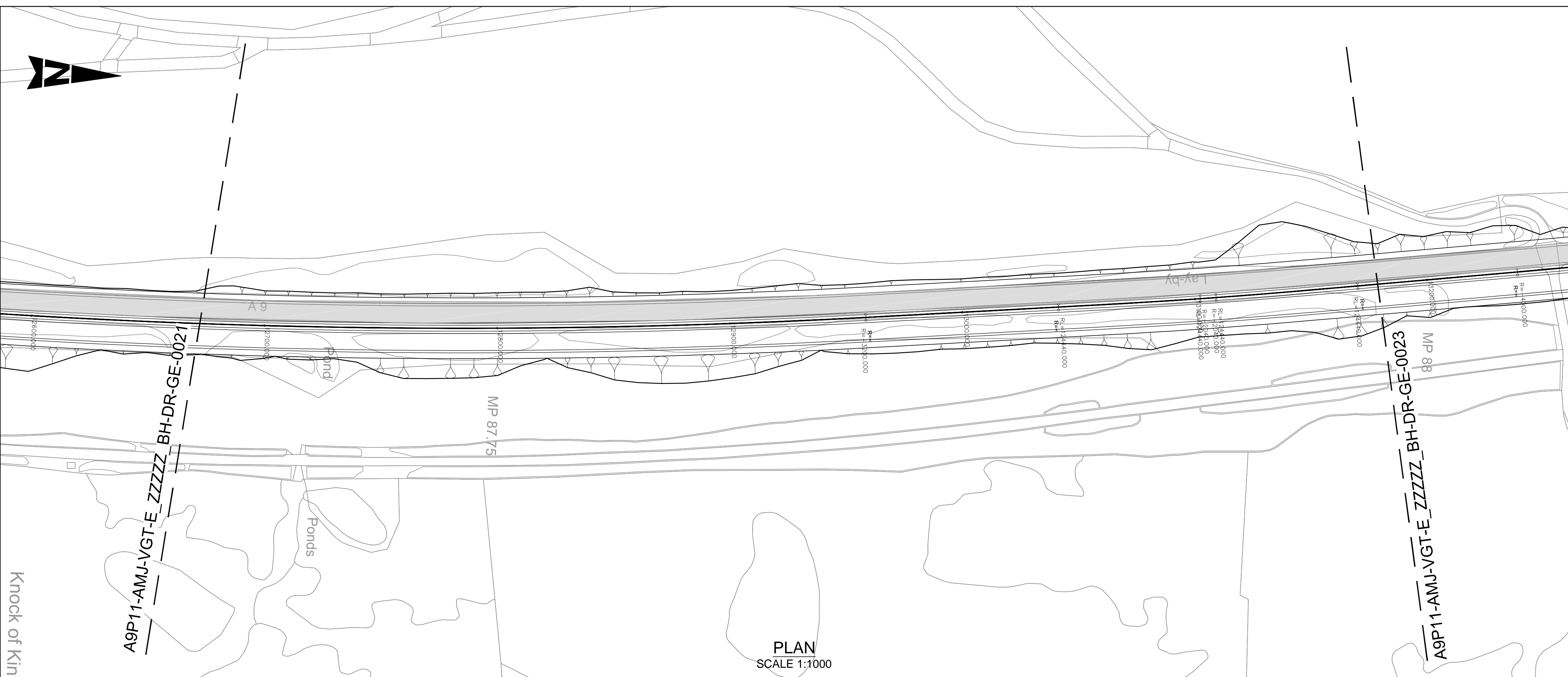


100
0 10
Millimetres
DO NOT SCALE



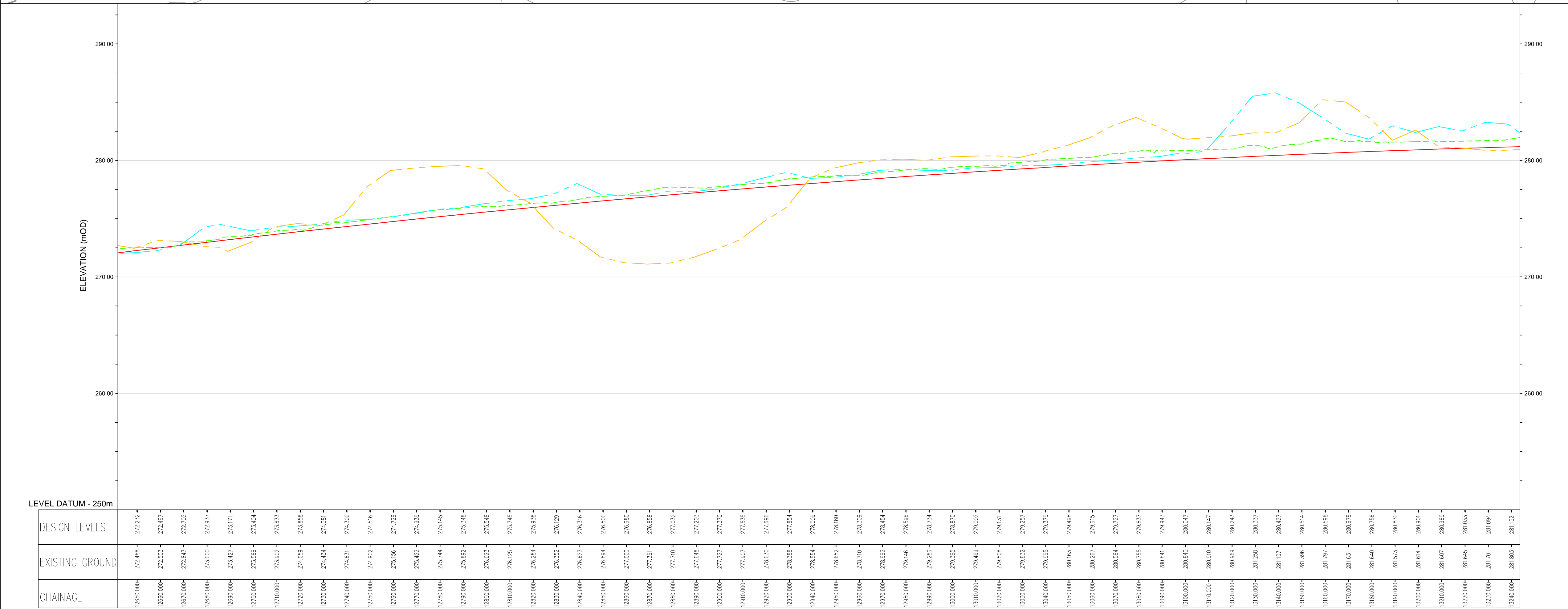
- NOTES:**
- ALL LEVELS IN mAOD UNLESS OTHERWISE NOTED. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE NOTED.
 - ALL DEPTHS SHOWN ARE IN METRES.
 - HISTORICAL BOREHOLE POSITIONS AND LEVELS INFERRED FROM BGS DATABASE TO ACCURACY ± 10m.

- KEY:**
- EXISTING A9
- BGS HISTORICAL GROUND INVESTIGATION:**
- | | | | |
|--------|----------------|--------|----------------|
| NH82NW | 1973 BOREHOLE | NH80NE | 1978 BOREHOLE |
| NH82NW | 1973 CORE | NH80NE | 1978 CORE |
| NH82NW | 1973 TRIAL PIT | NH80NE | 1978 TRIAL PIT |
| NH91NW | 1977 BOREHOLE | NH81SE | 2003 BOREHOLE |
| NH91NW | 1977 CORE | NH81SE | 2003 CORE |
| NH91NW | 1977 TRIAL PIT | NH81SE | 2003 TRIAL PIT |
| NH81SE | 1964 BOREHOLE | NH81SE | 1999 BOREHOLE |
| NH81SE | 1964 CORE | NH81SE | 1999 CORE |
| NH81SE | 1964 TRIAL PIT | NH81SE | 1999 TRIAL PIT |
| NH82SE | 1993 BOREHOLE | NH81SE | 1999 BOREHOLE |
| NH82SE | 1993 CORE | NH81SE | 1999 CORE |
| NH82SE | 1993 TRIAL PIT | NH81SE | 1999 TRIAL PIT |
| NH82SE | 2008 BOREHOLE | | |
| NH82SE | 2008 CORE | | |
| NH82SE | 2008 TRIAL PIT | | |

- GEOTECHNICAL LONG SECTION KEY:**
- | | |
|---------------------------------|-------------|
| TOPSOIL | TOPSOIL |
| MADE GROUND | MADE GROUND |
| PEAT | SAND |
| ALLUVIUM GRANULAR | GRAVEL |
| RIVER TERRACE DEPOSITS COHESIVE | SILT |
| RIVER TERRACE DEPOSITS GRANULAR | CLAY |
| GLACIAL FLUVIAL GRANULAR | BOULDERS |
| GLACIAL TILL COHESIVE | BEDROCK |
| GLACIAL TILL GRANULAR | |
| ROCK | |

NOTE:
COMPOSITE SOIL TYPES WILL BE SIGNIFIED BY COMBINED SYMBOLS E.G. SILTY SAND
DEPTHS (m BGL) ARE GENERALLY PRESENTED TO THE LEFT OF THE BOREHOLE LOGS ON THE GEOLOGICAL SECTION.

- WATER STRIKE
- RISE TO IN 20 MINS
- PROPOSED ROAD LEVEL
- EXISTING GROUND LEVEL
- SOUTHBOUND EARTHWORKS LEVEL
- NORTHBOUND EARTHWORKS LEVEL



P01	CC	KP	KP	05/08/16
FIRST ISSUE				
Rev	Drawn / Des	Checked	Approved	Date
Description				
Drawing Status				Subtality
FINAL				B

Client
TRANSPORT SCOTLAND
An agency of The Scottish Government



ATKINS mouchel

FIGURE 5.19-MAINLINE ALIGNMENT OPTION 1 BOREHOLE PLAN AND LONG SECTION (SHEET 22 OF 41)

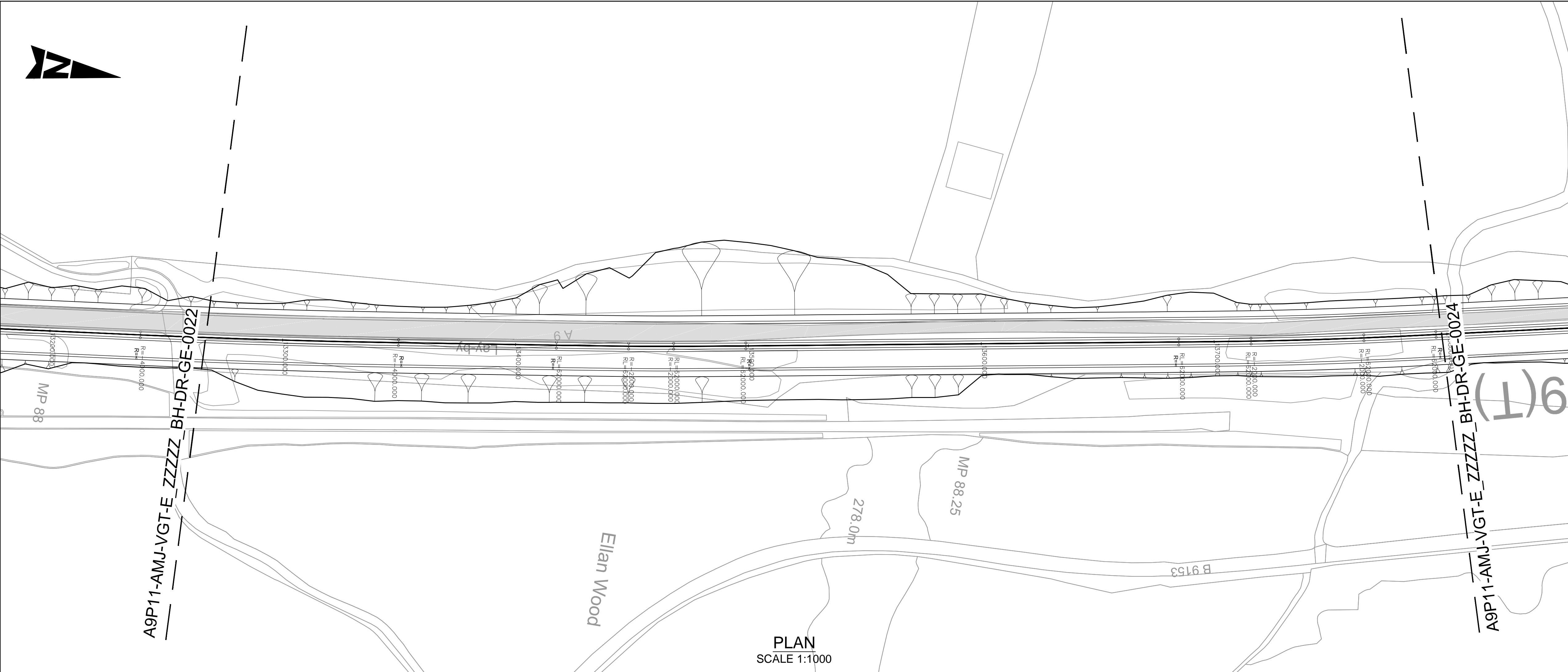
Scale	Designed / Drawn	Checked	Approved	Authorised
AS SHOWN	CC	KP	KP	RG
Original Size	Date	Date	Date	Date
A1	02/08/16	03/08/16	03/08/16	05/08/16
Drawing Number	Project	Originator	Volume	Revision
	A9P11 - AMJ - VGT - E_ZZZZ_BH - DR - GE - 0022			P01
Location	Type	Role	Number	

Plotfile: Mar 26, 2017 - 3:21pm by: CARR6635

Reproduced by permission of Ordnance Survey on behalf of HMSO. © Crown copyright and database right 2017. All rights reserved. Ordnance Survey Licence number 100046668.

ELEVATION
SCALE 1:1000 H 1:200 V

100
0 10
Millimetres
DO NOT SCALE



PLAN
SCALE 1:1000

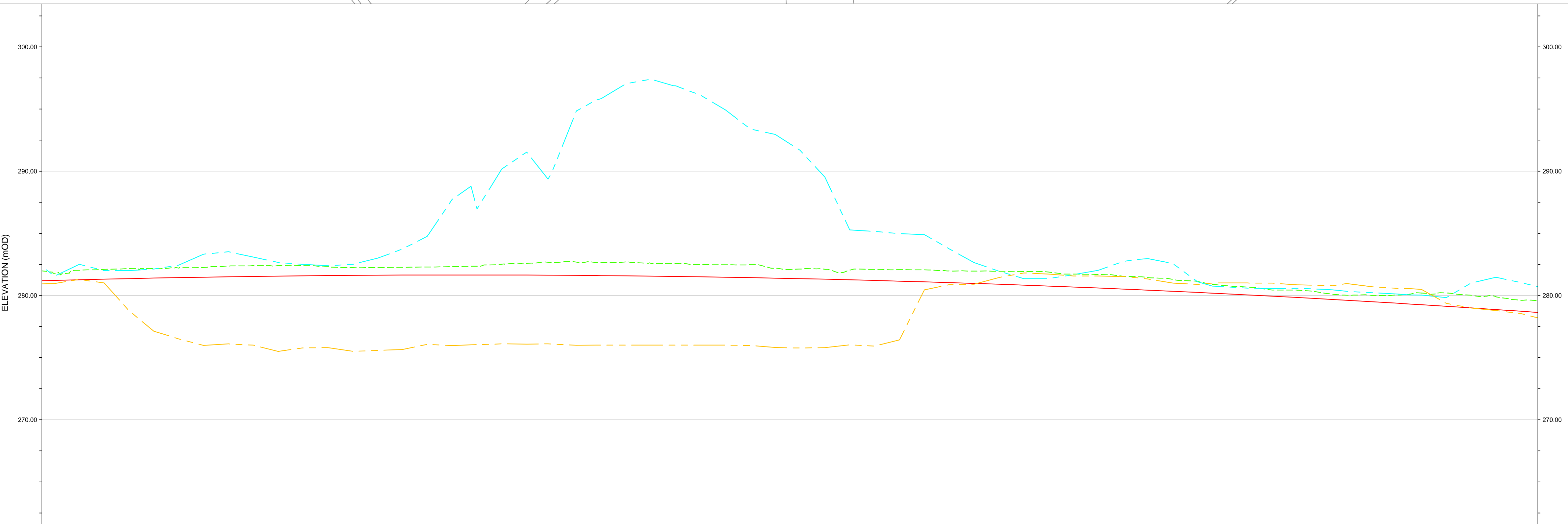
- NOTES:**
- ALL LEVELS IN mAOD UNLESS OTHERWISE NOTED. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE NOTED.
 - ALL DEPTHS SHOWN ARE IN METRES.
 - HISTORICAL BOREHOLE POSITIONS AND LEVELS INFERRED FROM BGS DATABASE TO ACCURACY ± 10m.

- KEY:**
- EXISTING A9
- BGS HISTORICAL GROUND INVESTIGATION:**
- | | |
|-----------------------|-----------------------|
| NH82NW 1973 BOREHOLE | NH80NE 1978 BOREHOLE |
| NH82NW 1973 CORE | NH80NE 1978 CORE |
| NH82NW 1973 TRIAL PIT | NH80NE 1978 TRIAL PIT |
| NH91NW 1977 BOREHOLE | NH81SE 2003 BOREHOLE |
| NH91NW 1977 CORE | NH81SE 2003 CORE |
| NH91NW 1977 TRIAL PIT | NH81SE 2003 TRIAL PIT |
| NH81SE 1964 BOREHOLE | NH81SE 1999 BOREHOLE |
| NH81SE 1964 CORE | NH81SE 1999 CORE |
| NH81SE 1964 TRIAL PIT | NH81SE 1999 TRIAL PIT |
| NH82SE 1993 BOREHOLE | NH81SE 1999 BOREHOLE |
| NH82SE 1993 CORE | NH81SE 1999 CORE |
| NH82SE 1993 TRIAL PIT | NH81SE 1999 TRIAL PIT |
| NH82SE 2008 BOREHOLE | |
| NH82SE 2008 CORE | |
| NH82SE 2008 TRIAL PIT | |

- GEOTECHNICAL LONG SECTION KEY:**
- | | |
|---------------------------------|-------------|
| TOPSOIL | TOPSOIL |
| MADE GROUND | MADE GROUND |
| PEAT | SAND |
| ALLUVIUM GRANULAR | GRAVEL |
| RIVER TERRACE DEPOSITS COHESIVE | SILT |
| RIVER TERRACE DEPOSITS GRANULAR | CLAY |
| GLACIAL FLUVIAL GRANULAR | BOULDERS |
| GLACIAL TILL COHESIVE | BEDROCK |
| GLACIAL TILL GRANULAR | |
| ROCK | |

NOTE:
COMPOSITE SOIL TYPES WILL BE SIGNIFIED BY COMBINED SYMBOLS E.G. SILTY SAND
DEPTHS (m BGL) ARE GENERALLY PRESENTED TO THE LEFT OF THE BOREHOLE LOGS ON THE GEOLOGICAL SECTION.

- WATER STRIKE
- RISE TO IN 20 MINS
- PROPOSED ROAD LEVEL
- EXISTING GROUND LEVEL
- SOUTHBOUND EARTHWORKS LEVEL
- NORTHBOUND EARTHWORKS LEVEL



LEVEL DATUM - 260m	CHAINAGE	DESIGN LEVELS	EXISTING GROUND
	13250.00	281.707	281.791
	13260.00	281.229	281.025
	13270.00	281.307	282.093
	13280.00	281.352	282.164
	13290.00	281.394	282.153
	13300.00	281.433	282.205
	13310.00	281.468	282.291
	13320.00	281.500	282.344
	13330.00	281.529	282.397
	13340.00	281.555	282.397
	13350.00	281.577	282.393
	13360.00	281.597	282.345
	13370.00	281.613	282.233
	13380.00	281.626	282.244
	13390.00	281.635	282.256
	13400.00	281.642	282.288
	13410.00	281.645	282.316
	13420.00	281.645	282.353
	13430.00	281.642	282.515
	13440.00	281.635	282.545
	13450.00	281.625	282.644
	13460.00	281.612	282.683
	13470.00	281.596	282.633
	13480.00	281.577	282.701
	13490.00	281.554	282.581
	13500.00	281.528	282.566
	13510.00	281.499	282.485
	13520.00	281.467	282.461
	13530.00	281.431	282.501
	13540.00	281.393	282.183
	13550.00	281.351	282.078
	13560.00	281.305	282.013
	13570.00	281.257	282.033
	13580.00	281.205	282.100
	13590.00	281.150	282.074
	13600.00	281.092	282.024
	13610.00	281.031	281.970
	13620.00	280.966	281.907
	13630.00	280.899	281.849
	13640.00	280.827	281.970
	13650.00	280.753	281.878
	13660.00	280.676	281.715
	13670.00	280.595	281.688
	13680.00	280.511	281.540
	13690.00	280.424	281.438
	13700.00	280.334	281.288
	13710.00	280.240	281.121
	13720.00	280.145	280.907
	13730.00	280.043	280.670
	13740.00	279.940	280.440
	13750.00	279.833	280.238
	13760.00	279.724	280.200
	13770.00	279.611	280.072
	13780.00	279.494	280.000
	13790.00	279.375	280.038
	13800.00	279.252	280.197
	13810.00	279.127	280.201
	13820.00	278.997	280.018
	13830.00	278.865	279.900
	13840.00	278.730	279.614

ELEVATION
SCALE 1:1000 H 1:200 V

P01	CC	KP	KP	05/08/16
FIRST ISSUE				
Rev	Drawn / Des	Checked	Approved	Date
Description				Subtality
FINAL				B



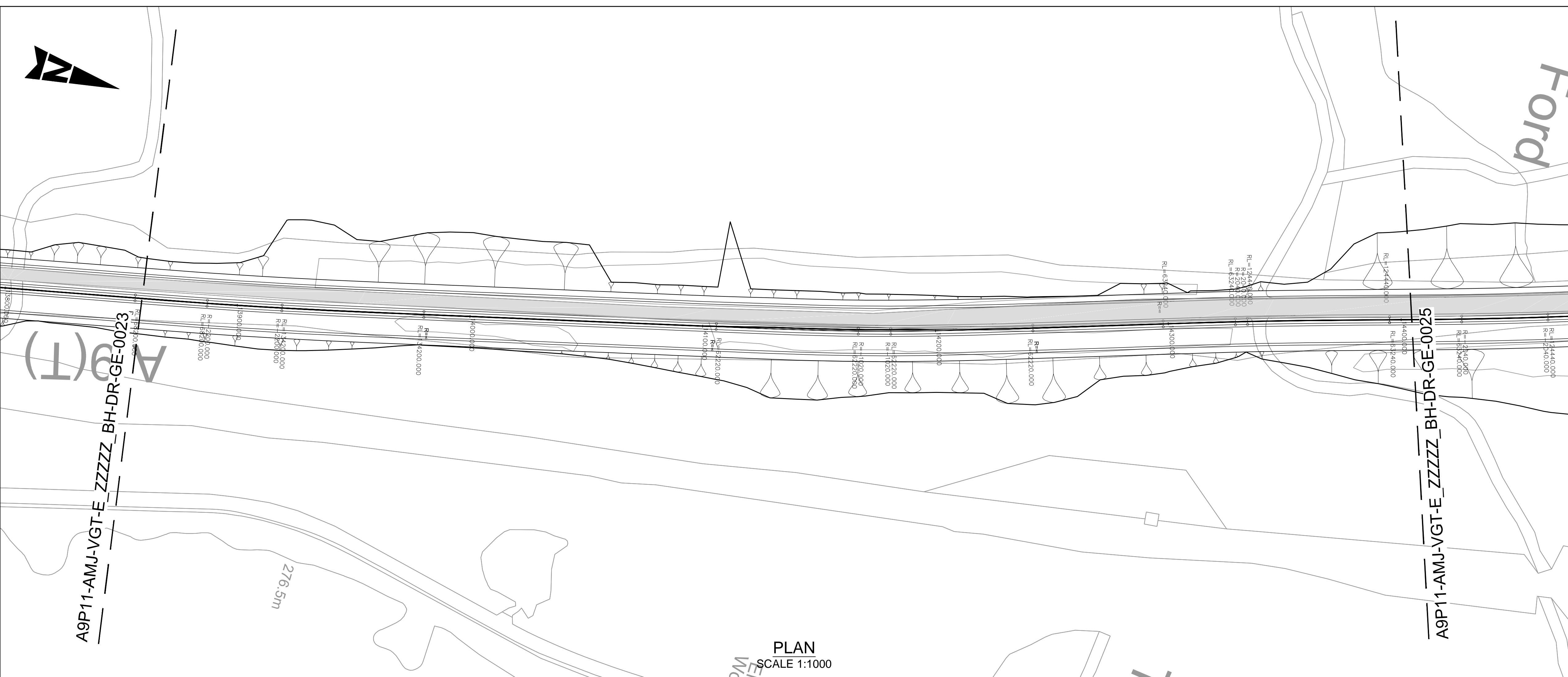
Drawing Title
FIGURE 5.19-MAINLINE ALIGNMENT OPTION 1 BOREHOLE PLAN AND LONG SECTION (SHEET 23 OF 41)

Scale	Designed / Drawn	Checked	Approved	Authorised
AS SHOWN	CC	KP	KP	RG
Original Size	Date	Date	Date	Date
A1	02/08/16	03/08/16	03/08/16	05/08/16
Drawing Number	Project	Originator	Volume	Revision
	A9P11 - AMJ - VGT - E_ZZZZ_BH - DR - GE - 0023			P01
Location	Type	Role	Number	

Plotlet: Mar 26, 2017 - 3:29pm by: CARR6635

Reproduced by permission of Ordnance Survey on behalf of HMSO. © Crown copyright and database right 2017. All rights reserved. Ordnance Survey Licence number 100046668.

100
10
0
Millimetres
DO NOT SCALE



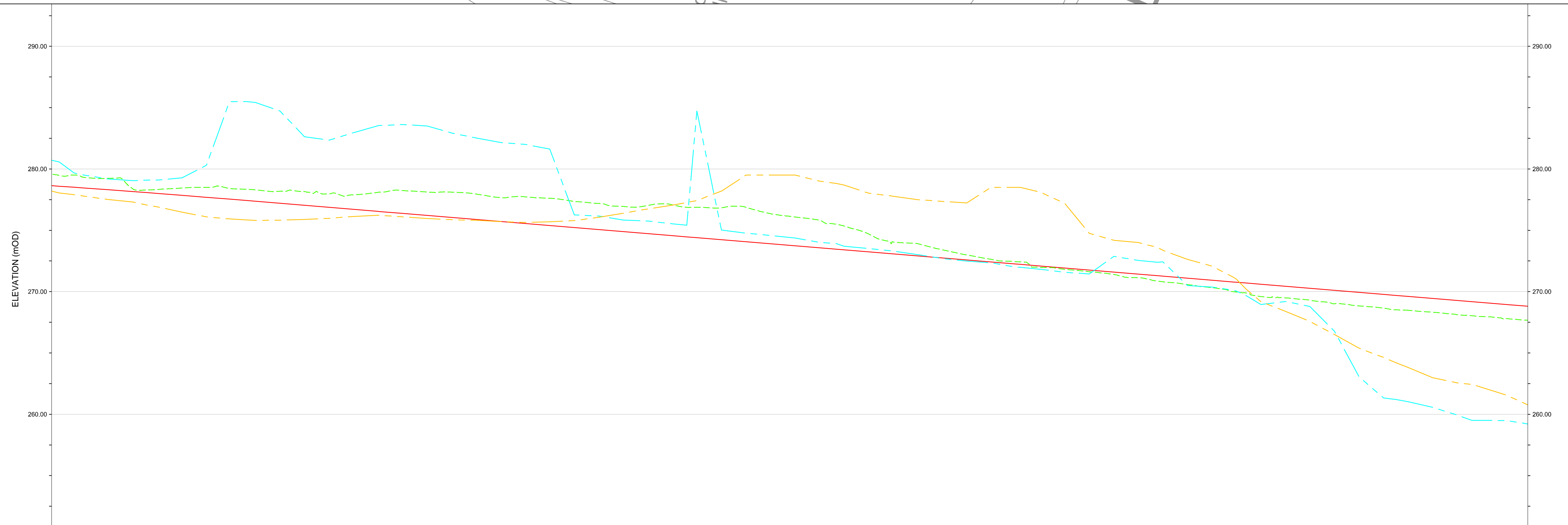
PLAN
SCALE 1:1000

- NOTES:**
- ALL LEVELS IN mAOD UNLESS OTHERWISE NOTED. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE NOTED.
 - ALL DEPTHS SHOWN ARE IN METRES.
 - HISTORICAL BOREHOLE POSITIONS AND LEVELS INFERRED FROM BGS DATABASE TO ACCURACY ± 10m.
- KEY:**
- EXISTING A9
- BGS HISTORICAL GROUND INVESTIGATION:**
- | | |
|-----------------------|-----------------------|
| NH82NW 1973 BOREHOLE | NH80NE 1978 BOREHOLE |
| NH82NW 1973 CORE | NH80NE 1978 CORE |
| NH82NW 1973 TRIAL PIT | NH80NE 1978 TRIAL PIT |
| NH91NW 1977 BOREHOLE | NH81SE 2003 BOREHOLE |
| NH91NW 1977 CORE | NH81SE 2003 CORE |
| NH91NW 1977 TRIAL PIT | NH81SE 2003 TRIAL PIT |
| NH81SE 1964 BOREHOLE | NH81SE 1999 BOREHOLE |
| NH81SE 1964 CORE | NH81SE 1999 CORE |
| NH81SE 1964 TRIAL PIT | NH81SE 1999 TRIAL PIT |
| NH82SE 1993 BOREHOLE | NH81SE 1999 BOREHOLE |
| NH82SE 1993 CORE | NH81SE 1999 CORE |
| NH82SE 1993 TRIAL PIT | NH81SE 1999 TRIAL PIT |
| NH82SE 2008 BOREHOLE | |
| NH82SE 2008 CORE | |
| NH82SE 2008 TRIAL PIT | |

- GEOTECHNICAL LONG SECTION KEY:**
- | | |
|---------------------------------|-------------|
| TOPSOIL | TOPSOIL |
| MADE GROUND | MADE GROUND |
| PEAT | SAND |
| ALLUVIUM GRANULAR | GRAVEL |
| RIVER TERRACE DEPOSITS COHESIVE | SILT |
| RIVER TERRACE DEPOSITS GRANULAR | CLAY |
| GLACIAL FLUVIAL GRANULAR | BOULDERS |
| GLACIAL TILL COHESIVE | BEDROCK |
| GLACIAL TILL GRANULAR | |
| ROCK | |

NOTE:
COMPOSITE SOIL TYPES WILL BE SIGNIFIED BY COMBINED SYMBOLS E.G. SILTY SAND
DEPTHS (m BGL) ARE GENERALLY PRESENTED TO THE LEFT OF THE BOREHOLE LOGS ON THE GEOLOGICAL SECTION.

- WATER STRIKE
- RISE TO IN 20 MINS
- PROPOSED ROAD LEVEL
- EXISTING GROUND LEVEL
- SOUTHBOUND EARTHWORKS LEVEL
- NORTHBOUND EARTHWORKS LEVEL



ELEVATION
SCALE 1:1000 H 1:200 V

LEVEL DATUM - 250m	CHAINAGE	DESIGN LEVELS	EXISTING GROUND
	13850.000	278.591	278.474
	13860.000	278.449	278.317
	13870.000	278.304	278.231
	13880.000	278.155	278.374
	13890.000	278.004	278.322
	13900.000	277.849	278.444
	13910.000	277.681	278.498
	13920.000	277.529	278.395
	13930.000	277.385	278.294
	13940.000	277.230	278.188
	13950.000	277.075	278.153
	13960.000	276.920	277.946
	13970.000	276.765	277.850
	13980.000	276.610	278.094
	13990.000	276.454	278.244
	14000.000	276.298	278.118
	14010.000	276.142	278.039
	14020.000	275.986	277.952
	14030.000	275.830	277.865
	14040.000	275.674	277.778
	14050.000	275.518	277.691
	14060.000	275.362	277.604
	14070.000	275.206	277.517
	14080.000	275.050	277.430
	14090.000	274.894	277.343
	14100.000	274.738	277.256
	14110.000	274.582	277.169
	14120.000	274.426	277.082
	14130.000	274.270	276.995
	14140.000	274.114	276.908
	14150.000	273.958	276.821
	14160.000	273.802	276.734
	14170.000	273.646	276.647
	14180.000	273.490	276.560
	14190.000	273.334	276.473
	14200.000	273.178	276.386
	14210.000	273.022	276.299
	14220.000	272.866	276.212
	14230.000	272.710	276.125
	14240.000	272.554	276.038
	14250.000	272.398	275.951
	14260.000	272.242	275.864
	14270.000	272.086	275.777
	14280.000	271.930	275.690
	14290.000	271.774	275.603
	14300.000	271.618	275.516
	14310.000	271.462	275.429
	14320.000	271.306	275.342
	14330.000	271.150	275.255
	14340.000	270.994	275.168
	14350.000	270.838	275.081
	14360.000	270.682	274.994
	14370.000	270.526	274.907
	14380.000	270.370	274.820
	14390.000	270.214	274.733
	14400.000	270.058	274.646
	14410.000	269.902	274.559
	14420.000	269.746	274.472
	14430.000	269.590	274.385
	14440.000	269.434	274.298
	14450.000	269.278	274.211

P01	CC	KP	KP	05/08/16
FIRST ISSUE				
Rev	Drawn / Des	Checked	Approved	Date
Description				Subtibility
Drawing Status				B
FINAL				



Drawing Title
FIGURE 5.19-MAINLINE ALIGNMENT OPTION 1 BOREHOLE PLAN AND LONG SECTION (SHEET 24 OF 41)

Scale	Designed / Drawn	Checked	Approved	Authorised
AS SHOWN	CC	KP	KP	RG
Original Size	Date	Date	Date	Date
A1	02/08/16	03/08/16	03/08/16	05/08/16
Drawing Number	Project	Originator	Volume	Revision
	A9P11 - AMJ - VGT - E_ZZZZ_BH - DR - GE - 0024			P01
Location	Type	Role	Number	

Plotted: Mar 26, 2017 - 3:40pm by: CARR6635

Reproduced by permission of Ordnance Survey on behalf of HMSO. © Crown copyright and database right 2017. All rights reserved. Ordnance Survey Licence number 100046668.

100
0 10
Millimetres
DO NOT SCALE



NOTES:

- ALL LEVELS IN mAOD UNLESS OTHERWISE NOTED. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE NOTED.
- ALL DEPTHS SHOWN ARE IN METRES.
- HISTORICAL BOREHOLE POSITIONS AND LEVELS INFERRED FROM BGS DATABASE TO ACCURACY ± 10m.

KEY:

EXISTING A9

BGS HISTORICAL GROUND INVESTIGATION:

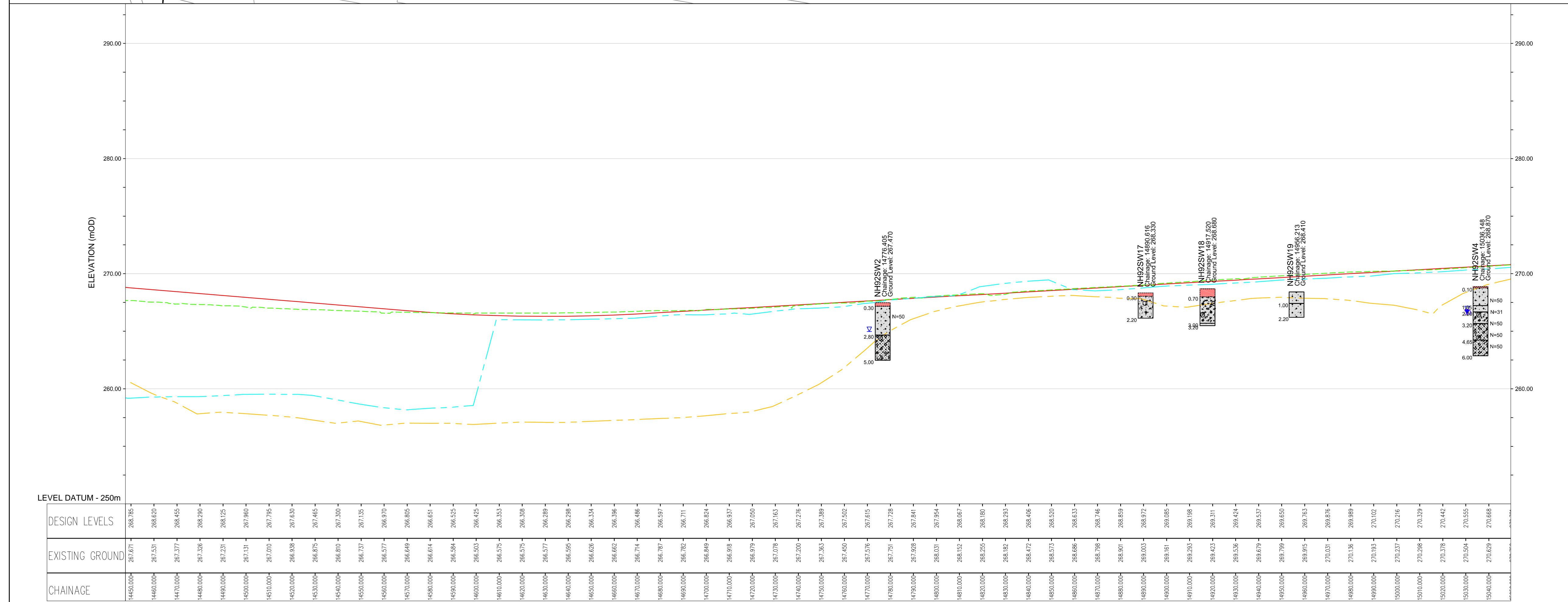
NH82NW 1973 BOREHOLE	NH80NE 1978 BOREHOLE
NH82NW 1973 CORE	NH80NE 1978 CORE
NH82NW 1973 TRIAL PIT	NH80NE 1978 TRIAL PIT
NH91NW 1977 BOREHOLE	NH81SE 2003 BOREHOLE
NH91NW 1977 CORE	NH81SE 2003 CORE
NH91NW 1977 TRIAL PIT	NH81SE 2003 TRIAL PIT
NH81SE 1964 BOREHOLE	NH81SE 1999 BOREHOLE
NH81SE 1964 CORE	NH81SE 1999 CORE
NH81SE 1964 TRIAL PIT	NH81SE 1999 TRIAL PIT
NH82SE 1993 BOREHOLE	NH81SE 1999 BOREHOLE
NH82SE 1993 TRIAL PIT	NH81SE 1999 TRIAL PIT
NH82SE 2008 BOREHOLE	
NH82SE 2008 CORE	
NH82SE 2008 TRIAL PIT	

GEOTECHNICAL LONG SECTION KEY:

TOPSOIL	TOPSOIL
MADE GROUND	MADE GROUND
PEAT	SAND
ALLUVIUM GRANULAR	GRAVEL
RIVER TERRACE DEPOSITS COHESIVE	SILT
RIVER TERRACE DEPOSITS GRANULAR	CLAY
GLACIAL FLUVIAL GRANULAR	BOULDERS
GLACIAL TILL COHESIVE	BEDROCK
GLACIAL TILL GRANULAR	
ROCK	

NOTE:
COMPOSITE SOIL TYPES WILL BE SIGNIFIED BY COMBINED SYMBOLS E.G. SILTY SAND
DEPTHS (m BGL) ARE GENERALLY PRESENTED TO THE LEFT OF THE BOREHOLE LOGS ON THE GEOLOGICAL SECTION.

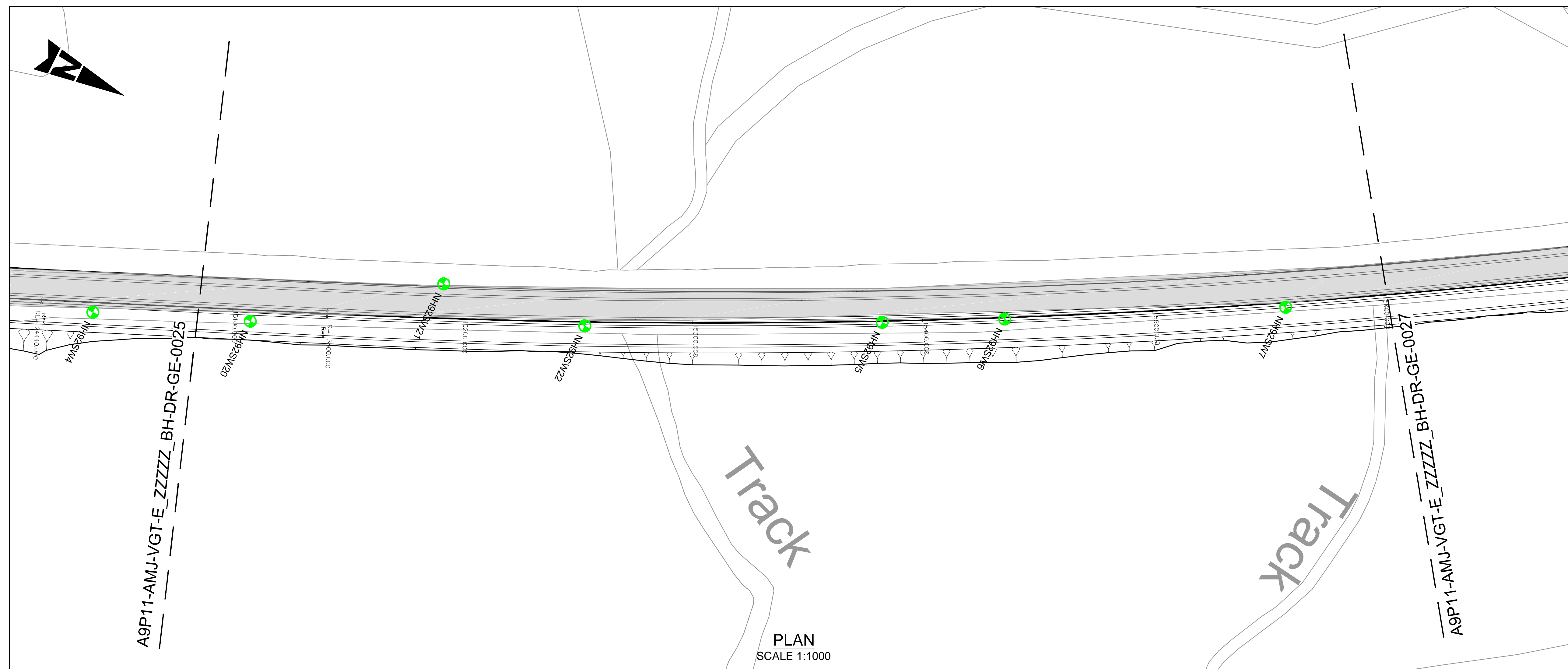
WATER STRIKE
 RISE TO IN 20 MINS
 PROPOSED ROAD LEVEL
 EXISTING GROUND LEVEL
 SOUTHBOUND EARTHWORKS LEVEL
 NORTHBOUND EARTHWORKS LEVEL



P01	CC	KP	KP	05/08/16
FIRST ISSUE				
Rev	Drawn / Des	Checked	Approved	Date
Description				
Drawing Status				Subtability
FINAL				B
Client				
 TRANSPORT SCOTLAND <small>An agency of The Scottish Government</small>				
 A9 DUALLING PERTH TO INVERNESS Dalraddy to Slochd				
 ATKINS mouchel				
Drawing Title				
FIGURE 5.19-MAINLINE ALIGNMENT OPTION 1 BOREHOLE PLAN AND LONG SECTION (SHEET 25 OF 41)				
Scale	Designed / Drawn	Checked	Approved	Authorised
AS SHOWN	CC	KP	KP	RG
Original Size	Date	Date	Date	Date
A1	02/08/16	03/08/16	03/08/16	05/08/16
Drawing Number				
Project	Originator	Volume	Revision	
A9P11 - AMJ - VGT - E_ZZZZ_BH - DR - GE - 0025			P01	
Location	Type	Role	Number	

Plotted: Mar 26, 2017 - 3:51pm by: CARR6635
 Reproduced by permission of Ordnance Survey on behalf of HMSO. © Crown copyright and database right 2017. All rights reserved. Ordnance Survey Licence number 100046668.

100
0 10
Millimetres
DO NOT SCALE



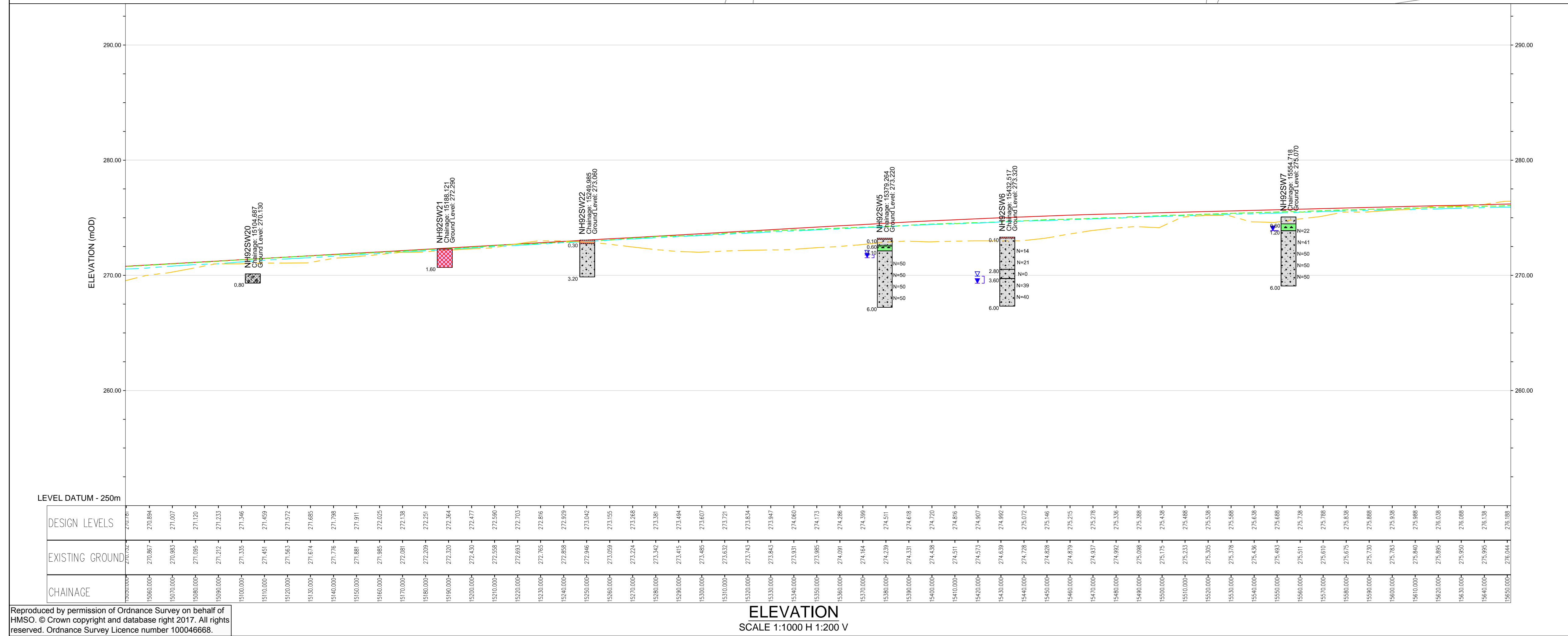
- NOTES:**
- ALL LEVELS IN mAOD UNLESS OTHERWISE NOTED. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE NOTED.
 - ALL DEPTHS SHOWN ARE IN METRES.
 - HISTORICAL BOREHOLE POSITIONS AND LEVELS INFERRED FROM BGS DATABASE TO ACCURACY ± 10m.

- KEY:**
- EXISTING A9
- BGS HISTORICAL GROUND INVESTIGATION:**
- | | |
|-----------------------|-----------------------|
| NH82NW 1973 BOREHOLE | NH80NE 1978 BOREHOLE |
| NH82NW 1973 CORE | NH80NE 1978 CORE |
| NH82NW 1973 TRIAL PIT | NH80NE 1978 TRIAL PIT |
| NH81NW 1977 BOREHOLE | NH81SE 2003 BOREHOLE |
| NH81NW 1977 CORE | NH81SE 2003 CORE |
| NH81NW 1977 TRIAL PIT | NH81SE 2003 TRIAL PIT |
| NH81SE 1964 BOREHOLE | NH81SE 1999 BOREHOLE |
| NH81SE 1964 CORE | NH81SE 1999 CORE |
| NH81SE 1964 TRIAL PIT | NH81SE 1999 TRIAL PIT |
| NH82SE 1993 BOREHOLE | NH81SE 1999 BOREHOLE |
| NH82SE 1993 CORE | NH81SE 1999 CORE |
| NH82SE 1993 TRIAL PIT | NH81SE 1999 TRIAL PIT |
| NH82SE 2008 BOREHOLE | |
| NH82SE 2008 CORE | |
| NH82SE 2008 TRIAL PIT | |

- GEOTECHNICAL LONG SECTION KEY:**
- | | |
|---------------------------------|-------------|
| TOPSOIL | TOPSOIL |
| MADE GROUND | MADE GROUND |
| PEAT | SAND |
| ALLUVIUM GRANULAR | GRAVEL |
| RIVER TERRACE DEPOSITS COHESIVE | SILT |
| RIVER TERRACE DEPOSITS GRANULAR | CLAY |
| GLACIAL FLUVIAL GRANULAR | BOULDERS |
| GLACIAL TILL COHESIVE | BEDROCK |
| GLACIAL TILL GRANULAR | |
| ROCK | |

NOTE:
COMPOSITE SOIL TYPES WILL BE SIGNIFIED BY COMBINED SYMBOLS E.G. SILTY SAND
DEPTHS (m BGL) ARE GENERALLY PRESENTED TO THE LEFT OF THE BOREHOLE LOGS ON THE GEOLOGICAL SECTION.

- WATER STRIKE
- RISE TO IN 20 MINS
- PROPOSED ROAD LEVEL
- EXISTING GROUND LEVEL
- SOUTHBOUND EARTHWORKS LEVEL
- NORTHBOUND EARTHWORKS LEVEL



P01	CC	KP	KP	05/08/16
FIRST ISSUE				
Rev	Drawn / Des	Checked	Approved	Date
Description				
Drawing Status				Subtality
FINAL				B

Client
TRANSPORT SCOTLAND
An agency of The Scottish Government



ATKINS mouchel

Drawing Title
FIGURE 5.19-MAINLINE ALIGNMENT OPTION 1 BOREHOLE PLAN AND LONG SECTION (SHEET 26 OF 41)

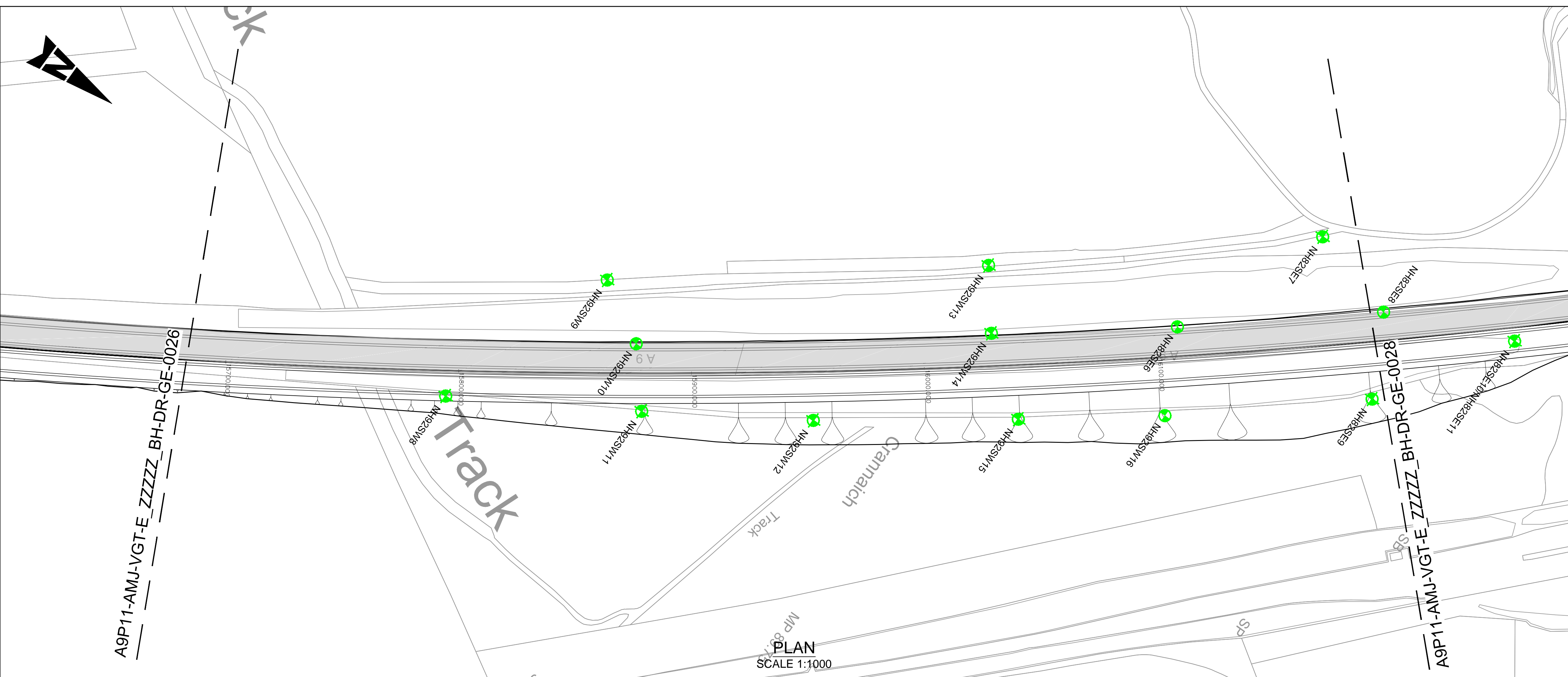
Scale	Designed / Drawn	Checked	Approved	Authorised
AS SHOWN	CC	KP	KP	RG
Original Size	Date	Date	Date	Date
A1	02/08/16	03/08/16	03/08/16	05/08/16
Drawing Number	Project	Originator	Volume	Revision
	A9P11 - AMJ - VGT - E_ZZZZ_BH - DR - GE - 0026			P01
Location	Type	Role	Number	

Plotfile: Mar 26, 2017 - 3:58pm by: CARR6635

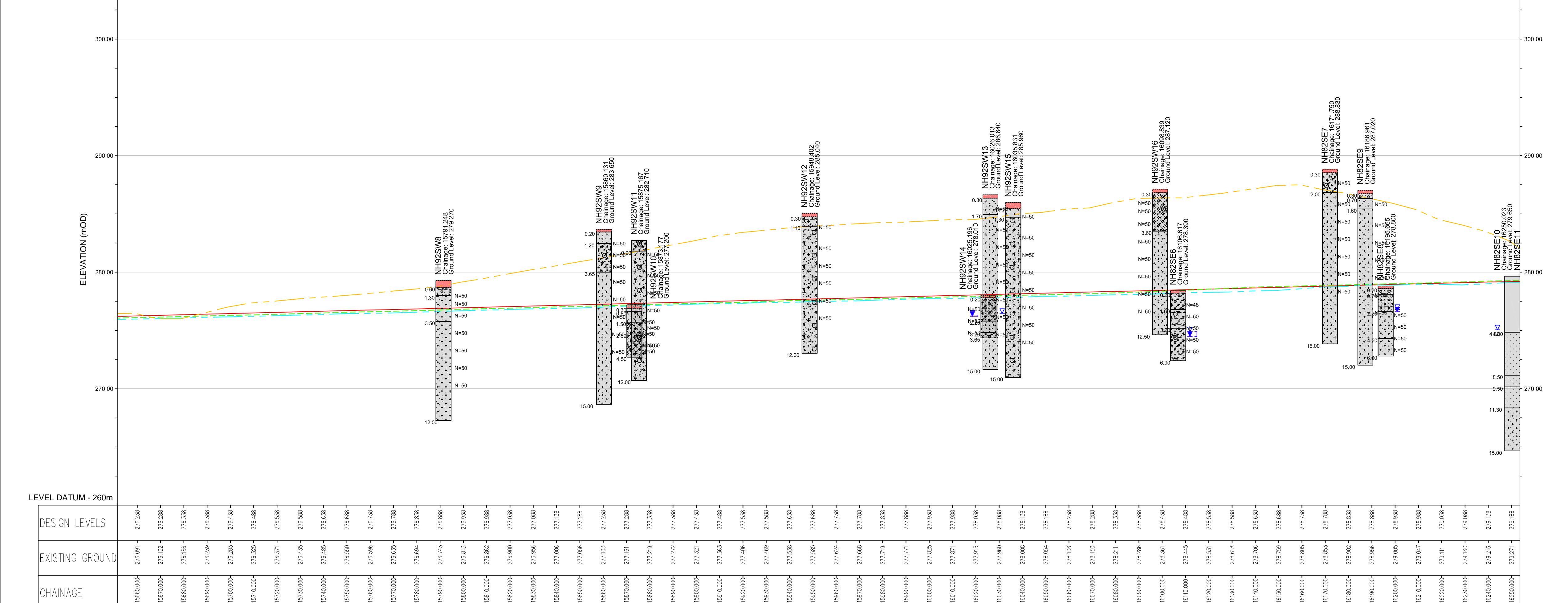
Reproduced by permission of Ordnance Survey on behalf of HMSO. © Crown copyright and database right 2017. All rights reserved. Ordnance Survey Licence number 100046668.

ELEVATION SCALE 1:1000 H 1:200 V

100
0 10
Millimetres
DO NOT SCALE



- NOTES:**
- ALL LEVELS IN mAOD UNLESS OTHERWISE NOTED. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE NOTED.
 - ALL DEPTHS SHOWN ARE IN METRES.
 - HISTORICAL BOREHOLE POSITIONS AND LEVELS INFERRED FROM BGS DATABASE TO ACCURACY ± 10m.
- KEY:**
- EXISTING A9
- BGS HISTORICAL GROUND INVESTIGATION:**
- | | |
|-----------------------|-----------------------|
| NH82NW 1973 BOREHOLE | NH80NE 1978 BOREHOLE |
| NH82NW 1973 CORE | NH80NE 1978 CORE |
| NH82NW 1973 TRIAL PIT | NH80NE 1978 TRIAL PIT |
| NH91NW 1977 BOREHOLE | NH81SE 2003 BOREHOLE |
| NH91NW 1977 CORE | NH81SE 2003 CORE |
| NH91NW 1977 TRIAL PIT | NH81SE 1999 BOREHOLE |
| NH81SE 1964 BOREHOLE | NH81SE 1999 TRIAL PIT |
| NH81SE 1964 CORE | NH81SE 1999 CORE |
| NH81SE 1964 TRIAL PIT | NH81SE 1999 TRIAL PIT |
| NH82SE 1993 BOREHOLE | NH81SE 1999 BOREHOLE |
| NH82SE 1993 CORE | NH81SE 1999 CORE |
| NH82SE 1993 TRIAL PIT | NH81SE 1999 TRIAL PIT |
| NH82SE 2008 BOREHOLE | |
| NH82SE 2008 CORE | |
| NH82SE 2008 TRIAL PIT | |
- GEOTECHNICAL LONG SECTION KEY:**
- | | |
|---------------------------------|-------------|
| TOPSOIL | TOPSOIL |
| MADE GROUND | MADE GROUND |
| PEAT | SAND |
| ALLUVIUM GRANULAR | GRAVEL |
| RIVER TERRACE DEPOSITS COHESIVE | SILT |
| RIVER TERRACE DEPOSITS GRANULAR | CLAY |
| GLACIAL FLUVIAL GRANULAR | BOULDERS |
| GLACIAL TILL COHESIVE | BEDROCK |
| GLACIAL TILL GRANULAR | |
| ROCK | |
- NOTE:**
COMPOSITE SOIL TYPES WILL BE SIGNIFIED BY COMBINED SYMBOLS E.G. SILTY SAND
DEPTH (m BGL) ARE GENERALLY PRESENTED TO THE LEFT OF THE BOREHOLE LOGS ON THE GEOLOGICAL SECTION.
- Legend:**
- WATER STRIKE
 - RISE TO IN 20 MINS
 - PROPOSED ROAD LEVEL
 - EXISTING GROUND LEVEL
 - SOUTHBOUND EARTHWORKS LEVEL
 - NORTHBOUND EARTHWORKS LEVEL



P01	CC	KP	KP	05/08/16
FIRST ISSUE				
Rev	Drawn / Des	Checked	Approved	Date
Description				
Drawing Status				Subtlety
FINAL				B

Client

TRANSPORT SCOTLAND

An agency of The Scottish Government

A9
DUALLING
PERTH TO INVERNESS
Dairaddy to Sliech

ATKINS mouchel

Drawing Title
FIGURE 5.19-MAINLINE ALIGNMENT OPTION 1 BOREHOLE PLAN AND LONG SECTION (SHEET 27 OF 41)

Scale	Designed / Drawn	Checked	Approved	Authorised
AS SHOWN	CC	KP	KP	RG
Original Size	Date	Date	Date	Date
A1	02/08/16	03/08/16	03/08/16	05/08/16

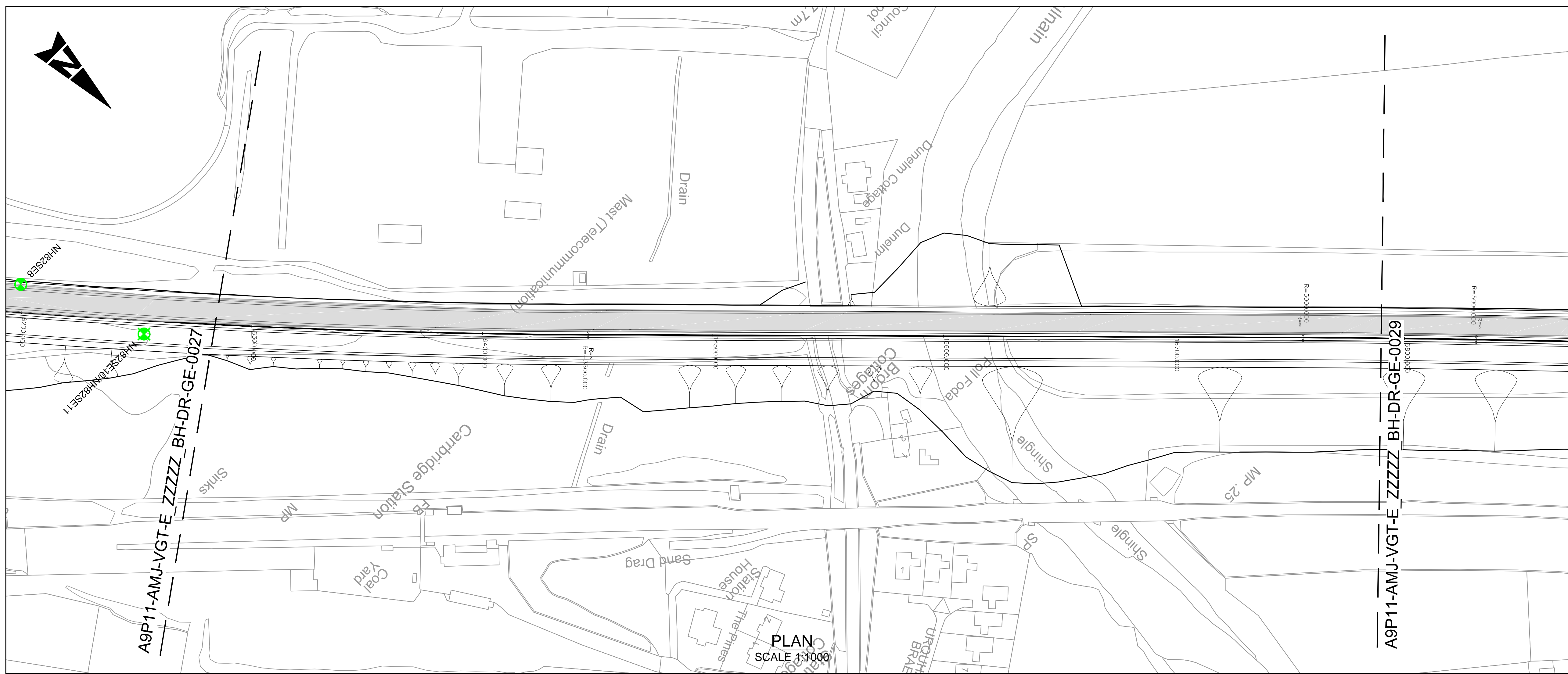
Drawing Number	Project	Originator	Volume	Revision
	A9P11 - AMJ - VGT - E_ZZZZ_BH - DR - GE - 0027			P01

Plotlet: Mar 26, 2017 - 4:12pm by: CARR6635

Reproduced by permission of Ordnance Survey on behalf of HMSO. © Crown copyright and database right 2017. All rights reserved. Ordnance Survey Licence number 100046668.

ELEVATION SCALE 1:1000 H 1:200 V

Millimetres
0 10
DO NOT SCALE



NOTES:
 1. ALL LEVELS IN mAOD UNLESS OTHERWISE NOTED. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE NOTED.
 2. ALL DEPTHS SHOWN ARE IN METRES.
 3. HISTORICAL BOREHOLE POSITIONS AND LEVELS INFERRED FROM BGS DATABASE TO ACCURACY ± 10m.

KEY:
 [Symbol] EXISTING A9

BGS HISTORICAL GROUND INVESTIGATION:

NH82NW 1973 BOREHOLE	NH80NE 1978 BOREHOLE
NH82NW 1973 CORE	NH80NE 1978 CORE
NH82NW 1973 TRIAL PIT	NH81SE 1978 TRIAL PIT
NH91NW 1977 BOREHOLE	NH81SE 2003 BOREHOLE
NH91NW 1977 CORE	NH81SE 2003 CORE
NH91NW 1977 TRIAL PIT	NH81SE 2003 TRIAL PIT
NH81SE 1964 BOREHOLE	NH81SE 1999 BOREHOLE
NH81SE 1964 CORE	NH81SE 1999 CORE
NH81SE 1964 TRIAL PIT	NH81SE 1999 TRIAL PIT
NH82SE 1993 BOREHOLE	NH81SE 1999 BOREHOLE
NH82SE 1993 CORE	NH81SE 1999 CORE
NH82SE 1993 TRIAL PIT	NH81SE 1999 TRIAL PIT
NH82SE 2008 BOREHOLE	NH82SE 2008 CORE
NH82SE 2008 CORE	NH82SE 2008 TRIAL PIT

GEOTECHNICAL LONG SECTION KEY:

[Red] TOPSOIL	[Red with diagonal lines] TOPSOIL
[Purple] MADE GROUND	[Purple with diagonal lines] MADE GROUND
[Green] PEAT	[Green with diagonal lines] SAND
[Orange] ALLUVIUM GRANULAR	[Orange with diagonal lines] GRAVEL
[Blue] RIVER TERRACE DEPOSITS COHESIVE	[Blue with diagonal lines] SILT
[Cyan] RIVER TERRACE DEPOSITS GRANULAR	[Cyan with diagonal lines] CLAY
[Yellow] GLACIAL FLUVIAL GRANULAR	[Yellow with diagonal lines] BOULDERS
[Brown] GLACIAL TILL COHESIVE	[Brown with diagonal lines] BEDROCK
[Grey] GLACIAL TILL GRANULAR	
[Blue] ROCK	

NOTE:
 COMPOSITE SOIL TYPES WILL BE SIGNIFIED BY COMBINED SYMBOLS E.G. [Symbol] SILTY SAND
 DEPTHS (m BGL) ARE GENERALLY PRESENTED TO THE LEFT OF THE BOREHOLE LOGS ON THE GEOLOGICAL SECTION.

LEGEND:
 [Blue triangle] WATER STRIKE
 [Blue inverted triangle] RISE TO IN 20 MINS
 [Red dashed line] PROPOSED ROAD LEVEL
 [Green dashed line] EXISTING GROUND LEVEL
 [Yellow dashed line] SOUTHBOUND EARTHWORKS LEVEL
 [Cyan dashed line] NORTHBOUND EARTHWORKS LEVEL



DESIGN LEVELS	EXISTING GROUND	CHAINAGE
273.226	273.311	16300.000
273.228	273.343	16300.000
273.335	273.375	16300.000
273.388	273.422	16300.000
273.438	273.453	16300.000
273.488	273.506	16300.000
273.538	273.571	16300.000
273.588	273.568	16300.000
273.638	273.611	16300.000
273.688	273.666	16300.000
273.738	273.698	16300.000
273.788	273.730	16300.000
273.838	273.765	16300.000
273.888	273.837	16300.000
273.938	273.881	16400.000
273.988	273.900	16400.000
280.038	273.924	16420.000
280.088	280.152	16430.000
280.138	280.160	16440.000
280.188	280.158	16450.000
280.238	280.221	16460.000
280.288	280.237	16470.000
280.338	280.336	16480.000
280.388	280.334	16490.000
280.438	280.320	16500.000
280.488	280.304	16510.000
280.538	280.270	16520.000
280.588	280.444	16530.000
280.638	280.448	16540.000
280.688	280.550	16550.000
280.738	280.597	16560.000
280.788	280.654	16570.000
280.838	280.660	16580.000
280.888	280.751	16590.000
280.938	280.795	16600.000
280.988	280.884	16610.000
290.038	280.918	16620.000
290.088	280.953	16630.000
290.138	280.986	16640.000
290.188	281.026	16650.000
290.238	280.954	16660.000
290.288	281.028	16670.000
290.338	281.100	16680.000
290.388	281.127	16690.000
290.438	281.180	16700.000
290.488	281.252	16710.000
290.538	281.274	16720.000
290.588	281.324	16730.000
290.638	281.395	16740.000
290.688	281.460	16750.000
290.738	281.536	16760.000
290.788	281.595	16770.000
290.838	281.600	16780.000
290.888	281.796	16790.000
290.938	281.852	16800.000
290.988	281.938	16810.000
291.038	281.991	16820.000
291.088	282.071	16830.000
291.138	282.108	16840.000
291.188	282.177	16850.000

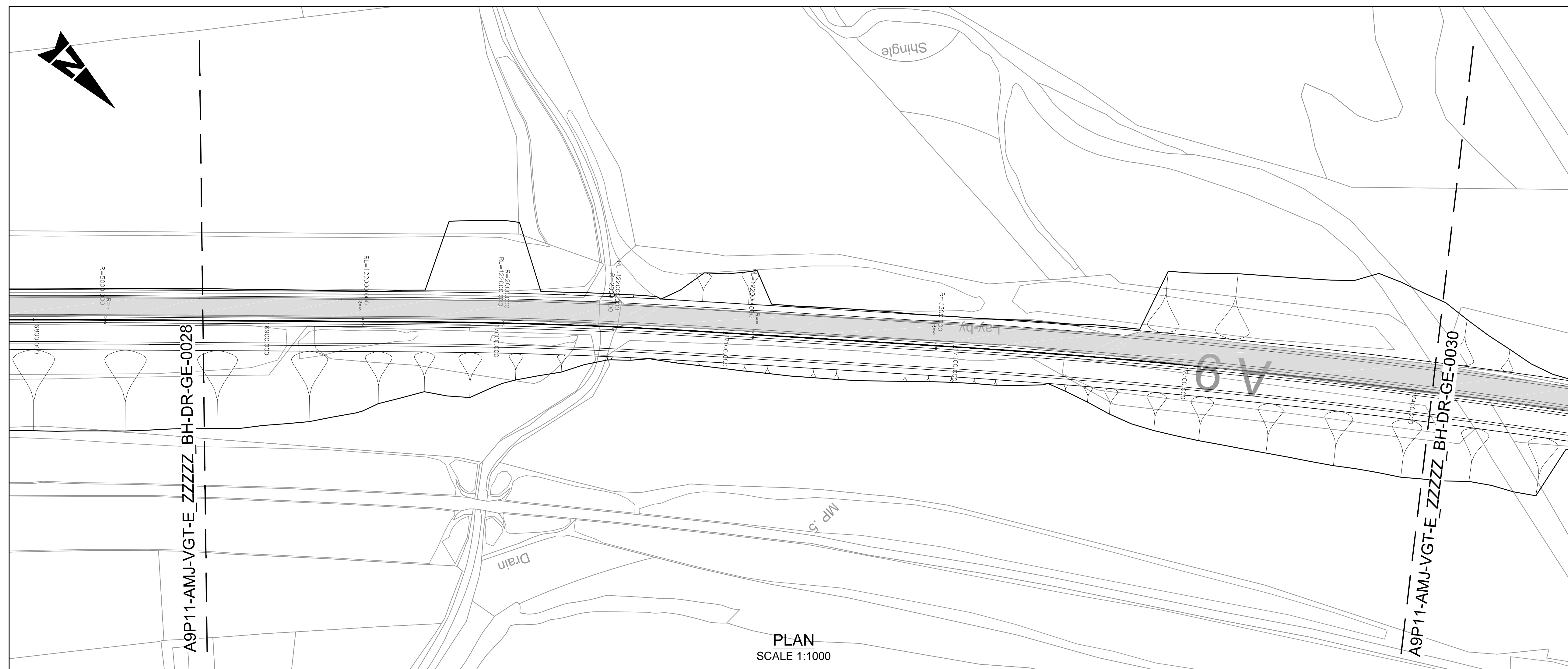
P01	CC	KP	KP	05/08/16
FIRST ISSUE				
Rev	Drawn / Des	Checked	Approved	Date
Description				
Drawing Status	FINAL			Suitability
				B
Client				
 <small>An agency of The Scottish Government</small>				
 <small>Dalraddy to Slouch</small>				
Drawing Title				
FIGURE 5.19-MAINLINE ALIGNMENT OPTION 1 BOREHOLE PLAN AND LONG SECTION (SHEET 28 OF 41)				
Scale	Designed / Drawn	Checked	Approved	Authorised
AS SHOWN	CC	KP	KP	RG
Original Size	Date	Date	Date	Date
A1	02/08/16	03/08/16	03/08/16	05/08/16
Drawing Number				
Project	Originator	Volume		Revision
A9P11 - AMJ - VGT - E_ZZZZ_BH - DR - GE - 0028				P01
Location	Type	Role	Number	

Plotted: Mar 26, 2017 - 4:23pm by: CARR6635

Reproduced by permission of Ordnance Survey on behalf of HMSO. © Crown copyright and database right 2017. All rights reserved. Ordnance Survey Licence number 100046668.

ELEVATION
 SCALE 1:1000 H 1:200 V

100
0 10
Millimetres
DO NOT SCALE



NOTES:

- ALL LEVELS IN mAOD UNLESS OTHERWISE NOTED. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE NOTED.
- ALL DEPTHS SHOWN ARE IN METRES.
- HISTORICAL BOREHOLE POSITIONS AND LEVELS INFERRED FROM BGS DATABASE TO ACCURACY ± 10m.

KEY:

EXISTING A9

BGS HISTORICAL GROUND INVESTIGATION:

NH82NW	1973 BOREHOLE	NH80NE	1978 BOREHOLE
NH82NW	1973 CORE	NH80NE	1978 CORE
NH82NW	1973 TRIAL PIT	NH80NE	1978 TRIAL PIT
NH91NW	1977 BOREHOLE	NH81SE	2003 BOREHOLE
NH91NW	1977 CORE	NH81SE	2003 CORE
NH91NW	1977 TRIAL PIT	NH81SE	2003 TRIAL PIT
NH81SE	1964 BOREHOLE	NH81SE	1999 BOREHOLE
NH81SE	1964 CORE	NH81SE	1999 CORE
NH81SE	1964 TRIAL PIT	NH81SE	1999 TRIAL PIT
NH82SE	1993 BOREHOLE	NH81SE	1999 BOREHOLE
NH82SE	1993 CORE	NH81SE	1999 CORE
NH82SE	1993 TRIAL PIT	NH81SE	1999 TRIAL PIT
NH82SE	2008 BOREHOLE	NH81SE	1999 TRIAL PIT
NH82SE	2008 CORE		
NH82SE	2008 TRIAL PIT		

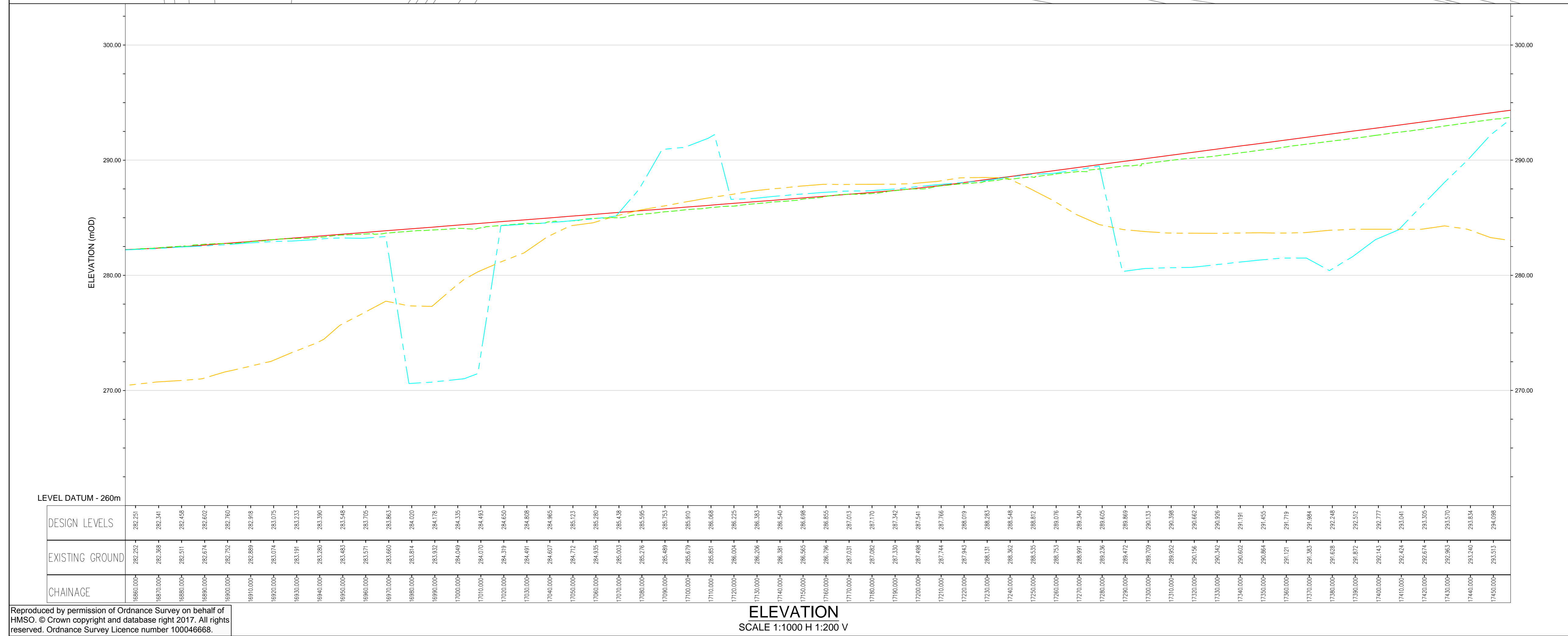
GEOTECHNICAL LONG SECTION KEY:

TOPSOIL	TOPSOIL
MADE GROUND	MADE GROUND
PEAT	SAND
ALLUVIUM GRANULAR	GRAVEL
RIVER TERRACE DEPOSITS COHESIVE	SILT
RIVER TERRACE DEPOSITS GRANULAR	CLAY
GLACIAL FLUVIAL GRANULAR	BOULDERS
GLACIAL TILL COHESIVE	BEDROCK
GLACIAL TILL GRANULAR	
ROCK	

NOTE:
COMPOSITE SOIL TYPES WILL BE SIGNIFIED BY COMBINED SYMBOLS E.G. SILTY SAND
DEPTHS (m BGL) ARE GENERALLY PRESENTED TO THE LEFT OF THE BOREHOLE LOGS ON THE GEOLOGICAL SECTION.

WATER STRIKE
 RISE TO IN 20 MINS
 PROPOSED ROAD LEVEL
 EXISTING GROUND LEVEL
 SOUTHBOUND EARTHWORKS LEVEL
 NORTHBOUND EARTHWORKS LEVEL

PLAN
SCALE 1:1000

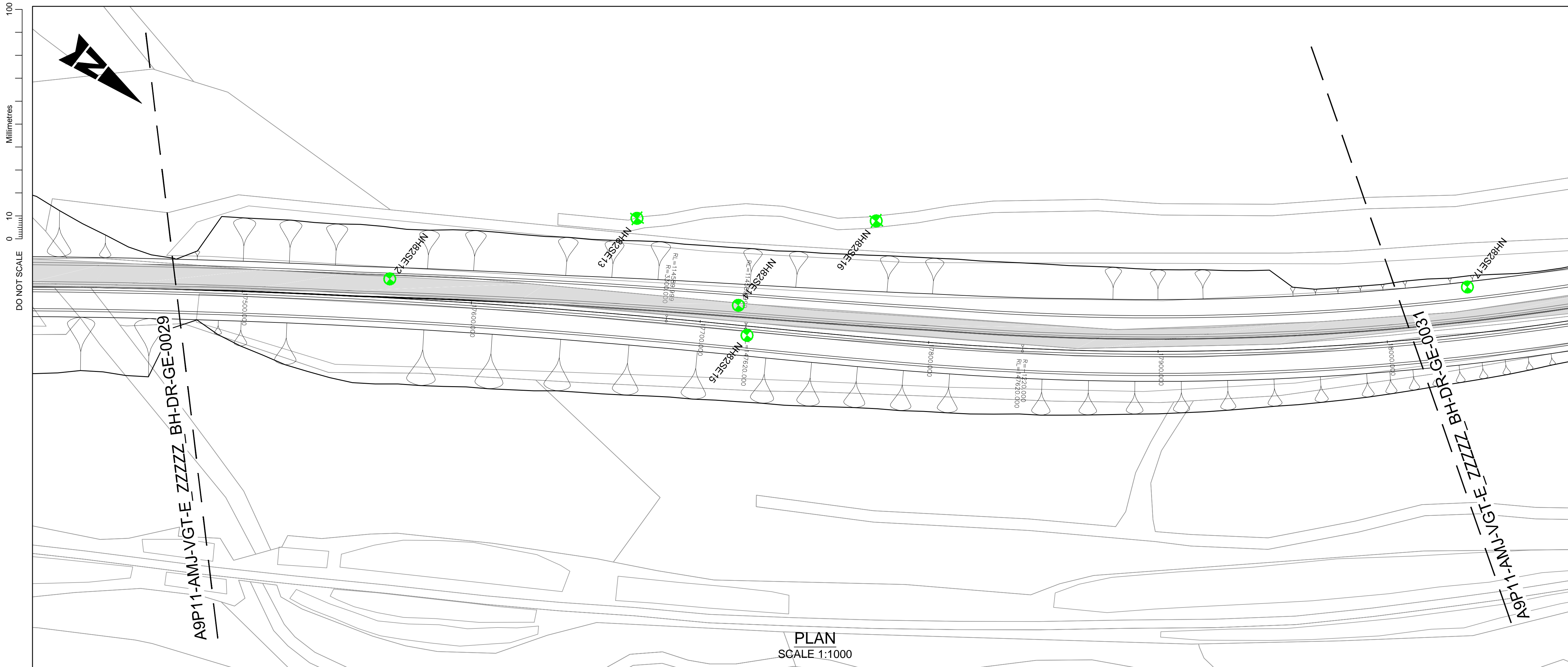


P01	CC	KP	KP	05/08/16
FIRST ISSUE				
Rev	Drawn / Des	Checked	Approved	Date
Description				Suitability
Drawing Status				B
Client				
 An agency of The Scottish Government				
 Dalraddy to Slochd				
Drawing Title				
FIGURE 5.19-MAINLINE ALIGNMENT OPTION 1 BOREHOLE PLAN AND LONG SECTION (SHEET 29 OF 41)				
Scale	Designed / Drawn	Checked	Approved	Authorised
AS SHOWN	CC	KP	KP	RG
Original Size	Date	Date	Date	Date
A1	02/08/16	03/08/16	03/08/16	05/08/16
Drawing Number				Revision
Project	Originator	Volume	P01	
A9P11 - AMJ - VGT - E_ZZZZ_BH - DR - GE - 0029				
Location	Type	Role	Number	

Plotlet: Mar 26, 2017 - 4:34pm by: CARR6635

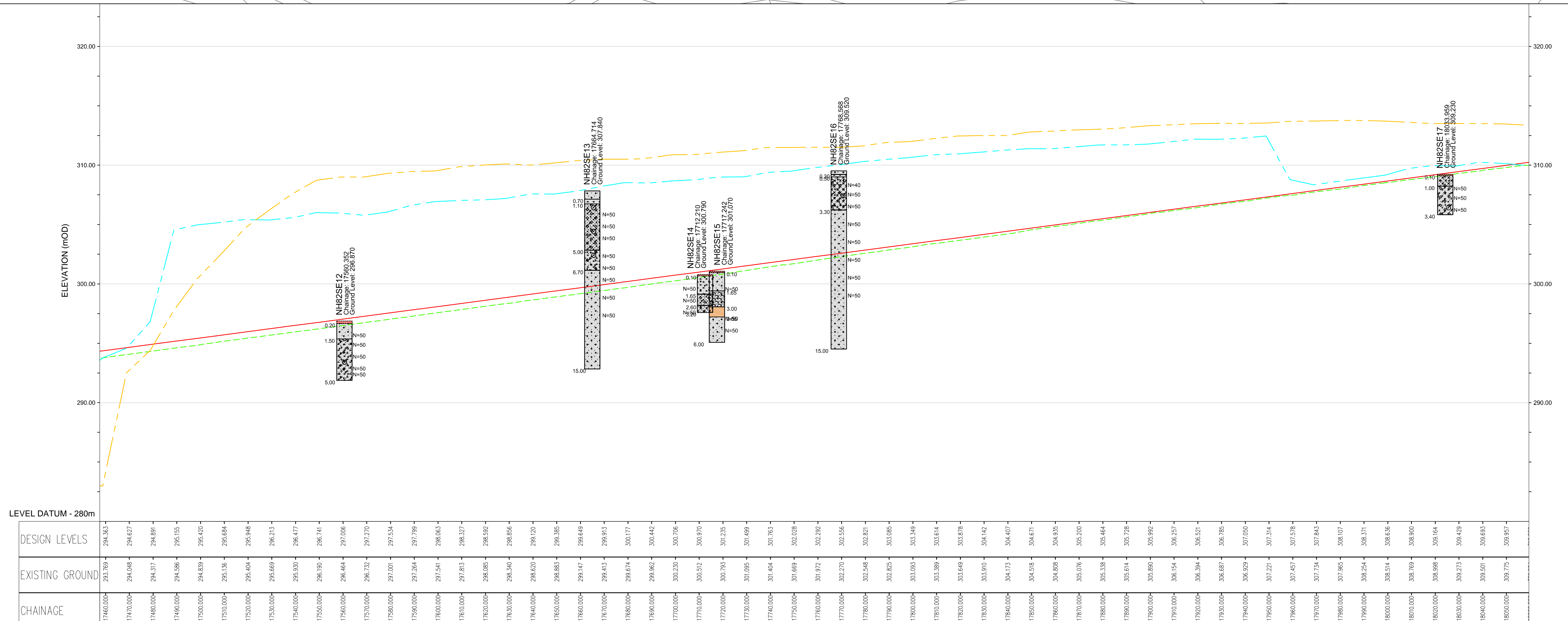
Reproduced by permission of Ordnance Survey on behalf of HMSO. © Crown copyright and database right 2017. All rights reserved. Ordnance Survey Licence number 100046668.

ELEVATION
SCALE 1:1000 H 1:200 V



- NOTES:**
- ALL LEVELS IN mAOD UNLESS OTHERWISE NOTED. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE NOTED.
 - ALL DEPTHS SHOWN ARE IN METRES.
 - HISTORICAL BOREHOLE POSITIONS AND LEVELS INFERRED FROM BGS DATABASE TO ACCURACY ± 10m.
- KEY:**
- EXISTING A9
- BGS HISTORICAL GROUND INVESTIGATION:**
- | | |
|-----------------------|-----------------------|
| NH82NW 1973 BOREHOLE | NH80NE 1978 BOREHOLE |
| NH82NW 1973 CORE | NH80NE 1978 CORE |
| NH82NW 1973 TRIAL PIT | NH80NE 1978 TRIAL PIT |
| NH81NW 1977 BOREHOLE | NH81SE 2003 BOREHOLE |
| NH81NW 1977 CORE | NH81SE 2003 CORE |
| NH81NW 1977 TRIAL PIT | NH81SE 2003 TRIAL PIT |
| NH81SE 1964 BOREHOLE | NH81SE 1999 BOREHOLE |
| NH81SE 1964 CORE | NH81SE 1999 CORE |
| NH81SE 1964 TRIAL PIT | NH81SE 1999 TRIAL PIT |
| NH82SE 1993 BOREHOLE | NH81SE 1999 BOREHOLE |
| NH82SE 1993 CORE | NH81SE 1999 CORE |
| NH82SE 1993 TRIAL PIT | NH81SE 1999 TRIAL PIT |
| NH82SE 2008 BOREHOLE | |
| NH82SE 2008 CORE | |
| NH82SE 2008 TRIAL PIT | |
- GEOTECHNICAL LONG SECTION KEY:**
- | | |
|---------------------------------|-------------|
| TOPSOIL | TOPSOIL |
| MADE GROUND | MADE GROUND |
| PEAT | SAND |
| ALLUVIUM GRANULAR | GRAVEL |
| RIVER TERRACE DEPOSITS COHESIVE | SILT |
| RIVER TERRACE DEPOSITS GRANULAR | CLAY |
| GLACIAL FLUVIAL GRANULAR | BOULDERS |
| GLACIAL TILL COHESIVE | BEDROCK |
| GLACIAL TILL GRANULAR | |
| ROCK | |
- NOTE:**
COMPOSITE SOIL TYPES WILL BE SIGNIFIED BY COMBINED SYMBOLS E.G. SILTY SAND
DEPTHS (m BGL) ARE GENERALLY PRESENTED TO THE LEFT OF THE BOREHOLE LOGS ON THE GEOLOGICAL SECTION.
- LEGEND:**
- WATER STRIKE
 - RISE TO IN 20 MINS
 - PROPOSED ROAD LEVEL
 - EXISTING GROUND LEVEL
 - SOUTHBOUND EARTHWORKS LEVEL
 - NORTHBOUND EARTHWORKS LEVEL

PLAN SCALE 1:1000



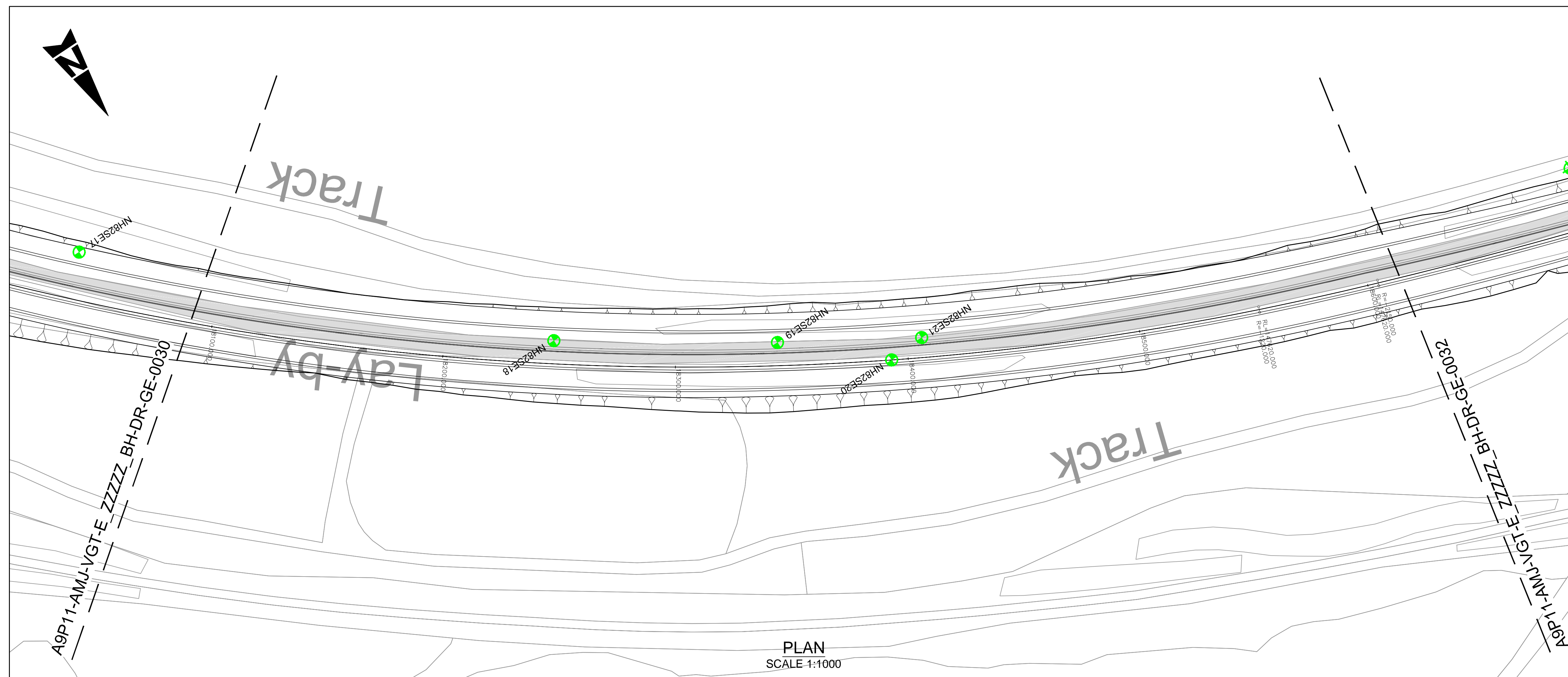
ELEVATION SCALE 1:1000 H 1:200 V

DESIGN LEVELS	294.303	294.627	294.891	295.155	295.420	295.684	295.948	296.213	296.477	296.741	297.006	297.270	297.534	297.799	298.063	298.327	298.592	298.856	299.120	299.385	299.649	299.913	300.177	300.442	300.706	300.970	301.235	301.499	301.763	302.028	302.292	302.556	302.821	303.085	303.349	303.614	303.878	304.142	304.407	304.671	304.935	305.200	305.464	305.728	305.992	306.257	306.521	306.785	307.050	307.314	307.578	307.843	308.107	308.371	308.636	308.900	309.164	309.429	309.693	309.957						
EXISTING GROUND	292.783	294.046	294.317	294.586	294.833	295.136	295.404	295.669	295.930	296.190	296.444	296.732	297.001	297.264	297.541	297.813	298.085	298.340	298.620	298.883	299.147	299.413	299.674	299.932	300.197	300.460	300.720	300.979	301.235	301.489	301.743	301.995	302.245	302.493	302.740	302.986	303.231	303.475	303.718	303.960	304.201	304.441	304.679	304.915	305.150	305.384	305.617	305.849	306.080	306.310	306.539	306.767	306.994	307.220	307.445	307.669	307.892	308.114	308.335	308.555	308.774	308.992	309.209	309.425	309.640	309.854
CHAINAGE	17460.000	17470.000	17480.000	17490.000	17500.000	17510.000	17520.000	17530.000	17540.000	17550.000	17560.000	17570.000	17580.000	17590.000	17600.000	17610.000	17620.000	17630.000	17640.000	17650.000	17660.000	17670.000	17680.000	17690.000	17700.000	17710.000	17720.000	17730.000	17740.000	17750.000	17760.000	17770.000	17780.000	17790.000	17800.000	17810.000	17820.000	17830.000	17840.000	17850.000	17860.000	17870.000	17880.000	17890.000	17900.000	17910.000	17920.000	17930.000	17940.000	17950.000	17960.000	17970.000	17980.000	17990.000	18000.000	18010.000	18020.000	18030.000	18040.000	18050.000						

P01	CC	KP	KP	05/08/16
FIRST ISSUE				
Rev	Drawn / Des	Checked	Approved	Date
Description				
Drawing Status				Subsidiarity
FINAL				B
Client				
 An agency of The Scottish Government				
 Dalraddy to Slouch				
Drawing Title				
FIGURE 5.19-MAINLINE ALIGNMENT OPTION 1 BOREHOLE PLAN AND LONG SECTION (SHEET 30 OF 41)				
Scale	Designed / Drawn	Checked	Approved	Authorised
AS SHOWN	CC	KP	KP	RG
Original Size	Date	Date	Date	Date
A1	02/08/16	03/08/16	03/08/16	05/08/16
Drawing Number				
Project	Originator	Volume	Revision	
A9P11 - AMJ - VGT - E_ZZZZ_BH - DR - GE - 0030			P01	
Location	Type	Role	Number	

Plotted: Mar 26, 2017 - 4:44pm by: CARR6635
 Reprinted by permission of Ordnance Survey on behalf of HMSO. © Crown copyright and database right 2017. All rights reserved. Ordnance Survey Licence number 100046668.

100
10
0
DO NOT SCALE



NOTES:

- ALL LEVELS IN mAOD UNLESS OTHERWISE NOTED. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE NOTED.
- ALL DEPTHS SHOWN ARE IN METRES.
- HISTORICAL BOREHOLE POSITIONS AND LEVELS INFERRED FROM BGS DATABASE TO ACCURACY ± 10m.

KEY:

EXISTING A9

BGS HISTORICAL GROUND INVESTIGATION:

NH82NW 1973 BOREHOLE	NH80NE 1978 BOREHOLE
NH82NW 1973 CORE	NH80NE 1978 CORE
NH82NW 1973 TRIAL PIT	NH80NE 1978 TRIAL PIT
NH81NW 1977 BOREHOLE	NH81SE 2003 BOREHOLE
NH81NW 1977 CORE	NH81SE 2003 CORE
NH81NW 1977 TRIAL PIT	NH81SE 2003 TRIAL PIT
NH81SE 1964 BOREHOLE	NH81SE 1999 BOREHOLE
NH81SE 1964 CORE	NH81SE 1999 CORE
NH81SE 1964 TRIAL PIT	NH81SE 1999 TRIAL PIT
NH82SE 1993 BOREHOLE	NH81SE 1999 TRIAL PIT
NH82SE 1993 CORE	NH81SE 1999 TRIAL PIT
NH82SE 1993 TRIAL PIT	NH81SE 1999 TRIAL PIT
NH82SE 2008 BOREHOLE	NH81SE 1999 TRIAL PIT
NH82SE 2008 CORE	
NH82SE 2008 TRIAL PIT	

GEOTECHNICAL LONG SECTION KEY:

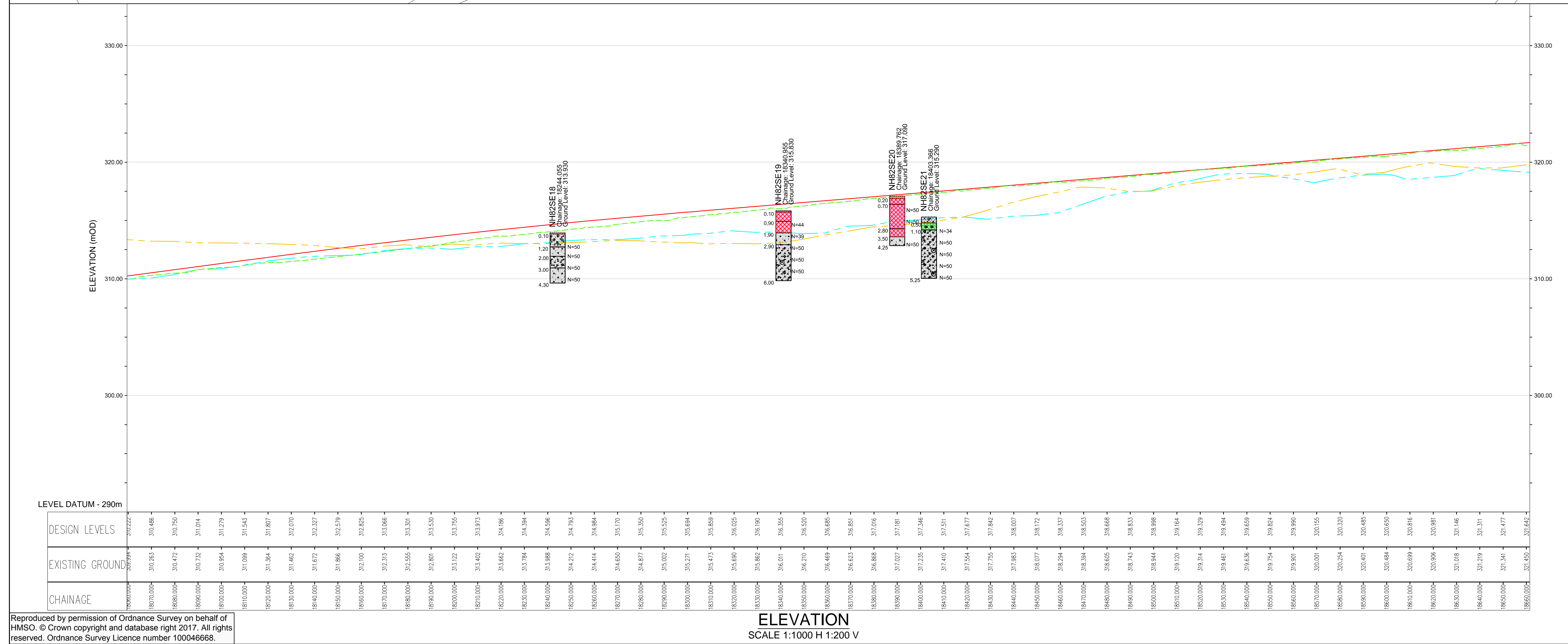
TOPSOIL	TOPSOIL
MADE GROUND	MADE GROUND
PEAT	SAND
ALLUVIUM GRANULAR	GRAVEL
RIVER TERRACE DEPOSITS COHESIVE	SILT
RIVER TERRACE DEPOSITS GRANULAR	CLAY
GLACIAL FLUVIAL GRANULAR	BOULDERS
GLACIAL TILL COHESIVE	BEDROCK
GLACIAL TILL GRANULAR	
ROCK	

NOTE:
COMPOSITE SOIL TYPES WILL BE SIGNIFIED BY COMBINED SYMBOLS E.G. SILTY SAND
DEPTHS (m BGL) ARE GENERALLY PRESENTED TO THE LEFT OF THE BOREHOLE LOGS ON THE GEOLOGICAL SECTION.

LEGEND:

- WATER STRIKE
- RISE TO IN 20 MINS
- PROPOSED ROAD LEVEL
- EXISTING GROUND LEVEL
- SOUTHBOUND EARTHWORKS LEVEL
- NORTHBOUND EARTHWORKS LEVEL

PLAN SCALE 1:1000



ELEVATION SCALE 1:1000 H 1:200 V

P01	CC	KP	KP	05/08/16
FIRST ISSUE				
Rev	Drawn / Des	Checked	Approved	Date
Description				
Drawing Status				Subtality
FINAL				B
Client				
 An agency of The Scottish Government				
 Dalraddy to Slochd				
Drawing Title				
FIGURE 5.19-MAINLINE ALIGNMENT OPTION 1 BOREHOLE PLAN AND LONG SECTION (SHEET 31 OF 41)				
Scale	Designed / Drawn	Checked	Approved	Authorised
AS SHOWN	CC	KP	KP	RG
Original Size	Date	Date	Date	Date
A1	02/08/16	03/08/16	03/08/16	05/08/16
Drawing Number				
Project	Originator	Volume	Revision	
A9P11 - AMJ - VGT - E_ZZZZ_BH - DR - GE - 0031			P01	
Location	Type	Role	Number	

Plotlet: Mar 26, 2017 - 4:56pm by: CARR6635

Reproduced by permission of Ordnance Survey on behalf of HMSO. © Crown copyright and database right 2017. All rights reserved. Ordnance Survey Licence number 100046668.

100
10
0
Millimetres
DO NOT SCALE



NOTES:

- ALL LEVELS IN mAOD UNLESS OTHERWISE NOTED. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE NOTED.
- ALL DEPTHS SHOWN ARE IN METRES.
- HISTORICAL BOREHOLE POSITIONS AND LEVELS INFERRED FROM BGS DATABASE TO ACCURACY ± 10m.

KEY:

EXISTING A9

BGS HISTORICAL GROUND INVESTIGATION:

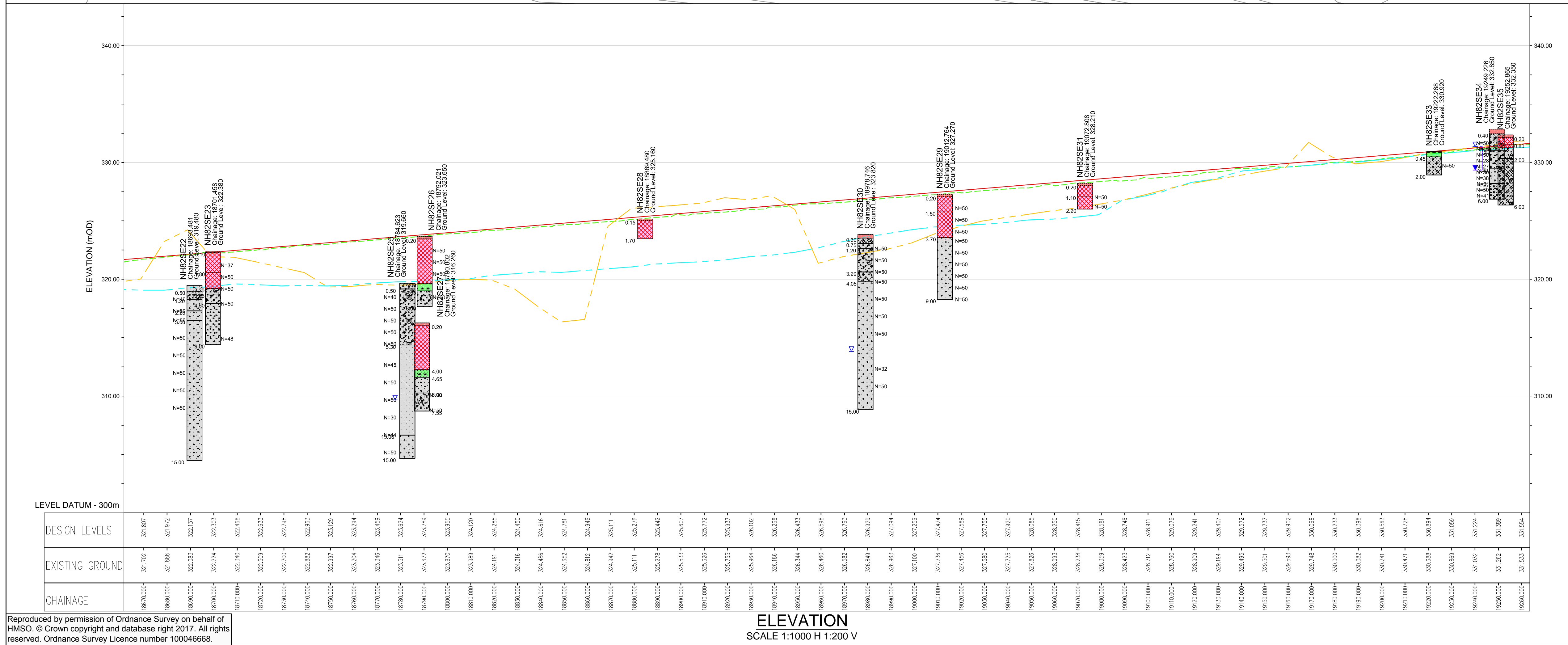
NH82NW 1973 BOREHOLE	NH80NE 1978 BOREHOLE
NH82NW 1973 CORE	NH80NE 1978 CORE
NH82NW 1973 TRIAL PIT	NH80NE 1978 TRIAL PIT
NH81NW 1977 BOREHOLE	NH81SE 2003 BOREHOLE
NH81NW 1977 CORE	NH81SE 2003 CORE
NH81NW 1977 TRIAL PIT	NH81SE 2003 TRIAL PIT
NH81SE 1964 BOREHOLE	NH81SE 1999 BOREHOLE
NH81SE 1964 CORE	NH81SE 1999 CORE
NH81SE 1964 TRIAL PIT	NH81SE 1999 TRIAL PIT
NH82SE 1993 BOREHOLE	NH81SE 1999 BOREHOLE
NH82SE 1993 CORE	NH81SE 1999 CORE
NH82SE 1993 TRIAL PIT	NH81SE 1999 TRIAL PIT
NH82SE 2008 BOREHOLE	
NH82SE 2008 CORE	
NH82SE 2008 TRIAL PIT	

GEOTECHNICAL LONG SECTION KEY:

TOPSOIL	TOPSOIL
MADE GROUND	MADE GROUND
PEAT	SAND
ALLUVIUM GRANULAR	GRAVEL
RIVER TERRACE DEPOSITS COHESIVE	SILT
RIVER TERRACE DEPOSITS GRANULAR	CLAY
GLACIAL FLUVIAL GRANULAR	BOULDERS
GLACIAL TILL COHESIVE	BEDROCK
GLACIAL TILL GRANULAR	
ROCK	

NOTE:
COMPOSITE SOIL TYPES WILL BE SIGNIFIED BY COMBINED SYMBOLS E.G. SILTY SAND
DEPTHS (m BGL) ARE GENERALLY PRESENTED TO THE LEFT OF THE BOREHOLE LOGS ON THE GEOLOGICAL SECTION.

WATER STRIKE
 RISE TO IN 20 MINS
 PROPOSED ROAD LEVEL
 EXISTING GROUND LEVEL
 SOUTHBOUND EARTHWORKS LEVEL
 NORTHBOUND EARTHWORKS LEVEL

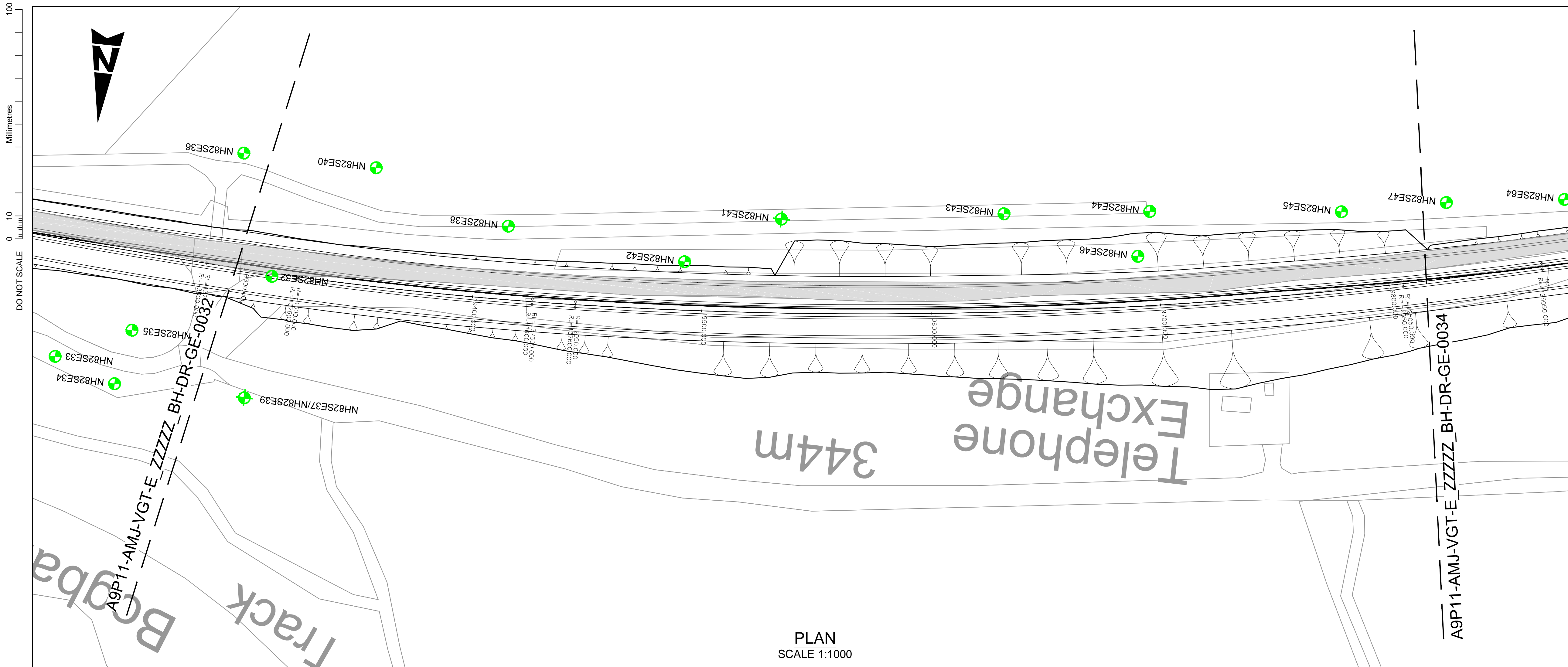


P01	CC	KP	KP	05/08/16
FIRST ISSUE				
Rev	Drawn / Des	Checked	Approved	Date
Description				
Drawing Status				Suitability
FINAL				B
Client				
Drawing Title				
FIGURE 5.19-MAINLINE ALIGNMENT OPTION 1 BOREHOLE PLAN AND LONG SECTION (SHEET 32 OF 41)				
Scale	Designed / Drawn	Checked	Approved	Authorised
AS SHOWN	CC	KP	KP	RG
Original Size	Date	Date	Date	Date
A1	02/08/16	03/08/16	03/08/16	05/08/16
Drawing Number				
Project	Originator	Volume	Revision	
A9P11 - AMJ - VGT - E_ZZZZ_BH - DR - GE - 0032			P01	
Location	Type	Role	Number	

Plotfile: Mar 26, 2017 - 5:09pm by: CARR6635

Reproduced by permission of Ordnance Survey on behalf of HMSO. © Crown copyright and database right 2017. All rights reserved. Ordnance Survey Licence number 100046668.

ELEVATION
SCALE 1:1000 H 1:200 V



PLAN
SCALE 1:1000

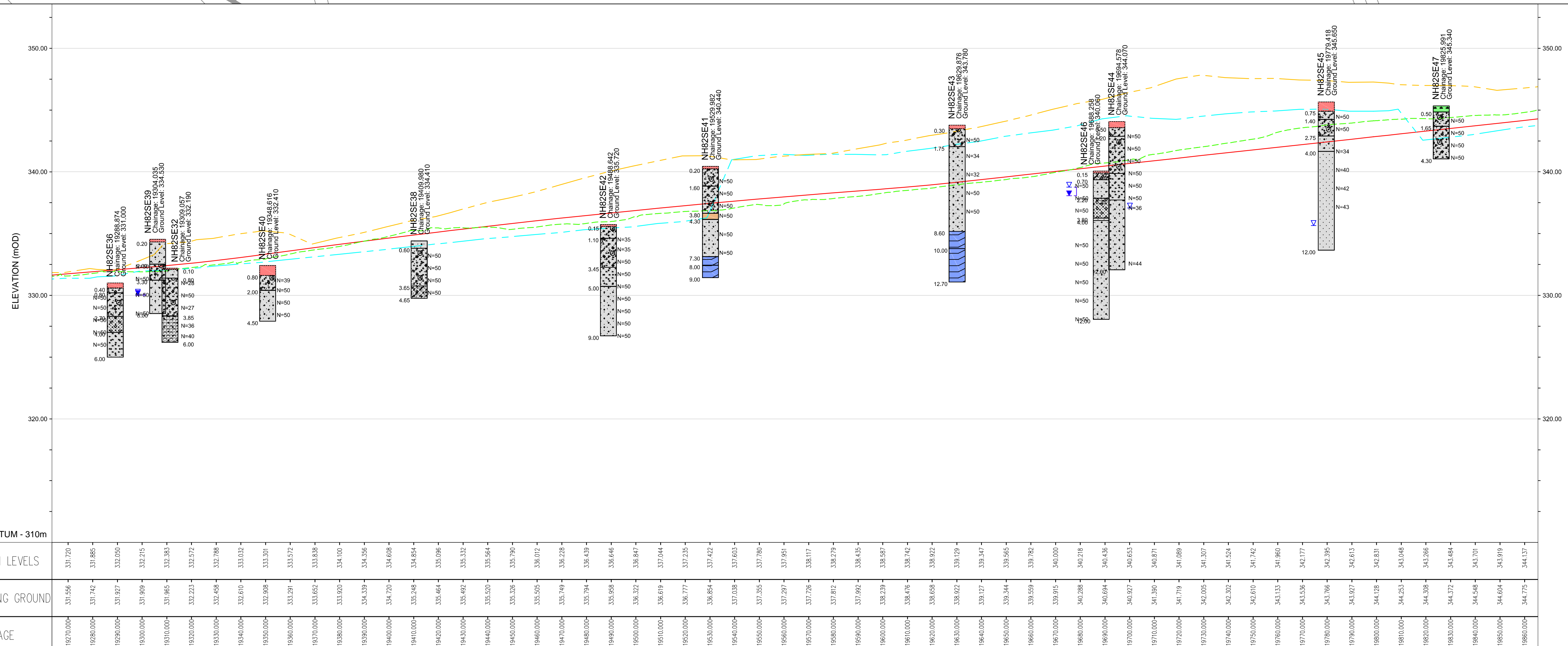
- NOTES:
- ALL LEVELS IN mAOD UNLESS OTHERWISE NOTED. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE NOTED.
 - ALL DEPTHS SHOWN ARE IN METRES.
 - HISTORICAL BOREHOLE POSITIONS AND LEVELS INFERRED FROM BGS DATABASE TO ACCURACY ± 10m.

- KEY:
- EXISTING A9
- BGS HISTORICAL GROUND INVESTIGATION:
- | | |
|-----------------------|-----------------------|
| NH82NW 1973 BOREHOLE | NH80NE 1978 BOREHOLE |
| NH82NW 1973 CORE | NH80NE 1978 CORE |
| NH82NW 1973 TRIAL PIT | NH81SE 1978 TRIAL PIT |
| NH91NW 1977 BOREHOLE | NH81SE 2003 BOREHOLE |
| NH91NW 1977 CORE | NH81SE 2003 CORE |
| NH91NW 1977 TRIAL PIT | NH81SE 2003 TRIAL PIT |
| NH81SE 1964 BOREHOLE | NH81SE 1999 BOREHOLE |
| NH81SE 1964 CORE | NH81SE 1999 CORE |
| NH81SE 1964 TRIAL PIT | NH81SE 1999 TRIAL PIT |
| NH82SE 1993 BOREHOLE | NH81SE 1999 BOREHOLE |
| NH82SE 1993 CORE | NH81SE 1999 CORE |
| NH82SE 1993 TRIAL PIT | NH81SE 1999 TRIAL PIT |
| NH82SE 2008 BOREHOLE | |
| NH82SE 2008 CORE | |
| NH82SE 2008 TRIAL PIT | |

- GEOTECHNICAL LONG SECTION KEY:
- | | |
|---------------------------------|-------------|
| TOPSOIL | TOPSOIL |
| MADE GROUND | MADE GROUND |
| PEAT | SAND |
| ALLUVIUM GRANULAR | GRAVEL |
| RIVER TERRACE DEPOSITS COHESIVE | SILT |
| RIVER TERRACE DEPOSITS GRANULAR | CLAY |
| GLACIAL FLUVIAL GRANULAR | BOULDERS |
| GLACIAL TILL COHESIVE | BEDROCK |
| GLACIAL TILL GRANULAR | |
| ROCK | |

NOTE:
COMPOSITE SOIL TYPES WILL BE SIGNIFIED BY COMBINED SYMBOLS E.G. SILTY SAND
DEPTHS (m BGL) ARE GENERALLY PRESENTED TO THE LEFT OF THE BOREHOLE LOGS ON THE GEOLOGICAL SECTION.

- WATER STRIKE
- RISE TO IN 20 MINS
- PROPOSED ROAD LEVEL
- EXISTING GROUND LEVEL
- SOUTHBOUND EARTHWORKS LEVEL
- NORTHBOUND EARTHWORKS LEVEL



ELEVATION
SCALE 1:1000 H 1:200 V

DESIGN LEVELS	EXISTING GROUND	CHAINAGE
337.720	331.566	19270.000
331.885	331.742	19280.000
332.050	331.927	19290.000
332.215	331.909	19300.000
332.383	331.965	19310.000
332.572	332.223	19320.000
332.788	332.458	19330.000
333.032	332.610	19340.000
333.300	332.908	19350.000
333.572	333.291	19360.000
333.838	333.652	19370.000
334.100	333.920	19380.000
334.356	334.339	19390.000
334.608	334.720	19400.000
334.854	335.248	19410.000
335.096	335.464	19420.000
335.332	335.492	19430.000
335.564	335.520	19440.000
335.790	335.326	19450.000
336.012	335.550	19460.000
336.228	335.749	19470.000
336.439	335.794	19480.000
336.646	335.958	19490.000
336.847	336.327	19500.000
337.044	336.619	19510.000
337.235	336.777	19520.000
337.422	336.854	19530.000
337.603	337.038	19540.000
337.786	337.155	19550.000
337.961	337.297	19560.000
338.117	337.726	19570.000
338.279	337.812	19580.000
338.435	337.902	19590.000
338.597	338.239	19600.000
338.742	338.476	19610.000
338.922	338.658	19620.000
339.129	338.922	19630.000
339.347	339.127	19640.000
339.565	339.344	19650.000
339.782	339.559	19660.000
340.000	339.915	19670.000
340.218	340.289	19680.000
340.436	340.684	19690.000
340.653	340.927	19700.000
340.871	341.390	19710.000
341.089	341.719	19720.000
341.307	342.005	19730.000
341.524	342.302	19740.000
341.742	342.610	19750.000
341.960	343.133	19760.000
342.177	343.536	19770.000
342.395	343.995	19780.000
342.613	343.927	19790.000
342.831	344.128	19800.000
343.048	344.253	19810.000
343.266	344.398	19820.000
343.484	344.377	19830.000
343.701	344.548	19840.000
343.919	344.604	19850.000
344.137	344.772	19860.000

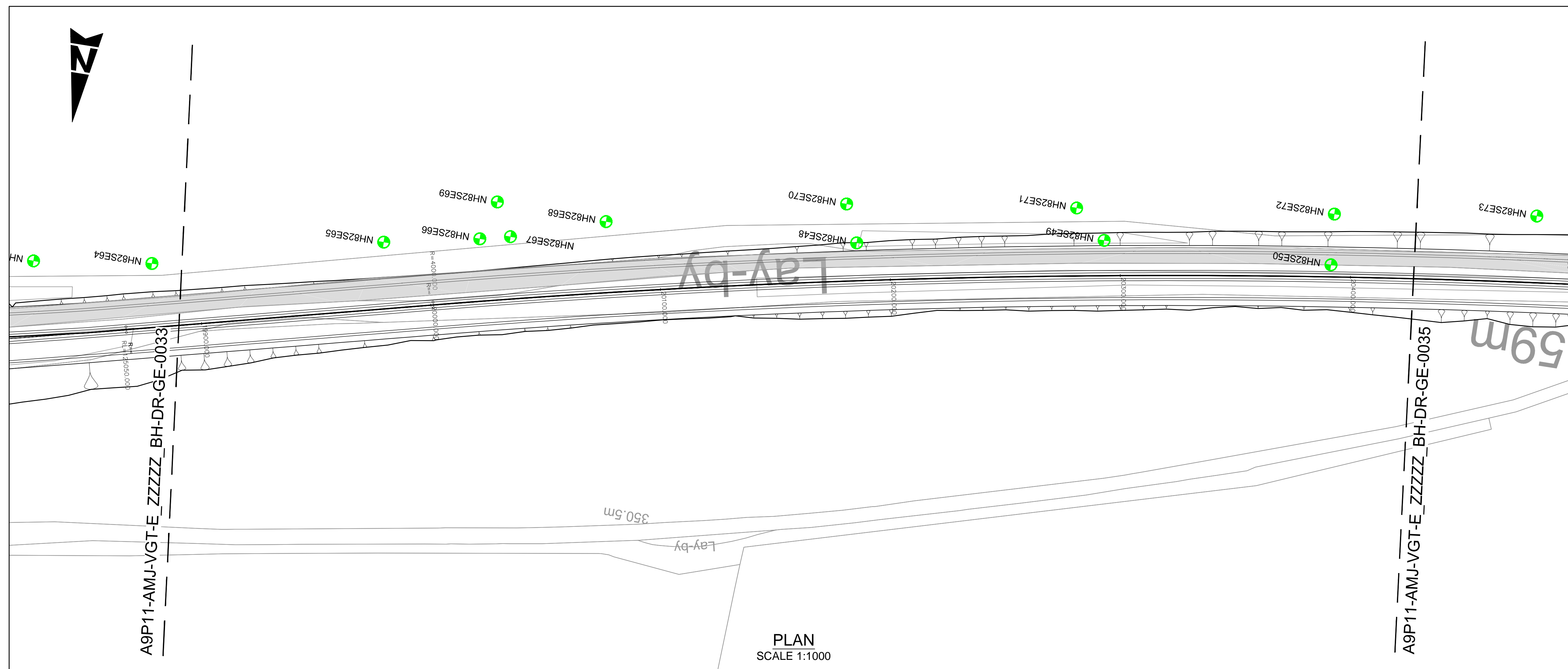
P01	CC	KP	KP	05/08/16
FIRST ISSUE				
Rev	Drawn / Des	Checked	Approved	Date
Description				
Drawing Status				Subtability
FINAL				B



FIGURE 5.19-MAINLINE ALIGNMENT OPTION 1
BOREHOLE PLAN AND LONG SECTION
(SHEET 33 OF 41)

Scale	Designed / Drawn	Checked	Approved	Authorised
AS SHOWN	CC	KP	KP	RG
Original Size	Date	Date	Date	Date
A1	02/08/16	03/08/16	03/08/16	05/08/16
Drawing Number				
Project	Originator	Volume	Revision	
A9P11 - AMJ - VGT - E_ZZZZ_BH - DR - GE - 0033			P01	
Location	Type	Role	Number	

100
10
0
Millimetres
DO NOT SCALE



NOTES:

- ALL LEVELS IN mAOD UNLESS OTHERWISE NOTED. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE NOTED.
- ALL DEPTHS SHOWN ARE IN METRES.
- HISTORICAL BOREHOLE POSITIONS AND LEVELS INFERRED FROM BGS DATABASE TO ACCURACY ± 10m.

KEY:

EXISTING A9

BGS HISTORICAL GROUND INVESTIGATION:

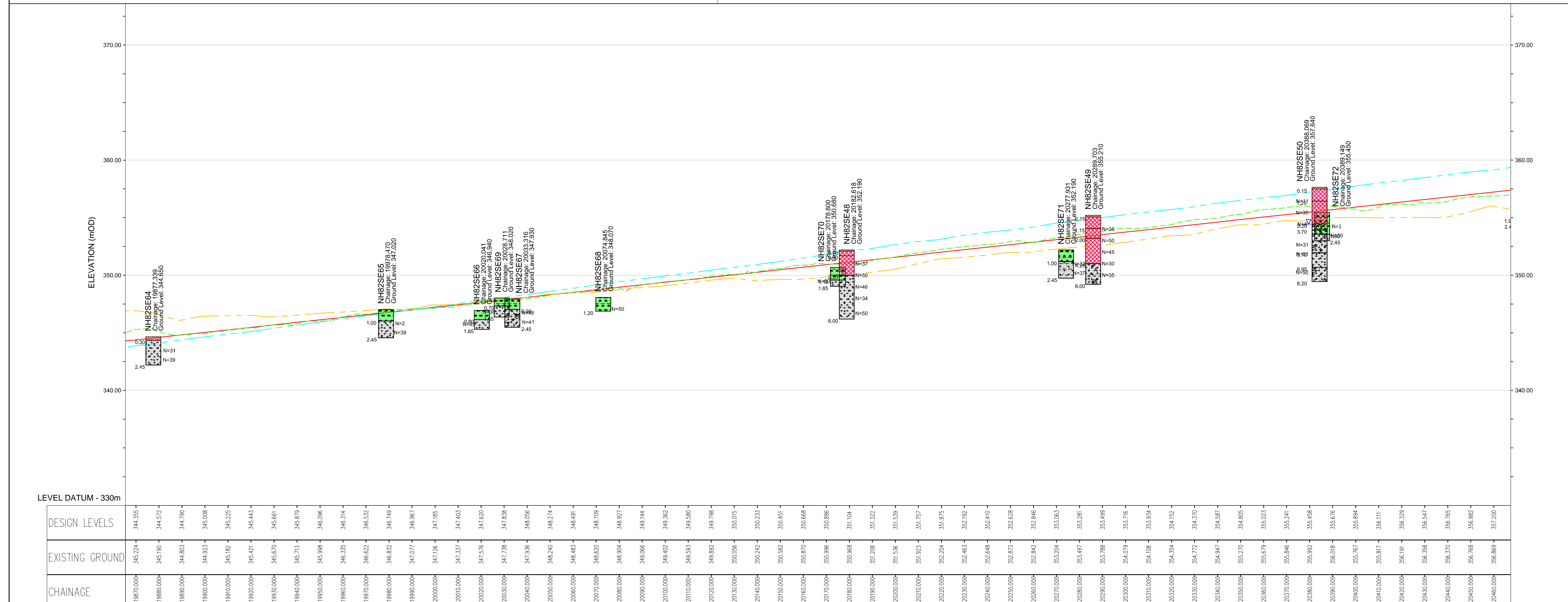
NH82NW 1973 BOREHOLE	NH80NE 1978 BOREHOLE
NH82NW 1973 CORE	NH80NE 1978 CORE
NH82NW 1973 TRIAL PIT	NH81SE 1978 TRIAL PIT
NH91NW 1977 BOREHOLE	NH81SE 2003 BOREHOLE
NH91NW 1977 CORE	NH81SE 2003 CORE
NH91NW 1977 TRIAL PIT	NH81SE 1999 BOREHOLE
NH81SE 1964 BOREHOLE	NH81SE 1999 TRIAL PIT
NH81SE 1964 CORE	NH81SE 1999 BOREHOLE
NH81SE 1964 TRIAL PIT	NH81SE 1999 CORE
NH82SE 1993 BOREHOLE	NH82SE 2008 BOREHOLE
NH82SE 1993 CORE	NH82SE 2008 CORE
NH82SE 1993 TRIAL PIT	NH82SE 2008 TRIAL PIT

GEOTECHNICAL LONG SECTION KEY:

TOPSOIL	TOPSOIL
MADE GROUND	MADE GROUND
PEAT	SAND
ALLUVIUM GRANULAR	GRAVEL
RIVER TERRACE DEPOSITS COHESIVE	SILT
RIVER TERRACE DEPOSITS GRANULAR	CLAY
GLACIAL FLUVIAL GRANULAR	BOULDERS
GLACIAL TILL COHESIVE	BEDROCK
GLACIAL TILL GRANULAR	
ROCK	

NOTE:
COMPOSITE SOIL TYPES WILL BE SIGNIFIED BY COMBINED SYMBOLS E.G. SILTY SAND
DEPTHS (m BGL) ARE GENERALLY PRESENTED TO THE LEFT OF THE BOREHOLE LOGS ON THE GEOLOGICAL SECTION.

WATER STRIKE
RISE TO IN 20 MINS
PROPOSED ROAD LEVEL
EXISTING GROUND LEVEL
SOUTHBOUND EARTHWORKS LEVEL
NORTHBOUND EARTHWORKS LEVEL



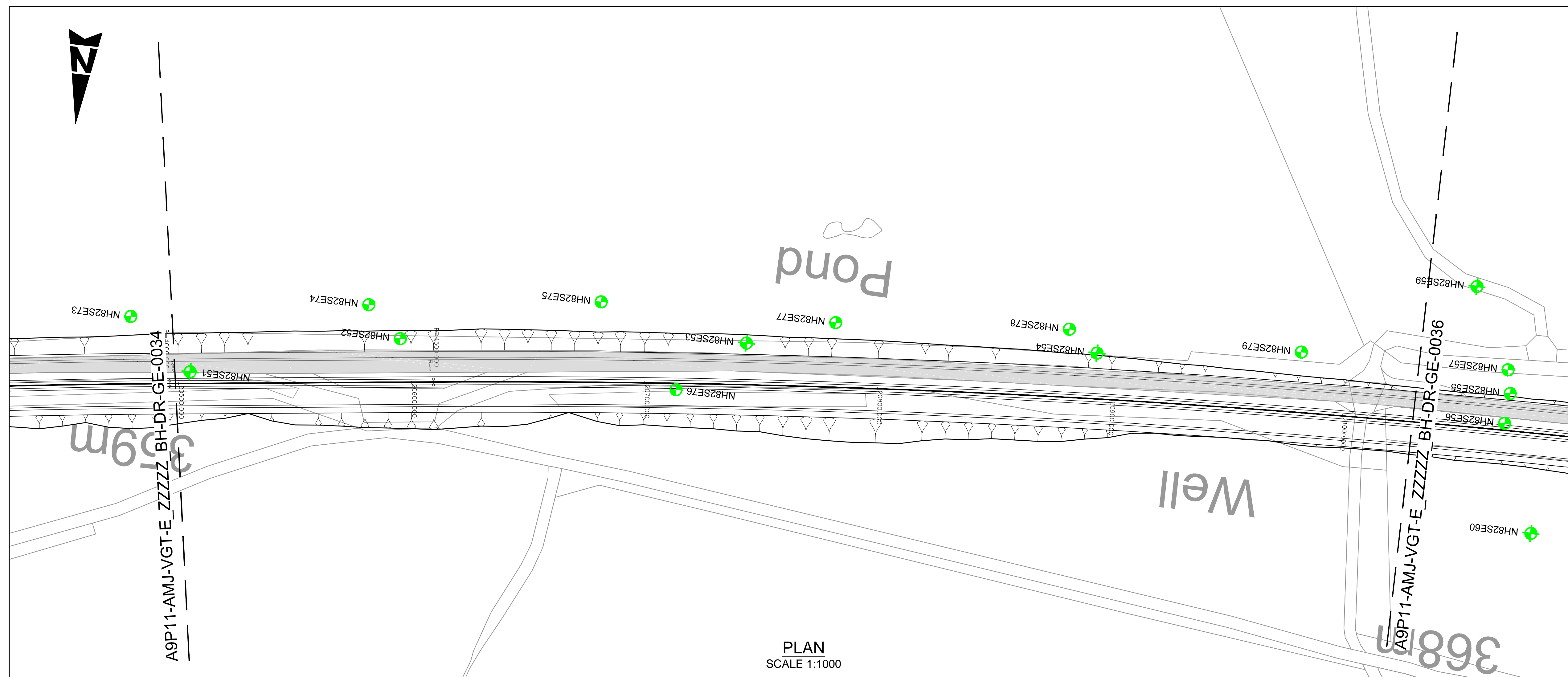
P01	CC	KP	KP	05/08/16
FIRST ISSUE				
Rev	Drawn / Des	Checked	Approved	Date
Description				
Drawing Status	FINAL			Suitability
				B
Client				
 An agency of The Scottish Government				
 Dalraddy to Slochd				
Drawing Title				
FIGURE 5.19-MAINLINE ALIGNMENT OPTION 1 BOREHOLE PLAN AND LONG SECTION (SHEET 34 OF 41)				
Scale	Designed / Drawn	Checked	Approved	Authorised
AS SHOWN	CC	KP	KP	RG
Original Size	Date	Date	Date	Date
A1	02/08/16	03/08/16	03/08/16	05/08/16
Drawing Number				
Project	Originator	Volume	Revision	
A9P11 - AMJ - VGT - E_ZZZZ_BH - DR - GE - 0034			P01	
Location	Type	Role	Number	

Plotfile: Mar 26, 2017 - 5:30pm by: CARR66835

Reproduced by permission of Ordnance Survey on behalf of HMSO. © Crown copyright and database right 2017. All rights reserved. Ordnance Survey Licence number 100046868.

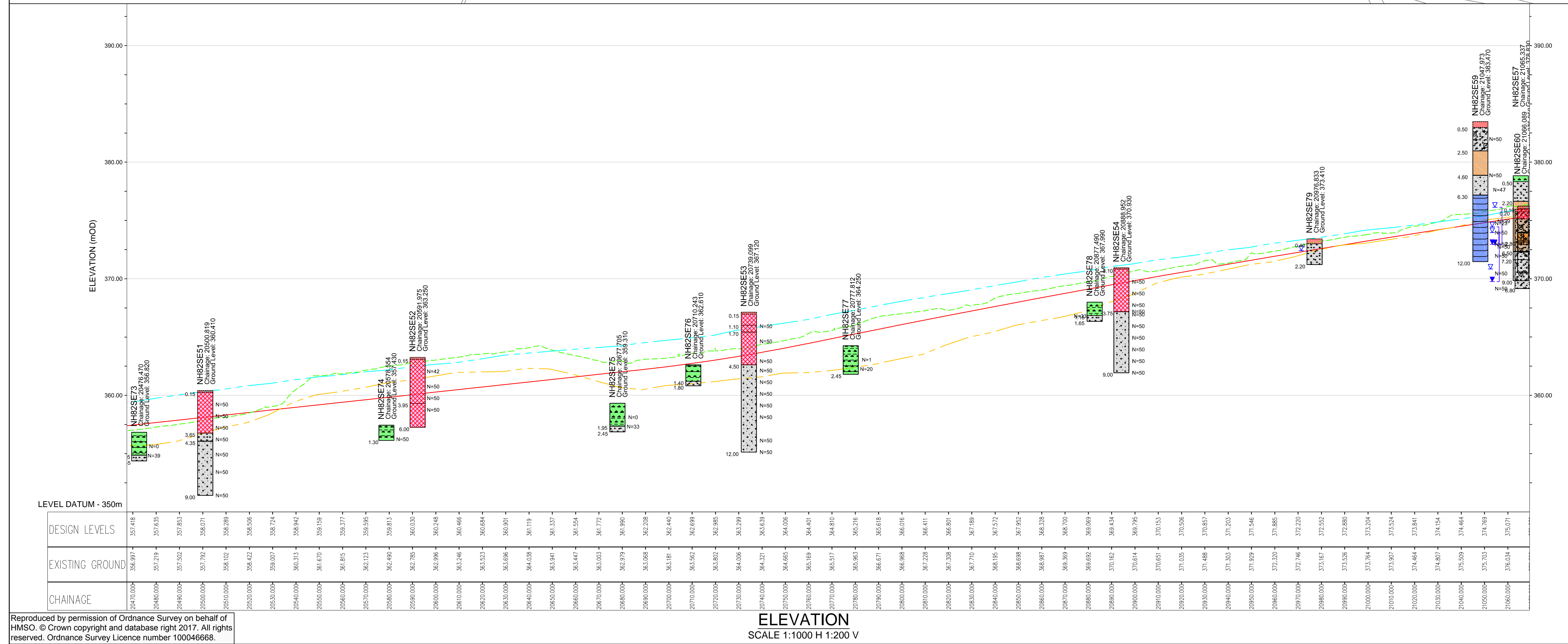
ELEVATION
SCALE 1:1000 H 1:200 V

100
0 10
Millimetres
DO NOT SCALE



- NOTES:**
- ALL LEVELS IN mAOD UNLESS OTHERWISE NOTED. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE NOTED.
 - ALL DEPTHS SHOWN ARE IN METRES.
 - HISTORICAL BOREHOLE POSITIONS AND LEVELS INFERRED FROM BGS DATABASE TO ACCURACY ± 10m.
- KEY:**
- EXISTING A9
- BGS HISTORICAL GROUND INVESTIGATION:**
- | | |
|-----------------------|-----------------------|
| NH82NW 1973 BOREHOLE | NH80NE 1978 BOREHOLE |
| NH82NW 1973 CORE | NH80NE 1978 CORE |
| NH82NW 1973 TRIAL PIT | NH81SE 2003 BOREHOLE |
| NH91NW 1977 BOREHOLE | NH81SE 2003 TRIAL PIT |
| NH91NW 1977 CORE | NH81SE 1999 BOREHOLE |
| NH81SE 1964 BOREHOLE | NH81SE 1999 TRIAL PIT |
| NH81SE 1964 CORE | NH81SE 1999 CORE |
| NH82SE 1993 BOREHOLE | NH81SE 1999 BOREHOLE |
| NH82SE 1993 TRIAL PIT | NH81SE 1999 TRIAL PIT |
| NH82SE 2008 BOREHOLE | NH82SE 2008 CORE |
| NH82SE 2008 CORE | NH82SE 2008 TRIAL PIT |
- GEOTECHNICAL LONG SECTION KEY:**
- | | |
|---------------------------------|-------------|
| TOPSOIL | TOPSOIL |
| MADE GROUND | MADE GROUND |
| PEAT | SAND |
| ALLUVIUM GRANULAR | GRAVEL |
| RIVER TERRACE DEPOSITS COHESIVE | SILT |
| RIVER TERRACE DEPOSITS GRANULAR | CLAY |
| GLACIAL FLUVIAL GRANULAR | BOULDERS |
| GLACIAL TILL COHESIVE | BEDROCK |
| GLACIAL TILL GRANULAR | |
| ROCK | |
- NOTE:**
COMPOSITE SOIL TYPES WILL BE SIGNIFIED BY COMBINED SYMBOLS E.G. SILTY SAND
DEPTHS (m BGL) ARE GENERALLY PRESENTED TO THE LEFT OF THE BOREHOLE LOGS ON THE GEOLOGICAL SECTION.
- WATER STRIKE
RISE TO IN 20 MINS
PROPOSED ROAD LEVEL
EXISTING GROUND LEVEL
SOUTHBOUND EARTHWORKS LEVEL
NORTHBOUND EARTHWORKS LEVEL

PLAN
SCALE 1:1000



ELEVATION
SCALE 1:1000 H 1:200 V

P01	CC	KP	KP	05/08/16
FIRST ISSUE				
Rev	Drawn / Des	Checked	Approved	Date
Description				
Drawing Status				Subtability
FINAL				B

Client
TRANSPORT SCOTLAND
An agency of The Scottish Government



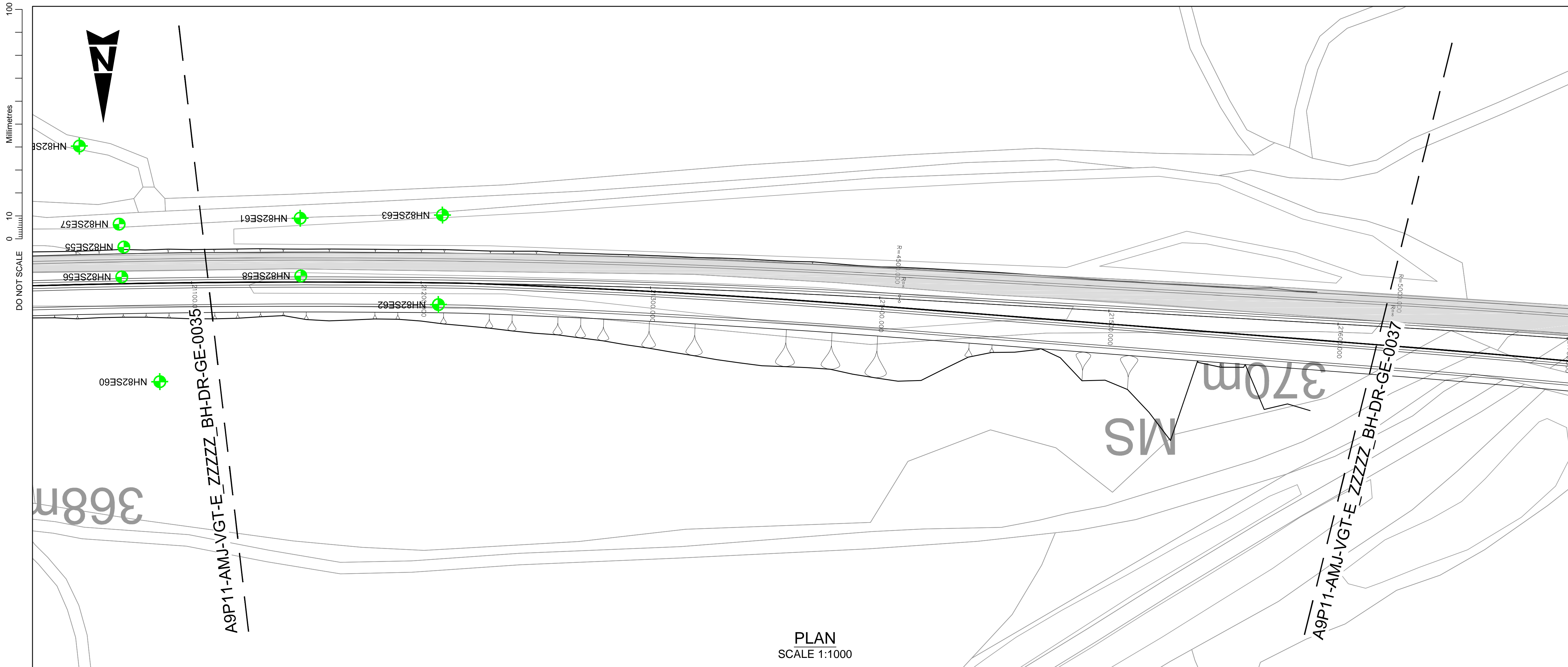
ATKINS mouchel

Drawing Title
FIGURE 5.19-MAINLINE ALIGNMENT OPTION 1 BOREHOLE PLAN AND LONG SECTION (SHEET 35 OF 41)

Scale	Designed / Drawn	Checked	Approved	Authorised
AS SHOWN	CC	KP	KP	RG
Original Size	Date	Date	Date	Date
A1	02/08/16	03/08/16	03/08/16	05/08/16
Drawing Number	Project	Originator	Volume	Revision
	A9P11 - AMJ - VGT - E_ZZZZ BH - DR - GE - 0035			P01
Location	Type	Role	Number	

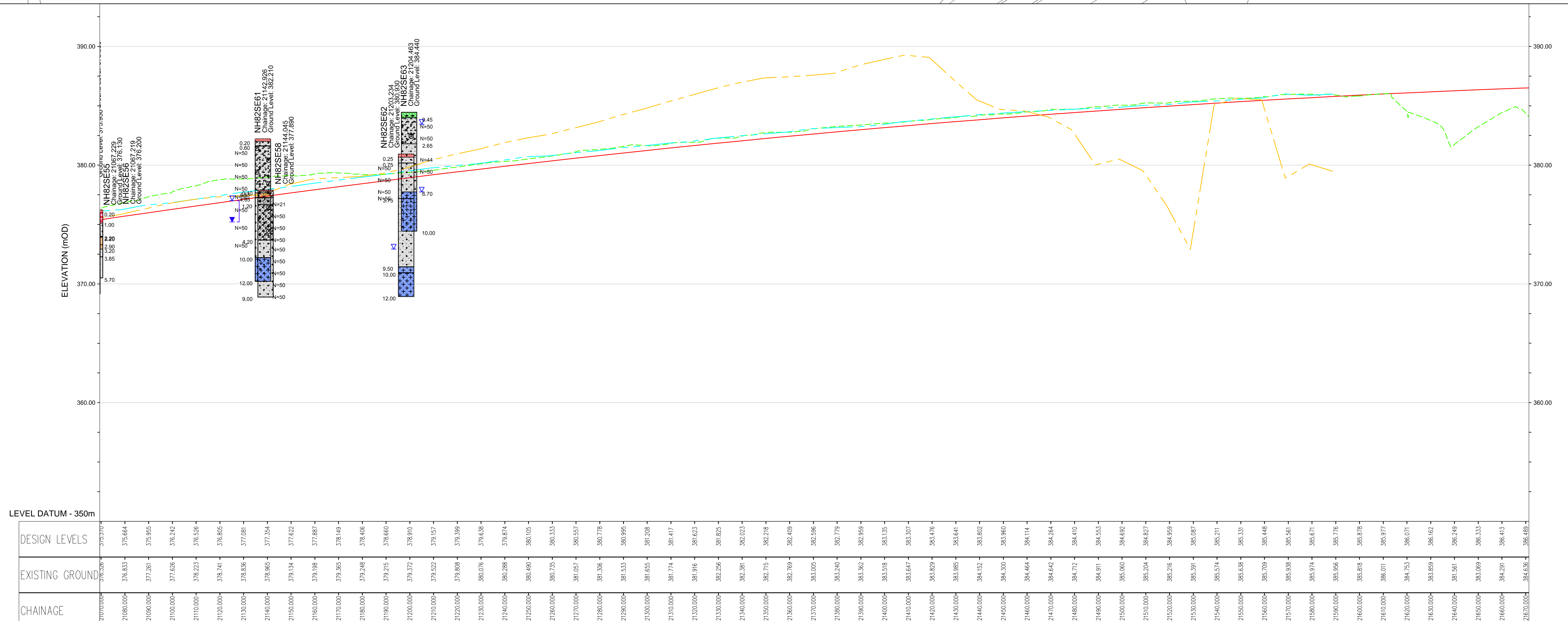
Plotlet: Mar 26, 2017 - 5:43pm by: CARR6635

Reproduced by permission of Ordnance Survey on behalf of HMSO. © Crown copyright and database right 2017. All rights reserved. Ordnance Survey Licence number 100046668.



- NOTES:**
- ALL LEVELS IN mAOD UNLESS OTHERWISE NOTED. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE NOTED.
 - ALL DEPTHS SHOWN ARE IN METRES.
 - HISTORICAL BOREHOLE POSITIONS AND LEVELS INFERRED FROM BGS DATABASE TO ACCURACY ± 10m.
- KEY:**
- EXISTING A9
- BGS HISTORICAL GROUND INVESTIGATION:**
- | | |
|-----------------------|-----------------------|
| NH82NW 1973 BOREHOLE | NH80NE 1978 BOREHOLE |
| NH82NW 1973 CORE | NH80NE 1978 CORE |
| NH82NW 1973 TRIAL PIT | NH80NE 1978 TRIAL PIT |
| NH81NW 1977 BOREHOLE | NH81SE 2003 BOREHOLE |
| NH81NW 1977 CORE | NH81SE 2003 CORE |
| NH81NW 1977 TRIAL PIT | NH81SE 2003 TRIAL PIT |
| NH81SE 1964 BOREHOLE | NH81SE 1999 BOREHOLE |
| NH81SE 1964 CORE | NH81SE 1999 CORE |
| NH81SE 1964 TRIAL PIT | NH81SE 1999 TRIAL PIT |
| NH82SE 1993 BOREHOLE | NH81SE 1999 BOREHOLE |
| NH82SE 1993 CORE | NH81SE 1999 CORE |
| NH82SE 1993 TRIAL PIT | NH81SE 1999 TRIAL PIT |
| NH82SE 2008 BOREHOLE | |
| NH82SE 2008 CORE | |
| NH82SE 2008 TRIAL PIT | |
- GEOTECHNICAL LONG SECTION KEY:**
- | | |
|---------------------------------|-------------|
| TOPSOIL | TOPSOIL |
| MADE GROUND | MADE GROUND |
| PEAT | SAND |
| ALLUVIUM GRANULAR | GRAVEL |
| RIVER TERRACE DEPOSITS COHESIVE | SILT |
| RIVER TERRACE DEPOSITS GRANULAR | CLAY |
| GLACIAL FLUVIAL GRANULAR | BOULDERS |
| GLACIAL TILL COHESIVE | BEDROCK |
| GLACIAL TILL GRANULAR | |
| ROCK | |
- NOTE:**
- COMPOSITE SOIL TYPES WILL BE SIGNIFIED BY COMBINED SYMBOLS E.G. SILTY SAND
- DEPTH (m BGL) ARE GENERALLY PRESENTED TO THE LEFT OF THE BOREHOLE LOGS ON THE GEOLOGICAL SECTION.
- WATER STRIKE
 - RISE TO IN 20 MINS
 - PROPOSED ROAD LEVEL
 - EXISTING GROUND LEVEL
 - SOUTHBOUND EARTHWORKS LEVEL
 - NORTHBOUND EARTHWORKS LEVEL

PLAN
SCALE 1:1000



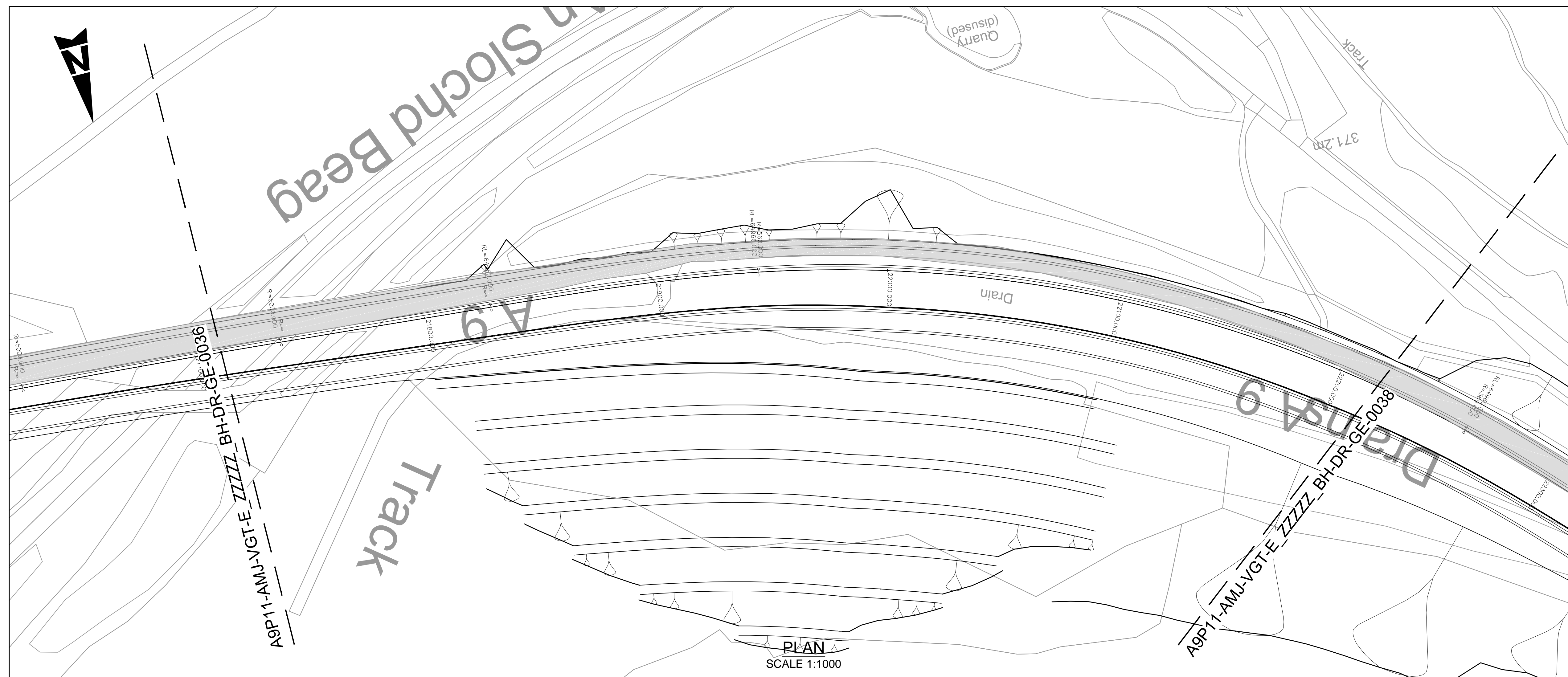
ELEVATION
SCALE 1:1000 H 1:200 V

P01	CC	KP	KP	05/08/16
FIRST ISSUE				
Rev	Drawn / Des	Checked	Approved	Date
Description				
Drawing Status				Subtability
FINAL				B
Client				
 An agency of The Scottish Government				
 Dalraddy to Stochd				
Drawing Title				
FIGURE 5.19-MAINLINE ALIGNMENT OPTION 1 BOREHOLE PLAN AND LONG SECTION (SHEET 36 OF 41)				
Scale	Designed / Drawn	Checked	Approved	Authorised
AS SHOWN	CC	KP	KP	RG
Original Size	Date	Date	Date	Date
A1	02/08/16	03/08/16	03/08/16	05/08/16
Drawing Number				
Project	Originator	Volume	Revision	
A9P11 - AMJ - VGT - E_ZZZZ_BH - DR - GE - 0036			P01	
Location	Type	Role	Number	

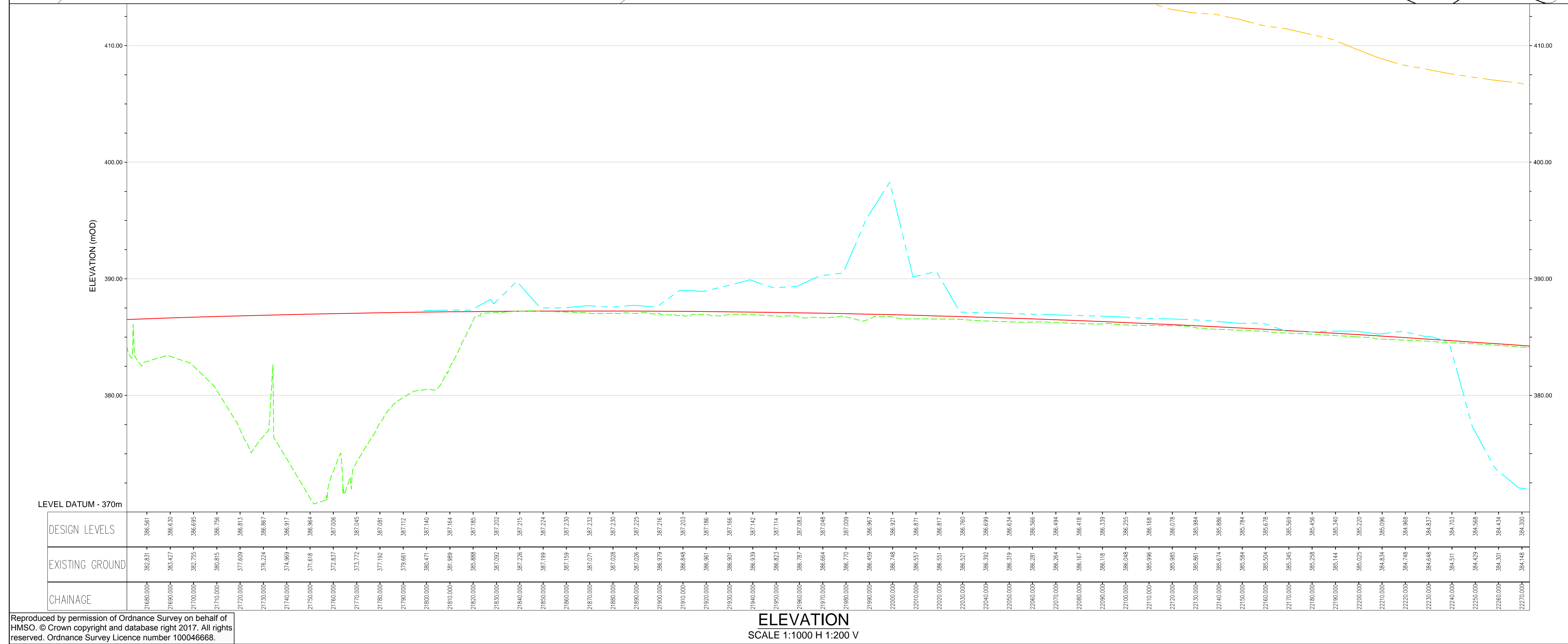
Plotter: Mar 26, 2017 - 5:53pm by: CARR6635

Reproduced by permission of Ordnance Survey on behalf of HMSO. © Crown copyright and database right 2017. All rights reserved. Ordnance Survey Licence number 100046668.

100
0 10
Millimetres
DO NOT SCALE



- NOTES:**
- ALL LEVELS IN mAOD UNLESS OTHERWISE NOTED. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE NOTED.
 - ALL DEPTHS SHOWN ARE IN METRES.
 - HISTORICAL BOREHOLE POSITIONS AND LEVELS INFERRED FROM BGS DATABASE TO ACCURACY ± 10m.
- KEY:**
- EXISTING A9
- BGS HISTORICAL GROUND INVESTIGATION:**
- | | |
|-----------------------|-----------------------|
| NH82NW 1973 BOREHOLE | NH80NE 1978 BOREHOLE |
| NH82NW 1973 CORE | NH80NE 1978 CORE |
| NH82NW 1973 TRIAL PIT | NH80NE 1978 TRIAL PIT |
| NH91NW 1977 BOREHOLE | NH81SE 2003 BOREHOLE |
| NH91NW 1977 CORE | NH81SE 2003 CORE |
| NH91NW 1977 TRIAL PIT | NH81SE 2003 TRIAL PIT |
| NH81SE 1964 BOREHOLE | NH81SE 1999 BOREHOLE |
| NH81SE 1964 CORE | NH81SE 1999 CORE |
| NH81SE 1964 TRIAL PIT | NH81SE 1999 TRIAL PIT |
| NH82SE 1993 BOREHOLE | NH81SE 1999 BOREHOLE |
| NH82SE 1993 CORE | NH81SE 1999 CORE |
| NH82SE 1993 TRIAL PIT | NH81SE 1999 TRIAL PIT |
| NH82SE 2008 BOREHOLE | |
| NH82SE 2008 CORE | |
| NH82SE 2008 TRIAL PIT | |
- GEOTECHNICAL LONG SECTION KEY:**
- | | |
|---------------------------------|-------------|
| TOPSOIL | TOPSOIL |
| MADE GROUND | MADE GROUND |
| PEAT | SAND |
| ALLUVIUM GRANULAR | GRAVEL |
| RIVER TERRACE DEPOSITS COHESIVE | SILT |
| RIVER TERRACE DEPOSITS GRANULAR | CLAY |
| GLACIAL FLUVIAL GRANULAR | BOULDERS |
| GLACIAL TILL COHESIVE | BEDROCK |
| GLACIAL TILL GRANULAR | |
| ROCK | |
- NOTE:**
COMPOSITE SOIL TYPES WILL BE SIGNIFIED BY COMBINED SYMBOLS E.G. SILTY SAND
DEPTHS (m BGL) ARE GENERALLY PRESENTED TO THE LEFT OF THE BOREHOLE LOGS ON THE GEOLOGICAL SECTION.
- WATER STRIKE
 RISE TO IN 20 MINS
 PROPOSED ROAD LEVEL
 EXISTING GROUND LEVEL
 SOUTHBOUND EARTHWORKS LEVEL
 NORTHBOUND EARTHWORKS LEVEL



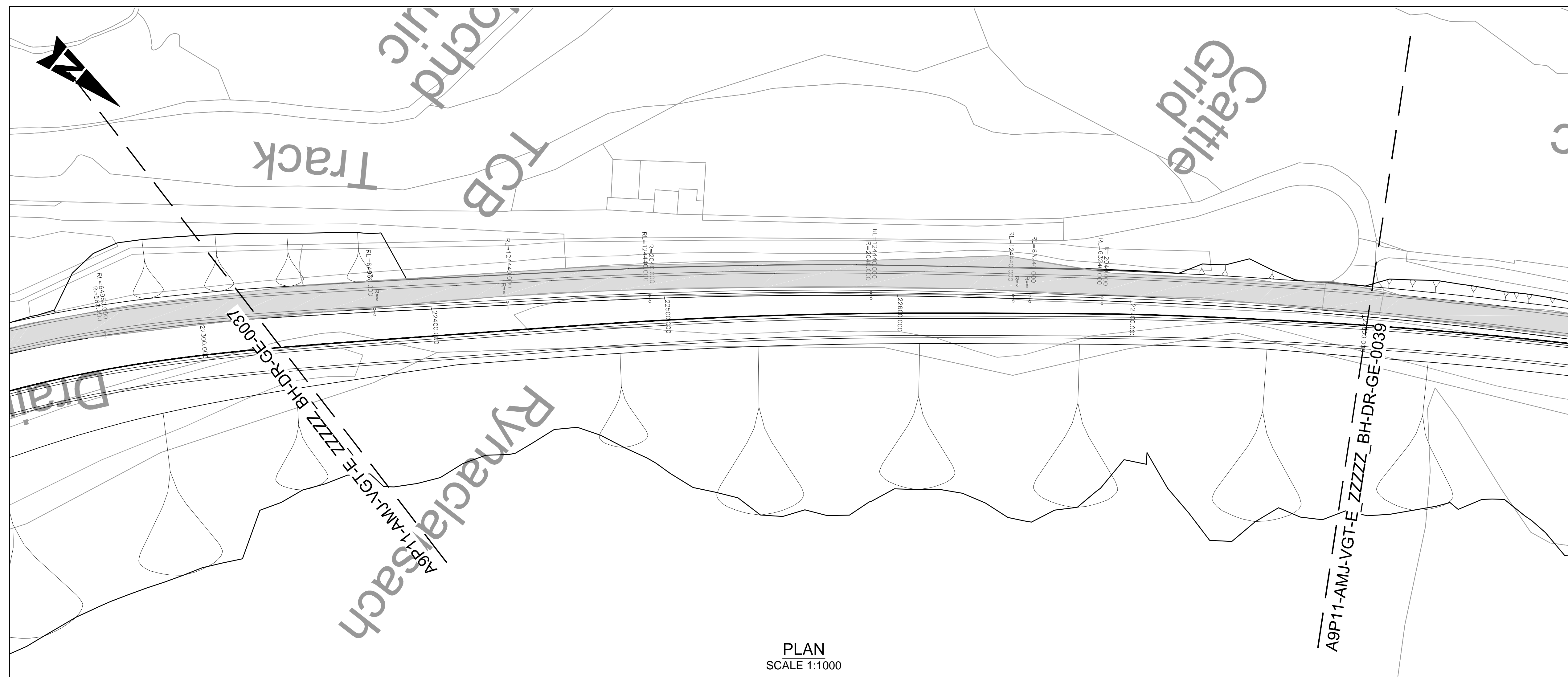
P01	CC	KP	KP	05/08/16
FIRST ISSUE				
Rev	Drawn / Des	Checked	Approved	Date
Description				Subsidiarity
Drawing Status				B
Client				
 An agency of The Scottish Government				
 Dalraddy to Slouch				
Drawing Title				
FIGURE 5.19-MAINLINE ALIGNMENT OPTION 1 BOREHOLE PLAN AND LONG SECTION (SHEET 37 OF 41)				
Scale	Designed / Drawn	Checked	Approved	Authorised
AS SHOWN	CC	KP	KP	RG
Original Size	Date	Date	Date	Date
A1	02/08/16	03/08/16	03/08/16	05/08/16
Drawing Number				Revision
Project	Originator	Volume	P01	
A9P11 - AMJ - VGT - E_ZZZZ_BH - DR - GE - 0037				
Location	Type	Role	Number	

Plotted: Mar 26, 2017 - 6:03pm by: CARR6635

Reproduced by permission of Ordnance Survey on behalf of HMSO. © Crown copyright and database right 2017. All rights reserved. Ordnance Survey Licence number 100046668.

ELEVATION SCALE 1:1000 H 1:200 V

100
0 10
Millimetres
DO NOT SCALE



PLAN
SCALE 1:1000

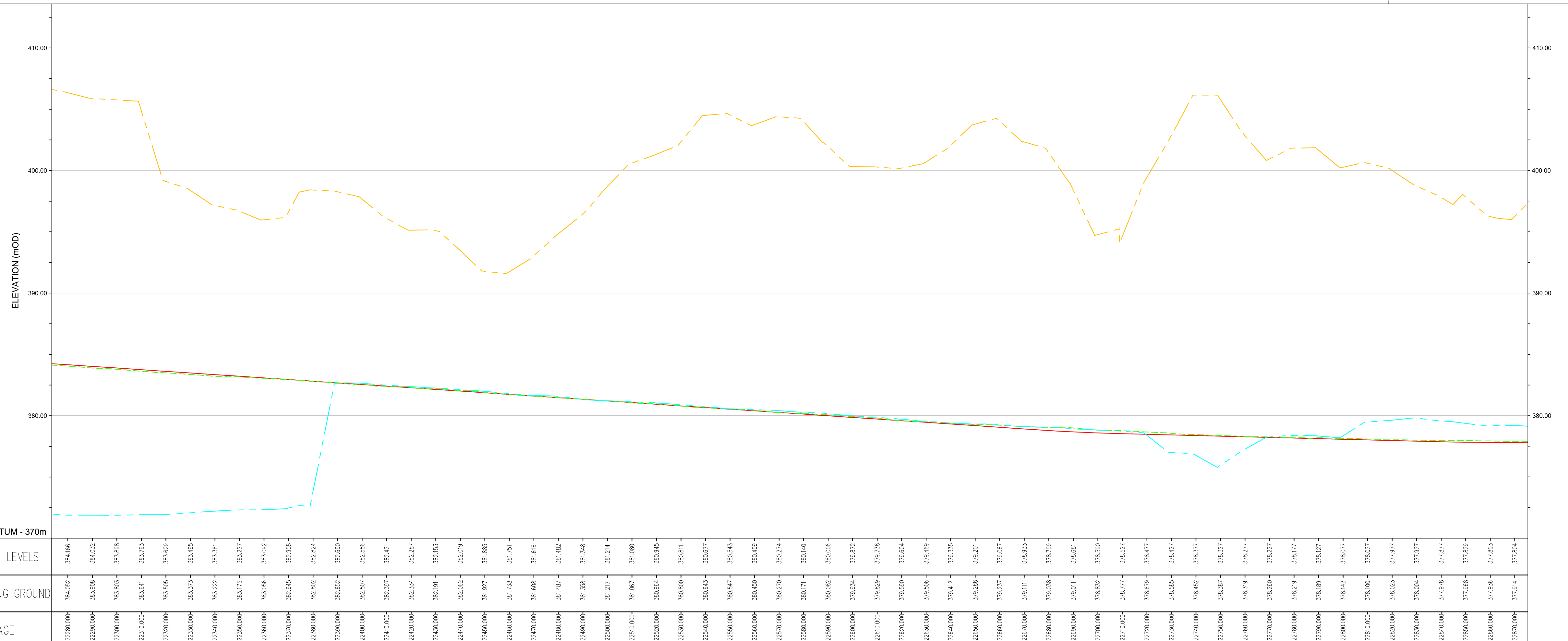
NOTES:
1. ALL LEVELS IN mAOD UNLESS OTHERWISE NOTED. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE NOTED.
2. ALL DEPTHS SHOWN ARE IN METRES.
3. HISTORICAL BOREHOLE POSITIONS AND LEVELS INFERRED FROM BGS DATABASE TO ACCURACY ± 10m.

- KEY:
[Symbol] EXISTING A9
- BGS HISTORICAL GROUND INVESTIGATION:
- | | |
|--------------------------------|--------------------------------|
| [Symbol] NH82NW 1973 BOREHOLE | [Symbol] NH80NE 1978 BOREHOLE |
| [Symbol] NH82NW 1973 TRIAL PIT | [Symbol] NH80NE 1978 TRIAL PIT |
| [Symbol] NH91NW 1977 BOREHOLE | [Symbol] NH81SE 2003 BOREHOLE |
| [Symbol] NH91NW 1977 TRIAL PIT | [Symbol] NH81SE 2003 TRIAL PIT |
| [Symbol] NH81SE 1964 BOREHOLE | [Symbol] NH81SE 1999 BOREHOLE |
| [Symbol] NH81SE 1964 TRIAL PIT | [Symbol] NH81SE 1999 TRIAL PIT |
| [Symbol] NH82SE 1993 BOREHOLE | [Symbol] NH81SE 1999 BOREHOLE |
| [Symbol] NH82SE 1993 TRIAL PIT | [Symbol] NH81SE 1999 TRIAL PIT |
| [Symbol] NH82SE 2008 BOREHOLE | [Symbol] NH81SE 1999 TRIAL PIT |
| [Symbol] NH82SE 2008 TRIAL PIT | |

- GEOTECHNICAL LONG SECTION KEY:
- | | |
|--|----------------------|
| [Symbol] TOPSOIL | [Symbol] TOPSOIL |
| [Symbol] MADE GROUND | [Symbol] MADE GROUND |
| [Symbol] PEAT | [Symbol] SAND |
| [Symbol] ALLUVIUM GRANULAR | [Symbol] GRAVEL |
| [Symbol] RIVER TERRACE DEPOSITS COHESIVE | [Symbol] SILT |
| [Symbol] RIVER TERRACE DEPOSITS GRANULAR | [Symbol] CLAY |
| [Symbol] GLACIAL FLUVIAL GRANULAR | [Symbol] BOULDERS |
| [Symbol] GLACIAL TILL COHESIVE | [Symbol] BEDROCK |
| [Symbol] GLACIAL TILL GRANULAR | |
| [Symbol] ROCK | |

NOTE:
COMPOSITE SOIL TYPES WILL BE SIGNIFIED BY COMBINED SYMBOLS E.G. [Symbol] SILTY SAND
DEPTHS (m BGL) ARE GENERALLY PRESENTED TO THE LEFT OF THE BOREHOLE LOGS ON THE GEOLOGICAL SECTION.

- [Symbol] WATER STRIKE
[Symbol] RISE TO IN 20 MINS
[Symbol] PROPOSED ROAD LEVEL
[Symbol] EXISTING GROUND LEVEL
[Symbol] SOUTHBOUND EARTHWORKS LEVEL
[Symbol] NORTHBOUND EARTHWORKS LEVEL



ELEVATION
SCALE 1:1000 H 1:200 V

P01	CC	KP	KP	05/08/16
FIRST ISSUE				
Rev	Drawn / Des	Checked	Approved	Date
Description				
Drawing Status				Subtability
FINAL				B

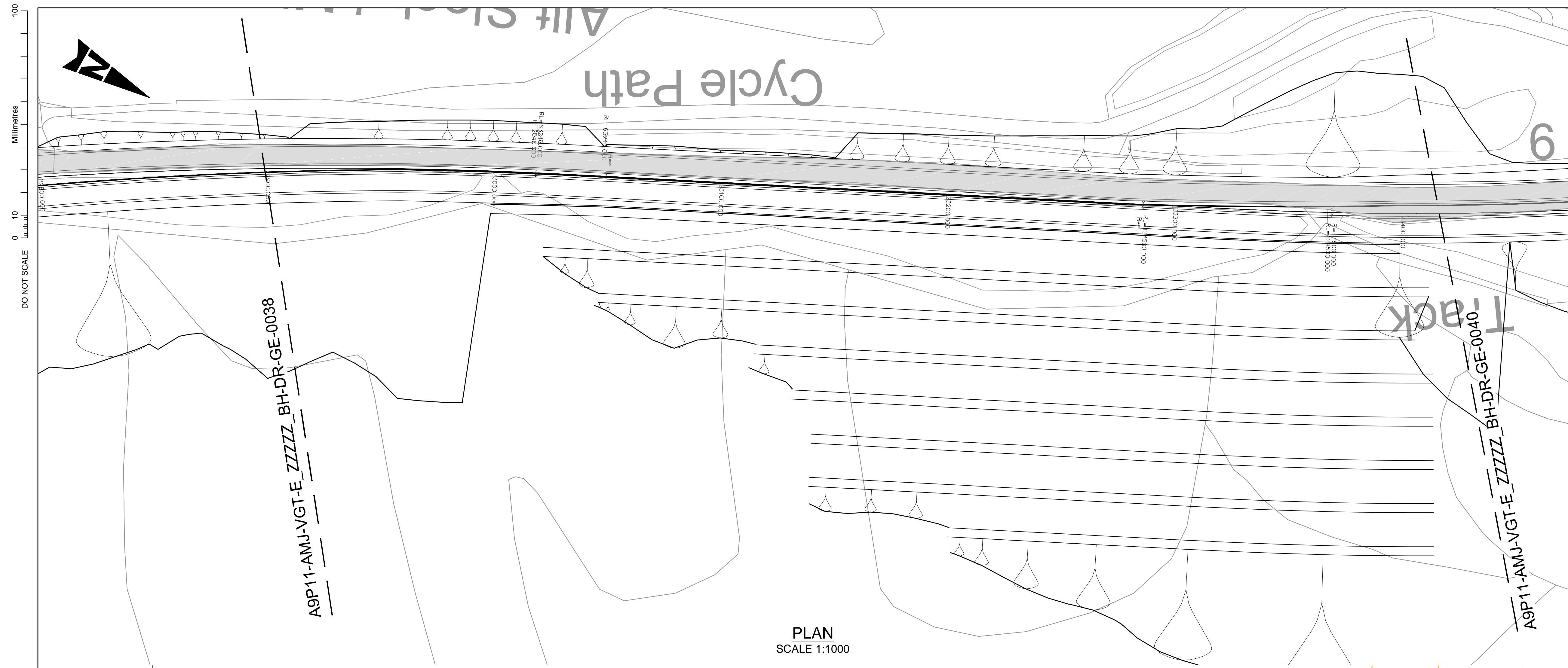
Client				
 An agency of The Scottish Government				
 Dalraddy to Slochd				

Drawing Title
FIGURE 5.19-MAINLINE ALIGNMENT OPTION 1 BOREHOLE PLAN AND LONG SECTION (SHEET 38 OF 41)

Scale	Designed / Drawn	Checked	Approved	Authorised
AS SHOWN	CC	KP	KP	RG
Original Size	Date	Date	Date	Date
A1	02/08/16	03/08/16	03/08/16	05/08/16
Drawing Number				Revision
Project		Originator	Volume	
A9P11 - AMJ - VGT -		E_ZZZZ_BH - DR - GE - 0038		P01
Location	Type	Role	Number	

Plotted: Mar 26, 2017 - 6:12pm by: CARR6635

Reproduced by permission of Ordnance Survey on behalf of HMSO. © Crown copyright and database right 2017. All rights reserved. Ordnance Survey Licence number 100046668.



PLAN
SCALE 1:1000

NOTES:

- ALL LEVELS IN mAOD UNLESS OTHERWISE NOTED. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE NOTED.
- ALL DEPTHS SHOWN ARE IN METRES.
- HISTORICAL BOREHOLE POSITIONS AND LEVELS INFERRED FROM BGS DATABASE TO ACCURACY ± 10m.

KEY:

- EXISTING A9

BGS HISTORICAL GROUND INVESTIGATION:

NH82NW 1973 BOREHOLE	NH80NE 1978 BOREHOLE
NH82NW 1973 CORE	NH80NE 1978 CORE
NH82NW 1973 TRIAL PIT	NH81SE 1978 TRIAL PIT
NH91NW 1977 BOREHOLE	NH81SE 2003 BOREHOLE
NH91NW 1977 CORE	NH81SE 2003 CORE
NH81SE 1964 BOREHOLE	NH81SE 1999 BOREHOLE
NH81SE 1964 CORE	NH81SE 1999 TRIAL PIT
NH81SE 1964 TRIAL PIT	NH81SE 1999 TRIAL PIT
NH82SE 1993 BOREHOLE	NH81SE 1999 TRIAL PIT
NH82SE 1993 CORE	NH81SE 1999 TRIAL PIT
NH82SE 1993 TRIAL PIT	NH81SE 1999 TRIAL PIT
NH82SE 2008 BOREHOLE	NH81SE 1999 TRIAL PIT
NH82SE 2008 CORE	NH81SE 1999 TRIAL PIT
NH82SE 2008 TRIAL PIT	NH81SE 1999 TRIAL PIT

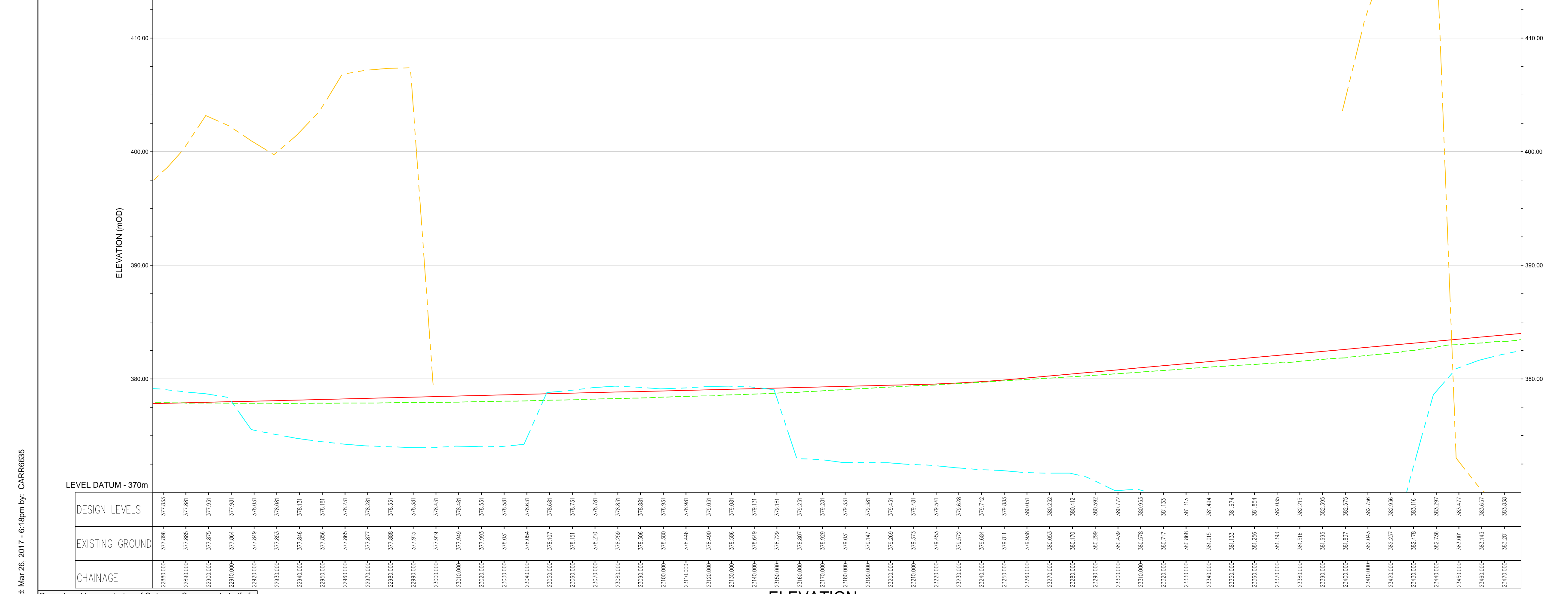
GEOTECHNICAL LONG SECTION KEY:

TOPSOIL	TOPSOIL
MADE GROUND	MADE GROUND
PEAT	SAND
ALLUVIUM GRANULAR	GRAVEL
RIVER TERRACE DEPOSITS COHESIVE	SILT
RIVER TERRACE DEPOSITS GRANULAR	CLAY
GLACIAL FLUVIAL GRANULAR	BOULDERS
GLACIAL TILL COHESIVE	BEDROCK
GLACIAL TILL GRANULAR	
ROCK	

NOTE:
COMPOSITE SOIL TYPES WILL BE SIGNIFIED BY COMBINED SYMBOLS E.G. SILTY SAND
DEPTHS (m BGL) ARE GENERALLY PRESENTED TO THE LEFT OF THE BOREHOLE LOGS ON THE GEOLOGICAL SECTION.

LEGEND:

- WATER STRIKE
- RISE TO IN 20 MINS
- PROPOSED ROAD LEVEL
- EXISTING GROUND LEVEL
- SOUTHBOUND EARTHWORKS LEVEL
- NORTHBOUND EARTHWORKS LEVEL



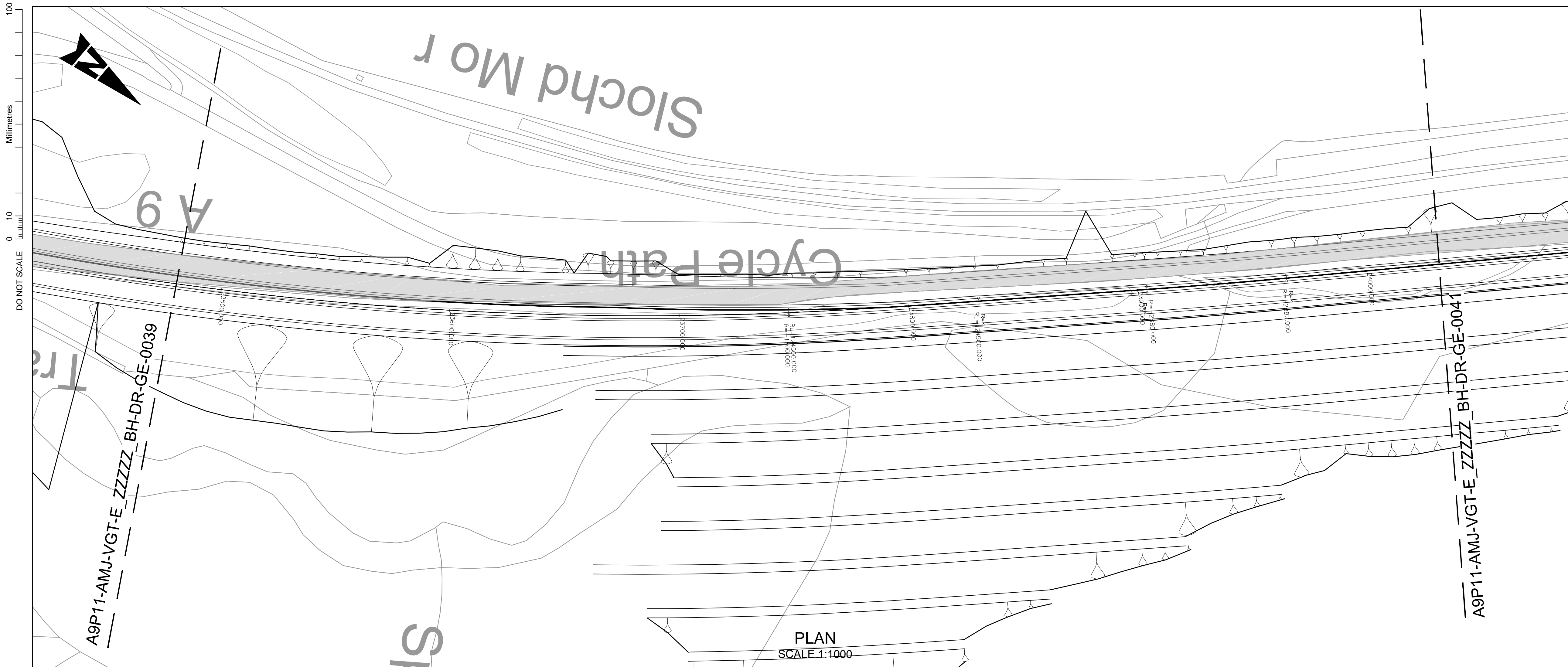
ELEVATION
SCALE 1:1000 H 1:200 V

DESIGN LEVELS	EXISTING GROUND	CHAINAGE
377.833	377.886	22880+00
377.881	377.885	22885+00
377.931	377.875	22890+00
377.981	377.864	22895+00
378.031	377.849	22900+00
378.081	377.853	22905+00
378.131	377.846	22910+00
378.181	377.856	22915+00
378.231	377.865	22920+00
378.281	377.877	22925+00
378.331	377.888	22930+00
378.381	377.915	22935+00
378.431	377.919	22940+00
378.481	377.946	22945+00
378.531	377.963	22950+00
378.581	378.001	22955+00
378.631	378.054	22960+00
378.681	378.107	22965+00
378.731	378.151	22970+00
378.781	378.210	22975+00
378.831	378.250	22980+00
378.881	378.300	22985+00
378.931	378.350	22990+00
378.981	378.400	22995+00
379.031	378.450	23000+00
379.081	378.500	23005+00
379.131	378.550	23010+00
379.181	378.600	23015+00
379.231	378.650	23020+00
379.281	378.700	23025+00
379.331	378.750	23030+00
379.381	378.800	23035+00
379.431	378.850	23040+00
379.481	378.900	23045+00
379.531	378.950	23050+00
379.581	379.000	23055+00
379.631	379.050	23060+00
379.681	379.100	23065+00
379.731	379.150	23070+00
379.781	379.200	23075+00
379.831	379.250	23080+00
379.881	379.300	23085+00
379.931	379.350	23090+00
379.981	379.400	23095+00
380.031	379.450	23100+00
380.081	379.500	23105+00
380.131	379.550	23110+00
380.181	379.600	23115+00
380.231	379.650	23120+00
380.281	379.700	23125+00
380.331	379.750	23130+00
380.381	379.800	23135+00
380.431	379.850	23140+00
380.481	379.900	23145+00
380.531	379.950	23150+00
380.581	380.000	23155+00
380.631	380.050	23160+00
380.681	380.100	23165+00
380.731	380.150	23170+00
380.781	380.200	23175+00
380.831	380.250	23180+00
380.881	380.300	23185+00
380.931	380.350	23190+00
380.981	380.400	23195+00
381.031	380.450	23200+00
381.081	380.500	23205+00
381.131	380.550	23210+00
381.181	380.600	23215+00
381.231	380.650	23220+00
381.281	380.700	23225+00
381.331	380.750	23230+00
381.381	380.800	23235+00
381.431	380.850	23240+00
381.481	380.900	23245+00
381.531	380.950	23250+00
381.581	381.000	23255+00
381.631	381.050	23260+00
381.681	381.100	23265+00
381.731	381.150	23270+00
381.781	381.200	23275+00
381.831	381.250	23280+00
381.881	381.300	23285+00
381.931	381.350	23290+00
381.981	381.400	23295+00
382.031	381.450	23300+00
382.081	381.500	23305+00
382.131	381.550	23310+00
382.181	381.600	23315+00
382.231	381.650	23320+00
382.281	381.700	23325+00
382.331	381.750	23330+00
382.381	381.800	23335+00
382.431	381.850	23340+00
382.481	381.900	23345+00
382.531	381.950	23350+00
382.581	382.000	23355+00
382.631	382.050	23360+00
382.681	382.100	23365+00
382.731	382.150	23370+00
382.781	382.200	23375+00
382.831	382.250	23380+00
382.881	382.300	23385+00
382.931	382.350	23390+00
382.981	382.400	23395+00
383.031	382.450	23400+00
383.081	382.500	23405+00
383.131	382.550	23410+00
383.181	382.600	23415+00
383.231	382.650	23420+00
383.281	382.700	23425+00
383.331	382.750	23430+00
383.381	382.800	23435+00
383.431	382.850	23440+00
383.481	382.900	23445+00
383.531	382.950	23450+00
383.581	383.000	23455+00
383.631	383.050	23460+00
383.681	383.100	23465+00
383.731	383.150	23470+00
383.781	383.200	23475+00
383.831	383.250	23480+00
383.881	383.300	23485+00
383.931	383.350	23490+00
383.981	383.400	23495+00
384.031	383.450	23500+00

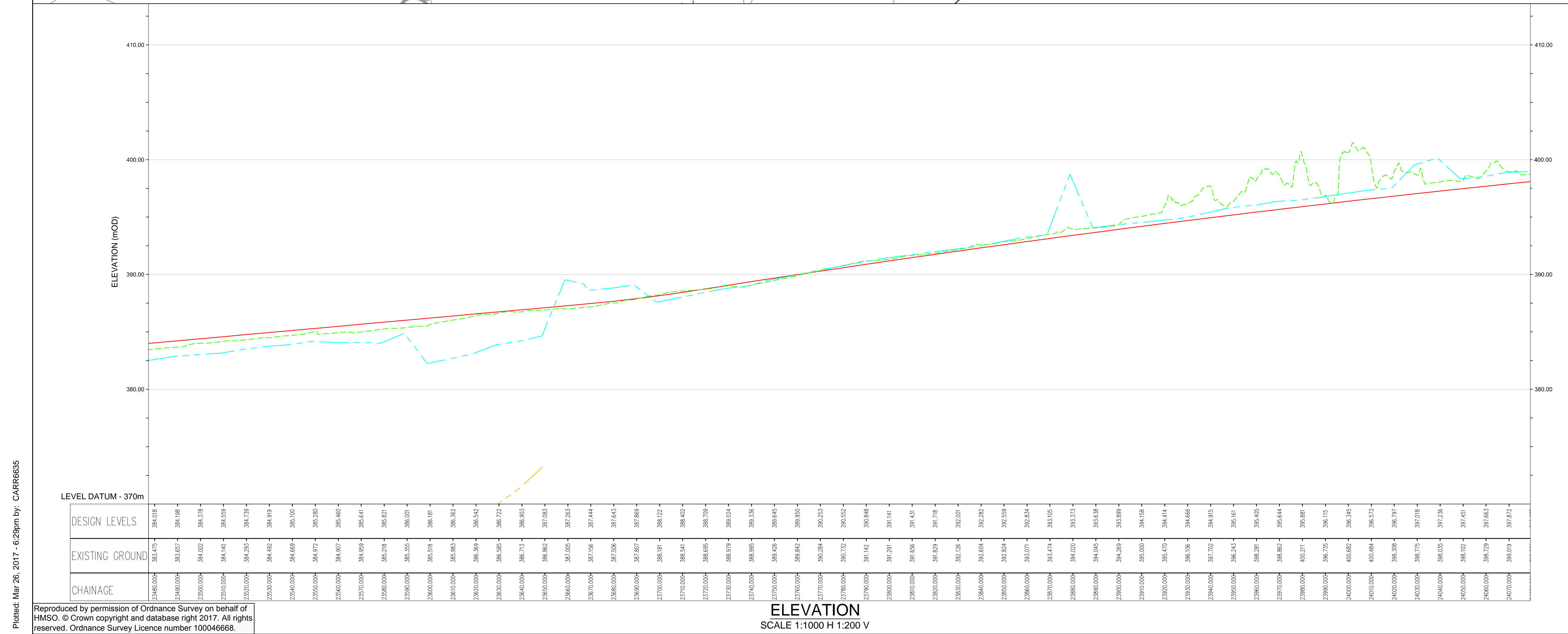
Plotter: Mar 26, 2017 - 6:11pm by: CARR6635

Reproduced by permission of Ordnance Survey on behalf of HMSO. © Crown copyright and database right 2017. All rights reserved. Ordnance Survey Licence number 100046668.

P01	CC	KP	KP	05/08/16
FIRST ISSUE				
Rev	Drawn / Des	Checked	Approved	Date
Description				
Drawing Status				Suitability
FINAL				B
Client				
 An agency of The Scottish Government				
 Dairdery to Sliech				
Drawing Title				
FIGURE 5.19-MAINLINE ALIGNMENT OPTION 1 BOREHOLE PLAN AND LONG SECTION (SHEET 39 OF 41)				
Scale	Designed / Drawn	Checked	Approved	Authorised
AS SHOWN	CC	KP	KP	RG
Original Size	Date	Date	Date	Date
A1	02/08/16	03/08/16	03/08/16	05/08/16
Drawing Number				
Project	Originator	Volume	Revision	
A9P11 - AMJ - VGT - E_ZZZZ_BH - DR - GE - 0039			P01	
Location	Type	Role	Number	



- NOTES:**
- ALL LEVELS IN mAOD UNLESS OTHERWISE NOTED. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE NOTED.
 - ALL DEPTHS SHOWN ARE IN METRES.
 - HISTORICAL BOREHOLE POSITIONS AND LEVELS INFERRED FROM BGS DATABASE TO ACCURACY ± 10m.
- KEY:**
- EXISTING A9
- BGS HISTORICAL GROUND INVESTIGATION:**
- | | |
|-----------------------|-----------------------|
| NH82NW 1973 BOREHOLE | NH80NE 1978 BOREHOLE |
| NH82NW 1973 CORE | NH80NE 1978 CORE |
| NH82NW 1973 TRIAL PIT | NH80NE 1978 TRIAL PIT |
| NH91NW 1977 BOREHOLE | NH81SE 2003 BOREHOLE |
| NH91NW 1977 CORE | NH81SE 2003 CORE |
| NH91NW 1977 TRIAL PIT | NH81SE 2003 TRIAL PIT |
| NH81SE 1964 BOREHOLE | NH81SE 1999 BOREHOLE |
| NH81SE 1964 CORE | NH81SE 1999 CORE |
| NH81SE 1964 TRIAL PIT | NH81SE 1999 TRIAL PIT |
| NH82SE 1993 BOREHOLE | NH81SE 1999 BOREHOLE |
| NH82SE 1993 CORE | NH81SE 1999 CORE |
| NH82SE 1993 TRIAL PIT | NH81SE 1999 TRIAL PIT |
| NH82SE 2008 BOREHOLE | |
| NH82SE 2008 CORE | |
| NH82SE 2008 TRIAL PIT | |
- GEOTECHNICAL LONG SECTION KEY:**
- | | |
|---------------------------------|-------------|
| TOPSOIL | TOPSOIL |
| MADE GROUND | MADE GROUND |
| PEAT | SAND |
| ALLUVIUM GRANULAR | GRAVEL |
| RIVER TERRACE DEPOSITS COHESIVE | SILT |
| RIVER TERRACE DEPOSITS GRANULAR | CLAY |
| GLACIAL FLUVIAL GRANULAR | BOULDERS |
| GLACIAL TILL COHESIVE | BEDROCK |
| GLACIAL TILL GRANULAR | |
| ROCK | |
- NOTE:**
COMPOSITE SOIL TYPES WILL BE SIGNIFIED BY COMBINED SYMBOLS E.G. SILTY SAND
DEPTHS (m BGL) ARE GENERALLY PRESENTED TO THE LEFT OF THE BOREHOLE LOGS ON THE GEOLOGICAL SECTION.
- WATER STRIKE
 - RISE TO IN 20 MINS
 - PROPOSED ROAD LEVEL
 - EXISTING GROUND LEVEL
 - SOUTHBOUND EARTHWORKS LEVEL
 - NORTHBOUND EARTHWORKS LEVEL

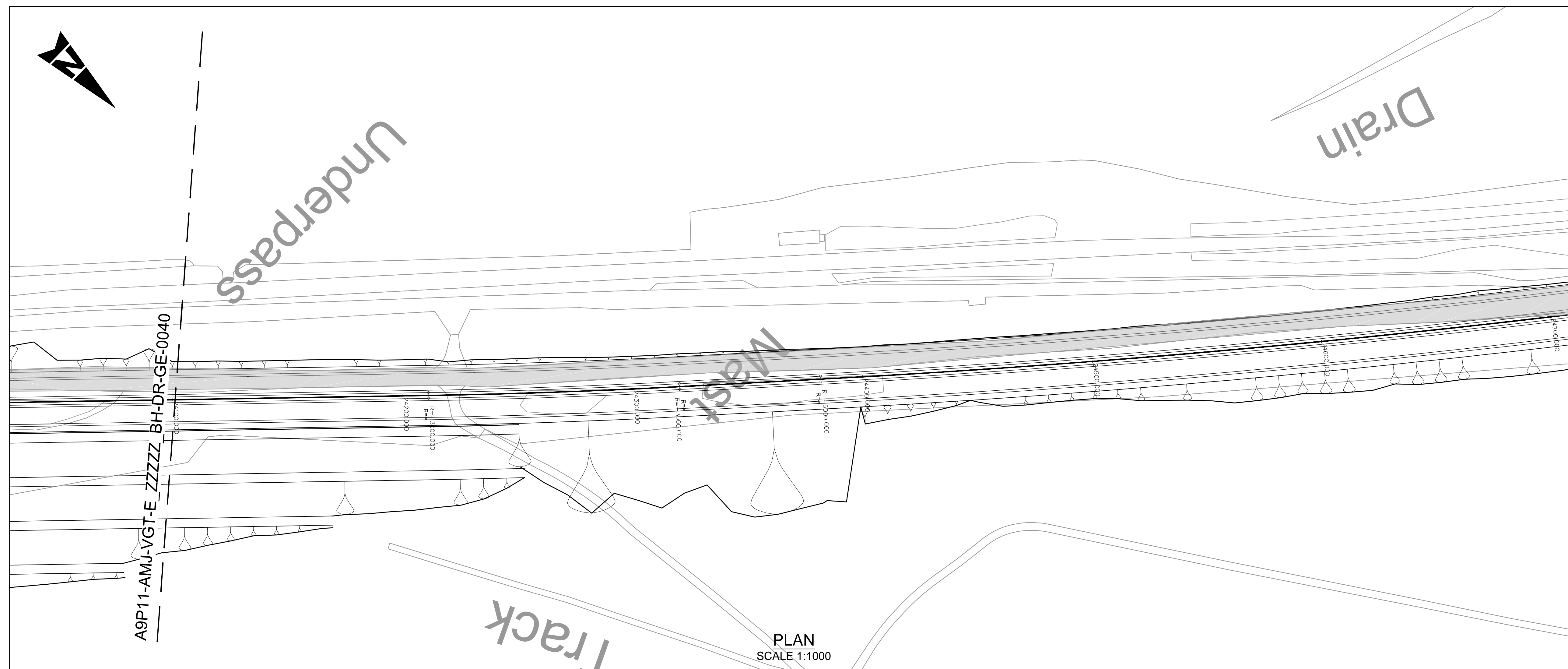


P01	CC	KP	KP	05/08/16
FIRST ISSUE				
Rev	Drawn / Des	Checked	Approved	Date
Description				
Drawing Status				Subtality
FINAL				B
Client				
 An agency of The Scottish Government				
 Dalraddy to Slochd				
Drawing Title				
FIGURE 5.19-MAINLINE ALIGNMENT OPTION 1 BOREHOLE PLAN AND LONG SECTION (SHEET 40 OF 41)				
Scale	Designed / Drawn	Checked	Approved	Authorised
AS SHOWN	CC	KP	KP	RG
Original Size	Date	Date	Date	Date
A1	02/08/16	03/08/16	03/08/16	05/08/16
Drawing Number				
Project	Originator	Volume	Revision	
A9P11 - AMJ - VGT - E_ZZZZ_BH - DR - GE - 0040			P01	
Location	Type	Role	Number	

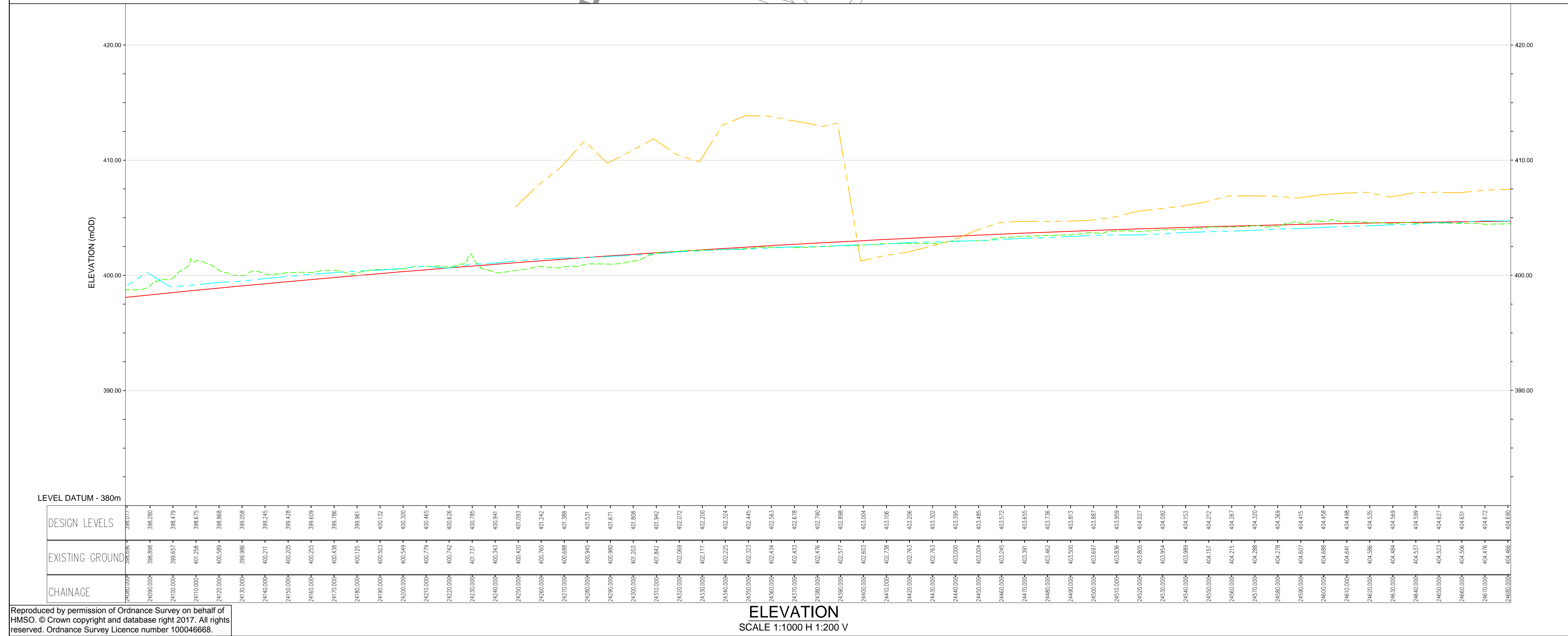
Plotter: Mar 26, 2017 - 6:29pm by: CARR6635

Reproduced by permission of Ordnance Survey on behalf of HMSO. © Crown copyright and database right 2017. All rights reserved. Ordnance Survey Licence number 100046668.

100
0 10
Millimetres
DO NOT SCALE



- NOTES:**
- ALL LEVELS IN mAOD UNLESS OTHERWISE NOTED. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE NOTED.
 - ALL DEPTHS SHOWN ARE IN METRES.
 - HISTORICAL BOREHOLE POSITIONS AND LEVELS INFERRED FROM BGS DATABASE TO ACCURACY ± 10m.
- KEY:**
- EXISTING A9
- BGS HISTORICAL GROUND INVESTIGATION:**
- | | |
|-----------------------|-----------------------|
| NH82NW 1973 BOREHOLE | NH80NE 1978 BOREHOLE |
| NH82NW 1973 CORE | NH80NE 1978 CORE |
| NH82NW 1973 TRIAL PIT | NH80NE 1978 TRIAL PIT |
| NH91NW 1977 BOREHOLE | NH81SE 2003 BOREHOLE |
| NH91NW 1977 CORE | NH81SE 2003 CORE |
| NH91NW 1977 TRIAL PIT | NH81SE 1999 BOREHOLE |
| NH81SE 1964 BOREHOLE | NH81SE 1999 TRIAL PIT |
| NH81SE 1964 CORE | NH81SE 1999 CORE |
| NH81SE 1964 TRIAL PIT | NH81SE 1999 TRIAL PIT |
| NH82SE 1993 BOREHOLE | NH81SE 1999 BOREHOLE |
| NH82SE 1993 CORE | NH81SE 1999 CORE |
| NH82SE 1993 TRIAL PIT | NH81SE 1999 TRIAL PIT |
| NH82SE 2008 BOREHOLE | |
| NH82SE 2008 CORE | |
| NH82SE 2008 TRIAL PIT | |
- GEOTECHNICAL LONG SECTION KEY:**
- | | |
|---------------------------------|-------------|
| TOPSOIL | TOPSOIL |
| MADE GROUND | MADE GROUND |
| PEAT | SAND |
| ALLUVIUM GRANULAR | GRAVEL |
| RIVER TERRACE DEPOSITS COHESIVE | SILT |
| RIVER TERRACE DEPOSITS GRANULAR | CLAY |
| GLACIAL FLUVIAL GRANULAR | BOULDERS |
| GLACIAL TILL COHESIVE | BEDROCK |
| GLACIAL TILL GRANULAR | |
| ROCK | |
- NOTE:**
COMPOSITE SOIL TYPES WILL BE SIGNIFIED BY COMBINED SYMBOLS E.G. SILTY SAND
DEPTHS (m BGL) ARE GENERALLY PRESENTED TO THE LEFT OF THE BOREHOLE LOGS ON THE GEOLOGICAL SECTION.
- WATER STRIKE
 RISE TO IN 20 MINS
 PROPOSED ROAD LEVEL
 EXISTING GROUND LEVEL
 SOUTHBOUND EARTHWORKS LEVEL
 NORTHBOUND EARTHWORKS LEVEL



P01	CC	KP	KP	05/08/16
FIRST ISSUE				
Rev	Drawn / Des	Checked	Approved	Date
Description				Subtality
Drawing Status				B
Client				
 TRANSPORT SCOTLAND <small>An agency of The Scottish Government</small>				
 A9 DUALLING PERTH TO INVERNESS <small>Dalraddy to Slochd</small>				
 ATKINS mouchel				
Drawing Title				
FIGURE 5.19-MAINLINE ALIGNMENT OPTION 1 BOREHOLE PLAN AND LONG SECTION (SHEET 41 OF 41)				
Scale	Designed / Drawn	Checked	Approved	Authorised
AS SHOWN	CC	KP	KP	RG
Original Size	Date	Date	Date	Date
A1	02/08/16	03/08/16	03/08/16	05/08/16
Drawing Number				
Project	Originator	Volume	Revision	
A9P11 - AMJ - VGT - E_ZZZZ_BH - DR - GE - 0041			P01	
Location	Type	Role	Number	

Plotted: Mar 26, 2017 - 6:39pm by: CARR6635

Reproduced by permission of Ordnance Survey on behalf of HMSO. © Crown copyright and database right 2017. All rights reserved. Ordnance Survey Licence number 100046668.