



Plan View CH0 - CH170  
(Scale 1:250)

Plan View CH170 - CH330  
(Scale 1:250)

Plan View CH330 - CH365  
(Scale 1:250)

- NOTES:**
- All dimensions mm UNO
  - All elevations mOD UNO
  - Do not scale, use figured dimensions only
  - Drawing based on Survey Operations Topographical Survey of Land at Bradley Mills Road, Huddersfield - 200036/001 - dated Apr 20
- KEY:**
- Existing Road / Footway Extents
  - Existing Road Centreline
  - Top of Lower Slope
  - Existing Dry Stone Walls
  - Proposed Road / Footway Extents
  - Proposed Road Centreline
  - Crest of Proposed Soil Nail Slope
  - Residual Risk / Risk Reference

- CDM - Statement of Residual Risks**
- Careful consideration must be taken of the services beneath Bradley Mills Road during construction. Details of services beneath the slope have not been provided and must be checked by others prior to construction.
  - The soil nail slope will need to be set out very carefully and excavation carefully controlled +/- 2.5' and +/- 50mm from the design excavation line. The accurate trimming of the final cut slope is very important to achieve a uniform finish on the face and ensure the facing mesh fully supports the soil. An experienced operator and/or computer controlled excavator is recommended. Nail position +/- 100mm and installation angle +/- 5'.
  - The critical stage for construction will be the temporary stability of the slope prior to installation of soil nails and facing mesh. The slope excavation must be undertaken in stages / benches with installation & meshing of each soil nail row in a top down sequence. It is recommended that the slope is inspected daily for signs of instability. The slope may be excavated to full height in a single cut but the excavation should not proceed longitudinally beyond a length that can be nailed and faced in one shift.
  - The stability of the cut face in the temporary condition will be affected by the geology. Clay soils are likely to set undrained and will stand for a short period whilst sandy soils may not be stable in the short term at the design face angle unless they contain some clay/silt. It is recommended that several face stability excavations are made during bulk excavation in front of the wall, which should lead to an assessment of the short term stand-up time. Moreover, groundwater will have a major impact on face stability and will need to be proactively managed (if encountered).
  - Based on the above, the sequencing of the works is critical. The slope may be excavated to full height in a single cut but the excavation should not proceed longitudinally beyond a length that can be nailed and faced in one shift. The facing and head plates should be installed right to the face as soon as possible after soil nail installation and before excavation to the next level commences.
  - Do not cut slopes under extreme weather conditions. Additional temporary slope protection may be required during inclement weather. It is recommended that sheeting is available on site to protect the slope when heavy or prolonged wet weather is forecast.
  - The facing products should be installed in accordance with Maccaferri installation guides and as detailed in sections 6.4 and 7.6 of this design report.
  - The limited GI does not investigate the ground beneath the slope, which has been assumed to be weathered bedrock. This must be confirmed by a competent individual before or during the start of construction. Should different ground conditions be evident the designer should be informed, and the design reviewed.
  - If groundwater is met during excavation of the slope, it should be carefully intercepted, collected and diverted to suitable outfall using a designed drainage detail. A crest drain may be necessary if significant overland water is observed.
  - These soil nails will be installed using self-drilling techniques with a grout flush to maintain bore stability and return the drill spoil.
  - Trees are present on the upper slopes and some nearest the soil nail slope may need to be removed (by others). Soil nails may encounter tree roots, which could be difficult to drill but should not overly damage the retained trees.
  - Soil nails will be provided with spacers at regular intervals to provide the minimum grout cover of 20mm. In practice, the bar can be centralised ensuring it is positioned centrally at the mouth of the bore since it is also central within the sacrificial drill bit at the distal end.
  - The grout level in the bore should be monitored and topped up as necessary. Since the fluid grout will settle to a horizontal plane, the remaining void should be filled with a stiff mortar flush with the final slope face.
  - Majority of works can be undertaken from existing road level. In the event that works at the crest of the cut slope are required then suitable access arrangements should be made - e.g. MEWP.
  - The soil nail slope is a passive ground engineering solution which requires some minor ground movement to develop the internal restraining forces within the nails. In addition, the facing is not fully rigid and may 'bulge' slightly in the long term between soil nail face plates.
  - A 0.5m excavation allowance below final pavement level has been included within the design. Should this allowance be exceeded during construction the designer must be informed immediately.

REV.	AMENDMENTS	DRAWN/CHECK	DATE
P04	Updated in accordance with comments	ML	WF 24/02/22
P03	Updated in accordance with comments	ML	WF 21/01/22
P02	Updated with new facing detail	WF	JM 28/04/21
P01	Updated in accordance with additional survey	BS	WF 01/07/20

**OS SHEET REF: OSREF**  
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**BRADLEY MILLS ROAD, RAWTHORPE, HUDDERSFIELD**  
**EXISTING & PROPOSED ROAD LAYOUT DRAWING**

DRAWING STATUS:		DRAWN BY:		SCALE:	
COMMENT	INITIALS	DATE	AutocAD BY	1:250	ORIGINAL SHEET SIZE
	BS	08/06/20			
	INITIALS	DATE	CHECKED BY	A1	
	BS	08/06/20			
INITIALS	DATE	WF	08/06/20		



DRAWING NUMBER:		DATE:
446370/BEL1451/BMR/XX/XX/C/D/001		JUNE 2020