

A19 Downhill Lane Junction Improvement Scheme Number: TR010024 2.6 Engineering Drawings and Sections

APFP Regulation 5(2)(o) Planning Act 2008 Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

> Volume 2 January 2019



Infrastructure Planning

Planning Act 2008

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

A19 DOWNHILL LANE JUNCTION IMPROVEMENT

The A19 (Downhill Lane Junction Improvement) Development Consent Order 201[]

ENGINEERING DRAWINGS AND SECTIONS

Regulation Number:	Regulation 5(2)(o) & Regulation 6(2)
Planning Inspectorate Scheme	TR010024
Reference	
Application Document Reference	TR010024/APP/2.6
Author:	A19 Project Team, Highways England &
	Jacobs

Version	Date	Status of Version
Rev 0	January 2019	Application Issue



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1 INTRODUCTION

- 1.1 These Engineering Drawings & Sections (these "Drawings") relate to an application made by Highways England (the "Applicant") to the Planning Inspectorate ("the Inspectorate") under section 37 of the Planning Act 2008 (the "2008 Act") for a Development Consent Order (DCO). If made, the DCO would grant consent for the Applicant to undertake the A19 Downhill Lane Junction Improvement (the "Scheme"). A detailed description of the Scheme can be found in the Environmental Statement **(Application Document Reference: TR010024/APP/6.1)**.
- 1.2 These Drawings comprise part of the suite of Application documentation and is included in the Application in compliance with Regulations 5(2)(o) and Regulation 6(2) of the Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009, which requires:

"5(2)(o) any other plans, drawings and sections necessary to describe the proposals for which development consent is sought, showing details of design, external appearance, and the preferred layout of buildings or structures, drainage, surface water management, means of vehicular and pedestrian access, any car parking to be provided, and means of landscaping"

6(2) If the application is for highway related development or for the construction or alteration of a railway, it must be accompanied by section drawings to suitable horizontal and vertical scales, which show, by reference to Ordnance Survey or Chart datum

(a) the levels of the proposed works, including in particular and where relevant

(i) ground levels;

(ii) the height of every proposed bridge, viaduct, aqueduct, embankment and elevated guideway;

(iii) the depth of every proposed cutting and tunnel;

(iv) the levels of the bed of any tidal waters or inland waterway in which it is proposed that any works should be situated;

(v) the height of every structure or device (including a cable, but not catenary and related equipment) intended to be erected above, on or below the surface of, or on or beneath the bed of tidal waters or an inland waterway; and

(vi) drainage outfall details for highways;

(b) a cross section of every intended tunnel and any altered gradient of a carriageway or a way forming part of a guided transport system on either side of every level crossing, bridge, tunnel or underpass which would carry the carriageway or way or through which it would pass.

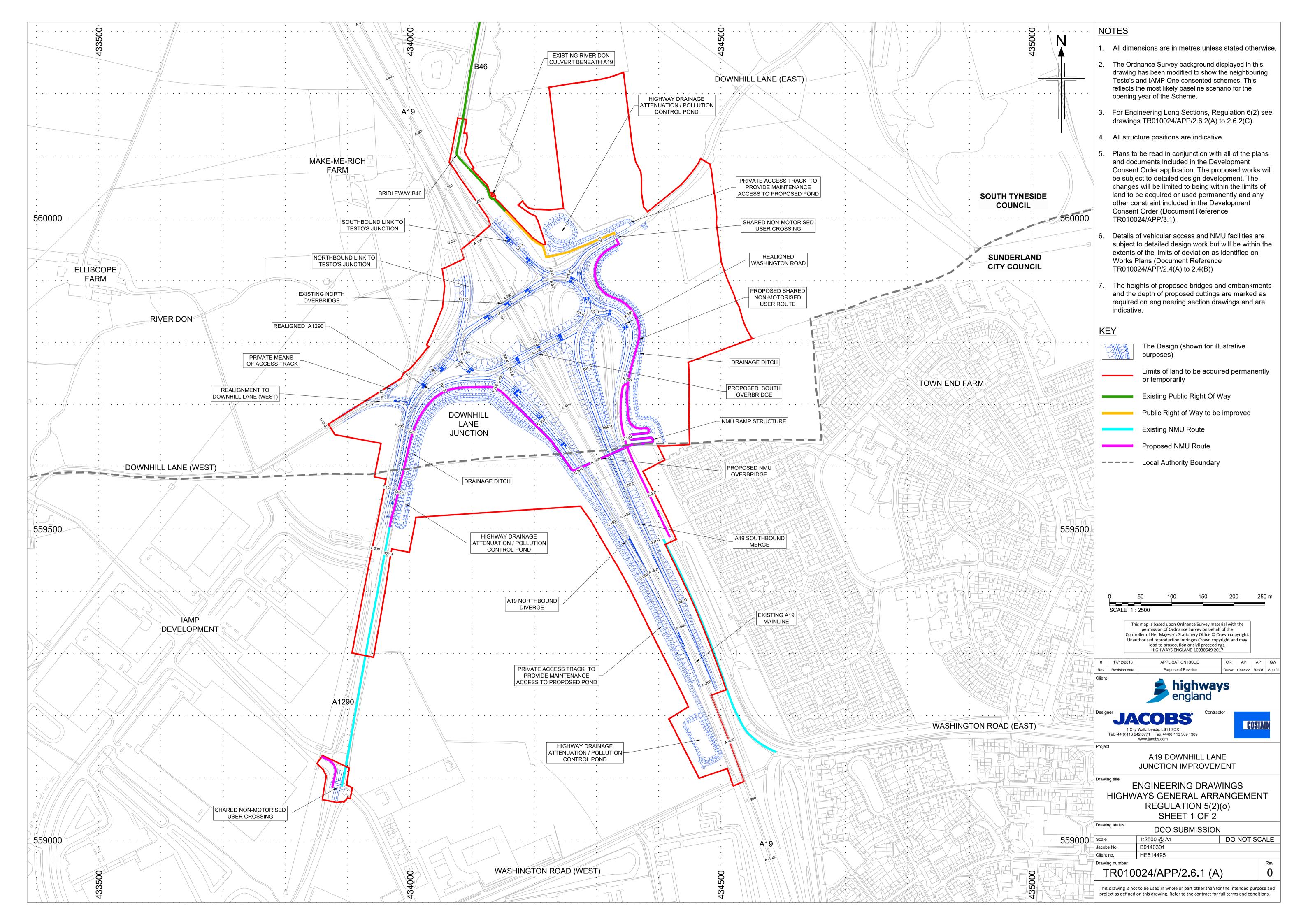


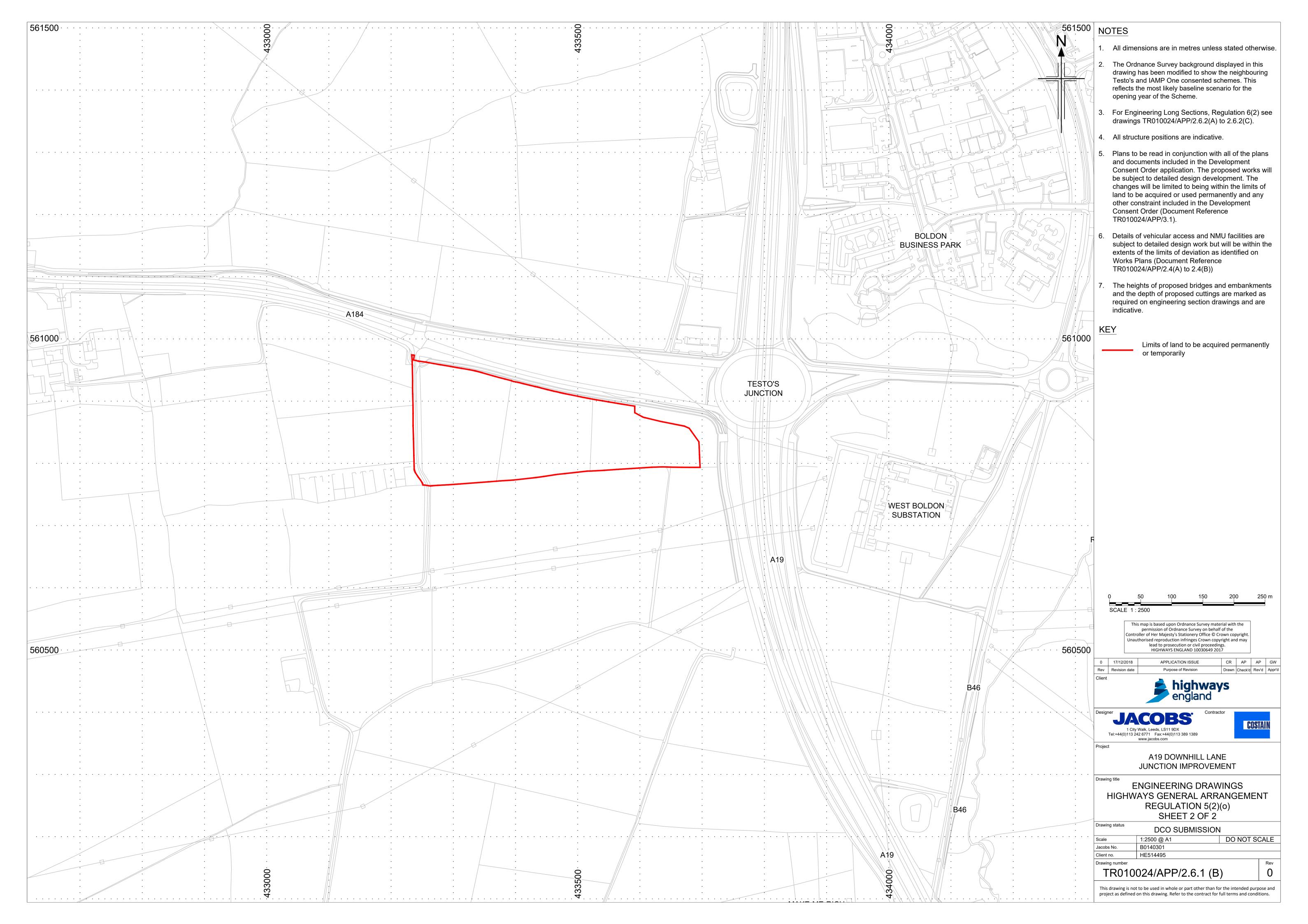
1.3 These Drawings are part of the Application documentation, they should be read alongside and is informed by the other Application documents. In particular, these Drawings should be read alongside Schedule 1 of the draft Development Consent Order (Application Document Reference: TR010024/APP/3.1).

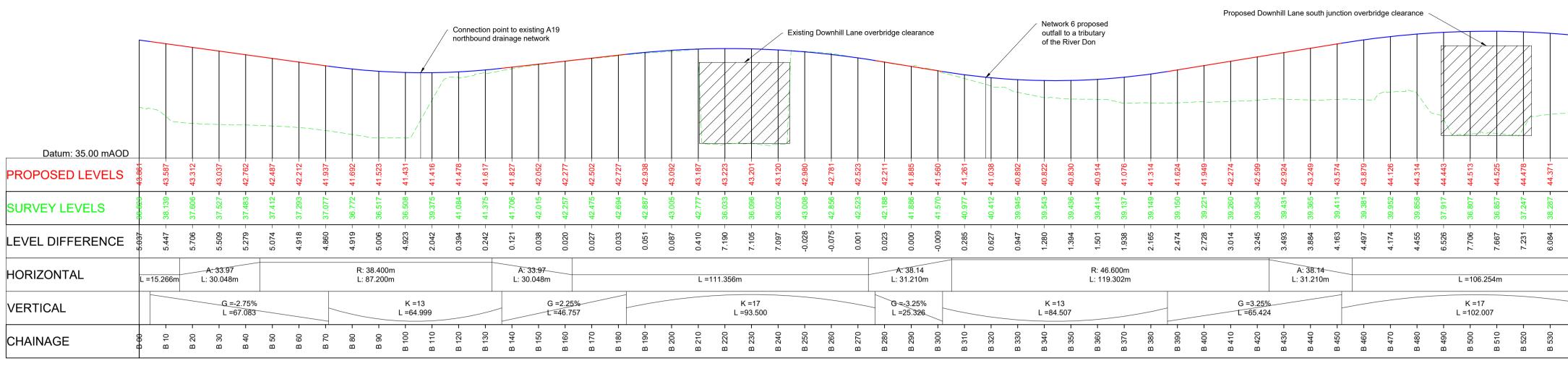


2 SCHEDULE OF PLANS INCLUDED IN THIS APPLICATION DOCUMENT

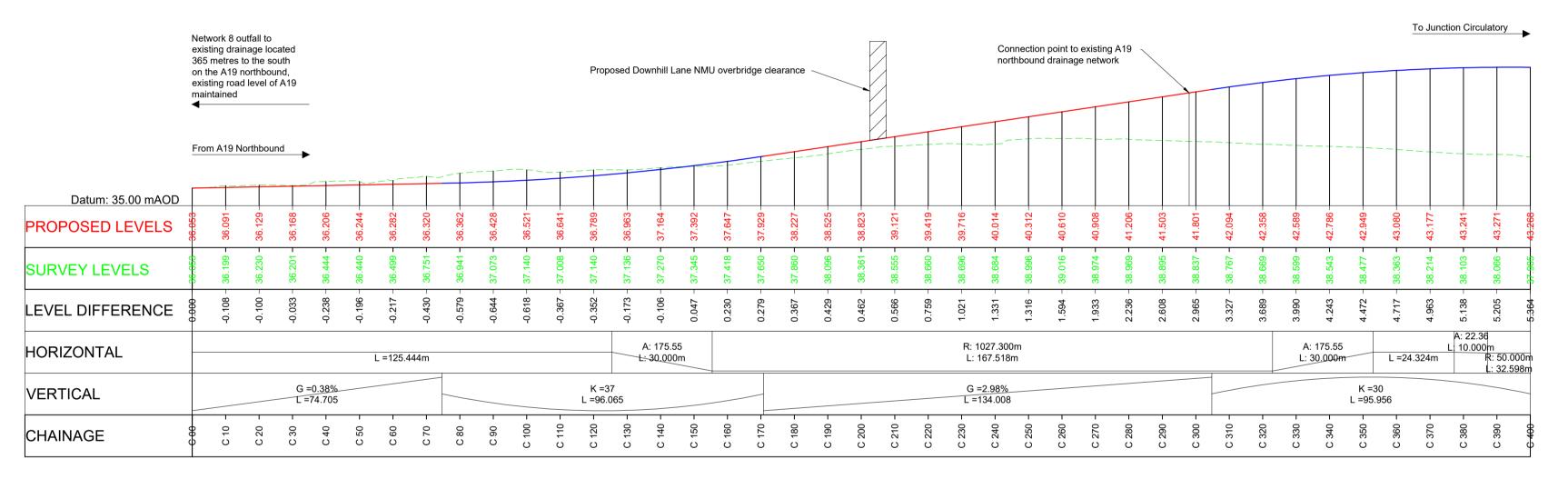
Document Title	Document Number	Revision
Engineering Drawings - Highways General Arrangement – APFP Regulation 5(2)(o) – Sheet 1 of 2	TR010024/APP/2.6.1(A)	0
Engineering Drawings - Highways General Arrangement – APFP Regulation 5(2)(o) – Sheet 2 of 2	TR010024/APP/2.6.1(B)	0
Engineering Drawings - Highways Longitudinal Sections – APFP Regulation 5(2)(o) – Sheet 1 of 3	TR010024/APP/2.6.2(A)	0
Engineering Drawings - Highways Longitudinal Sections – APFP Regulation 5(2)(o) – Sheet 2 of 3	TR010024/APP/2.6.2(B)	0
Engineering Drawings - Highways Longitudinal Sections – APFP Regulation 5(2)(o) – Sheet 3 of 3	TR010024/APP/2.6.2(C)	0
Engineering Drawings - Structures – South Junction Overbridge – APFP Regulation 5(2)(o)	TR010024/APP/2.6.3(A)	0
Engineering Drawings – Structures – Non-Motorised User Overbridge – APFP Regulation 5(2)(o)	TR010024/APP/2.6.3(B)	0
Engineering Drawings – Structures – Non-Motorised User Ramps – APFP Regulation 5(2)(o)	TR010024/APP/2.6.3(C)	0
Engineering Drawings – Drainage General Arrangement – APFP Regulation 5(2)(o)	TR010024/APP/2.6.4	0



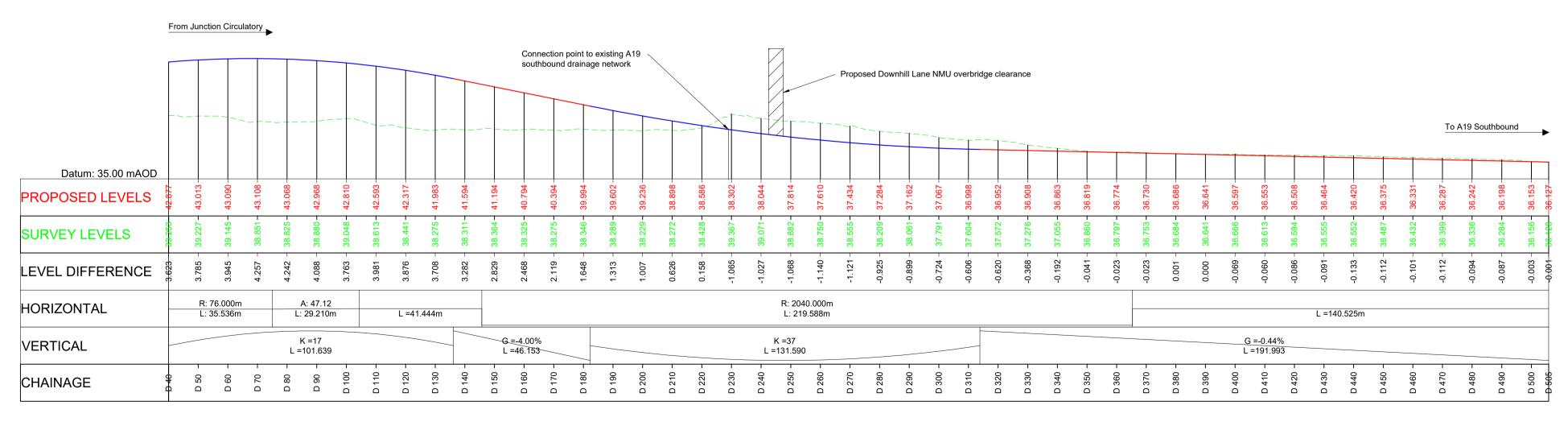








A19 - DOWNHILL LANE - NORTHBOUND DIVERGE - LONGITUDINAL SECTION SCALE: H 1:1000,V 1:200. DATUM: 35.000



A19 - DOWNHILL LANE - SOUTHBOUND MERGE - LONGITUDINAL SECTION SCALE: H 1:1000,V 1:200. DATUM: 35.000

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- 1. All dimensions are in metres unless stated otherwise.
- 2. This drawing should be read in conjunction with the Highways General Arrangement engineering drawings TR010024/APP/2.6.1(A) & 2.6.1(B), Structure engineering drawings TR010024/APP/2.6.3(A) to 2.6.3(C) and Drainage engineering drawing TR010024/APP/2.6.4(A).
- 3. All structure positions are indicative.
- 4. Plans to be read in conjunction with all of the plans and documents included in the Development Consent Order application. The proposed works will be subject to detailed design development. The changes will be limited to being within the limits of land to be acquired or used permanently and any other constraint included in the Development Consent Order (Document Reference TR010024/APP/3.1).

KEY



] Propos	ed Vertical	Alignm	ent C	Gradie	ent	
] Propos	ed Vertical	Alignm	ent C	Curve		
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This drawing is not to be used in whole or part other than for the intended purpose and project as defined on this drawing. Refer to the contract for full terms and conditions.

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A19 - DOWNHILL LANE - CIRCULATORY LONGITUDINAL SECTION SCALE: H 1:1000,V 1:200. DATUM: 35.000

	From Jun	ction Circulato	ry 🕨			To Tes	sto's Junc	tion	
	<u> </u>								
Datum: 35.00 mAOD									
PROPOSED LEVELS	41.617 41.669 -	41.828 - 42.056 -	42.223 -	42.291 -	42.259	42.127 -	41.894 -	41.562 -	41.135
SURVEY LEVELS	41.620 41.827	42.078- 42.307-	42.454	42.485-	42.394-	42.179	41.873-	41.490-	41:064
LEVEL DIFFERENCE	-0.003 -0.158 -	-0.250 -	-0.231 -	-0.194 -	-0.135	-0.053 -	0.021 -	0.072 -	0.071
	=14.812m			93.79 .764m			R: 122.5 L: 12.30	65m A: 03m L: 1	53.56 9.398m
	K = L =19 0.96% 2.032				K =10 L =69.9			6= L=	-4.50% 6.473
CHAINAGE	6 55 G 60 -	G 70 - G 80 -	G 90 -	G 100 -	G 110 -	G 120 -	G 130 -	G 140 -	6 150

	From Washin	igton Roa	ad 🕨	•																																	
Datum: 35.00 mAOD																																					
PROPOSED LEVELS	40.233 40.272 -	40.309 -	40.338	40.356	40.364	40.362 -	40.351-	40.329	40.297 -	40.256 -	40.206	40.156	40.106 -	40.056	40.006 -	39.956	39.906	39.864-	39.849-	39.860	39.899-	39.965		G 0.0	40.177 -	40.322	40.472	40.622 -	40.772	40.922	41.072	41.221	41.371	41.521		41.821-	
SURVEY LEVELS	40.233 40.272-	40.292 -	40.327 -	40.343-	40.365 -	40.349-	40.332-	40.305-	40.277 -	40.258-	40.175-	40.092 -	40.041-	39.942 -	39.905 -	39.895-	39.805-	39.824 -	39.829 -	39.793-	39.766 -	39.726-	- (39.600 -	39.565-	39.531-	39.437-	39.338 -	39.228-	39.103-	38.992 -	38.830-	38.641-	39.474 -	39.088-	
LEVEL DIFFERENCE	- 000.0	0.017 -	0.011 -	0.013 -	0.000	0.014 -	0.019 -	0.024	0.020 -	-0.003 -	0.031	0.064 -	0.065 -	0.114 -	0.101 -	0.061	0.101 -	0.040	0.019 -	0.068 -	0.133 -	0 239 -		0.385 -	0.577 -	0.757 -	0.941 -	1.185 -	1.433 -	1.693 -	1.969 -	2.230 -	2.541 -	2.880 -	2.197	2.733 -	
HORIZONTAL	L	. =44.721	m				94.87 0.000						: 180.00 .: 72.122							4.87 .000m			L =2	8.496m			4: 38.0 33.60						R: 43.00 L : 91.56				
VERTICAL	G =0.39% L =14.346					=100 88.975								=-0.50° =68.87							K =3 L =73.9										G =1 L =11	.50% 14.928					
CHAINAGE	K 10 - K	K 20 -	K 30 -	K 40 -	K 50 -	K 60 -	K 70 -	K 80 -	K 90 -	K 100 -	K 110 -	K 120 -	K 130 -	K 140 -	K 150 -	K 160 -	K 170 -	K 180 -	K 190 -	K 200 -	K 210 -	K 220 -		K 230 -	K 240 -	K 250 -	K 260 -	K 270 -	K 280 -	K 290 -	K 300 -	K 310 -	K 320 -	K 330 -	K 340 -	K 350 -	

A19 - DOWNHILL LANE - NORTHBOUND LINK TO TESTO'S - LONGITUDINAL SECTION SCALE: H 1:1000,V 1:200. DATUM: 35.000

	existin 5 metr	ork 4 outfall t ng drainage res to the no l9 southbou	located orth on	-					on point t nd link di				To	Junction	Circula	tory
	From Te	esto's Junctio			T			T								
Datum: 35.00 mAOD																
PROPOSED LEVELS		1		39.307	39.743	40.215	40.720	41.206	41.597	41.888	42.079	42.170	42.161	42.052	41.852	41.687 41.634
SURVEY LEVELS	<u>37.796</u> 38 135-	38.519-	38.898-	39.304-	39.745-	40.215-	40.718-	41.199-	41.592-	41.916-	42.087-	42.137-	42.128-	42.063-	41.874-	41.674- 41.647
LEVEL DIFFERENCE		I	1	0.003 -	-0.002	0.000 -	0.002 -	0.007 -	0.005 -	-0.028 -	- 900.0-	0.034 -	0.033 -	-0.010	-0.022 -	0.013 -
HORIZONTAL		R: 360.000m L: 33.745m				: 134.16 50.000n				L	=53.641	m				: 50.000m 24.760m
VERTICAL				6 =4.30% - =6.233	K = L =20	=26 0.609	G =5. L =8.			L	K =10 =73.472	2		G =-2 L =0.	25%	K =13 L =19.251
CHAINAGE	н 10 1 10 1 10	H 20 -	H 30 -	H 40 -	H 50 -	- 09 H	- 02 H	H 80 -	- 06 H	H 100 -	H 110 -	H 120 -	H 130 -	H 140 -	H 150 -	H 160 - H 165

	From Downhill Lane (West)													To A1290 Eastbound						
Datum: 35.00 mAOD												-								
PROPOSED LEVELS	37.3 95	37.396 -	37.396 -	37.397 -	37.398 -	37.400 -	37.438 -	37.525 -	37.625 -	37.725 -	37.825 -	37.925	38.025 -	38.125 -	38.225 -					
SURVEY LEVELS	37:395	37.386-	37.386-	37.395-	37.398-	37.370-	37.354-	37.314-	37.359-	37.394-	37.325-	37.048-	37.033-	37.064-	37.808-					
LEVEL DIFFERENCE	0.000	0.010 -	0.010 -	0.002 -	0.000 -	0.030 -	0.084 -	0.211 -	0.266 -	0.331 -	0.499 -	0.877	0.991 -	1.061 -	0.417 -					
HORIZONTAL		L =3	3.849m			-	A: 67.08 50.000r	n					.000m .581m							
VERTICAL			G =0. L =47				< =20 =19.836					=1.00% 77.885								
CHAINAGE	00 W	M 10 -	M 20 -	M 30 -	M 40 -	M 50 -	M 60	M 70	M 80 -	- 06 M	M 100 -	M 110 -	M 120 -	M 130 -	M 140 -					

A19 - DOWNHILL LANE - SOUTHBOUND LINK ROAD FROM TESTO'S -LONGITUDINAL SECTION SCALE: H 1:1000,V 1:200. DATUM: 35.000



A19 - DOWNHILL LANE - WASHINGTON ROAD - LONGITUDINAL SECTION SCALE: H 1:1000,V 1:200. DATUM: 35.000

A19 - DOWNHILL LANE - DOWNHILL LANE WEST LONGITUDINAL SECTION SCALE: H 1:1000,V 1:200. DATUM: 35.000

	Fro	m Junctio	on Circu	latory	•					
							Ţ	o Down	hill Lane	(Eas
					·					
Datum: 35.00 mAOD										
PROPOSED LEVELS	40.990	40.868 -	40.646 -	40.324 -	39.928 -	39.528 -	39.144 -	38.831-	38.595 -	38.437 -
SURVEY LEVELS	40.024	39.981-	39.841-	39.535-	39.196-	38.914 -	38.712-	38.578-	38.442-	38.378-
LEVEL DIFFERENCE	696.0	0.887 -	0.805 -	0.790 -	0.733 -	0.614 -	0.432 -	0.254 -	0.153 -	0.059 -
HORIZONTAL		45.700m 32.818m	L: 6.33	.01 R: 33m L: A: 17.0 L: 6.347		A: 35 L: 27.8			L =33.6	27m
VERTICAL			=10 9.767		G =-4. L =20				(=13 45.574	(
CHAINAGE	J 30	J 40 –	J 50 -	- 09 ſ	- 02 ſ	J 80 –	- 06 ſ	J 100 -	J 110 -	J 120 -

A19 - DOWNHILL LANE - DOWNHILL LANE EAST LONGITUDINAL SECTION SCALE: H 1:1000,V 1:200. DATUM: 35.000

- 1. All dimensions are in metres unless stated otherwise.
- 2. This drawing should be read in conjunction with the Highways General Arrangement engineering drawings TR010024/APP/2.6.1(A) & 2.6.1(B), Structure engineering drawings TR010024/APP/2.6.3(A) to 2.6.3(C) and Drainage engineering drawing TR010024/APP/2.6.4(A).
- 3. All structure positions are indicative.
- 4. Plans to be read in conjunction with all of the plans and documents included in the Development Consent Order application. The proposed works will be subject to detailed design development. The changes will be limited to being within the limits of land to be acquired or used permanently and any other constraint included in the Development Consent Order (Document Reference TR010024/APP/3.1).

KEY



Proposed Vertical Alignment Curve

Existing Ground Surface



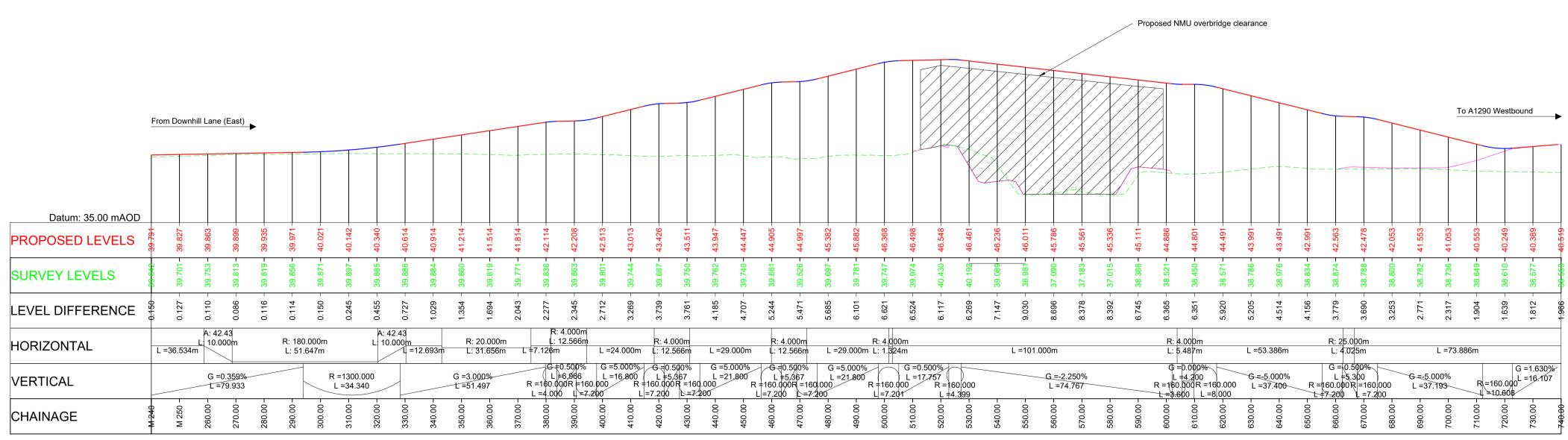
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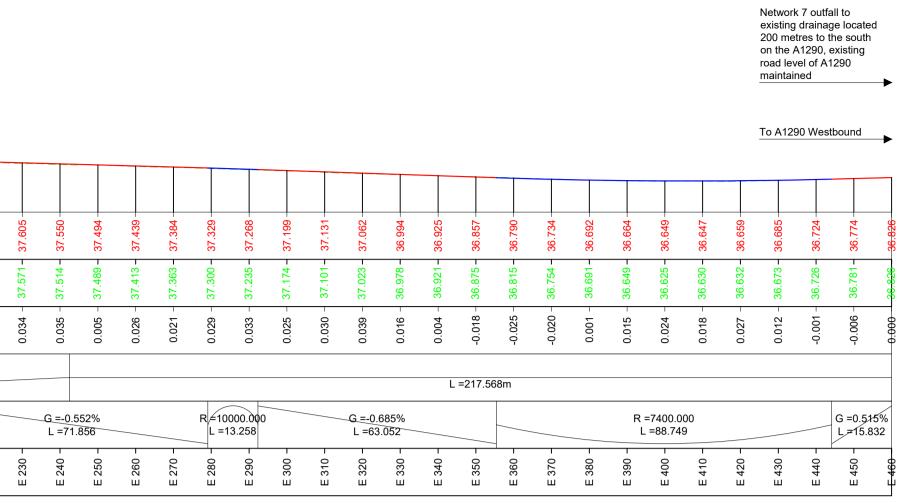
From Junction Circulatory

Datum: 35.00 mAOD																	
PROPOSED LEVELS	42.130 42.011-	41.805 -	41.540-	41.216 -	40.835 -	40.434 -	40.033 -	39.632	39.233 -	38.866	38.550 -	38.283 -	38.067	37.900 -	37.784 -	37.715 -	37.660 -
SURVEY LEVELS	37.194 -	37.082 -	36.972 -	36.898 -	36.809 -	36.788 -	36.845 -	36.884 -	36.998 -	37.819 -	37.781-	37.636 -	37.676 -	37.696 -	37.694 -	37.664 -	37.620 -
LEVEL DIFFERENCE	4.817 -	4.723 -	4.568 -	4.318 -	4.026 -	3.646 -	3.189 -	2.748 -	2.235 -	1.047 -	0.769 -	0.647 -	0.391 -	0.204 -	0.090 -	0.051 -	0.040 -
HORIZONTAL		A: 73 L: 61.0				R: 88.000 _: 30.044							A: 10 L: 117.				
VERTICAL	R =1700.000 L =47.100			G =-4.008% L =40.175				R =2000.000 L =69.108									
CHAINAGE	E 60 -	E 70 -	E 80 -	E 90 -	E 100 -	E 110 -	E 120 -	E 130 -	E 140 -	E 150 -	E 160 -	E 170 -	E 180 -	E 190 -	E 200 -	E 210 -	E 220 -

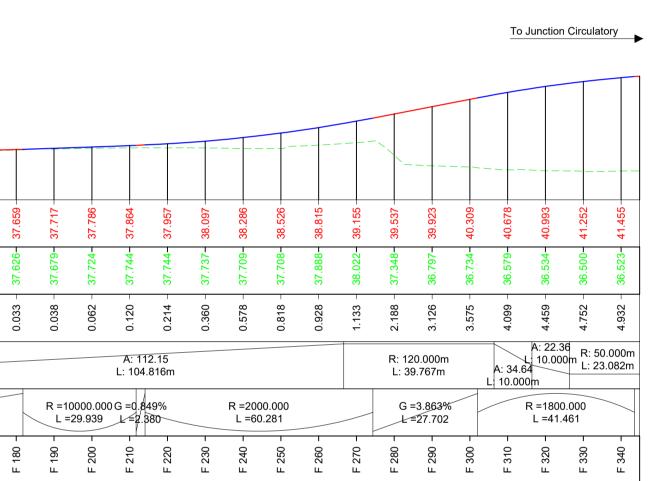
From A1290 Eastbound Datum: 35.00 mAOD PROPOSED LEVELS SURVEY LEVELS LEVEL DIFFERENCE HORIZONTAL L =161.828m R=10000.000 L=13.473 R =7400.000 G =0.685% G =0.550% VERTICAL L =44.080 L =63.193 L =60.514 F 10 F 20 F 20 F 20 F 20 F 20 F 100 F 120 F 130 F 120 CHAINAGE

> A19 - DOWNHILL LANE - A1290 EASTBOUND -LONGITUDINAL SECTION SCALE: H 1:1000,V 1:200. DATUM: 35.000





A19 - DOWNHILL LANE - A1290 WESTBOUND -LONGITUDINAL SECTION SCALE: H 1:1000,V 1:200. DATUM: 35.000

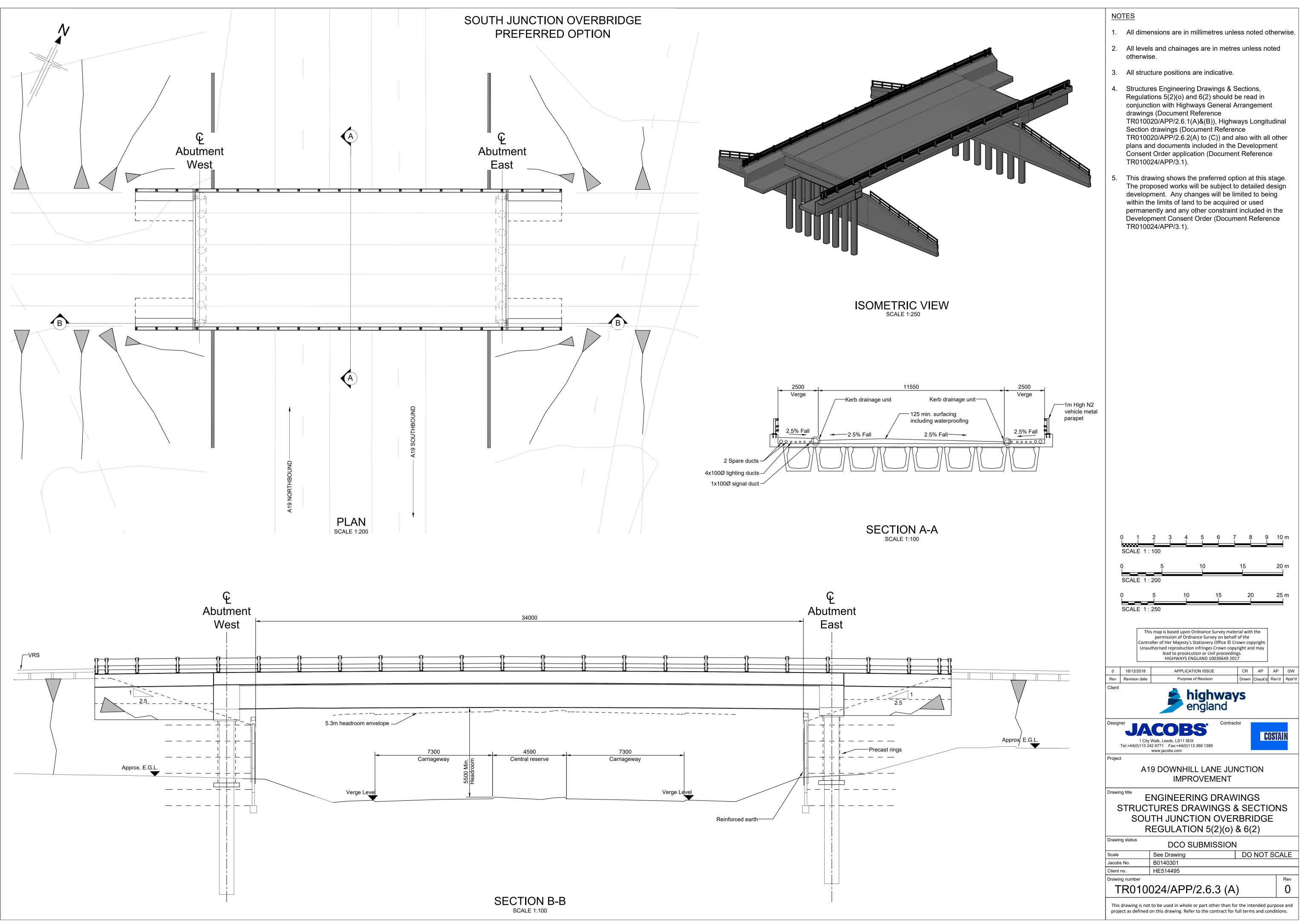


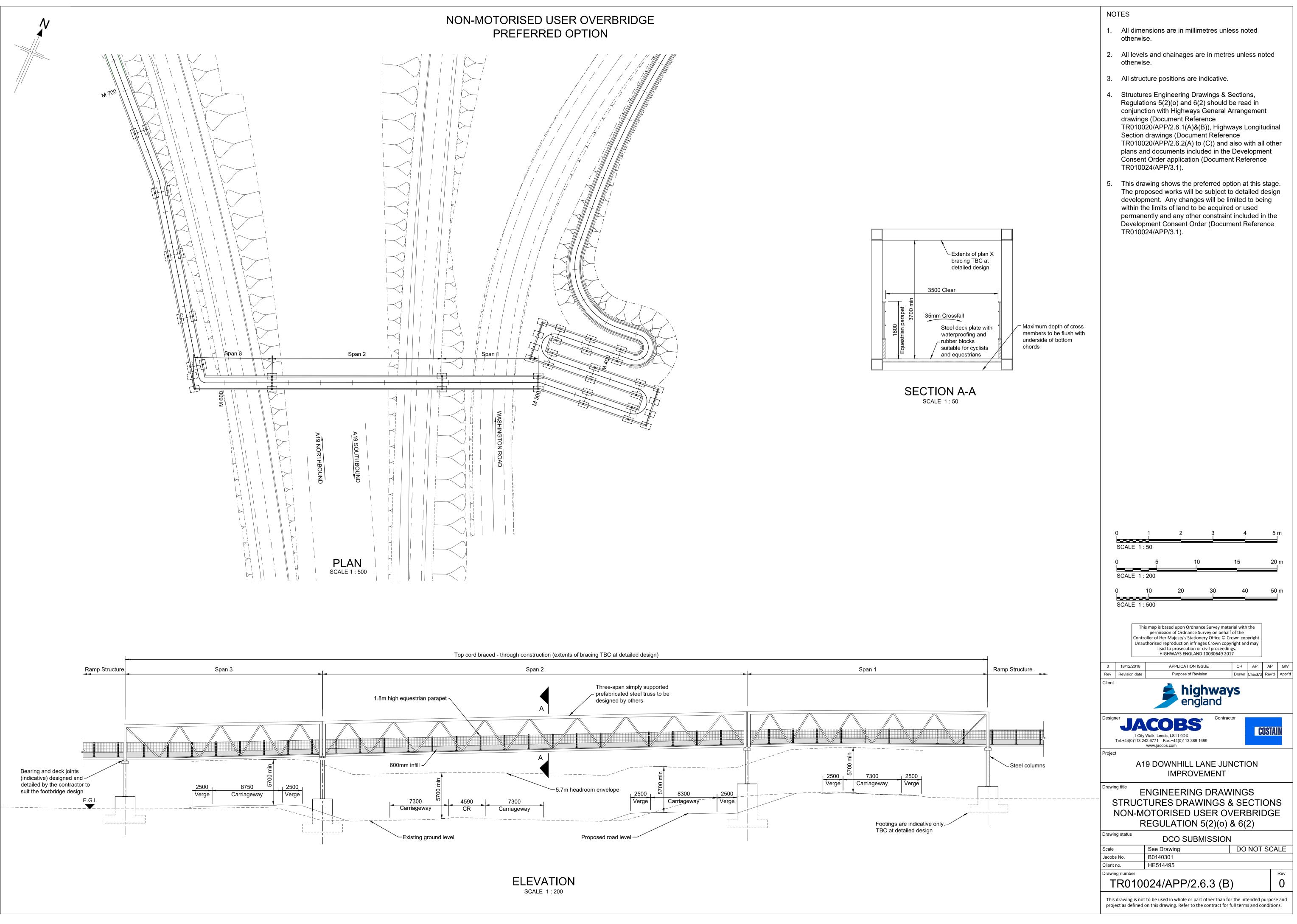
A19 - DOWNHILL LANE - NMU OVERBRIDGE - LONGITUDINAL SECTION SCALE: H 1:1000,V 1:200. DATUM: 35.000

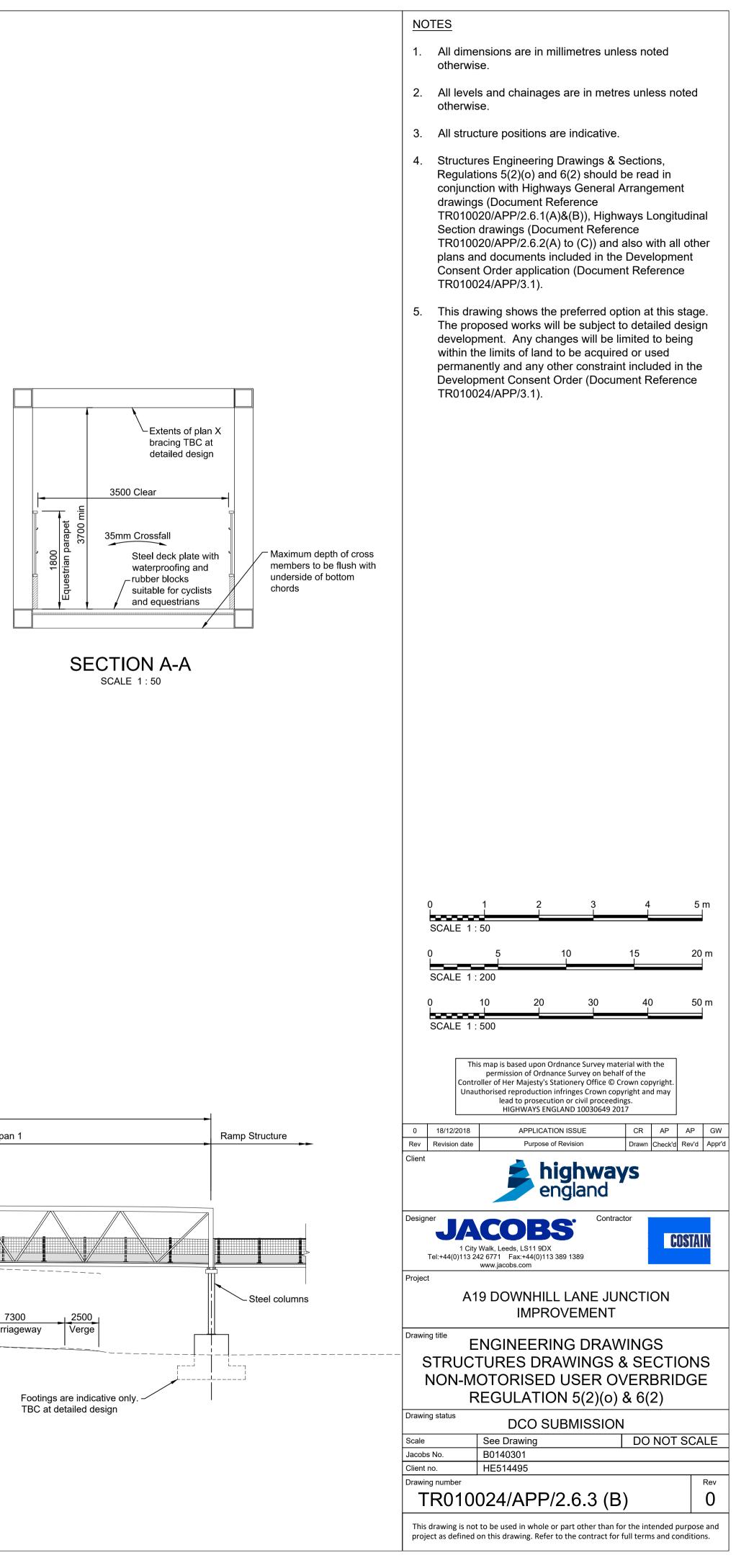
NOTES
1. All dimensions are in metres unless stated otherwise.
 This drawing should be read in conjunction with the Highways General Arrangement engineering drawings TR010024/APP/2.6.1(A) & 2.6.1(B), Structure engineering drawings TR010024/APP/2.6.3(A) to 2.6.3(C) and Drainage engineering drawing TR010024/APP/2.6.4(A).
3. All structure positions are indicative.
4. Plans to be read in conjunction with all of the plans and documents included in the Development Consent Order application. The proposed works will be subject to detailed design development. The changes will be limited to being within the limits of land to be acquired or used permanently and any other constraint included in the Development Consent Order (Document Reference TR010024/APP/3.1).
KEY
Proposed Vertical Alignment Gradient
Proposed Vertical Alignment Curve
——— Existing Ground Surface
0 5 10 15 20 m
SCALE 1 : 200 0 50 100 m
SCALE 1:1000
This map is based upon Ordnance Survey material with the permission of Ordnance Survey on behalf of the Controller of Her Majesty's Stationery Office © Crown copyright. Unauthorised reproduction infringes Crown copyright and may lead to prosecution or civil proceedings. HIGHWAYS ENGLAND 10030649 2017
0 18/12/2018 APPLICATION ISSUE CR AP AP GW Rev Revision date Purpose of Revision Drawn Check'd Rev'd Appr'd
Client highways england
Designer JACOBS Contractor
1 City Walk, Leeds, LS11 9DX Tel:+44(0)113 242 6771 Fax:+44(0)113 389 1389 www.jacobs.com Project
A19 DOWNHILL LANE JUNCTION IMPROVEMENT
Drawing title ENGINEERING DRAWINGS HIGHWAYS LONGITUDINAL SECTIONS REGULATION 5(2)(0) & 6(2) SHEET 3 OF 3
Drawing status DCO SUBMISSION Scale 1:1000 @ A1 DO NOT SCALE
Jacobs No. B0140301 Client no. HE514495 Drawing number Rev
TR010024/APP/2.6.2 (C) 0

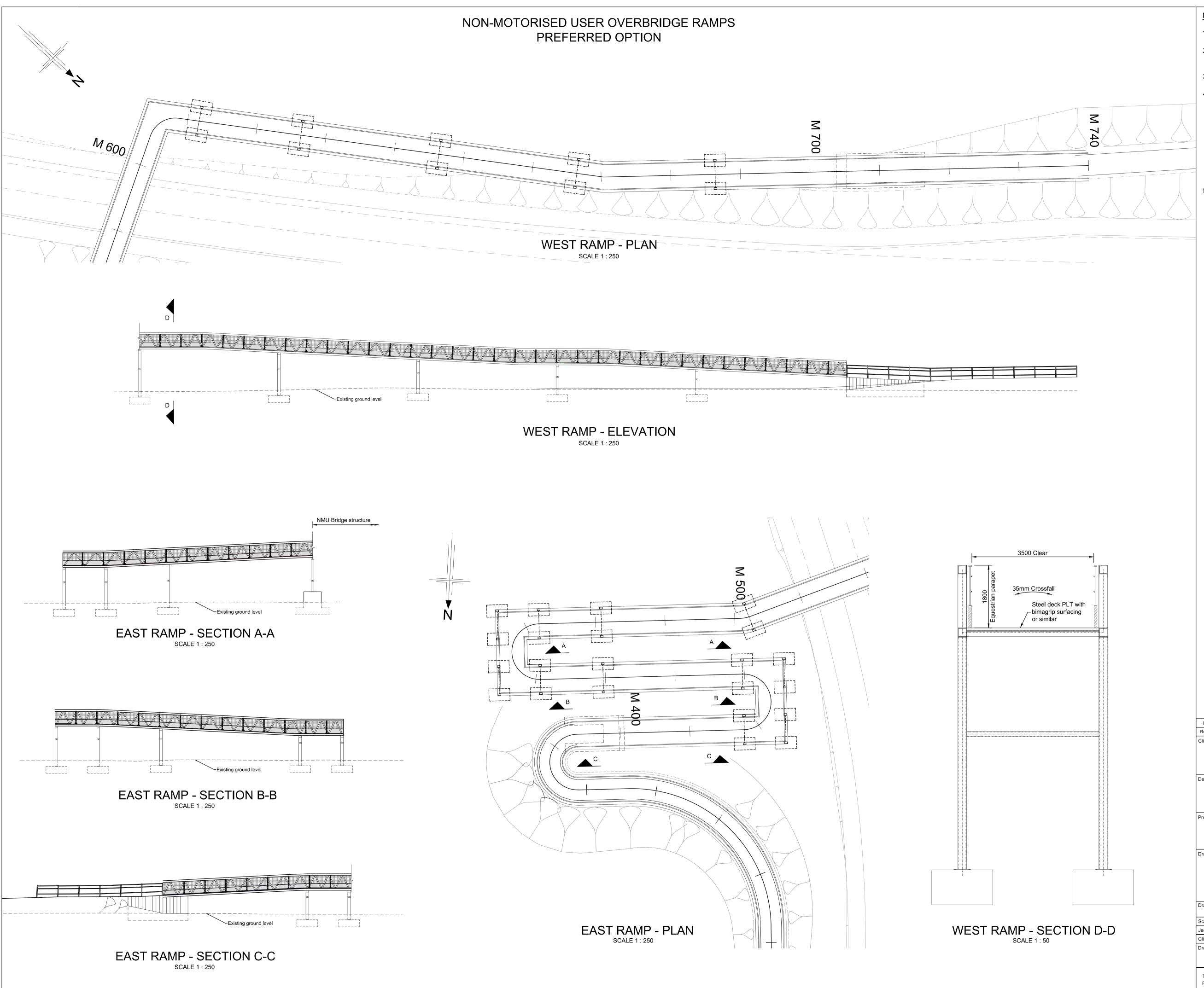
This drawing is not to be used in whole or part other than for the intended purpose and project as defined on this drawing. Refer to the contract for full terms and conditions.

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- NOTES
- 1. All dimensions are in millimetres unless noted otherwise.
- 2. All levels and chainages are in metres unless noted otherwise.
- 3. All structure positions are indicative.
- 4. Structures Engineering Drawings & Sections, Regulations 5(2)(o) and 6(2) should be read in conjunction with Highways General Arrangement drawings (Document Reference TR010020/APP/2.6.1(A)&(B)), Highways Longitudinal Section drawings (Document Reference TR010020/APP/2.6.2(A) to (C)) and also with all other plans and documents included in the Development Consent Order application (Document Reference TR010024/APP/3.1).
- This drawing shows the preferred option at this stage. The proposed works will be subject to detailed design 5. development. Any changes will be limited to being within the limits of land to be acquired or used permanently and any other constraint included in the Development Consent Order (Document Reference

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	SCALE 1:250									
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