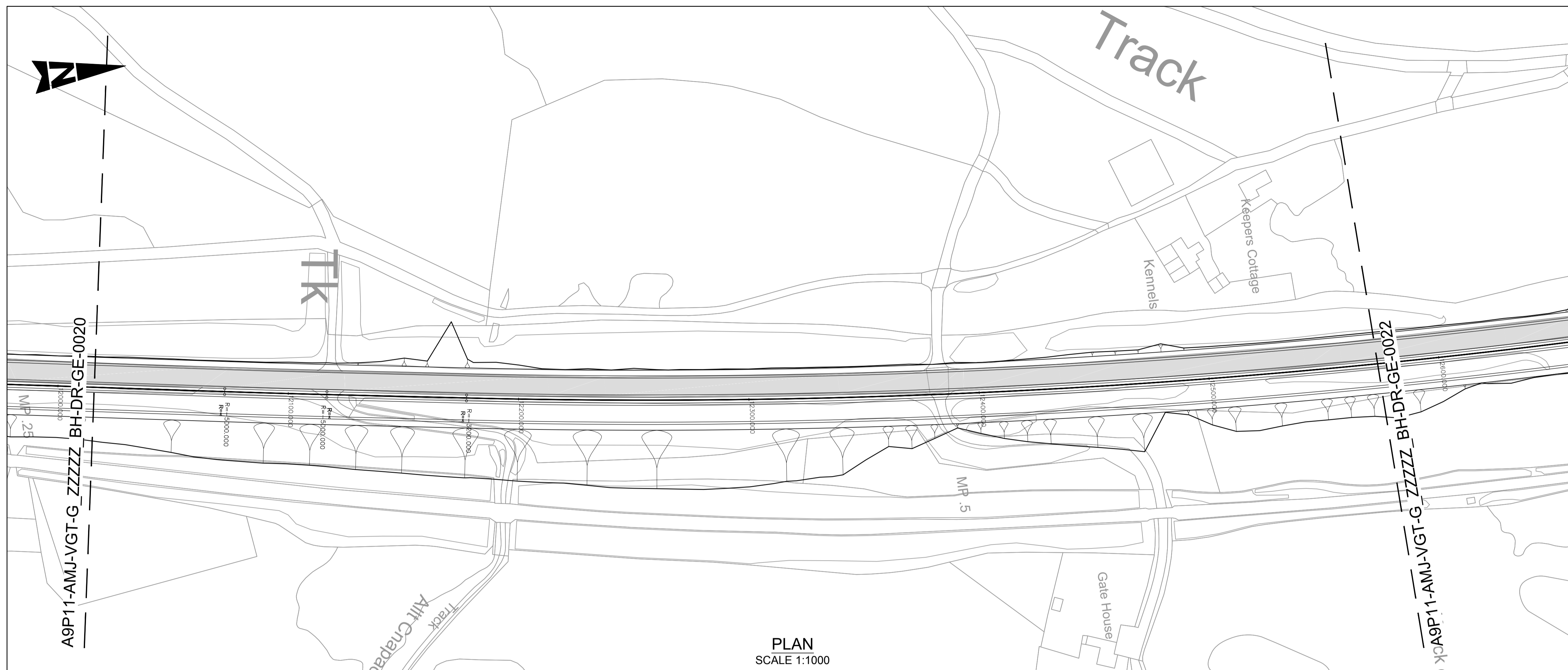


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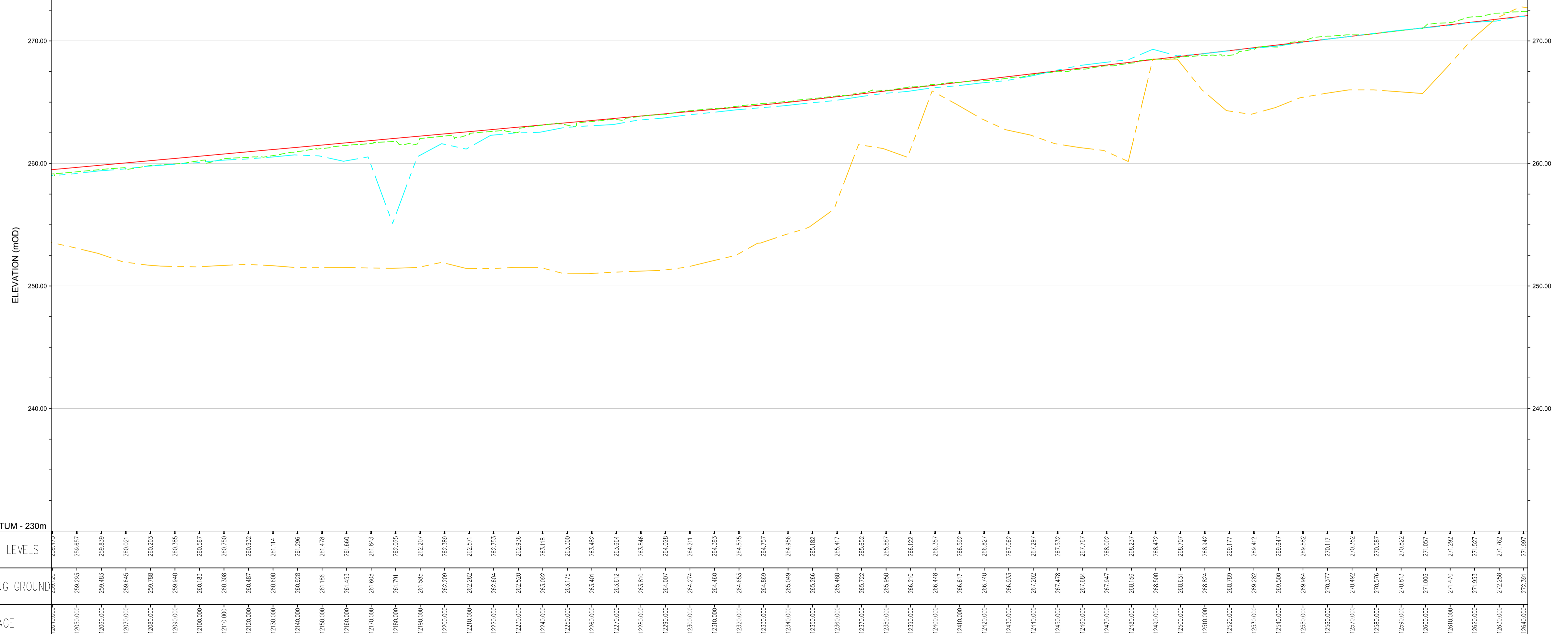
- NOTES:**
- ALL LEVELS IN mAOD UNLESS OTHERWISE NOTED. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE NOTED.
  - ALL DEPTHS SHOWN ARE IN METRES.
  - HISTORICAL BOREHOLE POSITIONS AND LEVELS INFERRED FROM BGS DATABASE TO ACCURACY ± 10m.

- KEY:**
- EXISTING A9
- BGS HISTORICAL GROUND INVESTIGATION:**
- |                       |                       |
|-----------------------|-----------------------|
| NH82NW 1973 BOREHOLE  | NH80NE 1978 BOREHOLE  |
| NH82NW 1973 CORE      | NH80NE 1978 CORE      |
| NH82NW 1973 TRIAL PIT | NH80SE 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  
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FIRST ISSUE				
Rev	Drawn / Des	Checked	Approved	Date
Description				Subtability
FINAL				B

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**ATKINS mouchel**

Drawing Title  
**FIGURE 5.20-MAINLINE ALIGNMENT OPTION 1A BOREHOLE PLAN AND LONG SECTION (SHEET 21 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 - G_ZZZZZ_BH - DR - GE - 0021			P01
Location	Type	Role	Number	

Plotted: Mar 28, 2017 - 12:50pm by: CARR6655

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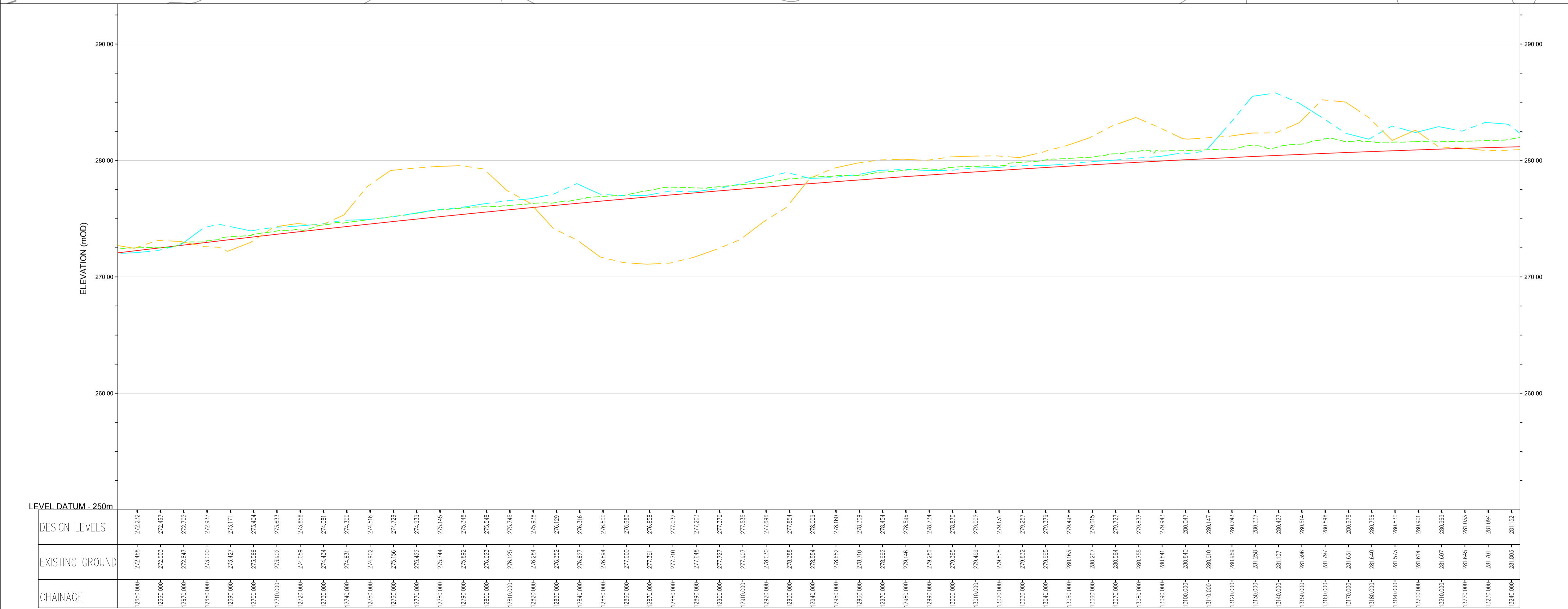
- NOTES:**
- ALL LEVELS IN mAOD UNLESS OTHERWISE NOTED. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE NOTED.
  - ALL DEPTHS SHOWN ARE IN METRES.
  - HISTORICAL BOREHOLE POSITIONS AND LEVELS INFERRED FROM BGS DATABASE TO ACCURACY ± 10m.

- 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				Suitability
FINAL				B

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**ATKINS mouchel**

Drawing Title  
**FIGURE 5.20-MAINLINE ALIGNMENT OPTION 1A BOREHOLE PLAN AND LONG SECTION (SHEET 22 OF 41)**

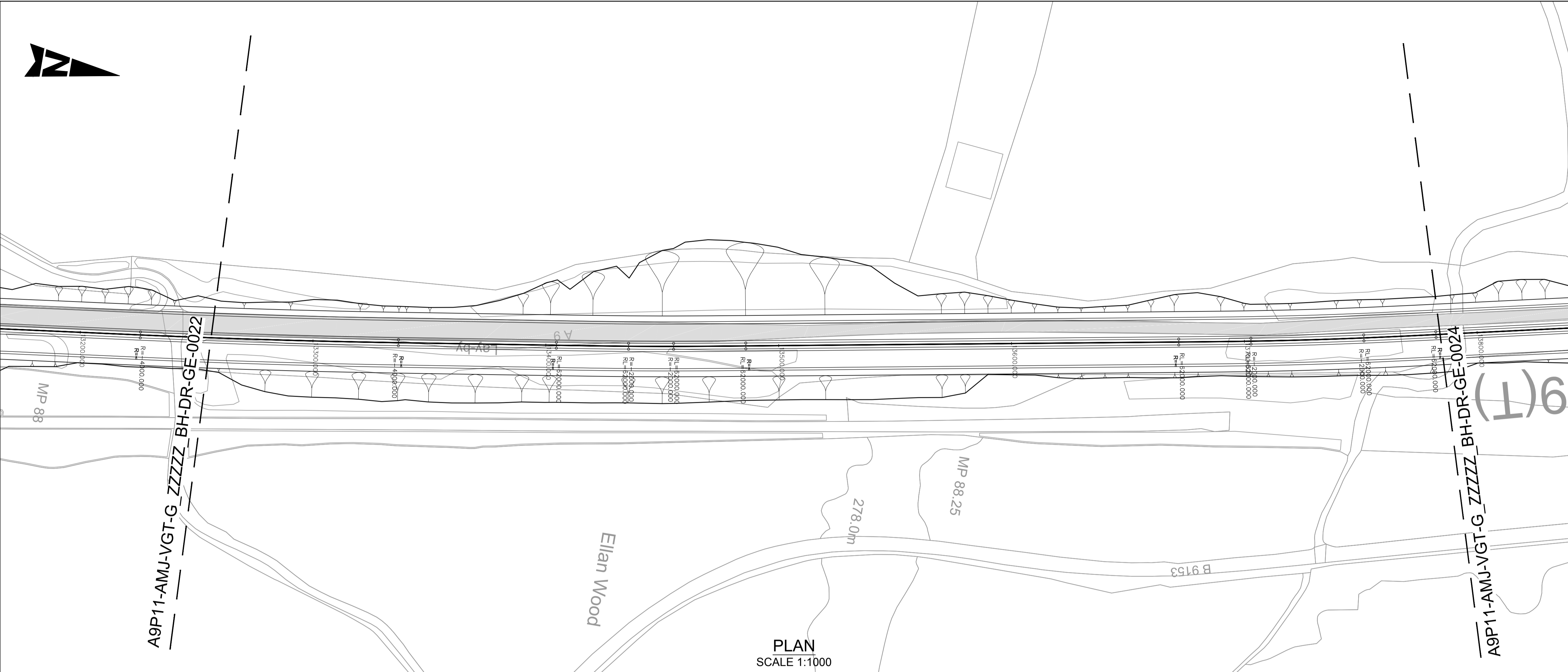
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Drawing Number	Project	Originator	Volume	Revision
	A9P11 - AMJ - VGT - G_ZZZZ_BH - DR - GE - 0022			P01
Location	Type	Role	Number	

Plotfile: Mar 28, 2017 - 10:06pm by: CARR6635

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SCALE 1:1000

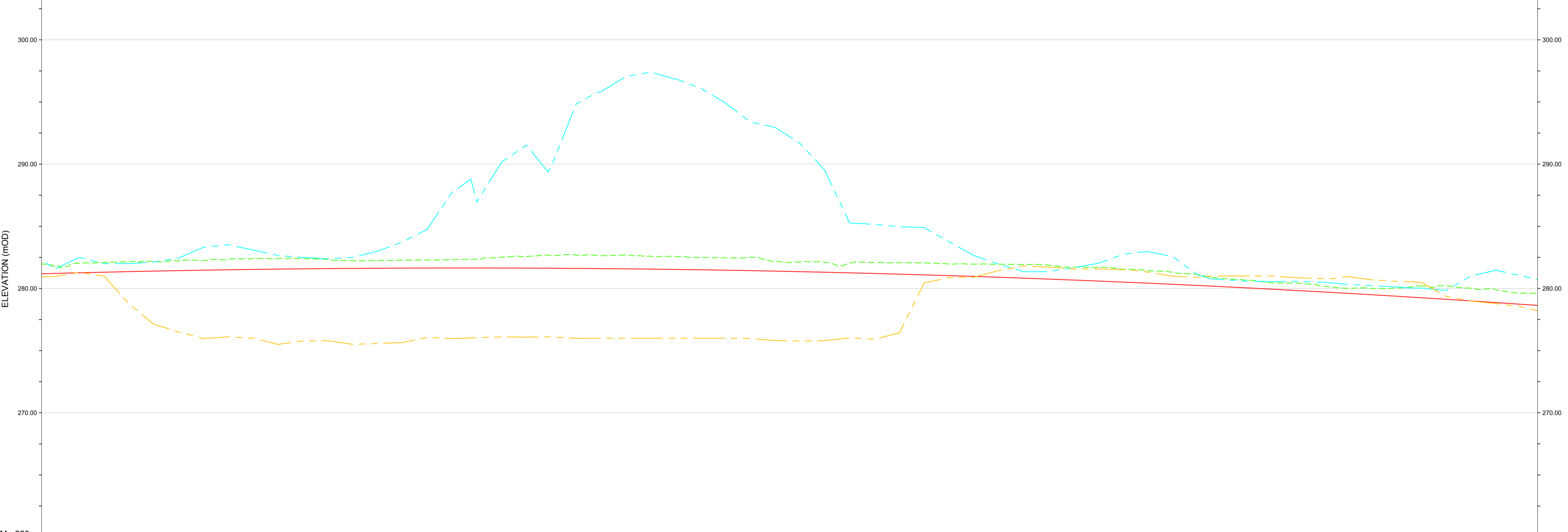
- NOTES:**
- ALL LEVELS IN mAOD UNLESS OTHERWISE NOTED. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE NOTED.
  - ALL DEPTHS SHOWN ARE IN METRES.
  - HISTORICAL BOREHOLE POSITIONS AND LEVELS INFERRED FROM BGS DATABASE TO ACCURACY ± 10m.

- 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 - 260m	CHAINAGE	DESIGN LEVELS	EXISTING GROUND
	13250.000	281.787	281.781
	13260.000	281.729	282.025
	13270.000	281.307	282.093
	13280.000	281.352	282.164
	13290.000	281.384	282.153
	13300.000	281.433	282.200
	13310.000	281.468	282.251
	13320.000	281.500	282.344
	13330.000	281.529	282.397
	13340.000	281.555	282.397
	13350.000	281.577	282.393
	13360.000	281.597	282.345
	13370.000	281.613	282.233
	13380.000	281.626	282.244
	13390.000	281.635	282.256
	13400.000	281.642	282.288
	13410.000	281.645	282.316
	13420.000	281.645	282.353
	13430.000	281.642	282.515
	13440.000	281.635	282.545
	13450.000	281.625	282.644
	13460.000	281.612	282.683
	13470.000	281.596	282.633
	13480.000	281.577	282.701
	13490.000	281.554	282.580
	13500.000	281.528	282.506
	13510.000	281.499	282.485
	13520.000	281.467	282.461
	13530.000	281.431	282.500
	13540.000	281.393	282.183
	13550.000	281.351	282.178
	13560.000	281.305	282.103
	13570.000	281.257	282.033
	13580.000	281.205	282.100
	13590.000	281.150	282.074
	13600.000	281.092	282.054
	13610.000	281.031	281.970
	13620.000	280.966	281.907
	13630.000	280.899	281.840
	13640.000	280.827	281.920
	13650.000	280.753	281.878
	13660.000	280.676	281.715
	13670.000	280.595	281.686
	13680.000	280.511	281.540
	13690.000	280.424	281.436
	13700.000	280.334	281.296
	13710.000	280.240	281.121
	13720.000	280.143	280.907
	13730.000	280.043	280.670
	13740.000	279.940	280.440
	13750.000	279.833	280.425
	13760.000	279.724	280.200
	13770.000	279.611	280.072
	13780.000	279.494	280.000
	13790.000	279.375	280.036
	13800.000	279.252	280.197
	13810.000	279.127	280.201
	13820.000	278.997	280.019
	13830.000	278.865	279.900
	13840.000	278.730	278.614

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FIRST ISSUE				
Rev	Drawn / Des	Checked	Approved	Date
Description				Subtability
FINAL				B



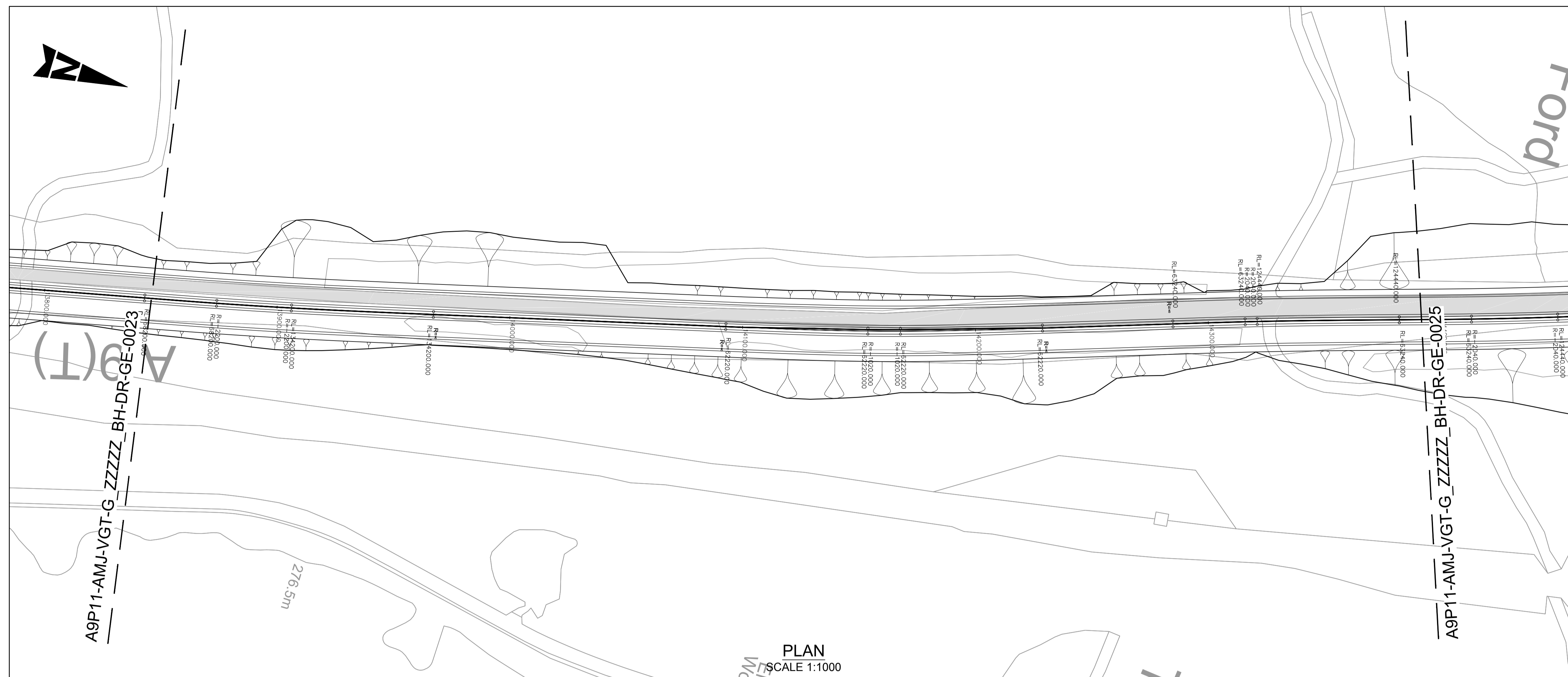
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**FIGURE 5.20-MAINLINE ALIGNMENT OPTION 1A BOREHOLE PLAN AND LONG SECTION (SHEET 23 OF 41)**

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Original Size	Date	Date	Date	Date
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Drawing Number	Project	Originator	Volume	Revision
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Location	Type	Role	Number	

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**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	

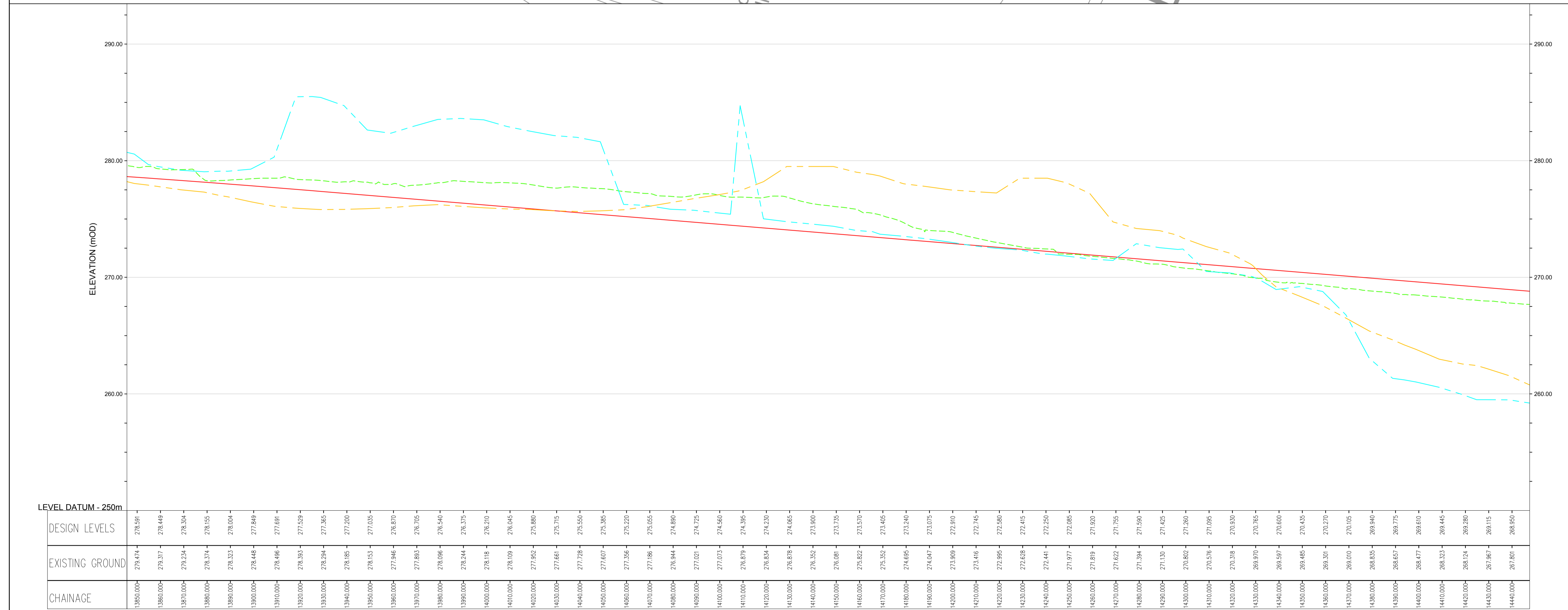
**GEOTECHNICAL LONG SECTION KEY:**

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

PLAN  
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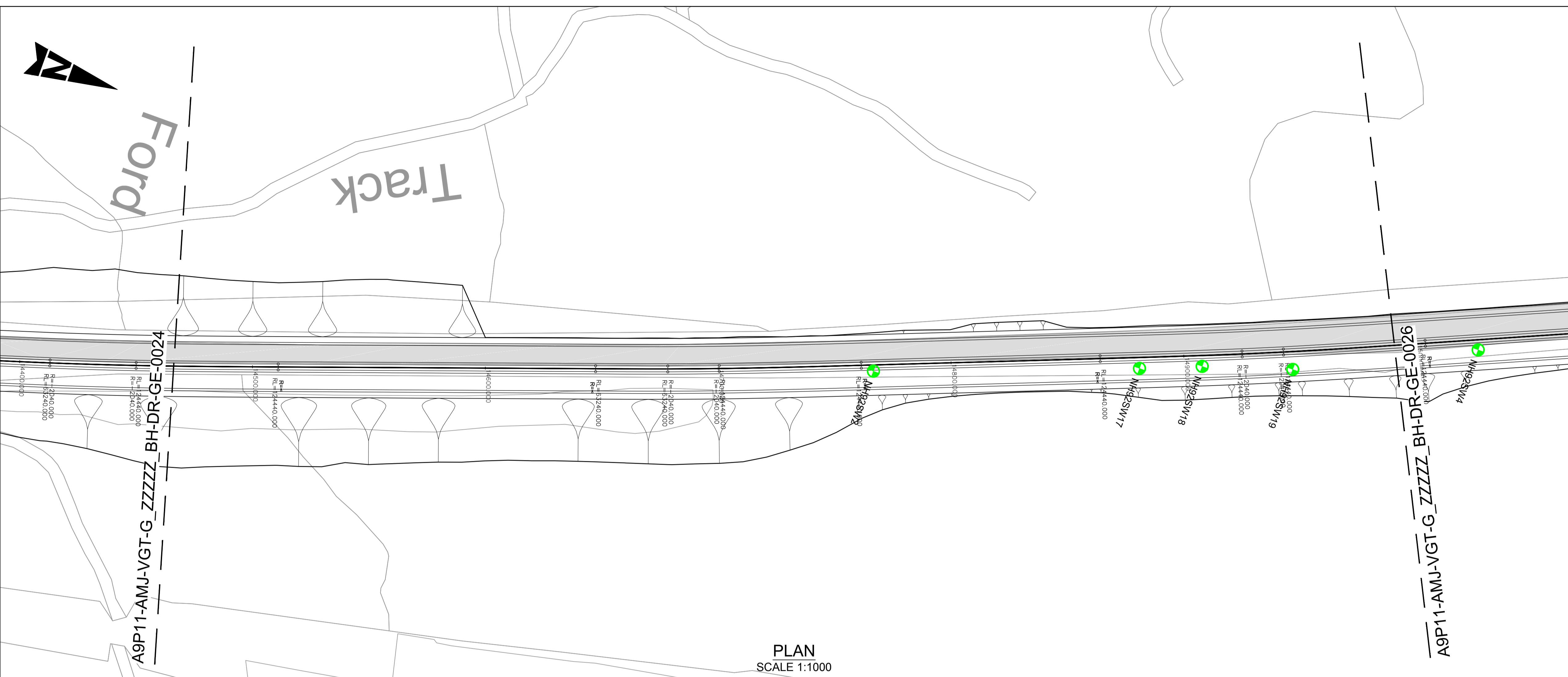
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Drawing Title				
FIGURE 5.20-MAINLINE ALIGNMENT OPTION 1A BOREHOLE PLAN AND LONG SECTION (SHEET 24 OF 41)				
Scale	Designed / Drawn	Checked	Approved	Authorised
AS SHOWN	CC	KP	KP	RG
Original Size	Date	Date	Date	Date
A1	02/08/16	03/08/16	03/08/16	05/08/16
Drawing Number				
Project	Originator	Volume	Revision	
A9P11 - AMJ - VGT - G_ZZZZZ_BH - DR - GE - 0024			P01	
Location	Type	Role	Number	

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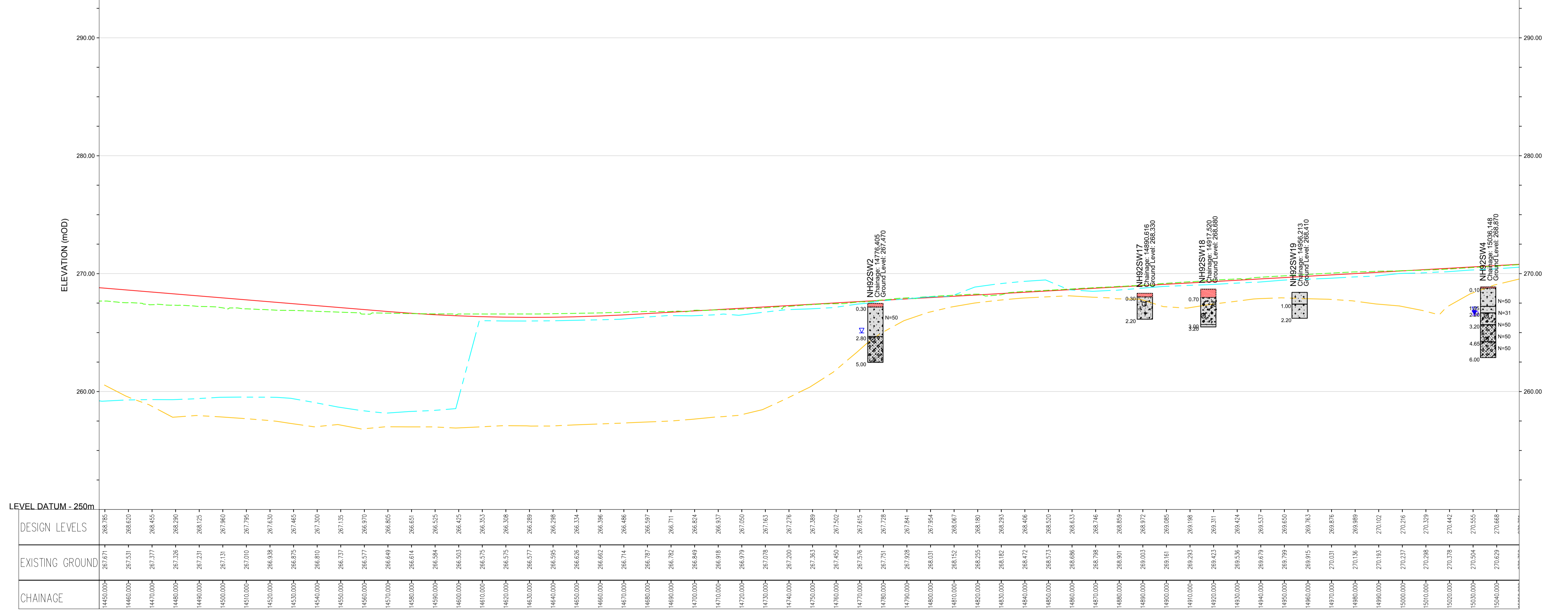
- NOTES:
- ALL LEVELS IN mAOD UNLESS OTHERWISE NOTED. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE NOTED.
  - ALL DEPTHS SHOWN ARE IN METRES.
  - HISTORICAL BOREHOLE POSITIONS AND LEVELS INFERRED FROM BGS DATABASE TO ACCURACY ± 10m.

- 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

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

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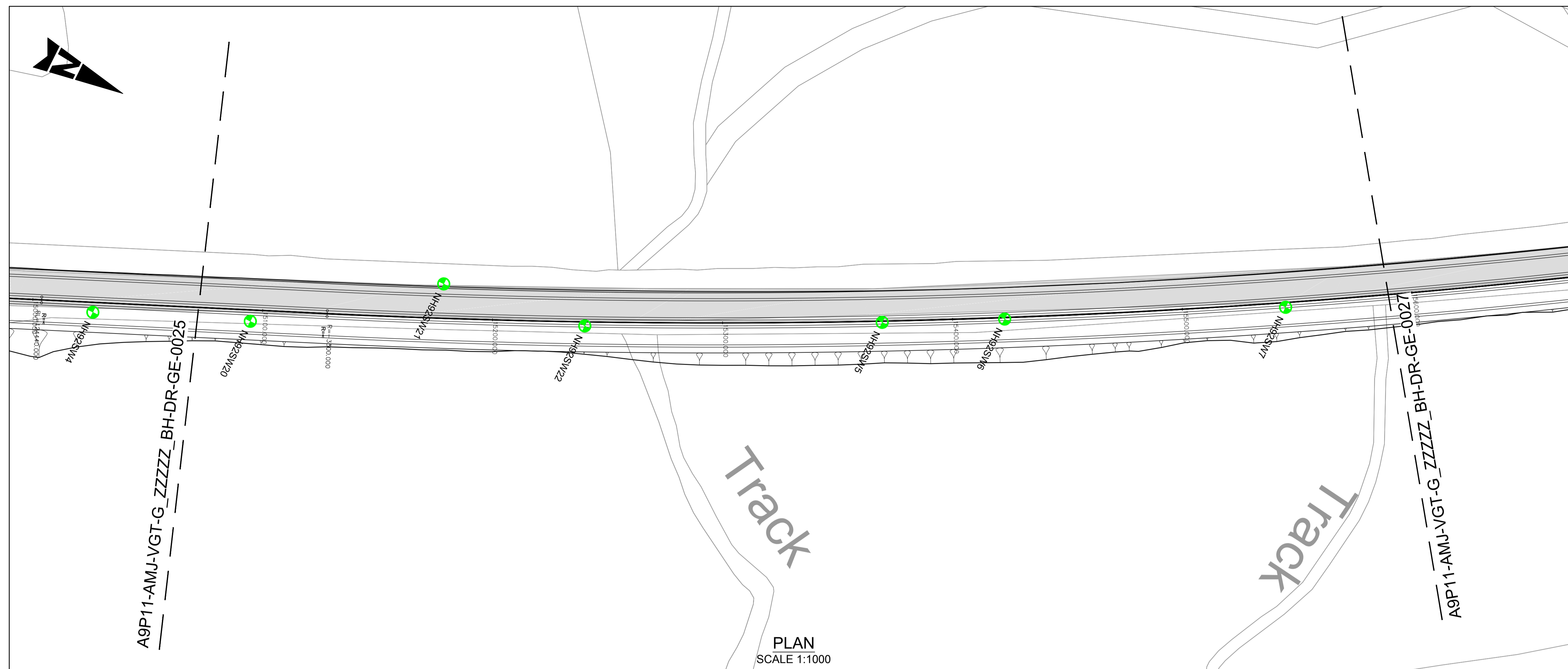
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**FIGURE 5.20-MAINLINE ALIGNMENT OPTION 1A BOREHOLE PLAN AND LONG SECTION (SHEET 25 OF 41)**

Scale	Designed / Drawn	Checked	Approved	Authorised
AS SHOWN	CC	KP	KP	RG
Original Size	Date	Date	Date	Date
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Drawing Number	Project	Originator	Volume	Revision
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Location	Type	Role	Number	

Plotted: Mar 28, 2017 - 1:50pm by: CARR6635

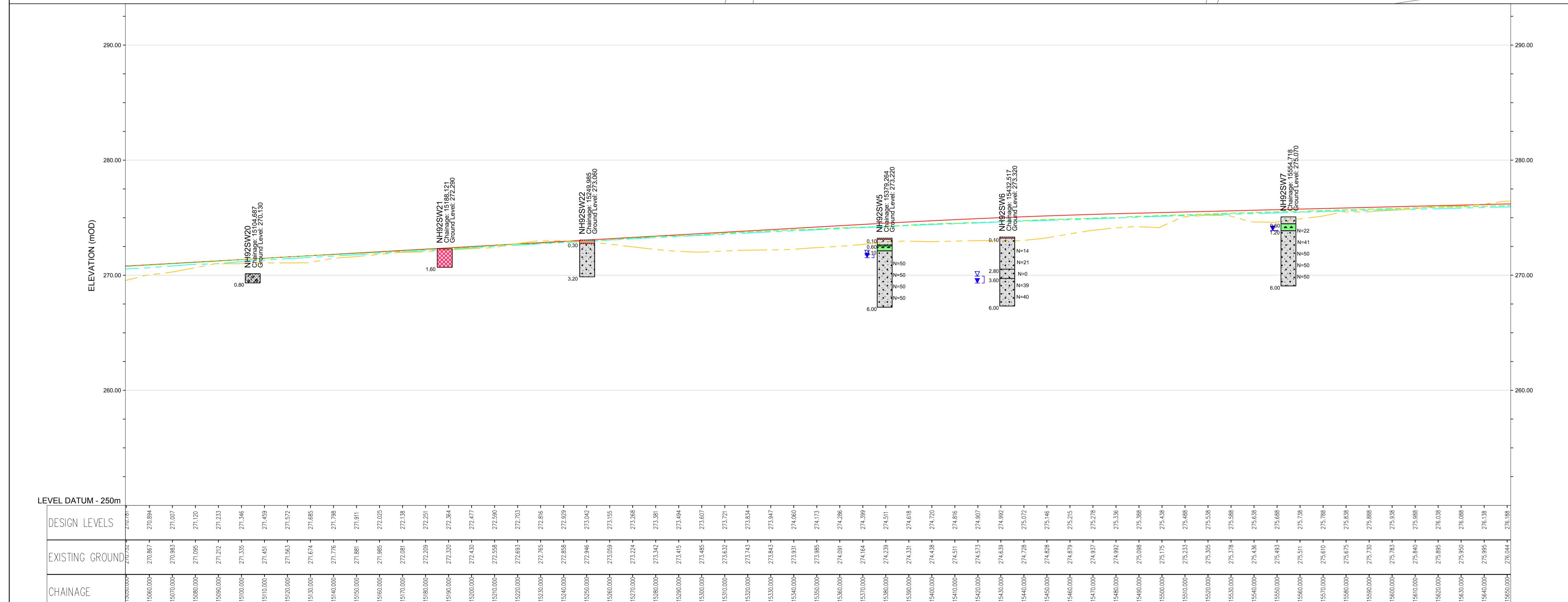
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Millimetres  
DO NOT SCALE



- NOTES:**
- ALL LEVELS IN m AOD 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

PLAN SCALE 1:1000



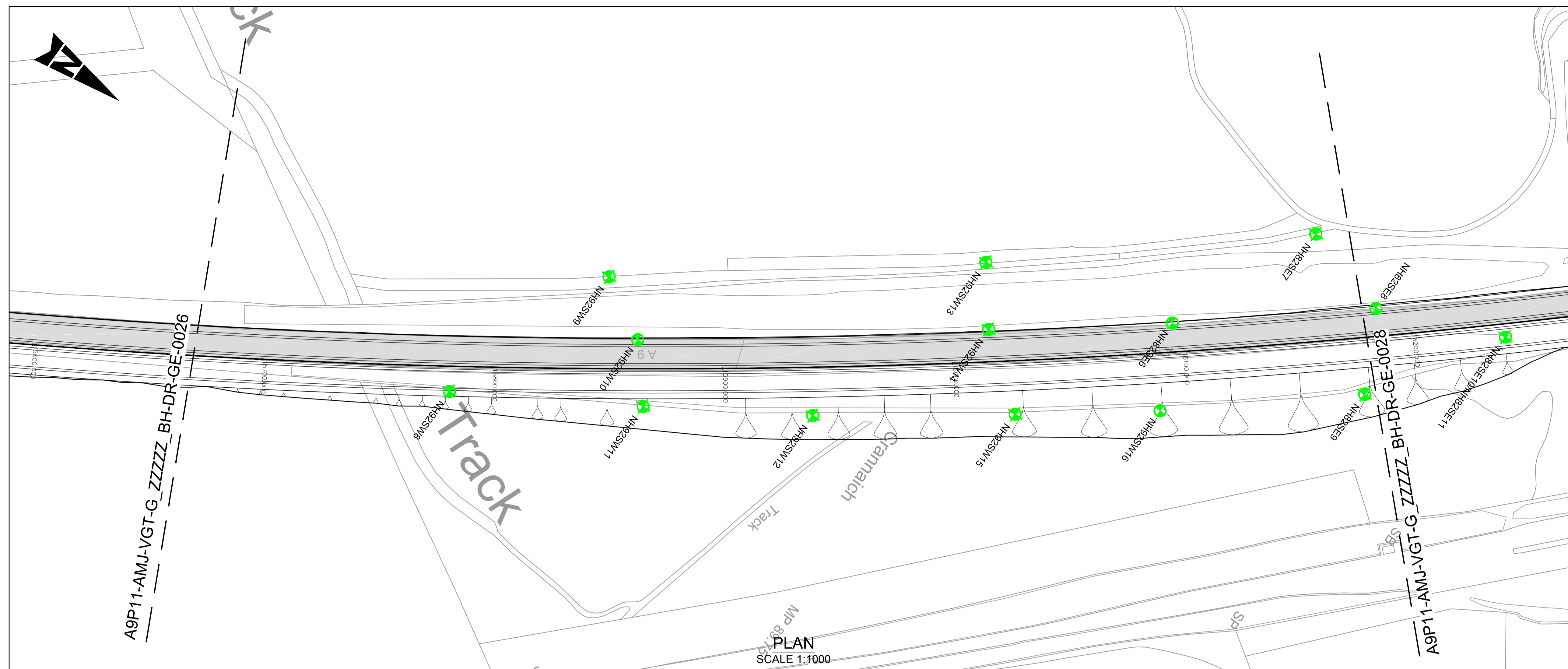
ELEVATION SCALE 1:1000 H 1:200 V

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 5.20-MAINLINE ALIGNMENT OPTION 1A 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 - G_ZZZZ_BH - DR - GE - 0026			P01	
Location	Type	Role	Number	

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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:**

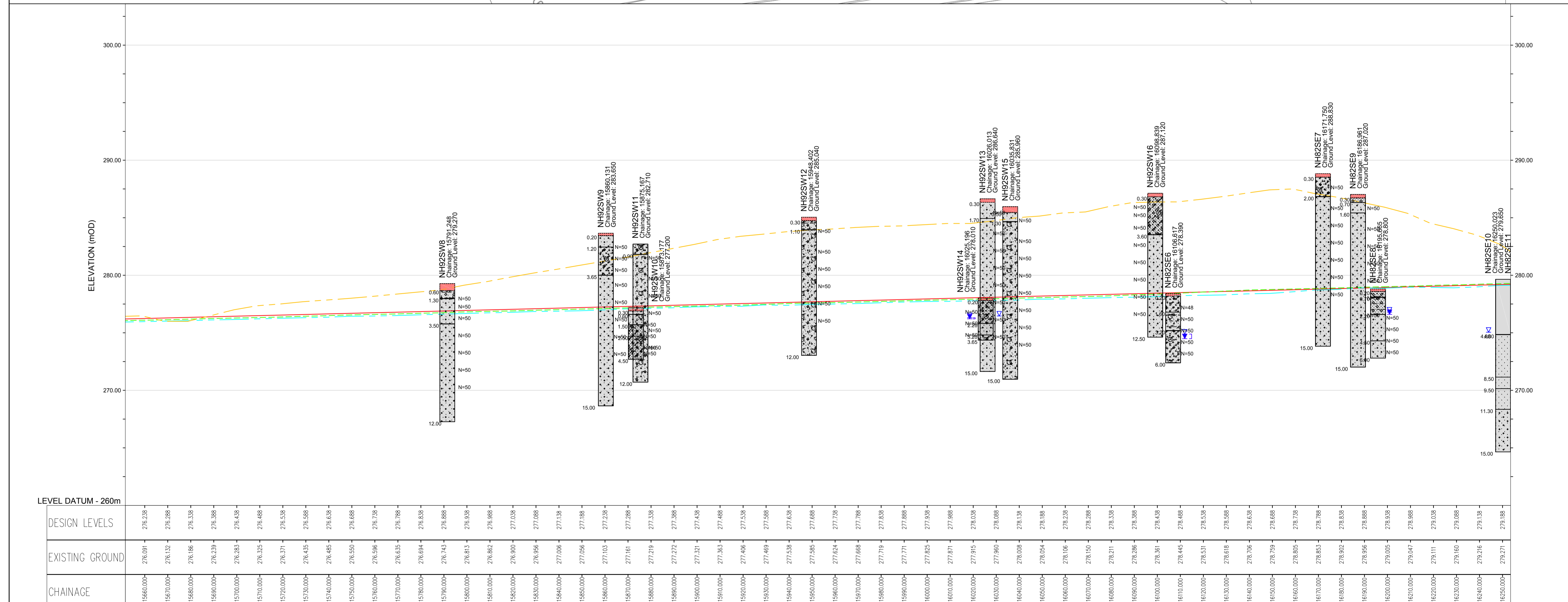
NH82NW 1973 BOREHOLE	NH80NE 1978 BOREHOLE
NH82NW 1973 CORE	NH80NE 1978 CORE
NH82NW 1973 TRIAL PIT	NH80NE 1978 TRIAL PIT
NH91NW 1977 BOREHOLE	NH81SE 2003 BOREHOLE
NH91NW 1977 CORE	NH81SE 2003 CORE
NH91NW 1977 TRIAL PIT	NH81SE 2003 TRIAL PIT
NH81SE 1964 BOREHOLE	NH81SE 1999 BOREHOLE
NH81SE 1964 CORE	NH81SE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



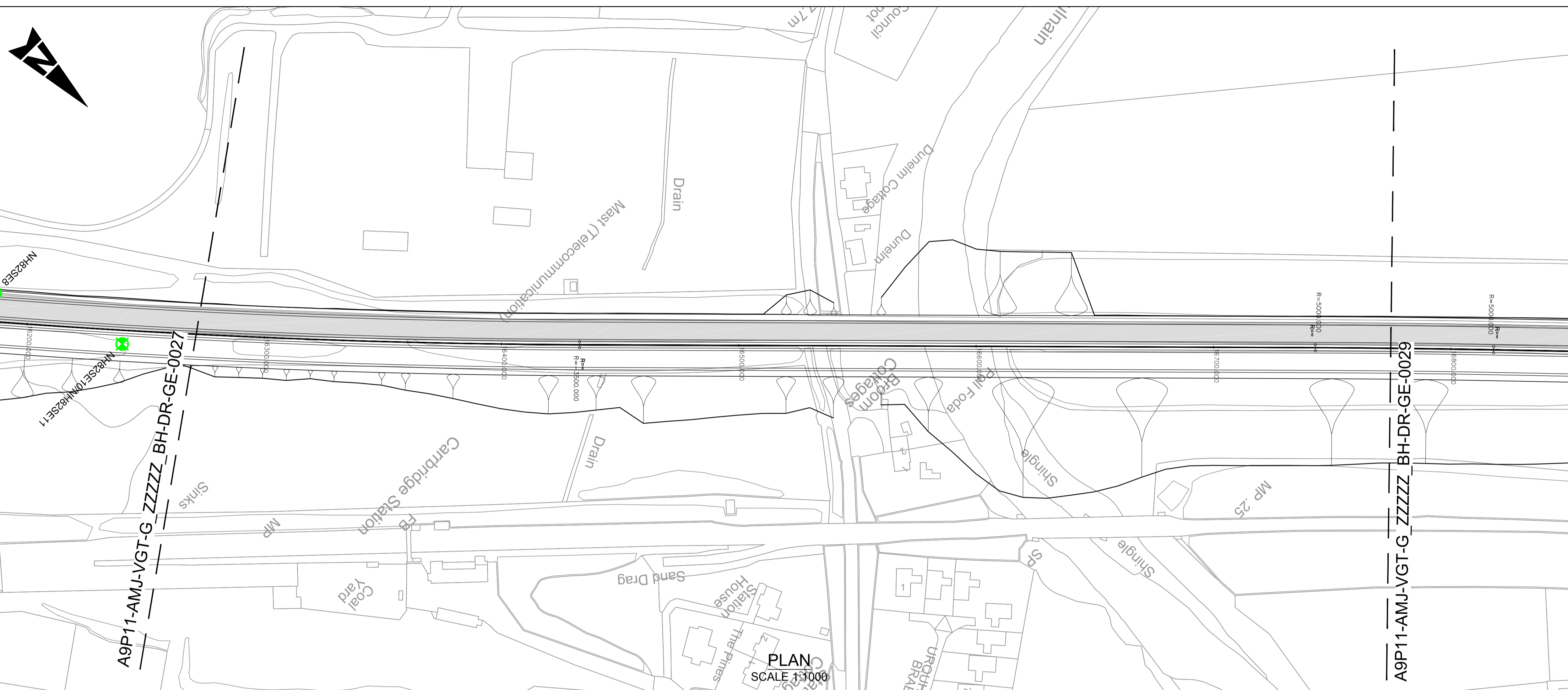
P01	CC	KP	KP	05/08/16
FIRST ISSUE				
Rev	Drawn / Des	Checked	Approved	Date
Description				
Drawing Status: FINAL				Subtability: B
Client: <b>TRANSPORT SCOTLAND</b> An agency of The Scottish Government				
Drawing Title: <b>FIGURE 5.20-MAINLINE ALIGNMENT OPTION 1A BOREHOLE PLAN AND LONG SECTION (SHEET 27 OF 41)</b>				
Scale: AS SHOWN	Designed / Drawn: CC	Checked: KP	Approved: KP	Authorised: RG
Original Size: A1	Date: 02/08/16	Date: 03/08/16	Date: 03/08/16	Date: 05/08/16
Drawing Number: Project	Originator: A9P11 - AMJ - VGT - G_ZZZZ_BH - DR - GE - 0027	Volume:	Revision: P01	
Location:	Type:	Role:	Number:	

Plotted: Mar 28, 2017 - 2:15pm by: CARR6635

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**ELEVATION**  
SCALE 1:200 H

100  
10  
0  
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

DESIGN LEVELS	EXISTING GROUND	CHAINAGE
273.226	273.311	16300.000
273.288	273.343	16370.000
273.338	273.375	16380.000
273.388	273.422	16390.000
273.438	273.453	16390.000
273.488	273.506	16390.000
273.538	273.571	16390.000
273.588	273.568	16390.000
273.638	273.611	16390.000
273.688	273.666	16390.000
273.738	273.696	16390.000
273.788	273.730	16390.000
273.838	273.785	16390.000
273.888	273.837	16390.000
273.938	273.881	16400.000
273.988	273.930	16400.000
280.038	273.924	16420.000
280.088	280.192	16430.000
280.138	280.160	16440.000
280.188	280.155	16450.000
280.238	280.221	16460.000
280.288	280.237	16470.000
280.338	280.306	16480.000
280.388	280.314	16490.000
280.438	280.320	16500.000
280.488	280.304	16510.000
280.538	280.270	16520.000
280.588	280.588	16530.000
280.638	280.444	16540.000
280.688	280.488	16540.000
280.738	280.550	16550.000
280.788	280.597	16560.000
280.838	280.654	16570.000
280.888	280.660	16580.000
280.938	280.751	16590.000
280.988	280.790	16600.000
281.038	280.884	16610.000
281.088	280.918	16620.000
281.138	280.953	16630.000
281.188	280.996	16640.000
281.238	281.026	16650.000
281.288	280.954	16660.000
281.338	281.028	16670.000
281.388	281.100	16680.000
281.438	281.127	16690.000
281.488	281.180	16700.000
281.538	281.252	16710.000
281.588	281.274	16720.000
281.638	281.324	16730.000
281.688	281.395	16740.000
281.738	281.460	16750.000
281.788	281.536	16760.000
281.838	281.595	16770.000
281.888	281.600	16780.000
281.938	281.688	16790.000
281.988	281.852	16800.000
282.038	281.938	16810.000
282.088	281.991	16820.000
282.138	282.071	16830.000
282.188	282.108	16840.000
282.238	282.177	16850.000

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



Drawing Title  
FIGURE 5.20-MAINLINE ALIGNMENT OPTION 1A  
BOREHOLE PLAN AND LONG SECTION  
(SHEET 28 OF 41)

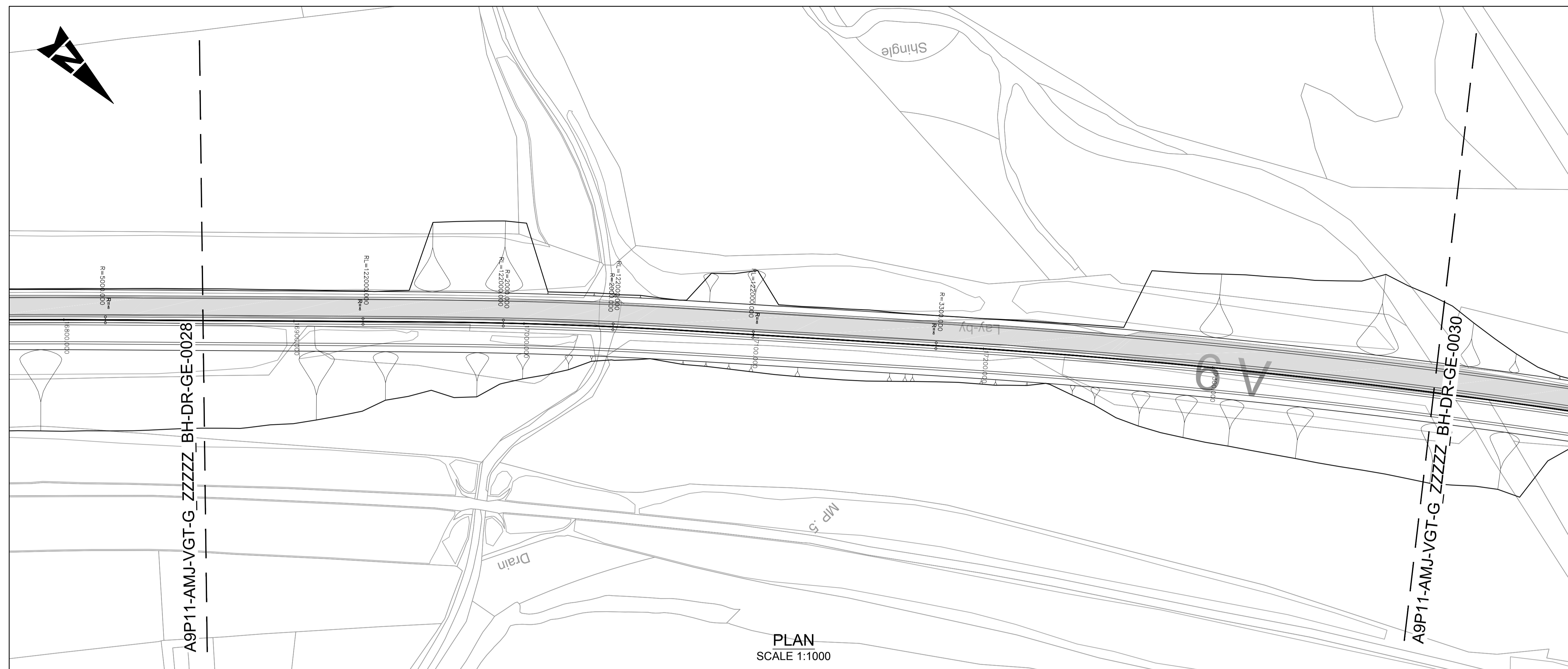
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Drawing Number	Project	Originator	Volume	Revision
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Location	Type	Role	Number	

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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:**

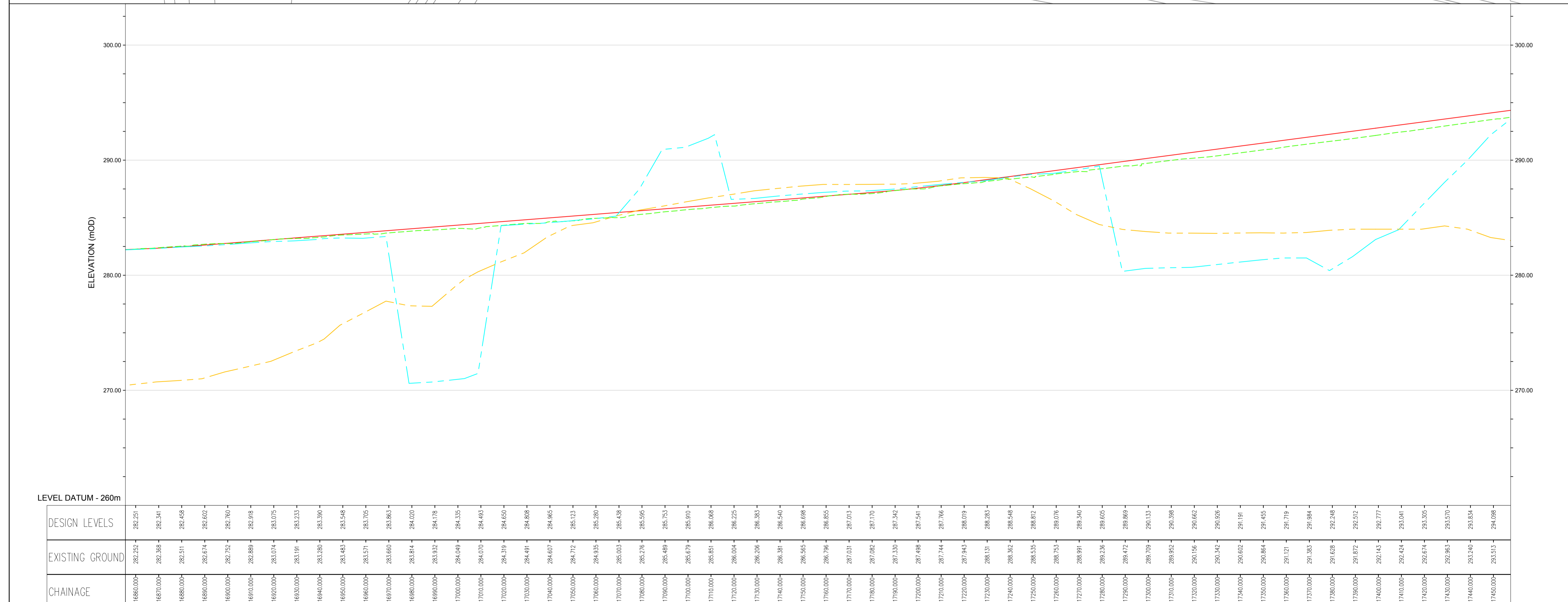
NH82NW	1973 BOREHOLE	NH80NE	1978 BOREHOLE
NH82NW	1973 CORE	NH80NE	1978 CORE
NH82NW	1973 TRIAL PIT	NH80NE	1978 TRIAL PIT
NH91NW	1977 BOREHOLE	NH81SE	2003 BOREHOLE
NH91NW	1977 CORE	NH81SE	2003 CORE
NH91NW	1977 TRIAL PIT	NH81SE	2003 TRIAL PIT
NH81SE	1964 BOREHOLE	NH81SE	1999 BOREHOLE
NH81SE	1964 CORE	NH81SE	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.

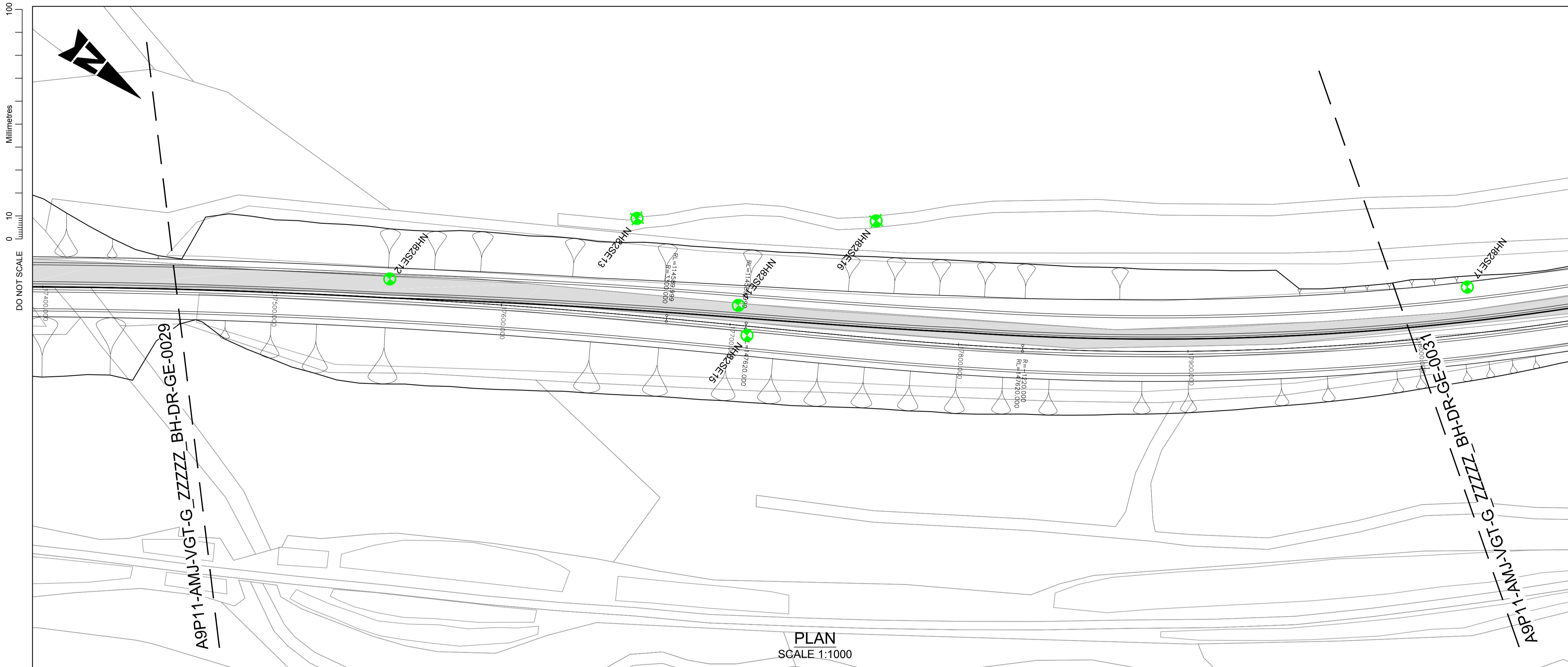
WATER STRIKE  
 RISE TO IN 20 MINS  
 PROPOSED ROAD LEVEL  
 EXISTING GROUND LEVEL  
 SOUTHBOUND EARTHWORKS LEVEL  
 NORTHBOUND EARTHWORKS LEVEL



P01	CC	KP	KP	05/08/16
FIRST ISSUE				
Rev	Drawn / Des	Checked	Approved	Date
Description				Subtality
Drawing Status				B
Client				
 An agency of The Scottish Government				
 Dalraddy to Slouch				
Drawing Title				
FIGURE 5.20-MAINLINE ALIGNMENT OPTION 1A 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				
Project	Originator	Volume	Revision	
A9P11 - AMJ - VGT - G_ZZZZ_BH - DR - GE - 0029			P01	
Location	Type	Role	Number	

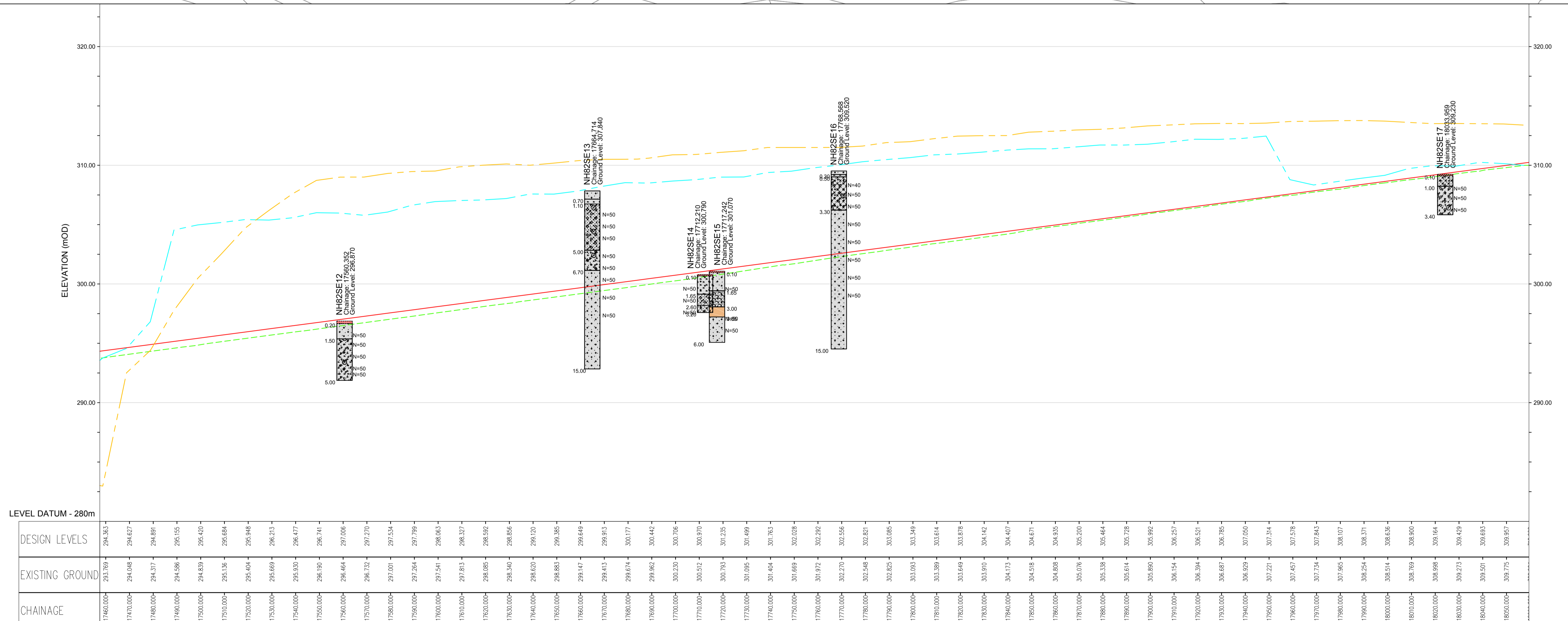
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  - ALL DEPTHS SHOWN ARE IN METRES.
  - HISTORICAL BOREHOLE POSITIONS AND LEVELS INFERRED FROM BGS DATABASE TO ACCURACY ± 10m.
- KEY:**
- EXISTING A9
- BGS HISTORICAL GROUND INVESTIGATION:**
- |                       |                       |
|-----------------------|-----------------------|
| 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 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



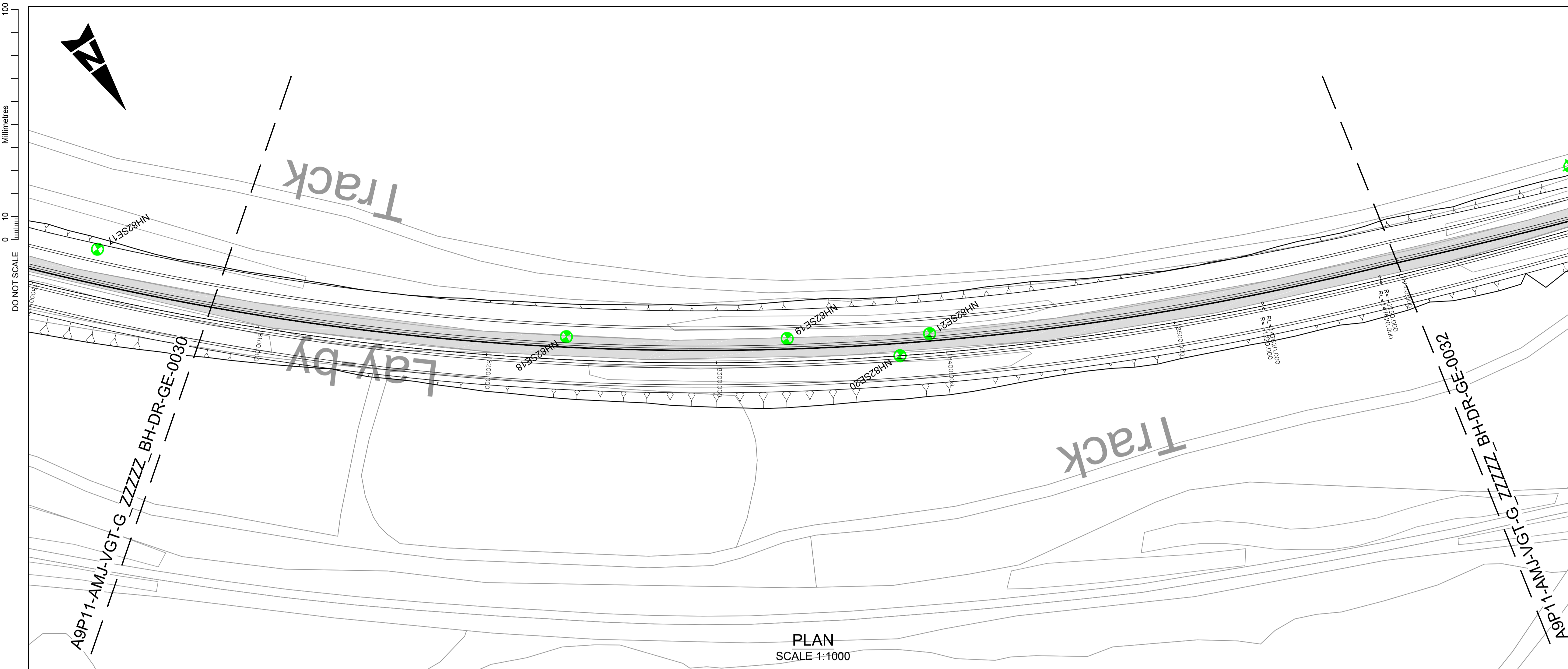
ELEVATION SCALE 1:1000 H 1:200 V

P01	CC	KP	KP	05/08/16
FIRST ISSUE				
Rev	Drawn / Des	Checked	Approved	Date
Description				
Drawing Status				Suitability
FINAL				B
Client				
 An agency of The Scottish Government				
 Dairdery to Slouch				
Drawing Title				
FIGURE 5.20-MAINLINE ALIGNMENT OPTION 1A 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 - G_ZZZZ_BH - DR - GE - 0030			P01	
Location	Type	Role	Number	

Plotfile: Mar 28, 2017 - 2:39pm by: CARR6635

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100  
10  
0  
DO NOT SCALE



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

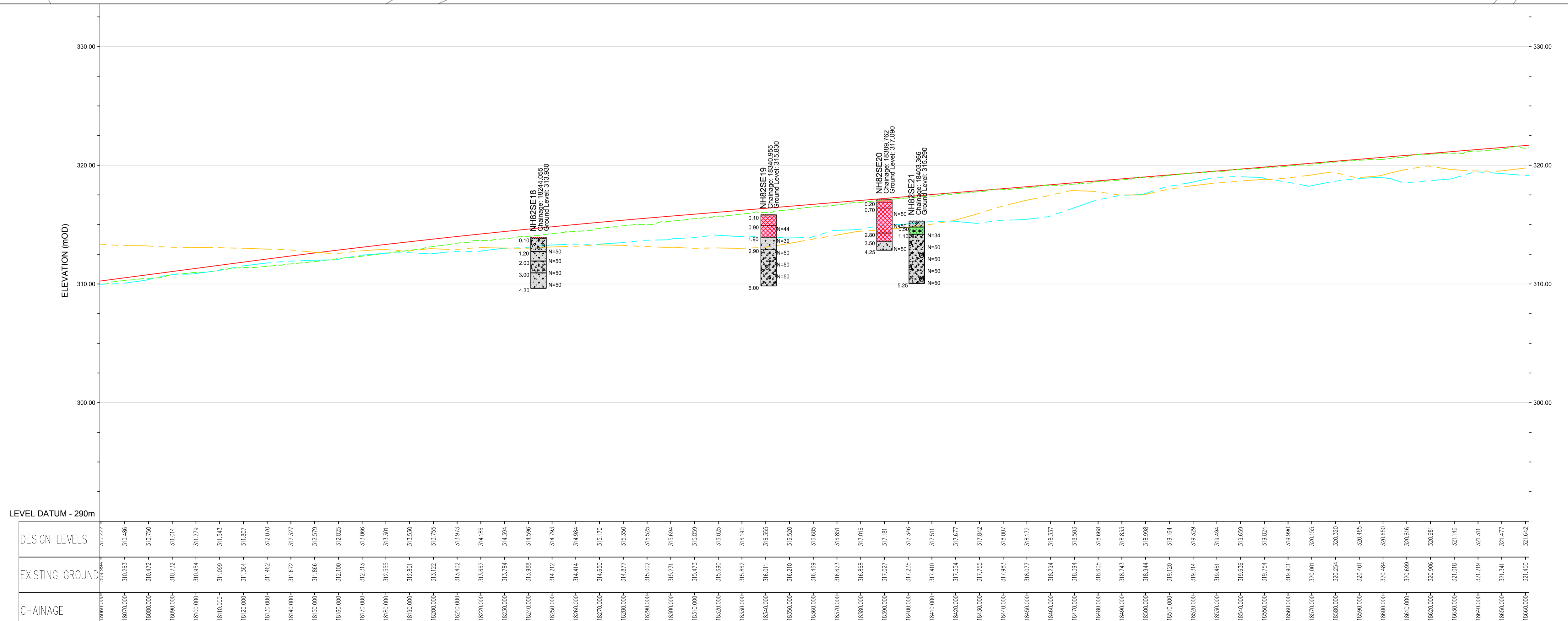
- KEY:**
- EXISTING A9
- BGS HISTORICAL GROUND INVESTIGATION:**
- |                       |                       |
|-----------------------|-----------------------|
| NH82NW 1973 BOREHOLE  | NH80NE 1978 BOREHOLE  |
| NH82NW 1973 CORE      | NH80NE 1978 CORE      |
| NH82NW 1973 TRIAL PIT | NH80NE 1978 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      | 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  
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				Subtability
Drawing Status				B
Client				

FINAL				
Subtability				
B				

Client  
**TRANSPORT SCOTLAND**  
An agency of The Scottish Government



**ATKINS mouchel**

Drawing Title  
**FIGURE 5.20-MAINLINE ALIGNMENT OPTION 1A 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 - G_ZZZZ_BH - DR - GE - 0031			P01
Location	Type	Role	Number	

Plotfile: Mar 28, 2017 - 2:49pm by: CARR6635

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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
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
NH82SE 2008 TRIAL PIT	

**GEOTECHNICAL LONG SECTION KEY:**

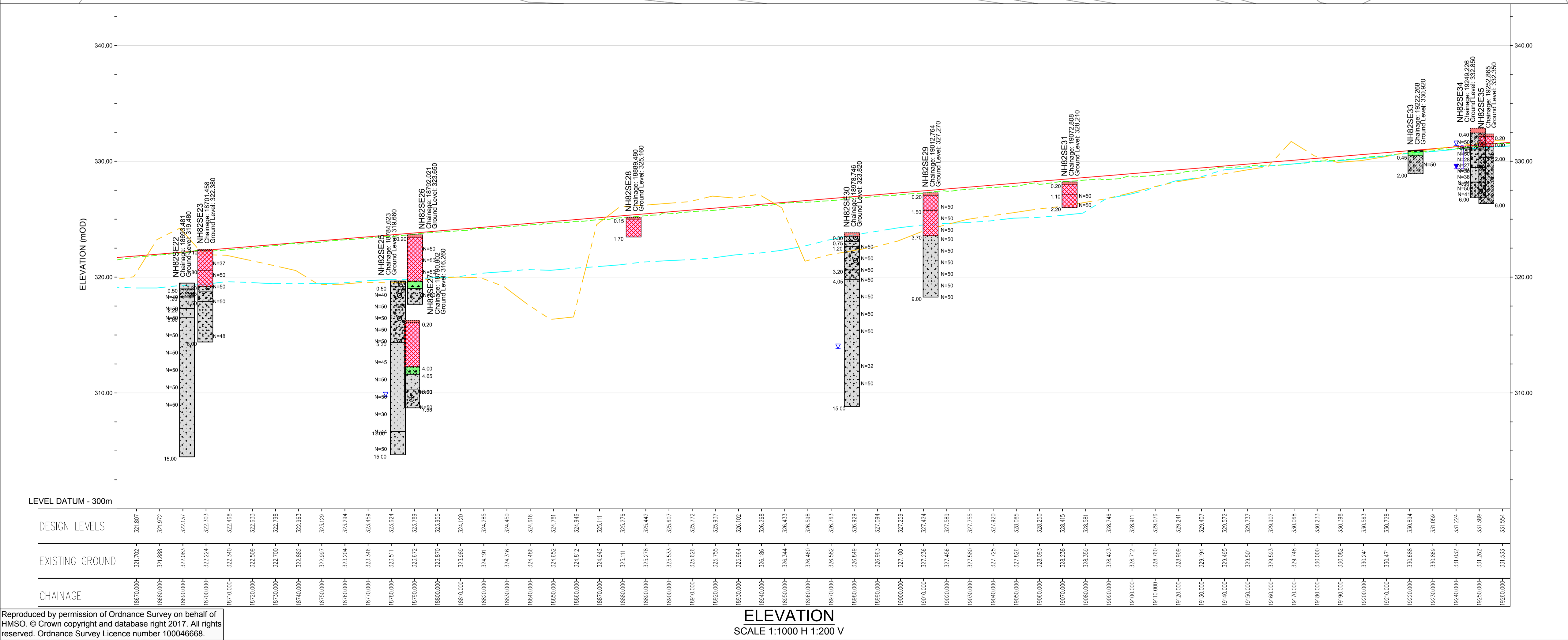
TOPSOIL	TOPSOIL
MADE GROUND	MADE GROUND
PEAT	SAND
ALLUVIUM GRANULAR	GRAVEL
RIVER TERRACE DEPOSITS COHESIVE	SILT
RIVER TERRACE DEPOSITS GRANULAR	CLAY
GLACIAL FLUVIAL GRANULAR	BOULDERS
GLACIAL TILL COHESIVE	BEDROCK
GLACIAL TILL GRANULAR	
ROCK	

**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

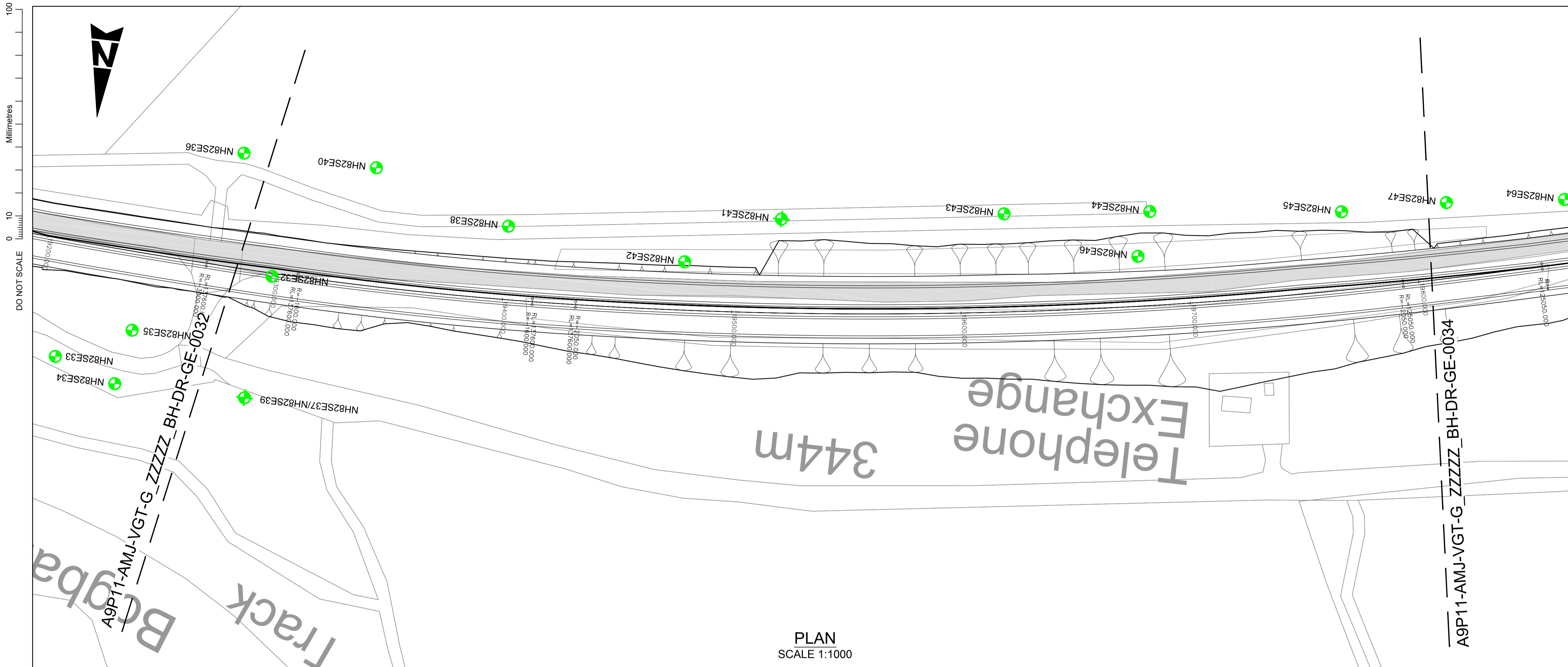


ELEVATION SCALE 1:200 V

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				
 Dalraddy to Stochd				
Drawing Title				
FIGURE 5.20-MAINLINE ALIGNMENT OPTION 1A 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 - G_ZZZZ_BH - DR - GE - 0032			P01	
Location	Type	Role	Number	

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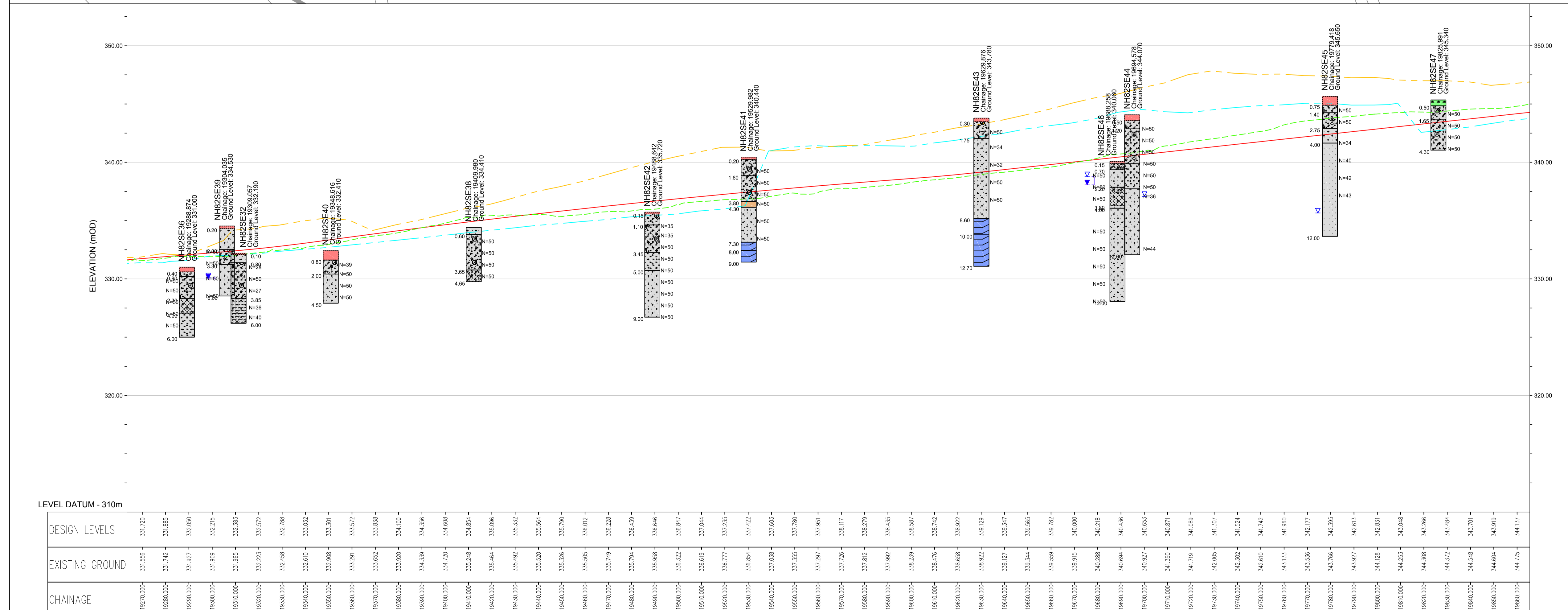


- NOTES:
- ALL LEVELS IN mAOD UNLESS OTHERWISE NOTED. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE NOTED.
  - ALL DEPTHS SHOWN ARE IN METRES.
  - HISTORICAL BOREHOLE POSITIONS AND LEVELS INFERRED FROM BGS DATABASE TO ACCURACY ± 10m.

- 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 TRIAL PIT |
| NH81SE 1964 BOREHOLE  | NH81SE 1999 BOREHOLE  |
| NH81SE 1964 CORE      | NH81SE 1999 TRIAL PIT |
| NH82SE 1993 BOREHOLE  | NH81SE 1999 BOREHOLE  |
| NH82SE 1993 TRIAL PIT | NH81SE 1999 CORE      |
| 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



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



Drawing Title  
FIGURE 5.20-MAINLINE ALIGNMENT OPTION 1A  
BOREHOLE PLAN AND LONG SECTION  
(SHEET 33 OF 41)

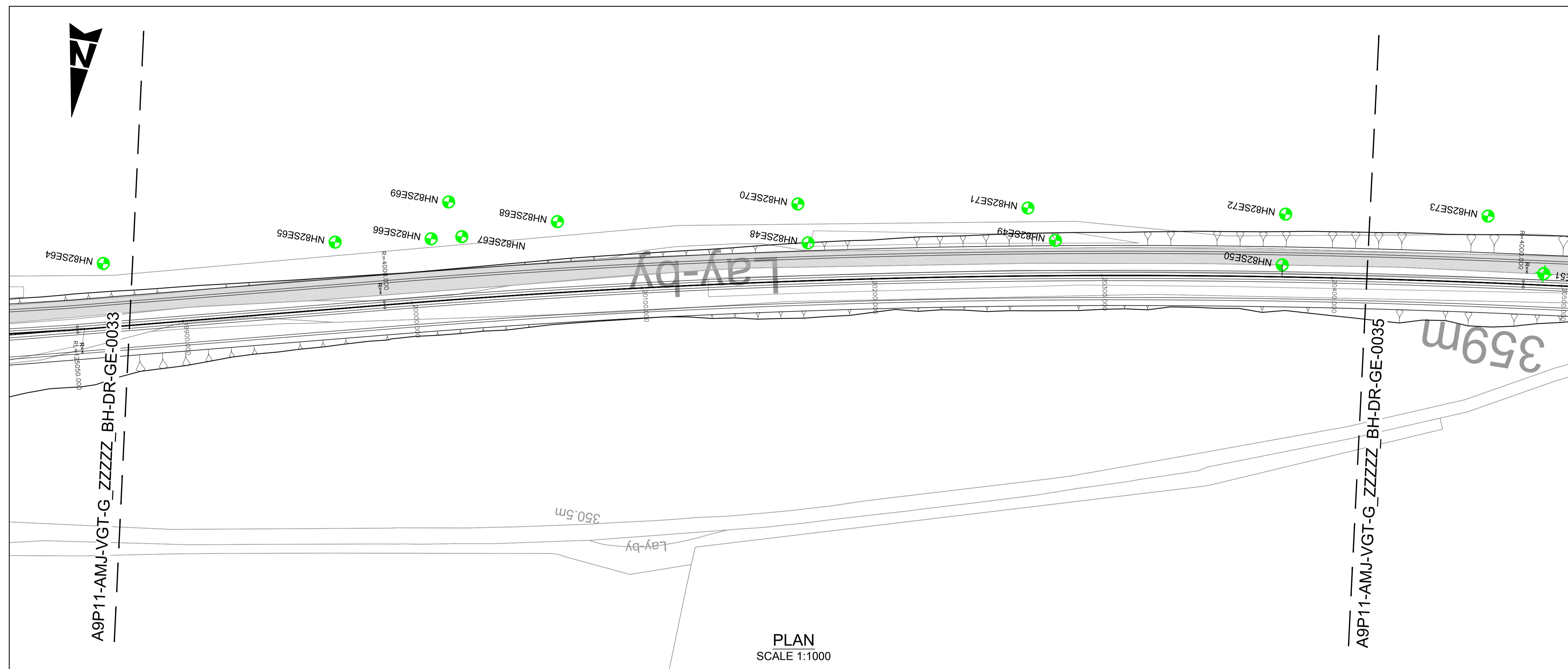
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Original Size	Date	Date	Date	Date
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Drawing Number	Project	Originator	Volume	Revision
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Location	Type	Role	Number	

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ELEVATION  
SCALE 1:1000 H 1:200 V

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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 BOREHOLE
NH82SE 2008 CORE	NH82SE 2008 CORE
NH82SE 2008 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

DEPTH (m BGL) ARE GENERALLY PRESENTED TO THE LEFT OF THE BOREHOLE LOGS ON THE GEOLOGICAL SECTION.

WATER STRIKE

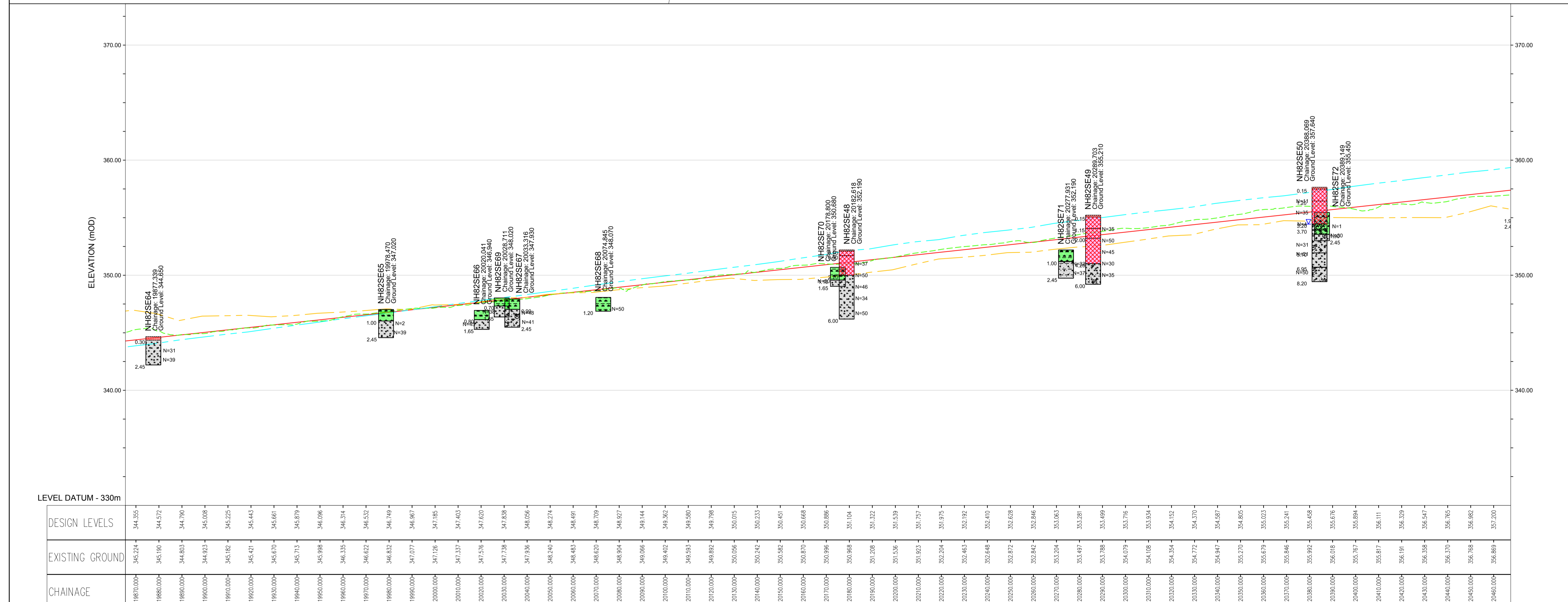
RISE TO IN 20 MINS

PROPOSED ROAD LEVEL

EXISTING GROUND LEVEL

SOUTHBOUND EARTHWORKS LEVEL

NORTHBOUND EARTHWORKS LEVEL



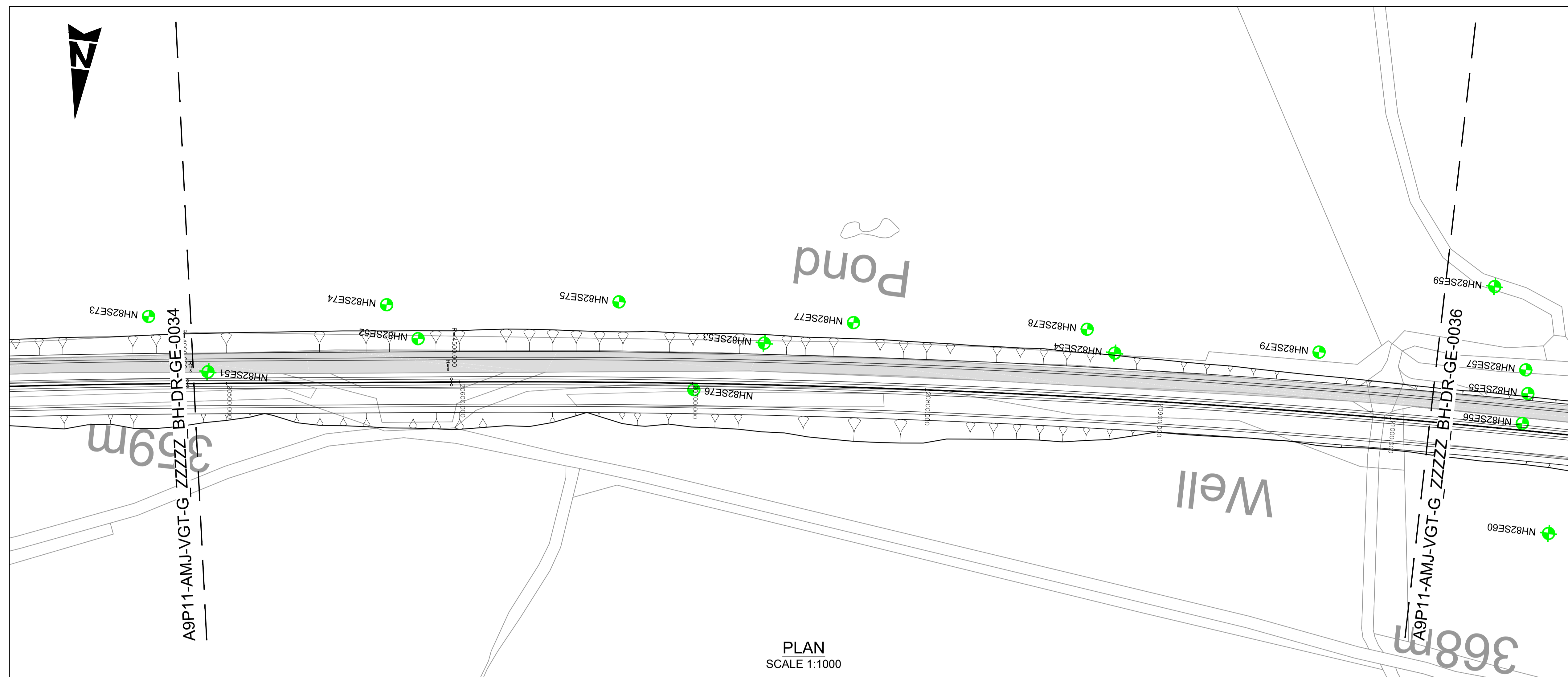
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FIRST ISSUE				
Rev	Drawn / Des	Checked	Approved	Date
Description				
Drawing Status	FINAL			Suitability
				B
Client				
 TRANSPORT SCOTLAND <small>An agency of The Scottish Government</small>				
 A9 DUALLING PERTH TO INVERNESS <small>Dalraddy to Stochd</small>				
 ATKINS mouchel				
Drawing Title				
FIGURE 5.20-MAINLINE ALIGNMENT OPTION 1A 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
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Project	Originator	Volume	Revision	
A9P11 - AMJ - VGT - G_ZZZZ_BH - DR - GE - 0034			P01	
Location	Type	Role	Number	

Plotfile: Mar 28, 2017 - 3:14pm by: CARR6635

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Millimetres  
DO NOT SCALE



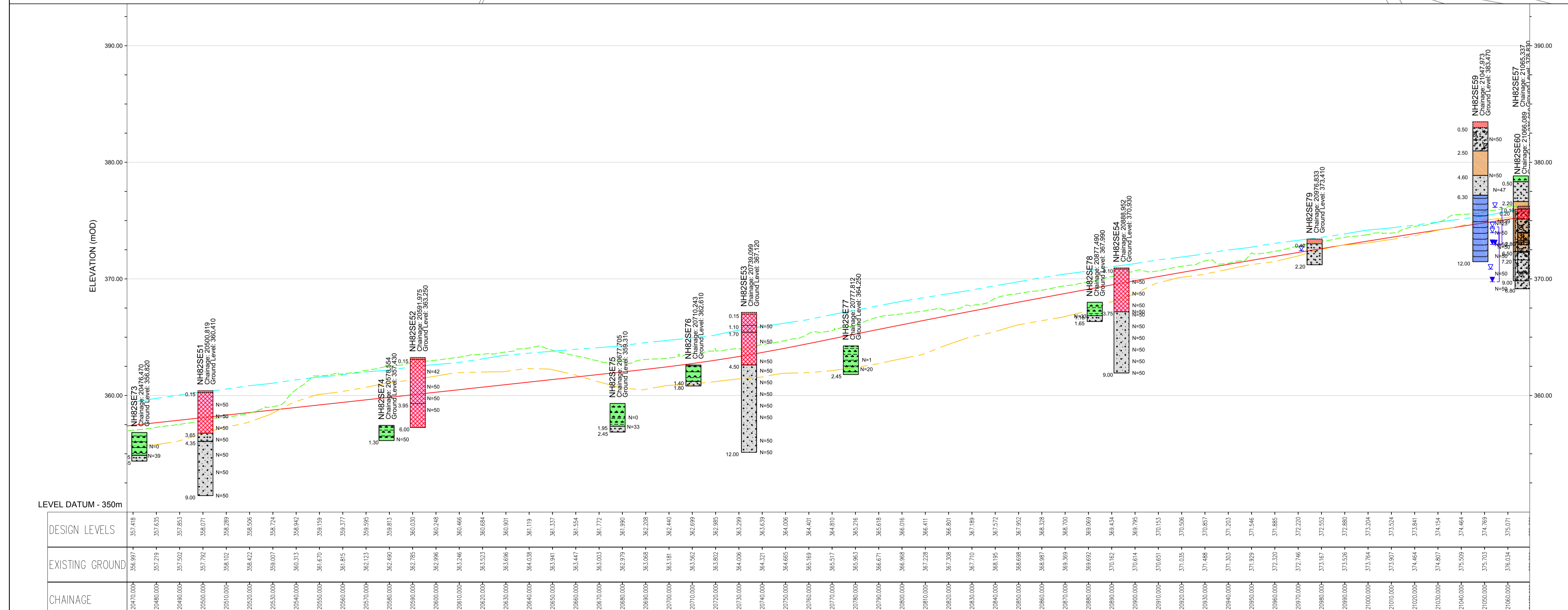
- NOTES:**
- ALL LEVELS IN mAOD UNLESS OTHERWISE NOTED. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE NOTED.
  - ALL DEPTHS SHOWN ARE IN METRES.
  - HISTORICAL BOREHOLE POSITIONS AND LEVELS INFERRED FROM BGS DATABASE TO ACCURACY ± 10m.

- 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

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

**A9 DUALLING**  
PERTH TO INVERNESS  
Dalraddy to Slochd

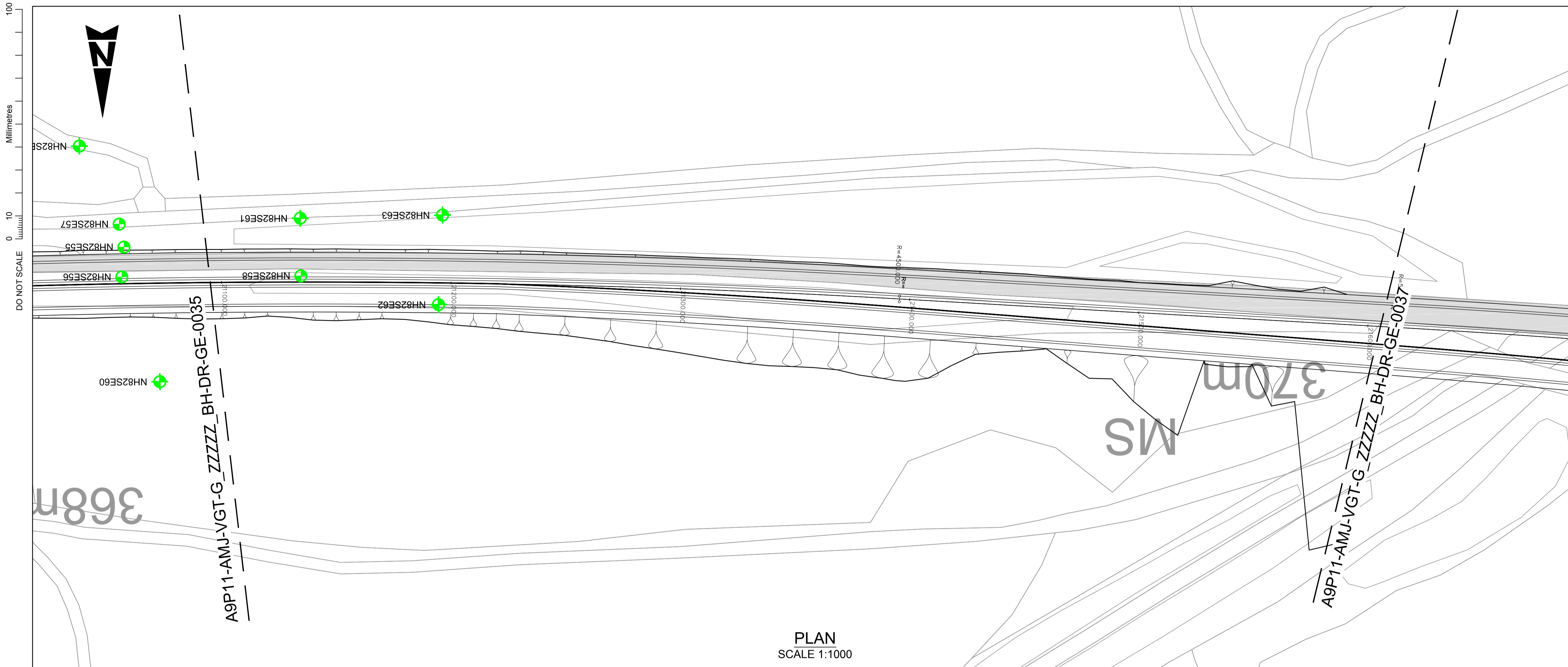
**ATKINS mouchel**

Drawing Title  
**FIGURE 5.20-MAINLINE ALIGNMENT OPTION 1A 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
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Location	Type	Role	Number	

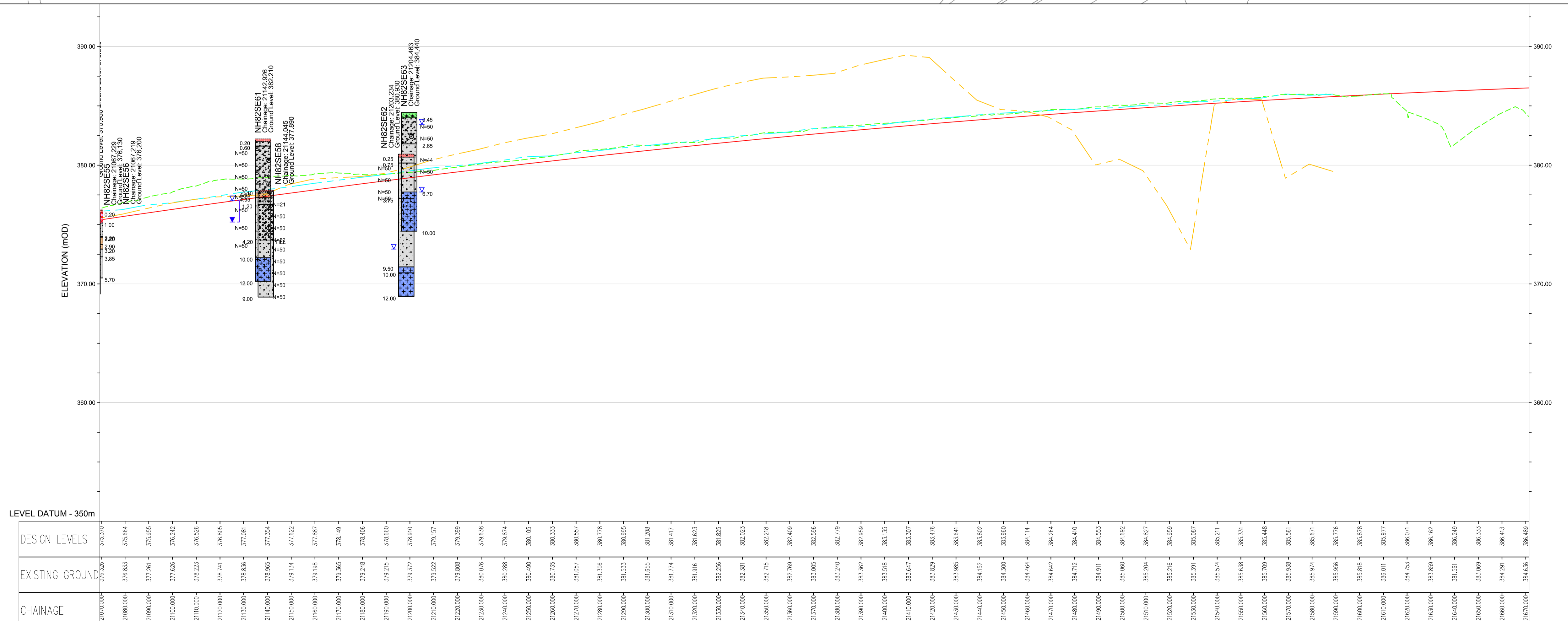
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- NOTES:**
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  - ALL DEPTHS SHOWN ARE IN METRES.
  - HISTORICAL BOREHOLE POSITIONS AND LEVELS INFERRED FROM BGS DATABASE TO ACCURACY ± 10m.
- KEY:**
- EXISTING A9
- BGS HISTORICAL GROUND INVESTIGATION:**
- |                       |                       |
|-----------------------|-----------------------|
| 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  | 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

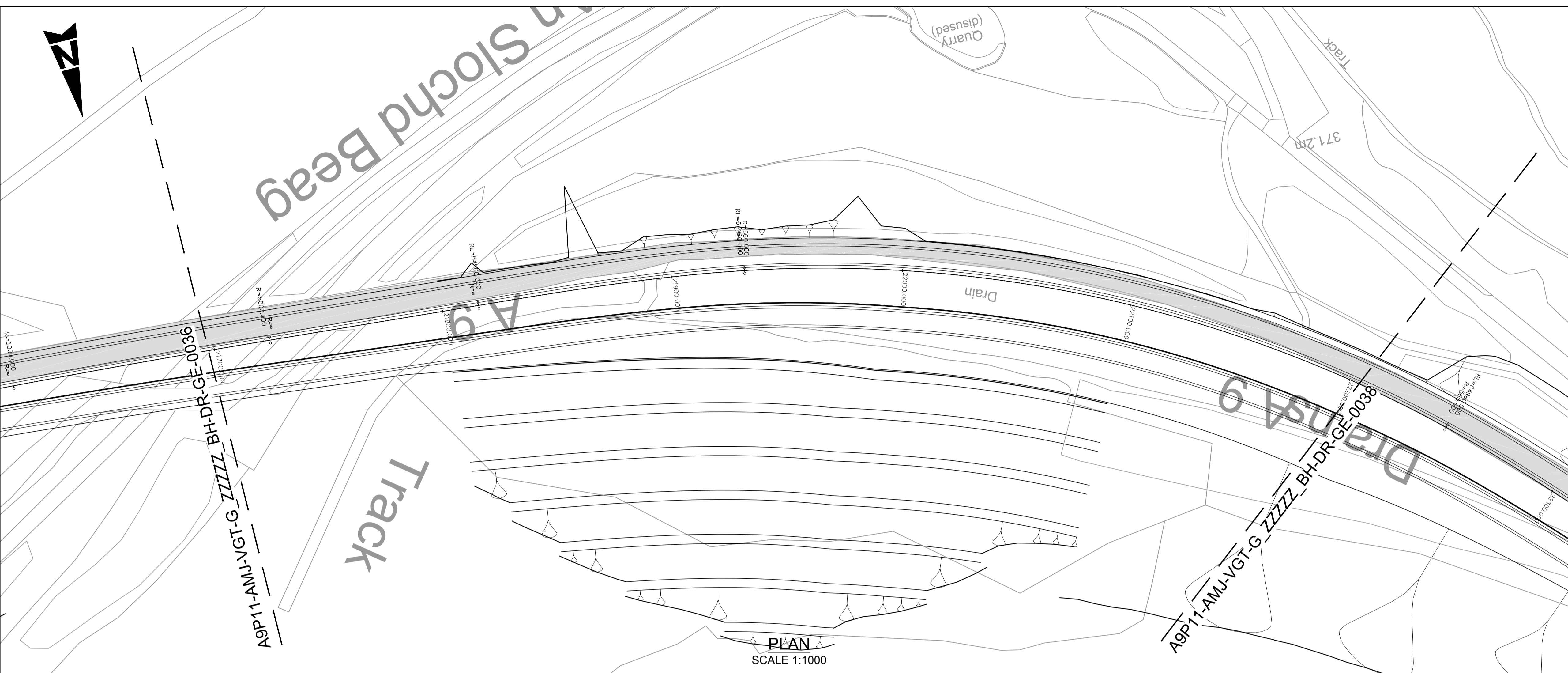
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FIRST ISSUE				
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Description				
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FINAL				B
Client				
 An agency of The Scottish Government				
 Dalraddy to Stochd				
Drawing Title				
FIGURE 5.20-MAINLINE ALIGNMENT OPTION 1A BOREHOLE PLAN AND LONG SECTION (SHEET 36 OF 41)				
Scale	Designed / Drawn	Checked	Approved	Authorised
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Drawing Number				
Project	Originator	Volume	Revision	
A9P11 - AMJ - VGT - G_ZZZZ_BH - DR - GE - 0036			P01	
Location	Type	Role	Number	

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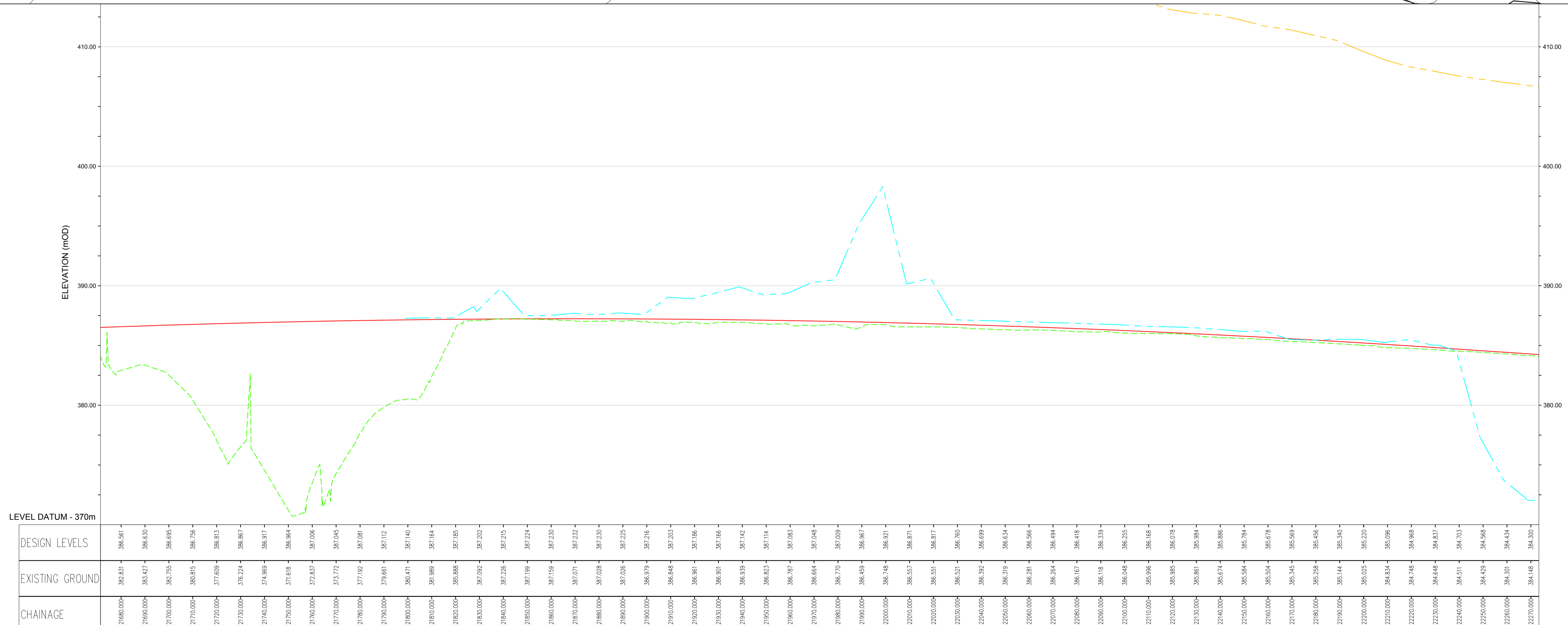


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DO NOT SCALE



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 TRIAL PIT |
| NH82NW 1973 TRIAL PIT | NH81SE 2003 BOREHOLE  |
| NH91NW 1977 BOREHOLE  | NH81SE 2003 TRIAL PIT |
| NH91NW 1977 TRIAL PIT | NH81SE 1999 BOREHOLE  |
| NH81SE 1964 BOREHOLE  | NH81SE 1999 TRIAL PIT |
| NH81SE 1964 CORE      | NH81SE 1999 BOREHOLE  |
| NH82SE 1993 BOREHOLE  | NH81SE 1999 TRIAL PIT |
| NH82SE 1993 TRIAL PIT | NH82SE 2008 BOREHOLE  |
| 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 LEVELS
  - SOUTHBOUND EARTHWORKS LEVEL
  - NORTHBOUND EARTHWORKS LEVEL



DESIGN LEVELS	EXISTING GROUND	CHAINAGE
386.561	382.831	21880.000
386.630	383.427	21890.000
386.695	383.755	21900.000
386.736	383.815	21910.000
386.813	377.609	21920.000
386.867	376.224	21930.000
386.917	374.963	21940.000
386.964	371.618	21950.000
387.006	372.857	21960.000
387.045	373.772	21970.000
387.081	377.192	21980.000
387.112	379.661	21990.000
387.140	386.471	22000.000
387.164	381.989	22010.000
387.185	386.888	22020.000
387.202	387.092	22030.000
387.215	387.228	22040.000
387.224	387.199	22050.000
387.230	387.159	22060.000
387.232	387.071	22070.000
387.230	387.028	22080.000
387.225	387.028	22090.000
387.216	386.973	22100.000
387.203	386.848	22110.000
387.186	386.961	22120.000
387.166	386.901	22130.000
387.142	386.939	22140.000
387.114	386.823	22150.000
387.083	386.787	22160.000
387.048	386.664	22170.000
387.019	386.770	22180.000
386.997	386.650	22190.000
386.971	386.748	22200.000
386.871	386.557	22210.000
386.834	386.519	22220.000
386.796	386.421	22230.000
386.748	386.319	22240.000
386.699	386.281	22250.000
386.644	386.264	22260.000
386.586	386.173	22270.000
386.531	386.118	22280.000
386.474	386.048	22290.000
386.425	385.996	22300.000
386.378	385.985	22310.000
386.334	385.881	22320.000
386.286	385.674	22330.000
386.240	385.584	22340.000
386.194	385.504	22350.000
386.145	385.345	22360.000
386.096	385.258	22370.000
386.046	385.144	22380.000
385.996	385.023	22390.000
385.946	384.834	22400.000
385.896	384.748	22410.000
385.846	384.648	22420.000
385.796	384.511	22430.000
385.746	384.423	22440.000
385.696	384.301	22450.000
385.646	384.148	22460.000
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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  
**TRANSPORT SCOTLAND**  
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**A9**  
**DUALLING**  
PERTH TO INVERNESS  
Draffady to Stochd

**ATKINS mouchel**

Drawing Title  
**FIGURE 5.20-MAINLINE ALIGNMENT OPTION 1A  
BOREHOLE PLAN AND LONG SECTION  
(SHEET 37 OF 41)**

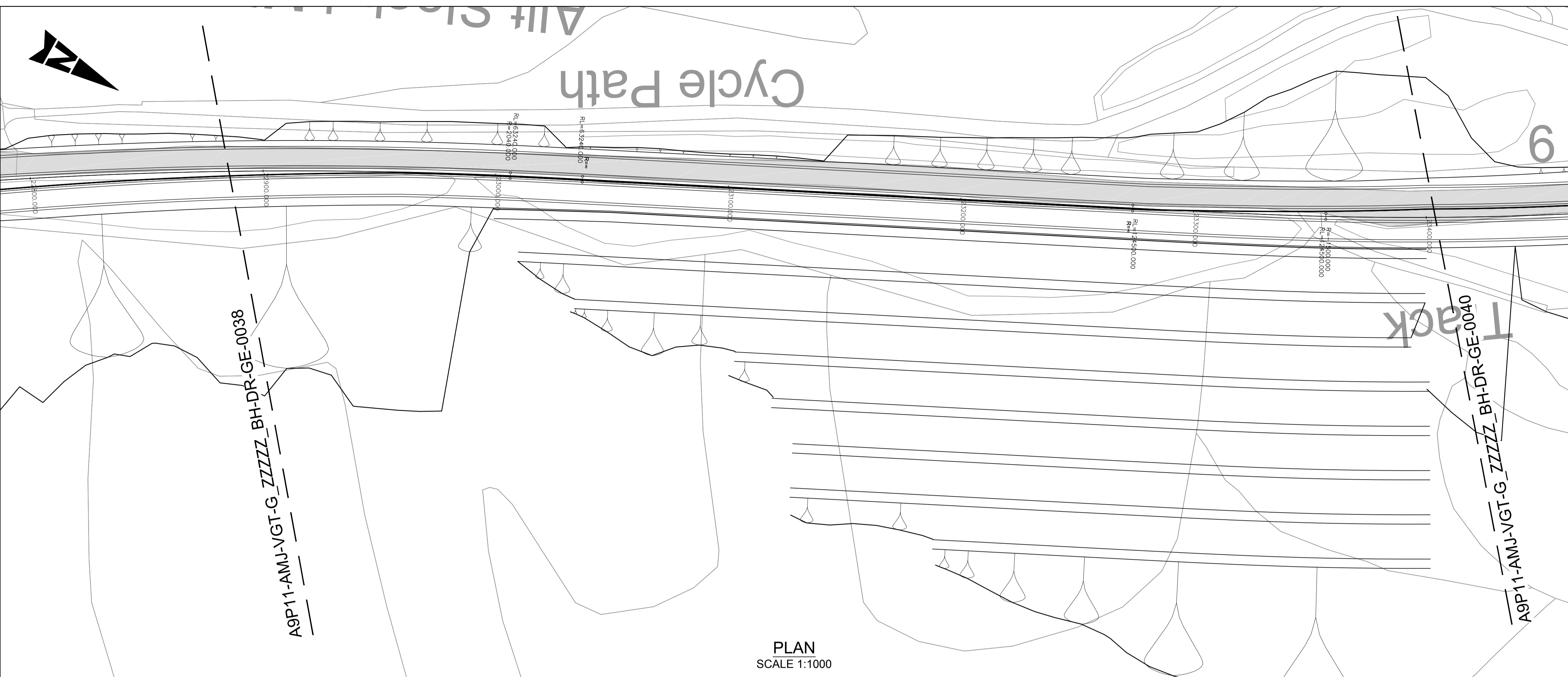
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Drawing Number	Project	Originator	Volume	Revision
	A9P11 - AMJ - VGT -	G_ZZZZ_BH - DR - GE - 0037		P01
Location	Type	Role	Number	

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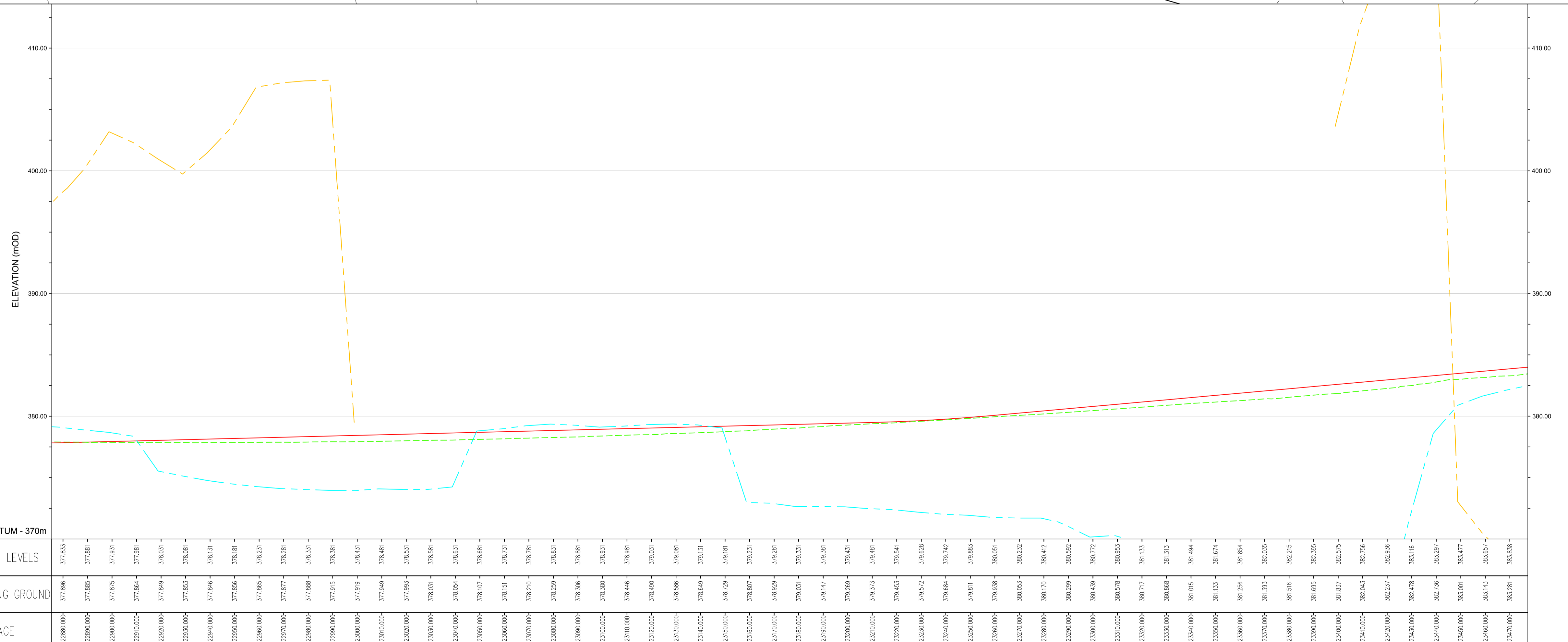
PLAN  
SCALE 1:1000

- 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 TRIAL PIT |
| NH81SE 1964 TRIAL PIT | NH81SE 1999 BOREHOLE  |
| NH82SE 1993 BOREHOLE  | NH81SE 1999 CORE      |
| NH82SE 1993 CORE      | NH81SE 1999 TRIAL PIT |
| NH82SE 1993 TRIAL PIT | NH82SE 2008 BOREHOLE  |
| 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



ELEVATION  
SCALE 1:1000 H 1:200 V

DESIGN LEVELS	EXISTING GROUND	CHAINAGE
377.833	377.886	228850.000
377.861	377.885	228860.000
377.931	377.875	228900.000
377.968	377.864	229100.000
378.031	377.844	229200.000
378.081	377.853	229300.000
378.131	377.846	229400.000
378.181	377.856	229500.000
378.231	377.865	229600.000
378.281	377.877	229700.000
378.331	377.888	229800.000
378.381	377.915	229900.000
378.431	377.919	230000.000
378.441	377.944	230100.000
378.531	377.983	230200.000
378.581	378.031	230300.000
378.631	378.054	230400.000
378.681	378.071	230500.000
378.731	378.151	230600.000
378.781	378.210	230700.000
378.831	378.259	230800.000
378.881	378.305	230900.000
378.931	378.386	231000.000
378.981	378.446	231100.000
379.031	378.495	231200.000
379.081	378.586	231300.000
379.131	378.649	231400.000
379.181	378.729	231500.000
379.231	378.807	231600.000
379.281	378.920	231700.000
379.331	379.031	231800.000
379.381	379.147	231900.000
379.431	379.269	232000.000
379.481	379.373	232100.000
379.541	379.453	232200.000
379.628	379.572	232300.000
379.742	379.684	232400.000
379.883	379.811	232500.000
380.021	379.938	232600.000
380.212	380.053	232700.000
380.412	380.170	232800.000
380.582	380.299	232900.000
380.772	380.439	233000.000
380.953	380.578	233100.000
381.133	380.717	233200.000
381.313	380.858	233300.000
381.494	381.015	233400.000
381.674	381.133	233500.000
381.854	381.256	233600.000
382.035	381.393	233700.000
382.215	381.518	233800.000
382.395	381.655	233900.000
382.575	381.837	234000.000
382.756	382.043	234100.000
382.936	382.237	234200.000
383.116	382.478	234300.000
383.297	382.739	234400.000
383.477	383.001	234500.000
383.657	383.143	234600.000
383.838	383.281	234700.000

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



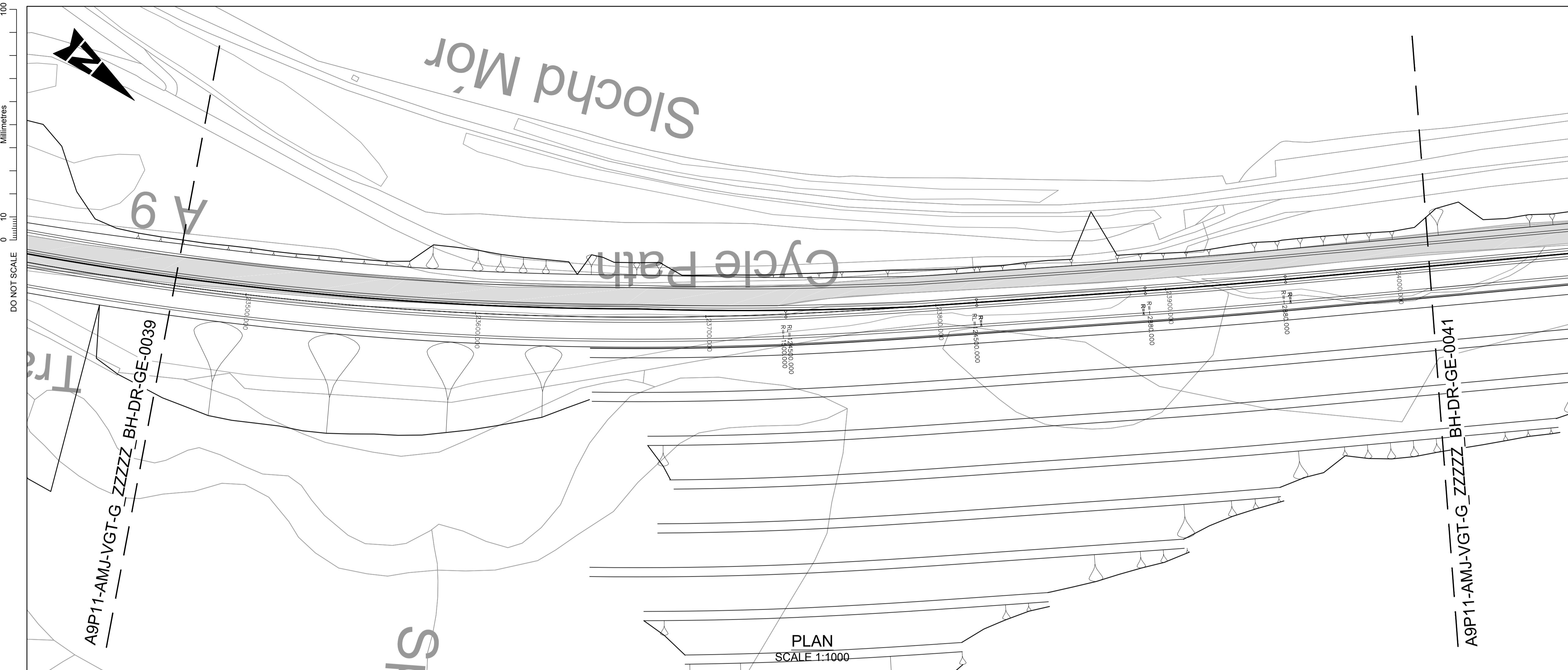
Drawing Title  
**FIGURE 5.20-MAINLINE ALIGNMENT OPTION 1A BOREHOLE PLAN AND LONG SECTION (SHEET 39 OF 41)**

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 - G_ZZZZ_BH - DR - GE - 0039			P01
Location	Type	Role	Number	

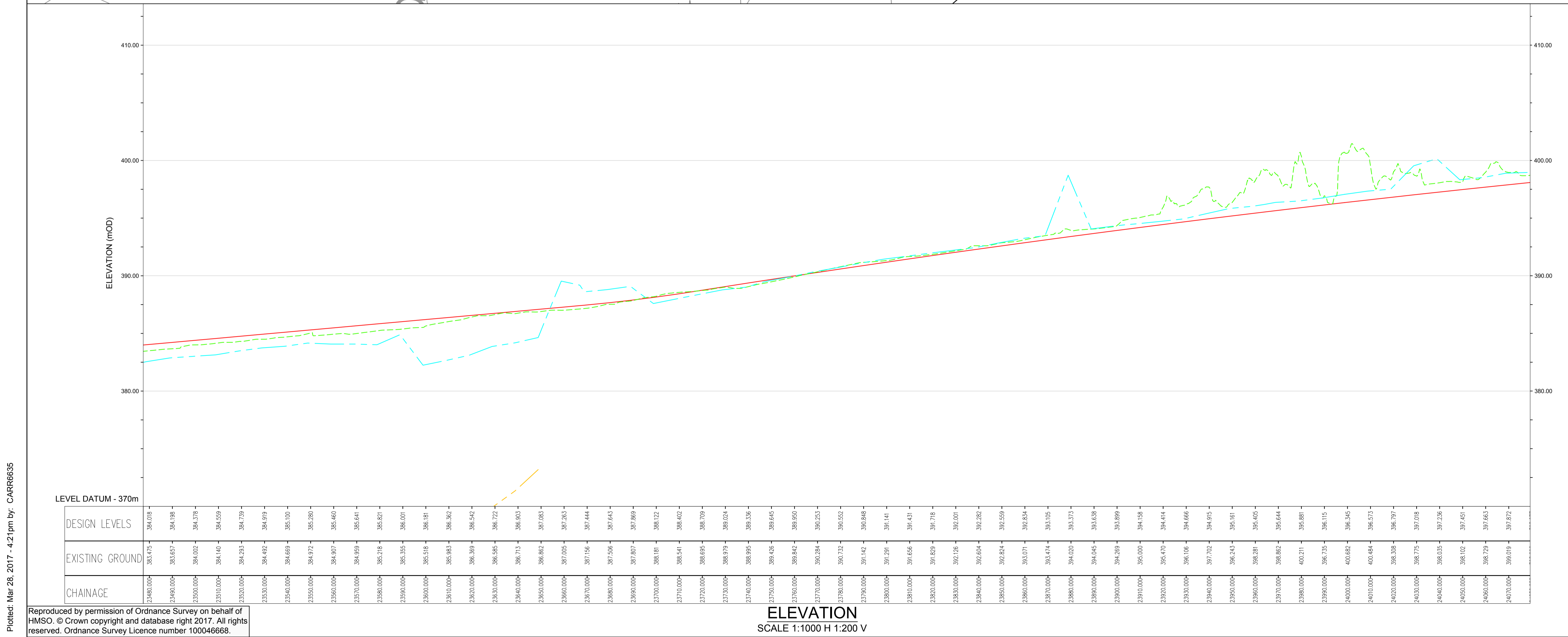
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100  
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DO NOT SCALE



- 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				Subtibility
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 5.20-MAINLINE ALIGNMENT OPTION 1A 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 - G_ZZZZ_BH - DR - GE - 0040			P01	
Location	Type	Role	Number	

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Millimetres  
DO NOT SCALE

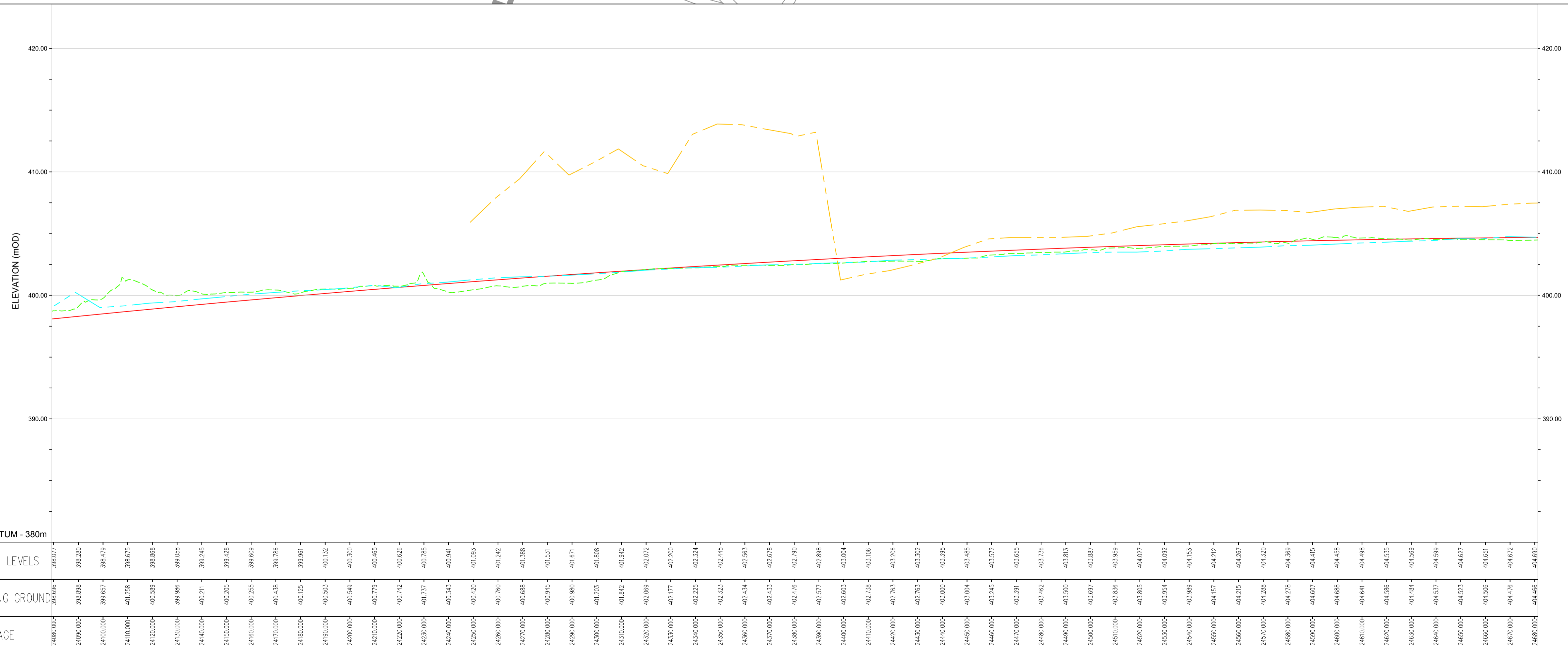


PLAN  
SCALE 1:1000

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

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

- NOTE:**
- COMPOSITE SOIL TYPES WILL BE SIGNIFIED BY COMBINED SYMBOLS E.G. SILTY SAND
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  - SOUTHBOUND EARTHWORKS LEVEL
  - 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				Subtibility
FINAL				B

Client				
 An agency of The Scottish Government				
 Dalraddy to Slochd				

Drawing Title				
FIGURE 5.20-MAINLINE ALIGNMENT OPTION 1A				
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 -	G_ZZZZ_BH - DR - GE - 0041		P01	
Location	Type	Role	Number	

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