

100
10
0
Millimetres
DO NOT SCALE



PLAN
SCALE 1:1000

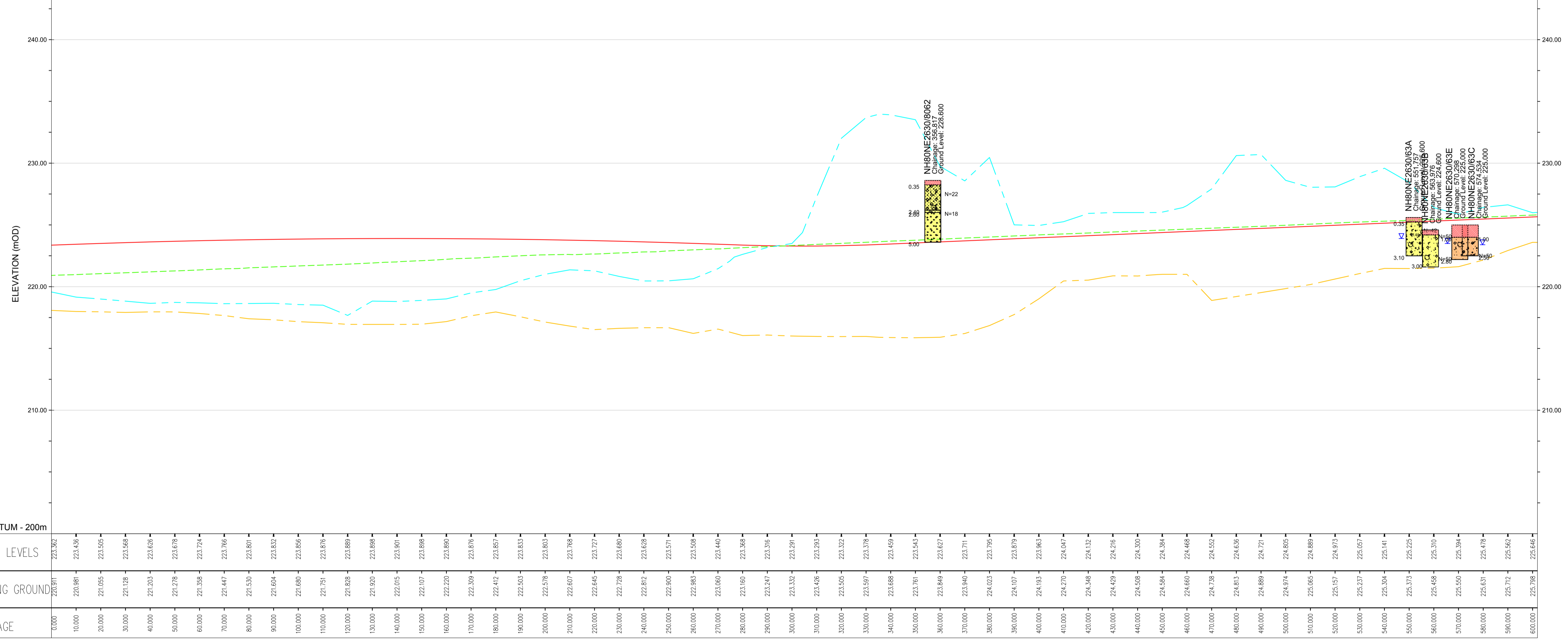
- NOTES:
- ALL LEVELS IN mAOD UNLESS OTHERWISE NOTED. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE NOTED.
 - ALL DEPTHS SHOWN ARE IN METRES.
 - HISTORICAL BOREHOLE POSITIONS AND LEVELS INFERRED FROM BGS DATABASE TO ACCURACY ± 10m.

- 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

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

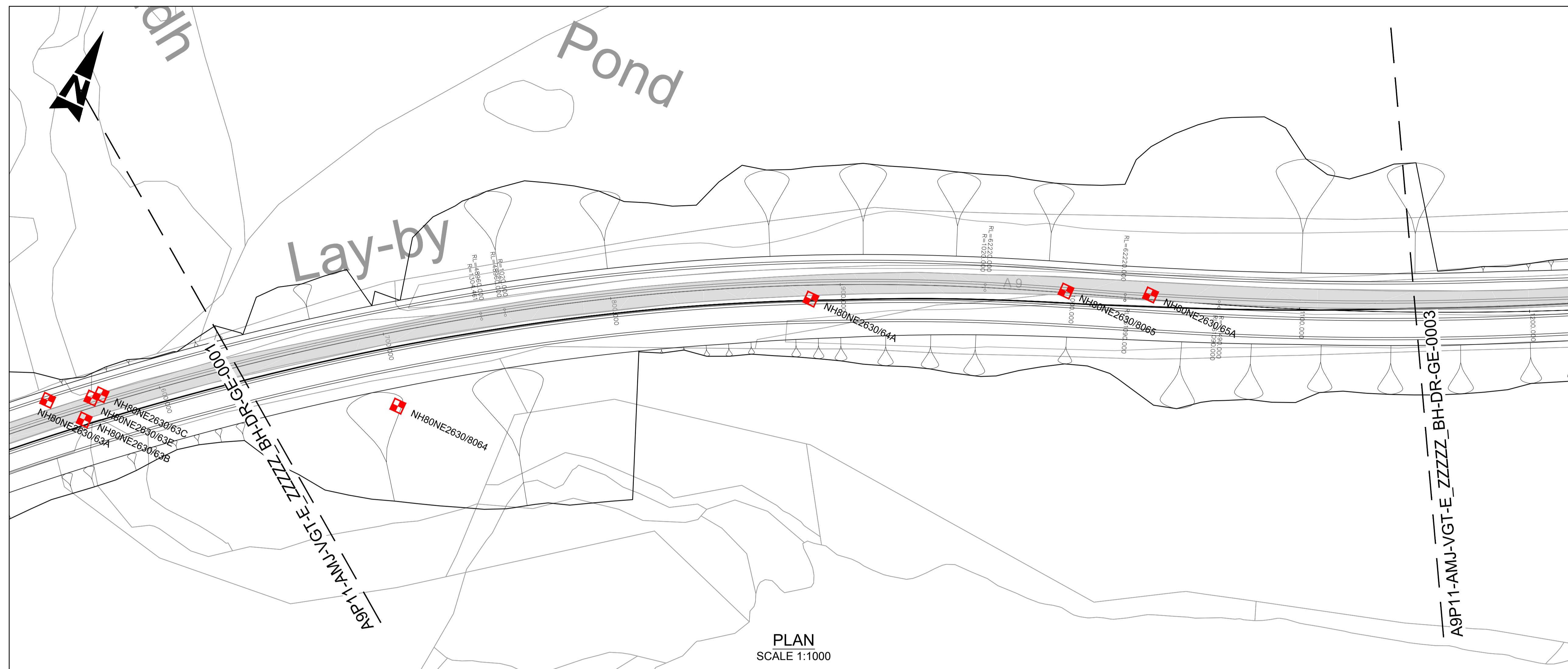
Client				
 An agency of The Scottish Government				
 Dalraddy to Stochd				

Drawing Title				
FIGURE 5.19-MAINLINE ALIGNMENT OPTION 1 BOREHOLE PLAN AND LONG SECTION (SHEET 1 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 - 0001			P01	
Location	Type	Role	Number	

Plotted: Mar 23, 2017 - 9:59am 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:

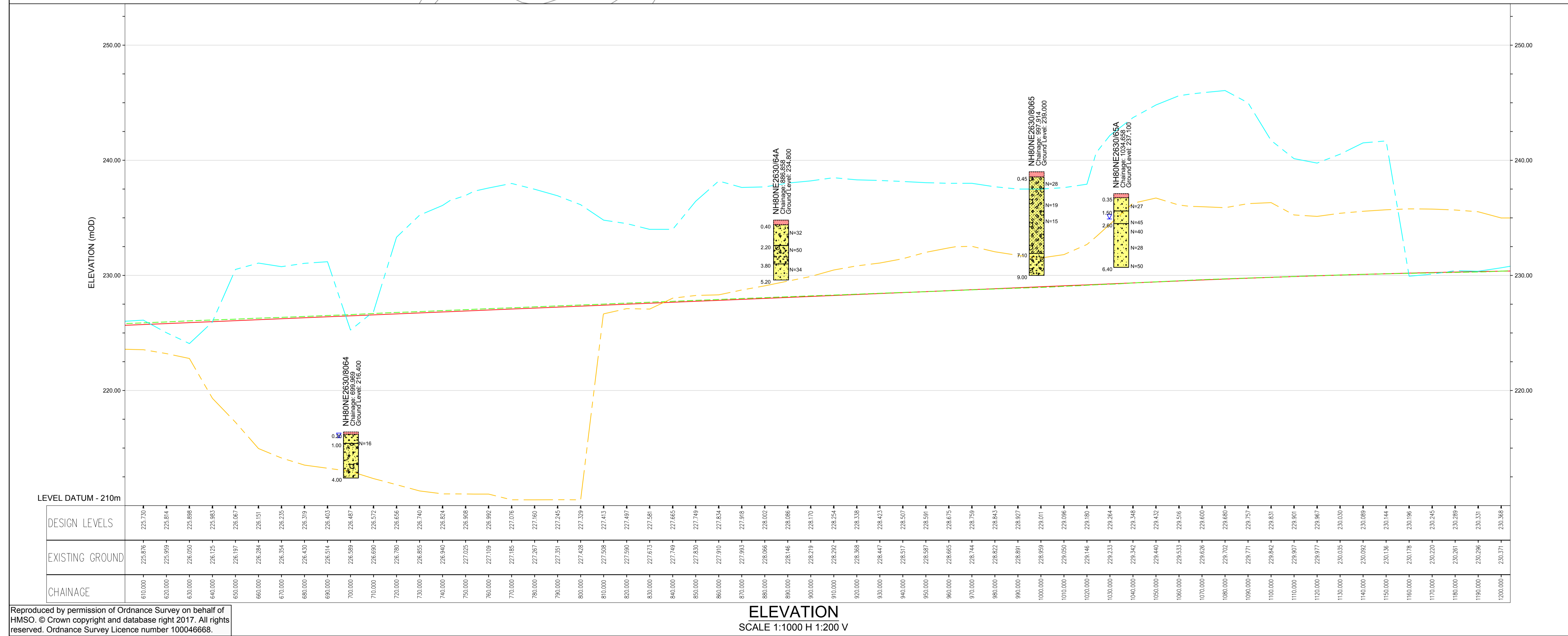
NH82NW 1973 BOREHOLE	NH80NE 1978 BOREHOLE
NH82NW 1973 CORE	NH80NE 1978 CORE
NH82NW 1973 TRIAL PIT	NH80NE 1978 TRIAL PIT
NH91NW 1977 BOREHOLE	NH81SE 2003 BOREHOLE
NH91NW 1977 CORE	NH81SE 2003 CORE
NH91NW 1977 TRIAL PIT	NH81SE 2003 TRIAL PIT
NH81SE 1964 BOREHOLE	NH81SE 1999 BOREHOLE
NH81SE 1964 CORE	NH81SE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

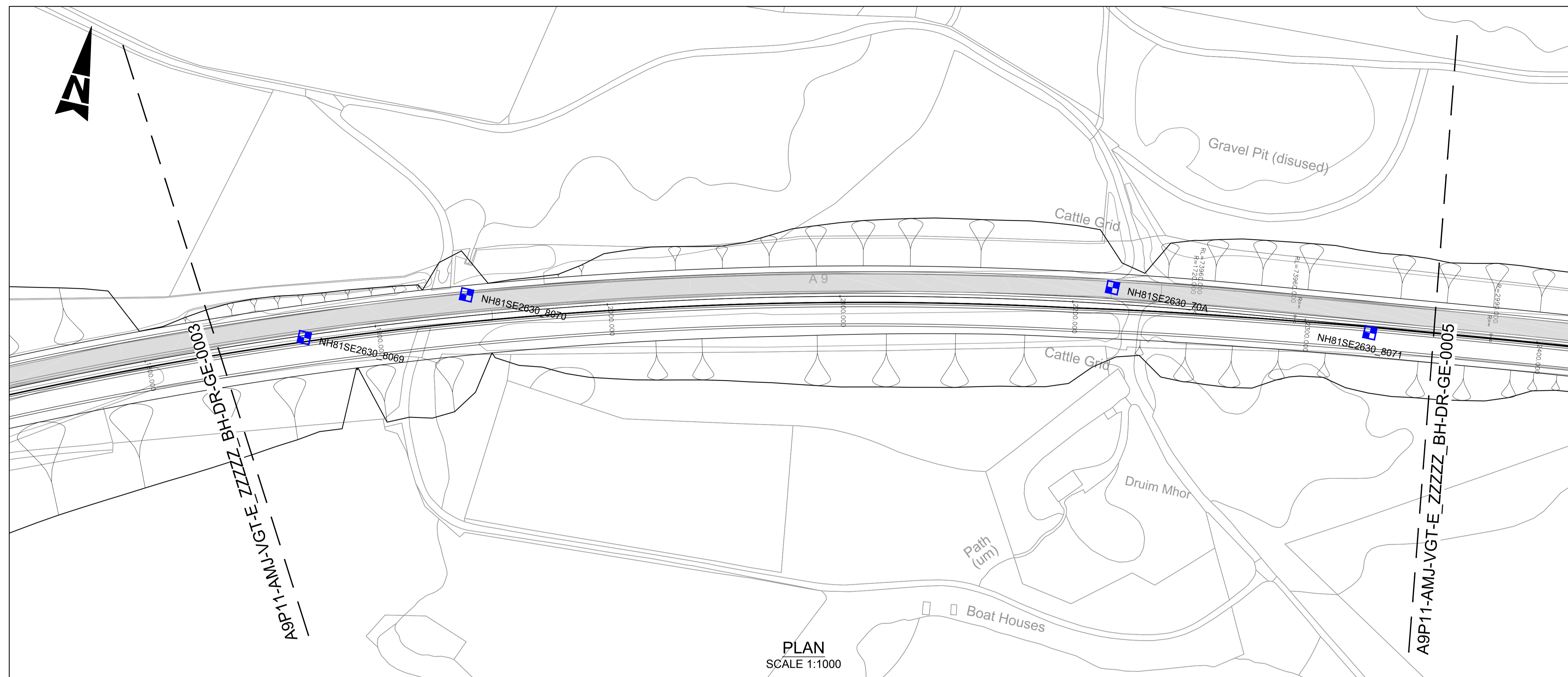


P01	CC	KP	KP	05/08/16
FIRST ISSUE				
Rev	Drawn / Des	Checked	Approved	Date
Description				Subtability
Drawing Status				B
Client				
 An agency of The Scottish Government				
 Dalraddy to Stochd				
Drawing Title				
FIGURE 5.19-MAINLINE ALIGNMENT OPTION 1 BOREHOLE PLAN AND LONG SECTION (SHEET 2 OF 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 - 0002			P01	
Location	Type	Role	Number	

Plotted: Mar 23, 2017 - 10:11am by: CARR6655

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



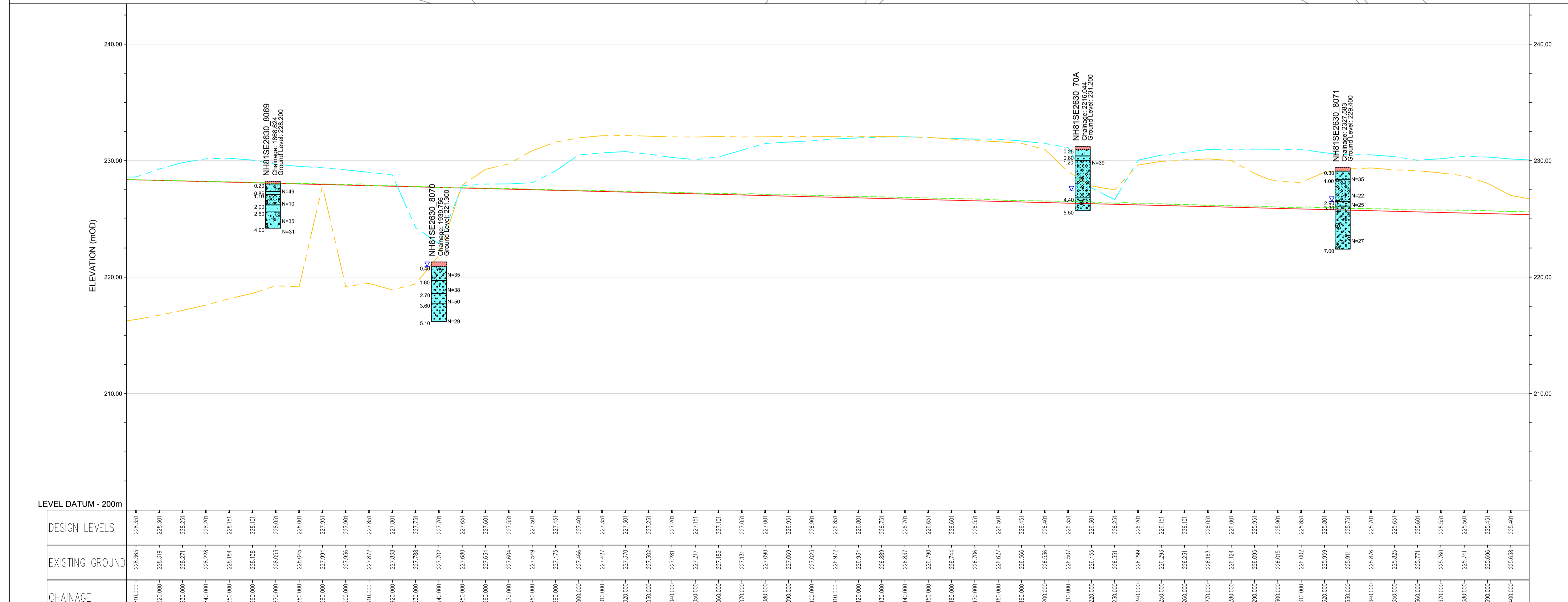
- NOTES:**
- ALL LEVELS IN mAOD UNLESS OTHERWISE NOTED. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE NOTED.
 - ALL DEPTHS SHOWN ARE IN METRES.
 - HISTORICAL BOREHOLE POSITIONS AND LEVELS INFERRED FROM BGS DATABASE TO ACCURACY ± 10m.
- KEY:**
- EXISTING A9
- BGS HISTORICAL GROUND INVESTIGATION:**
- |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

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

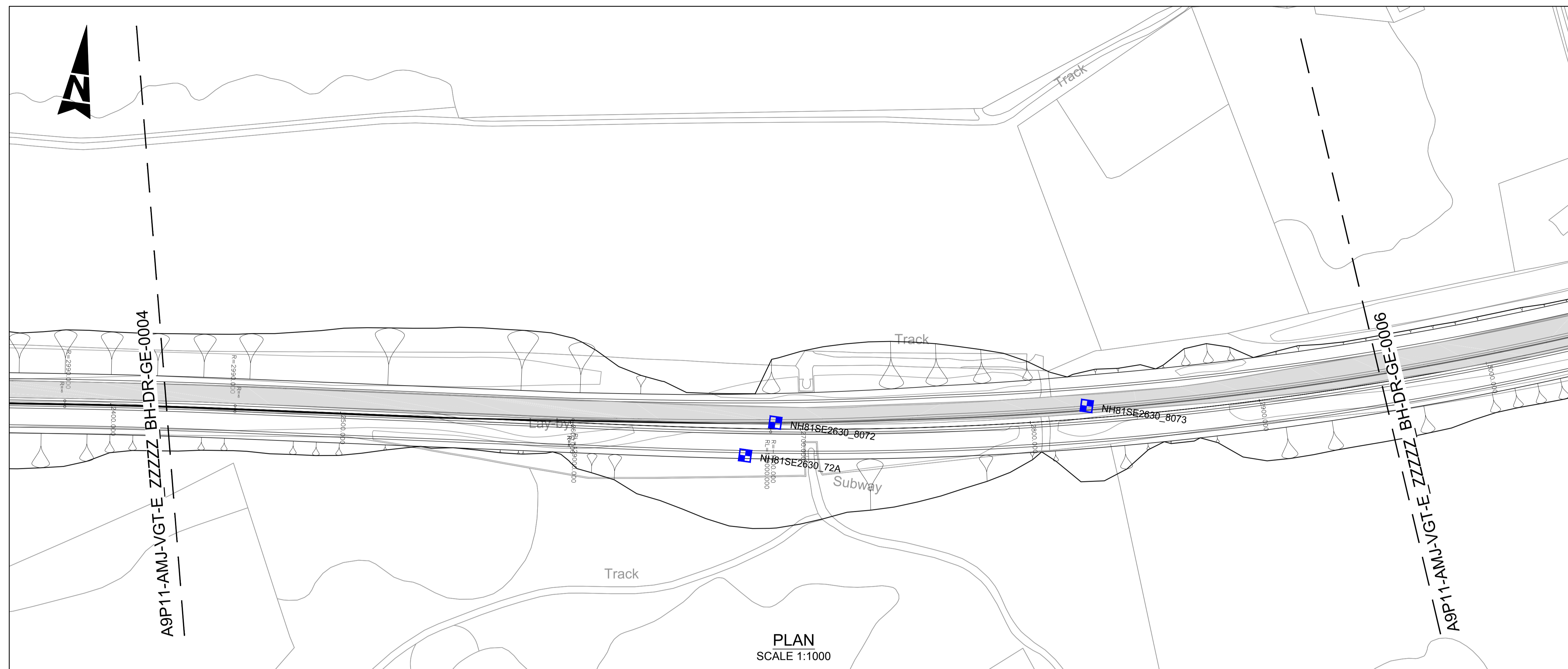
Client				
 An agency of The Scottish Government				
 Dairdery to Slouch				

Drawing Title				
FIGURE 5.19-MAINLINE ALIGNMENT OPTION 1 BOREHOLE PLAN AND LONG SECTION (SHEET 4 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 - 0004			P01	
Location	Type	Role	Number	

Plotfile: Mar 23, 2017 - 10:36am by: CARR6655

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



PLAN
SCALE 1:1000

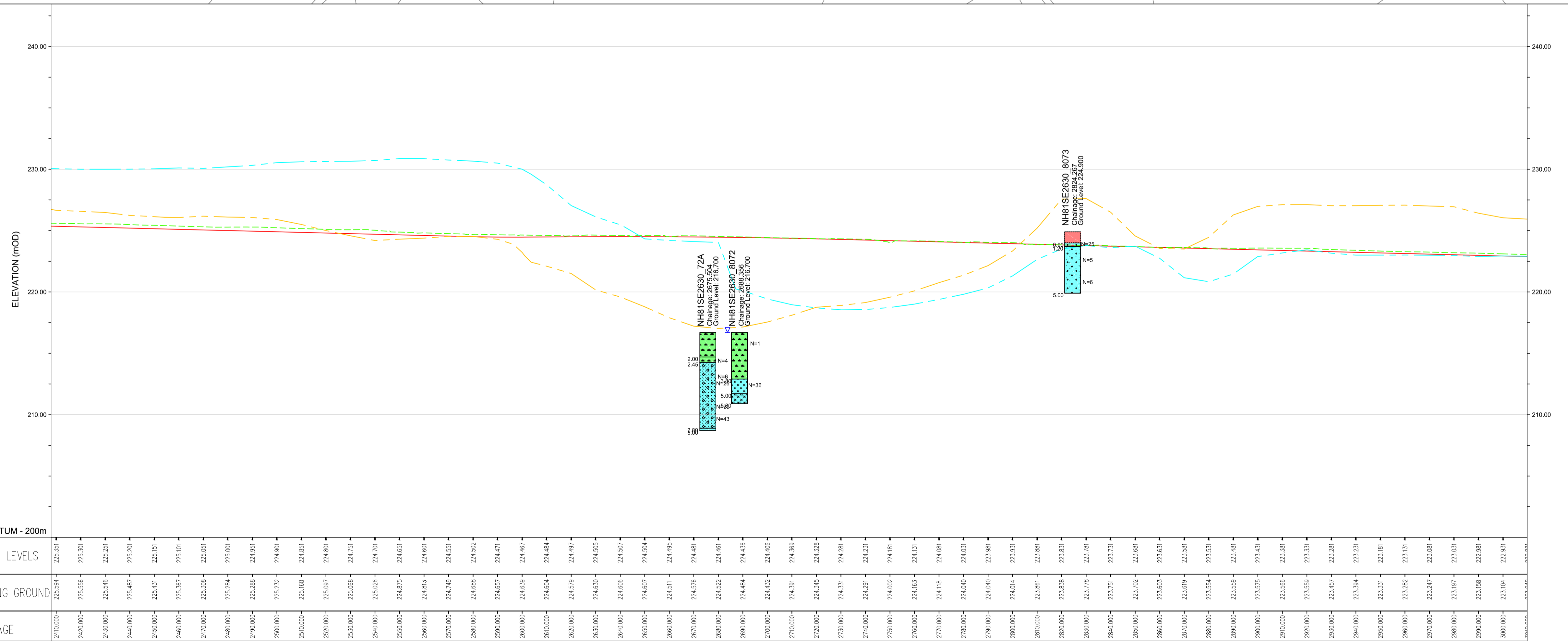
- NOTES:**
- ALL LEVELS IN mAOD UNLESS OTHERWISE NOTED. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE NOTED.
 - ALL DEPTHS SHOWN ARE IN METRES.
 - HISTORICAL BOREHOLE POSITIONS AND LEVELS INFERRED FROM BGS DATABASE TO ACCURACY ± 10m.

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

Client
TRANSPORT SCOTLAND
An agency of The Scottish Government



ATKINS mouchel

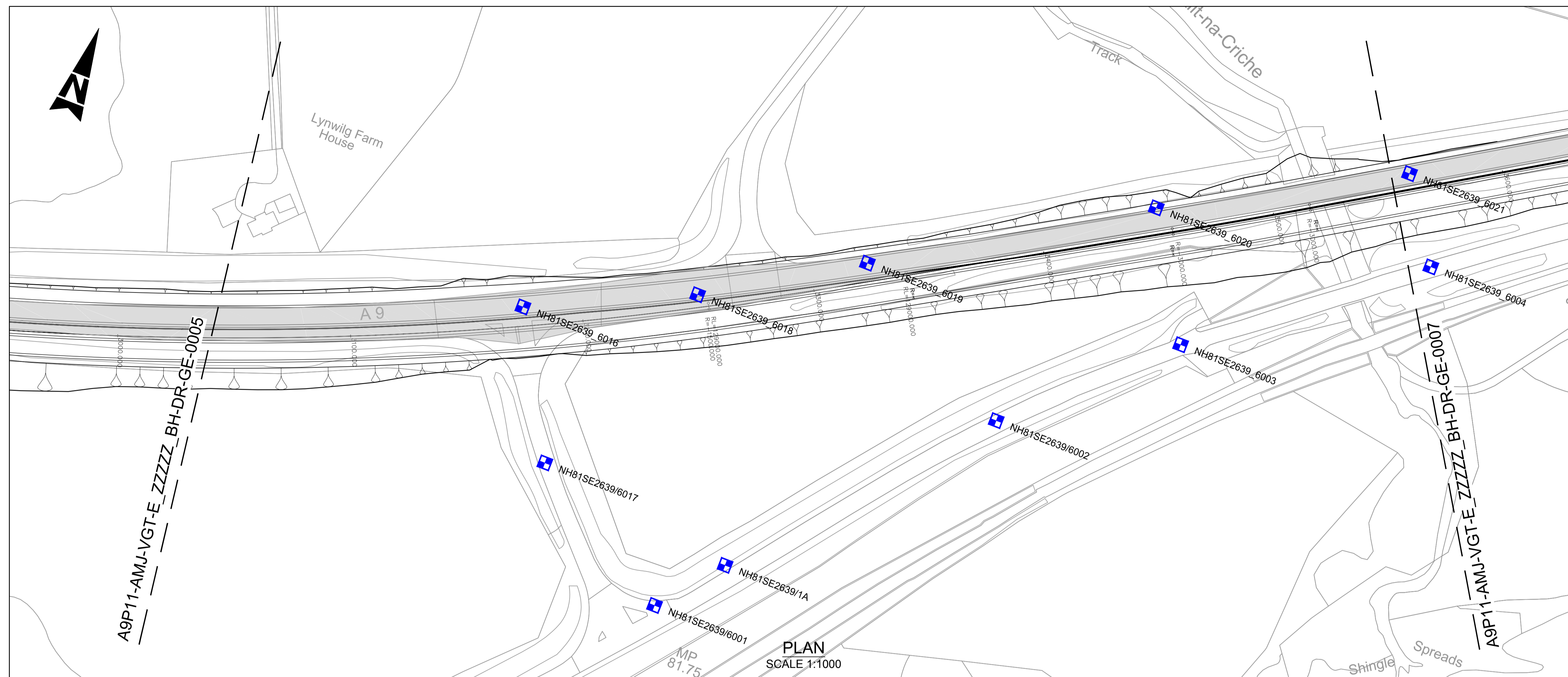
Drawing Title
FIGURE 5.19-MAINLINE ALIGNMENT OPTION 1 BOREHOLE PLAN AND LONG SECTION (SHEET 5 OF 41)

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 - 0005			P01
Location	Type	Role	Number	

Plotted: Mar 23, 2017 - 10:49am by: CARR6655

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:

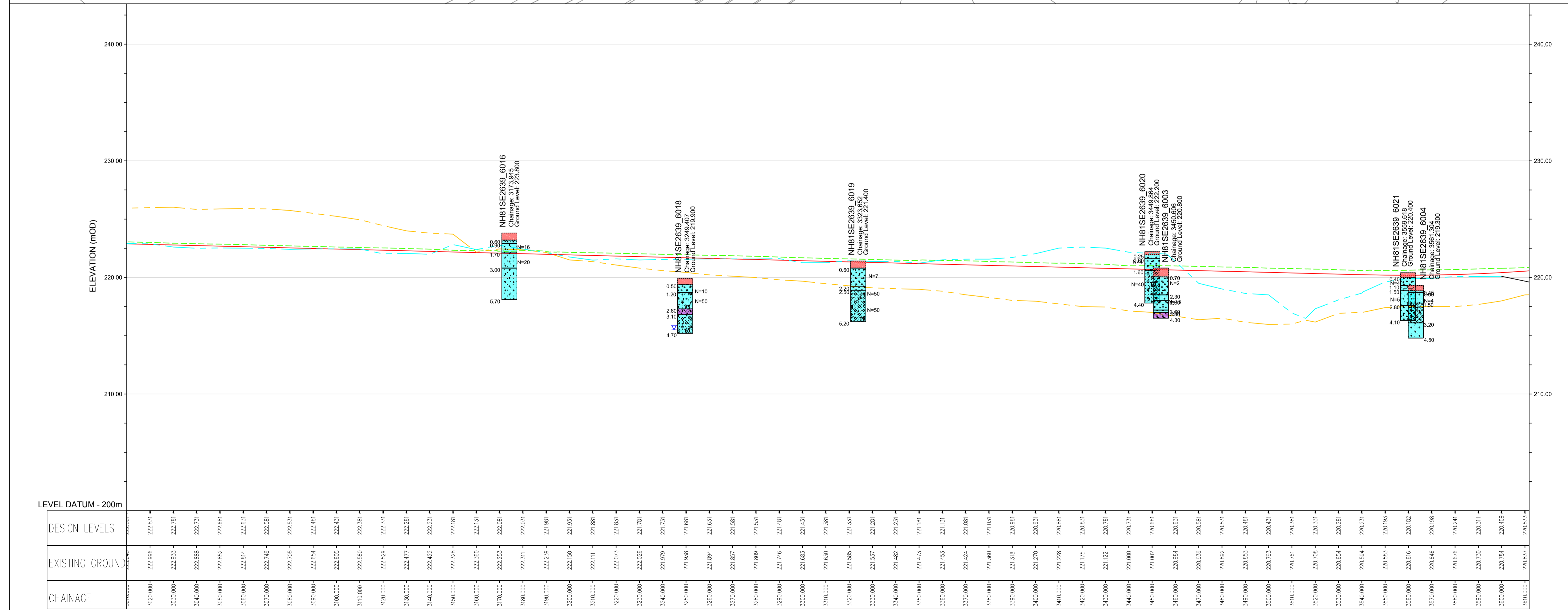
NH82NW 1973 BOREHOLE	NH80NE 1978 BOREHOLE
NH82NW 1973 CORE	NH80NE 1978 CORE
NH82NW 1973 TRIAL PIT	NH80NE 1978 TRIAL PIT
NH91NW 1977 BOREHOLE	NH81SE 2003 BOREHOLE
NH91NW 1977 CORE	NH81SE 2003 CORE
NH91NW 1977 TRIAL PIT	NH81SE 2003 TRIAL PIT
NH81SE 1964 BOREHOLE	NH81SE 1999 BOREHOLE
NH81SE 1964 CORE	NH81SE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



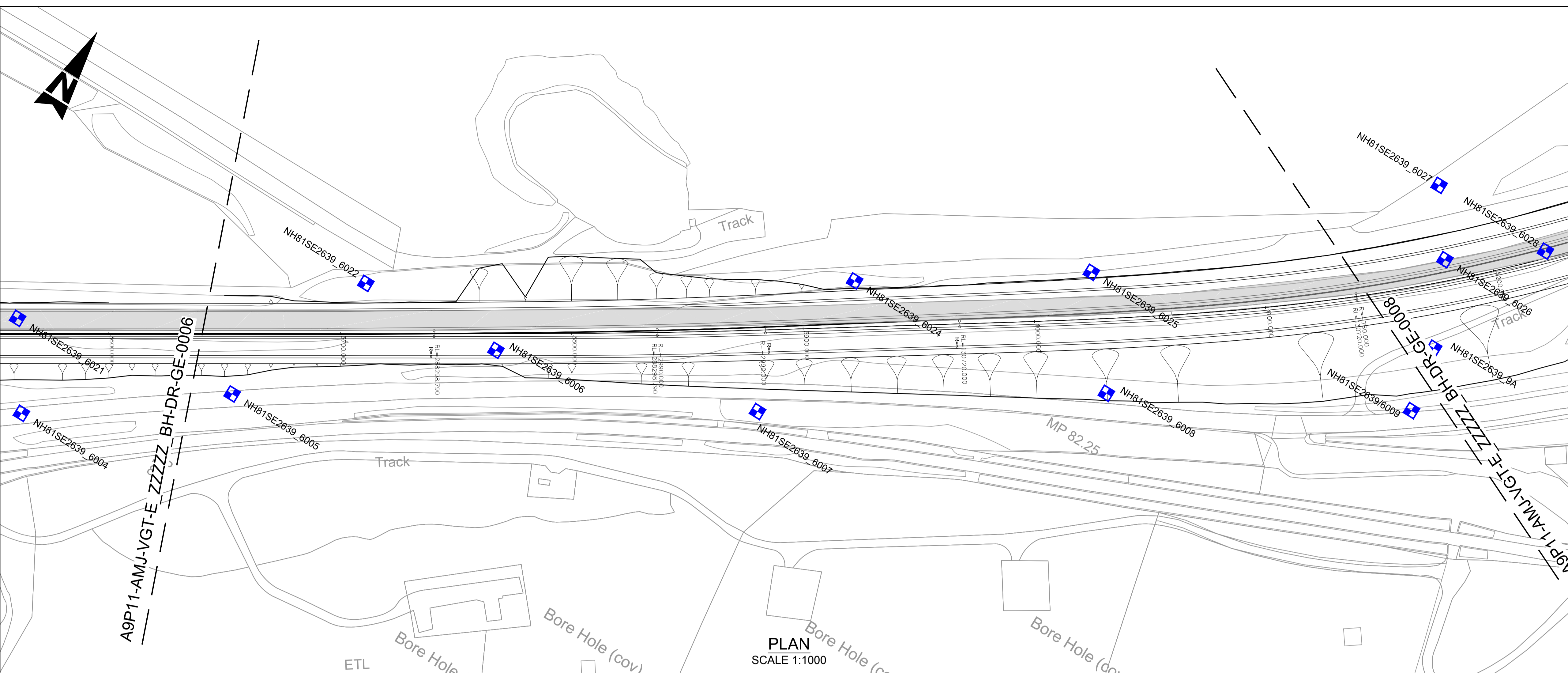
P01	CC	KP	KP	05/08/16
FIRST ISSUE				
Rev	Drawn / Des	Checked	Approved	Date
Description				Subtability
Drawing Status				B
Client				
 An agency of The Scottish Government				
 Dalraddy to Stochd				
Drawing Title				
FIGURE 5.19-MAINLINE ALIGNMENT OPTION 1 BOREHOLE PLAN AND LONG SECTION (SHEET 6 OF 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 - 0006			P01	
Location	Type	Role	Number	

Plotted: Mar 24, 2017 - 3:02pm 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
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	

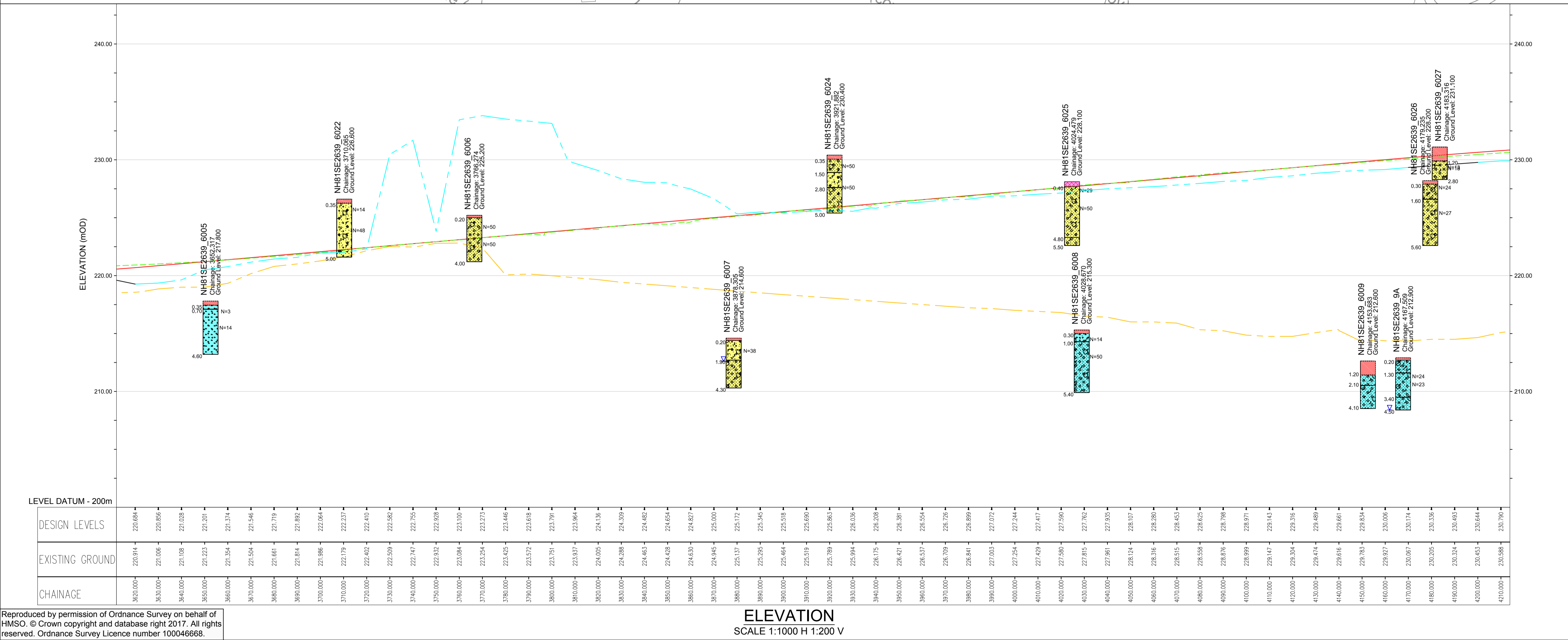
GEOTECHNICAL LONG SECTION KEY:

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.

LEGEND:

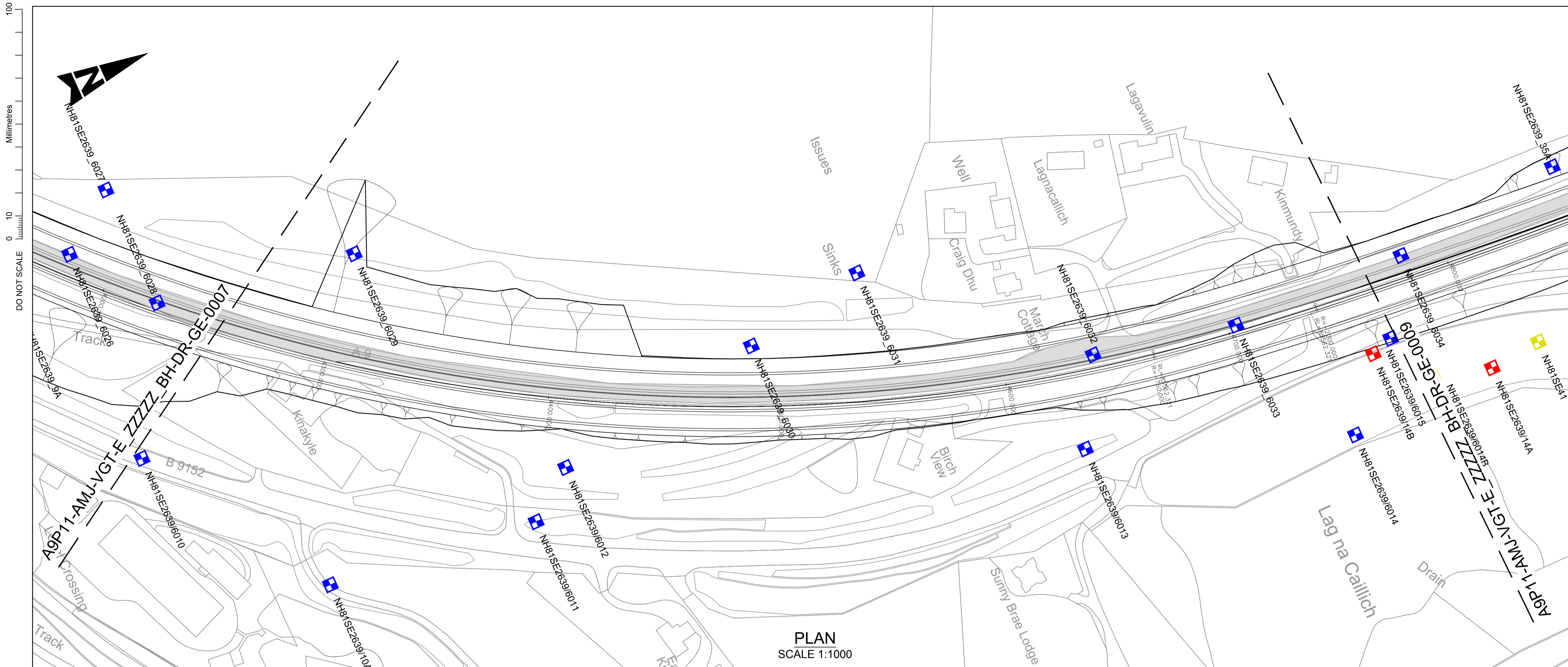
- WATER STRIKE
- RISE TO IN 20 MINS
- PROPOSED ROAD LEVEL
- EXISTING GROUND LEVEL
- SOUTHBOUND EARTHWORKS LEVEL
- NORTHBOUND EARTHWORKS LEVEL



P01	CC	KP	KP	05/08/16
FIRST ISSUE				
Rev	Drawn / Des	Checked	Approved	Date
Description				
Drawing Status				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 7 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 - 0007			P01	
Location	Type	Role	Number	

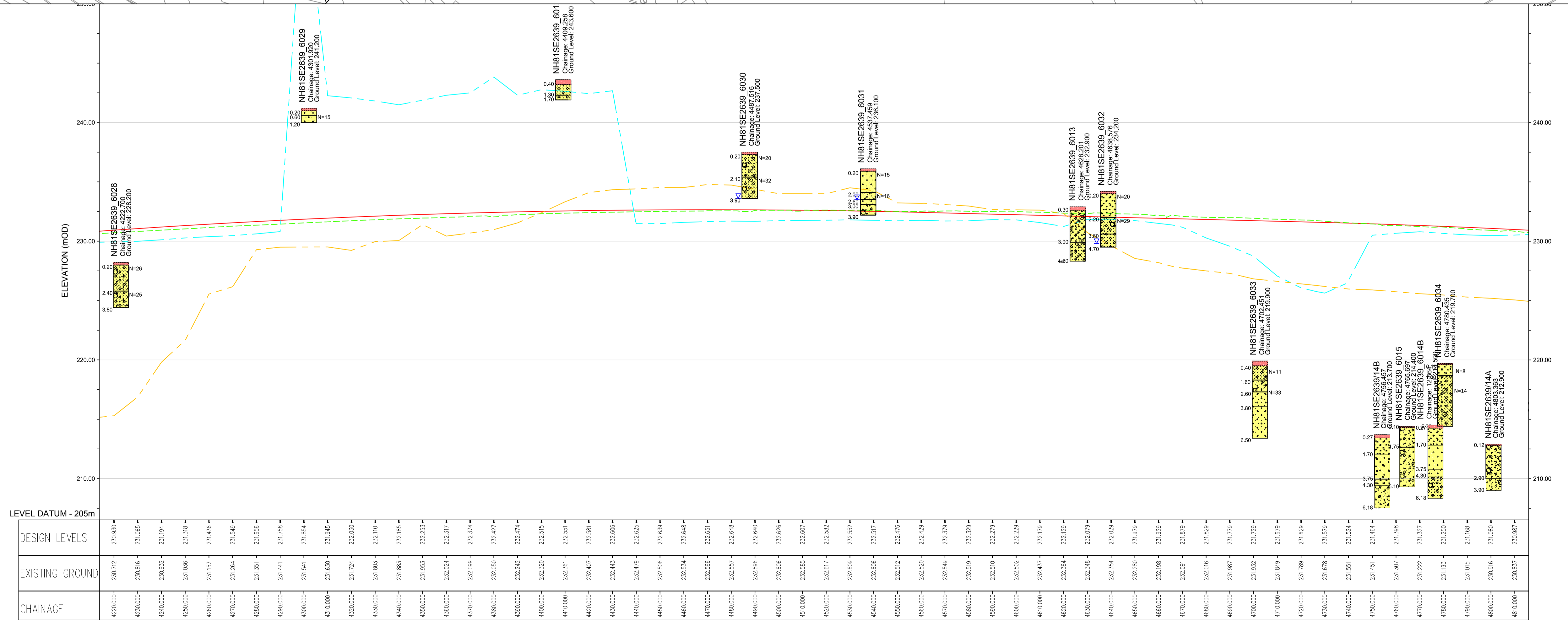
Plotted: Mar 24, 2017 - 3:09pm by: CARR6635

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



- 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 |
| 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

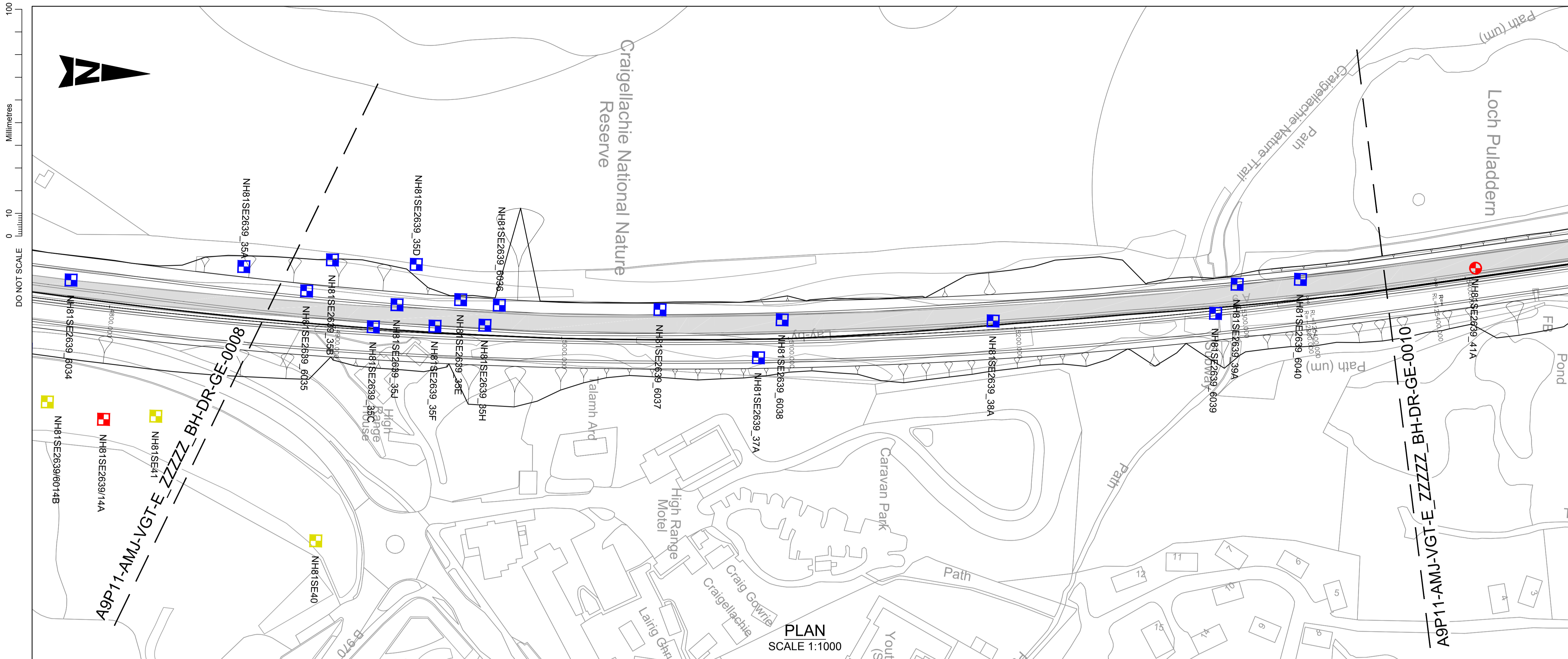
P01	CC	KP	KP	05/08/16
FIRST ISSUE				
Rev	Drawn / Des	Checked	Approved	Date
Description				
Drawing Status				Subtality
FINAL				B

Client				
 An agency of The Scottish Government				
 Dalraddy to Stochd				

Drawing Title				
FIGURE 5.19-MAINLINE ALIGNMENT OPTION 1 BOREHOLE PLAN AND LONG SECTION (SHEET 8 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 - 0008				P01
Location	Type	Role	Number	

Plotted: Mar 24, 2017 - 3:17pm 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 BOREHOLE |
| 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



LEVEL DATUM - 200m	DESIGN LEVELS	EXISTING GROUND	CHAINAGE
	230.888	230.888	4820.000
	230.784	230.784	4830.000
	230.674	230.674	4840.000
	230.559	230.559	4850.000
	230.438	230.438	4860.000
	230.312	230.312	4870.000
	230.186	230.186	4880.000
	230.041	230.041	4890.000
	229.900	229.900	4900.000
	229.752	229.752	4910.000
	229.598	229.598	4920.000
	229.439	229.439	4930.000
	229.274	229.274	4940.000
	229.104	229.104	4950.000
	228.928	228.928	4960.000
	228.747	228.747	4970.000
	228.560	228.560	4980.000
	228.366	228.366	4990.000
	228.171	228.171	5000.000
	227.968	227.968	5010.000
	227.759	227.759	5020.000
	227.545	227.545	5030.000
	227.325	227.325	5040.000
	227.100	227.100	5050.000
	226.869	226.869	5060.000
	226.633	226.633	5070.000
	226.392	226.392	5080.000
	226.144	226.144	5090.000
	225.892	225.892	5100.000
	225.634	225.634	5110.000
	225.370	225.370	5120.000
	225.101	225.101	5130.000
	224.827	224.827	5140.000
	224.546	224.546	5150.000
	224.261	224.261	5160.000
	223.970	223.970	5170.000
	223.673	223.673	5180.000
	223.374	223.374	5190.000
	223.068	223.068	5200.000
	222.757	222.757	5210.000
	222.442	222.442	5220.000
	222.124	222.124	5230.000
	221.801	221.801	5240.000
	221.474	221.474	5250.000
	221.144	221.144	5260.000
	220.810	220.810	5270.000
	220.472	220.472	5280.000
	220.130	220.130	5290.000
	219.784	219.784	5300.000
	219.434	219.434	5310.000
	219.080	219.080	5320.000
	218.722	218.722	5330.000
	218.360	218.360	5340.000
	217.994	217.994	5350.000
	217.624	217.624	5360.000
	217.250	217.250	5370.000
	216.872	216.872	5380.000
	216.490	216.490	5390.000
	216.104	216.104	5400.000

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
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 9 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 - 0009			P01
Location	Type	Role	Number	

100
0 10
Millimetres
DO NOT SCALE



PLAN
SCALE 1:1000

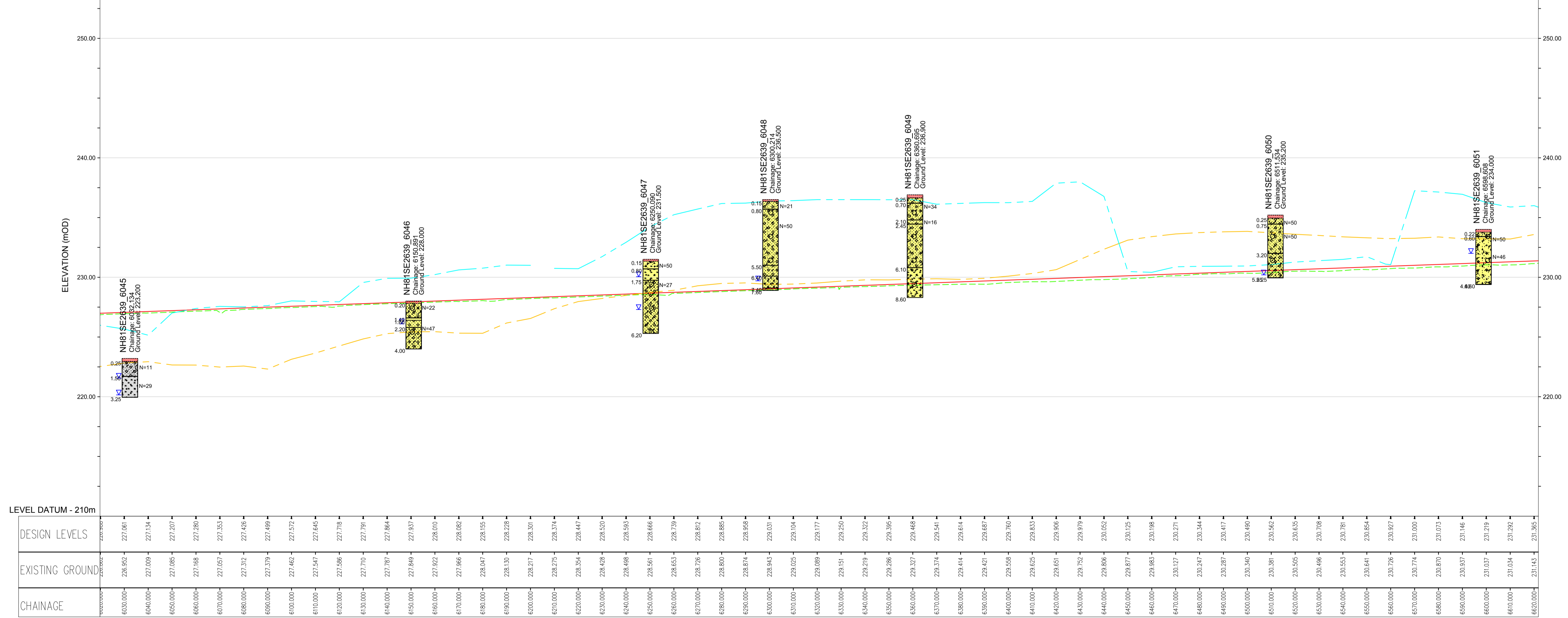
- NOTES:
- ALL LEVELS IN mAOD UNLESS OTHERWISE NOTED. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE NOTED.
 - ALL DEPTHS SHOWN ARE IN METRES.
 - HISTORICAL BOREHOLE POSITIONS AND LEVELS INFERRED FROM BGS DATABASE TO ACCURACY ± 10m.

- 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



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

FINAL				
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 11 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				P01
Originator				
Volume				
Location				
Type				
Role				
Number				

Plotlet: Mar 24, 2017 - 3:52pm 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 TRIAL PIT
NH82NW 1973 TRIAL PIT	NH81SE 2003 BOREHOLE
NH91NW 1977 BOREHOLE	NH81SE 2003 TRIAL PIT
NH91NW 1977 CORE	NH81SE 1999 BOREHOLE
NH91NW 1977 TRIAL PIT	NH81SE 1999 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 TRIAL PIT
NH82SE 1993 CORE	NH82SE 2008 BOREHOLE
NH82SE 1993 TRIAL PIT	NH82SE 2008 CORE
NH82SE 2008 BOREHOLE	NH82SE 2008 TRIAL PIT

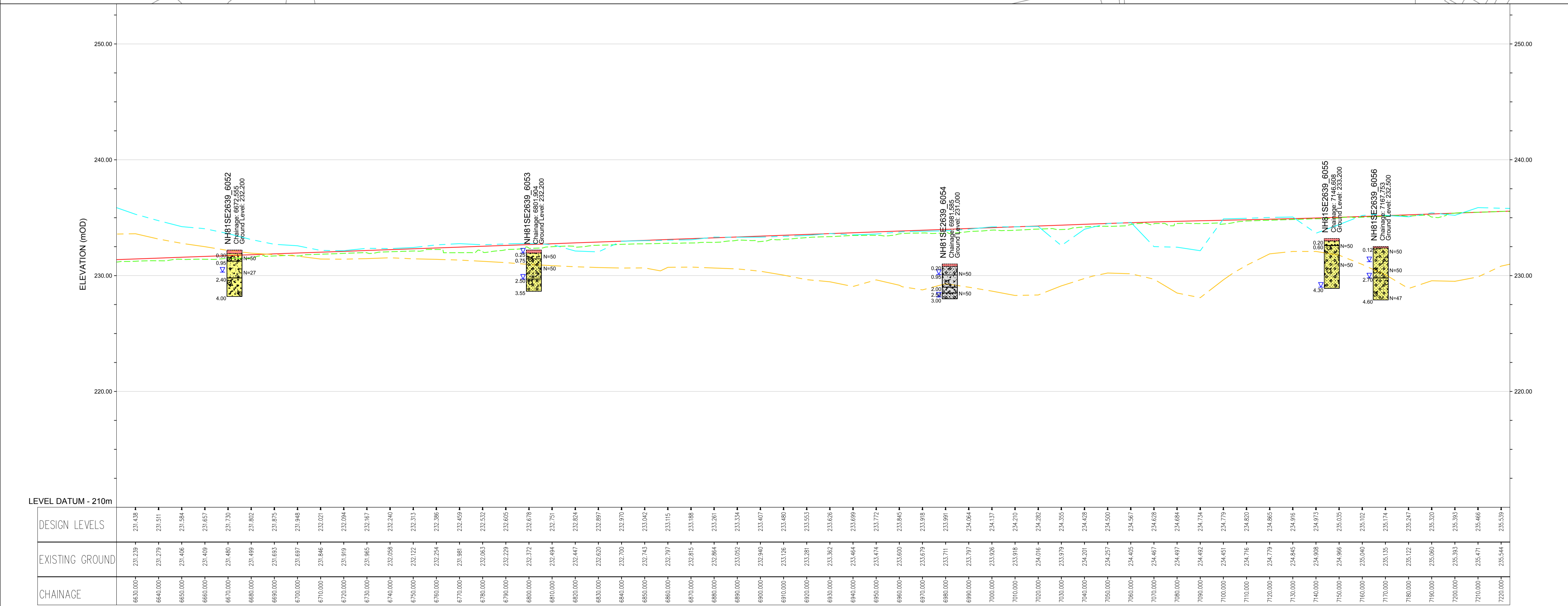
GEOTECHNICAL LONG SECTION KEY:

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



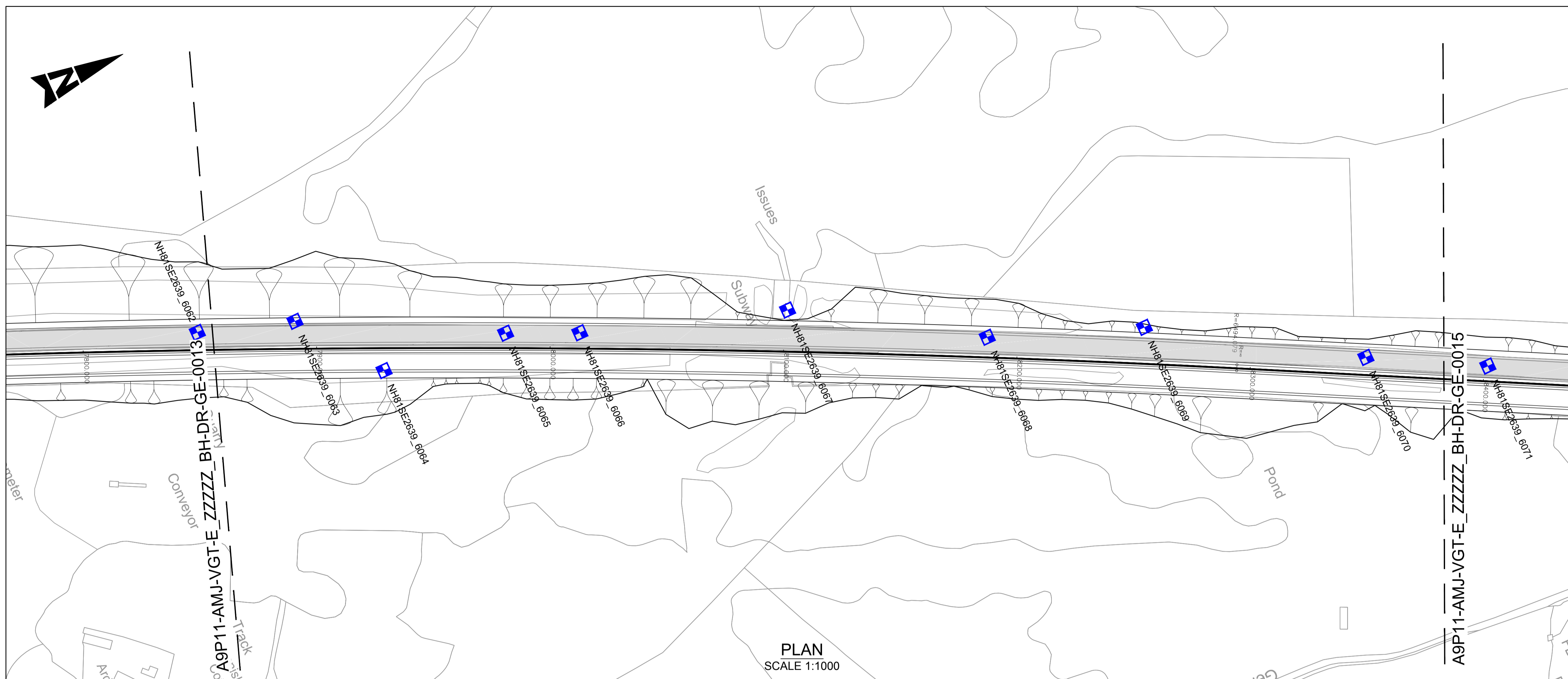
P01	CC	KP	KP	05/08/16
FIRST ISSUE				
Rev	Drawn / Des	Checked	Approved	Date
Description				
Drawing Status				Suitability
FINAL				B
Client				
 An agency of The Scottish Government				
 Dalraddy to Stochd				
Drawing Title				
FIGURE 5.19-MAINLINE ALIGNMENT OPTION 1 BOREHOLE PLAN AND LONG SECTION (SHEET 12 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 - 0012			P01	
Location	Type	Role	Number	

Plotfile: Mar 24, 2017 - 3:59pm 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

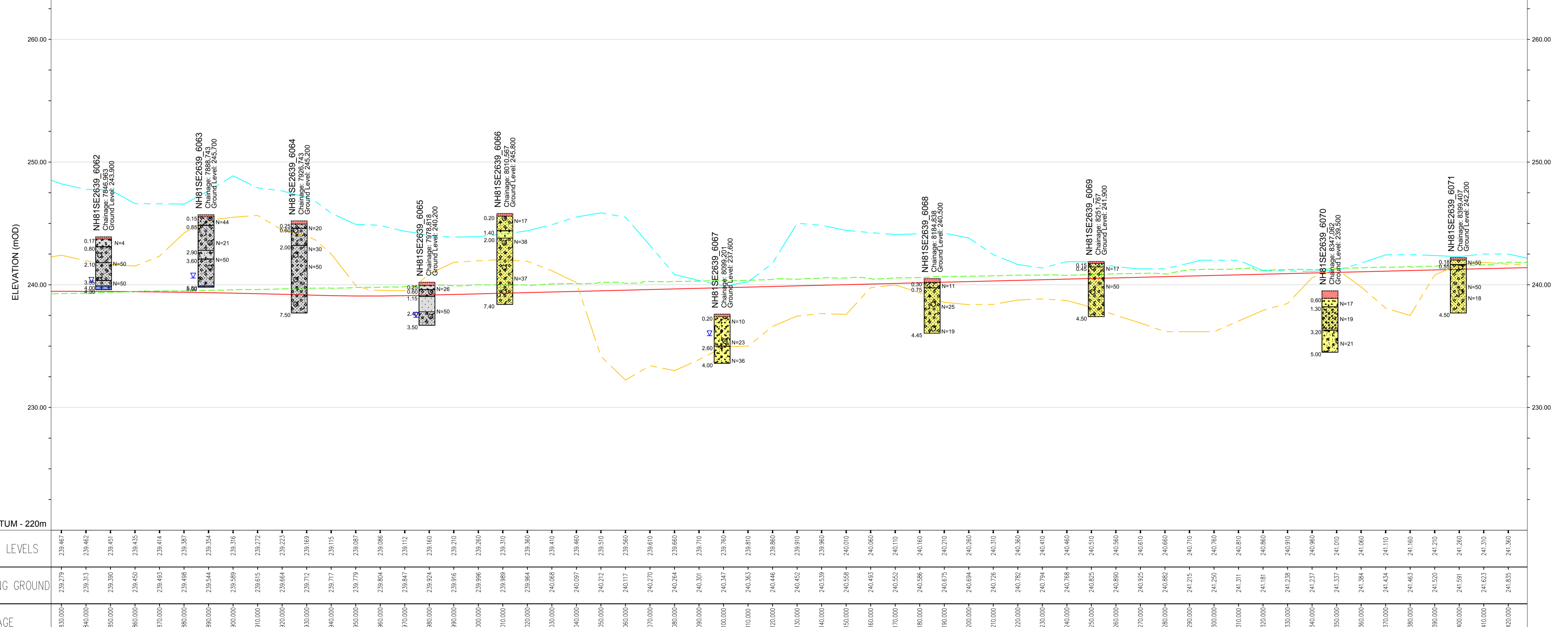
- NOTES:
- ALL LEVELS IN mAOD UNLESS OTHERWISE NOTED. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE NOTED.
 - ALL DEPTHS SHOWN ARE IN METRES.
 - HISTORICAL BOREHOLE POSITIONS AND LEVELS INFERRED FROM BGS DATABASE TO ACCURACY ± 10m.

- 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 |
| 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.

- 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 - 220m	230.00	230.10	230.20	230.30	230.40	230.50	230.60	230.70	230.80	230.90	240.00	240.10	240.20	240.30	240.40	240.50	240.60	240.70	240.80	240.90	241.00	241.10	241.20	241.30	241.40	241.50	241.60	241.70	241.80	241.90	242.00																																																																																																																													
DESIGN LEVELS	239.467	239.479	239.462	239.451	239.435	239.414	239.387	239.354	239.316	239.272	239.223	239.169	239.115	239.067	239.006	238.944	238.884	238.824	238.762	238.699	238.636	238.572	238.508	238.444	238.380	238.316	238.252	238.188	238.124	238.060	237.996	237.932	237.868	237.804	237.740	237.676	237.612	237.548	237.484	237.420	237.356	237.292	237.228	237.164	237.100	237.036	236.972	236.908	236.844	236.780	236.716	236.652	236.588	236.524	236.460	236.396	236.332	236.268	236.204	236.140	236.076	236.012	235.948	235.884	235.820	235.756	235.692	235.628	235.564	235.500	235.436	235.372	235.308	235.244	235.180	235.116	235.052	234.988	234.924	234.860	234.796	234.732	234.668	234.604	234.540	234.476	234.412	234.348	234.284	234.220	234.156	234.092	234.028	233.964	233.900	233.836	233.772	233.708	233.644	233.580	233.516	233.452	233.388	233.324	233.260	233.196	233.132	233.068	233.004	232.940	232.876	232.812	232.748	232.684	232.620	232.556	232.492	232.428	232.364	232.300	232.236	232.172	232.108	232.044	231.980	231.916	231.852	231.788	231.724	231.660	231.596	231.532	231.468	231.404	231.340	231.276	231.212	231.148	231.084	231.020	230.956	230.892	230.828	230.764	230.700	230.636	230.572	230.508	230.444	230.380	230.316	230.252	230.188	230.124	230.060	230.000
EXISTING GROUND	239.467	239.479	239.462	239.451	239.435	239.414	239.387	239.354	239.316	239.272	239.223	239.169	239.115	239.067	239.006	238.944	238.884	238.824	238.762	238.699	238.636	238.572	238.508	238.444	238.380	238.316	238.252	238.188	238.124	238.060	237.996	237.932	237.868	237.804	237.740	237.676	237.612	237.548	237.484	237.420	237.356	237.292	237.228	237.164	237.100	237.036	236.972	236.908	236.844	236.780	236.716	236.652	236.588	236.524	236.460	236.396	236.332	236.268	236.204	236.140	236.076	236.012	235.948	235.884	235.820	235.756	235.692	235.628	235.564	235.500	235.436	235.372	235.308	235.244	235.180	235.116	235.052	234.988	234.924	234.860	234.796	234.732	234.668	234.604	234.540	234.476	234.412	234.348	234.284	234.220	234.156	234.092	234.028	233.964	233.900	233.836	233.772	233.708	233.644	233.580	233.516	233.452	233.388	233.324	233.260	233.196	233.132	233.068	233.004	232.940	232.876	232.812	232.748	232.684	232.620	232.556	232.492	232.428	232.364	232.300	232.236	232.172	232.108	232.044	231.980	231.916	231.852	231.788	231.724	231.660	231.596	231.532	231.468	231.404	231.340	231.276	231.212	231.148	231.084	231.020	230.956	230.892	230.828	230.764	230.700	230.636	230.572	230.508	230.444	230.380	230.316	230.252	230.188	230.124	230.060	230.000
CHAINAGE	7830.000	7840.000	7850.000	7860.000	7870.000	7880.000	7890.000	7900.000	7910.000	7920.000	7930.000	7940.000	7950.000	7960.000	7970.000	7980.000	7990.000	8000.000	8010.000	8020.000	8030.000	8040.000	8050.000	8060.000	8070.000	8080.000	8090.000	8100.000	8110.000	8120.000	8130.000	8140.000	8150.000	8160.000	8170.000	8180.000	8190.000	8200.000	8210.000	8220.000	8230.000	8240.000	8250.000	8260.000	8270.000	8280.000	8290.000	8300.000	8310.000	8320.000	8330.000	8340.000	8350.000	8360.000	8370.000	8380.000	8390.000	8400.000	8410.000	8420.000	8430.000	8440.000	8450.000	8460.000	8470.000	8480.000	8490.000	8500.000	8510.000	8520.000	8530.000	8540.000	8550.000	8560.000	8570.000	8580.000	8590.000	8600.000	8610.000	8620.000	8630.000	8640.000	8650.000	8660.000	8670.000	8680.000	8690.000	8700.000	8710.000	8720.000	8730.000	8740.000	8750.000	8760.000	8770.000	8780.000	8790.000	8800.000	8810.000	8820.000	8830.000	8840.000	8850.000	8860.000	8870.000	8880.000	8890.000	8900.000	8910.000	8920.000	8930.000	8940.000	8950.000	8960.000	8970.000	8980.000	8990.000	9000.000																																						

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



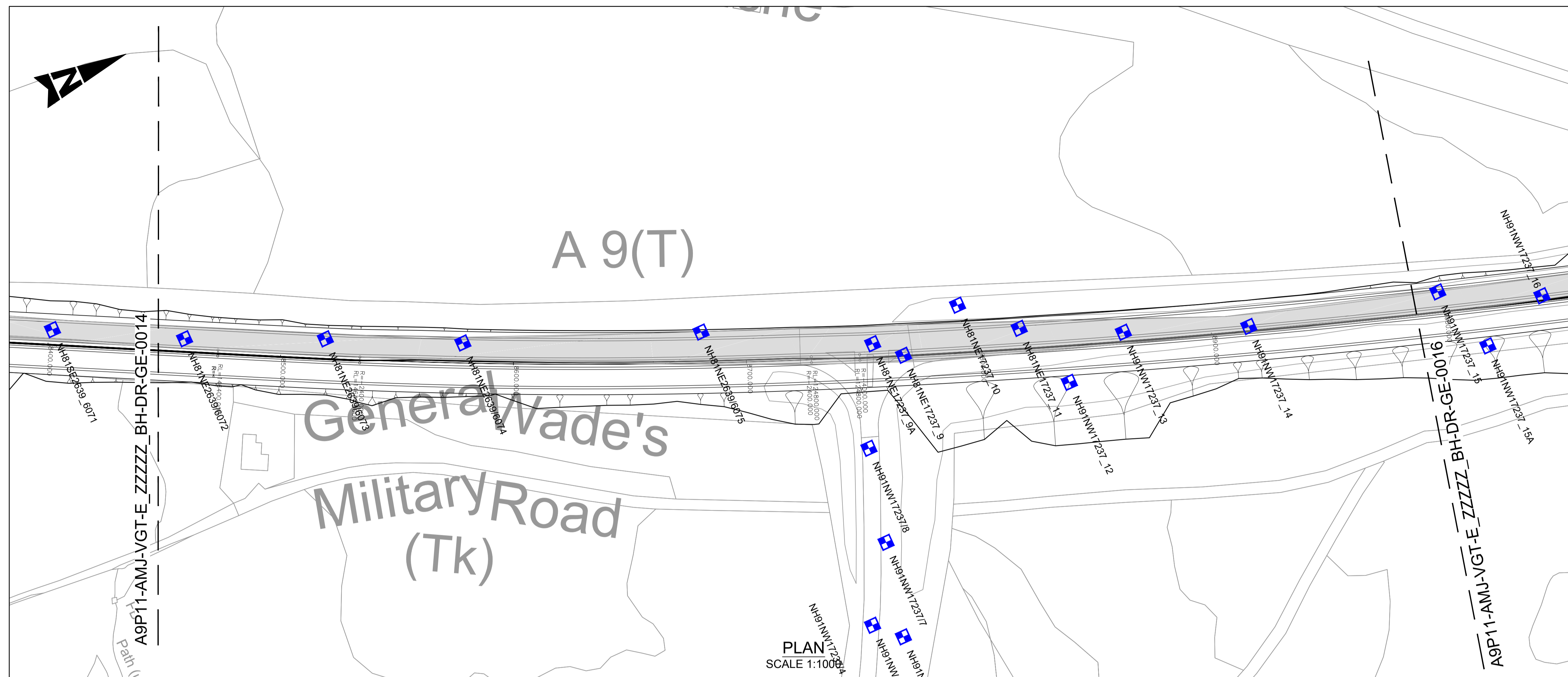
FIGURE 5.19-MAINLINE ALIGNMENT OPTION 1
BOREHOLE PLAN AND LONG SECTION
(SHEET 14 OF 41)

Scale	AS SHOWN	Designed / Drawn	Checked	Approved	Authorised
Original Size	A1	CC	KP	KP	RG
Date	02/08/16	03/08/16	03/08/16	05/08/16	
Drawing Number	Project				Revision
	A9P11 - AMJ - VGT - E_ZZZZ_BH - DR - GE - 0014				P01
Location	Type	Role	Number		

Plotted: Mar 24, 2017 - 4:13pm 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



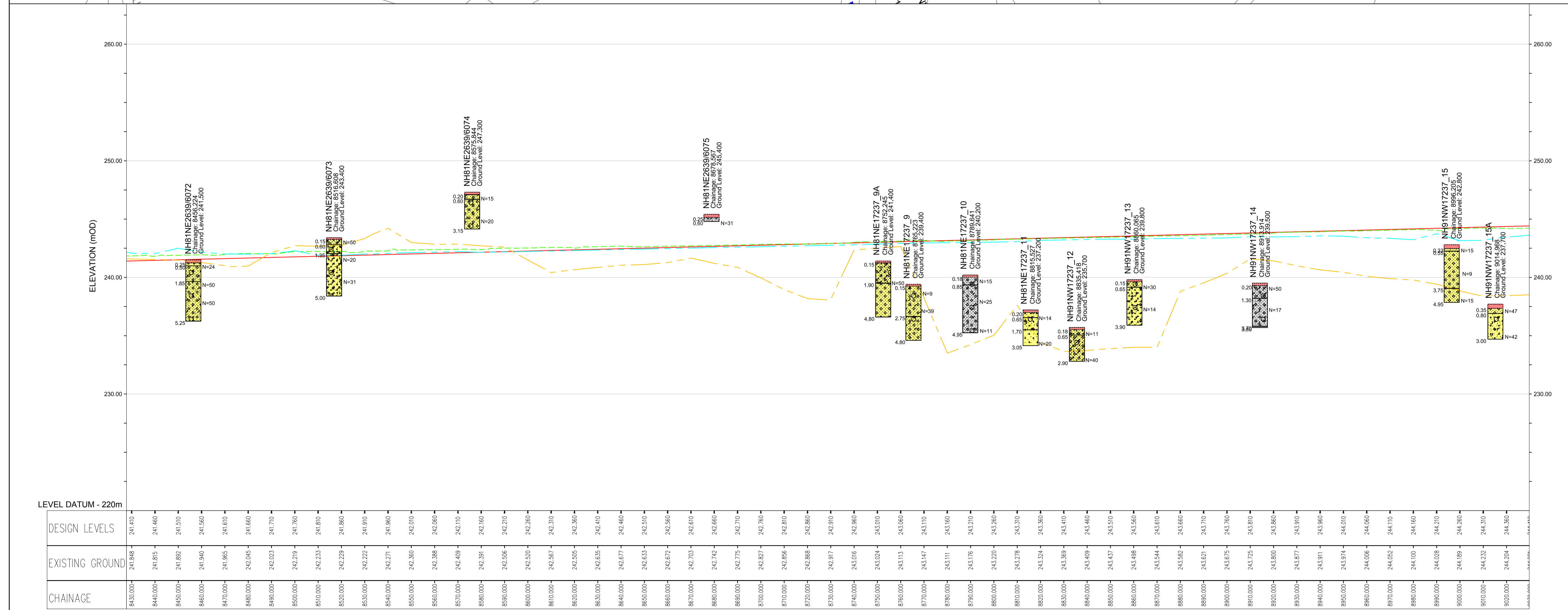
PLAN
SCALE 1:1000

- 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 |
| NH81NW 1977 BOREHOLE | NH81SE 2003 BOREHOLE |
| NH81NW 1977 CORE | NH81SE 2003 TRIAL PIT |
| NH81NW 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 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

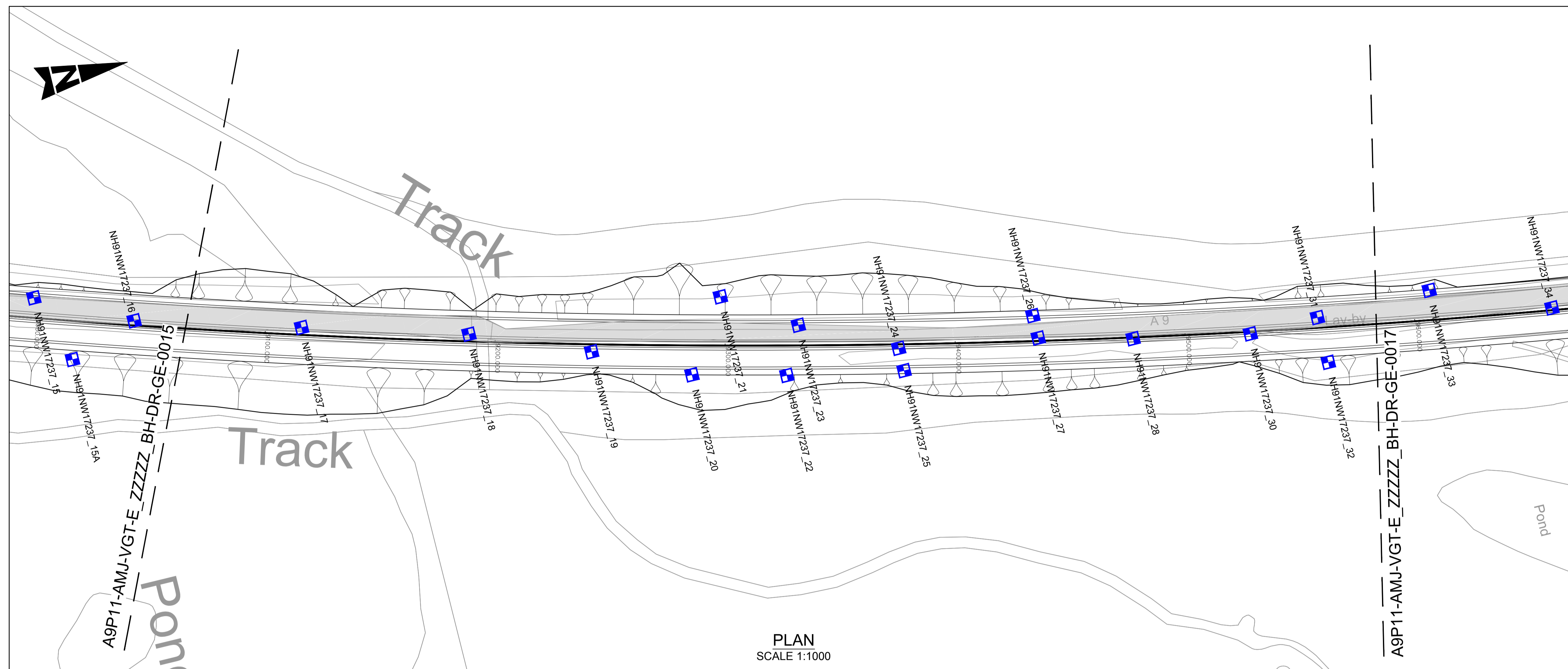
Client				
 An agency of The Scottish Government				
 Dalraddy to Stochd				
Drawing Title				
FIGURE 5.19-MAINLINE ALIGNMENT OPTION 1 BOREHOLE PLAN AND LONG SECTION (SHEET 15 OF 41)				

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 - 0015			P01	
Location	Type	Role	Number	

Plotted: Mar 24, 2017 - 4:22pm 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:

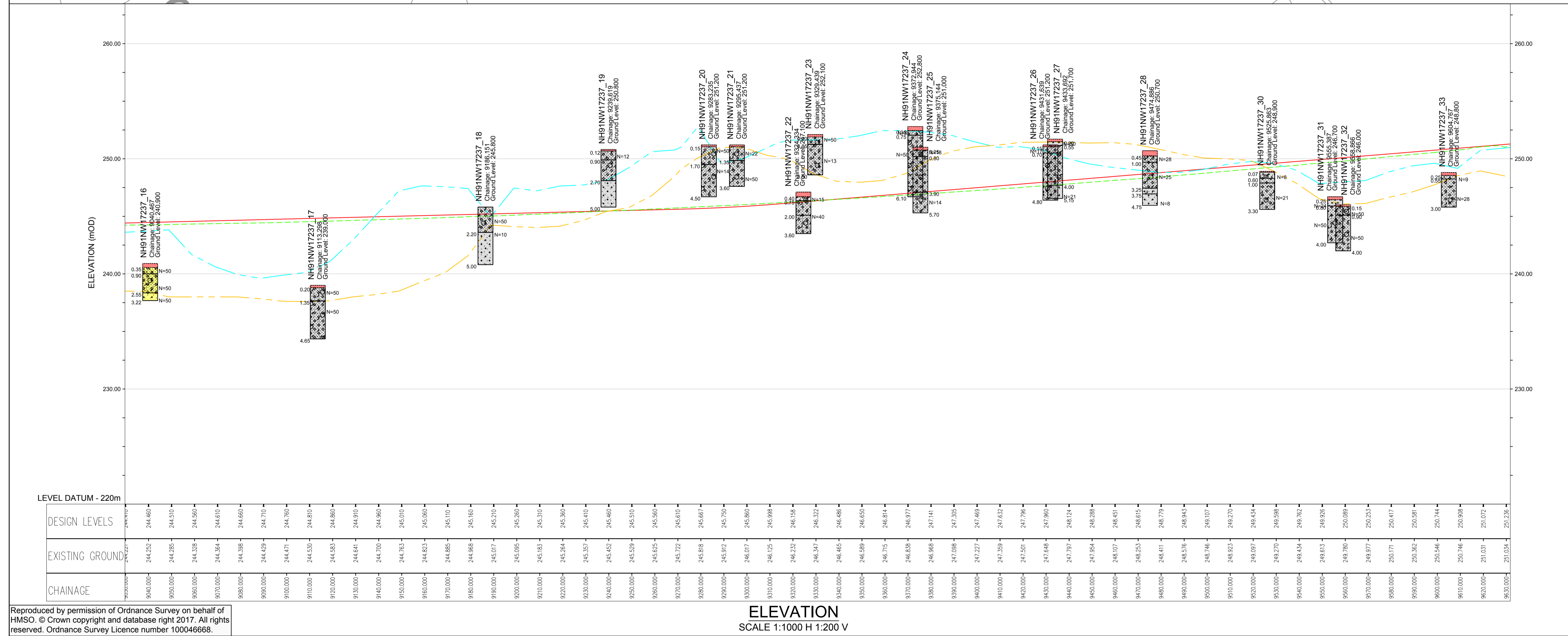
NH82NW 1973 BOREHOLE	NH80NE 1978 BOREHOLE
NH82NW 1973 CORE	NH80NE 1978 CORE
NH82NW 1973 TRIAL PIT	NH80NE 1978 TRIAL PIT
NH91NW 1977 BOREHOLE	NH81SE 2003 BOREHOLE
NH91NW 1977 CORE	NH81SE 2003 TRIAL PIT
NH91NW 1977 TRIAL PIT	NH81SE 1999 BOREHOLE
NH81SE 1964 BOREHOLE	NH81SE 1999 CORE
NH81SE 1964 CORE	NH81SE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

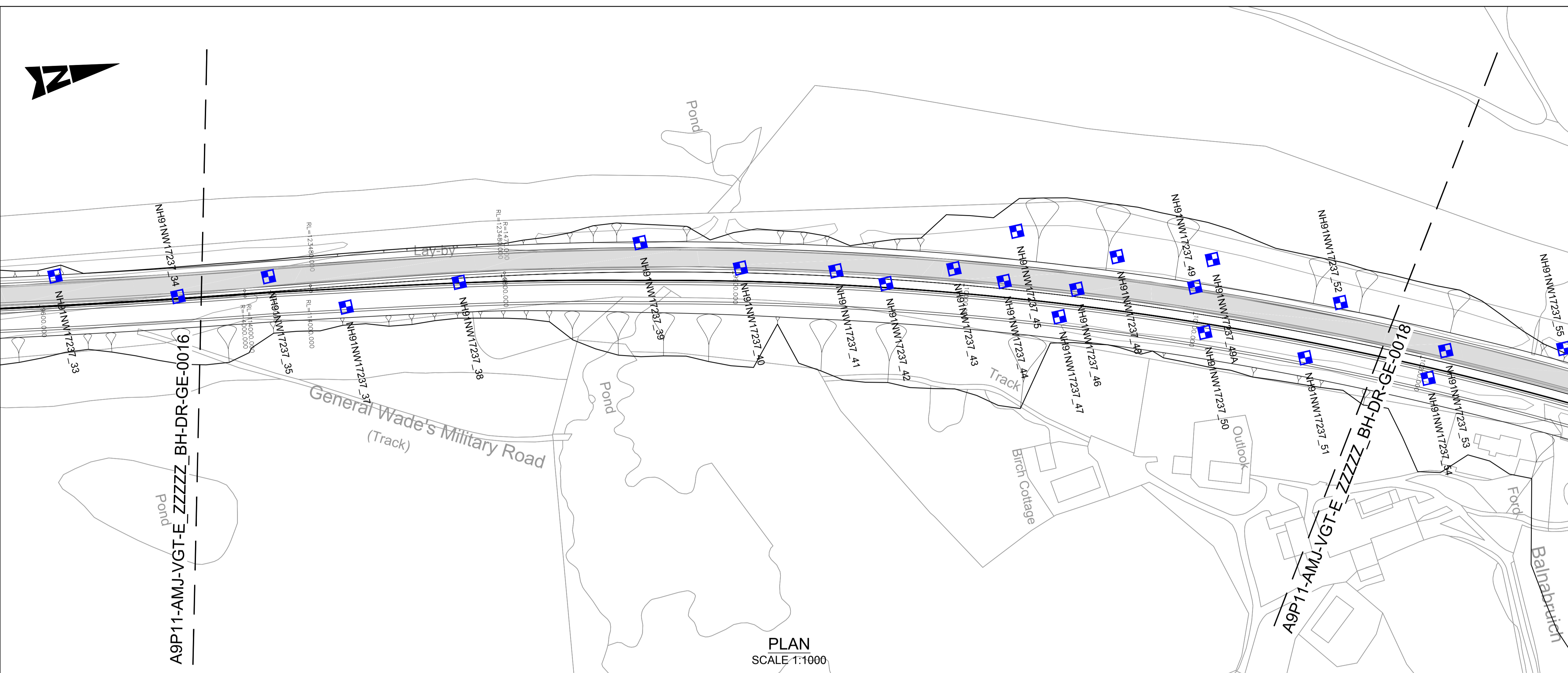


P01	CC	KP	KP	05/08/16
FIRST ISSUE				
Rev	Drawn / Des	Checked	Approved	Date
Description				
Drawing Status				Subtality
FINAL				B
Client				
 An agency of The Scottish Government				
 Dalraddy to Slouch				
Drawing Title				
FIGURE 5.19-MAINLINE ALIGNMENT OPTION 1 BOREHOLE PLAN AND LONG SECTION (SHEET 16 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 - 0016			P01	
Location	Type	Role	Number	

Plotted: Mar 24, 2017 - 4:37pm 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



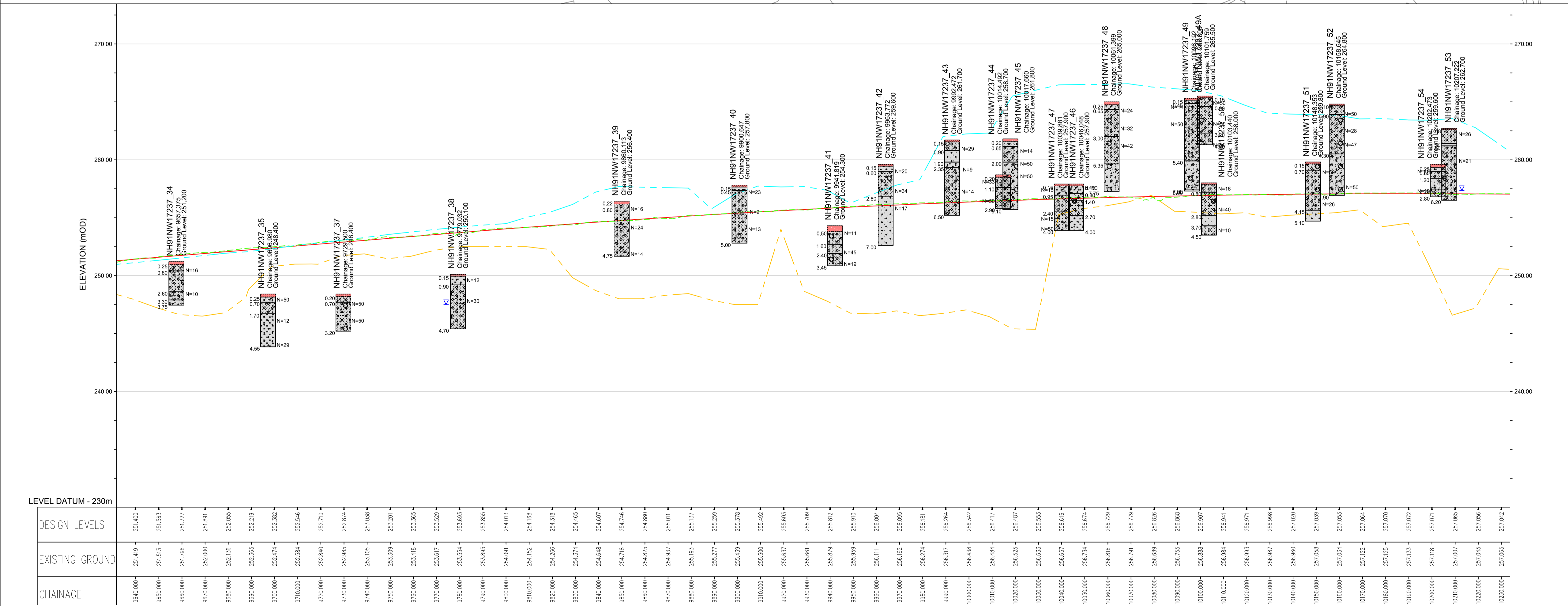
- NOTES:
- ALL LEVELS IN mAOD UNLESS OTHERWISE NOTED. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE NOTED.
 - ALL DEPTHS SHOWN ARE IN METRES.
 - HISTORICAL BOREHOLE POSITIONS AND LEVELS INFERRED FROM BGS DATABASE TO ACCURACY ± 10m.

- 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 BOREHOLE |
| NH82SE 2008 CORE | NH82SE 2008 CORE |
| NH82SE 2008 TRIAL PIT | NH82SE 2008 TRIAL PIT |

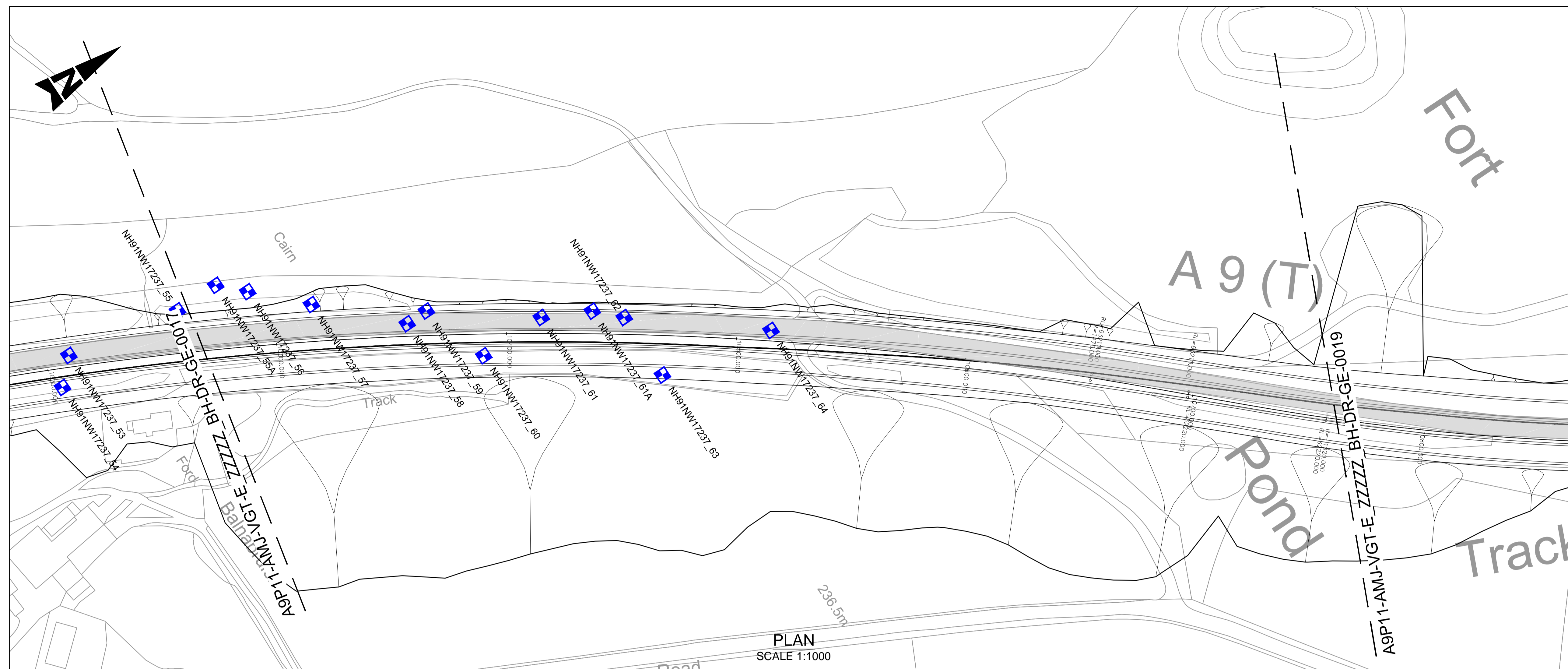
- GEOTECHNICAL LONG SECTION KEY:
- | | |
|---------------------------------|-------------|
| TOPSOIL | TOPSOIL |
| MADE GROUND | MADE GROUND |
| PEAT | SAND |
| ALLUVIUM GRANULAR | GRAVEL |
| RIVER TERRACE DEPOSITS COHESIVE | SILT |
| RIVER TERRACE DEPOSITS GRANULAR | CLAY |
| GLACIAL FLUVIAL GRANULAR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

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



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:

1. ALL 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:

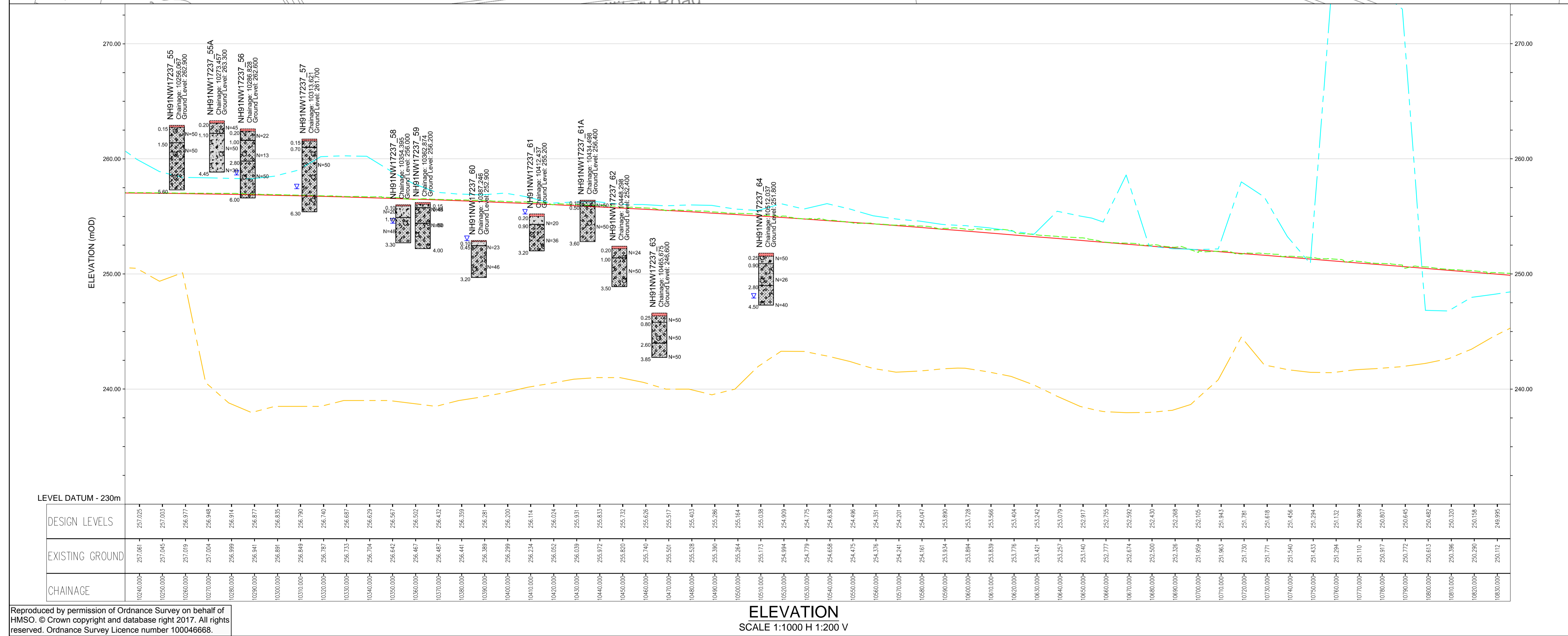
TOPSOIL	TOPSOIL
MADE GROUND	MADE GROUND
PEAT	SAND
ALLUVIUM GRANULAR	GRAVEL
RIVER TERRACE DEPOSITS COHESIVE	SILT
RIVER TERRACE DEPOSITS GRANULAR	CLAY
GLACIAL FLUVIAL GRANULAR	BOULDERS
GLACIAL TILL COHESIVE	BEDROCK
GLACIAL TILL GRANULAR	
ROCK	

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.

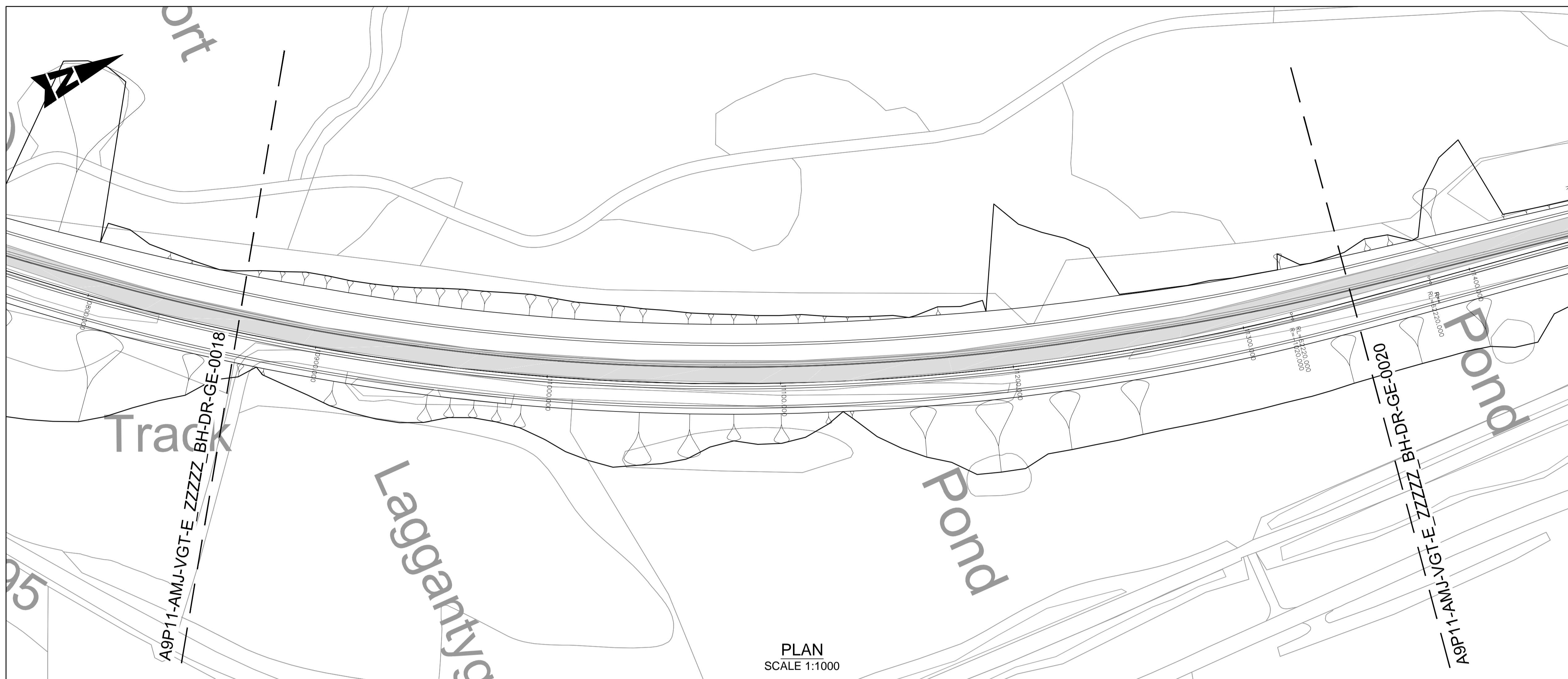
LEGEND:

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

PLAN SCALE 1:1000



100
0 10
Millimetres
DO NOT SCALE



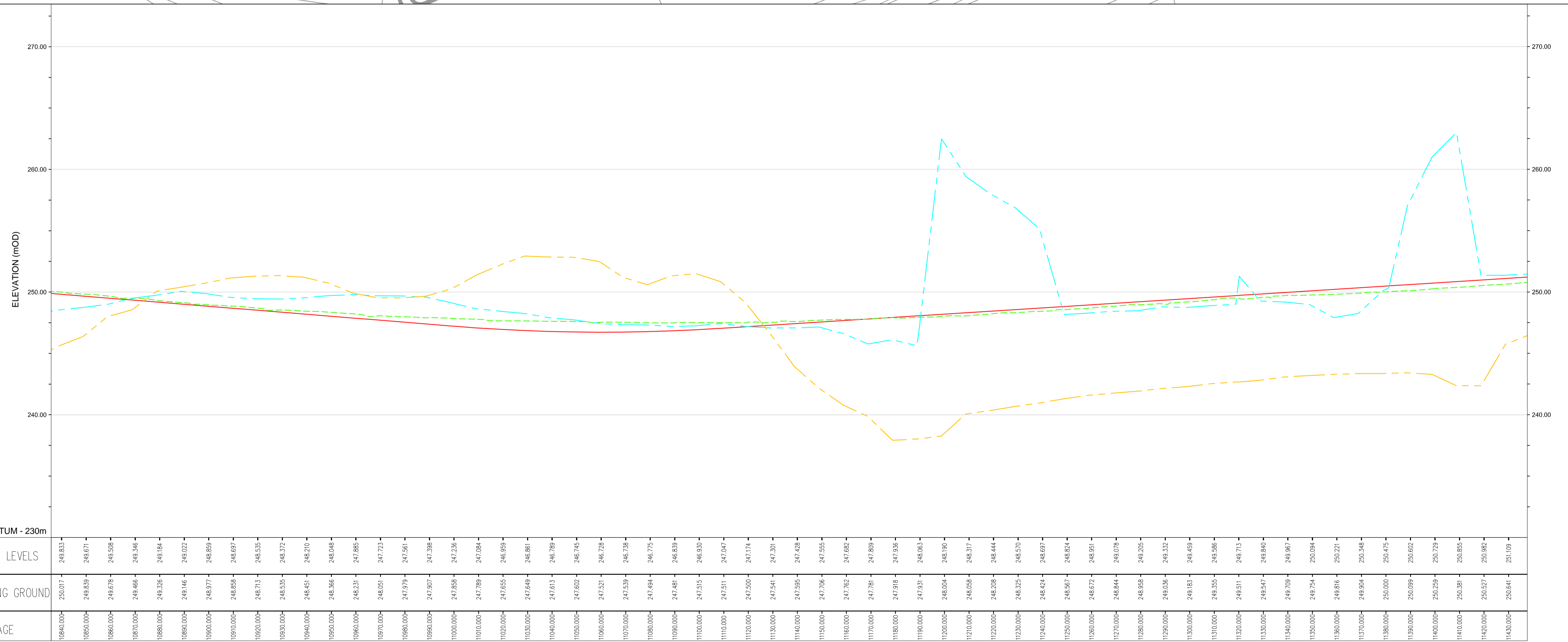
- NOTES:**
- ALL LEVELS IN mAOD UNLESS OTHERWISE NOTED. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE NOTED.
 - ALL DEPTHS SHOWN ARE IN METRES.
 - HISTORICAL BOREHOLE POSITIONS AND LEVELS INFERRED FROM BGS DATABASE TO ACCURACY ± 10m.

- 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

A9
DUALLING
PERTH TO INVERNESS
Dairaddy to Slochd

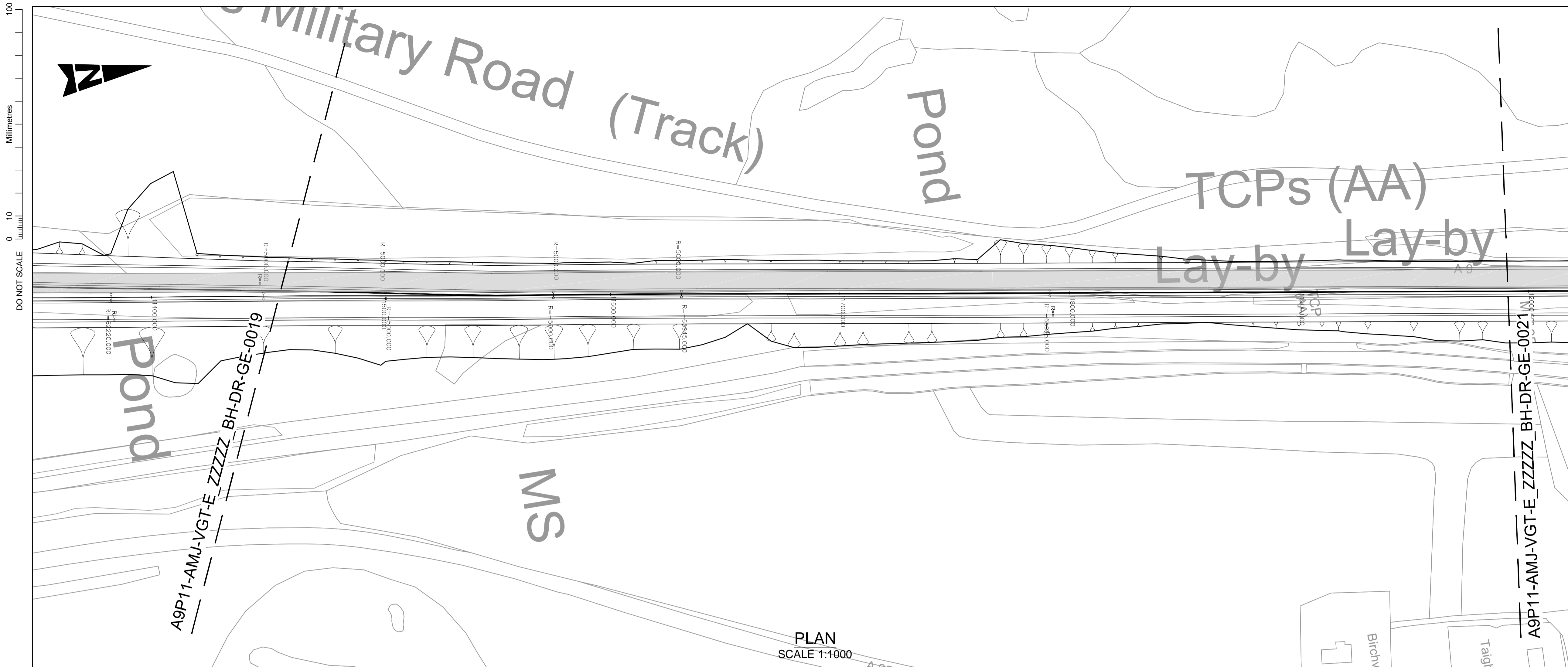
ATKINS mouchel

FIGURE 5.19-MAINLINE ALIGNMENT OPTION 1 BOREHOLE PLAN AND LONG SECTION (SHEET 19 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 - 0019			P01
Location	Type	Role	Number	

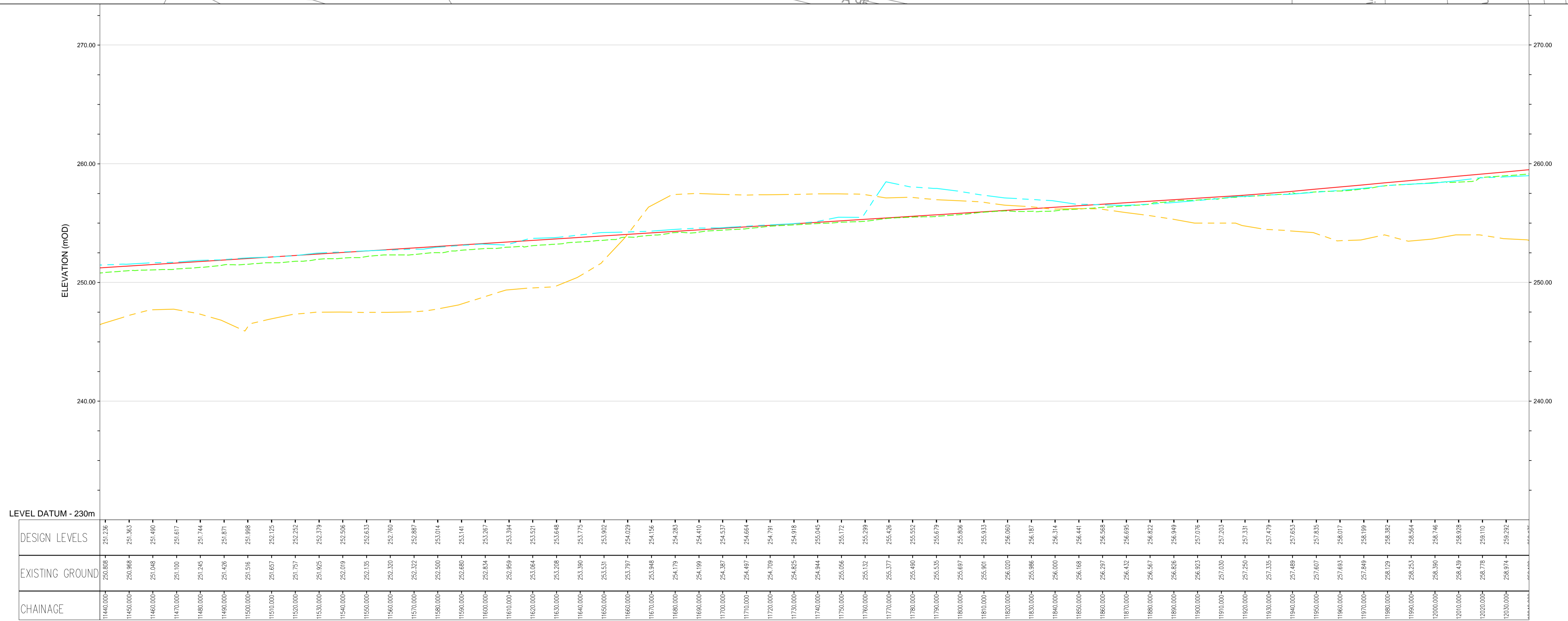
Plotfile: Mar 26, 2017 - 2:42pm by: CARR66835

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



- 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				Subtability
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 20 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 - 0020		P01
Location	Type	Role	Number	

Plotter: Mar 26, 2017 - 2:56pm 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.

ELEVATION SCALE 1:1000 H 1:200 V

