

Key

- Proposed Highway Extents
- Exposed Rock
- Proposed Unstrengthened Cut / Fill (26.5°)
- Proposed Strengthened Soil Cut (56°)
- Proposed Rock Cut (56°)
- Proposed Cut Slope Transition (Varies see note 9)
- Proposed Minor Earthworks (45° Max. for H < 0.5m)
- Reinforced Soil Retaining Wall (84°)
- Setting Out Point

- Notes**
- General:**
- This Drawing shall be read in conjunction with all other Drawings and the Works Specification. Refer to Specification Appendix 0/4 for a list of associated drawings and designers risk assessments.
 - All dimensions are in metres unless stated otherwise.
 - The Contractor is responsible for undertaking his own search with regard to services and for coordinating and liaising with the relevant authorities for the protection of existing services. Refer to Drawing No. 13/NW/0901/052/2700/001 for anticipated service locations.
 - The Contractor is responsible for all temporary works required to facilitate the Works.
- The Works:**
- The Works require cutting into the existing hillside on the southbound side of the A83 to facilitate the proposed road realignment scheme. The cutting shall be principally formed in rock however, soil cuttings are required above and in front of the rock cutting at the locations shown. Selected cross sections for the proposed cutting works are shown on Drawing No's. 13/NW/0901/052/GDR/102 and 103. On the westbound side only minor earthworks are typically required however, a low height retaining wall (<1.5m retained height) is to be constructed at the location shown. Details for the retaining wall are shown on Drawing No. 13/NW/0901/052/GDR/109.
 - The cut slope shall be formed at 56° to the horizontal at the locations shown. Where formed in soil the slope is to be strengthened by soil nails with a flexible facing as detailed on Drawing No's. 13/NW/0901/052/GDR/104 and 106.
 - Finished rock cut slopes shall be meshed unless otherwise instructed by the Engineer. Rock meshing details are shown on Drawing No's. 13/NW/0901/052/GDR/104 and 107. Potential rock cut stabilisation measures are shown on Drawing No. 13/NW/0901/052/GDR/108 and shall applied as instructed by the Engineer.
 - Unstrengthened soil cut slopes shall be formed at 26.5° to the horizontal at the locations shown. Details for the unstrengthened soil cutting are shown on Drawing No. 13/NW/0901/052/GDR/104.
 - Slope transitions parallel to the cutting face shall be formed over a minimum length of 5.0m unless otherwise agreed with the Engineer. The maximum slope angle shall not exceed 26.5° for unstrengthened slopes and 56° for strengthened soil or rock cut slopes.
 - The retaining wall required to the westbound side of the carriageway shall be constructed as a geo-grid reinforced soil retaining wall with a blockwork face. Details for the retaining wall are shown on Drawing No. 13/NW/0901/052/109.
 - The foreshore of Loch Fyne including the slope below the location of proposed westbound retaining wall is designated as a Site of Special Scientific Interest (SSSI). No access to this area shall be permitted by construction plant.
 - All surplus earthworks materials shall be disposed of offsite.

Do not scale this drawing

0	Jan 17	Issue for Construction	JPB	FM
Rev	Date	Purpose	Checked	

Employer

Contractor

Status: **FOR CONSTRUCTION**

Project: A83 Strone Point

Title: Earthworks General Arrangement Plan

Drawing No. 13/NW/0901/052/GDR/101

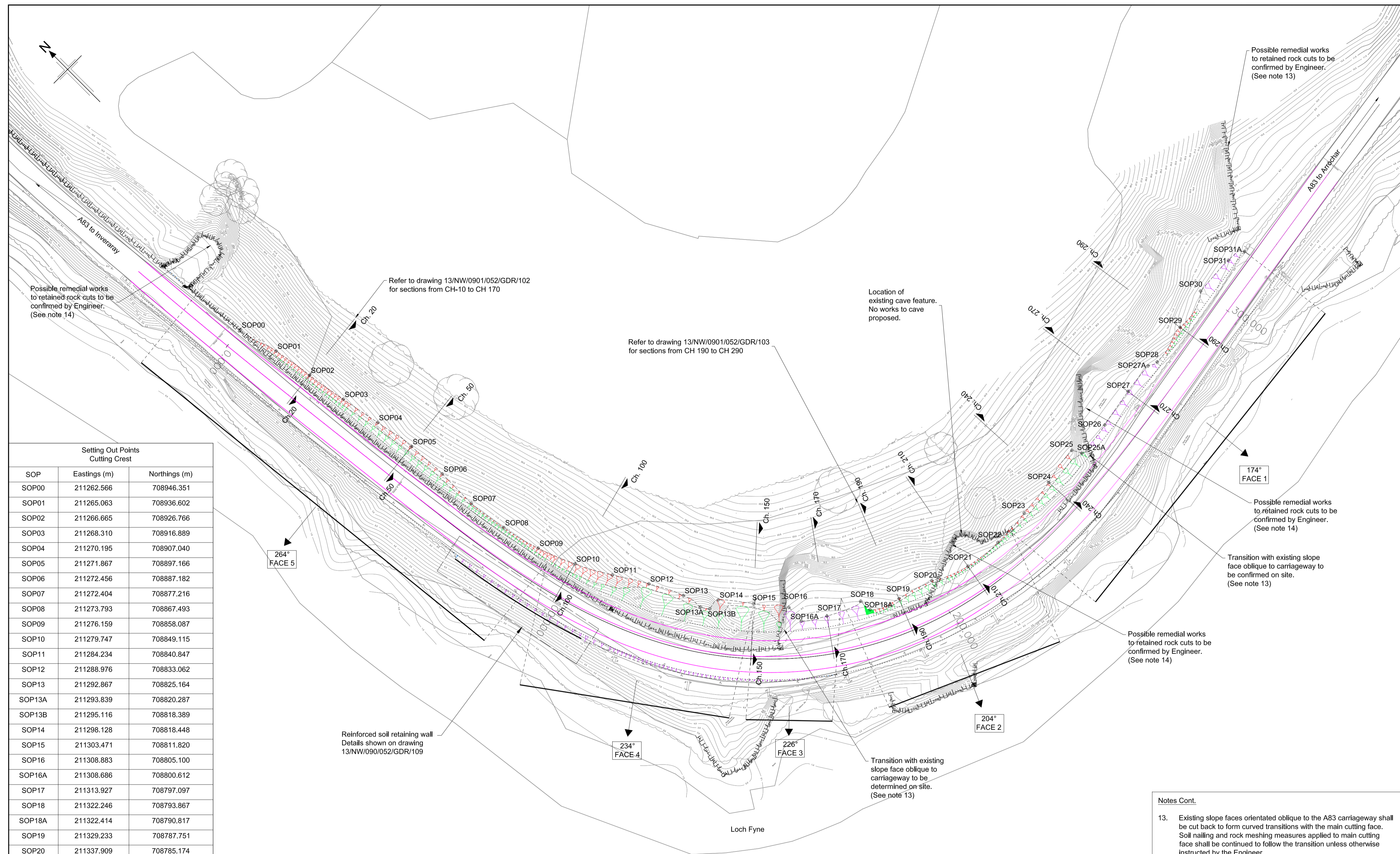
Scale: 1:500@A1

Drawn: WK, Checked: JPB, Approved: JW

Date: August 2016

Prepared for BEAR Scotland by **JACOBS**

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Setting Out Points

SOP	Eastings (m)	Northings (m)
SOP00	211262.566	708946.351
SOP01	211265.063	708936.602
SOP02	211266.665	708926.766
SOP03	211268.310	708916.889
SOP04	211270.195	708907.040
SOP05	211271.867	708897.166
SOP06	211272.456	708887.182
SOP07	211272.404	708877.216
SOP08	211273.793	708867.493
SOP09	211276.159	708858.087
SOP10	211279.747	708849.115
SOP11	211284.234	708840.847
SOP12	211288.976	708833.062
SOP13	211292.867	708825.164
SOP13A	211293.839	708820.287
SOP13B	211295.116	708818.389
SOP14	211298.128	708818.448
SOP15	211303.471	708811.820
SOP16	211308.883	708805.100
SOP16A	211308.686	708800.612
SOP17	211313.927	708797.097
SOP18	211322.246	708793.867
SOP18A	211322.414	708790.817
SOP19	211329.233	708787.751
SOP20	211337.909	708785.174
SOP21	211346.558	708781.510
SOP22	211355.785	708780.455
SOP23	211365.292	708780.983
SOP24	211374.688	708782.028
SOP25	211384.160	708783.550
SOP25A	211385.372	708781.321
SOP26	211394.104	708782.277
SOP27	211403.818	708784.029
SOP27A	211411.607	708784.995
SOP28	211413.886	708784.091
SOP29	211423.697	708786.086
SOP30	211433.405	708788.793
SOP31	211443.435	708789.316
SOP31A	211447.666	708788.096

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following:

CONSTRUCTION

- Analysis has shown the natural hillside extending above the A83 to have potentially marginal stability. The works are not considered to increase the risk of instability however the Contractor should consider the stability of the slope in determining safe methods for undertaking the works.
- Rock falls from existing rock faces.
- Risk of debris / rock falls reaching live carriageway during cutting formation.
- Risk of debris / rock falls to construction staff and plant during cutting formation.

MAINTENANCE / CLEANING

- The use of mobile elevated work platforms or specialist roped access techniques are likely to be required to undertake maintenance of the cutting slope.

DECOMMISSIONING / DEMOLITION

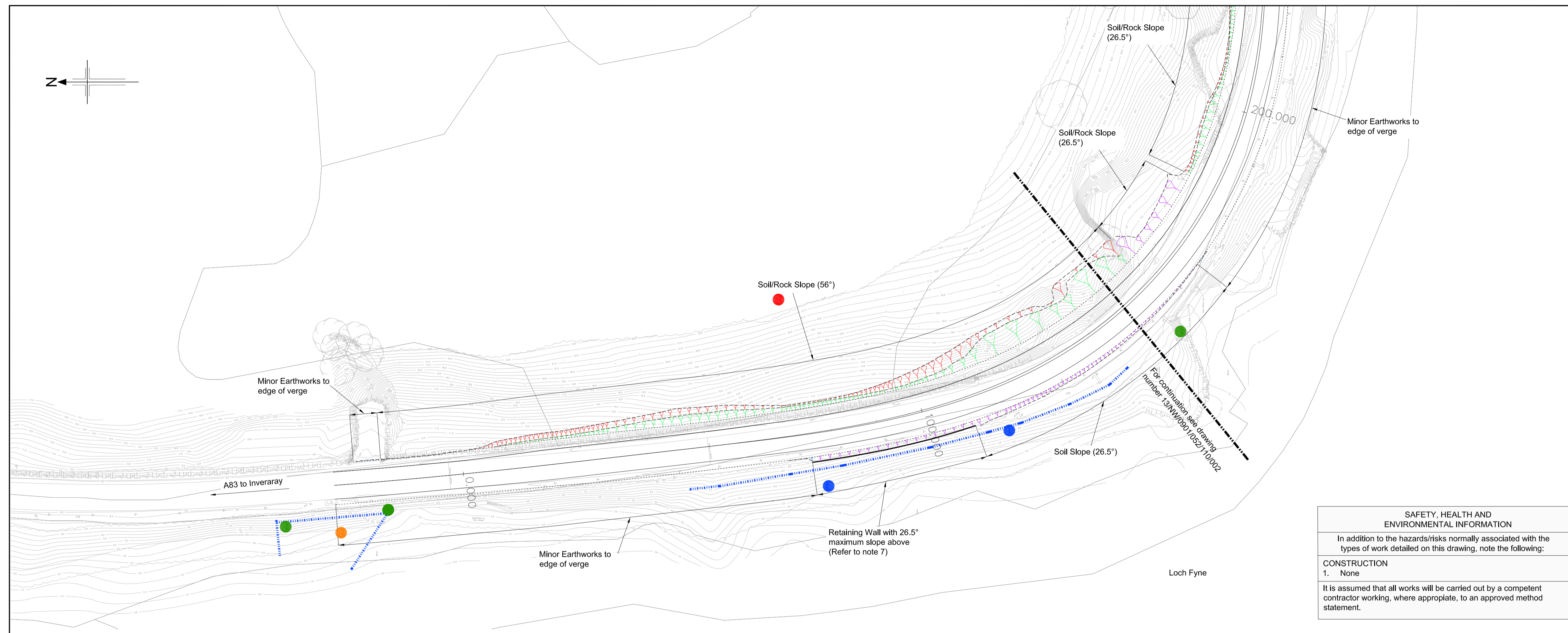
- Removal or renewal of soil nails and associated facing to sections of strengthened soil cut should consider the potential influence to stability of the cutting slope and overlying natural hillside.

It is assumed that all works will be carried out by a competent contractor working, where appropriate, to an approved method statement

- Notes Cont.**
- Existing slope faces orientated oblique to the A83 carriageway shall be cut back to form curved transitions with the main cutting face. Soil nailing and rock meshing measures applied to main cutting face shall be continued to follow the transition unless otherwise instructed by the Engineer.
 - Existing rock faces to be retained following the Works shall be inspected by the Engineer prior to proposed cutting formation to determine if any additional rock slope stabilisation measures are required. Stabilisation measures, if any, shall be as instructed by the Engineer and implemented prior to cutting formation.
 - Limited working space is available at the site due to the existing topography and the requirement for a single lane of the A83 to remain open to traffic during the Works. The geometry of the proposed cutting works is intended to allow the majority of cutting formation to be undertaken with long reach plant operating from existing carriageway level. This is intended to limit the requirement for plant to be operated on / above steep slopes.
 - The Contractor shall be responsible for developing a safe method of working using appropriate plant, equipment and working practices commensurate with the site constraints and incorporate appropriate traffic management to allow safe use of the Trunk Road during his works. The Contractors procedures shall prevent any equipment or excavated material reaching sections of live carriageway. This shall include the provision of a suitable temporary barrier between areas of active cutting formation and sections of live carriageway.
 - The Contractors method of working shall mitigate the risk of injury to construction staff from debris / rock falls during construction.
 - The Contractor shall consider the possibility of adverse weather conditions during the works when developing proposed methods of working and shall include allowance for appropriate temporary measures to protect the Works during construction.

- Notes
- Refer to drawing 13/NW/0901/052/200/001 and Specification Appendix 2/1, 2/2, 2/3 and 2/6 for site clearance details.
 - Refer to drawing 13/NW/0901/052/300/001 and 002 and Specification Appendix 3/1 for fence details.
 - Refer to drawing 13/NW/0901/052/400/001 and Specification Appendix 4/1 and 4/2 for details of road restraint systems.
 - Refer to drawing 13/NW/0901/052/500/001 to 003 and Specification Appendix 5/1 and 5/7 for drainage details.
 - Refer to drawing 13/NW/0901/052/GDR/101 to 108 and Specification Appendix 6/1, 6/2, 6/3, 6/8, and 6/10 for earthworks details.
 - Refer to drawing 13/NW/0901/052/700/001 to 003 and Specification Appendix 7/1, 7/2, 7/4, 7/6 and 7/9 for pavement details.
 - Refer to drawing 13/NW/0901/052/GDR/109 and Specification Appendix 25/2 for details of the retaining wall.
 - Refer to Specification Appendix 1/16 and 13/NW/0901/052/2700/001 and 002 for utility details.
 - Refer to drawing 13/NW/0901/052/3000/001 and Specification Appendix 30/1, 30/2 and 30/5 for landscape details.
 - All protection zones should be set up with the Ecological Clerk of Works. Refer to drawing 13/NW/0901/052/3000/002 and Specification Appendix 2/6 and 30/12 for ecological site clearance restrictions and special ecological measures.

- Key:
- Unstrengthened Cut/Fill (26.5°)
 - Strengthened Soil Cut (56°)
 - Rock Cut (56°)
 - Cut Slope Transition (varies)
 - Minor Earthworks (45° Max. for H < 0.5m)
 - Otter Holt
 - Otter Couch
 - Protection Zone
 - Tree with potential bat roosts that cannot be climbed
 - Tree bat roosts

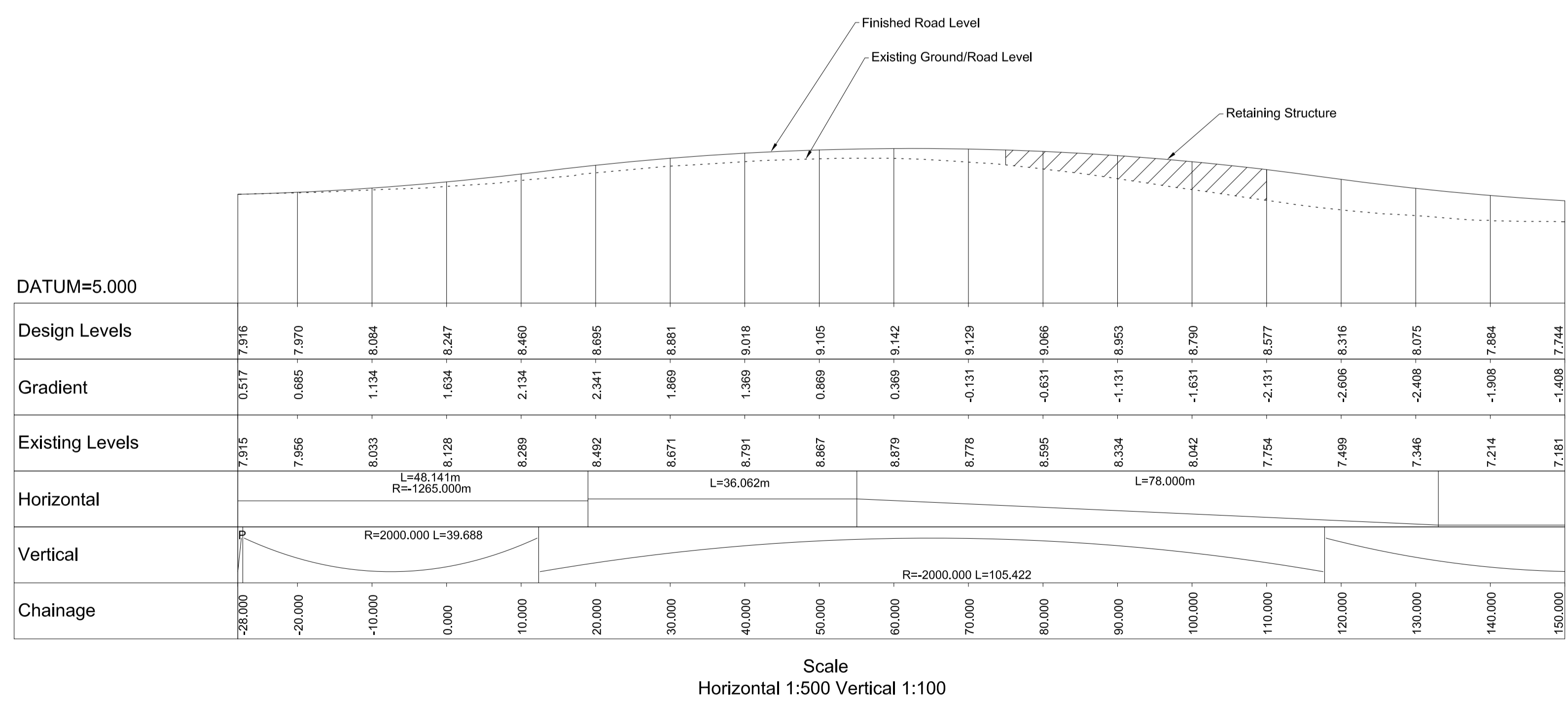


SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION
In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following:

CONSTRUCTION
1. None

It is assumed that all works will be carried out by a competent contractor working, where appropriate, to an approved method statement.

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Scale
Horizontal 1:500 Vertical 1:100

Do not scale this drawing

Rev	Date	Description	Checked
0	Jan 17	Issue for Construction	GI

Client:

Status: **FOR CONSTRUCTION**

Project: **A83 STONE POINT IMPROVEMENT SCHEME**

Title: **DETAILED DESIGN PLAN AND PROFILE SHEET 1 OF 2**

Drawing No.	13/NW/0901/052/110/001	SA	SA		
Scale	1:500 @ A1	Date	02/09/2016		
Designed AR	Drawn SA	Checked GI	Approved JW		