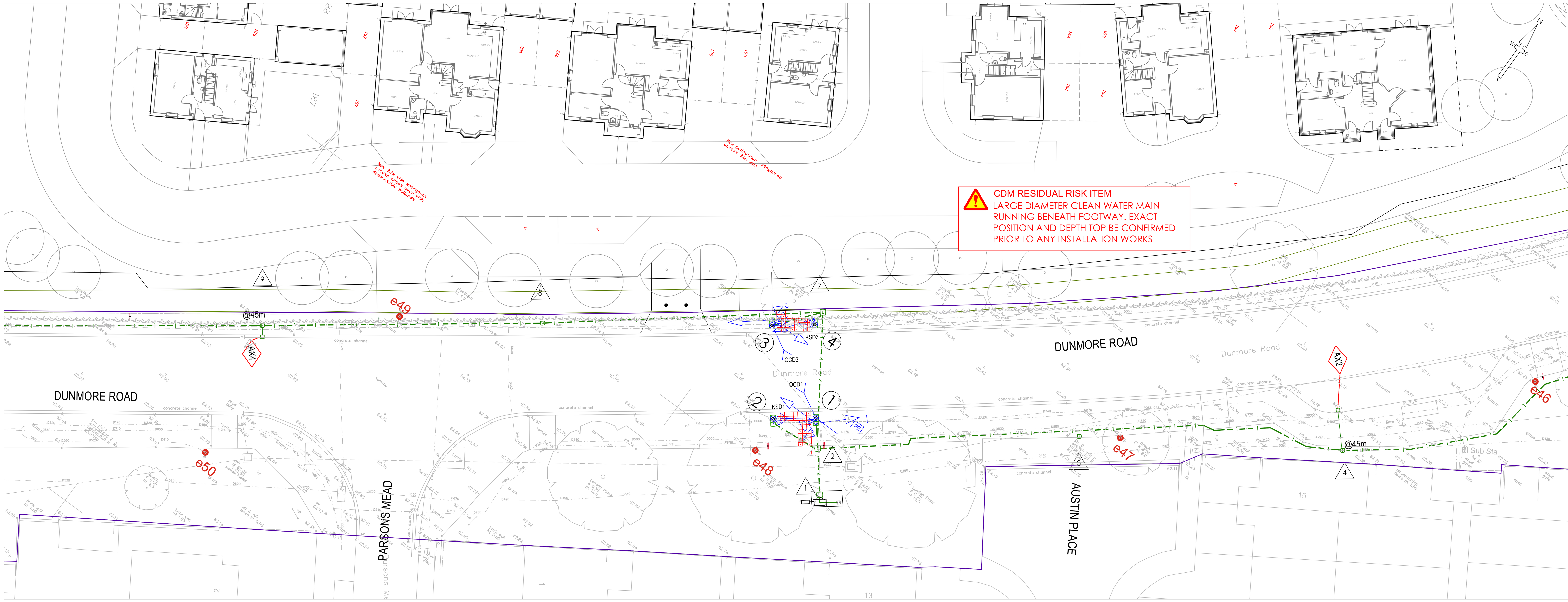
SCALE @ A3 1:1250

DESIGN DJ
DRAFT NJ
APPROVED TST

PROJECT NUMBER	STATUS	DATE
2932	S4	July 18

PROJECT	ORIGIN	PHASE	LEVEL	TYPE	ROLE	DWG NO	REVISION
DUNR	ICS	SC	XX	DR	C	020	P5

2932-020-Signalised Crossing_Details Engineering_TEN_._Legal Plan



NOTES

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SERVICES

- catv
- communication
- electric
- foul water } drainage
- storm water } drainage
- fuel oil line
- gas
- GPR trace (unknown)
- multiduct
- power trace
- radio trace (unknown)
- service duct
- street lighting
- telecom
- water

D850	approx depth (mm)
EOT	end of trace
RS	rod stops
UTT	unable to trace
UTTF	unable to trace further

REV	DRAWN	CHECK	REVISION COMMENTS	ISSUE DATE
P5	AC	DJ	Proposed signalised crossing shown	03/05/19
P4	NJ	DJ	Amended to address DWH audit comments	12/02/19
P3	NJ	DJ	Drawing number changed	29/01/19
P2	NJ	DJ	Minor amendments	15/10/18
P1	NJ	DJ	Initial issue	04/06/18

DRAWING TITLE
Utilities
Signalised Pedestrian Crossing

SHEET NO.
1/1

PROJECT
Dunmore Road
Abingdon
Oxon

S2 - INFORMATION

CLIENT
Where quality lives
David Wilson Homes

Infrastruct CS Ltd

SCALE @ A1
1:200
0m 5m 10.0m

ENGINEER DJ
DRAFT NJ
APPROVED TST

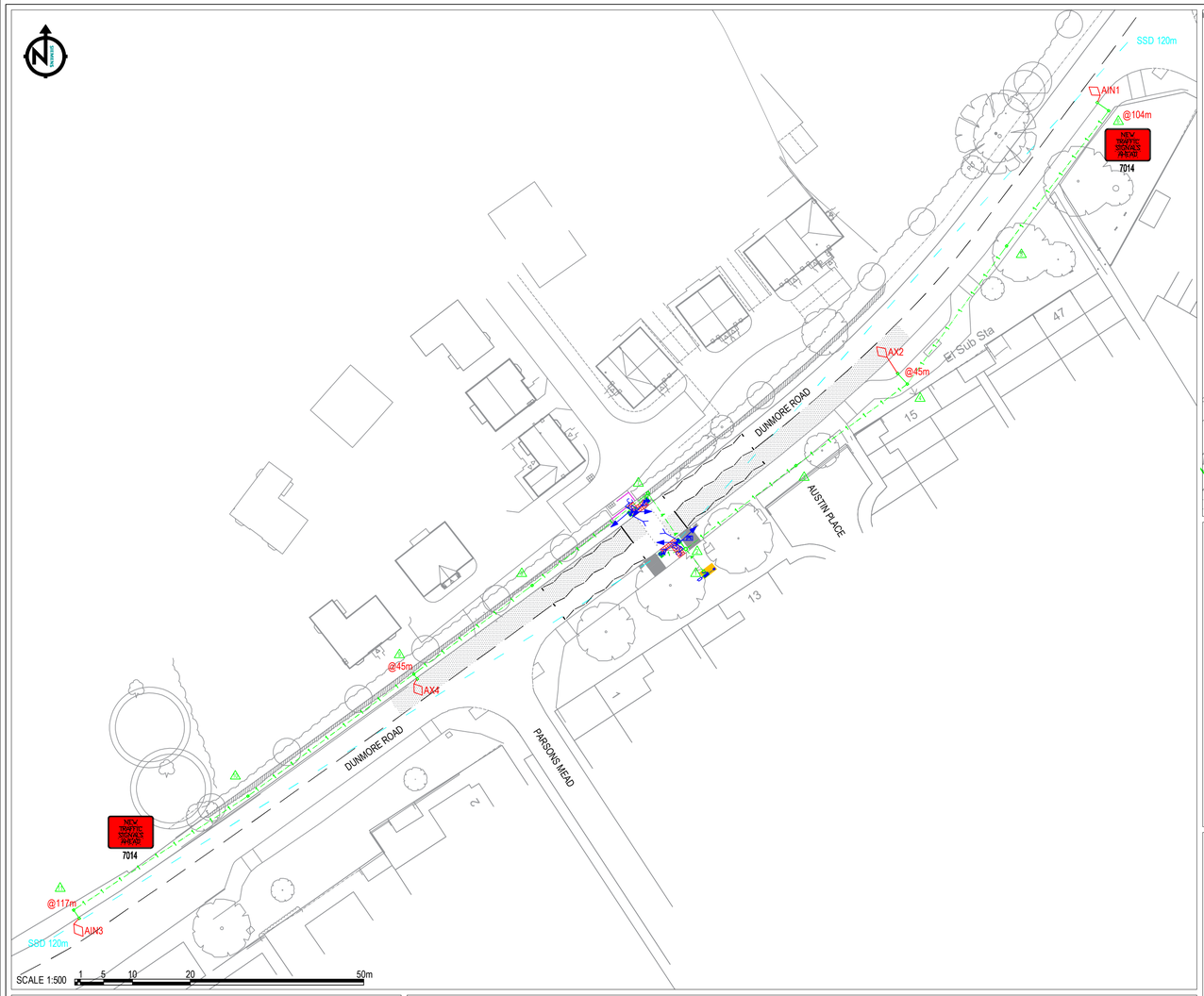
PROJECT NUMBER	STATUS	DATE
2932	S2	May 18

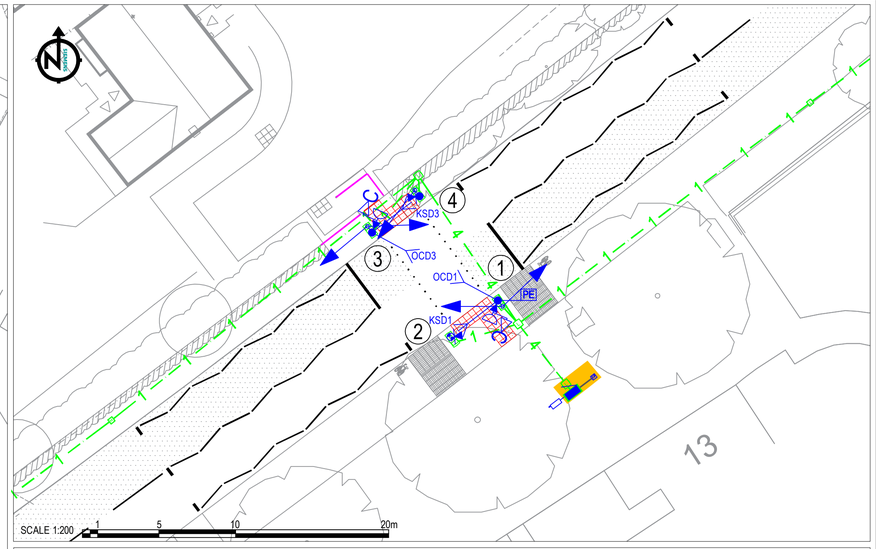
PROJECT	ORIGIN	PHASE	LEVEL	TYPE	ROLE	NO.	REVISION
DUNR	ICS	SC	XX	DR	C	050	P5

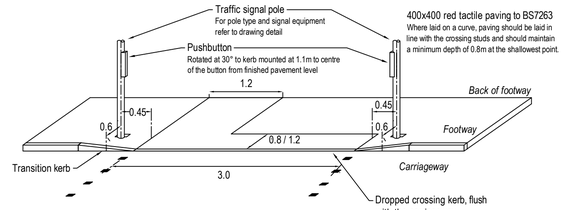
The Stables, High Cogges Farm, High Cogges, Witney, OX29 6UN - Tel: 01993 709709: info@infrastructcs.co.uk

2932-050-Signalised Crossing_Details Engineering_TEN_._Utilities

X:\ICS Jobs\2900 Jobs\2932 - DUNR - Dunmore Rd, Abingdon (DW Homes)\01 - Drawings\01 - Design\B - S278\2932-DUNR-ICS-M2-C-D - S278 Signalised Crossing.dwg







Isometric View

NOT TO SCALE

SITING of POLES & EQUIPMENT SCHEDULE

Pole No	Pole Height (m)	Pole Type	Pole Distance to Kerb Face	Pole Distance to Tactile	Primary ELV RAG Signal Head	Secondary ELV RAG Signal Head	ELV Toucan Display with Combined PBU	ELV PBU	Tactile Device	Audible Device	On Crossing Detector	Kerbside Detector	PE Cell
1	4.00	Straight	0.60	0.45	2	-	1	-	1	1	1	1	1
2	2.00	Stub	0.60	0.45	-	-	-	1	1	-	-	-	-
3	4.00	Straight	0.60	0.45	2	-	1	-	1	1	1	1	-
4	4.00	Straight	0.60	0.45	-	1	-	1	1	-	-	-	-

OPERATION CYCLE & TIMINGS for NEARSIDE CROSSING

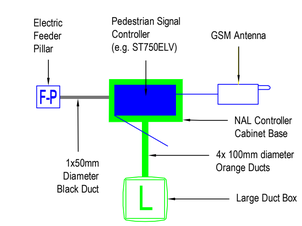
Period	Signals Shown		*Timings (seconds)
	To Pedestrians	To Vehicles	E= 7.4m
P1	Red Standing Figure (wait)	Green (proceed if way is clear)	7-30
P2	Red Standing Figure	Amber (stop unless not safe to do so)	3
P3	Red Standing Figure	Red (stop, wait behind Stop line on carriageway)	3
P4	Green Walking Figure with Audible signal	Red	5
P5	Red Standing Figure (do not start to cross)	Red	3
P6	Red Standing Figure	Red	10
P7	Red Standing Figure	Red	0
P8	Red Standing Figure	Red	0
P9	Red Standing Figure	Red with Amber (stop)	2

NOTE: Timings are based on concurrent mode

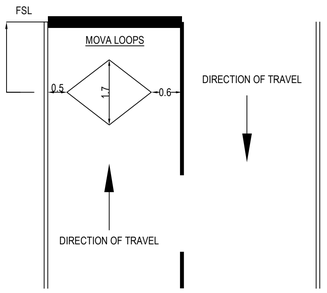
VEHICLE DETECTOR SCHEDULE

Detector Label	Detector Distance from the Associated Stop Line (m)	Detector Type
AIN1	104	MOVA / VA
AX2	45	MOVA / VA
AIN3	117	MOVA / VA
AX4	45	MOVA / VA

CONTROLLER DETAIL



LOOPS STANDARD DETAIL



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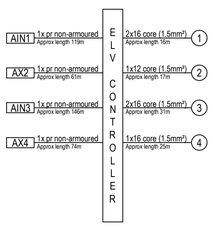

GENERAL

1. This site should be installed in accordance with the approved version of this drawing and associated technical note 857150688/TN/001.Any deviation should be discussed and agreed with the designer or an Oxfordshire County Council (OCC) representative prior to commencing works.
2. Drawing to be reproduced in colour.
3. Works to be completed in accordance with the requirements of OCC.
4. A full electrical design for the traffic signal system has not been completed as part of the traffic signal design. It is the responsibility of the traffic signal contractor to complete and electrical design in accordance with BS7671. On completion of the installation a fully completed electrical installation certificate should be provided to the highway authority, signed by the electrical design team, installation team and the inspection and testing team.

CIVILS

5. Traffic signal ducting should be orange in colour, high density polyethylene of 100mm with 'Traffic Signals' marked at 1m intervals. Draw ropes should be provided in the duct runs for the use of pulling cable. The maximum bend in ducting runs should not exceed 45° radius.
6. Ducts in the carriageway to have a minimum of 750mm cover. Ducts in the footway/verge to have a minimum of 450mm cover.
7. 1x 50mm diameter orange duct to be laid between each carriageway loop box and adjacent duct boxes.
8. All poles to be positioned 0.6m and 0.45m from the carriageway edge and tactile paving slabs respectively.
9. All poles to be rotated 45° from the carriageway edge.
10. All poles to be positioned to allow a minimum of 450mm clearance from the edge of any equipment to the edge of the carriageway. Final position to be agreed with OCC prior to installation.
11. Controller to be installed on a suitable sized NAL controller base, surrounded by a hard standing area as per this drawing easing maintenance tasks and minimising effects of vegetation overgrowth.
12. The electrical supply feeder pillar is to be installed at least 1m from the controller.
13. Grey coloured high PSV surfacing (+68 PSV) or High Friction Surfacing (HFS) shall be applied for an absolute minimum distance of 53m up to the first row of pedestrian crossing studs on both approaches.

SIGNING AND LINING

14. All road markings to be laid in accordance with the 'Traffic Signs Regulations and General Directions 2016'. White lining shown has been provided by the client.
15. Temporary 'New Traffic Signals Ahead' sign to diag 7014 to be installed on each approach, on a suitable post at approximately 100m from the stop line. Signs to be taken down after a period of no longer than 3 months.

TRAFFIC SIGNAL EQUIPMENT

16. All equipment to be ELV (Extra Low Voltage) and all poles are to be non-passive steel poles.
17. All equipment to be grey coloured and traffic signal poles to be numbered as shown.
18. Height of all red aspects to be consistent across the site. Distance between the bottom of the signal head and finished surface level to be a minimum of 2.4m.
19. Nearside pedestrian signals must be installed with combined push button units. Push button wait indicators to be fitted at 30° from the carriageway edge, complete with rotating tactile cones. Exact orientation to be agreed on site with OCC prior to installation.
20. All right hand side push buttons to be fitted with audible devices, to be timetabled for activation initially set to activate between 07:00 and 23:00. Audibles must be volume adjustable.
21. The contractor is responsible for the provision of a suitable 230V 50Hz electrical supply, to be terminated into the adjacent electrical supply pillar (supplied by the signals contractor). The contractor will connect to the main supply via a 25Amp rated lockable isolator.
22. Traffic signal cable to be armoured 1.5mm² in accordance with the electrical design developed by the traffic signal contractor. A minimum of 25% or 4 spare cores are required after installation for future proofing.
23. A Siemens GSM OMU complete with the latest MOVA licence to be supplied and to include configuration, download and test.

COMMUNICATIONS

24. A data enabled GSM SIM card is to be free-issued by OCC.
25. GSM Antenna is to be cabinet mounted.

SYSTEMS

26. Siemens ITS Consultancy Services has been commissioned to attend SAT. An OCC representative is also required to to attend SAT.
27. This Toucan crossing is to operate under MOVA control.
28. Siemens ITS Consultancy Services has been commissioned to carry out MOVA works.

DRAWING N° 857150688/D/001 | ISSUE 3

KEY:-

SIGNAL POLES - Grey Coloured
- 4.0m Straight Pole
- 2.0m Stub Pole

VEHICLE SIGNAL HEADS
- Primary ELV RAG LED Signal Head
- Signal Head Side-Mounted on Pole (not bracket)

SIGNAL EQUIPMENT
- ELV Pedestrian Controller with NAL Cabinet Base
- FP Electric Feeder Pillar (FP)
- PE Photo-Electric Cell (PE)
- GSM Cabinet Mounted Antenna
- MOVA Loops (IN / X)

PEDESTRIAN SIGNAL EQUIPMENT
- C ELV Nearside Toucan Display, Combined Demand Unit + Tactile Cone and Audible Devices
- ELV Push Button Unit + Tactile Cone
- Kerbside Detector (KSD)
- On Crossing Detector (OCD)

CIVILS (Proposed)
- 1x50mm dia Black Duct
- 1 1x100mm dia Orange Traffic Signal Duct
- 4 4x100mm dia Orange Traffic Signal Duct
- L Large Duct Box (600x600mm)
- M Medium Duct Box (450x450mm)
- Carriageway Loop Box with 50mm dia under Kerb Duct
- Pole Retention Socket (NAL115/600DF)

MISCELLANEOUS
- 1 Pole Number
- 1 Duct Box Number
- Red Coloured Tactile Paving (400x400mm)
- Pedestrian Crossing Studs (100x100mm)
- +68 PSV wearing course surface or HFS
- Hard Standing Area
- Stopping Sight Distance (SSD)
- Pedestrian Guard Rail (shown indicatively)

DO NOT SCALE

ISSUE	DESCRIPTION	DRN	CHK	APP	DATE
3	Updated to show approval	SM			13/08/19
3	Notes updated following order of SAT and MOVA	SM	MG	CC	15/05/19
2	Customer comments incorporated	TH	MN	LB	4.9.18

SIEMENS

DRAWING STATUS
APPROVED

CUSTOMER
INFRASTRUCT CS LTD

SCHEME TITLE
TRAFFIC SIGNAL DESIGN
TOUCAN CROSSING
DUNMORE ROAD NEAR PARSONS MEAD
ABINGDON, OXFORDSHIRE

DATE: 4.9.18	SCALE: A/S	DRN: DV	CHKD: TH	APP: SD
	SHEET NO: 1 of 1	PAPER SIZE: A1		
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