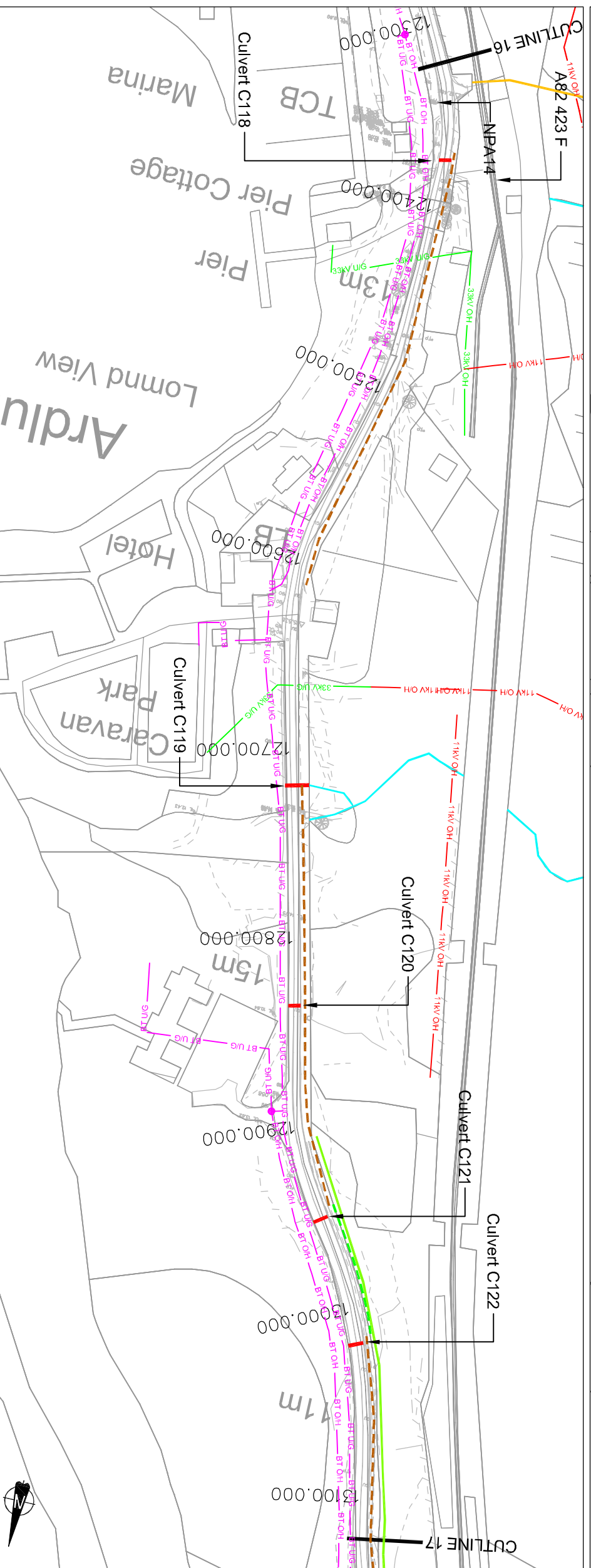
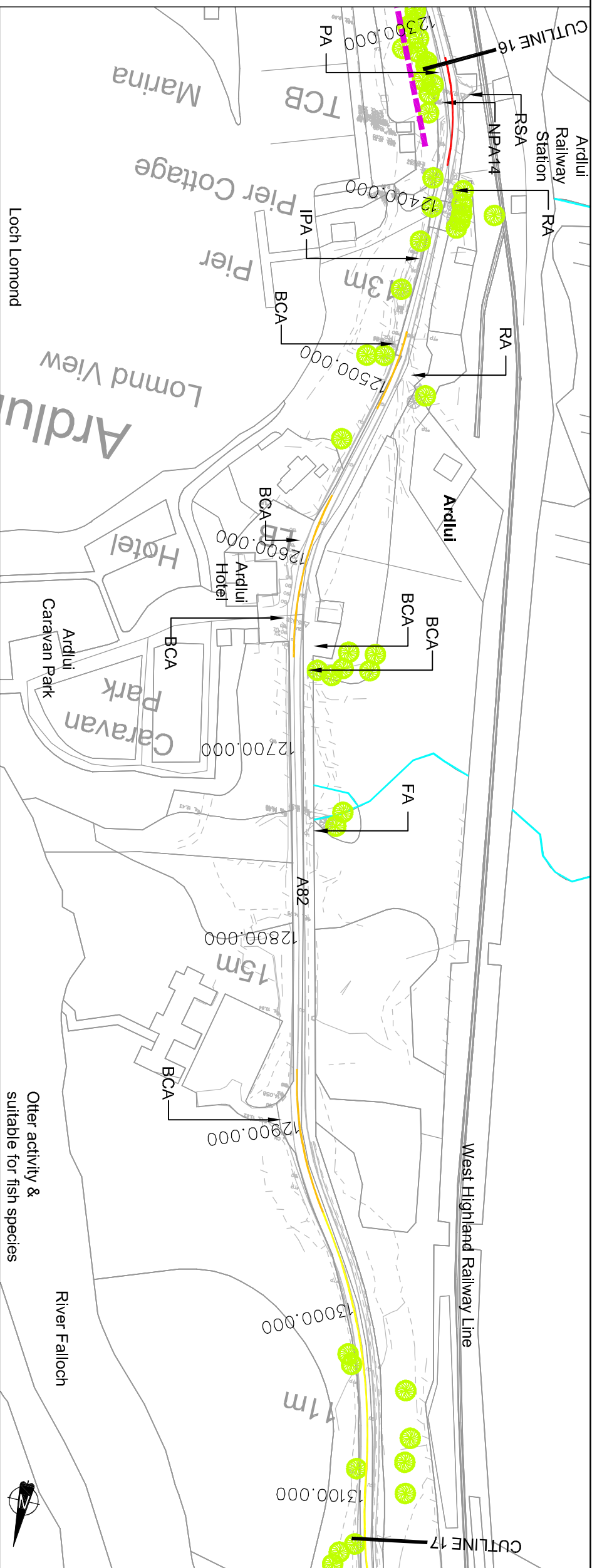


SIGNIFICANT RESIDUAL RISKS

The following list provides a cross reference between this drawing and the Designer's Health and Safety Risk Assessment, and identifies those areas of Significant Residual Risk

Description of Risk	Ref. No.
CLIENT OPERATIONS	1
ADJACENT ACTIVITIES	2
RESTRICTED SITE	3
TRAFFIC	4
INTERFACE WITH PUBLIC	5
NEAR TO HIGHWAYS	6
NEAR TO RAILWAYS	7
NEAR TO WATERWAYS	8
GROUND INSTABILITY	9
CONTAMINATION/SOIL GAS	10
GROUND WATER	11
INUNDATION	12
SERVICES	13
OVERHEAD CABLES	14
INSECT ATTACK (INCL. BEEHIVE & TICKS)	15



KEY

Top Viewport

Horizontal Alignment Assessment

- 1 Step below standard
- 2 Step below standard
- 3 Step below standard
- 4 Step below standard

Access Points

- BCA Business / commercial access
- FA Field access
- IPA Informal parking area
- LAR Loch access road
- PA Parking area
- RA Residential access
- RSA Railway station access
- TR Track road
- UAR Unknown access road

Features

- Potential Rock cut, 0-5m high
- Potential Rock cut, 5-10m high
- Potential Rock cut, >10m high
- Requested parking (suitable)
- Requested parking (not suitable)
- Specimen Tree

Bottom Viewport

Public Utilities

- 11kV Overhead line
- 11kV Underground cable
- 132/275kV Overhead line
- 33kV Overhead line
- 33kV Underground cable
- Pilot cable
- BT Overhead line
- BT Underground cable
- Scottish Water distribution main
- Scottish Water combined sewer
- Scottish Water supply pipe

Drainage

- Existing channel
- Existing ditch
- Existing filter drain
- Hillside run off
- Watercourses

Scale: 1:2500

Drawing No.: 476416-0000-066

Revision: 3.0

EXISTING LAYOUT AND FEATURES

SHEET 17 OF 22

Client: Transport Scotland, The Scottish Government

Project: A82 TARBET TO INVERARNAN UPGRADE

Revision	By	Checked	Approved	Date	Description
3.0	SM	EN	EC	11.12.13	Drawing frame and title block amended.
2.0	MC	EN	EC	11.12.13	Drawing frame and title block amended.
1.0	MC	EN	EC	20.11.13	Footways/footpaths added.

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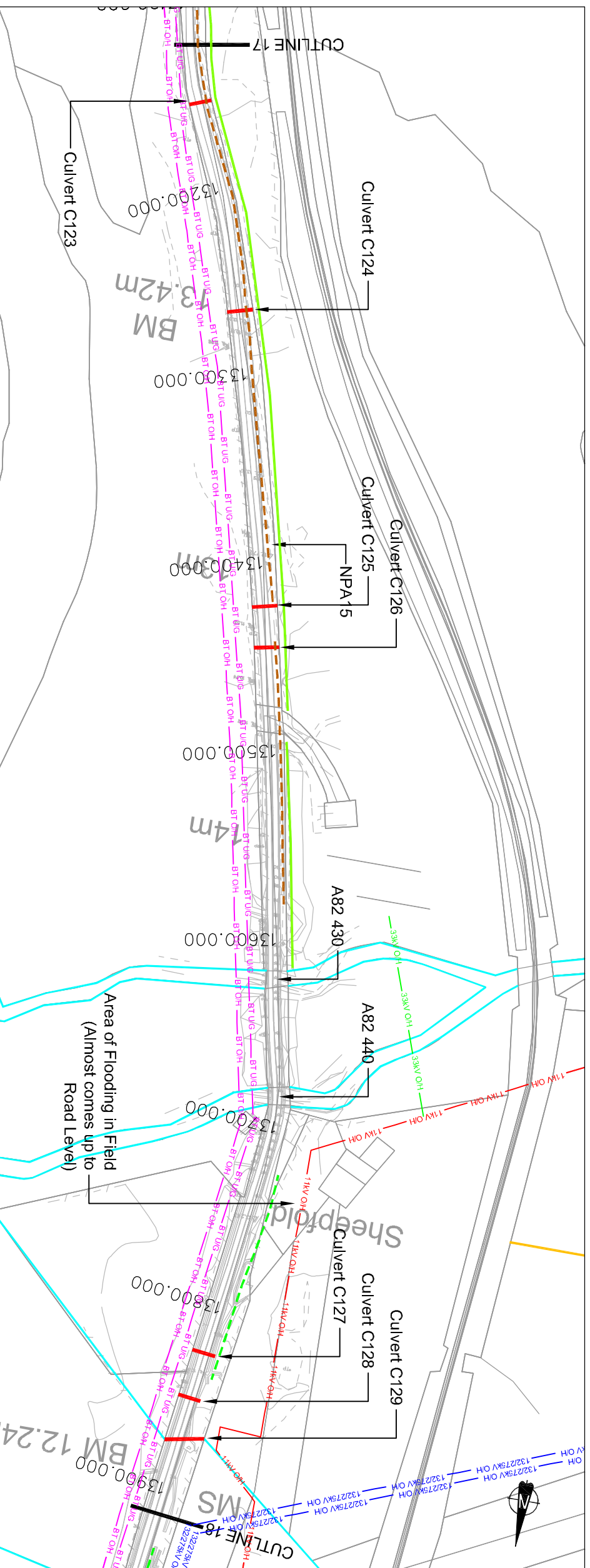
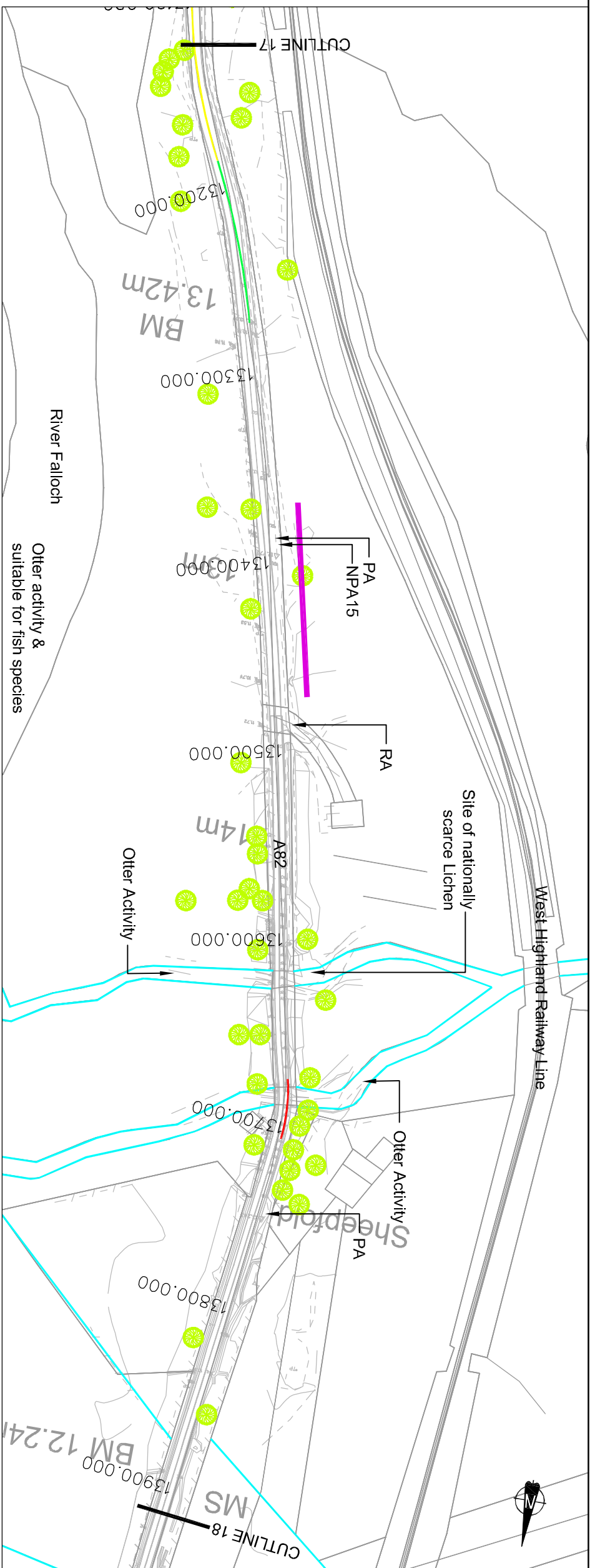
CH2M HILL FAIRHURST JV
 C/O: City Park 368 Alexandra Parade Glasgow G31 3AU
 Tel: +44 (0)141 552 2000 Fax: +44 (0)141 552 2525

Drawn by: M COLAHAN Date: 11.11.13
 Checked by: E NICOLSON Date: 11.12.13
 Authorised by: E CRAWFORD Date: 11.12.13
 CAD Filename:

SIGNIFICANT RESIDUAL RISKS

The following list provides a cross reference between this drawing and the Designer's Health and Safety Risk Assessment, and identifies those areas of Significant Residual Risk

Description of Risk	Ref. No.
CLIENT OPERATIONS	1
ADJACENT ACTIVITIES	2
RESTRICTED SITE	3
TRAFFIC	4
INTERFACE WITH PUBLIC	5
NEAR TO HIGHWAYS	6
NEAR TO RAILWAYS	7
NEAR TO WATERWAYS	8
GROUND INSTABILITY	9
CONTAMINATION/SOIL GAS	10
GROUND WATER	11
INUNDATION	12
SERVICES	13
OVERHEAD CABLES	14
INSECT ATTACK (INCL. NIDGEE & TICKS)	15



- KEY**
- Top Viewport**
- Horizontal Alignment Assessment**
- 1 Step below standard
 - 2 Step below standard
 - 3 Step below standard
 - 4 Step below standard
- Access Points**
- BCA Business / commercial access
 - FA Field access
 - IPA Informal parking area
 - LAR Loch access road
 - PA Parking area
 - RA Residential access
 - RSA Railway station access
 - TR Track road
 - UAR Unknown access road
- Features**
- Potential Rock cut, 0-5m high
 - Potential Rock cut, 5-10m high
 - Potential Rock cut, >10m high
 - Requested parking (suitable)
 - Requested parking (not suitable)
 - Specimen Tree
- Bottom Viewport**
- Public Utilities**
- 11kV Overhead line
 - 11kV Underground cable
 - 132/275kV Overhead line
 - 132/275kV Underground cable
 - 33kV Overhead line
 - 33kV Underground cable
 - Pilot cable
 - BT Overhead line
 - BT Underground cable
 - Scottish Water distribution main
 - Scottish Water combined sewer
 - Scottish Water supply pipe
- Drainage**
- Existing channel
 - Existing ditch
 - Existing filter drain
 - Hillside run off
 - Watercourses

Client: The Scottish Government

Project: **A82 TARBET TO INVERARNAN UPGRADE**

Revision	By	Checked	Approved	Date	Description
3.0	SM	EN	EC	11.12.13	Drawing frame and title block amended.
2.0	MC	EN	EC	11.12.13	Drawing frame and title block amended.
1.0	MC	EN	EC	20.11.13	Footways/footpaths added.

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Drawn by: **M COLAHAN** Date: 11.11.13
 Checked by: **ENICOLSON** Date: 11.12.13
 Authorised by: **E GRAMFORD** Date: 11.12.13

CH2M HILL **FARHURST**
 CH2M Hill Fairhurst JV
 C/O: City Park 368 Alexandra Parade Glasgow G31 3AU
 Tel +44 (0)141 552 2000 Fax +44 (0)141 552 2525

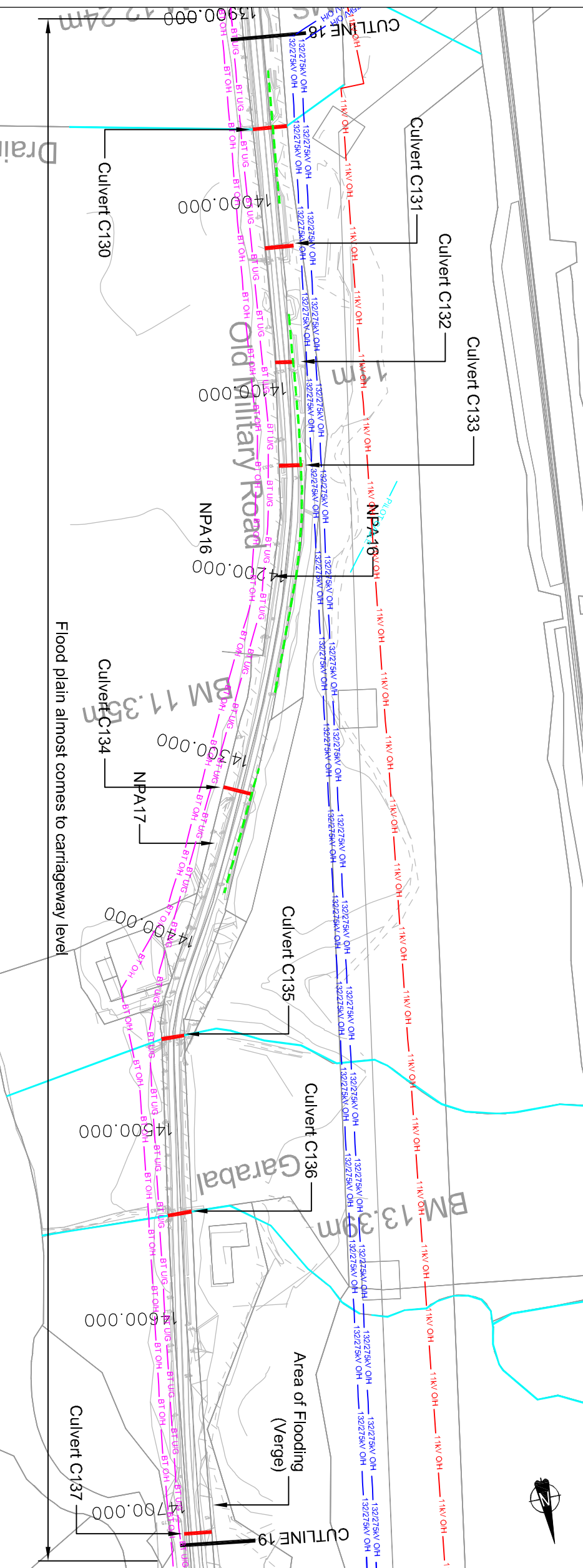
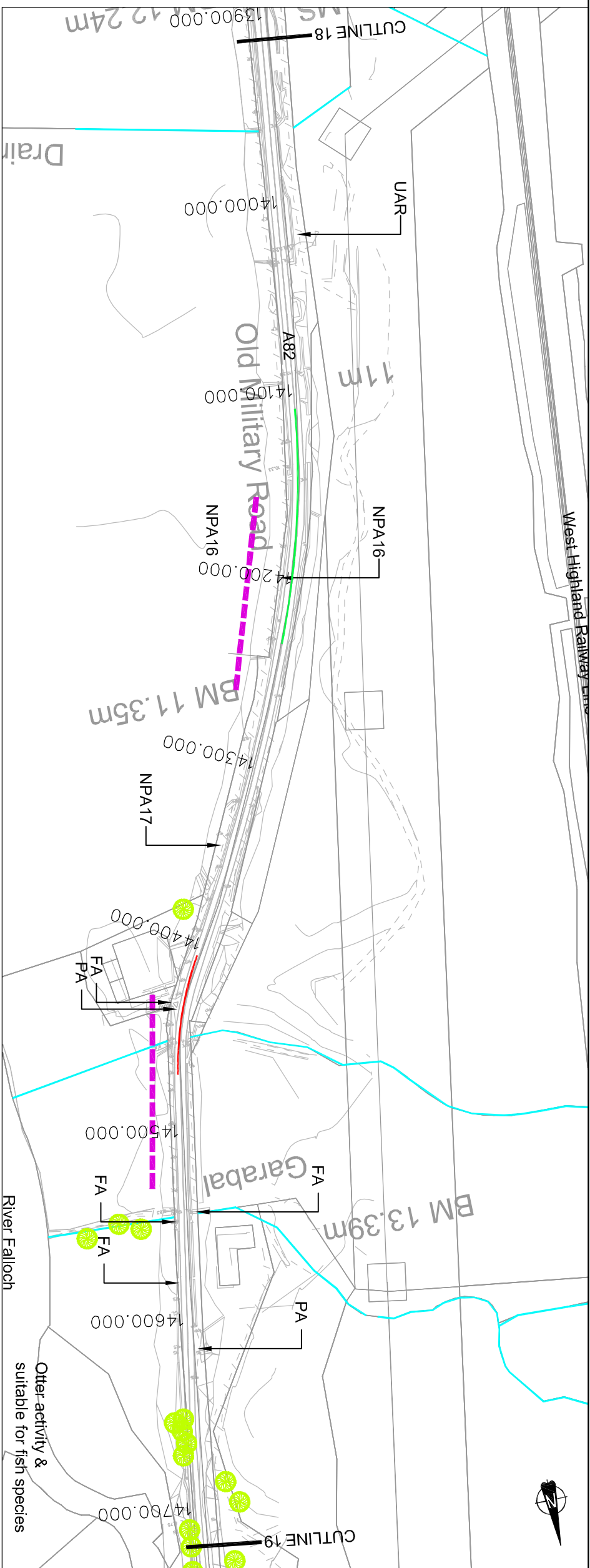
Drawing: **EXISTING LAYOUT AND FEATURES**
 SHEET 18 OF 22

Scale: 1:2500
 Drawing No. **476416-0000-067**
 Revision **3.0**

SIGNIFICANT RESIDUAL RISKS

The following list provides a cross reference between this drawing and the Designer's Health and Safety Risk Assessment, and identifies those areas of Significant Residual Risk.

Description of Risk	Ref. No.
CLIENT OPERATIONS	1
ADJACENT ACTIVITIES	2
RESTRICTED SITE	3
TRAFFIC	4
INTERFACE WITH PUBLIC	5
NEAR TO HIGHWAYS	6
NEAR TO RAILWAYS	7
NEAR TO WATERWAYS	8
GROUND INSTABILITY	9
CONTAMINATION/SOIL GAS	10
GROUND WATER	11
NUDATION	12
SERVICES	13
OVERHEAD CABLES	14
INSECT ATTACK (INCL. MIDGE & TICKS)	15



- KEY**
- Top Viewport**
- Horizontal Alignment Assessment**
- 1 Step below standard
 - 2 Step below standard
 - 3 Step below standard
 - 4 Step below standard
- Access Points**
- BCA Business / commercial access
 - FA Field access
 - IPA Informal parking area
 - LAR Loch access road
 - PA Parking area
 - RA Residential access
 - RSA Railway station access
 - TR Track road
 - UAR Unknown access road
- Features**
- Potential Rock cut, 0-5m high
 - Potential Rock cut, 5-10m high
 - Potential Rock cut, >10m high
 - Requested parking (suitable)
 - Requested parking (not suitable)
 - Specimen Tree
- Bottom Viewport**
- Public Utilities**
- 11kV Overhead line
 - 11kV Underground cable
 - 132/275kV Overhead line
 - 132/275kV Underground cable
 - 33kV Overhead line
 - 33kV Underground cable
 - Pilot cable
 - BT Overhead line
 - BT Underground cable
 - SWDM Scottish Water distribution main
 - SWCS Scottish Water combined sewer
 - SWSP Scottish Water supply pipe
- Drainage**
- Existing channel
 - Existing ditch
 - Existing filter drain
 - Hillside run off
 - Watercourses

Drawing

EXISTING LAYOUT AND FEATURES

SHEET 19 OF 22

Scale: 1:2500

Drawing No. **476416-0000-068**

Revision **3.0**

Client

Project

A82 TARBET TO INVERARNAN UPGRADE

Revision	By	Checked	Approved	Date	Description
3.0	SM	EN	EC	11.12.13	Drawing frame and title block amended.
2.0	MC	EN	EC	11.12.13	Drawing frame and title block amended.
1.0	MC	EN	EC	20.11.13	Footways/footpaths added.

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Drawn by: **M COLAHAN** Date: 11.11.13

Checked by: **E NICOLSON** Date: 11.12.13

Authorised by: **E CRAWFORD** Date: 11.12.13

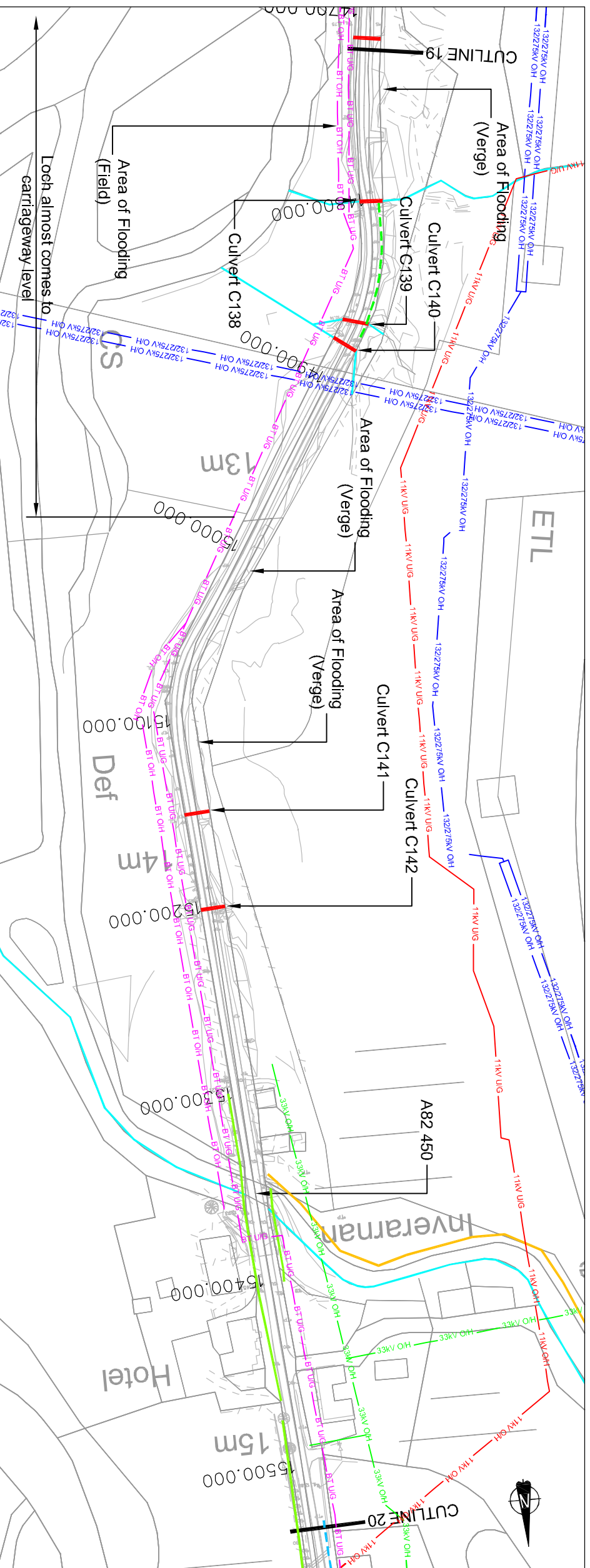
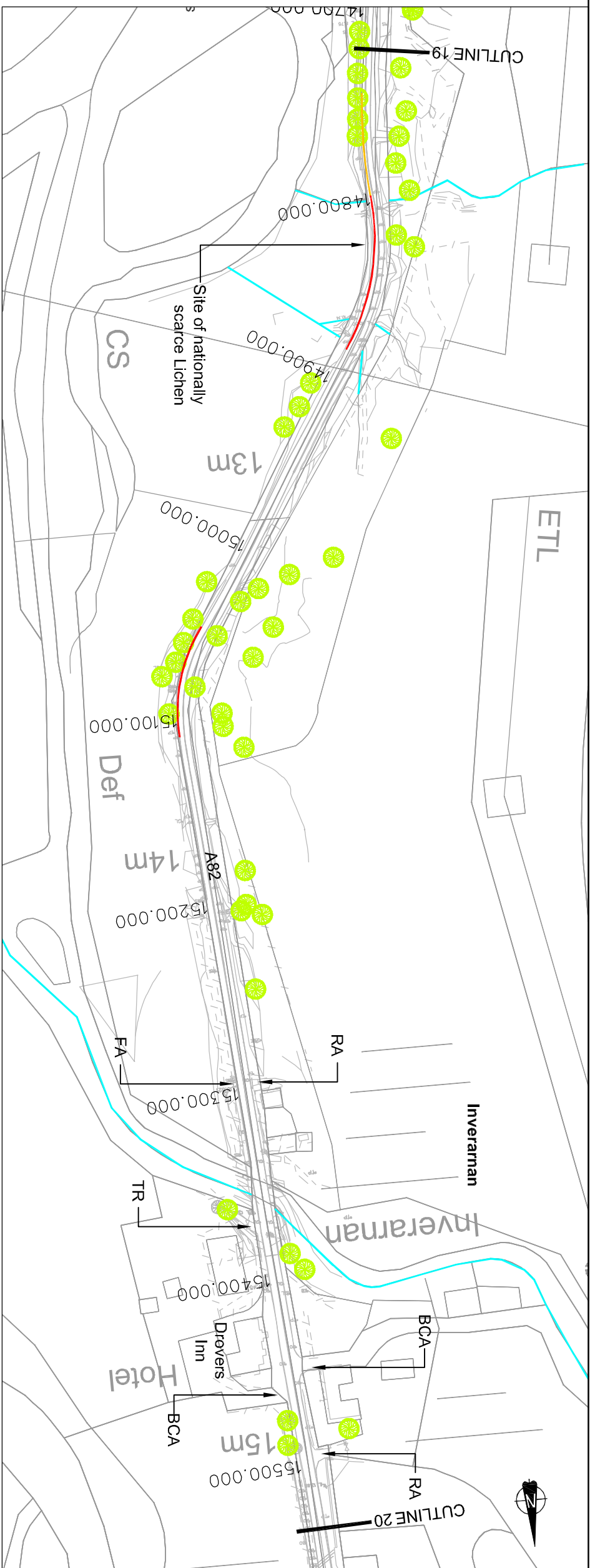
CAD Filename:

CH2M HILL FAIRHURST JV
 C/O: City Park 368 Alexandra Parade Glasgow G31 3AU
 Tel +44 (0)141 552 2000 Fax +44 (0)141 552 2525

SIGNIFICANT RESIDUAL RISKS

The following list provides a cross reference between this drawing and the Designer's Health and Safety Risk Assessment, and identifies those areas of Significant Residual Risk

Description of Risk	Ref. No.
CLIENT OPERATIONS	1
ADJACENT ACTIVITIES	2
RESTRICTED SITE	3
TRAFFIC	4
INTERFERENCE WITH PUBLIC	5
NEAR TO HIGHWAYS	6
NEAR TO RAILWAYS	7
NEAR TO WATERWAYS	8
GROUND INSTABILITY	9
CONTAMINATION/SOIL GAS	10
GROUND WATER	11
INUNDATION	12
SERVICES	13
OVERHEAD CABLES	14
INSECT ATTACK (INCL. BIRDS & TICKS)	15



- KEY**
- Top Viewport**
- Horizontal Alignment Assessment**
- 1 Step below standard
 - 2 Step below standard
 - 3 Step below standard
 - 4 Step below standard
- Access Points**
- BCA Business / commercial access
 - FA Field access
 - IPA Informal parking area
 - LAR Loach access road
 - PA Parking area
 - RA Residential access
 - RSA Railway station access
 - TR Track road
 - UAR Unknown access road
- Features**
- Potential Rock cut, 0-5m high
 - Potential Rock cut, 5-10m high
 - Potential Rock cut, >10m high
 - Requested parking (suitable)
 - Requested parking (not suitable)
 - Specimen Tree
- Bottom Viewport**
- Public Utilities**
- 11kV Overhead line
 - 11kV Underground cable
 - 132/275kV Overhead line
 - 33kV Overhead line
 - 33kV Underground cable
 - Pilot cable
 - BT Overhead line
 - BT Underground cable
 - SWDM Scottish Water distribution main
 - SWCS Scottish Water combined sewer
 - SWSP Scottish Water supply pipe
- Drainage**
- Existing channel
 - Existing ditch
 - Existing filter drain
 - Hillside run off
 - Watercourses

Client

The Scottish Government

Project

A82 TARBET TO INVERARNAN UPGRADE

Revision	By	Checked	Approved	Date	Description
3.0	SM	EN	EC	11.12.13	Drawing frame and title block amended.
2.0	MC	EN	EC	11.12.13	Drawing frame and title block amended.
1.0	MC	EN	EC	20.11.13	Footways/footpaths added.

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Drawn by: **M COLAHAN** Date: 11.11.13

Checked by: **ENICOLSON** Date: 11.12.13

Authorised by: **E CRAWFORD** Date: 11.12.13

CAD Filename:

CH2M HILL

FAIRHURST

CH2M Hill Fairhurst JV
 C/O: City Park 368 Alexandra Parade Glasgow G31 3AU
 Tel: +44 (0)141 552 2000 Fax: +44 (0)141 552 2525

Drawing

EXISTING LAYOUT AND FEATURES

SHEET 20 OF 22

Scale: 1:2500

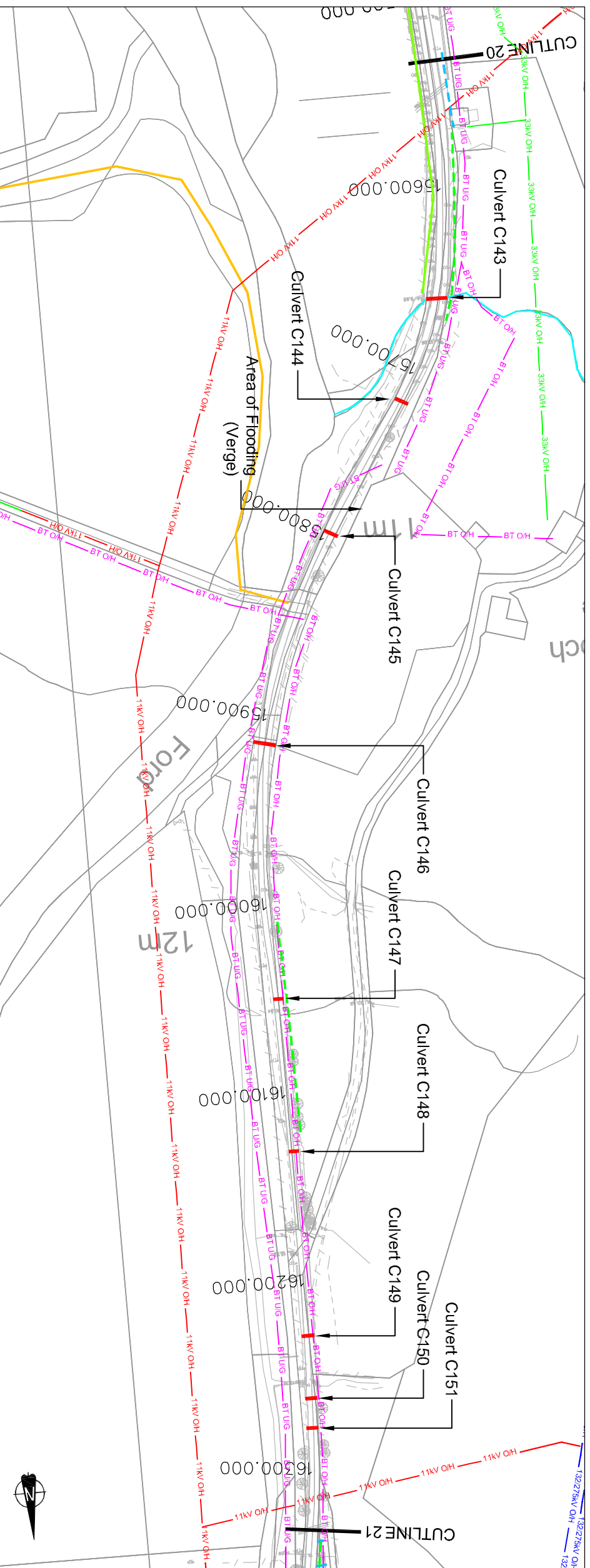
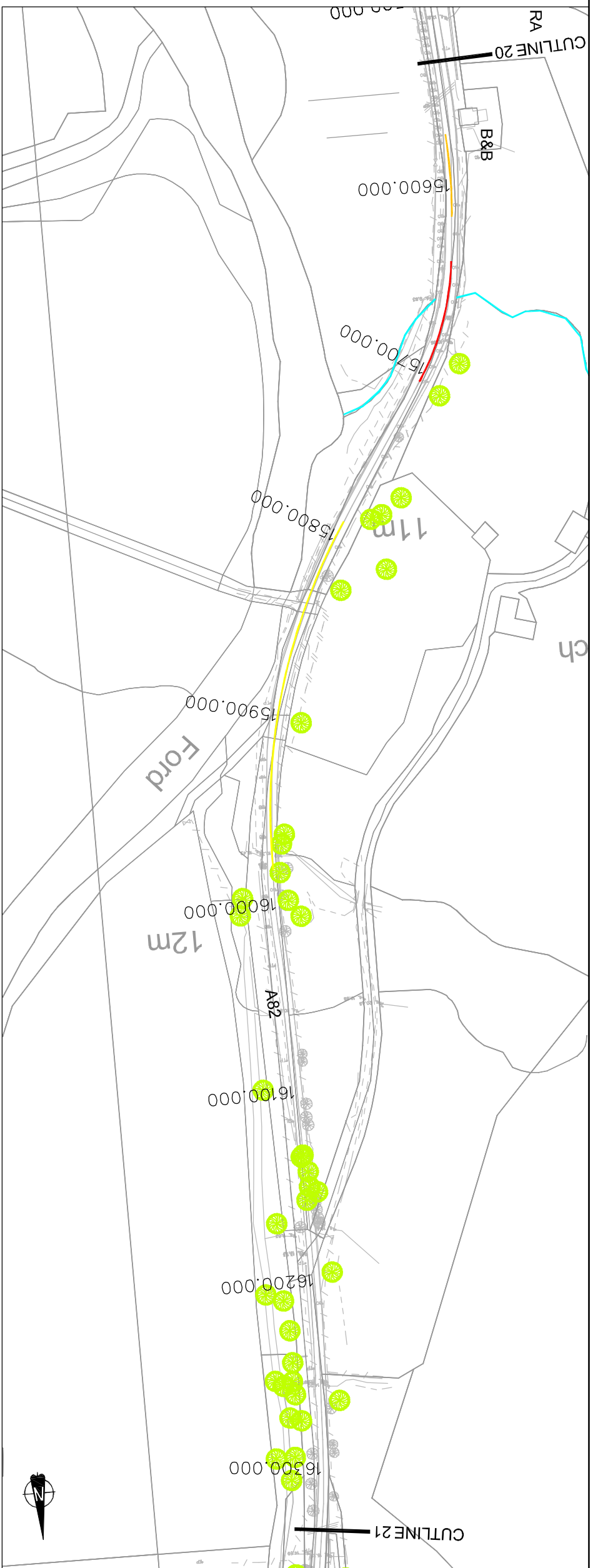
Drawing No. **476416-0000-069**

Revision **3.0**

SIGNIFICANT RESIDUAL RISKS

The following list provides a cross reference between this drawing and the Designer's Health and Safety Risk Assessment, and identifies those areas of Significant Residual Risk

Description of Risk	Ref. No.
CLIENT OPERATIONS	1
ADJACENT ACTIVITIES	2
RESTRICTED SITE	3
TRAFFIC	4
INTERFACE WITH PUBLIC	5
NEAR TO HIGHWAYS	6
NEAR TO RAILWAYS	7
NEAR TO WATERWAYS	8
GROUND INSTABILITY	9
CONTAMINATION/SOIL GAS	10
GROUND WATER	11
INUNDATION	12
SERVICES	13
OVERHEAD CABLES	14
INSECT ATTACK (INCL. NIDJEE & TICKS)	15



- KEY**
- Top Viewport**
- Horizontal Alignment Assessment**
- 1 Step below standard
 - 2 Step below standard
 - 3 Step below standard
 - 4 Step below standard
- Access Points**
- BCA Business / commercial access
 - FA Field access
 - IPA Informal parking area
 - LAR Loch access road
 - PA Parking area
 - RA Residential access
 - RSA Railway station access
 - TR Track road
 - UAR Unknown access road
- Features**
- Potential Rock cut, 0-5m high
 - Potential Rock cut, 5-10m high
 - Potential Rock cut, >10m high
 - Requested parking (suitable)
 - Requested parking (not suitable)
 - Specimen Tree
- Bottom Viewport**
- Public Utilities**
- 11kV Overhead line
 - 11kV Underground cable
 - 132/275kV Overhead line
 - 33kV Overhead line
 - 33kV Underground cable
 - Pilot cable
 - BT Overhead line
 - BT Underground cable
 - Scottish Water distribution main
 - Scottish Water combined sewer
 - Scottish Water supply pipe
- Drainage**
- Existing channel
 - Existing ditch
 - Existing filter drain
 - Hillside run off
 - Watercourses

Client: The Scottish Government

Project: **A82 TARBET TO INVERARNAN UPGRADE**

Revision	By	Checked	Approved	Date	Description
3.0	SM	EN	EC	11.12.13	Drawing frame and title block amended.
2.0	MC	EN	EC	11.12.13	Drawing frame and title block amended.
1.0	MC	EN	EC	20.11.13	Fordways/footpaths added.

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Drawn by: **M COLAHAN** Date: 11.11.13
 Checked by: **ENICOLSON** Date: 11.12.13
 Authorised by: **E CRAWFORD** Date: 11.12.13

CH2M HILL **FARRHURST**
 C/O: City Park 368 Alexandra Parade Glasgow G31 3AU
 Tel +44 (0)141 552 2000 Fax +44 (0)141 552 2525

Drawing: **EXISTING LAYOUT AND FEATURES**
 SHEET 21 OF 22

Scale: 1:2500

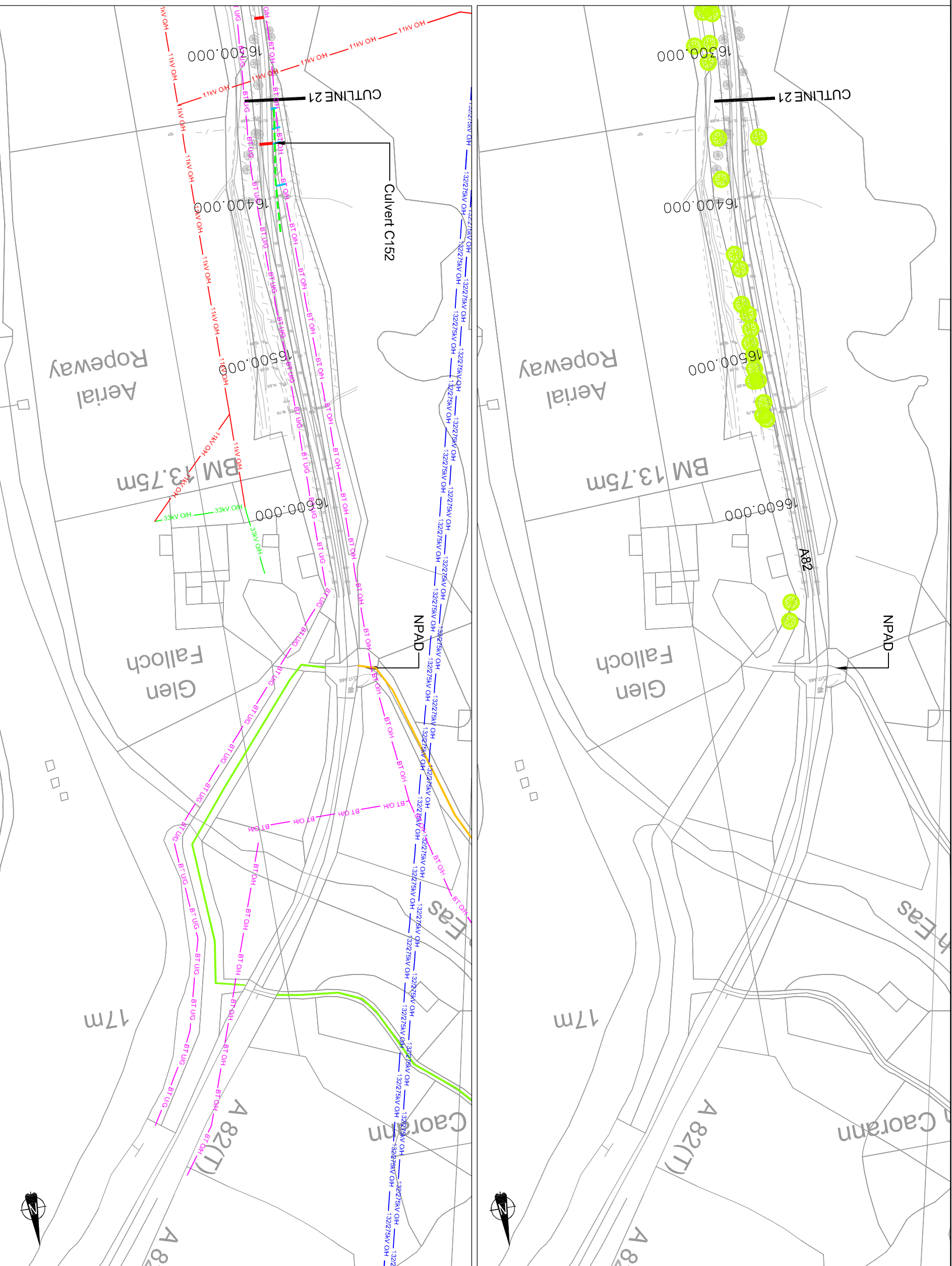
Drawing No. **476416-0000-070**

Revision **3.0**

SIGNIFICANT RESIDUAL RISKS

The following list provides a cross reference between this drawing and the Designer's Health and Safety Risk Assessment, and defines those areas of Significant Residual Risk

Description of Risk	Ref. No.
CLIENT OPERATIONS	1
ADJACENT ACTIVITIES	2
RESTRICTED SITE	3
TRAFFIC	4
INTERFACE WITH PUBLIC	5
NEAR TO HIGHWAYS	6
NEAR TO RAILWAYS	7
NEAR TO WATERWAYS	8
GROUND INSTABILITY	9
CONTAMINATION/SOIL GAS	10
GROUND WATER	11
INUNDATION	12
SERVICES	13
OVER-HEAD CABLES	14
INSECT ATTACK (INCL. MIDGE & TICKS)	15



KEY

Top Viewport

Horizontal Alignment Assessment

- 1 Step below standard
- 2 Step below standard
- 3 Step below standard
- 4 Step below standard

Access Points

- BCA Business / commercial access
- FA Field access
- IPA Informal parking area
- LAR Loch access road
- PA Parking area
- RA Residential access
- RSA Railway station access
- TR Track road
- UAR Unknown access road

Features

- Potential Rock cut, 0-5m high
- Potential Rock cut, 5-10m high
- Potential Rock cut, >10m high
- Requested parking (suitable)
- Requested parking (not suitable)
- Specimen Tree

Bottom Viewport

Public Utilities

- 11kV Overhead line
- 11kV Underground cable
- 132/275kV Overhead line
- 33kV Overhead line
- 33kV Underground cable
- PILOT CABLE
- BT Overhead line
- BT Underground cable
- SW Scottish Water distribution main
- SW Scottish Water combined sewer
- SW Scottish Water supply pipe

Drainage

- Existing channel
- Existing ditch
- Existing filter drain
- Hillside run off
- Watercourses

Scale: 1:2500

Drawing No.: 476416-0000-071

Revision: 3.0

Client: Transport Scotland

Project: A82 TARBET TO INVERARNAN UPGRADE

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Revision	By	Checked	Approved	Date	Description
3.0	SM	EN	EC	11.12.13	Drawing frame and title block amended.
2.0	MC	EN	EC	11.12.13	Drawing frame and title block amended.
1.0	MC	EN	EC	20.11.13	Footways/footpaths added.

Drawn by: M COLAHAN Date: 11.11.13

Checked by: E NICOLSON Date: 11.12.13

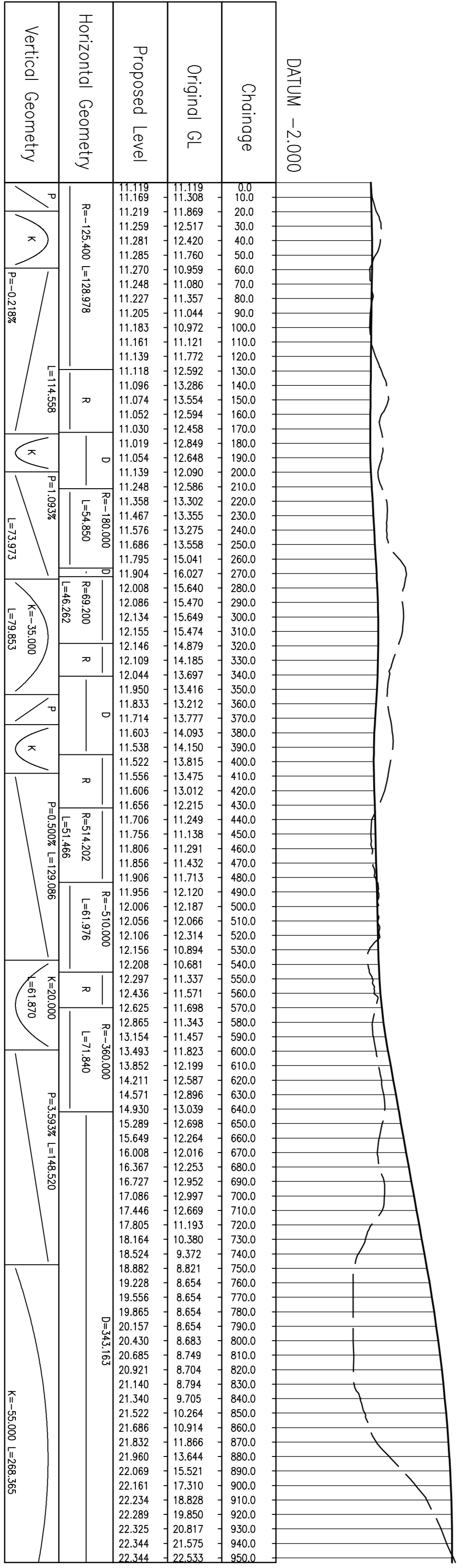
Authorised by: E CRAWFORD Date: 11.12.13

CAD Filename:

CH2M HILL FAIRHURST

CH2M Hill Fairhurst JV
C/O: City Park 368 Alexandra Parade Glasgow G31 3AU
Tel: +44 (0)141 552 2000 Fax: +44 (0)141 552 2525

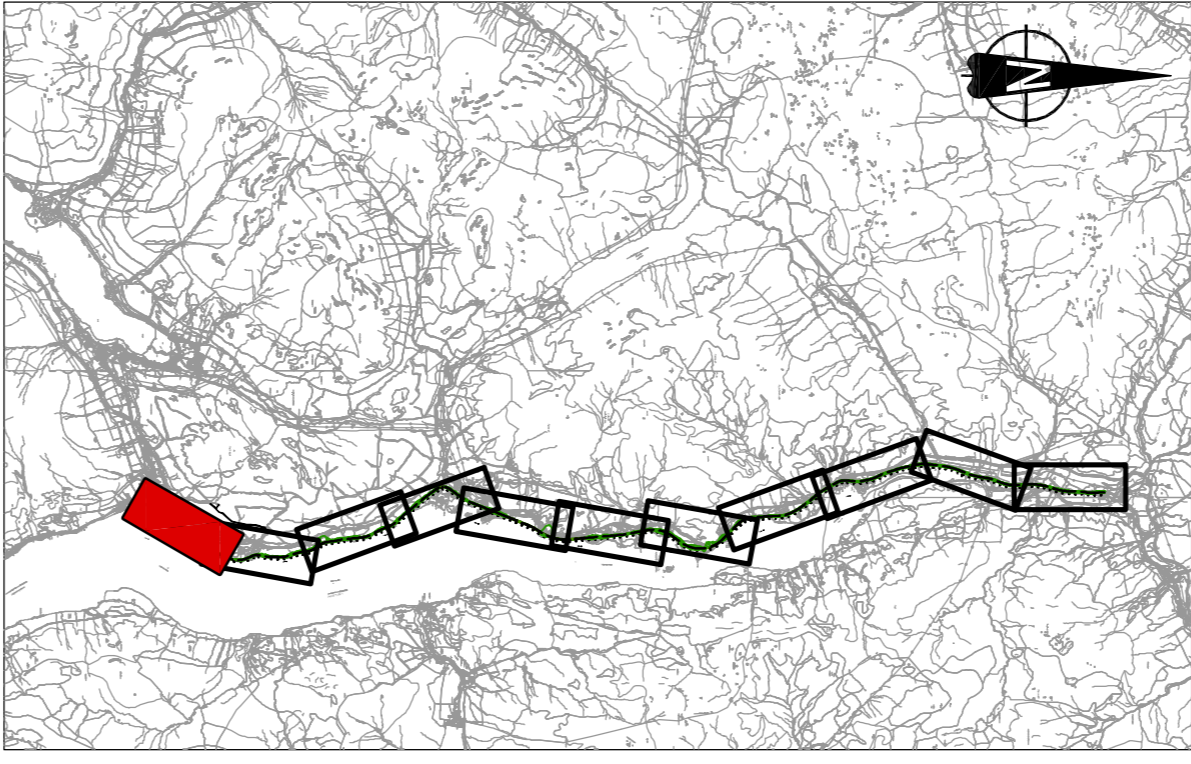
EXISTING LAYOUT AND FEATURES
SHEET 22 OF 22



LONG SECTION KEY:
 ——— EXISTING GROUND LEVEL
 ——— PROPOSED GROUND LEVEL

SIGNIFICANT RESIDUAL RISKS		
The following list provides a cross reference between the drawing and the Designer's Safety and Safety Risk Assessment, and indicates those areas of Significant Residual Risk		
Description of Risk	Risk No.	
CLIENT OPERATIONS	1	
ADJACENT ACTIVITIES	2	
RESTRICTED SITE	3	
TRAFFIC	4	
INTERFACE WITH PUBLIC	5	
NEAR TO HIGHWAYS	6	
NEAR TO RAILWAYS	7	
GROUND INSTABILITY	8	
CONTEMPORANEOUS GAS	9	
GROUND WATER	10	
INUNDATION	11	
SERVICES	12	
OVERHEAD CABLES	13	
INSECT ATTACK (INCL. MIDGE & TICKS)	14	
	15	

- Notes**
- Existing information based on surveys provided by others and OS plans.
 - Alignment design, including earthworks extent, is preliminary for DMRB Stage 1 assessment purposes only. The design will be developed and refined during DMRB Stage 2.
 - Preliminary earthworks design assume a 1:2 slope.
 - Design speed based on 85B kph.



Rev	By	Check	Approved	Date	Description
4.0	SM	EN	EC	11/12/13	Drawing frame amended.
3.0	MC	EN	EC	11/12/13	Drawing frame, title block and notes amended.
2.0	MC	EN	EC	20/11/13	Longitudinal sections and notes amended.
1.0	MC	EN	EC	19/11/13	Indicative vertical design elements amended.

Client

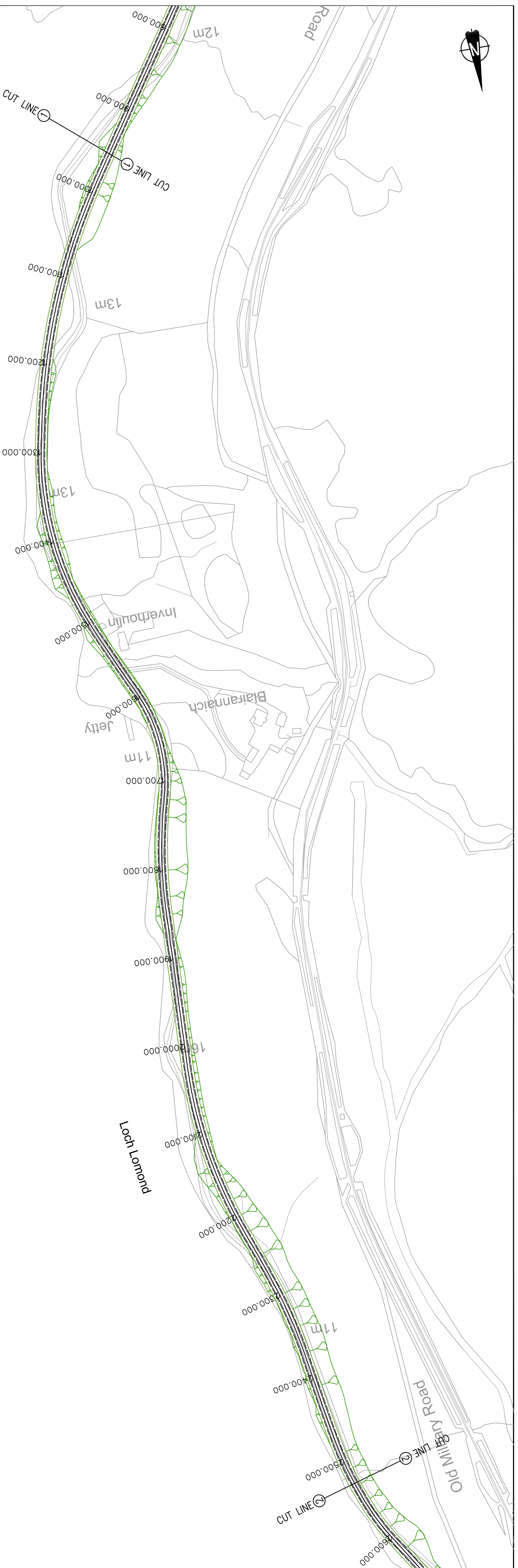
CH2M HILL FAIRHURST
 CH2M Hill Fairhurst JV
 C/O CH2M Hill, 368 Alexander Parade Glasgow G3 7AU
 Tel: +44 (0)141 552 2000 Fax: +44 (0)141 552 2020

Project: **A82 TARBET TO INVERARMAN UPGRADE**

Drawing: **OPTION 1
 TARBET TO INVERARMAN
 PLAN & SECTION
 SHEET 1 OF 11**

Drawn by: GIANZIE Date: 06/11/13
 Checked by: ENICOLSON Date: 11/12/13
 Approved by: ERRAWFORD Date: 11/12/13

Drawing No: **476416-0000-100** Revision: **4.0**



DATUM -2.000

Chainage	Original GL	Proposed Level
860.0	23.375	22.327
870.0	24.220	22.291
880.0	25.125	22.236
890.0	25.885	22.164
900.0	26.100	22.073
1010.0	25.689	21.965
1020.0	24.845	21.839
1030.0	23.710	21.711
1040.0	22.351	21.582
1050.0	21.094	21.454
1060.0	19.365	21.325
1070.0	17.318	21.196
1080.0	12.969	21.068
1090.0	12.085	20.939
1100.0	11.612	20.811
1200.0	9.402	20.683
1300.0	8.830	20.555
1310.0	8.330	20.425
1320.0	7.830	20.296
1330.0	8.652	20.168
1340.0	8.652	20.039
1350.0	8.652	19.911
1360.0	8.652	19.782
1370.0	8.956	19.653
1380.0	9.597	19.525
1390.0	12.349	19.396
1400.0	13.405	19.268
1410.0	12.300	19.139
1420.0	14.845	19.010
1430.0	15.485	18.882
1440.0	15.839	18.753
1450.0	16.077	18.625
1460.0	16.164	18.496
1470.0	16.149	18.367
1480.0	16.118	18.239
1490.0	16.196	18.110
1500.0	16.326	17.982
1510.0	16.452	17.853
1520.0	16.642	17.725
1530.0	16.870	17.598
1540.0	16.843	17.433
1550.0	16.778	17.261
1560.0	16.717	17.089
1570.0	16.690	16.860
1580.0	16.392	16.633
1590.0	16.384	16.397
1600.0	16.107	16.124
1610.0	15.391	15.842
1620.0	14.477	15.542
1630.0	13.603	15.234
1640.0	13.135	14.927
1650.0	12.662	14.620
1660.0	12.197	14.313
1670.0	11.852	14.005
1680.0	11.647	13.698
1690.0	11.616	13.391
1700.0	11.699	13.084
1710.0	11.792	12.777
1720.0	11.944	12.497
1730.0	11.944	12.268
1740.0	11.897	12.089
1750.0	11.765	11.960
1760.0	11.637	11.881
1770.0	11.517	11.831
1780.0	11.456	11.781
1790.0	11.414	11.731
1800.0	11.564	11.681
1810.0	11.573	11.631
1820.0	11.573	11.581
1830.0	10.438	11.531
1840.0	10.394	11.481
1850.0	10.704	11.431
1860.0	11.220	11.381
1870.0	11.877	11.331
1880.0	12.462	11.281
1890.0	13.029	11.238
1900.0	13.714	11.192
1910.0	13.436	11.148
1920.0	13.584	11.108
1930.0	13.906	11.065
1940.0	14.266	11.021
1950.0	14.543	10.977
1960.0	14.870	10.933
1970.0	15.159	10.889
1980.0	15.379	10.845
1990.0	15.498	10.801
2000.0	15.477	10.757
2010.0	15.445	10.713
2020.0	15.535	10.669
2030.0	15.538	10.625
2040.0	15.394	10.581
2050.0	15.158	10.537
2060.0	14.867	10.493
2070.0	14.422	10.449
2080.0	13.988	10.405
2090.0	13.659	10.361
2100.0	13.637	10.317
2110.0	14.001	10.273
2120.0	14.716	10.229
2130.0	15.336	10.185
2140.0	15.961	10.141
2150.0	16.308	10.097
2160.0	16.549	10.053
2170.0	16.562	10.009
2180.0	16.450	9.965
2190.0	16.236	9.921
2200.0	15.883	9.877
2210.0	15.527	9.833
2220.0	15.328	9.789
2230.0	15.406	9.745
2240.0	15.549	9.701
2250.0	15.820	9.657
2260.0	15.500	9.613
2270.0	15.394	9.569
2280.0	15.397	9.525
2290.0	15.536	9.481
2300.0	15.780	9.437
2310.0	16.059	9.393
2320.0	16.386	9.349
2330.0	17.122	9.305
2340.0	17.708	9.261
2350.0	18.997	9.217
2360.0	17.063	9.173
2370.0	16.743	9.129
2380.0	16.386	9.085
2390.0	16.118	9.041
2400.0	15.926	8.997
2410.0	15.630	8.953
2420.0	15.049	8.909
2430.0	14.242	8.865
2440.0	13.919	8.821
2450.0	13.330	8.777
2460.0	12.645	8.733
2470.0	12.583	8.689
2480.0	12.754	8.645
2490.0	12.955	8.601
2500.0	13.291	8.557
2510.0	13.766	8.513
2520.0	14.321	8.469
2530.0	13.849	8.425
2540.0	13.825	8.381
2550.0	13.975	8.337
2560.0	13.885	8.293
2570.0	13.636	8.249
2580.0	13.523	8.205
2590.0	13.420	8.161
2600.0	13.410	8.117
2610.0	13.302	8.073
2620.0	13.302	8.029
2630.0	13.352	7.985
2640.0	13.337	7.941
2650.0	13.176	7.897
2660.0	13.076	7.853
2670.0	12.719	7.809
2680.0	12.378	7.765
2690.0	12.379	7.721
2700.0	12.491	7.677
2710.0	12.221	7.633
2720.0	12.773	7.589
2730.0	12.860	7.545

LONG SECTION KEY:
 --- EXISTING GROUND LEVEL
 --- PROPOSED GROUND LEVEL

LONGITUDINAL SECTION
 SCALE 1:2500H/1:500V

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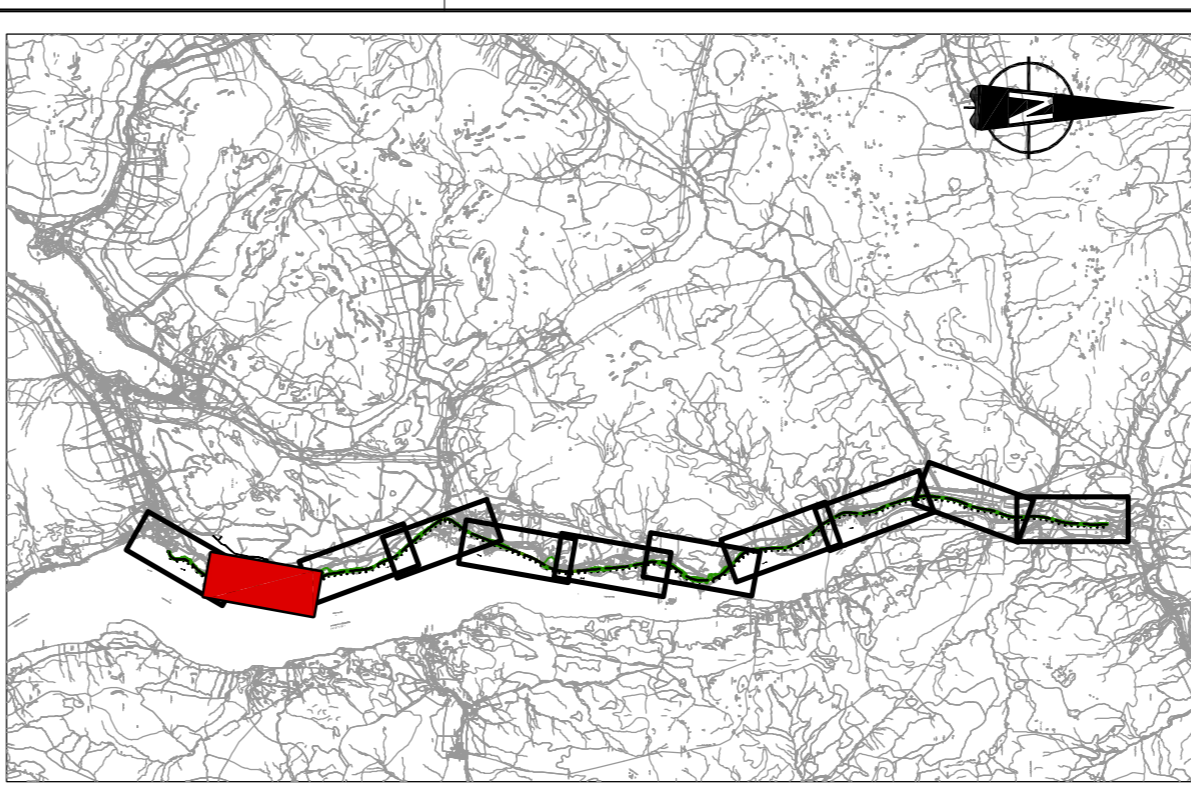
SIGNIFICANT RESIDUAL RISKS

The following list provides a cross reference between the drawing and the Designer's Health and Safety Risk Assessment, and identifies those areas of Significant Residual Risk.

Description of Risk	Risk No.
CLIENT OPERATIONS	1
ADJACENT ACTIVITIES	2
RESTRICTED SITE	3
TRAFFIC	4
INTERFACE WITH PUBLIC	5
NEAR TO HIGHWAYS	6
NEAR TO RAILWAYS	7
NEAR TO WATERWAYS	8
GROUND INSTABILITY	9
CONJUNCTIONS/ROADS	10
GROUND WATER	11
INUNDATION	12
SERVICES	13
OVERHEAD CABLES	14
INSECT ATTACK (INCL. MIDGE & TICKS)	15

Notes

- Existing information based on surveys provided by others and OS plans.
- Alignment design, including earthworks extent, is preliminary for DMRB Stage 1 assessment purposes only. The design will be developed and refined during DMRB Stage 2.
- Preliminary earthworks design assume a 1:2 slope.
- Design speed based on 85B kph.



Rev	By	Chkd	Approved	Date	Description
4.0	SM	EN	EC	11/12/13	Drawing name amended.
3.0	MC	EN	EC	11/12/13	Drawing name, title block and notes amended.
2.0	MC	EN	EC	20/11/13	Longitudinal sections and notes amended.
1.0	MC	EN	EC	19/11/13	Inclusive vertical design elements amended.

Client: **Transport Scotland**

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 C/O City Park 368 Meadowbank Park Glasgow G51 3AU
 Tel: +44 (0)141 552 2000 Fax: +44 (0)141 552 2022

Project: **A82 TARBET TO INVERARMAN UPGRADE**

Drawing: **OPTION 1**

TARBET TO INVERARMAN
PLAN & SECTION
SHEET 2 OF 11

Drawn by: **GANAZE** Date: 05/11/13

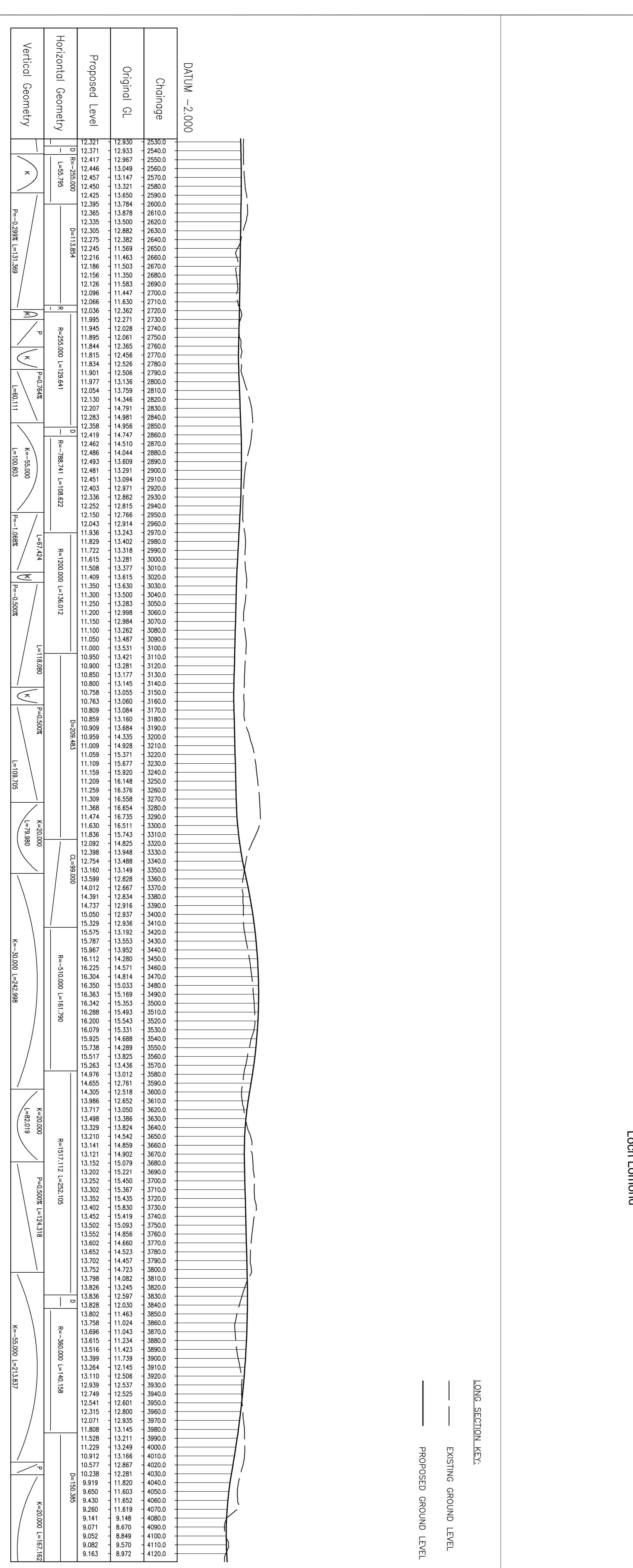
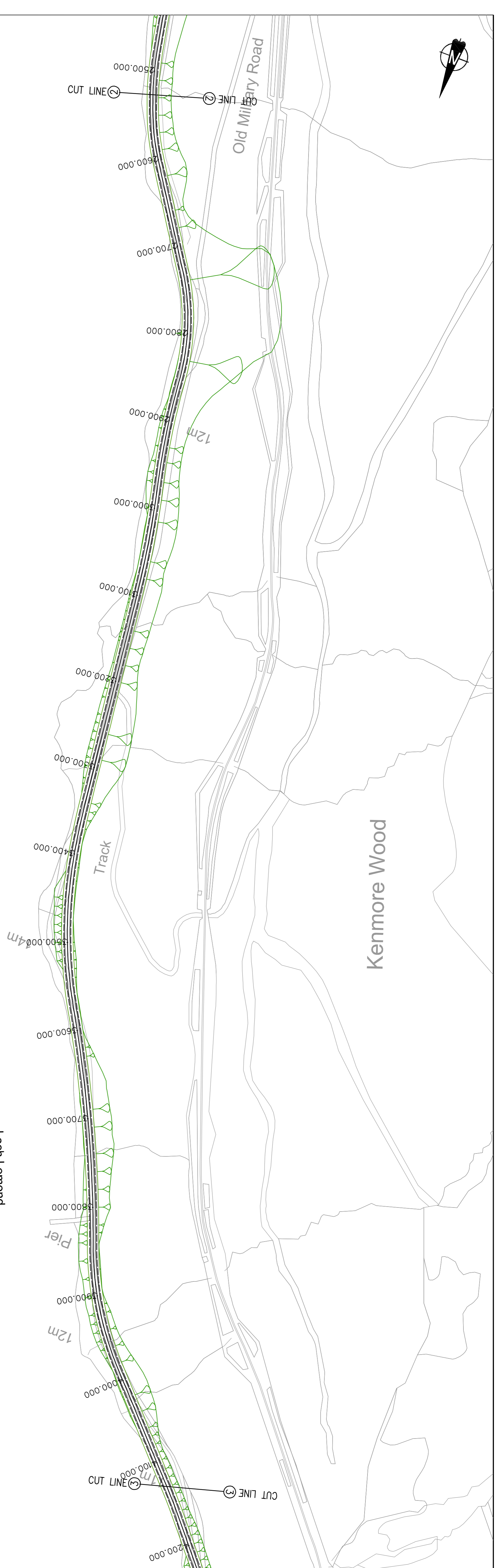
Checked by: **ENICOLSON** Date: 11/12/13

Approved by: **CRAMFORD** Date: 11/12/13

Drawing No: **476416-0000-101** Revision: **4.0**

Drawing Scale: 1:2500 at A1 (1:5000 at A3) Plot Scale:

CAD Filename:



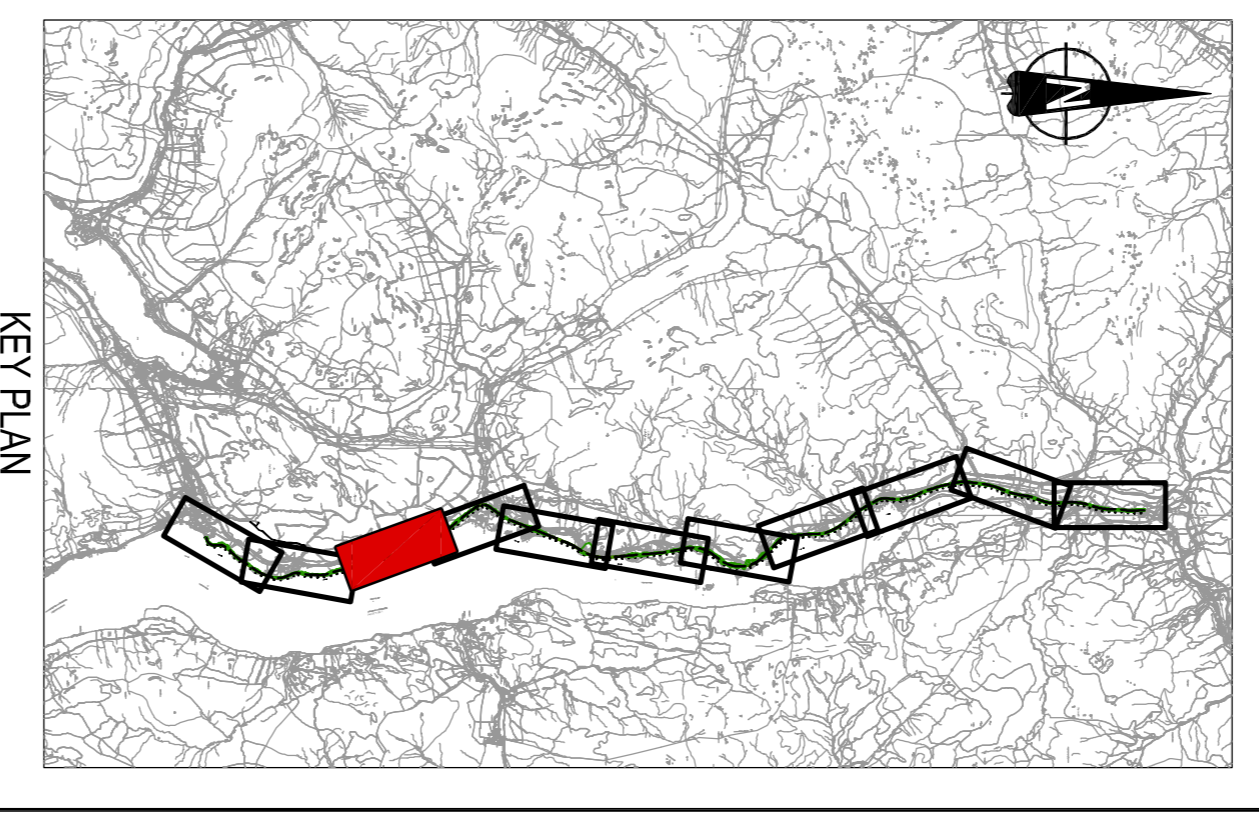
LONGITUDINAL SECTION
SCALE 1:2500H/1:500V

SIGNIFICANT RESIDUAL RISKS

The following list provides a cross reference between this drawing and the Designer's Health and Safety Risk Assessment, and identifies those areas of Significant Residual Risk.

Description of Risk	Risk No.
CLIENT OPERATIONS	1
ADJACENT ACTIVITIES	2
RESTRICTED SITE	3
TRAFFIC	4
INTERFACE WITH PUBLIC	5
NEAR TO HIGHWAYS	6
NEAR TO RAILWAYS	7
NEAR TO WATERWAYS	8
GROUND INSTABILITY	9
CONTRACTOR/SOIL GAS	10
GROUND WATER	11
MINIATION	12
SERVICES	13
OVERHEAD CABLES	14
INJECT ATTACK (INCL. MIDGE & TICKS)	15

- Notes**
- Existing information based on surveys provided by others and OS plans.
 - Alignment design, including earthworks extent, is preliminary for DMRB Stage 1 assessment purposes only. The design will be developed and refined during DMRB Stage 2.
 - Preliminary earthworks design assume a 1:2 slope.
 - Design speed based on 85B kph.



LONG SECTION KEY:
 --- EXISTING GROUND LEVEL
 - - - PROPOSED GROUND LEVEL

Rev	By	Chkd	Approved	Date	Description
4.0	SM	EN	EC	11/12/13	Drawing name amended.
3.0	MC	EN	EC	11/12/13	Drawing name, title block and notes amended.
2.0	MC	EN	EC	20/11/13	Longitudinal sections and notes amended.
1.0	MC	EN	EC	19/11/13	Indicative vertical design elements amended.

Client: **TRANSPORT SCOTLAND**

CH2MHILL **FARHURST**

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A82 TARBET TO INVERARAN UPGRADE

OPTION 1

TARBET TO INVERARAN PLAN & SECTION SHEET 3 OF 11

Drawing No. **476416-0000-102**

Drawn By: GIANZIE Date: 05/11/13
 Checked By: E NICOLSON Date: 11/12/13
 Approved By: E CRAVFOOD Date: 11/12/13

Revision **4.0**

Drawing Scale: 1:2500 at A1 (1:5000 at A3) Plot Scale:
 C4D Filename: User and Plot Date

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Drawing file path & name: K:\Highways\A82 Tarbet to Inverman\Technical Design\Drawings\0000 Plans and Profiles\Live Drawings\476416-0000-100_110-Rev 3.0 - Option 1.dwg
 Reference file path: K:\Highways\A82 Tarbet to Inverman\Technical Design\Drawings\0000 Plans and Profiles\Live Drawings\ Project: smclean.1 - 28.2.2014 - 10.2 am



LONG SECTION KEY:
 ——— EXISTING GROUND LEVEL
 ——— PROPOSED GROUND LEVEL

Vertical Geometry		Original Q.L.	Proposed Level	Change
		8.870	8.874	4130.0
		9.704	10.016	4150.0
		9.984	10.430	4160.0
		10.315	10.635	4170.0
		10.695	11.411	4180.0
		11.125	11.623	4190.0
		11.805	11.852	4200.0
		12.102	12.225	4210.0
		12.599	12.581	4220.0
		13.096	13.083	4230.0
		13.593	13.632	4240.0
		14.090	14.269	4250.0
		14.587	14.709	4260.0
		15.084	15.128	4270.0
		15.581	15.534	4280.0
		16.078	16.140	4290.0
		16.575	16.923	4300.0
		17.072	17.751	4310.0
		17.561	18.618	4320.0
		18.017	19.698	4330.0
		18.439	20.779	4340.0
		18.829	21.772	4350.0
		19.185	22.781	4360.0
		19.507	23.730	4370.0
		19.797	24.232	4380.0
		20.053	24.427	4390.0
		20.275	24.598	4400.0
		20.465	24.737	4410.0
		20.639	24.882	4420.0
		20.812	25.009	4430.0
		20.986	25.119	4440.0
		21.160	25.230	4450.0
		21.334	25.444	4460.0
		21.507	25.800	4470.0
		21.681	26.178	4480.0
		21.855	25.835	4490.0
		22.029	25.342	4500.0
		22.202	25.048	4510.0
		22.376	24.981	4520.0
		22.550	25.010	4530.0
		22.724	25.233	4540.0
		22.897	25.300	4550.0
		23.071	25.390	4560.0
		23.254	25.529	4570.0
		23.484	25.752	4580.0
		23.763	25.804	4590.0
		24.092	25.849	4600.0
		24.446	25.978	4610.0
		24.795	26.086	4620.0
		25.089	26.155	4630.0
		25.442	26.240	4640.0
		25.737	26.417	4650.0
		26.015	26.712	4660.0
		26.275	27.047	4670.0
		26.516	27.012	4680.0
		26.739	26.828	4690.0
		26.945	26.560	4700.0
		27.125	26.146	4710.0
		27.271	26.171	4720.0
		27.384	26.453	4730.0
		27.464	26.820	4740.0
		27.511	27.115	4750.0
		27.524	27.603	4760.0
		27.504	27.997	4770.0
		27.451	28.299	4780.0
		27.364	28.345	4790.0
		27.253	28.274	4800.0
		27.129	28.111	4810.0
		27.027	28.598	4820.0
		26.915	28.621	4830.0
		26.802	27.716	4840.0
		26.689	26.175	4850.0
		26.577	23.950	4860.0
		26.464	21.511	4870.0
		26.351	19.346	4880.0
		26.234	19.593	4890.0
		26.126	20.294	4900.0
		26.013	21.168	4910.0
		25.901	22.401	4920.0
		25.788	23.615	4930.0
		25.675	24.888	4940.0
		25.563	25.709	4950.0
		25.450	26.213	4960.0
		25.337	26.280	4970.0
		25.224	26.675	4980.0
		25.112	26.779	4990.0
		24.999	26.195	5000.0
		24.884	25.592	5010.0
		24.742	25.036	5020.0
		24.567	24.433	5030.0
		24.359	23.800	5040.0
		24.117	23.320	5050.0
		23.942	22.979	5060.0
		23.533	22.266	5070.0
		23.200	22.004	5080.0
		22.866	22.138	5090.0
		22.541	22.667	5100.0
		22.262	23.278	5110.0
		22.018	23.693	5120.0
		21.776	23.770	5130.0
		21.534	22.442	5140.0
		21.292	21.244	5150.0
		21.050	21.137	5160.0
		20.808	21.337	5170.0
		20.566	21.639	5180.0
		20.325	21.643	5190.0
		20.083	21.771	5200.0
		19.841	21.316	5210.0
		19.599	20.618	5220.0
		19.352	20.166	5230.0
		19.076	19.778	5240.0
		18.766	19.034	5250.0
		18.424	18.541	5260.0
		18.048	18.079	5270.0
		17.638	17.524	5280.0
		17.195	16.532	5290.0
		16.719	15.627	5300.0
		16.218	14.921	5310.0
		15.715	14.620	5320.0
		15.212	14.689	5330.0
		14.721	14.556	5340.0
		14.278	14.024	5350.0
		13.885	13.938	5360.0
		13.543	13.226	5370.0
		13.250	12.785	5380.0
		13.007	12.603	5390.0

LONGITUDINAL SECTION
 SCALE 1:2500(H)/1:500(V)

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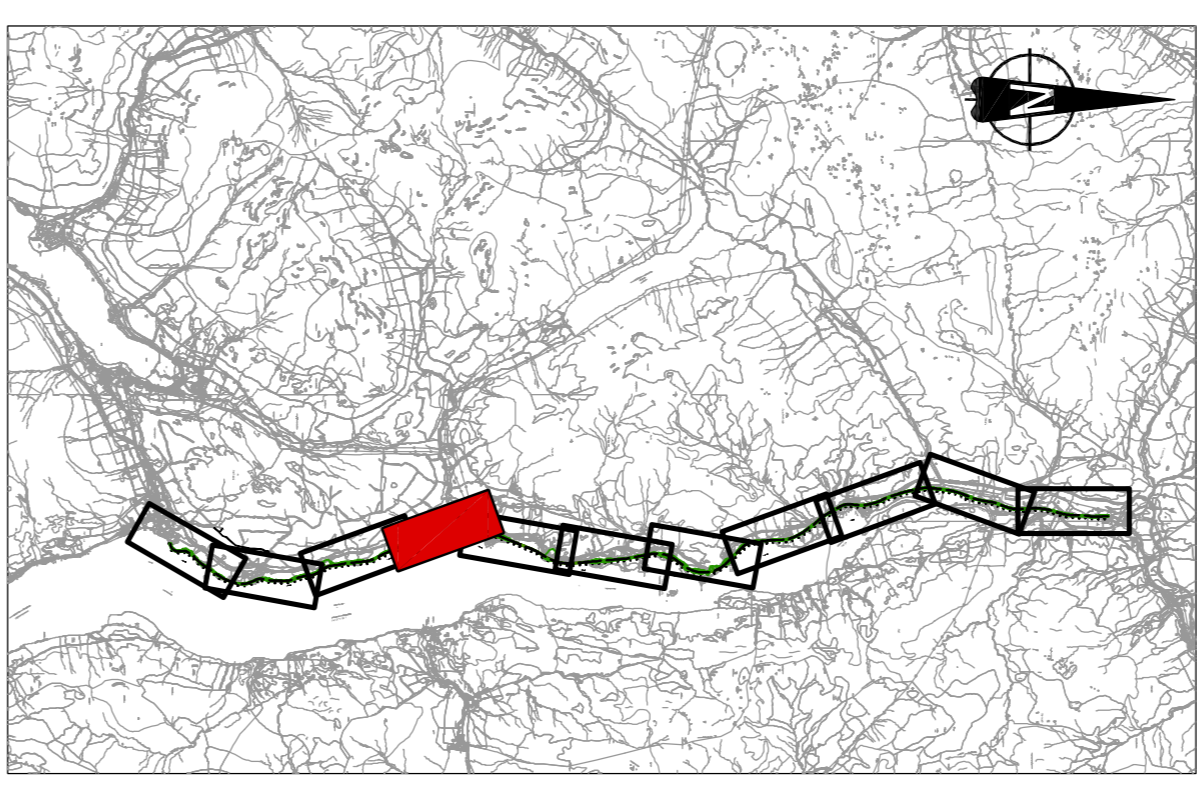
SIGNIFICANT RESIDUAL RISKS

The following list provides a cross reference between this drawing and the Designer's Health and Safety Risk Assessment, and identifies those areas of Significant Residual Risk

Description of Risk	Risk No.
CLIENT OPERATIONS	1
ADJACENT ACTIVITIES	2
RESTRICTED SITE	3
TRAFFIC	4
INTERFACE WITH PUBLIC	5
NEAR TO HIGHWAYS	6
NEAR TO RAILWAYS	7
GROUND INSTABILITY	8
CONTAMINATION/SOIL GAS	9
GROUND WATER	10
INUNDATION	11
SERVICES	12
OVERHEAD CABLES	13
INBET ATTACK (INCL. MIDGE & TICKS)	14
	15

Notes

- Existing information based on surveys provided by others and OS plans.
- Alignment design, including earthworks extent, is preliminary for DMRB Stage 1 assessment purposes only. The design will be developed and refined during DMRB Stage 2.
- Preliminary earthworks design assume a 1:2 slope.
- Design speed based on 85B kph.



KEY PLAN

Rev	By	Cwd	Approved	Date	Description
4.0	SM	EN	EC	11/12/13	Drawing Name amended.
3.0	MC	EN	EC	11/12/13	Drawing Name, title block and notes amended.
2.0	MC	EN	EC	20/11/13	Longitudinal sections and notes amended.
1.0	MC	EN	EC	19/11/13	Indicative vertical design elements amended.

Client



CH2M HILL FAIRFURST

CH2M Hill Fairhurst JV

C/O CH2M Hill, 368 Alexander Parade Glasgow G3 7AU

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Project

A82 TARBET TO INVERARMAN UPGRADE

Drawing

**OPTION 1
 TARBET TO INVERARMAN
 PLAN & SECTION
 SHEET 4 OF 11**

Drawn by:

GANZIE Date: 06/11/13

Checked by:

EMCOLESON Date: 11/12/13

Approved by:

ERAWFORD Date: 11/12/13

Drawing No:

476416-0000-103 Revision

Drawing Scale:

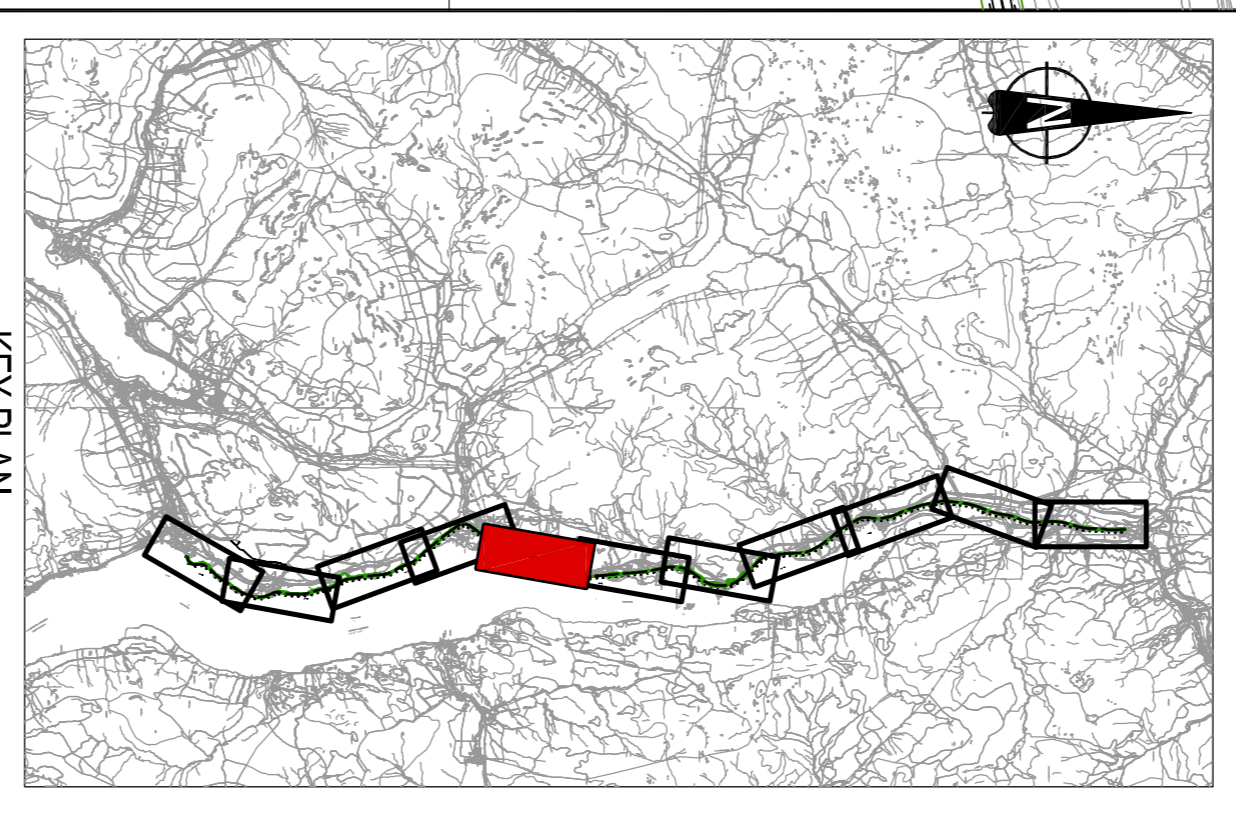
1:2500 at A1 (1:5000 at A3) Plot Scale:

CD File Name:



SIGNIFICANT RESIDUAL RISKS	
Description of Risk	Rat. No.
CLIENT OPERATIONS	1
ADJACENT ACTIVITIES	2
RESTRICTED SITE	3
TRAFFIC	4
INTERFACE WITH PUBLIC	5
NEAR TO HIGHWAYS	6
NEAR TO RAILWAYS	7
NEAR TO WATERWAYS	8
GROUND INSTABILITY	9
CAN YAMKATONS/DL GAS	10
GROUND WATER	11
INUNDATION	12
SERVICES	13
OVERHEAD CABLES	14
INSECT ATTACK (INCL. MIDGE & TICKS)	15

- Notes**
- Existing information based on surveys provided by others and OS plans.
 - Alignment design, including earthworks extent, is preliminary for DMRB Stage 1 assessment purposes only. The design will be developed and refined during DMRB Stage 2.
 - Preliminary earthworks design assume a 1:2 slope.
 - Design speed based on 85B kph.



DATUM -2.000

Chai	Original GL	Proposed Level	Vertical Geometry
50.000	12.443	12.792	
51.000	12.194	12.578	
52.000	11.474	12.364	
53.000	11.423	12.150	
54.000	11.705	11.940	
55.000	11.713	11.727	
56.000	11.548	11.513	
57.000	11.314	11.299	
58.000	11.010	11.085	
59.000	11.154	10.871	
60.000	10.940	10.657	
61.000	10.788	10.443	
62.000	10.788	10.229	
63.000	11.127	10.015	
64.000	11.304	9.801	
65.000	11.548	9.587	
66.000	11.713	9.373	
67.000	11.899	9.159	
68.000	12.085	8.945	
69.000	12.271	8.731	
70.000	12.457	8.517	
71.000	12.643	8.303	
72.000	12.829	8.089	
73.000	13.015	7.875	
74.000	13.201	7.661	
75.000	13.387	7.447	
76.000	13.573	7.233	
77.000	13.759	7.019	
78.000	13.945	6.805	
79.000	14.131	6.591	
80.000	14.317	6.377	
81.000	14.503	6.163	
82.000	14.689	5.949	
83.000	14.875	5.735	
84.000	15.061	5.521	
85.000	15.247	5.307	
86.000	15.433	5.093	
87.000	15.619	4.879	
88.000	15.805	4.665	
89.000	15.991	4.451	
90.000	16.177	4.237	
91.000	16.363	4.023	
92.000	16.549	3.809	
93.000	16.735	3.595	
94.000	16.921	3.381	
95.000	17.107	3.167	
96.000	17.293	2.953	
97.000	17.479	2.739	
98.000	17.665	2.525	
99.000	17.851	2.311	
100.000	18.037	2.097	
101.000	18.223	1.883	
102.000	18.409	1.669	
103.000	18.595	1.455	
104.000	18.781	1.241	
105.000	18.967	1.027	
106.000	19.153	0.813	
107.000	19.339	0.599	
108.000	19.525	0.385	
109.000	19.711	0.171	
110.000	19.897	0.000	

LONGITUDINAL SECTION
SCALE 1:2500H/1:500V

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Client: **CH2M HILL** **FAIRFURST**
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Project: **A82 TARGET TO INVERARMAN UPGRADE**

Drawing: **OPTION 1
TARGET TO INVERARMAN
PLAN & SECTION
SHEET 5 OF 11**

Drawn by:	GIMANZE	Date:	05/11/13
Checked by:	EMCOLSON	Date:	11/12/13
Approved by:	E.GRAVWERO	Date:	11/12/13
Drawing No.		Revision	
	476416-0000-104		4.0

Drawing Scale: 1:2500 at A1 (1:5000 at A3)
C/D Filename: **476416-0000-104** Plot Scale: **4.0**

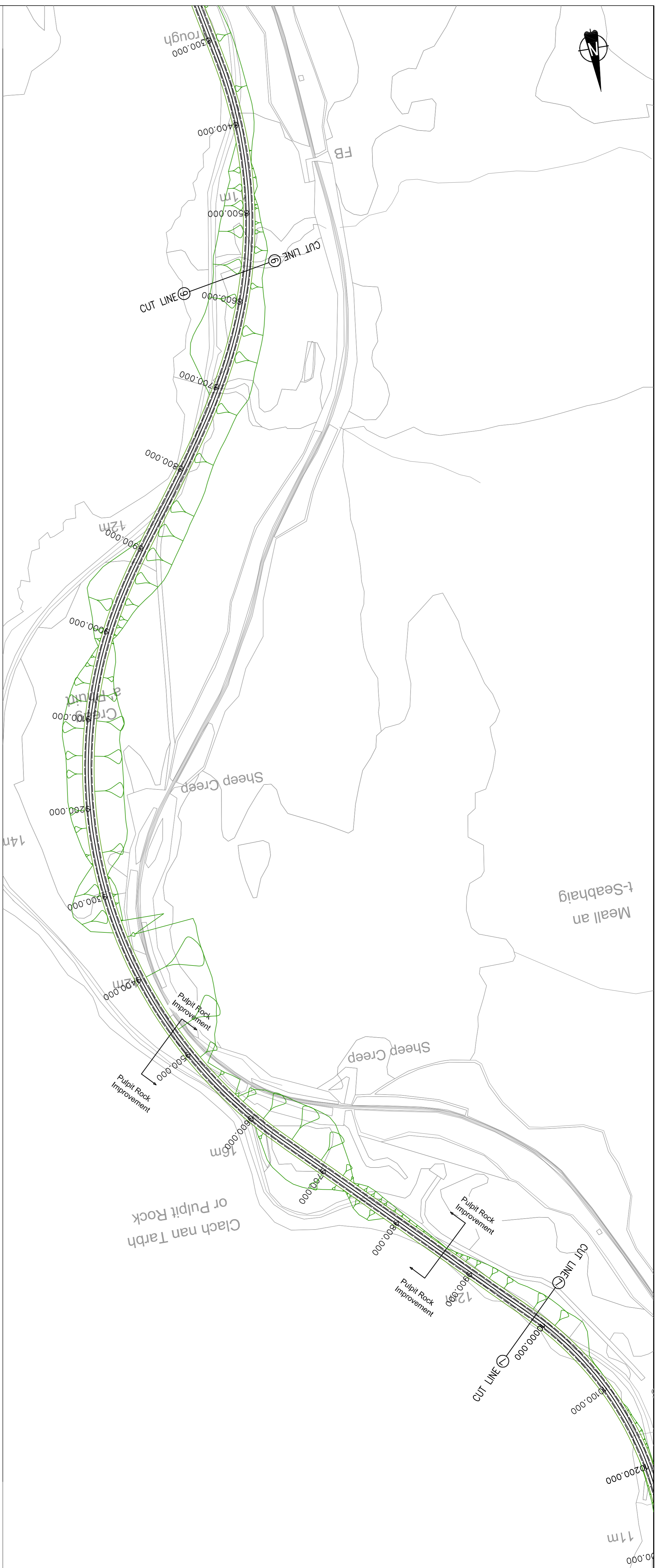


LONG SECTION KEY:

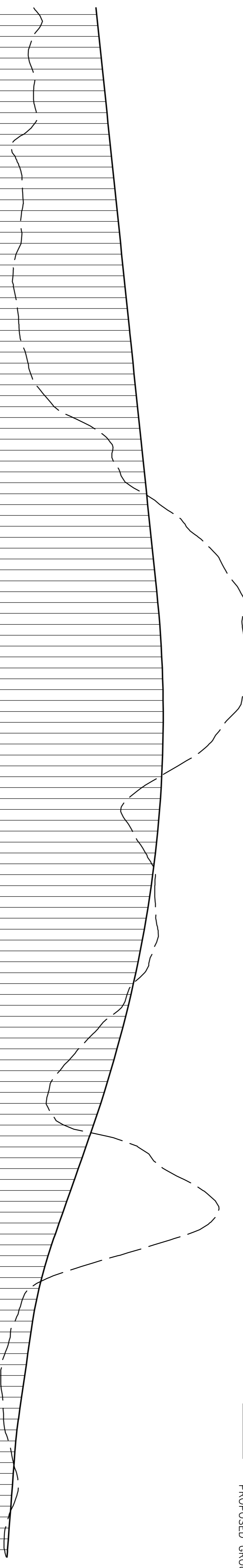
———— EXISTING GROUND LEVEL
 —— PROPOSED GROUND LEVEL

Datum -2.000		
Chainage	Original GL	Proposed Level
0.000	699.8	699.8
10.000	701.0	701.0
20.000	702.0	702.0
30.000	703.0	703.0
40.000	704.0	704.0
50.000	705.0	705.0
60.000	706.0	706.0
70.000	707.0	707.0
80.000	708.0	708.0
90.000	709.0	709.0
100.000	710.0	710.0
110.000	711.0	711.0
120.000	712.0	712.0
130.000	713.0	713.0
140.000	714.0	714.0
150.000	715.0	715.0
160.000	716.0	716.0
170.000	717.0	717.0
180.000	718.0	718.0
190.000	719.0	719.0
200.000	720.0	720.0
210.000	721.0	721.0
220.000	722.0	722.0
230.000	723.0	723.0
240.000	724.0	724.0
250.000	725.0	725.0
260.000	726.0	726.0
270.000	727.0	727.0
280.000	728.0	728.0
290.000	729.0	729.0
300.000	730.0	730.0
310.000	731.0	731.0
320.000	732.0	732.0
330.000	733.0	733.0
340.000	734.0	734.0
350.000	735.0	735.0
360.000	736.0	736.0
370.000	737.0	737.0
380.000	738.0	738.0
390.000	739.0	739.0
400.000	740.0	740.0
410.000	741.0	741.0
420.000	742.0	742.0
430.000	743.0	743.0
440.000	744.0	744.0
450.000	745.0	745.0
460.000	746.0	746.0
470.000	747.0	747.0
480.000	748.0	748.0
490.000	749.0	749.0
500.000	750.0	750.0
510.000	751.0	751.0
520.000	752.0	752.0
530.000	753.0	753.0
540.000	754.0	754.0
550.000	755.0	755.0
560.000	756.0	756.0
570.000	757.0	757.0
580.000	758.0	758.0
590.000	759.0	759.0
600.000	760.0	760.0
610.000	761.0	761.0
620.000	762.0	762.0
630.000	763.0	763.0
640.000	764.0	764.0
650.000	765.0	765.0
660.000	766.0	766.0
670.000	767.0	767.0
680.000	768.0	768.0
690.000	769.0	769.0
700.000	770.0	770.0
710.000	771.0	771.0
720.000	772.0	772.0
730.000	773.0	773.0
740.000	774.0	774.0
750.000	775.0	775.0
760.000	776.0	776.0
770.000	777.0	777.0
780.000	778.0	778.0
790.000	779.0	779.0
800.000	780.0	780.0
810.000	781.0	781.0
820.000	782.0	782.0
830.000	783.0	783.0
840.000	784.0	784.0
850.000	785.0	785.0
860.000	786.0	786.0
870.000	787.0	787.0
880.000	788.0	788.0
890.000	789.0	789.0
900.000	790.0	790.0
910.000	791.0	791.0
920.000	792.0	792.0
930.000	793.0	793.0
940.000	794.0	794.0
950.000	795.0	795.0
960.000	796.0	796.0
970.000	797.0	797.0
980.000	798.0	798.0
990.000	799.0	799.0
1000.000	800.0	800.0
1010.000	801.0	801.0
1020.000	802.0	802.0
1030.000	803.0	803.0
1040.000	804.0	804.0
1050.000	805.0	805.0
1060.000	806.0	806.0
1070.000	807.0	807.0
1080.000	808.0	808.0
1090.000	809.0	809.0
1100.000	810.0	810.0
1110.000	811.0	811.0
1120.000	812.0	812.0
1130.000	813.0	813.0
1140.000	814.0	814.0
1150.000	815.0	815.0
1160.000	816.0	816.0
1170.000	817.0	817.0
1180.000	818.0	818.0
1190.000	819.0	819.0
1200.000	820.0	820.0
1210.000	821.0	821.0
1220.000	822.0	822.0
1230.000	823.0	823.0
1240.000	824.0	824.0
1250.000	825.0	825.0
1260.000	826.0	826.0
1270.000	827.0	827.0
1280.000	828.0	828.0
1290.000	829.0	829.0
1300.000	830.0	830.0
1310.000	831.0	831.0
1320.000	832.0	832.0
1330.000	833.0	833.0
1340.000	834.0	834.0
1350.000	835.0	835.0
1360.000	836.0	836.0
1370.000	837.0	837.0
1380.000	838.0	838.0
1390.000	839.0	839.0
1400.000	840.0	840.0
1410.000	841.0	841.0
1420.000	842.0	842.0
1430.000	843.0	843.0
1440.000	844.0	844.0
1450.000	845.0	845.0
1460.000	846.0	846.0
1470.000	847.0	847.0
1480.000	848.0	848.0
1490.000	849.0	849.0
1500.000	850.0	850.0
1510.000	851.0	851.0
1520.000	852.0	852.0
1530.000	853.0	853.0
1540.000	854.0	854.0
1550.000	855.0	855.0
1560.000	856.0	856.0
1570.000	857.0	857.0
1580.000	858.0	858.0
1590.000	859.0	859.0
1600.000	860.0	860.0

Horizontal Geometry		Vertical Geometry	
Chainage	Curve Data	Chainage	Vertical Curve Data
0.000	C1=99.000	0.000	P=3000.000 L=243.503
9.941		9.941	
9.941		9.941	
9.941	R=2000.000 L=110.838	9.941	P=48422 L=196.510
10.050		10.050	
10.159		10.159	
10.268		10.268	
10.377		10.377	
10.486		10.486	
10.486	D=768.801	10.486	P=3239 L=263.136
10.595		10.595	
10.704		10.704	
10.704	R=3000.000 L=243.503	10.704	P=48422 L=196.510
10.813		10.813	
10.922		10.922	
11.031		11.031	
11.140		11.140	
11.249		11.249	
11.358		11.358	
11.467		11.467	
11.576		11.576	
11.685		11.685	
11.794		11.794	
11.903		11.903	
12.012		12.012	
12.121		12.121	
12.230		12.230	
12.339		12.339	
12.448		12.448	
12.557	12.557		
12.666	12.666		
12.775	12.775		
12.884	12.884		
12.993	12.993		
13.102	13.102		
13.211	13.211		
13.320	13.320		
13.429	13.429		
13.538	13.538		
13.647	13.647		
13.756	13.756		
13.865	13.865		
13.974	13.974		
14.083	14.083		
14.192	14.192		
14.301	14.301		
14.410	14.410		
14.519	14.519		
14.628	14.628		
14.737	14.737		
14.846	14.846		
14.955	14.955		
15.064	15.064		
15.173	15.173		
15.282	15.282		
15.391	15.391		
15.500	15.500		
15.609	15.609		
15.718	15.718		
15.827	15.827		
15.936	15.936		
16.045	16.045		
16.154	16.154		
16.263	16.263		
16.372	16.372		
16.481	16.481		
16.590	16.590		
16.699	16.699		
16.808	16.808		
16.917	16.917		
17.026	17.026		
17.135	17.135		
17.244	17.244		
17.353	17.353		
17.462	17.462		
17.571	17.571		
17.680	17.680		
17.789	17.789		
17.898	17.898		
18.007	18.007		
18.116	18.116		
18.225	18.225		
18.334	18.334		
18.443	18.443		
18.552	18.552		
18.661	18.661		
18.770	18.770		
18.879	18.879		
18.988	18.988		
19.097	19.097		
19.206	19.206		
19.315	19.315		
19.424	19.424		
19.533	19.533		
19.642	19.642		
19.751	19.751		
19.860	19.860		
19.969	19.969		
20.078	20.078		
20.187	20.187		
20.296	20.296		
20.405	20.405		
20.514	20.514		
20.623	20.623		
20.732	20.732		
20.841	20.841		
20.950	20.950		
21.059	21.059		
21.168	21.168		
21.277	21.277		
21.386	21.386		
21.495	21.495		
21.604	21.604		
21.713	21.713		
21.822	21.822		
21.931	21.931		
22.040	22.040		
22.149	22.149		
22.258	22.258		
22.367	22.367		
22.476	22.476		
22.585	22.585		
22.694	22.694		
22.803	22.803		
22.912	22.912		
23.021	23.021		
23.130	23.130		
23.239	23.239		
23.348	23.348		
23.457	23.457		
23.566	23.566		
23.675	23.675		
23.784	23.784		
23.893	23.893		
24.002	24.002		
24.111	24.111		
24.220	24.220		
24.329	24.329		
24.438	24.438		
24.547	24.547		
24.656	24.656		
24.765	24.765		
24.874	24.874		
24.983	24.983		
25.092	25.092		
25.201	25.201		
25.310	25.310		
25.419	25.419		
25.528	25.528		
25.637	25.637		
25.746	25.746		
25.855	25.855		
25.964	25.964		
26.073	26.073		
26.182	26.182		
26.291	26.291		
26.400	26.400		
26.509	26.509		
26.618	26.618		
26.727	26.727		
26.836	26.836		
26.945	26.945		
27.054	27.054		
27.163	27.163		
27.272	27.272		
27.381	27.381		
27.490	27.490		
27.599	27.599		
27.708	27.708		
27.817	27.817		
27.926	27.926		
28.035	28.035		
28.144	28.144		
28.253	28.253		
28.362	28.362		
28.471	28.471		
28.580	28.580		
28.689	28.689		
28.798	28.798		
28.907	28.907		
29.016	29.016		
29.125	29.125		



Chainage	Original GI		Proposed Level
	Original GI	Proposed Level	
	8570.0	15.898	26.477
	8580.0	16.548	26.863
	8590.0	14.782	27.101
	8600.0	14.085	27.309
	8610.0	13.985	27.517
	8620.0	14.619	27.725
	8630.0	15.114	27.933
	8640.0	14.873	28.141
	8650.0	14.906	28.349
	8660.0	15.388	28.557
	8670.0	15.068	28.765
	8680.0	13.041	28.973
	8690.0	10.722	29.181
	8700.0	11.461	29.389
	8710.0	12.303	29.596
	8720.0	12.767	29.804
	8730.0	12.829	30.012
	8740.0	12.953	30.220
	8750.0	12.724	30.428
	8760.0	12.498	30.636
	8770.0	12.706	30.844
	8780.0	12.579	31.052
	8790.0	11.664	31.260
	8800.0	11.158	31.468
	8810.0	11.078	31.676
	8820.0	11.169	31.884
	8830.0	11.592	32.092
	8840.0	11.892	32.300
	8850.0	12.123	32.508
	8860.0	12.240	32.715
	8870.0	12.566	32.923
	8880.0	13.347	33.131
	8890.0	13.860	33.339
	8900.0	14.351	33.547
	8910.0	15.346	33.755
	8920.0	16.921	33.963
	8930.0	18.548	34.171
	8940.0	22.093	34.379
	8950.0	25.959	34.587
	8960.0	28.550	34.795
	8970.0	29.409	35.003
	8980.0	29.523	35.211
	8990.0	30.722	35.419
	9000.0	31.875	35.627
	9010.0	35.176	35.835
	9020.0	38.072	36.042
	9030.0	41.000	36.250
	9040.0	42.895	36.458
	9050.0	45.177	36.666
	9060.0	47.320	36.874
	9070.0	49.025	37.082
	9080.0	50.079	37.290
	9090.0	51.434	37.498
	9100.0	52.921	37.707
	9110.0	53.539	37.915
	9120.0	53.427	38.123
	9130.0	53.174	38.331
	9140.0	53.485	38.539
	9150.0	53.904	38.747
	9160.0	54.386	38.955
	9170.0	54.363	39.163
	9180.0	53.875	39.371
	9190.0	53.072	39.579
	9200.0	53.120	39.787
	9210.0	52.032	39.995
	9220.0	50.102	40.203
	9230.0	48.442	40.411
	9240.0	47.135	40.619
	9250.0	44.701	40.827
	9260.0	41.393	41.035
	9270.0	38.020	41.243
	9280.0	34.778	41.451
	9290.0	32.252	41.659
	9300.0	30.907	41.867
	9310.0	31.754	42.075
	9320.0	33.033	42.283
	9330.0	34.148	42.491
	9340.0	35.456	42.699
	9350.0	36.578	42.907
	9360.0	37.248	43.115
	9370.0	37.149	43.323
	9380.0	37.142	43.531
	9390.0	37.255	43.739
	9400.0	37.314	43.947
	9410.0	37.696	44.155
	9420.0	37.603	44.363
	9430.0	36.768	44.571
	9440.0	36.092	44.779
	9450.0	35.072	44.987
	9460.0	33.990	45.195
	9470.0	32.069	45.403
	9480.0	31.276	45.611
	9490.0	29.056	45.819
	9500.0	26.932	46.027
	9510.0	25.028	46.235
	9520.0	23.109	46.443
	9530.0	21.460	46.651
	9540.0	19.848	46.859
	9550.0	18.143	47.067
	9560.0	17.580	47.275
	9570.0	17.183	47.483
	9580.0	18.236	47.691
	9590.0	20.450	47.899
	9600.0	28.083	48.107
	9610.0	34.052	48.315
	9620.0	36.532	48.523
	9630.0	35.248	48.731
	9640.0	33.090	48.939
	9650.0	32.069	49.147
	9660.0	31.276	49.355
	9670.0	29.056	49.563
	9680.0	26.932	49.771
	9690.0	25.028	49.979
	9700.0	23.109	50.187
	9710.0	21.460	50.395
	9720.0	19.848	50.603
	9730.0	17.721	50.811
	9740.0	14.211	51.019
	9750.0	12.827	51.227
	9760.0	12.189	51.435
	9770.0	11.494	51.643
	9780.0	10.639	51.851
	9790.0	10.296	52.059
	9800.0	9.380	52.267
	9810.0	9.078	52.475
	9820.0	8.860	52.683
	9830.0	8.884	52.891
	9840.0	9.181	53.099
	9850.0	9.278	53.307
	9860.0	9.343	53.515
	9870.0	9.594	53.723
	9880.0	9.233	53.931
	9890.0	10.760	54.139
	9900.0	11.161	54.347
	9910.0	11.773	54.555
	9920.0	12.093	54.763
	9930.0	11.809	54.971
	9940.0	11.076	55.179
	9950.0	10.280	55.387
	9960.0	9.694	55.595
	9970.0	9.457	55.803
	9980.0	9.518	56.011
	9990.0	9.518	56.219



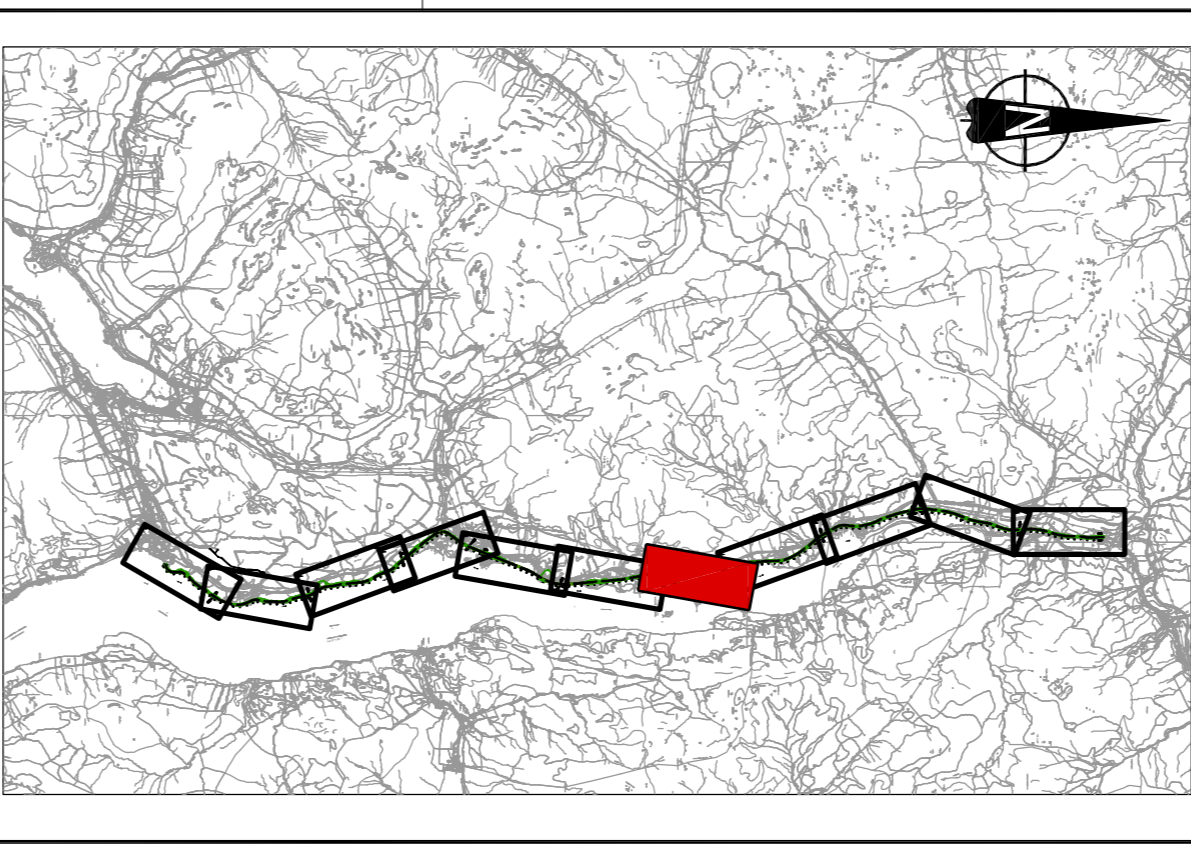
LONG SECTION KEY:
 — — — — — EXISTING GROUND LEVEL
 — — — — — PROPOSED GROUND LEVEL

SIGNIFICANT RESIDUAL RISKS

The following list provides a cross reference between the drawing and the Designer's Safety and Stable Risk Assessment, and identifies those areas of Significant Residual Risk.

Description of Risk	Rd. No.
CUT OPERATIONS	1
CLIENT OPERATIONS	2
ADJACENT ACTIVITIES	3
RESTRICTED SITE	4
TRAFFIC	5
INTERFACE WITH PUBLIC	6
NEAR TO HIGHWAYS	7
NEAR TO RAILWAYS	8
NEAR TO WATERWAYS	9
GROUND INSTABILITY	10
CONTEMPORANEOUS GAS	11
GROUND WATER	12
INUNDATION	13
SERVICES	14
OVERHEAD CABLES	15
INSECT ATTACK (INCL. MIDGE & TICKS)	16

- ### Notes
- Existing information based on surveys provided by others and OS plans.
 - Alignment design, including earthworks extent, is preliminary for DMRB Stage 1 assessment purposes only. The design will be developed and refined during DMRB Stage 2.
 - Preliminary earthworks design assume a 1:2 slope.
 - Design speed based on 85B kph.



Rev	By	Chkd	Appr'd	Date	Description
4.0	SM	EN	EC	11.12.13	Drawing name amended.
3.0	MC	EN	EC	11.12.13	Drawing name, title block and notes amended.
2.0	MC	EN	EC	20.11.13	Longitudinal sections and notes amended.
1.0	MC	EN	EC	19.11.13	Technical workshop design elements amended.

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Client: **TARBET TO INVERARMAN UPGRADE**
 Project: **OPTION 1**
 Drawing No: **TARBET TO INVERARMAN PLAN & SECTION SHEET 7 OF 11**

Drawn by: **GANZIE** Date: 05.11.13
 Checked by: **ENICOLSON** Date: 11.12.13
 Approved by: **ERAWFORD** Date: 11.12.13

Drawing No: **476416-0000-106** Revision: **4.0**
 Drawing Scale: 1:2500 at A1 (1:5000 at A3) Plot Scale:
 C/D Filename:

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Loch Lomond

LONG SECTION KEY:
 ----- EXISTING GROUND LEVEL
 _____ PROPOSED GROUND LEVEL

DATUM -2.000

Chainage	Original GL	Proposed Level	Horizontal Geometry	Vertical Geometry
9990.0	10.127	9.944		
10000.0	10.913	9.793		
10010.0	11.662	9.643		
10020.0	11.890	9.492		
10030.0	11.386	9.341		
10040.0	10.337	9.190		
10050.0	8.967	9.039		
10060.0	8.704	8.889		
10070.0	8.803	8.738		
10080.0	8.823	8.587		
10090.0	8.654	8.436		
10100.0	8.729	8.285		
10110.0	8.651	8.146		
10120.0	8.653	8.054		
10130.0	8.652	8.012		
10140.0	8.652	8.019		
10150.0	8.651	8.077		
10160.0	8.651	8.185		
10170.0	8.984	8.343		
10180.0	8.789	8.546		
10190.0	8.876	8.756		
10200.0	8.947	8.966		
10210.0	9.115	9.176		
10220.0	9.342	9.386		
10230.0	9.592	9.599		
10240.0	9.939	9.806		
10250.0	10.075	10.016		
10260.0	10.103	10.226		
10270.0	10.408	10.436		
10280.0	10.778	10.646		
10290.0	11.109	10.856		
10300.0	11.791	11.066		
10310.0	11.961	11.276		
10320.0	12.053	11.486		
10330.0	12.187	11.674		
10340.0	12.261	11.829		
10350.0	12.554	11.951		
10360.0	12.632	12.039		
10370.0	12.419	12.094		
10380.0	11.904	12.116		
10390.0	11.165	12.104		
10400.0	10.701	12.104		
10410.0	9.925	11.981		
10420.0	9.457	11.870		
10430.0	9.324	11.732		
10440.0	9.309	11.597		
10450.0	9.425	11.505		
10460.0	9.694	11.463		
10470.0	9.886	11.471		
10480.0	10.126	11.529		
10490.0	10.184	11.579		
10500.0	10.184	11.794		
10510.0	10.291	11.994		
10520.0	10.601	12.199		
10530.0	10.872	12.403		
10540.0	11.003	12.608		
10550.0	11.229	12.813		
10560.0	11.678	13.017		
10570.0	12.222	13.222		
10580.0	12.581	13.427		
10590.0	12.355	13.631		
10600.0	12.450	13.836		
10610.0	12.620	14.040		
10620.0	12.938	14.245		
10630.0	13.280	14.450		
10640.0	13.611	14.654		
10650.0	13.919	14.859		
10660.0	14.209	15.063		
10670.0	14.432	15.268		
10680.0	14.784	15.458		
10690.0	15.137	15.656		
10700.0	15.490	15.853		
10710.0	15.814	16.051		
10720.0	16.257	16.249		
10730.0	16.480	16.447		
10740.0	16.572	16.645		
10750.0	16.919	16.843		
10760.0	16.874	17.040		
10770.0	16.936	17.238		
10780.0	16.968	17.436		
10790.0	17.093	17.634		
10800.0	17.122	17.832		
10810.0	17.075	18.029		
10820.0	17.642	18.227		
10830.0	18.179	18.424		
10840.0	18.383	18.623		
10850.0	18.518	18.821		
10860.0	18.732	19.019		
10870.0	18.929	19.245		
10880.0	19.090	19.478		
10890.0	19.372	19.710		
10900.0	19.639	19.943		
10910.0	19.772	20.175		
10920.0	20.039	20.407		
10930.0	20.300	20.640		
10940.0	20.520	20.862		
10950.0	20.711	21.066		
10960.0	20.975	21.252		
10970.0	21.172	21.419		
10980.0	21.263	21.569		
10990.0	21.395	21.700		
11000.0	21.562	21.813		
11010.0	21.806	21.907		
11020.0	22.100	21.984		
11030.0	22.222	22.042		
11040.0	22.349	22.092		
11050.0	22.168	22.142		
11060.0	22.099	22.192		
11070.0	22.139	22.242		
11080.0	22.179	22.292		
11090.0	22.196	22.342		
11100.0	22.191	22.356		
11110.0	21.429	22.360		
11120.0	21.282	22.346		
11130.0	21.127	22.314		
11140.0	20.921	22.264		
11150.0	20.594	22.196		
11160.0	20.083	22.109		
11170.0	19.587	22.004		
11180.0	19.184	21.881		
11190.0	19.427	21.740		
11200.0	19.463	21.581		
11210.0	19.558	21.404		
11220.0	19.764	21.208		
11230.0	19.766	20.994		
11240.0	19.932	20.767		
11250.0	20.097	20.539		
11260.0	20.330	20.311		
11270.0	20.525	20.083		
11280.0	20.091	19.885		
11290.0	19.983	19.735		
11300.0	18.669	19.597		
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11340.0	16.947	19.043		
11350.0	16.783	18.905		
11360.0	17.867	18.768		
11370.0	17.343	18.628		
11380.0	17.111	18.490		
11390.0	17.187	18.351		
11400.0	17.226	18.215		
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11420.0	17.183	18.065		
11430.0	17.248	18.065		
11440.0	17.426	18.074		
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LONGITUDINAL SECTION
 SCALE 1:2500H/1:500V

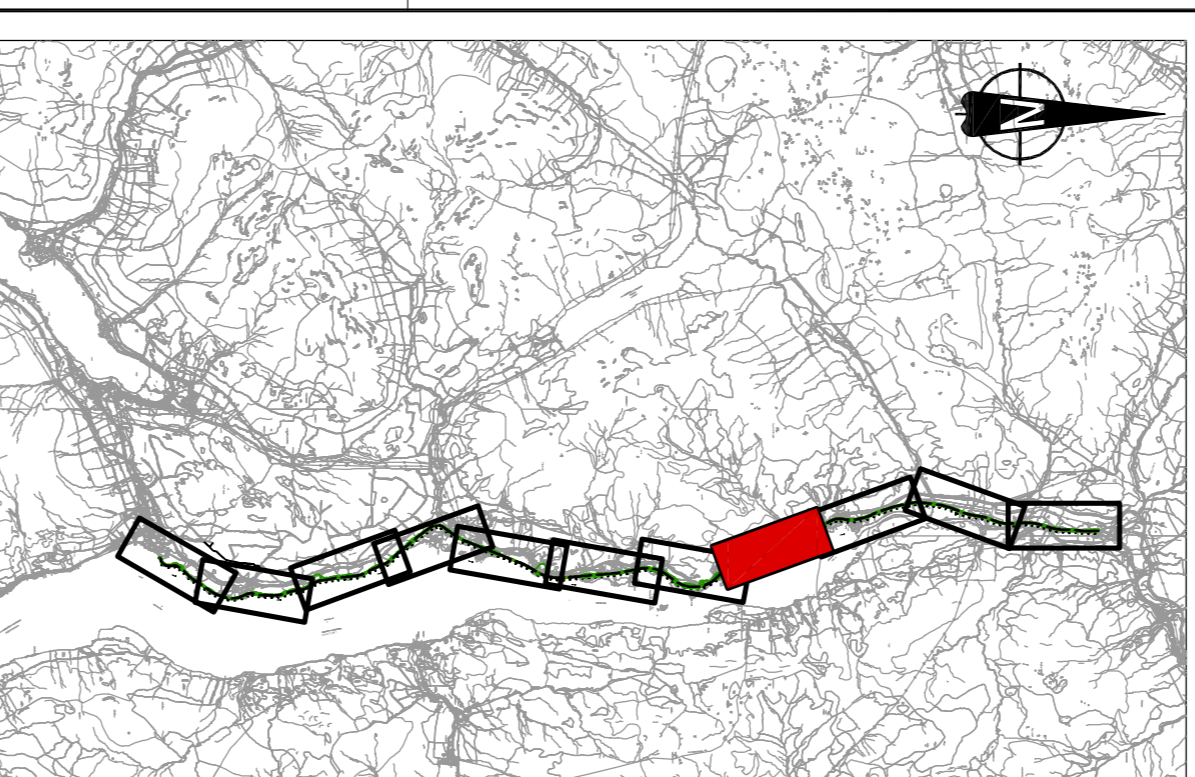
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SIGNIFICANT RESIDUAL RISKS

The following list provides a cross-reference between the drawing and the Designer's Health and Safety Risk Assessment, and identifies those areas of Significant Residual Risk

Description of Risk	Rd. No.
CLIENT OPERATIONS	1
ADJACENT ACTIVITIES	2
RESTRICTED SITE	3
TRAFFIC	4
INTERFACE WITH PUBLIC	5
NEAR TO HIGHWAYS	6
NEAR TO RAILWAYS	7
NEAR TO WATERWAYS	8
GROUND INSTABILITY	9
CONSTRUCTIONAL GAS	10
GROUND WATER	11
INUNDATION	12
SERVICES	13
OVERHEAD CABLES	14
INSECT ATTACK (INCL. MIDGE & TICKS)	15

- Notes**
- Existing information based on surveys provided by others and OS plans.
 - Alignment design, including earthworks extent, is preliminary for DMRB Stage 1 assessment purposes only. The design will be developed and refined during DMRB Stage 2.
 - Preliminary earthworks design assumes a 1:2 slope.
 - Design speed based on 895 kph.



Rev	By	Cmd	Approved	Date	Description
4.0	SM	EN	EC	11/12/13	Drawing name amended.
3.0	MC	EN	EC	11/12/13	Drawing name, title block and notes amended.
2.0	MC	EN	EC	20/11/13	Longitudinal sections and notes amended.
1.0	MC	EN	EC	19/11/13	Finalise vertical design elements amended.

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Project
 A82 TARGET TO INVERARMAN UPGRADE
OPTION 1
 TARGET TO INVERARMAN
 PLAN & SECTION
 SHEET 8 OF 11

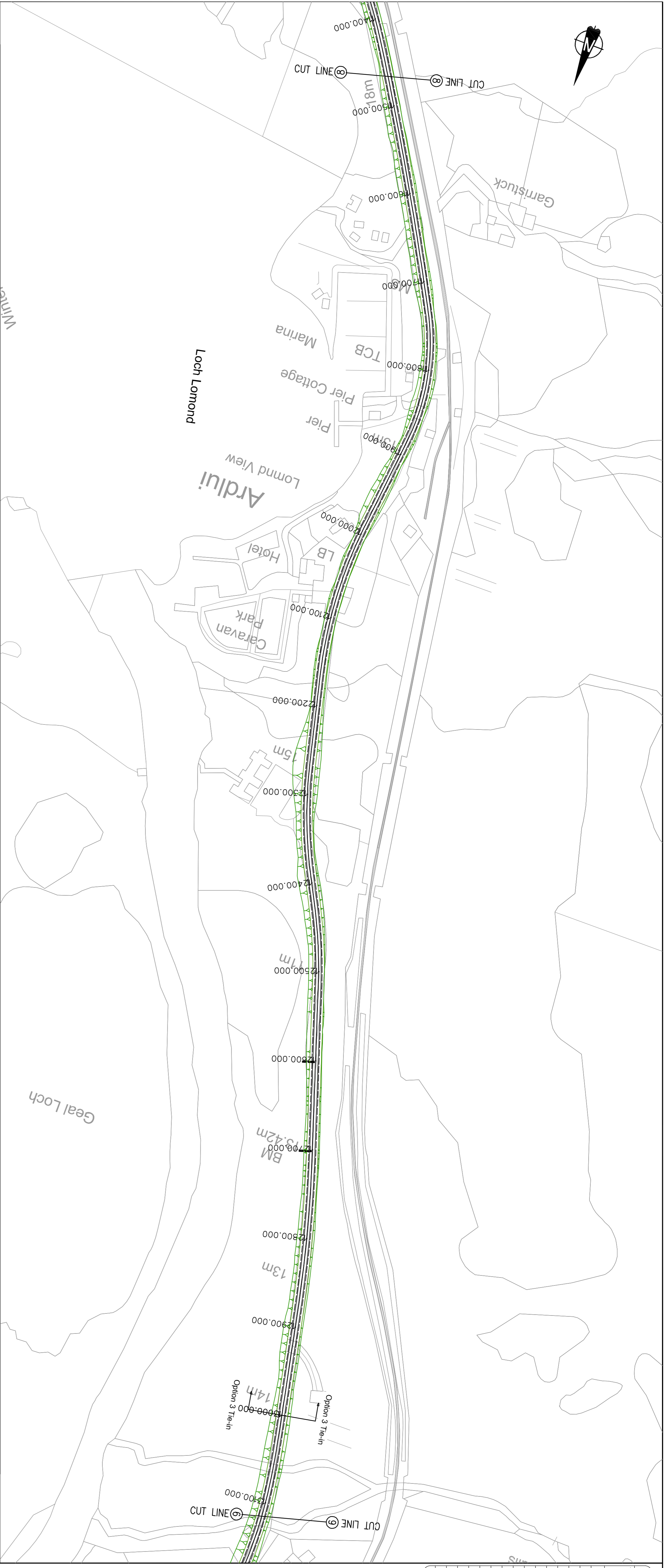
Drawing No.
 476416-0000-107
Revision
 3.0

Client
 Transport Scotland
 10 St. Andrew's House, Edinburgh

Drawn By: GIANZIE Date: 06/11/13
Checked by: ENICOLSON Date: 11/12/13
Approved by: ERAWFORD Date: 11/12/13

Drawing Scale: 1:2500 at A1 (1:5000 at A3)
Ppl. Scale:

Drawing file path & name: K:\Highways\A82 Target to Inverarman\Technical Design\Drawings\0000 Plans and Profiles\Live Drawings\476416-0000-100_110-Rev 3.0 - Option 1.dwg
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 User and Plot Date: smclean.1: 28:22:2014 - 10:2 am

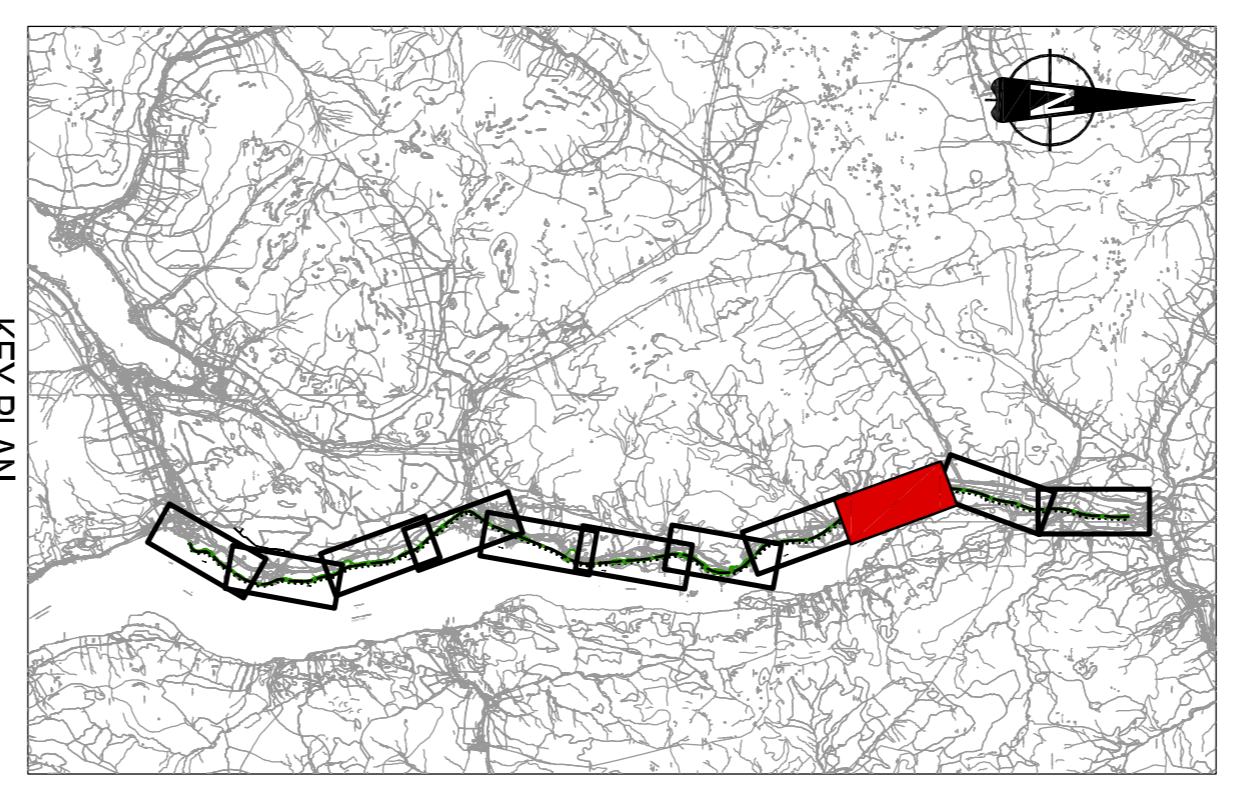


Chainage	Original GL	Proposed Level	Horiz. Geometry	Vert. Geometry
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11490.0	1171.61	1809.7		
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11510.0	1170.28	1809.7		
11520.0	1171.81	1809.7		
11530.0	1171.75	1809.7		
11540.0	1171.64	1809.7		
11550.0	1171.49	1809.7		
11560.0	1171.36	1809.7		
11570.0	1171.15	1809.7		
11580.0	1170.94	1809.7		
11590.0	1170.74	1809.7		
11600.0	1170.57	1809.7		
11610.0	1170.43	1809.7		
11620.0	1170.31	1809.7		
11630.0	1170.21	1809.7		
11640.0	1170.13	1809.7		
11650.0	1170.07	1809.7		
11660.0	1170.03	1809.7		
11670.0	1170.01	1809.7		
11680.0	1170.01	1809.7		
11690.0	1170.02	1809.7		
11700.0	1170.04	1809.7		
11710.0	1170.08	1809.7		
11720.0	1170.14	1809.7		
11730.0	1170.22	1809.7		
11740.0	1170.32	1809.7		
11750.0	1170.44	1809.7		
11760.0	1170.58	1809.7		
11770.0	1170.74	1809.7		
11780.0	1170.92	1809.7		
11790.0	1171.11	1809.7		
11800.0	1171.31	1809.7		
11810.0	1171.52	1809.7		
11820.0	1171.74	1809.7		
11830.0	1171.97	1809.7		
11840.0	1172.21	1809.7		
11850.0	1172.46	1809.7		
11860.0	1172.72	1809.7		
11870.0	1172.99	1809.7		
11880.0	1173.27	1809.7		
11890.0	1173.56	1809.7		
11900.0	1173.86	1809.7		
11910.0	1174.17	1809.7		
11920.0	1174.49	1809.7		
11930.0	1174.82	1809.7		
11940.0	1175.16	1809.7		
11950.0	1175.51	1809.7		
11960.0	1175.87	1809.7		
11970.0	1176.24	1809.7		
11980.0	1176.62	1809.7		
11990.0	1177.01	1809.7		
12000.0	1177.41	1809.7		
12010.0	1177.82	1809.7		
12020.0	1178.24	1809.7		
12030.0	1178.67	1809.7		
12040.0	1179.11	1809.7		
12050.0	1179.56	1809.7		
12060.0	1180.02	1809.7		
12070.0	1180.49	1809.7		
12080.0	1180.97	1809.7		
12090.0	1181.46	1809.7		
12100.0	1181.96	1809.7		
12110.0	1182.47	1809.7		
12120.0	1182.99	1809.7		
12130.0	1183.52	1809.7		
12140.0	1184.06	1809.7		
12150.0	1184.61	1809.7		
12160.0	1185.17	1809.7		
12170.0	1185.74	1809.7		
12180.0	1186.32	1809.7		
12190.0	1186.91	1809.7		
12200.0	1187.51	1809.7		
12210.0	1188.12	1809.7		
12220.0	1188.74	1809.7		
12230.0	1189.37	1809.7		
12240.0	1189.99	1809.7		
12250.0	1190.62	1809.7		
12260.0	1191.26	1809.7		
12270.0	1191.91	1809.7		
12280.0	1192.57	1809.7		
12290.0	1193.24	1809.7		
12300.0	1193.92	1809.7		
12310.0	1194.61	1809.7		
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12340.0	1196.74	1809.7		
12350.0	1197.47	1809.7		
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12450.0	1205.32	1809.7		
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12480.0	1207.87	1809.7		
12490.0	1208.74	1809.7		
12500.0	1209.62	1809.7		
12510.0	1210.51	1809.7		
12520.0	1211.42	1809.7		
12530.0	1212.34	1809.7		
12540.0	1213.27	1809.7		
12550.0	1214.21	1809.7		
12560.0	1215.17	1809.7		
12570.0	1216.14	1809.7		
12580.0	1217.12	1809.7		
12590.0	1218.11	1809.7		
12600.0	1219.12	1809.7		
12610.0	1220.14	1809.7		
12620.0	1221.17	1809.7		
12630.0	1222.21	1809.7		
12640.0	1223.27	1809.7		
12650.0	1224.34	1809.7		
12660.0	1225.42	1809.7		
12670.0	1226.51	1809.7		
12680.0	1227.62	1809.7		
12690.0	1228.74	1809.7		
12700.0	1229.87	1809.7		
12710.0	1231.02	1809.7		
12720.0	1232.18	1809.7		
12730.0	1233.35	1809.7		
12740.0	1234.53	1809.7		
12750.0	1235.72	1809.7		
12760.0	1236.93	1809.7		
12770.0	1238.15	1809.7		
12780.0	1239.38	1809.7		
12790.0	1240.62	1809.7		
12800.0	1241.87	1809.7		
12810.0	1243.14	1809.7		
12820.0	1244.42	1809.7		
12830.0	1245.71	1809.7		
12840.0	1247.02	1809.7		
12850.0	1248.34	1809.7		
12860.0	1249.67	1809.7		
12870.0	1251.02	1809.7		
12880.0	1252.38	1809.7		
12890.0	1253.75	1809.7		
12900.0	1255.14	1809.7		
12910.0	1256.54	1809.7		
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12940.0	1260.81	1809.7		
12950.0	1262.26	1809.7		
12960.0	1263.72	1809.7		
12970.0	1265.19	1809.7		
12980.0	1266.68	1809.7		
12990.0	1268.18	1809.7		
13000.0	1269.69	1809.7		
13010.0	1271.22	1809.7		
13020.0	1272.76	1809.7		
13030.0	1274.32	1809.7		
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13050.0	1277.47	1809.7		
13060.0	1279.07	1809.7		
13070.0	1280.68	1809.7		
13080.0	1282.3	1809.7		
13090.0	1283.93	1809.7		
13100.0	1285.58	1809.7		
13110.0	1287.24	1809.7		
13120.0	1288.91	1809.7		
13130.0	1290.6	1809.7		
13140.0	1292.31	1809.7		
13150.0	1294.03	1809.7		

LONGITUDINAL SECTION
SCALE 1:2500H/1:500V

SIGNIFICANT RESIDUAL RISKS	
Description of Risk	Rtd. No.
CLIENT OPERATIONS	1
ADJACENT ACTIVITIES	2
RESTRICTED SITE	3
TRAFFIC	4
INTERFACE WITH PUBLIC	5
NEAR TO HIGHWAYS	6
NEAR TO RAILWAYS	7
NEAR TO WATERWAYS	8
GROUND INSTABILITY	9
CONTAMINATION/NOISE	10
GROUND WATER	11
INUNDATION	12
SERVICES	13
OVERHEAD CABLES	14
INSECT ATTACK (INCL. MIDGE & TICKS)	15

- Notes**
- Existing information based on surveys provided by others and OS plans.
 - Alignment design, including earthworks extent, is preliminary for DMRB Stage 1 assessment purposes only. The design will be developed and refined during DMRB Stage 2.
 - Preliminary earthworks design assume a 1:2 slope.
 - Design speed based on 85B kph.



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Project: A82 TARBET TO INVERARAN UPGRADE

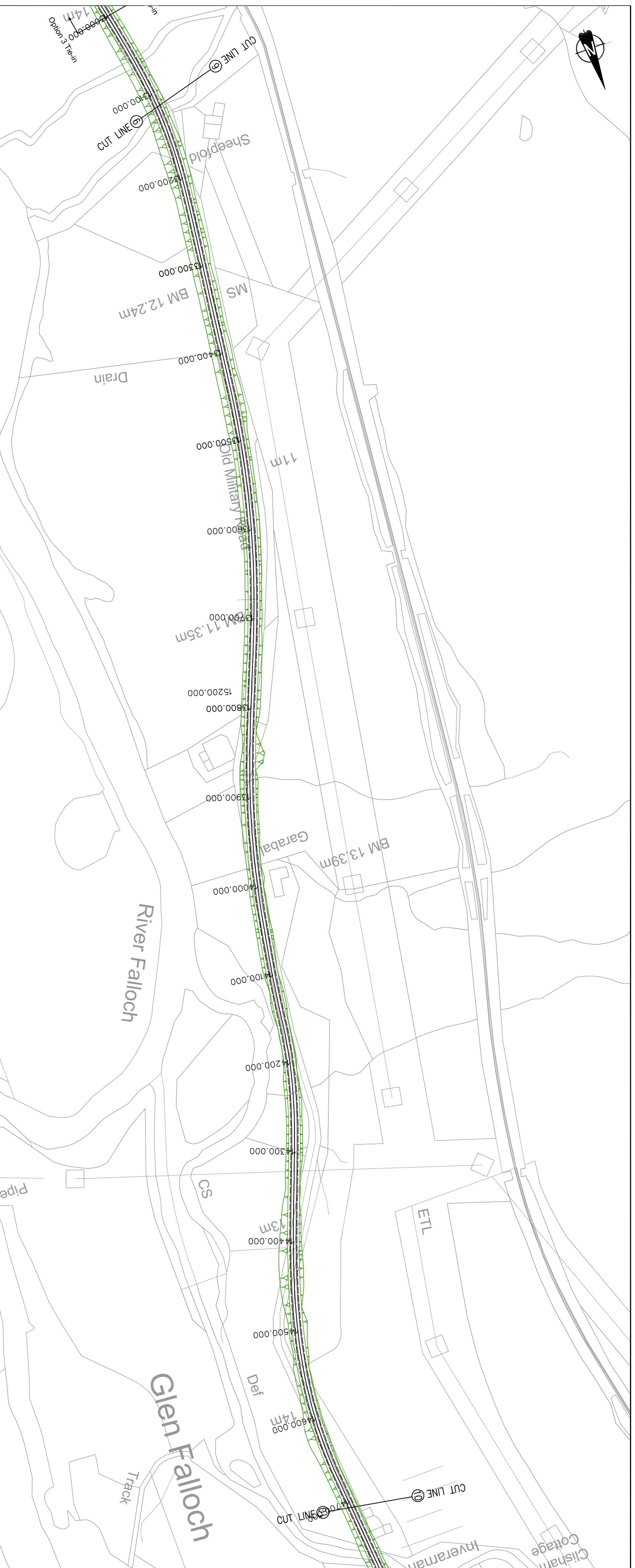
Rev	By	Of	Date	Description		
4.0	SM	EN	11/12/13	Drawing format amended.		
3.0	MC	EN	11/12/13	Drawing format title block and notes amended.		
2.0	MC	EN	10/11/13	Longitudinal sections and notes amended.		
1.0	MC	EN	10/11/13	Indicative vertical design elements amended.		
	Rev	By	Of	Approved	Date	Description

Drawing No.: 476416-0000-108

Revision: 4.0

Scale: Drawing Scale: 1:2500 at A1 (1:5000 at A3)

Page: 9 of 11



DATUM -2.000

Change	Original GL		Proposed Level	
	13120.0	11.959	13120.0	14.602
	13130.0	11.909	13130.0	14.407
	13140.0	11.441	13140.0	14.213
	13150.0	10.981	13150.0	14.019
	13160.0	10.517	13160.0	13.818
	13170.0	9.966	13170.0	13.600
	13180.0	9.371	13180.0	13.379
	13190.0	8.731	13190.0	13.141
	13200.0	8.058	13200.0	12.884
	13210.0	7.356	13210.0	12.619
	13220.0	6.631	13220.0	12.348
	13230.0	5.881	13230.0	12.072
	13240.0	5.113	13240.0	11.792
	13250.0	4.335	13250.0	11.508
	13260.0	3.548	13260.0	11.221
	13270.0	2.752	13270.0	10.932
	13280.0	1.947	13280.0	10.641
	13290.0	1.133	13290.0	10.348
	13300.0	0.309	13300.0	10.054
	13310.0	-0.516	13310.0	9.759
	13320.0	-1.340	13320.0	9.464
	13330.0	-2.164	13330.0	9.169
	13340.0	-2.987	13340.0	8.874
	13350.0	-3.811	13350.0	8.579
	13360.0	-4.634	13360.0	8.284
	13370.0	-5.458	13370.0	7.989
	13380.0	-6.281	13380.0	7.694
	13390.0	-7.105	13390.0	7.399
	13400.0	-7.928	13400.0	7.104
	13410.0	-8.752	13410.0	6.809
	13420.0	-9.575	13420.0	6.514
	13430.0	-10.399	13430.0	6.219
	13440.0	-11.222	13440.0	5.924
	13450.0	-12.046	13450.0	5.629
	13460.0	-12.869	13460.0	5.334
	13470.0	-13.693	13470.0	5.039
	13480.0	-14.516	13480.0	4.744
	13490.0	-15.340	13490.0	4.449
	13500.0	-16.163	13500.0	4.154
	13510.0	-16.987	13510.0	3.859
	13520.0	-17.810	13520.0	3.564
	13530.0	-18.634	13530.0	3.269
	13540.0	-19.457	13540.0	2.974
	13550.0	-20.281	13550.0	2.679
	13560.0	-21.104	13560.0	2.384
	13570.0	-21.928	13570.0	2.089
	13580.0	-22.751	13580.0	1.794
	13590.0	-23.575	13590.0	1.499
	13600.0	-24.398	13600.0	1.204
	13610.0	-25.222	13610.0	0.909
	13620.0	-26.045	13620.0	0.614
	13630.0	-26.869	13630.0	0.319
	13640.0	-27.692	13640.0	0.024
	13650.0	-28.516	13650.0	-0.271
	13660.0	-29.339	13660.0	-0.566
	13670.0	-30.163	13670.0	-0.861
	13680.0	-30.986	13680.0	-1.156
	13690.0	-31.810	13690.0	-1.451
	13700.0	-32.633	13700.0	-1.746
	13710.0	-33.457	13710.0	-2.041
	13720.0	-34.280	13720.0	-2.336
	13730.0	-35.104	13730.0	-2.631
	13740.0	-35.927	13740.0	-2.926
	13750.0	-36.751	13750.0	-3.221
	13760.0	-37.574	13760.0	-3.516
	13770.0	-38.398	13770.0	-3.811
	13780.0	-39.221	13780.0	-4.106
	13790.0	-40.045	13790.0	-4.401
	13800.0	-40.868	13800.0	-4.696
	13810.0	-41.692	13810.0	-4.991
	13820.0	-42.515	13820.0	-5.286
	13830.0	-43.339	13830.0	-5.581
	13840.0	-44.162	13840.0	-5.876
	13850.0	-44.986	13850.0	-6.171
	13860.0	-45.809	13860.0	-6.466
	13870.0	-46.633	13870.0	-6.761
	13880.0	-47.456	13880.0	-7.056
	13890.0	-48.280	13890.0	-7.351
	13900.0	-49.103	13900.0	-7.646
	13910.0	-49.927	13910.0	-7.941
	13920.0	-50.750	13920.0	-8.236
	13930.0	-51.574	13930.0	-8.531
	13940.0	-52.397	13940.0	-8.826
	13950.0	-53.221	13950.0	-9.121
	13960.0	-54.044	13960.0	-9.416
	13970.0	-54.868	13970.0	-9.711
	13980.0	-55.691	13980.0	-10.006
	13990.0	-56.515	13990.0	-10.301
	14000.0	-57.338	14000.0	-10.596
	14010.0	-58.162	14010.0	-10.891
	14020.0	-58.985	14020.0	-11.186
	14030.0	-59.809	14030.0	-11.481
	14040.0	-60.632	14040.0	-11.776
	14050.0	-61.456	14050.0	-12.071
	14060.0	-62.279	14060.0	-12.366
	14070.0	-63.103	14070.0	-12.661
	14080.0	-63.926	14080.0	-12.956
	14090.0	-64.750	14090.0	-13.251
	14100.0	-65.573	14100.0	-13.546
	14110.0	-66.397	14110.0	-13.841
	14120.0	-67.220	14120.0	-14.136
	14130.0	-68.044	14130.0	-14.431
	14140.0	-68.867	14140.0	-14.726
	14150.0	-69.691	14150.0	-15.021
	14160.0	-70.514	14160.0	-15.316
	14170.0	-71.338	14170.0	-15.611
	14180.0	-72.161	14180.0	-15.906
	14190.0	-72.985	14190.0	-16.201
	14200.0	-73.808	14200.0	-16.496
	14210.0	-74.632	14210.0	-16.791
	14220.0	-75.455	14220.0	-17.086
	14230.0	-76.279	14230.0	-17.381
	14240.0	-77.102	14240.0	-17.676
	14250.0	-77.926	14250.0	-17.971
	14260.0	-78.749	14260.0	-18.266
	14270.0	-79.573	14270.0	-18.561
	14280.0	-80.396	14280.0	-18.856
	14290.0	-81.220	14290.0	-19.151
	14300.0	-82.043	14300.0	-19.446
	14310.0	-82.867	14310.0	-19.741
	14320.0	-83.690	14320.0	-20.036
	14330.0	-84.514	14330.0	-20.331
	14340.0	-85.337	14340.0	-20.626
	14350.0	-86.161	14350.0	-20.921
	14360.0	-86.984	14360.0	-21.216
	14370.0	-87.808	14370.0	-21.511
	14380.0	-88.631	14380.0	-21.806
	14390.0	-89.455	14390.0	-22.101
	14400.0	-90.278	14400.0	-22.396
	14410.0	-91.102	14410.0	-22.691
	14420.0	-91.925	14420.0	-22.986
	14430.0	-92.749	14430.0	-23.281
	14440.0	-93.572	14440.0	-23.576
	14450.0	-94.396	14450.0	-23.871
	14460.0	-95.219	14460.0	-24.166
	14470.0	-96.043	14470.0	-24.461
	14480.0	-96.866	14480.0	-24.756
	14490.0	-97.690	14490.0	-25.051
	14500.0	-98.513	14500.0	-25.346
	14510.0	-99.337	14510.0	-25.641
	14520.0	-100.160	14520.0	-25.936
	14530.0	-100.984	14530.0	-26.231
	14540.0	-101.807	14540.0	-26.526
	14550.0	-102.631	14550.0	-26.821
	14560.0	-103.454	14560.0	-27.116
	14570.0	-104.278	14570.0	-27.411
	14580.0	-105.101	14580.0	-27.706
	14590.0	-105.925	14590.0	-28.001
	14600.0	-106.748	14600.0	-28.296
	14610.0	-107.572	14610.0	-28.591
	14620.0	-108.395	14620.0	-28.886
	14630.0	-109.219	14630.0	-29.181
	14640.0	-110.042	14640.0	-29.476
	14650.0	-110.866	14650.0	-29.771
	14660.0	-111.689	14660.0	-30.066
	14670.0	-112.513	14670.0	-30.361
	14680.0	-113.336	14680.0	-30.656
	14690.0	-114.160	14690.0	-30.951
	14700.0	-114.983	14700.0	-31.246

LONGITUDINAL SECTION
SCALE 1:2500H/1:500V

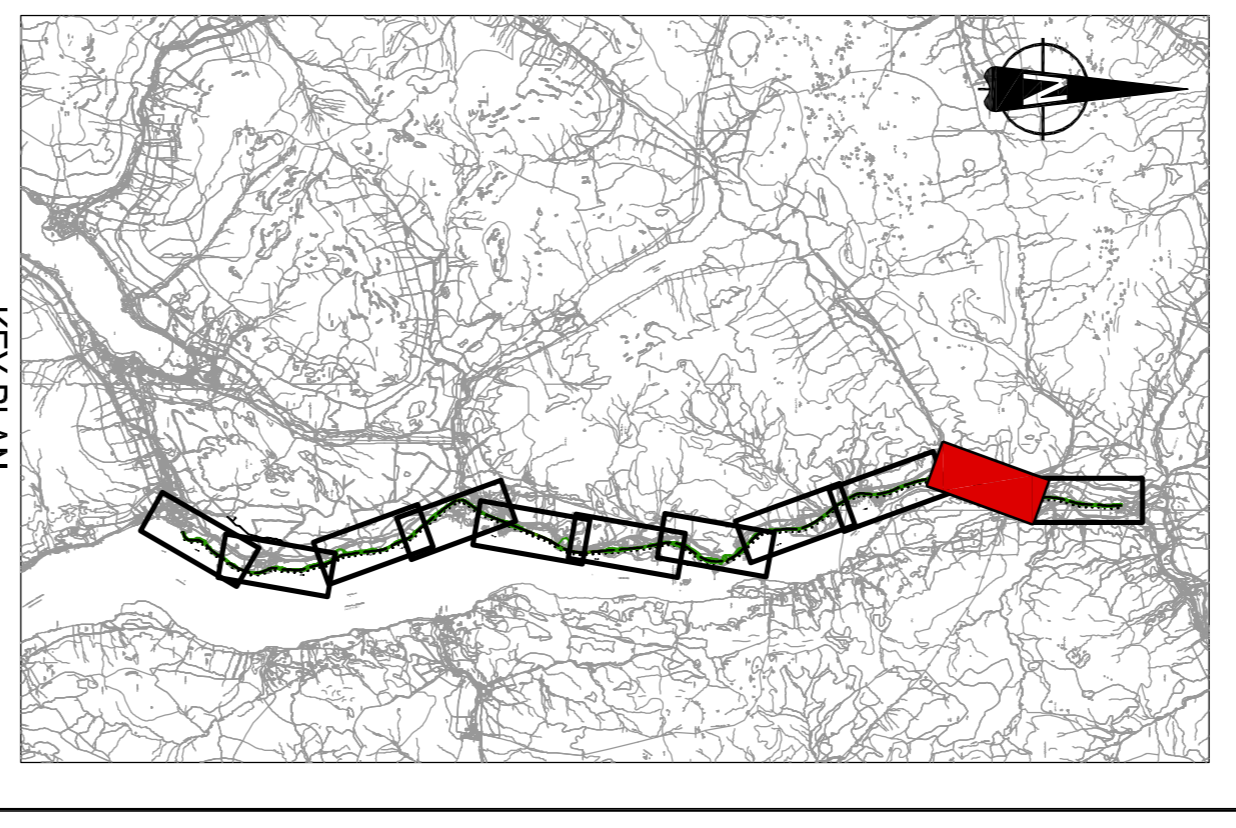
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SIGNIFICANT RESIDUAL RISKS

The following list provides a cross-reference between the drawing and the Designer's Health and Safety Risk Assessment, and identifies those areas of Significant Residual Risk.

Description of Risk	Rat. No.
CLIENT OPERATIONS	1
ADJACENT ACTIVITIES	2
RESTRICTED SITE	3
TRAFFIC	4
INTERFACE WITH PUBLIC	5
NEAR TO HIGHWAYS	6
NEAR TO RAILWAYS	7
NEAR TO WATERWAYS	8
GROUND INSTABILITY	9
CONTAMINATION/SOIL GAS	10
GROUND WATER	11
INUNDATION	12
SERVICES	13
OVERHEAD CABLES	14
INSECT ATTACK (INCL. MIDGE & TICKS)	15

- Notes**
- Existing information based on surveys provided by others and OS plans.
 - Alignment design, including earthworks extent, is preliminary for DMRB Stage 1 assessment purposes only. The design will be developed and refined during DMRB Stage 2.
 - Preliminary earthworks design assume a 1:2 slope.
 - Design speed based on 85B kph.



Rev	By	Chkd	Apprd	Date	Description
4.0	SM	EN	EC	11/12/13	Drawing issue amended.
3.0	MC	EN	EC	11/12/13	Drawing format, title block and notes amended.
2.0	MC	EN	EC	20/11/13	Longitudinal sections and notes amended.
1.0	MC	EN	EC	19/11/13	Indicative vertical design elements amended.

Client: TRANSPORT SCOTLAND
Glen Falloch Development

Project: CH2M HILL FARHURST JV
CH2M Hill Farhurst JV
C/O CH2M Farhurst JV, 368 Mainland Road, Glasgow, G51 3AU
Tel: +44 (0)141 522 2000 Fax: +44 (0)141 522 2022

Drawing: A82 TARGET TO INVERARNAN UPGRADE
OPTION 1
TARGET TO INVERARNAN
PLAN & SECTION
SHEET 10 OF 11

Drawn by: GIANZIE Date: 05/11/13
Checked by: EMINCOLSON Date: 11/12/13
Approved by: ERRAWFORD Date: 11/12/13

Drawing No: **476416-0000-109** **Revision:** **4.0**

Drawing Scale: 1:2500 at A1 (1:5000 at A3) **Plot Scale:**

CAD Filename: PLOT



DATUM -2.000		
Chainage	Original G.L.	Proposed Level
14700.00	14700.00	14700.00
14720.00	14720.00	14720.00
14740.00	14740.00	14740.00
14760.00	14760.00	14760.00
14780.00	14780.00	14780.00
14800.00	14800.00	14800.00
14820.00	14820.00	14820.00
14840.00	14840.00	14840.00
14860.00	14860.00	14860.00
14880.00	14880.00	14880.00
14900.00	14900.00	14900.00
14920.00	14920.00	14920.00
14940.00	14940.00	14940.00
14960.00	14960.00	14960.00
14980.00	14980.00	14980.00
15000.00	15000.00	15000.00
15020.00	15020.00	15020.00
15040.00	15040.00	15040.00
15060.00	15060.00	15060.00
15080.00	15080.00	15080.00
15100.00	15100.00	15100.00
15120.00	15120.00	15120.00
15140.00	15140.00	15140.00
15160.00	15160.00	15160.00
15180.00	15180.00	15180.00
15200.00	15200.00	15200.00
15220.00	15220.00	15220.00
15240.00	15240.00	15240.00
15260.00	15260.00	15260.00
15280.00	15280.00	15280.00
15300.00	15300.00	15300.00
15320.00	15320.00	15320.00
15340.00	15340.00	15340.00
15360.00	15360.00	15360.00
15380.00	15380.00	15380.00
15400.00	15400.00	15400.00
15420.00	15420.00	15420.00
15440.00	15440.00	15440.00
15460.00	15460.00	15460.00
15480.00	15480.00	15480.00
15500.00	15500.00	15500.00
15520.00	15520.00	15520.00
15540.00	15540.00	15540.00
15560.00	15560.00	15560.00
15580.00	15580.00	15580.00
15600.00	15600.00	15600.00
15620.00	15620.00	15620.00
15640.00	15640.00	15640.00
15660.00	15660.00	15660.00
15680.00	15680.00	15680.00
15700.00	15700.00	15700.00
15720.00	15720.00	15720.00
15740.00	15740.00	15740.00
15760.00	15760.00	15760.00
15780.00	15780.00	15780.00
15800.00	15800.00	15800.00
15820.00	15820.00	15820.00
15840.00	15840.00	15840.00
15860.00	15860.00	15860.00
15880.00	15880.00	15880.00
15900.00	15900.00	15900.00
15920.00	15920.00	15920.00
15940.00	15940.00	15940.00
15960.00	15960.00	15960.00
15980.00	15980.00	15980.00
16000.00	16000.00	16000.00
16020.00	16020.00	16020.00
16040.00	16040.00	16040.00
16060.00	16060.00	16060.00
16080.00	16080.00	16080.00
16100.00	16100.00	16100.00
16120.00	16120.00	16120.00
16140.00	16140.00	16140.00
16160.00	16160.00	16160.00
16180.00	16180.00	16180.00
16200.00	16200.00	16200.00
16220.00	16220.00	16220.00
16240.00	16240.00	16240.00
16260.00	16260.00	16260.00
16280.00	16280.00	16280.00
16300.00	16300.00	16300.00
16320.00	16320.00	16320.00
16340.00	16340.00	16340.00
16360.00	16360.00	16360.00
16380.00	16380.00	16380.00
16400.00	16400.00	16400.00
16420.00	16420.00	16420.00
16440.00	16440.00	16440.00
16460.00	16460.00	16460.00
16480.00	16480.00	16480.00
16500.00	16500.00	16500.00
16520.00	16520.00	16520.00
16540.00	16540.00	16540.00
16560.00	16560.00	16560.00
16580.00	16580.00	16580.00
16600.00	16600.00	16600.00
16620.00	16620.00	16620.00
16640.00	16640.00	16640.00
16660.00	16660.00	16660.00
16680.00	16680.00	16680.00
16700.00	16700.00	16700.00
16720.00	16720.00	16720.00
16740.00	16740.00	16740.00
16760.00	16760.00	16760.00
16780.00	16780.00	16780.00
16800.00	16800.00	16800.00
16820.00	16820.00	16820.00
16840.00	16840.00	16840.00
16860.00	16860.00	16860.00
16880.00	16880.00	16880.00
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16940.00	16940.00	16940.00
16960.00	16960.00	16960.00
16980.00	16980.00	16980.00
17000.00	17000.00	17000.00
17020.00	17020.00	17020.00
17040.00	17040.00	17040.00
17060.00	17060.00	17060.00
17080.00	17080.00	17080.00
17100.00	17100.00	17100.00
17120.00	17120.00	17120.00
17140.00	17140.00	17140.00
17160.00	17160.00	17160.00
17180.00	17180.00	17180.00
17200.00	17200.00	17200.00
17220.00	17220.00	17220.00
17240.00	17240.00	17240.00
17260.00	17260.00	17260.00
17280.00	17280.00	17280.00

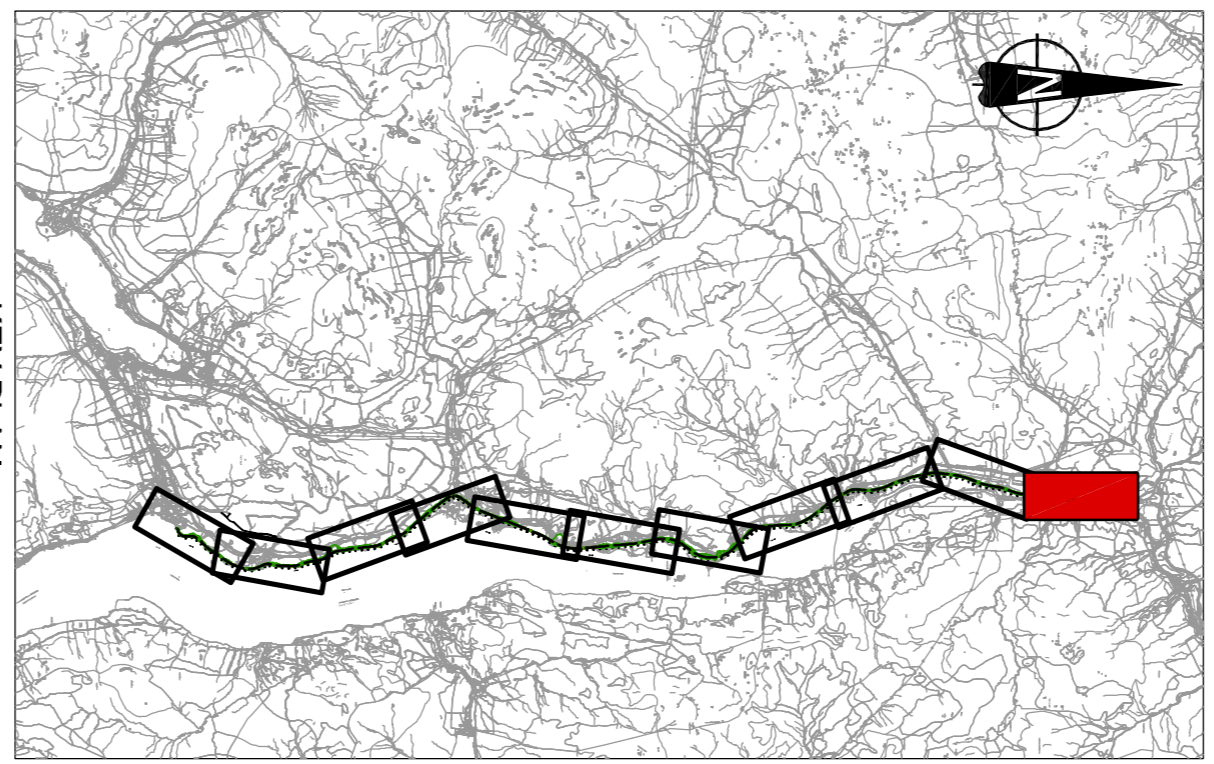
LONG SECTION KEY:
 - - - EXISTING GROUND LEVEL
 ——— PROPOSED GROUND LEVEL

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LONGITUDINAL SECTION
 SCALE 1:2500H/1:500V

SIGNIFICANT RESIDUAL RISKS	
Description of Risk	Rsk. No.
CLIENT OPERATIONS	1
ADJACENT ACTIVITIES	2
RESTRICTED SITE	3
TRAFFIC	4
INTERFACE WITH PUBLIC	5
NEAR TO HIGHWAYS	6
NEAR TO RAILWAYS	7
NEAR TO WATERWAYS	8
GROUND INSTABILITY	9
COUNTRYSIDE/SCAPES	10
CONTRIBUTION TO CLIMATE CHANGE	11
OVERHEAD CABLES	12
SERVICES	13
OVERHEAD CABLES	14
INSECT ATTACK (INCL. MIDGE & TICKS)	15

- Notes
- Existing information based on surveys provided by others and OS plans.
 - Alignment design, including earthworks extent, is preliminary for DMRB Stage 1 assessment purposes only. The design will be developed and refined during DMRB Stage 2.
 - Preliminary earthworks design assume a 1:2 slope.
 - Design speed based on 85B kph.



Rev	By	Cndd	Approved	Date	Description
4.0	SM	EN	EC	11/12/13	Drawing name amended.
3.0	MC	EN	EC	11/12/13	Drawing name, title block and title amended.
2.0	MC	EN	EC	20/11/13	Longitudinal sections and notes amended.
1.0	MC	EN	EC	19/11/13	Indicative vertical design elements amended.

Client: **Transport Scotland**

CH2M HILL FAIRFURST
 C/O City Park, 368 Alexandra Parade, Glasgow, G31 3AU
 Tel: +44 (0)141 552 2000 Fax: +44 (0)141 552 2020

Project: **A82 TARBET TO INVERAMAN UPGRADE**

Drawing: **OPTION 1 TARBET TO INVERAMAN PLAN & SECTION SHEET 11 OF 11**

Drawn by: GIMANZE	Date: 06/11/13
Checked by: ENICOLSON	Date: 11/12/13
Approved by: ERWATFORD	Date: 11/12/13

Drawing No: **476416-0000-110** Revision: **4.0**

Drawing Scale: 1:2500 at A1 (1:5000 at A3) Plot Scale: **4.0**
 C/D Filename: _____

DATUM - 4.000

Chainage	Original CL	Proposed Level	Horizontal Geometry	Vertical Geometry
0.00	4.492	4.492		
0.30	4.344	4.344		
0.60	3.970	3.970		
0.90	4.220	4.220		
1.20	4.470	4.470		
1.50	4.720	4.720		
1.80	4.970	4.970		
2.10	5.220	5.220		
2.40	5.469	5.469		
2.70	5.708	5.708		
3.00	5.938	5.938		
3.30	6.157	6.157		
3.60	6.367	6.367		
3.90	6.567	6.567		
4.20	6.756	6.756		
4.50	6.936	6.936		
4.80	7.105	7.105		
5.10	7.265	7.265		
5.40	7.415	7.415		
5.70	7.554	7.554		
6.00	7.684	7.684		
6.30	7.803	7.803		
6.60	7.913	7.913		
6.90	8.014	8.014		
7.20	8.114	8.114		
7.50	8.214	8.214		
7.80	8.314	8.314		
8.10	8.414	8.414		
8.40	8.514	8.514		
8.70	8.614	8.614		
9.00	8.714	8.714		
9.30	8.814	8.814		
9.60	8.914	8.914		
9.90	9.014	9.014		
10.20	9.114	9.114		
10.50	9.214	9.214		
10.80	9.314	9.314		
11.10	9.414	9.414		
11.40	9.514	9.514		
11.70	9.614	9.614		
12.00	9.714	9.714		
12.30	9.814	9.814		
12.60	9.914	9.914		
12.90	10.014	10.014		
13.20	10.114	10.114		
13.50	10.214	10.214		
13.80	10.314	10.314		
14.10	10.414	10.414		
14.40	10.514	10.514		
14.70	10.614	10.614		
15.00	10.714	10.714		
15.30	10.814	10.814		
15.60	10.914	10.914		
15.90	11.014	11.014		
16.20	11.114	11.114		
16.50	11.214	11.214		
16.80	11.314	11.314		
17.10	11.414	11.414		
17.40	11.514	11.514		
17.70	11.614	11.614		
18.00	11.714	11.714		
18.30	11.814	11.814		
18.60	11.914	11.914		
18.90	12.014	12.014		
19.20	12.114	12.114		
19.50	12.214	12.214		
19.80	12.314	12.314		
20.10	12.414	12.414		
20.40	12.514	12.514		
20.70	12.614	12.614		
21.00	12.714	12.714		
21.30	12.814	12.814		
21.60	12.914	12.914		
21.90	13.014	13.014		
22.20	13.114	13.114		
22.50	13.214	13.214		
22.80	13.314	13.314		
23.10	13.414	13.414		
23.40	13.514	13.514		
23.70	13.614	13.614		
24.00	13.714	13.714		
24.30	13.814	13.814		
24.60	13.914	13.914		
24.90	14.014	14.014		
25.20	14.114	14.114		
25.50	14.214	14.214		
25.80	14.314	14.314		
26.10	14.414	14.414		
26.40	14.514	14.514		
26.70	14.614	14.614		
27.00	14.714	14.714		
27.30	14.814	14.814		
27.60	14.914	14.914		
27.90	15.014	15.014		
28.20	15.114	15.114		
28.50	15.214	15.214		
28.80	15.314	15.314		
29.10	15.414	15.414		
29.40	15.514	15.514		
29.70	15.614	15.614		
30.00	15.714	15.714		
30.30	15.814	15.814		
30.60	15.914	15.914		
30.90	16.014	16.014		
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31.50	16.214	16.214		
31.80	16.314	16.314		
32.10	16.414	16.414		
32.40	16.514	16.514		
32.70	16.614	16.614		
33.00	16.714	16.714		
33.30	16.814	16.814		
33.60	16.914	16.914		
33.90	17.014	17.014		
34.20	17.114	17.114		
34.50	17.214	17.214		
34.80	17.314	17.314		
35.10	17.414	17.414		
35.40	17.514	17.514		
35.70	17.614	17.614		
36.00	17.714	17.714		
36.30	17.814	17.814		
36.60	17.914	17.914		
36.90	18.014	18.014		
37.20	18.114	18.114		
37.50	18.214	18.214		
37.80	18.314	18.314		
38.10	18.414	18.414		
38.40	18.514	18.514		
38.70	18.614	18.614		
39.00	18.714	18.714		
39.30	18.814	18.814		
39.60	18.914	18.914		
39.90	19.014	19.014		
40.20	19.114	19.114		
40.50	19.214	19.214		
40.80	19.314	19.314		
41.10	19.414	19.414		
41.40	19.514	19.514		
41.70	19.614	19.614		
42.00	19.714	19.714		
42.30	19.814	19.814		
42.60	19.914	19.914		
42.90	20.014	20.014		
43.20	20.114	20.114		
43.50	20.214	20.214		
43.80	20.314	20.314		
44.10	20.414	20.414		
44.40	20.514	20.514		
44.70	20.614	20.614		
45.00	20.714	20.714		
45.30	20.814	20.814		
45.60	20.914	20.914		
45.90	21.014	21.014		
46.20	21.114	21.114		
46.50	21.214	21.214		
46.80	21.314	21.314		
47.10	21.414	21.414		
47.40	21.514	21.514		
47.70	21.614	21.614		
48.00	21.714	21.714		
48.30	21.814	21.814		
48.60	21.914	21.914		
48.90	22.014	22.014		
49.20	22.114	22.114		
49.50	22.214	22.214		
49.80	22.314	22.314		
50.10	22.414	22.414		
50.40	22.514	22.514		
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51.00	22.714	22.714		
51.30	22.814	22.814		
51.60	22.914	22.914		
51.90	23.014	23.014		
52.20	23.114	23.114		
52.50	23.214	23.214		
52.80	23.314	23.314		
53.10	23.414	23.414		
53.40	23.514	23.514		
53.70	23.614	23.614		
54.00	23.714	23.714		
54.30	23.814	23.814		
54.60	23.914	23.914		
54.90	24.014	24.014		
55.20	24.114	24.114		
55.50	24.214	24.214		
55.80	24.314	24.314		
56.10	24.414	24.414		
56.40	24.514	24.514		
56.70	24.614	24.614		
57.00	24.714	24.714		
57.30	24.814	24.814		
57.60	24.914	24.914		
57.90	25.014	25.014		
58.20	25.114	25.114		
58.50	25.214	25.214		
58.80	25.314	25.314		
59.10	25.414	25.414		
59.40	25.514	25.514		
59.70	25.614	25.614		
60.00	25.714	25.714		
60.30	25.814	25.814		
60.60	25.914	25.914		
60.90	26.014	26.014		
61.20	26.114	26.114		
61.50	26.214	26.214		
61.80	26.314	26.314		
62.10	26.414	26.414		
62.40	26.514	26.514		
62.70	26.614	26.614		
63.00	26.714	26.714		
63.30	26.814	26.814		
63.60	26.914	26.914		
63.90	27.014	27.014		
64.20	27.114	27.114		
64.50	27.214	27.214		
64.80	27.314	27.314		
65.10	27.414	27.414		
65.40	27.514	27.514		
65.70	27.614	27.614		
66.00	27.714	27.714		
66.30	27.814	27.814		
66.60	27.914	27.914		
66.90	28.014	28.014		
67.20	28.114	28.114		
67.50	28.214	28.214		
67.80	28.314	28.314		
68.10	28.414	28.414		
68.40	28.514	28.514		
68.70	28.614	28.614		
69.00	28.714	28.714		
69.30	28.814	28.814		
69.60	28.914	28.914		
69.90	29.014	29.014		
70.20	29.114	29.114		
70.50	29.214	29.214		
70.80	29.314	29.314		
71.10	29.414	29.414		
71.40	29.514	29.514		
71.70	29.614	29.614		
72.00	29.714	29.714		
72.30	29.814	29.814		
72.60	29.914	29.914		
72.90	30.014	30.014		

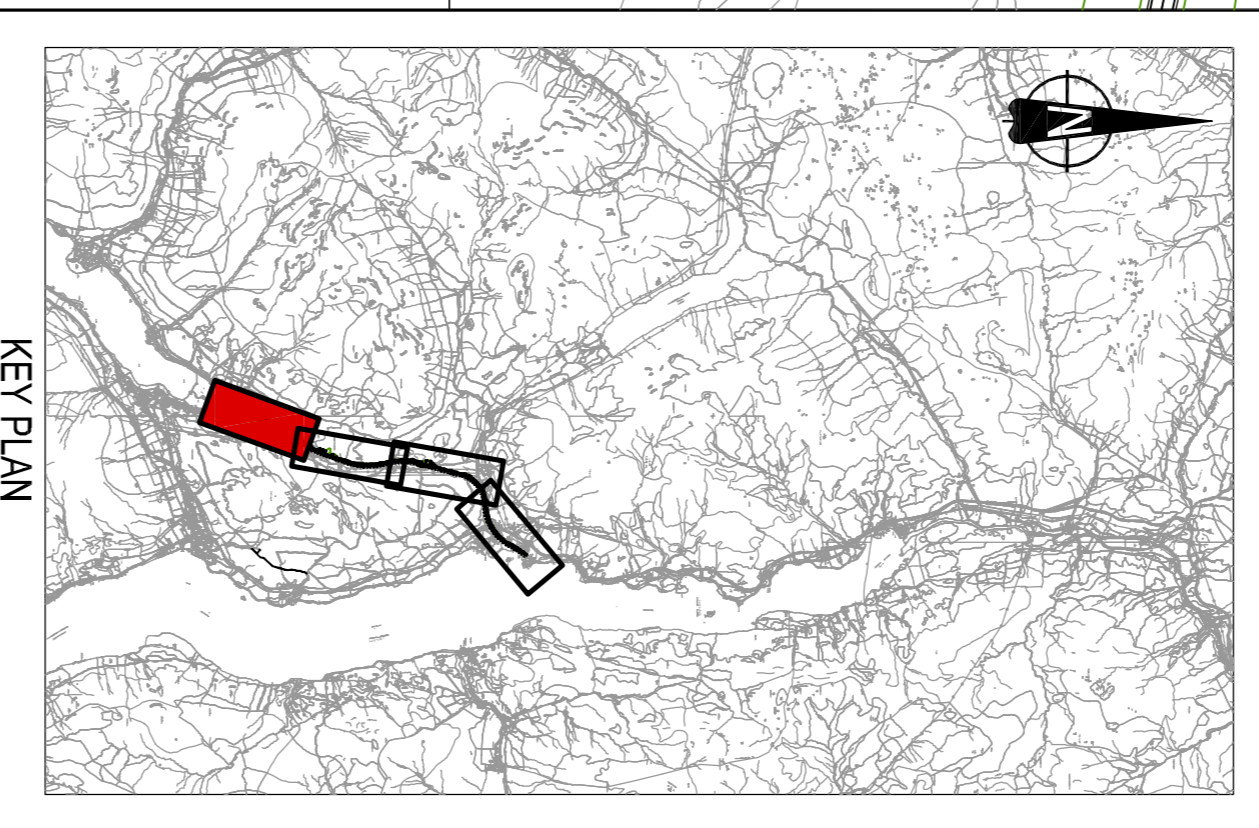
LONGITUDINAL SECTION
SCALE 1:2500H/1:500V



LONG. SECTION KEY

----- EXISTING GROUND LEVEL

————— PROPOSED GROUND LEVEL



Rev	By	Checked	Date	Description	
4.0	SM	EN	EC	27/02/11	Drawing name amended.
3.0	MC	EN	EC	15/12/13	Drawing name, title block and notes amended.
2.0	MC	EN	EC	20/11/13	Longitudinal sections and notes amended.
1.0	MC	EN	EC	19/11/13	Indicative vertical design elements amended.

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Project
A82 TARBET TO INVERARLAN UPGRADE

Drawing
ARROCHAR TO INVERARLAN
PLAN & SECTION
SHEET 1 OF 4

Drawn by: MCOLAHAN **Date:** 25/10/13
Checked by: E NICOLSON **Date:** 11/12/13
Approved by: E CRAWFORD **Date:** 11/12/13

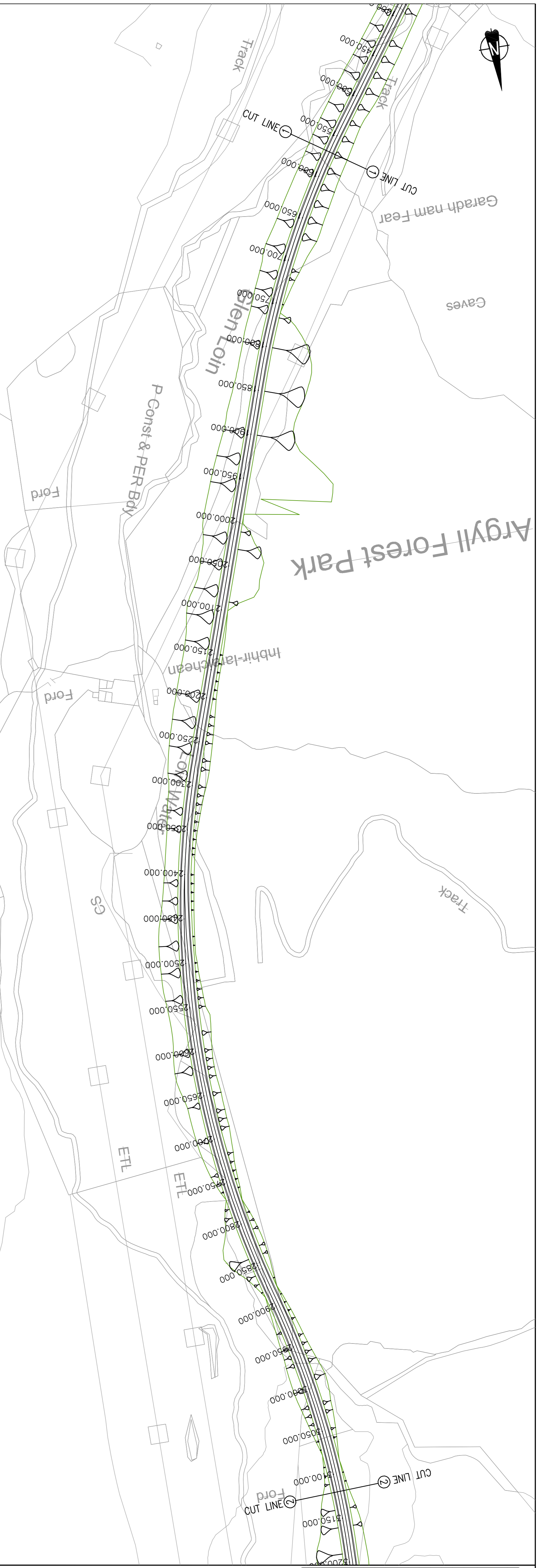
Drawing No. **Revision**
476416-0000-200 **4.0**

Client **Scale:** **Proj. Scale:**

SIGNIFICANT RESIDUAL RISKS

This drawing identifies a cross reference between the drawing and the Designer's Safety and Safety Risk Assessment, and identifies those areas of Significant Residual Risk

Description of Risk	Risk No.
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LONG SECTION KEY:
 --- EXISTING GROUND LEVEL
 - - - - - PROPOSED GROUND LEVEL

DATUM 5.000

Choinage	Original GL	Proposed Level	Horizontal Geometry	Vertical Geometry
151.11	152.70	151.11	R=1020.000 L=36.878	P=3.300% L=519.896
152.00	153.59	152.00		
152.89	154.48	152.89		
153.78	155.37	153.78		
154.67	156.26	154.67		
155.56	157.15	155.56		
156.45	158.04	156.45		
157.34	158.93	157.34		
158.23	159.82	158.23		
159.12	160.71	159.12		
160.01	161.60	160.01		
160.90	162.49	160.90		
161.79	163.38	161.79		
162.68	164.27	162.68		
163.57	165.16	163.57		
164.46	166.05	164.46		
165.35	166.94	165.35		
166.24	167.83	166.24		
167.13	168.72	167.13		
168.02	169.61	168.02		
168.91	170.50	168.91		
169.80	171.39	169.80		
170.69	172.28	170.69		
171.58	173.17	171.58		
172.47	174.06	172.47		
173.36	174.95	173.36		
174.25	175.84	174.25		
175.14	176.73	175.14		
176.03	177.62	176.03		
176.92	178.51	176.92		
177.81	179.40	177.81		
178.70	180.29	178.70		
179.59	181.18	179.59		
180.48	182.07	180.48		
181.37	182.96	181.37		
182.26	183.85	182.26		
183.15	184.74	183.15		
184.04	185.63	184.04		
184.93	186.52	184.93		
185.82	187.41	185.82		
186.71	188.30	186.71		
187.60	189.19	187.60		
188.49	190.08	188.49		
189.38	190.97	189.38		
190.27	191.86	190.27		
191.16	192.75	191.16		
192.05	193.64	192.05		
192.94	194.53	192.94		
193.83	195.42	193.83		
194.72	196.31	194.72		
195.61	197.20	195.61		
196.50	198.09	196.50		
197.39	198.98	197.39		
198.28	199.87	198.28		
199.17	200.76	199.17		
200.06	201.65	200.06		
200.95	202.54	200.95		
201.84	203.43	201.84		
202.73	204.32	202.73		
203.62	205.21	203.62		
204.51	206.10	204.51		
205.40	206.99	205.40		
206.29	207.88	206.29		
207.18	208.77	207.18		
208.07	209.66	208.07		
208.96	210.55	208.96		
209.85	211.44	209.85		
210.74	212.33	210.74		
211.63	213.22	211.63		
212.52	214.11	212.52		
213.41	215.00	213.41		
214.30	215.89	214.30		
215.19	216.78	215.19		
216.08	217.67	216.08		
216.97	218.56	216.97		
217.86	219.45	217.86		
218.75	220.34	218.75		
219.64	221.23	219.64		
220.53	222.12	220.53		
221.42	223.01	221.42		
222.31	223.90	222.31		
223.20	224.79	223.20		
224.09	225.68	224.09		
224.98	226.57	224.98		
225.87	227.46	225.87		
226.76	228.35	226.76		
227.65	229.24	227.65		
228.54	230.13	228.54		
229.43	231.02	229.43		
230.32	231.91	230.32		
231.21	232.80	231.21		
232.10	233.69	232.10		
232.99	234.58	232.99		
233.88	235.47	233.88		
234.77	236.36	234.77		
235.66	237.25	235.66		
236.55	238.14	236.55		
237.44	239.03	237.44		
238.33	239.92	238.33		
239.22	240.81	239.22		
240.11	241.70	240.11		
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241.89	243.48	241.89		
242.78	244.37	242.78		
243.67	245.26	243.67		
244.56	246.15	244.56		
245.45	247.04	245.45		
246.34	247.93	246.34		
247.23	248.82	247.23		
248.12	249.71	248.12		
249.01	250.60	249.01		
249.90	251.49	249.90		
250.79	252.38	250.79		
251.68	253.27	251.68		
252.57	254.16	252.57		
253.46	255.05	253.46		
254.35	255.94	254.35		
255.24	256.83	255.24		
256.13	257.72	256.13		
257.02	258.61	257.02		
257.91	259.50	257.91		
258.80	260.39	258.80		
259.69	261.28	259.69		
260.58	262.17	260.58		
261.47	263.06	261.47		
262.36	263.95	262.36		
263.25	264.84	263.25		
264.14	265.73	264.14		
265.03	266.62	265.03		
265.92	267.51	265.92		
266.81	268.40	266.81		
267.70	269.29	267.70		
268.59	270.18	268.59		
269.48	271.07	269.48		
270.37	271.96	270.37		
271.26	272.85	271.26		
272.15	273.74	272.15		
273.04	274.63	273.04		
273.93	275.52	273.93		
274.82	276.41	274.82		
275.71	277.30	275.71		
276.60	278.19	276.60		
277.49	279.08	277.49		
278.38	279.97	278.38		
279.27	280.86	279.27		
280.16	281.75	280.16		
281.05	282.64	281.05		
281.94	283.53	281.94		
282.83	284.42	282.83		
283.72	285.31	283.72		
284.61	286.20	284.61		
285.50	287.09	285.50		
286.39	287.98	286.39		
287.28	288.87	287.28		
288.17	289.76	288.17		
289.06	290.65	289.06		
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290.84	292.43	290.84		
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294.40	295.99	294.40		
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297.96	299.55	297.96		
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303.30	304.89	303.30		
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305.97	307.56	305.97		
306.86	308.45	306.86		
307.75	309.34	307.75		
308.64	310.23	308.64		
309.53	311.12	309.53		
310.42	312.01	310.42		
311.31	312.90	311.31		
312.20	313.79	312.20		
313.09	314.68	313.09		
313.98	315.57	313.98		
314.87	316.46	314.87		
315.76	317.35	315.76		
316.65	318.24	316.65		
317.54	319.13	317.54		
318.43	320.02	318.43		
319.32	320.91	319.32		
320.21	321.80	320.21		
321.10	322.69	321.10		
321.99	323.58	321.99		
322.88	324.47	322.88		
323.77	325.36	323.77		
324.66	326.25	324.66		
325.55	327.14	325.55		
326.44	328.03	326.44		
327.33	328.92	327.33		
328.22	329.81	328.22		
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331.78	333.37	331.78		
332.67	334.26	332.67		
333.56	335.15	333.56		
334.45	336.04	334.45		
335.34	336.93	335.34		
336.23	337.82	336.23		
337.12	338.71	337.12		
338.01	339.60	338.01		
338.90	340.49	338.90		
339.79	341.38	339.79		
340.68	342.27	340.68		
341.57	343.16	341.57		
342.46	344.05	342.46		
343.35	344.94	343.35		
344.24	345.83	344.24		
345.13	346.72	345.13		
346.02	347.61	346.02		
346.91	348.50	346.91		
347.80	349.39	347.80		
348.69	350.28	348.69		
349.58	351.17	349.58		
350.47	352.06	350.47		
351.36	352.95	351.36		
352.25	353.84	352.25		
353.14	354.73	353.14		
354.03	355.62	354.03		
354.92	356.51	354.92		
355.81	357.40	355.81		
356.70	358.29	356.70		
357.59	359.18	357.59		
358.48	360.07	358.48		
359.37	360.96	359.37		
360.26	361.85	360.26		
361.15	362.74	361.15		
362.04	363.63	362.04		
362.93	364.52	362.93		
363.82	365.41	363.82		
364.71	366.30	364.71		
365.60	367.19	365.60		
366.49	368.08	366.49		
367.38	368.97	367.38		
368.27	369.86	368.27		
369.16	370.75	369.16		
370.05	371.64	370.05		
370.94	372.53	370.94		
371.83	373.42	371.83		
372.72	374.31	372.72		
373.61	375.20	373.61		
374.50	376.09	374.50		
375.39	376.98	375.39		
376.28	377.87	376.28		
377.17	378.76	377.17		
378.06	379.65	378.06		
378.95	380.54	378.95		
379.84	381.43	379.84		
380.73	382.32	380.73		
381.62	383.21	381.62		
382.51	384.10	382.51		
383.40	384.99	383.40		
384.29	385.88	384.29		
385.18	386.77	385.18		
386.07	387.66	386.07		
386.96	388.55	386.96		
387.85	389.44	387.85		
388.74	390.33	388.74		
389.63	391.22	389.63		
390.52	392.11	390.52		
391.41	393.00	391.41		
392.30	393.89	392.30		
393.19	394.78	393.19		
394.08	395.67	394.08		
394.97	396.56	394.97		
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396.75	398.34	396.75		
397.64	399.23	397.64		
398.53	400.12	398.53		
399.42	401.01	399.42		
400.31	401.90	400.31		
401.20	402.79	401.20		
402.09	403.68	402.09		
402.98	404.57	402.98		
403.87	405.46	403.87		
404.76	406.35	404.76		
405.65	407.24	405.65		
406.54	408.13	406.54		
407.43	409.02	407.43		
408.32	409.91	408.32		
409.21	410.80	409.21		
410.10	411.69	410.10		
410.99	412.58	410.99		
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412.77	414.36	412.77		
413.66	415.25	413.66		
414.55	416.14	414.55		
415.44	417.03	415.44		
416.33	417.92	416.33		
417.22	418.81	417.22		
418.11	419.70	418.11		
419.00	420.59	419.00		
419.89	421.48	419.89		
420.78	422.37	420.78		
421.67	423.26	421.67		
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423.45	425.04	423.45		
424.34	425.93	424.34		
425.23	426.82	425.23		
426.12	427.71	426.12		
427.01	428.60	427.01		
427.90	429.49	427.90		
428.79	430.38	428.79		
429.68	431.27	429.68		
430.57	432.16	430.57		
431.46	433.05	431		



LONGITUDINAL SECTION
SCALE 1:2500H/1:500V

LONG SECTION KEY
 --- EXISTING GROUND LEVEL
 --- PROPOSED GROUND LEVEL

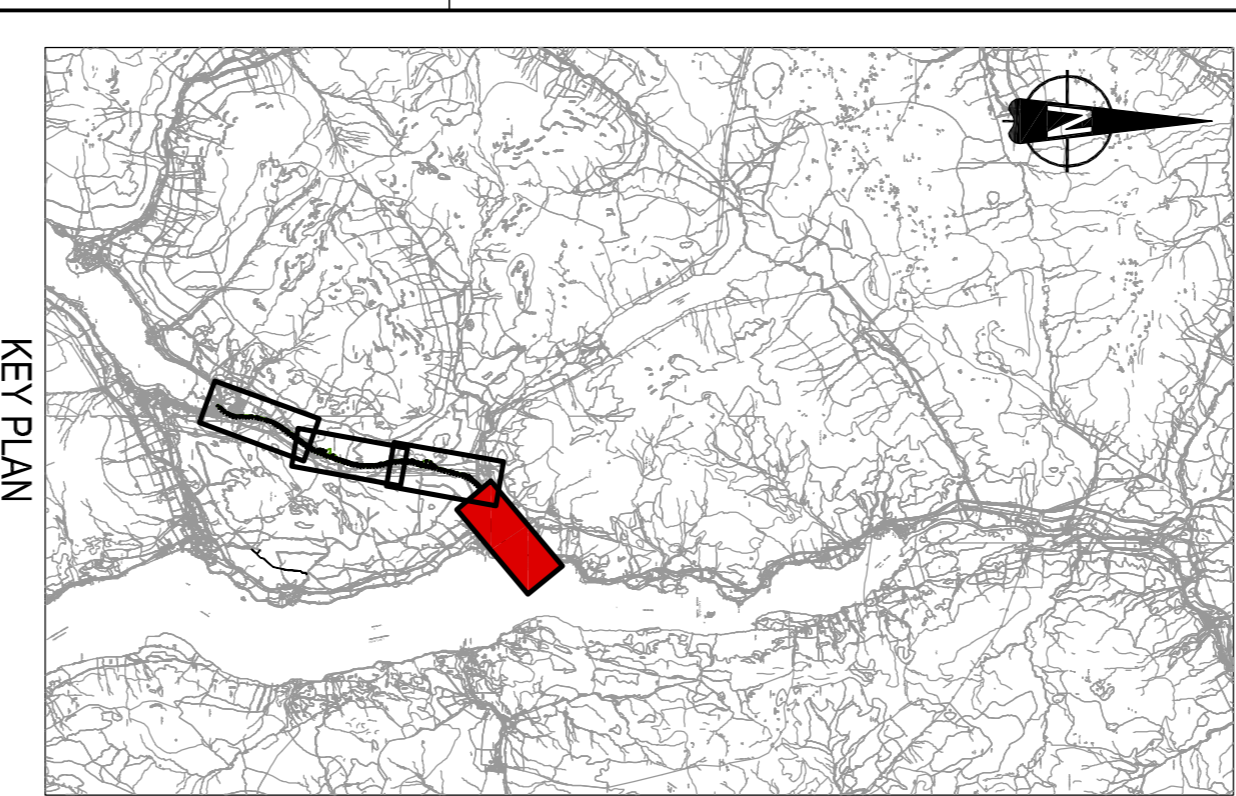
SIGNIFICANT RESIDUAL RISKS

The following list provides a cross reference between the drawing and the Designer's Health and Safety Risk Assessment, and identifies those areas of Significant Residual Risk.

Description of Risk	Risk No.
CLIENT OPERATIONS	1
ADJACENT ACTIVITIES	2
RESTRICTED SITE	3
TRAFFIC	4
INTERFACE WITH PUBLIC	5
NEAR TO HIGHWAYS	6
NEAR TO WATERWAYS	7
GROUND INSTABILITY	8
CON'TAMINATION/SOIL GAS	9
GROUND WATER	10
INUNDATION	11
SERVICES	12
OVERHEAD CABLES	13
INSECT ATTACK (INCL. MIDGE & TICKS)	14
	15

Notes

- Existing information based on surveys provided by others and OS plans.
- Alignment design, including earthworks extent, is preliminary for DMRB Stage 1 assessment purposes only. The design will be developed and refined during DMRB Stage 2.
- Preliminary earthworks design assume a 1:2 slope.
- Design speed based on 85B kph.



KEY PLAN

Rev	By	Checked	Approved	Date	Description
4.0	SM	EN	EC	17/02/11	Drawing frame amended.
3.0	MC	EN	EC	11/12/13	Drawing frame, title block and notes amended.
2.0	MC	EN	EC	20/11/13	Longitudinal sections and notes amended.
1.0	MC	EN	EC	19/11/13	Indicative vertical design elements amended.

Client
TRANSPORT SCOTLAND
 The Scottish Government

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Project
A82 TARBET TO INVERARMAN UPGRADE

Drawing
**OPTION 2
 ARROCHAR TO INVERUGLAS TO INVERARMAN
 PLAN & SECTION
 SHEET 4 OF 4**

Drawn by: MCOLLIHAN Date: 25.10.13
 Checked by: ENCOLLISON Date: 11.12.13
 Approved by: ERRAWFORD Date: 11.12.13

Drawing No. **476416-0000-203** Revision **4.0**

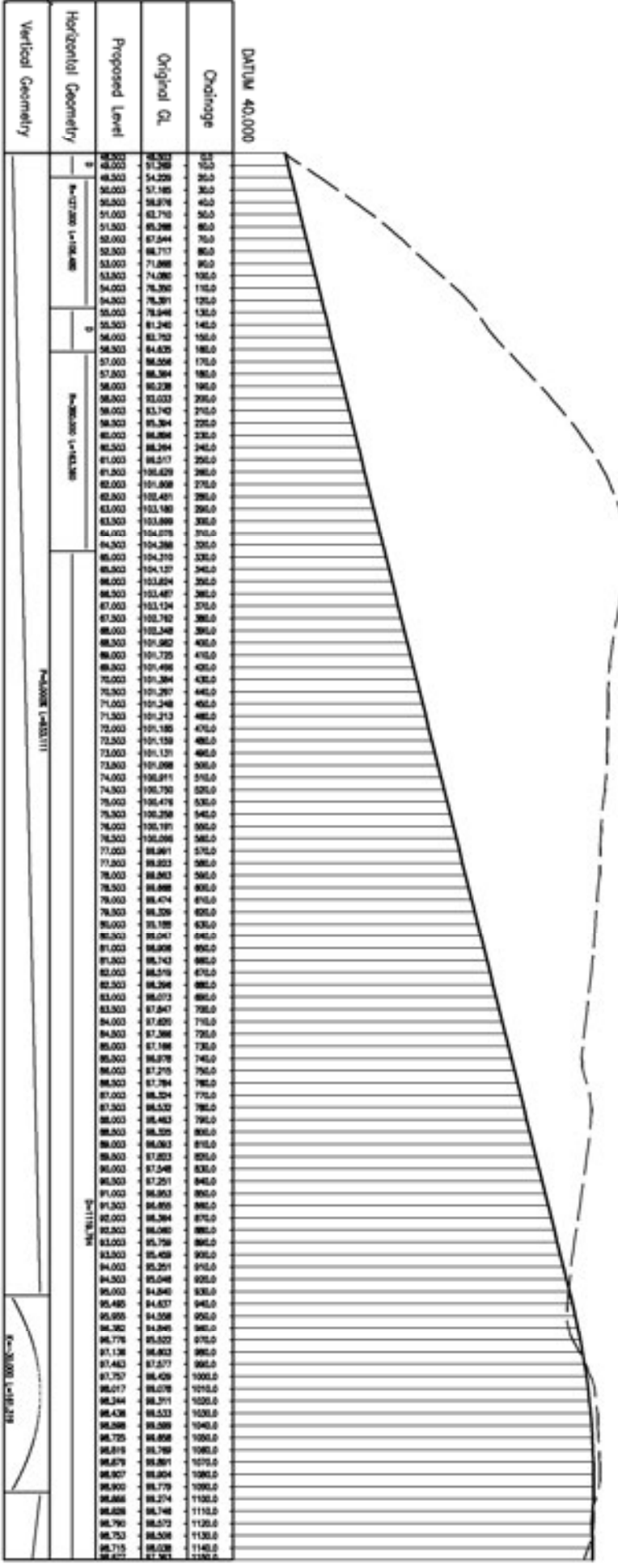
Drawing Scale: 1:2500 at A1 (1:5000 at A3) Plot Scale:
 CAD Filename: PLOT Scale:



LONG SECTION ACX

--- EXISTING GROUND LEVEL

— PROPOSED GROUND LEVEL



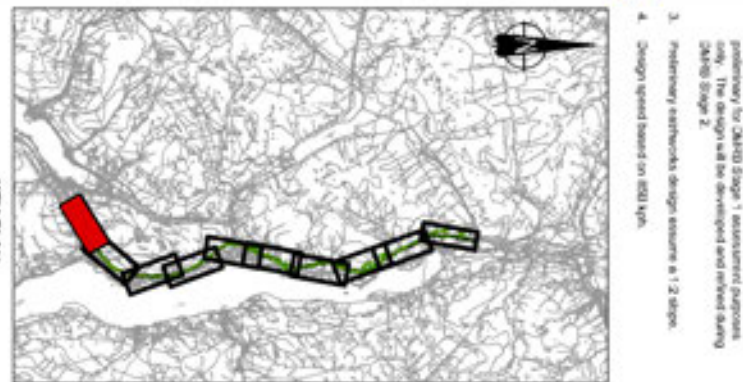
LONGITUDINAL SECTION
SCALE 1:2500H/1:500V

Prepared by: [Name] / [Title]
Checked by: [Name] / [Title]
Approved by: [Name] / [Title]
Date: [Date]

SIGNIFICANT RESIDUAL RISKS

The following table provides a summary of the significant residual risks identified during the design process. It is intended to provide a high-level overview of the risks and the measures to be taken to manage them.

Description of Risk	Risk No.
OVERSIGHT OF DESIGN	1
ADDITIONAL ACTIVITIES	2
RESTRICTED SITE	3
TRAFFIC	4
INTERFERENCE WITH EXISTING SERVICES	5
ADDITIONAL WORK	6
ADDITIONAL WORK	7
ADDITIONAL WORK	8
ADDITIONAL WORK	9
ADDITIONAL WORK	10
ADDITIONAL WORK	11
ADDITIONAL WORK	12



CH2MHILL FAIRHURST

CH2M Hill Fairhurst Ltd
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ADD TARBET TO INVERARANN UPGRADE

OPTION 3
HIGH ROAD
(TARBET TO GEAR LOCH TO INVERARANN)
SHEET 1 OF 10

Drawn by: [Name] Date: 01/11/13
Checked by: [Name] Date: 01/12/13
Approved by: [Name] Date: 01/12/13

Drawing No: **476416-0000-300** Revision: **4.0**

Drawing Scale: 1:2500 (H) / 1:500 (V) Plot Scale: [Scale]



DATUM 60,000

Change	Original	Proposed	Vertical Geometry
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3	199.11	199.11	No. 1-5.0%
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5	199.11	199.11	No. 1-5.0%
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7	199.11	199.11	No. 1-5.0%
8	199.11	199.11	
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11	199.11	199.11	No. 1-5.0%
12	199.11	199.11	
13	199.11	199.11	No. 1-5.0%
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33	199.11	199.11	No. 1-5.0%
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36	199.11	199.11	
37	199.11	199.11	No. 1-5.0%
38	199.11	199.11	
39	199.11	199.11	No. 1-5.0%
40	199.11	199.11	
41	199.11	199.11	No. 1-5.0%
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47	199.11	199.11	No. 1-5.0%
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53	199.11	199.11	No. 1-5.0%
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55	199.11	199.11	No. 1-5.0%
56	199.11	199.11	
57	199.11	199.11	No. 1-5.0%
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59	199.11	199.11	No. 1-5.0%
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61	199.11	199.11	No. 1-5.0%
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63	199.11	199.11	No. 1-5.0%
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65	199.11	199.11	No. 1-5.0%
66	199.11	199.11	
67	199.11	199.11	No. 1-5.0%
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69	199.11	199.11	No. 1-5.0%
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72	199.11	199.11	
73	199.11	199.11	No. 1-5.0%
74	199.11	199.11	
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76	199.11	199.11	
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79	199.11	199.11	No. 1-5.0%
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81	199.11	199.11	No. 1-5.0%
82	199.11	199.11	
83	199.11	199.11	No. 1-5.0%
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85	199.11	199.11	No. 1-5.0%
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87	199.11	199.11	No. 1-5.0%
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90	199.11	199.11	
91	199.11	199.11	No. 1-5.0%
92	199.11	199.11	
93	199.11	199.11	No. 1-5.0%
94	199.11	199.11	
95	199.11	199.11	No. 1-5.0%
96	199.11	199.11	
97	199.11	199.11	No. 1-5.0%
98	199.11	199.11	
99	199.11	199.11	No. 1-5.0%
100	199.11	199.11	

LONGITUDINAL SECTION
SCALE 1:2500H/1:500V

SIGNIFICANT RESIDUAL RISKS

Description of Risk	Risk No.
Clearance	1
Adjacent Structures	2
Existing Utilities	3
Tree	4
Retainage with Easement	5
Asphalt to Roadway	6
Asphalt to Roadway	7
Concrete Retention Wall	8
Concrete Retention Wall	9
Concrete Retention Wall	10
Concrete Retention Wall	11
Concrete Retention Wall	12
Concrete Retention Wall	13
Concrete Retention Wall	14
Concrete Retention Wall	15
Concrete Retention Wall	16
Concrete Retention Wall	17
Concrete Retention Wall	18
Concrete Retention Wall	19
Concrete Retention Wall	20

- ### Notes
- Existing information based on surveys provided by others and DE plans.
 - Any design, including earthworks, shall be preliminary for Design Stage 1 submission purposes only. The design will be developed and refined during Design Stage 2.
 - Any earthworks design assumes a 2% slope.
 - Design speed based on 3000 kph.



REVISIONS

No.	Date	By	Description
1.0	11/11/23	CH2M	Initial design
2.0	11/11/23	CH2M	Design based on 3000 kph
3.0	11/11/23	CH2M	Design based on 3000 kph
4.0	11/11/23	CH2M	Design based on 3000 kph

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Project: **ADD TARGET TO INVERARVAN UPGRADE**

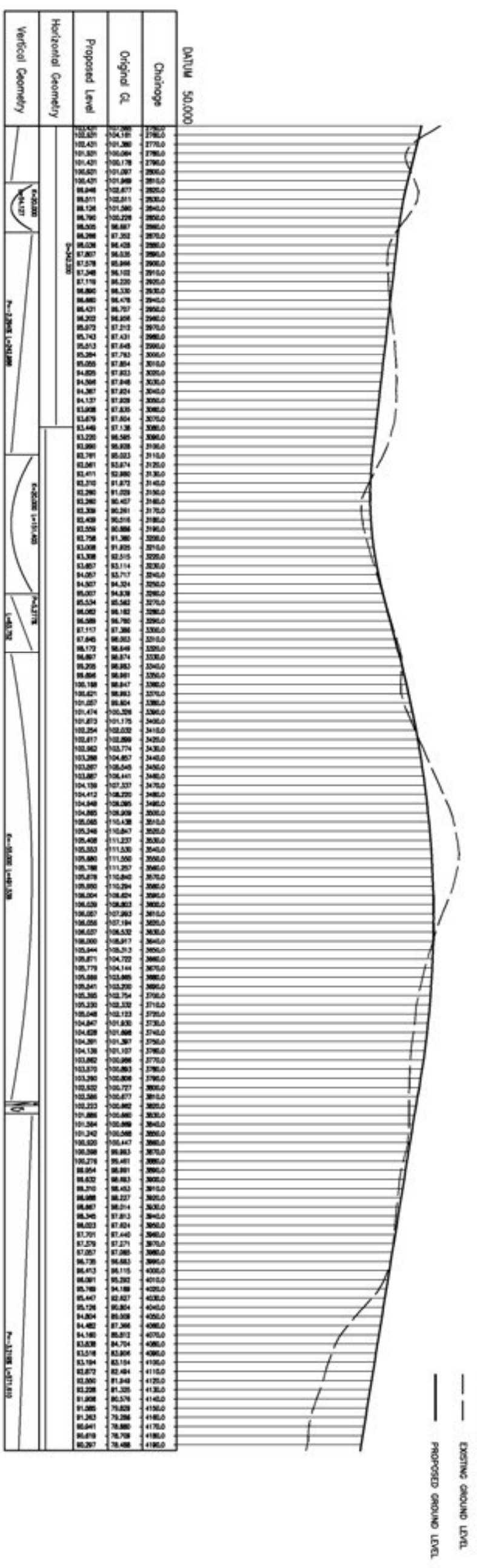
Design: **OPTION 3 HIGH ROAD (TARGET TO GEAR LOOP TO INVERARVAN) SHEET 2 OF 10**

Drawn by: 038026 Date: 01/11/23
Checked by: 038026 Date: 11/11/23
Approved by: 038026 Date: 11/11/23

Drawing No: **476416-0000-301** Revision: **4.0**

Drawing Scale: 1:2000 (PLAN) 1:500 (ELEV)
OO Reference: PO: 5088

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LONGITUDINAL SECTION
SCALE 1:2500H/1:500V

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SIGNIFICANT RESIDUAL RISKS

The following table lists any residual risks remaining after the design and construction phases of the project. It is intended to be used as a guide to the design and construction team to ensure that all risks are identified and managed.

Description of Risk	Risk No.
Climate Change	1
Construction	2
Design	3
Environmental	4
Health and Safety	5
Quality	6
Resource	7
Value	8
Other	9
Other	10
Other	11
Other	12
Other	13
Other	14
Other	15
Other	16
Other	17
Other	18
Other	19
Other	20

- Notes**
- Existing information based on surveys provided by others and O/S plans.
 - Any design, including earthworks, is preliminary for Design Stage 1 submission purposes only. The design will be developed and refined during Design Stage 2.
 - Any earthworks design assumes a 2 degree design speed based on 800 gph.



No.	Date	Author	Check	Comments
1	11/11/2012	CH2M HILL	FAIRHURST	Issue for Design Stage 1
2	11/11/2012	CH2M HILL	FAIRHURST	Issue for Design Stage 2
3	11/11/2012	CH2M HILL	FAIRHURST	Issue for Design Stage 3
4	11/11/2012	CH2M HILL	FAIRHURST	Issue for Design Stage 4
5	11/11/2012	CH2M HILL	FAIRHURST	Issue for Design Stage 5
6	11/11/2012	CH2M HILL	FAIRHURST	Issue for Design Stage 6
7	11/11/2012	CH2M HILL	FAIRHURST	Issue for Design Stage 7
8	11/11/2012	CH2M HILL	FAIRHURST	Issue for Design Stage 8
9	11/11/2012	CH2M HILL	FAIRHURST	Issue for Design Stage 9
10	11/11/2012	CH2M HILL	FAIRHURST	Issue for Design Stage 10

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ADD TARGET TO INVERARVAN UPGRADE

Option 3
HIGH ROAD
(TARGET TO GEAR LOCH TO INVERARVAN)
SHEET 3 OF 10

Drawn by: 030826 Date: 01/11/12
Checked by: 030202 Date: 11/11/12
Approved by: 030405 Date: 11/11/12

Drawing No: **476416-0000-302** Revision: **4.0**

Drawing Scale: 1:2500 (H:1:1500 V:1:10) Plot Scale: 1:2500