

Scheme Number: TR010059

7.33.1 Applicant's Written Summary of Oral Submissions to Hearings - Appendix A Technical Note - Proposed Amendments to Earthworks

Rule 8(1)(c)

Infrastructure Planning (Examination Procedure) Rules 2010

Planning Act 2008



Infrastructure Planning

Planning Act 2008

The Infrastructure Planning (Examination Procedure) Rules 2010

The A1 in Northumberland: Morpeth to Ellingham

Development Consent Order 20[xx]

Appendix A Technical Note - Proposed Amendments to Earthworks

Rule Reference:	8(1)(c)
Planning Inspectorate Scheme	TR010059
Reference:	
Document Reference:	7.33.1
Author:	A1 in Northumberland: Morpeth to Ellingham
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Version Date		Status of Version		
Rev 0	June 2021	Deadline 10		



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1 PROPOSED AMENDMENTS TO EARTHWORKS

1.1 INTRODUCTION

1.1.1. This technical note has been prepared in response to a request from the Examining Authority (ExA) at Issue Specific Hearing 5 (Tuesday 15 June 2021) for the Applicant to provide information regarding the number and relative height of bunds proposed as part of the Earthworks Amendments described in Environmental Statement Addendum: Earthworks Amendments for Change Request [REP4-061]. This technical note is supported with two figures indicating the locations of the previously proposed soil storage areas, essential and desirable bunds for Parts A – Figure 1 Proposed Earthworks Comparison Part B. These are provided alongside the proposed modifications to the previously proposed bunds, and additional bunds identified in Environmental Statement Addendum: Earthworks Amendments for Change Request [REP4-061].

1.2 TEMPORARY BUNDS

- 1.2.1. The previously proposed temporary soil storage area locations for Part A (12no.) and Part B (7no.), are indicated on Environmental Statement Figure 2.5 Temporary Construction Works Part A [APP-070], and for Part B Environmental Statement Figure 2.6 Temporary Construction Works Part B [APP-071], and will not exceed 2m in height as set out in measure S-L7 of the Outline Construction Environmental Management Plan [REP9-016 and 017] (and as updated at Deadline 10).
- 1.2.2. An additional 6no. temporary soil storage bunds for Part A and 3no. for Part B, as indicated in **Appendix A of Environmental Statement Addendum: Earthworks Amendments** [REP4-061], are proposed at the following locations:

Part A

- Additional soil storage areas within the temporary land take required for the re-routing of the gas pipeline at Causey Park Bridge (M2F CH171 NB NGA 1 - M2F CH174 SB NGA 4).
- Additional soil storage area west of West Moor Junction (M2F CH217 SB TPS 11), within the adjacent arable field, and an extension to temporary top soil storage area location 10.
- Additional soil storage area east of West Moor Junction (M2F CH215 NB TPS 15), within the adjacent arable field, and an extension to temporary top soil storage area location 11.

Part B

- Additional soil storage areas, alongside the existing A1 (A2E CH541 SB TPS 9).
- Additional soil storage areas, adjacent to the Heckley Fence overbridge (A2E CH553 NB TPS 5).
- Additional soil storage areas, south of the Charlton Mires junction (A2E CH583 NB TPS 2).



1.2.3. These additional temporary bunds would also be subject to the height restriction in measure S-L7 of the Outline Construction Environmental Management Plan [REP9-016 and 017] (and as updated at Deadline 10). These are temporary measures and have been assessed appropriately under the construction effects and would not form permanent features of the landscape. The conclusion of the assessment of landscape and visual effects (refer to Environmental Statement Addendum: Earthworks Amendments for Change Request [REP4-061]) states that should these additional soil bunds locations be used for the purpose of constructing the Scheme, no additional significant effects would arise.

1.3 PERMANENT BUNDS

- 1.3.1. Table 1-1 Permanent Bunds and Modifications to Height below, lists and describes the five new permanent bunds proposed as part of the Earthworks Amendments and also the 14no. bunds previously proposed along Part A (as part of the Scheme as assessed in Chapter 7: Landscape and Visual Part A of the ES [APP-044] of the ES) where an amendment to the height or length is proposed as part of the Earthworks Amendments. The ExA should note that bunds were not proposed as part of the original mitigation strategy for Part B and therefore all four bunds within Part B are considered new features of the Scheme.
- The five new bunds are proposed at locations along Part A (1no.) and Part B (4no.) and are 1.3.2. considered as being appropriate for the disposal of excess site won material, whilst not significantly impacting on the landscape setting and visual amenity. Four of these new bunds are proposed at locations along Part B where woodland planting is proposed, as indicated on Landscape Mitigation Plan Part B [REP8-010], resulting in a slight improvement in visual effects during operation (in comparison with the Scheme as assessed in the ES) due to the additional visual screening provided by the proposed bunds, and additional height achieved by woodland during its early establishment. The remaining permanent bund (M2F-CH126-NB-NBD-15) is proposed to the northbound side of the A1 between ch12600 and ch13300 of Part A of the Scheme. Grass seeding is proposed along the length of this bund, with a hedgerow and individual trees to the toe of the bund as indicated on Landscape Mitigation Masterplan Part A [REP8a-003], resulting in a slight improvement in visual effects during operation (in comparison with the Scheme as assessed in the ES) due to the additional visual screening provided by the proposed bund. Nevertheless, the conclusion of the Environmental Statement Addendum: Earthworks Amendments for Change Request [REP4-061] was that the significance of effect would be unchanged in relation to landscape character and visual effects.
- 1.3.3. The 14 bunds previously proposed along Part A (where an amendment to the height or length is proposed as part of the Earthworks Amendments) are also considered as being appropriate for the disposal of excess site won material, whilst not significantly impacting on the landscape setting and visual amenity. The additional visual screening provided by the increase in height or length of 12 of these bunds would result in a slight improvement in



visual effects during operation (in comparison with the Scheme as assessed in the ES) at 15 of the 28 residential receptors detailed in Table 5-2 within section 5 of Environmental Statement Addendum: Earthworks Amendments for Change Request [REP4-061]. The visual screening function of these 11 bunds would improve further following the establishment of proposed woodland planting as indicated on Landscape Mitigation Masterplan Part A [REP8a-003]. Nevertheless, the conclusion of the Environmental Statement Addendum: Earthworks Amendments for Change Request [REP4-061] was that the significance of effect would be unchanged in relation to landscape character and visual effects.

- 1.3.4. The proposed increase in height of proposed Bunds 3 (M2F-CH122-SB-EBD-3) and 6 (M2F-CH141-NB-EBD-6) would result in minor additional visual impacts at receptors R93 (Strafford House) and Jackson GK and Sons garage (commercial receptor). At both receptor locations, the visual prominence of these bunds would however reduce following the establishment of proposed woodland planting as indicated on Landscape Mitigation Masterplan Part A [REP8a-003]. Nevertheless, the conclusion of the Environmental Statement Addendum: Earthworks Amendments for Change Request [REP4-061] was that the significance of effect would be unchanged in relation to landscape character and visual effects.
- 1.3.5. The proposed amended or additional permanent soil bunds for Part A and Part B would have a maximum gradient of 1:4, and would not exceed 4 m in height, as set out in Paragraph 2.4.6 of the Environmental Statement Addendum: Earthworks Amendments for Change Request [REP4-061]. This reflects the assumptions made in paragraph 7.5.1 (j) of Chapter 7: Landscape and visual Part A of the ES [APP-044].



Table 1-1 - Permanent Bunds and Modifications to Height

Earthworks Opportunities Unique ID	Bund Number (as shown on Landscape Mitigation Masterplan Part A – Rev 5) [REP8a-003]	Environmental Function	Proposed height above ground level in Earthworks Amendments for Change Request [REP4-061]	Was bund previously proposed as part of the Scheme assessed in the ES?	In line with Assessment Parameters 4 or 5 (Part A only - as set out in Chapter 2: The Scheme of the ES [APP-037])	Difference in height/length in comparison with the Scheme as assessed in the ES
Part A – Morpeth	to Felton					
M2F-CH120-NB- EBD-1	1	Visual Screening	Maximum height 4m	Yes	No	2m higher
M2F-CH121-NB- EBD-2	2	Visual Screening	Maximum height 4m	Yes	No	2m higher
M2F-CH122-SB- EBD-3	3	Non-essential mitigation	Maximum height 4m	Yes	No -increase in height (greater than 2m) an addition to parameter 5	2m higher
M2F-CH126-NB- NBD-15	N/A (new bund)	Disposal of excess material	Maximum height 2m	No	No	N/A (new bund)
M2F-CH135-NB- EBD-4	4	Visual Screening	Maximum height 4m	Yes	No - increase in height (greater than	2m higher





Earthworks Opportunities Unique ID	Bund Number (as shown on Landscape Mitigation Masterplan Part A – Rev 5) [REP8a-003]	Environmental Function	Proposed height above ground level in Earthworks Amendments for Change Request [REP4-061]	Was bund previously proposed as part of the Scheme assessed in the ES?	In line with Assessment Parameters 4 or 5 (Part A only - as set out in Chapter 2: The Scheme of the ES [APP-037])	Difference in height/length in comparison with the Scheme as assessed in the ES
					2m) an addition to parameter 5	
M2F-CH136-NB- EBD-5	5	Landscape Integration	Maximum height 4m	Yes	No - increase in height (greater than 2m) an addition to parameter 5	2m higher
M2F-CH141-NB- EBD-6	6	Landscape Integration	Maximum height 4m	Yes	No - increase in height (greater than 2m) an addition to parameter 5	2m higher
M2F-CH148-NB- EBD-7	7	Landscape Integration, Visual Screening	Maximum height 4m	Yes	No	2m higher and proposed extension to overall footprint of bund within order limits
M2F-CH149-NB- EBD-8	8	Visual Screening,	Maximum height 4m	Yes	No	2m higher and proposed extension to overall footprint of bund within order limits





Earthworks Opportunities Unique ID	Bund Number (as shown on Landscape Mitigation Masterplan Part A – Rev 5) [REP8a-003]	Environmental Function	Proposed height above ground level in Earthworks Amendments for Change Request [REP4-061]	Was bund previously proposed as part of the Scheme assessed in the ES?	In line with Assessment Parameters 4 or 5 (Part A only - as set out in Chapter 2: The Scheme of the ES [APP-037])	Difference in height/length in comparison with the Scheme as assessed in the ES
M2F-CH150-SB- EBD-9	9	Visual Screening	Maximum height 4m	Yes	No	2m higher and proposed extension to overall footprint of bund within order limits
M2F-CH159-SB- EBD-10	10	Visual Screening, Nature Conservation & Biodiversity, Auditory Amenity	Maximum height 4m	Yes	Yes	No increase in height; proposed extension to overall footprint of bund within order limits
M2F-CH160-NB- EBD-13	13	Landscape Integration, Nature Conservation & Biodiversity, Native Species Hedgerows	Maximum height 4m	Yes	No	2m higher and proposed extension to overall footprint of bund within order limits





Earthworks Opportunities Unique ID	Bund Number (as shown on Landscape Mitigation Masterplan Part A – Rev 5) [REP8a-003]	Environmental Function	Proposed height above ground level in Earthworks Amendments for Change Request [REP4-061]	Was bund previously proposed as part of the Scheme assessed in the ES?	In line with Assessment Parameters 4 or 5 (Part A only - as set out in Chapter 2: The Scheme of the ES [APP-037])	Difference in height/length in comparison with the Scheme as assessed in the ES
M2F-CH166-SB- EBD-11	11	Visual Screening, Landscape Integration, Nature Conservation & Biodiversity	Maximum height 4m	Yes	No	1m higher and proposed extension to overall footprint of bund within order limits
M2F-CH167-NB- EBD-12	12	Visual Screening, Nature Conservation & Biodiversity	Maximum height 4m	Yes	No	2m higher and proposed extension to overall footprint of bund within order limits
M2F-CH213-SB- EBD-14	14	Grass bund	Maximum height 2m	Yes	Yes – parameter 5	No increase in height; proposed extension to length of bund of a maximum 10m to tie into nosing of West Moor junction



Earthworks Opportunities Unique ID	Bund Number (as shown on Landscape Mitigation Masterplan Part A – Rev 5) [REP8a-003]	Environmental Function	Proposed height above ground level in Earthworks Amendments for Change Request [REP4-061]	Was bund previously proposed as part of the Scheme assessed in the ES?	In line with Assessment Parameters 4 or 5 (Part A only - as set out in Chapter 2: The Scheme of the ES [APP-037])	Difference in height/length in comparison with the Scheme as assessed in the ES
Part B – Alnwick	to Ellingham	-				
A2E-CH550-NB- NBD-3	N/A (new bund)	Disposal of material but will have a slight improvement in relation to visual screening and landscape integration	Maximum height 3m	No	No	N/A
A2E-CH554-NB- NBD-4	N/A (new bund)	Disposal of material but will have a slight improvement in relation to visual screening and landscape integration	Maximum height 3m	No	No	N/A





Earthworks Opportunities Unique ID	Bund Number (as shown on Landscape Mitigation Masterplan Part A – Rev 5) [REP8a-003]	Environmental Function	Proposed height above ground level in Earthworks Amendments for Change Request [REP4-061]	Was bund previously proposed as part of the Scheme assessed in the ES?	In line with Assessment Parameters 4 or 5 (Part A only - as set out in Chapter 2: The Scheme of the ES [APP-037])	Difference in height/length in comparison with the Scheme as assessed in the ES
A2E-CH583-NB- NBD-2	N/A (new bund)	Disposal of material but will have a slight improvement in relation to visual screening and landscape integration	Maximum height 3m	No	No	N/A
A2E-CH591-SB- NBD-1	N/A (new bund)	Disposal of material but will have a slight improvement in relation to landscape integration	Maximum height 3m	No	No	N/A



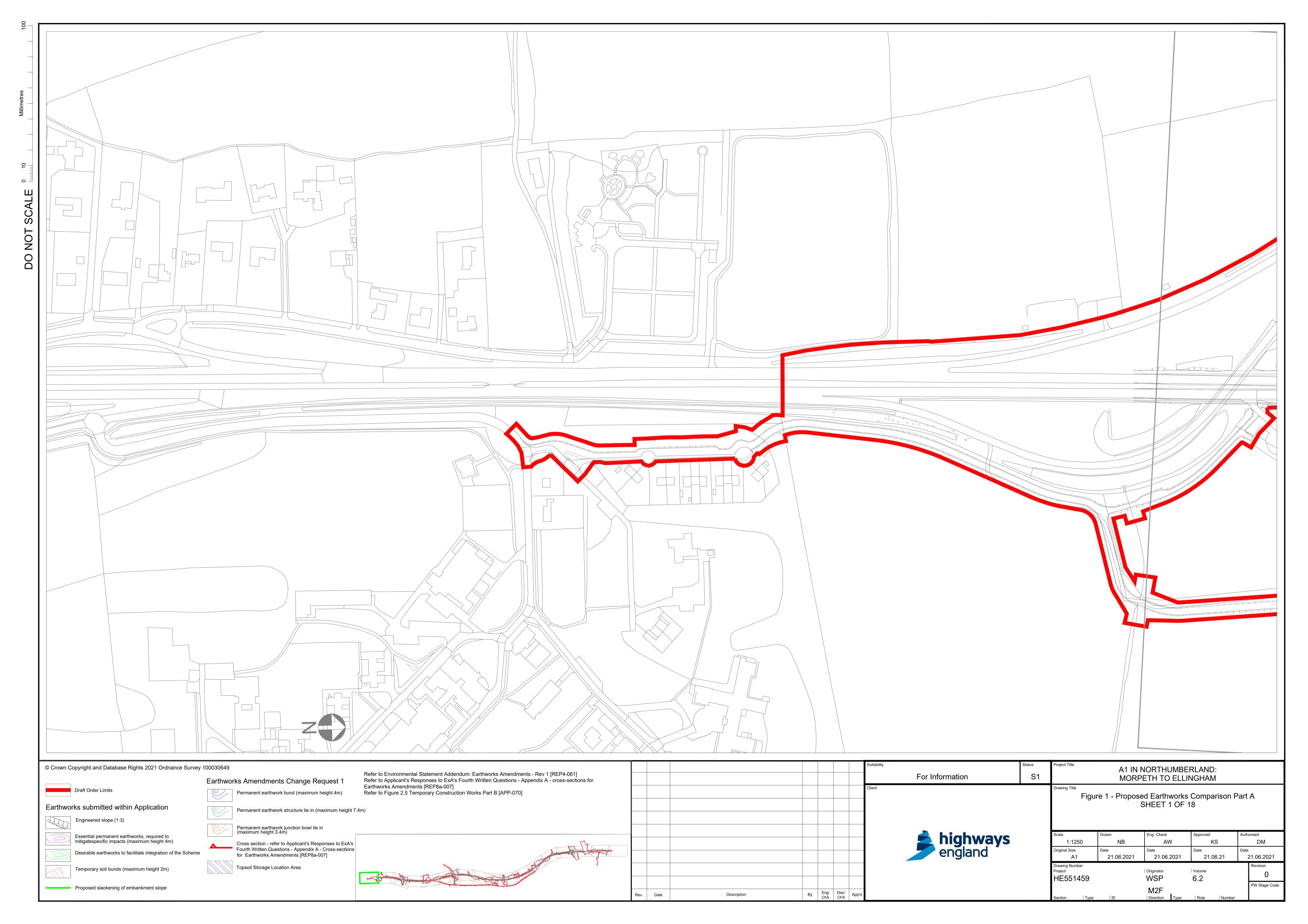
1.4 AMENDMENTS TO EARTHWORKS

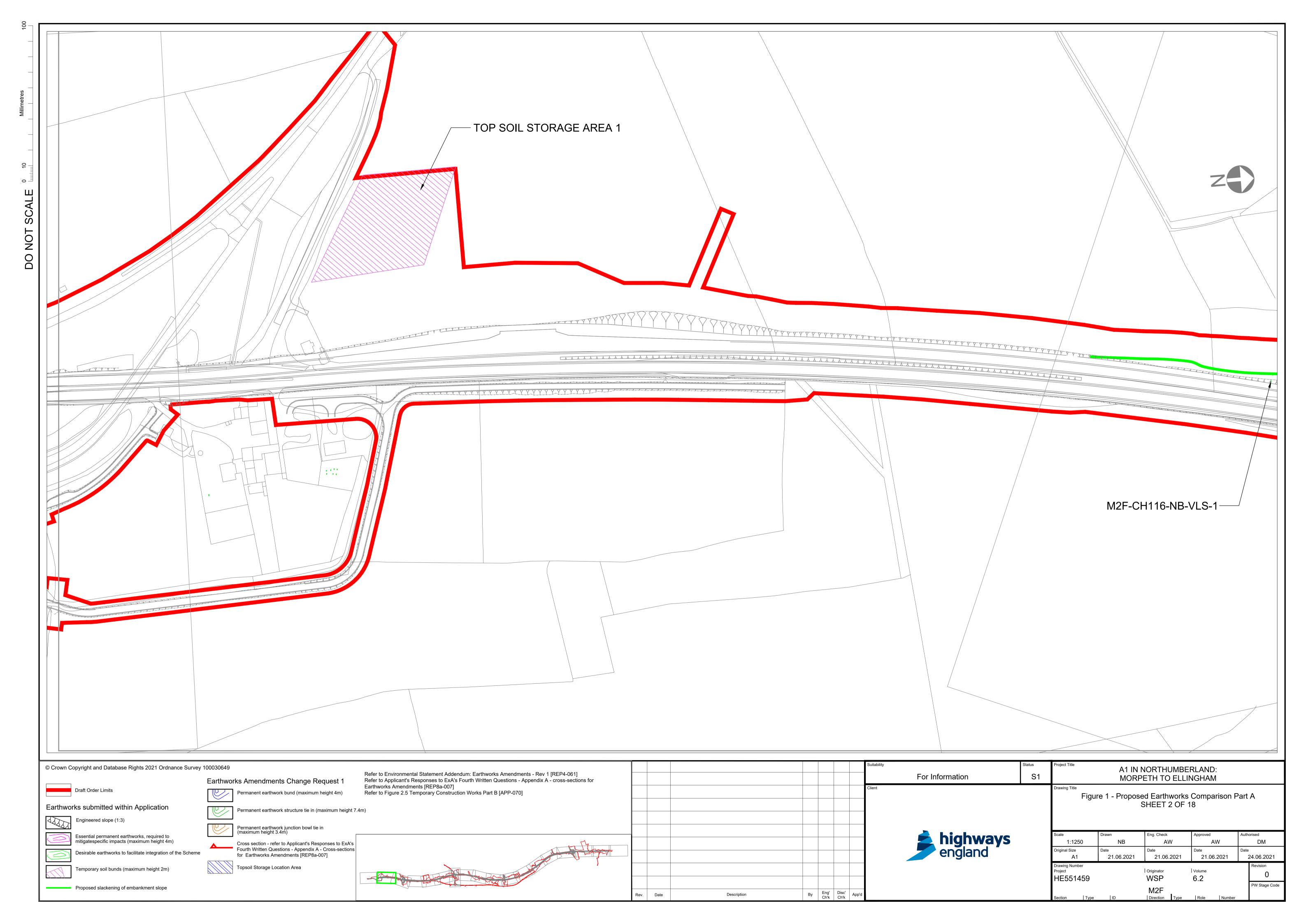
- 1.4.1. In addition to specific earth mounding or bunds, the design of the Scheme includes earthworks that tie into structures, support the main alignment or tie into existing landform. At several locations, the Applicant has proposed to modify the design, as proposed in the General Arrangement Plans [REP8a-002], seeking to dispose of material through reprofiling of slopes (slackening) to reduce the steepness of the slope or lift the landform within junction bowls, both of these having the effect of improving the integration of the design with the wider landscape.
- 1.4.2. The proposed maximum height of the proposed slackened slopes adjacent and supporting the approaches to proposed structures for Part A (11no.) would 7.4m above the road level of an adjacent access track and ties into the approach to the bridge crossing at Highlaws Junction (ch12200 to 12280), and would not result in an increase in the overall height of the earthworks over that assessed in **Chapter 7: Landscape and Visual Part A** of the ES [APP-044]. The earthwork extends to the south where it is 4m above the adjoining proposed ground level as it ties into the existing road network. This is demonstrated in earthwork opportunities unique ID M2F-CH122-SB-SEB-1 (Appendix A of **Environmental Statement Addendum: Earthworks Amendments for Change Request** [REP4-061]) and explained in Earthworks Opportunities Section M2F-CH122-SB-SEB-1 in **Applicant's Responses to ExA's Fourth Written Questions** [REP8a-007]). The proposed slackening of slopes at 10 locations adjacent and supporting the approaches to proposed structures for Part A would re-use excess site won material, having the added impact of improving the landscape integration of the Scheme, as permanent landscape features.
- 1.4.3. The proposed maximum height of the proposed infilled junction bowls for Part A (4no.) would be 3.5m above the road level of the adjacent A1 northbound carriageway and 3m above the adjoining proposed ground level. This is demonstrated in earthwork opportunities unique ID M2F-CH216-NB-SBF-1 (Appendix A of Environmental Statement Addendum: Earthworks Amendments for Change Request [REP4-061]) and explained in Earthworks Opportunities Section M2F-CH216-NB-SBF-1 in Applicant's Responses to ExA's Fourth Written Questions Appendix A Cross-sections for Earthworks Amendments [REP8a-007]). This proposed structure bowl fill would not however increase the overall height of the junction. The proposed infilling of junction bowls for Part A would re-use excess site won material, having the added impact of improving integration with the existing landform as permanent landscape features.
- 1.4.4. The proposed maximum height of the proposed slackened slope adjacent and supporting the embankment slopes to the main alignment (i.e. earthworks associated with the Heckley Fence overbridge) in Part B would be 0m above the road level of the adjacent A1 northbound carriageway where embankment slopes are extended, and 7.3m above the adjoining proposed ground level as it ties into the Heckley Fence overbridge (earthwork opportunities unique ID A2E-CH554-NB-NBD-4 (Appendix A of Environmental Statement Addendum: Earthworks Amendments for Change Request [REP4-061]) as shown in

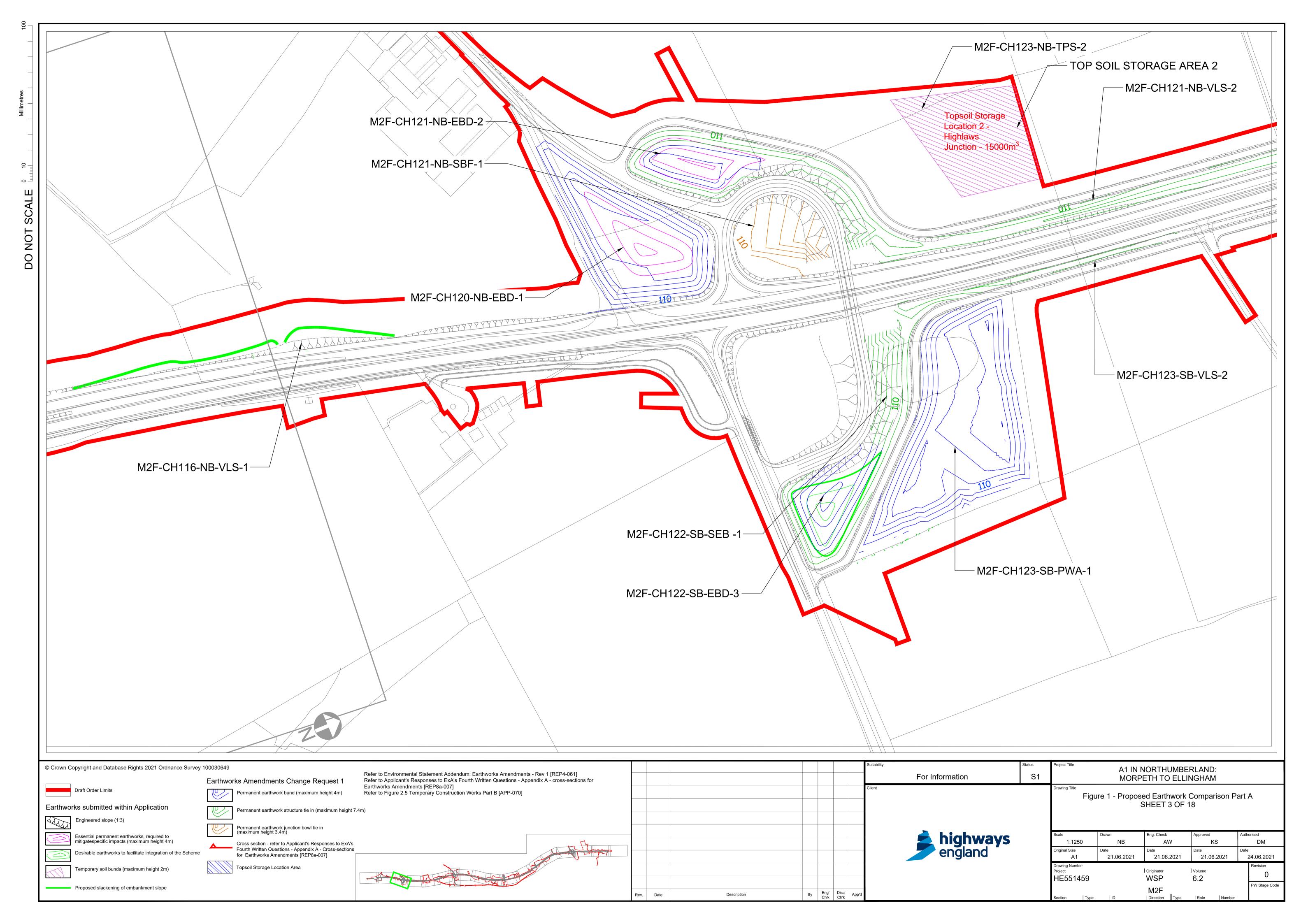


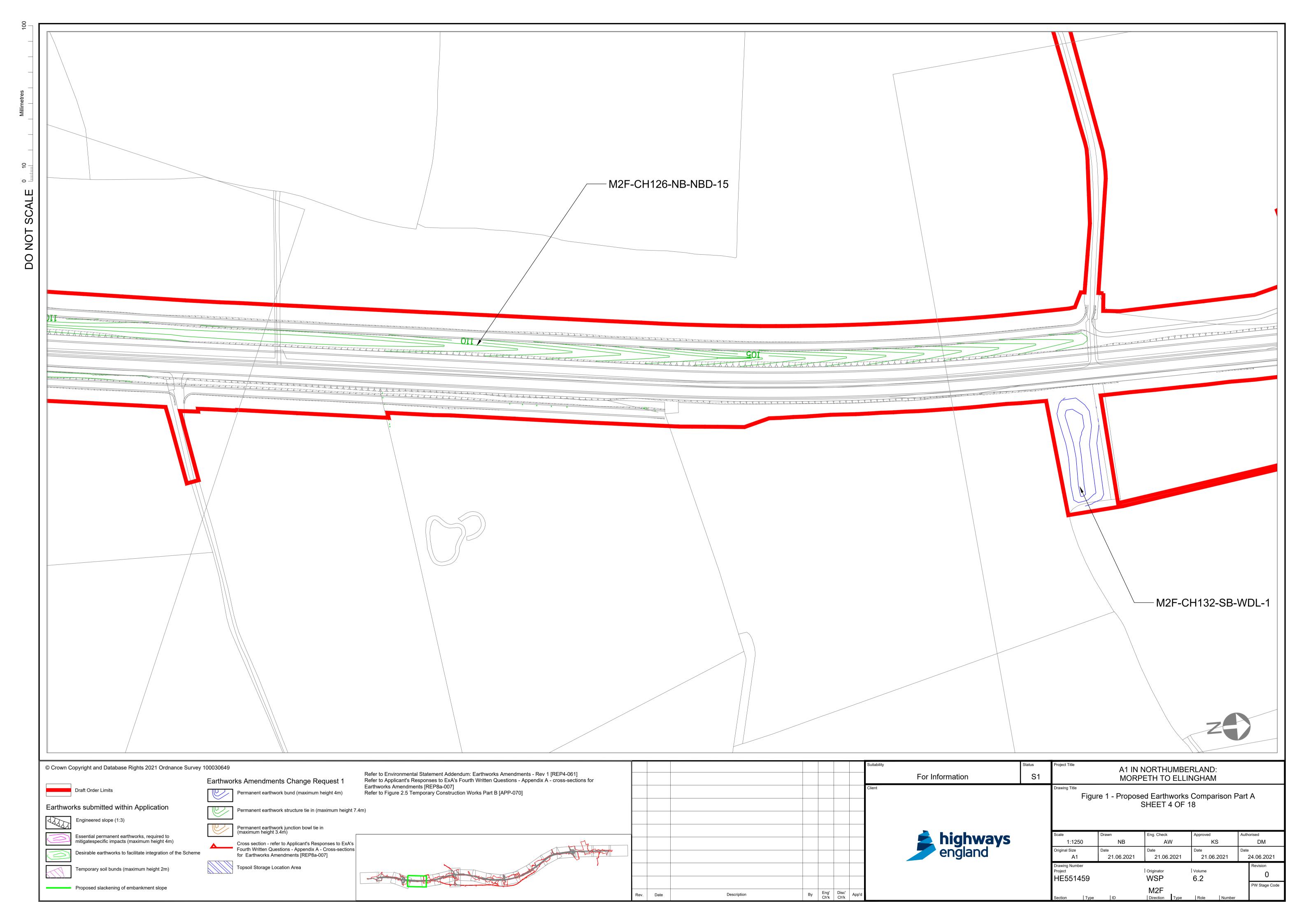
Earthworks Opportunities Section A2E-CH554-NB-NBD-4 - Side Road A in **Applicant's Responses to ExA's Fourth Written Questions - Appendix A - Cross-sections for Earthworks Amendments** [REP8a-007]). The proposed change would not result in an increase in the overall height of the earthworks over that assessed in **Chapter 7: Landscape and Visual Part B** of the ES [APP-045]. The proposed slackened slope at this location would re-use excess site won material and form a permanent feature that improves the landscape integration of the Scheme.

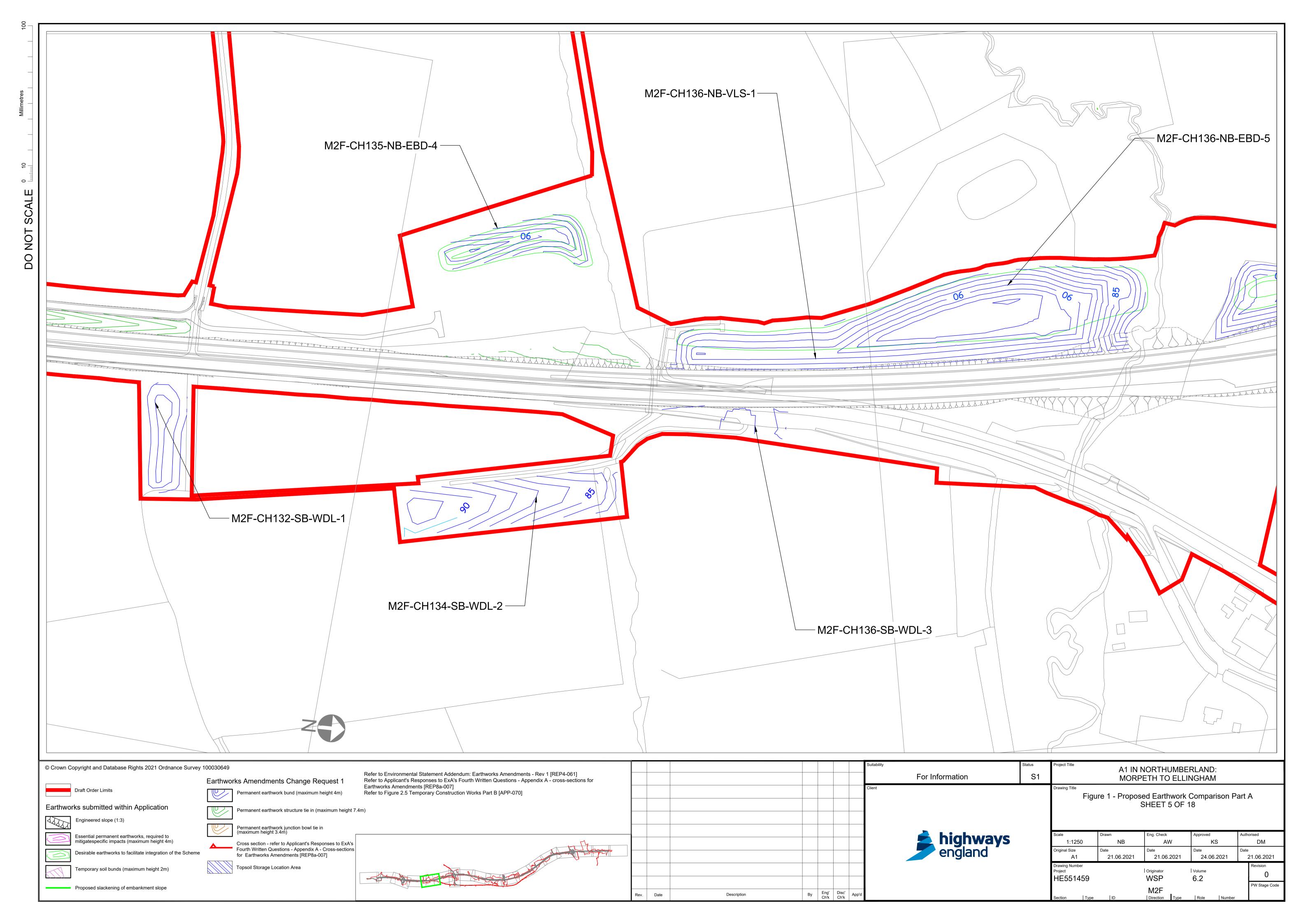
1.4.5. The proposed maximum height of the proposed infilled junction bowls for Part B (2no.) would be 3.4m above the adjoining proposed ground level (earthwork opportunities unique ID A2E-CH589-NB-SBF-1 (Appendix A of Environmental Statement Addendum: Earthworks Amendments for Change Request [REP4-061]) as shown in Earthworks Opportunities Section A2E-CH589-NB-SBF-1 in Applicant's Responses to ExA's Fourth Written Questions - Appendix A - Cross-sections for Earthworks Amendments [REP8a-007]). This proposed structure bowl fill would not however increase the overall height of the junction. The proposed infilling of junction bowls for Part B would re-use excess site won material and improve their integration with the existing landform as permanent landscape features.

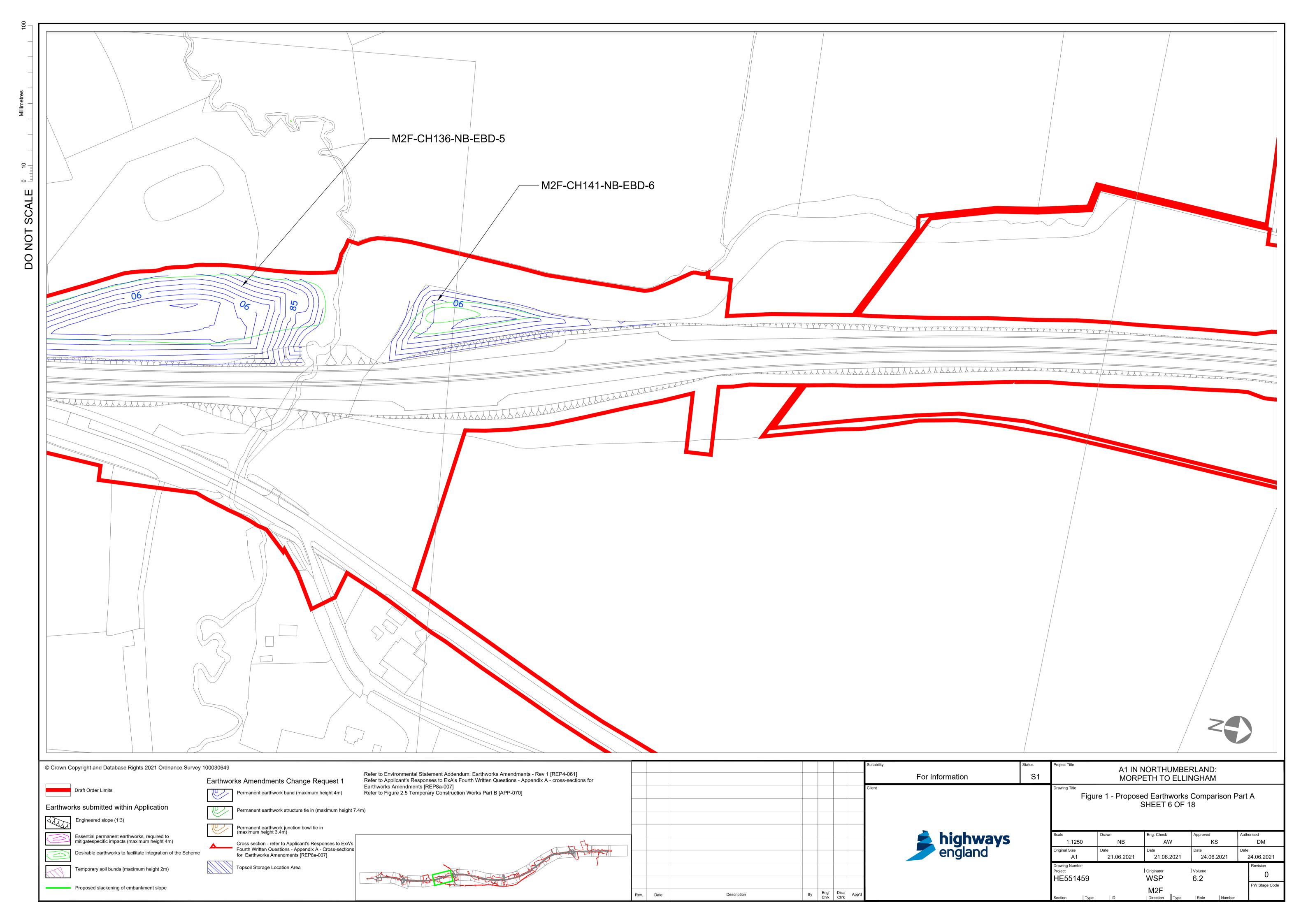


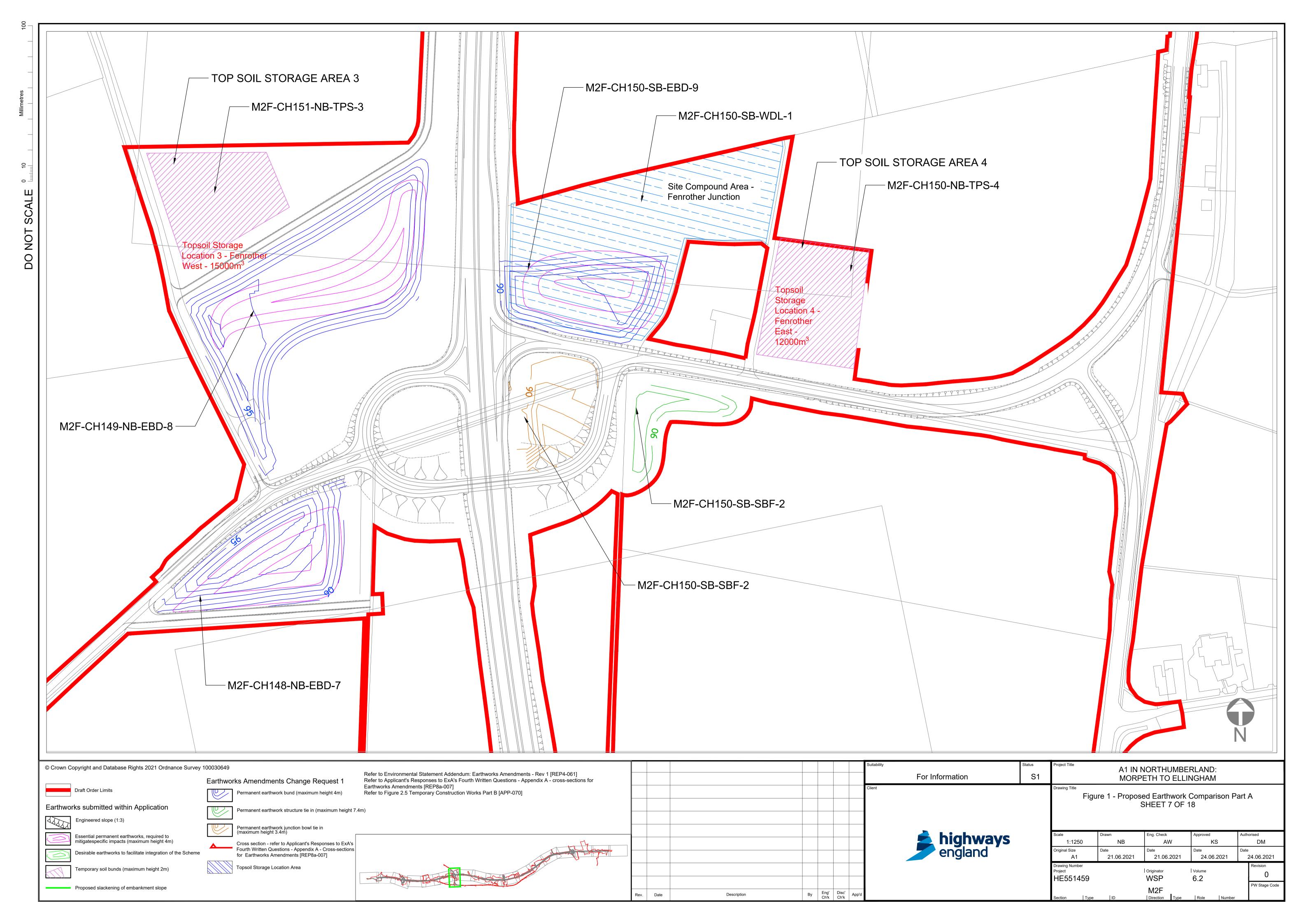


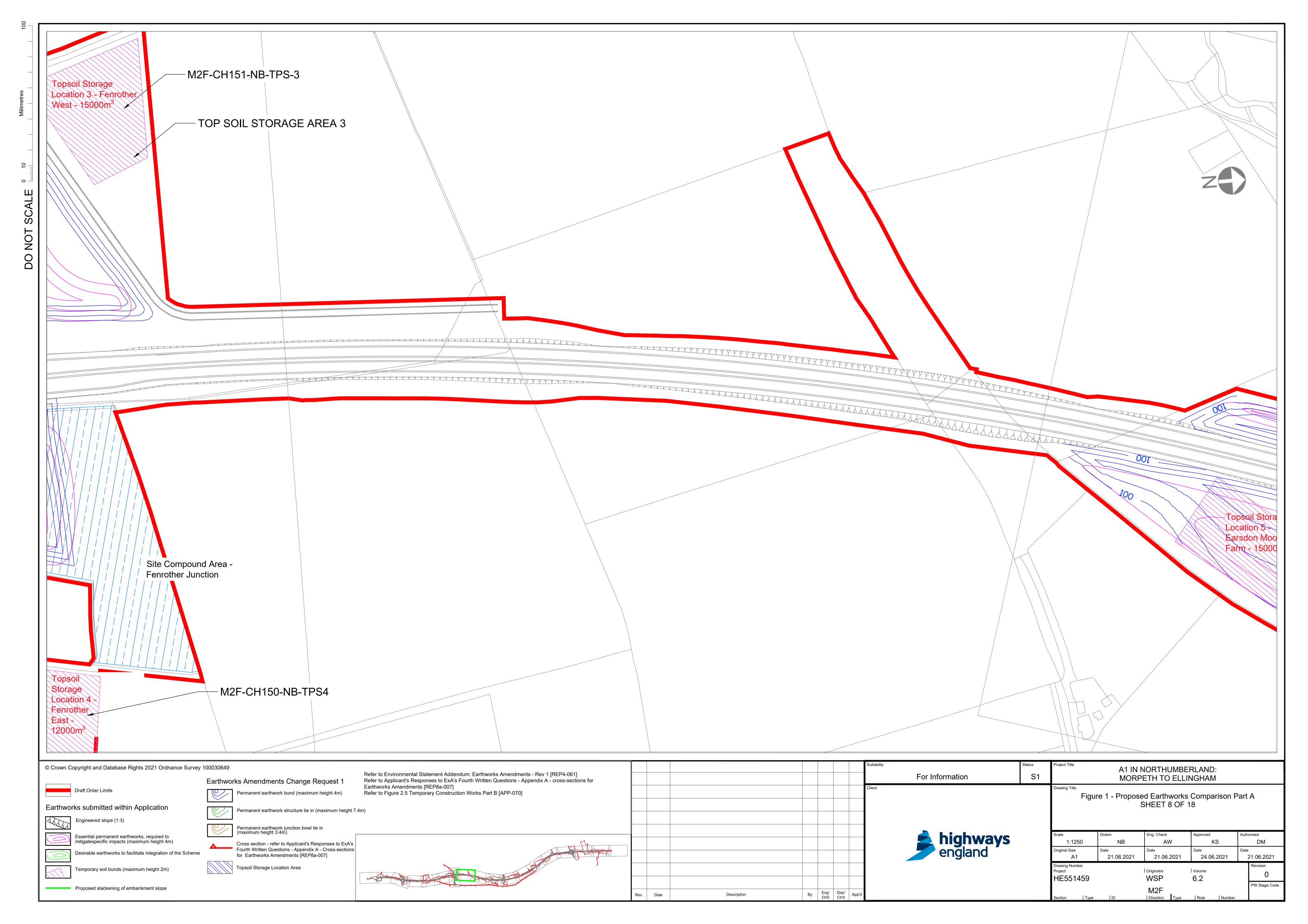


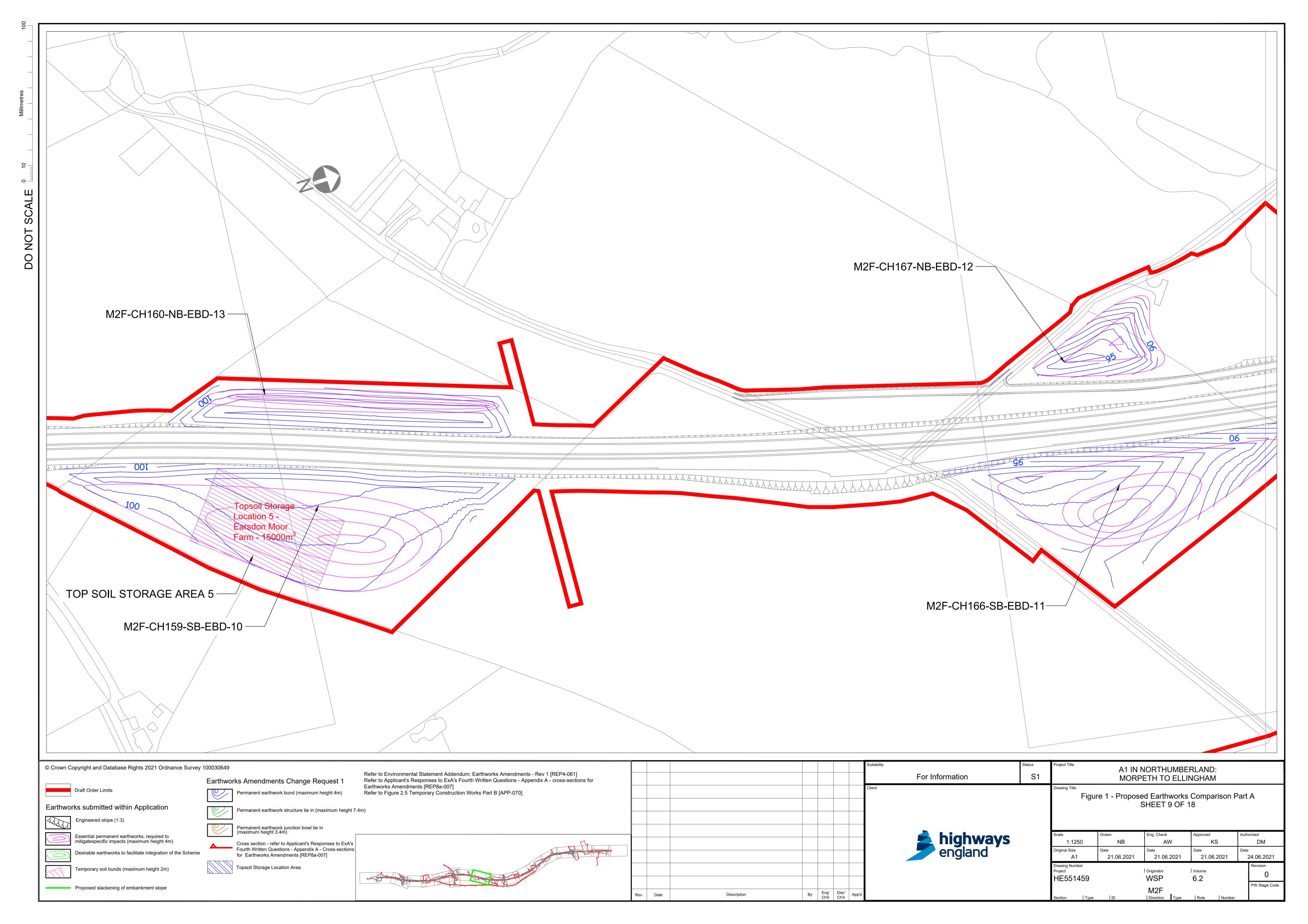


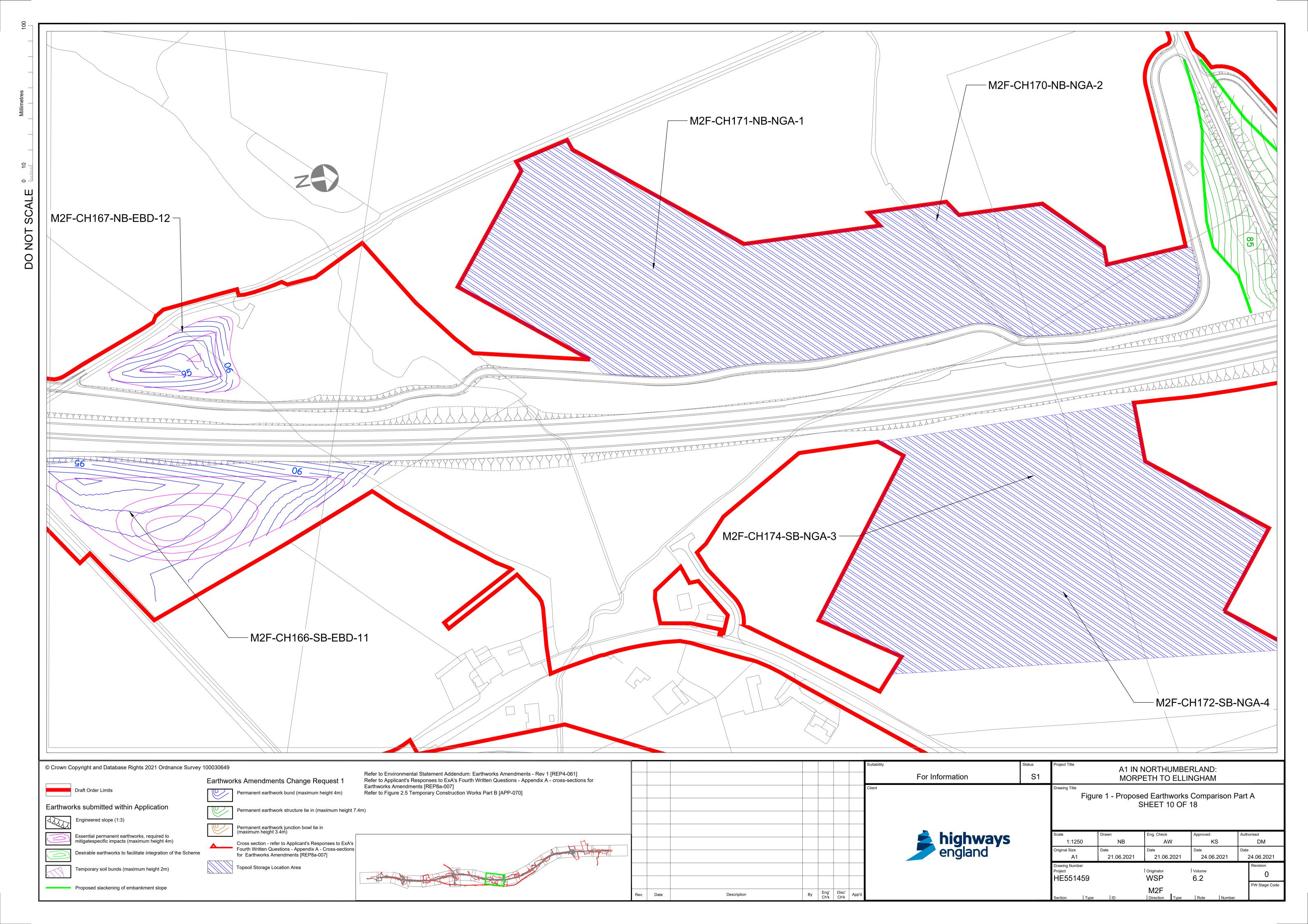


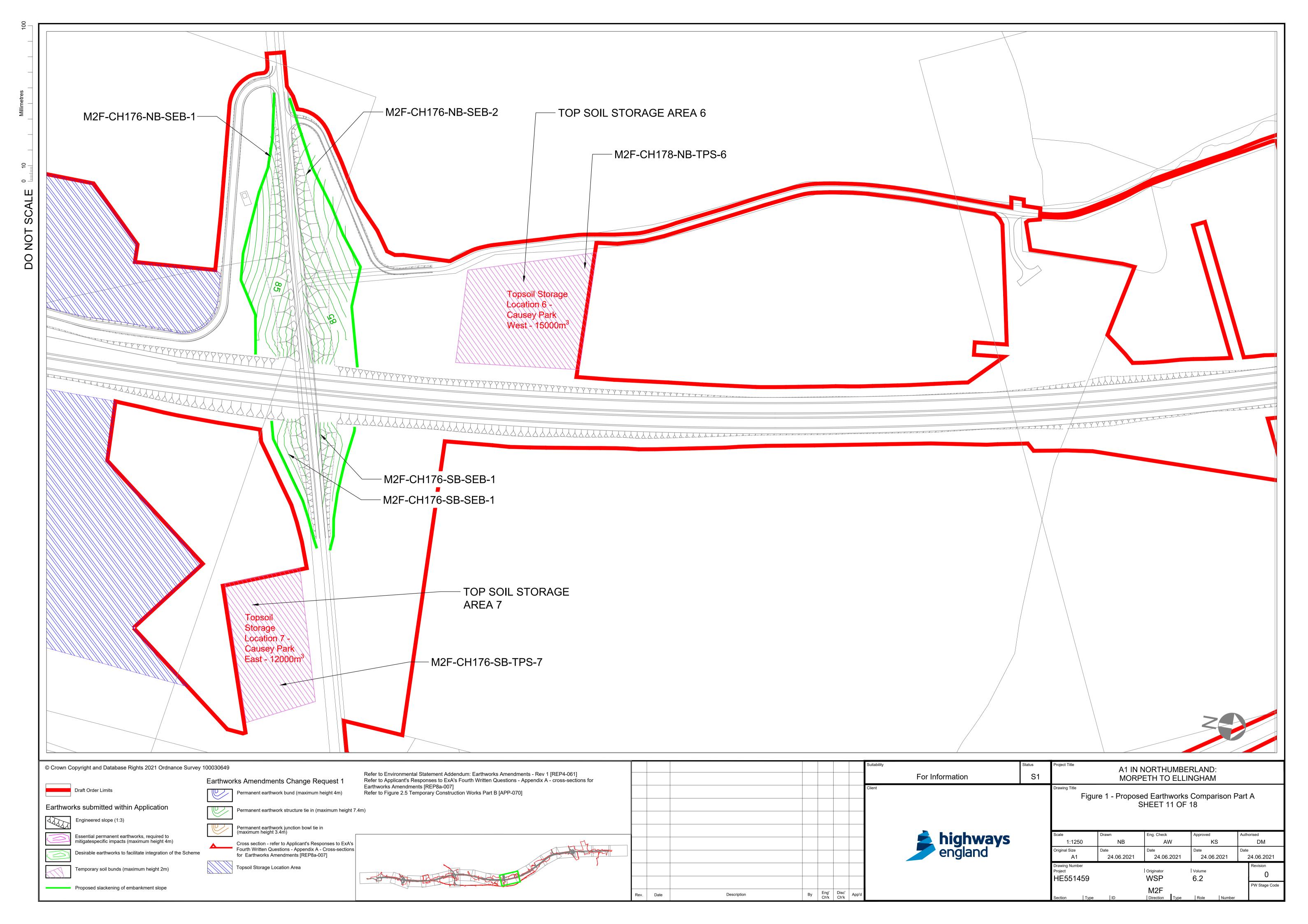


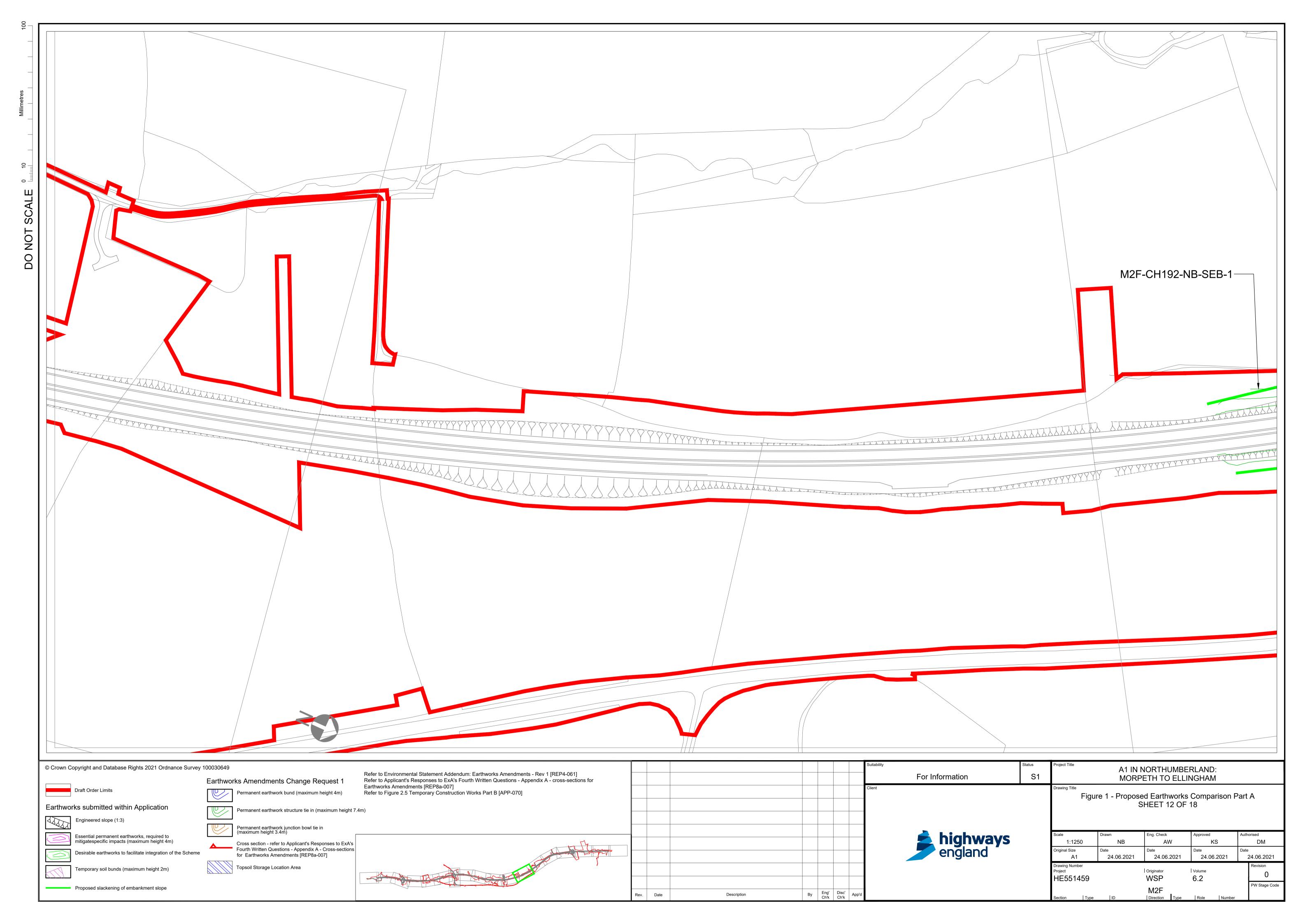


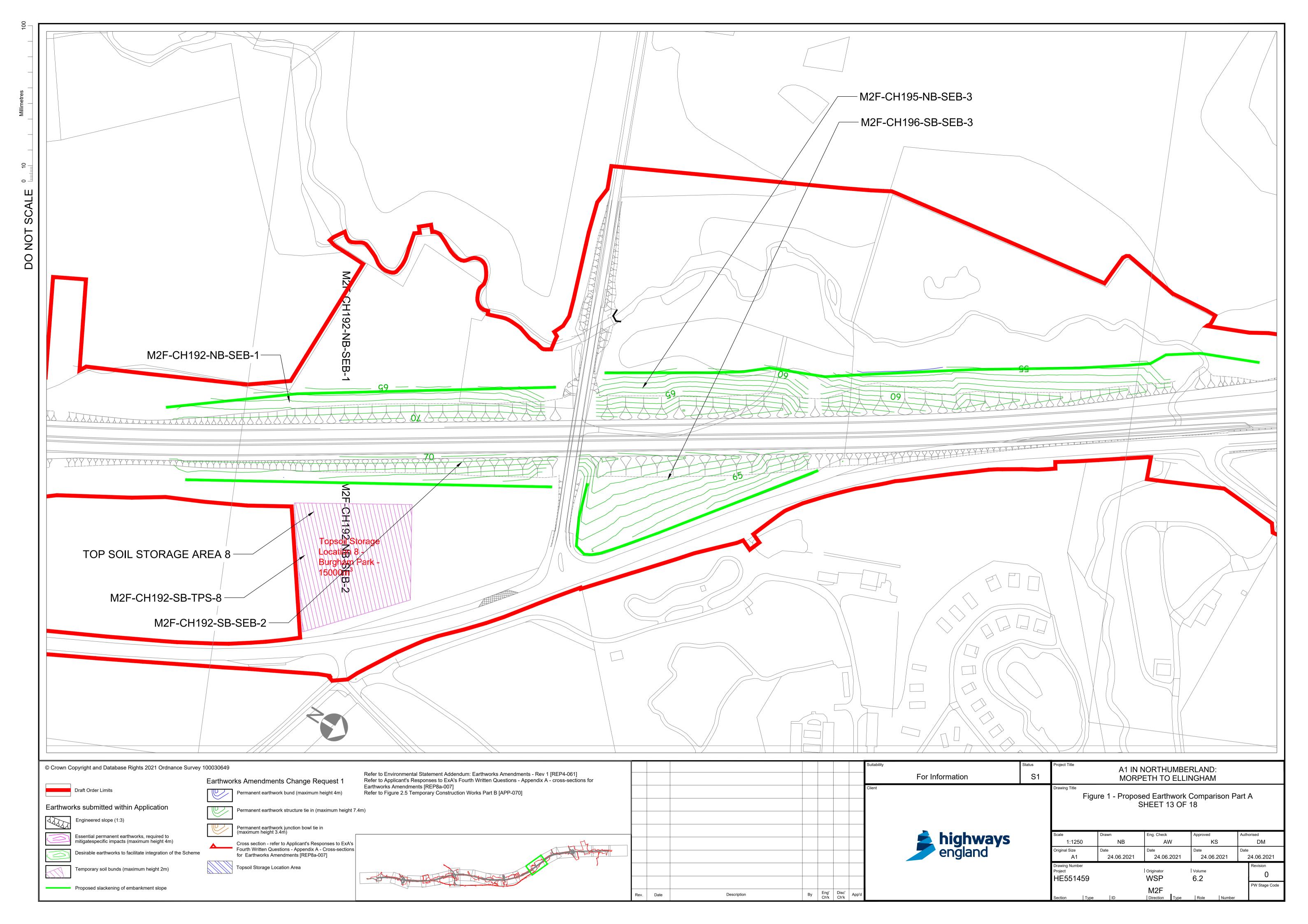


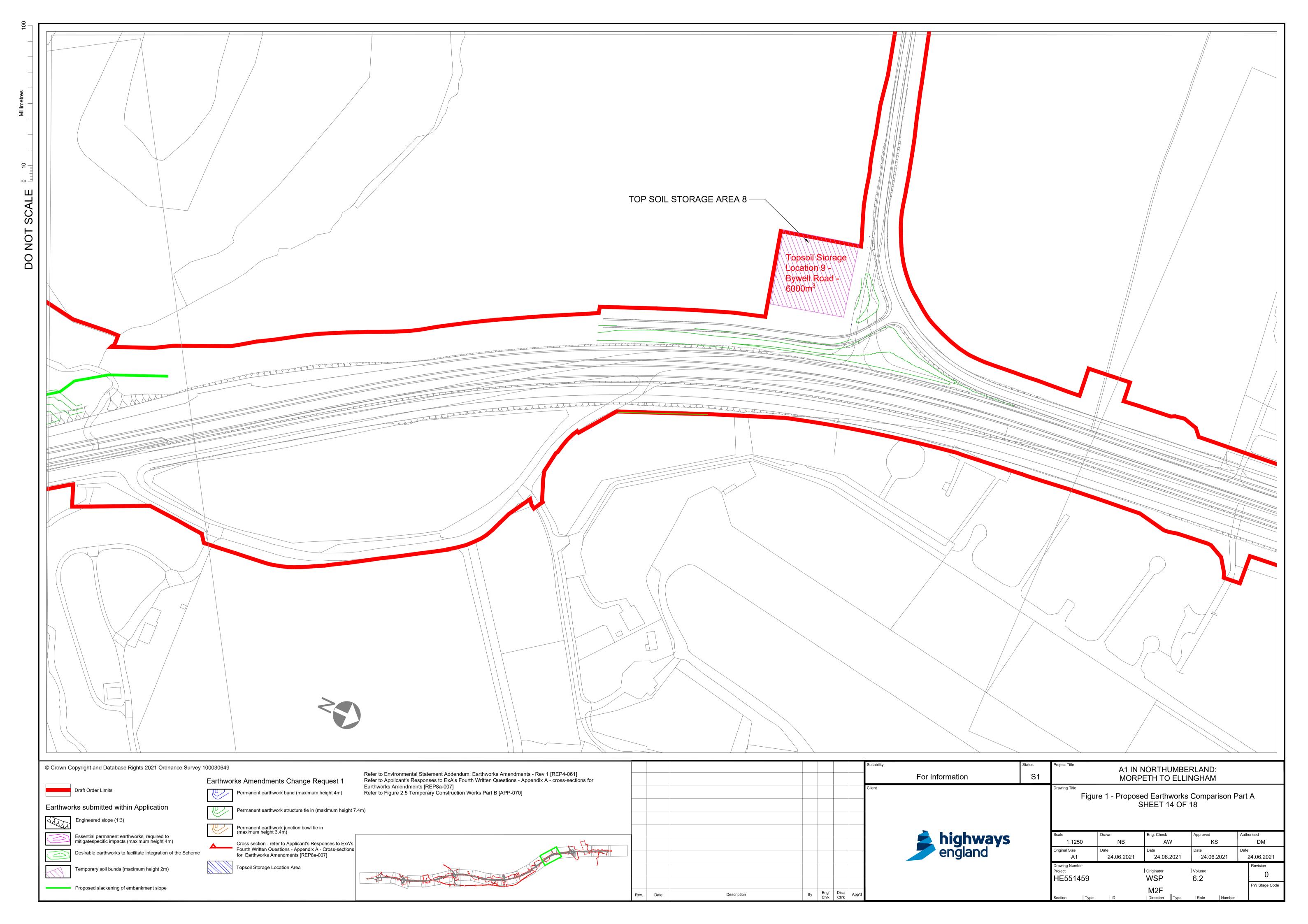


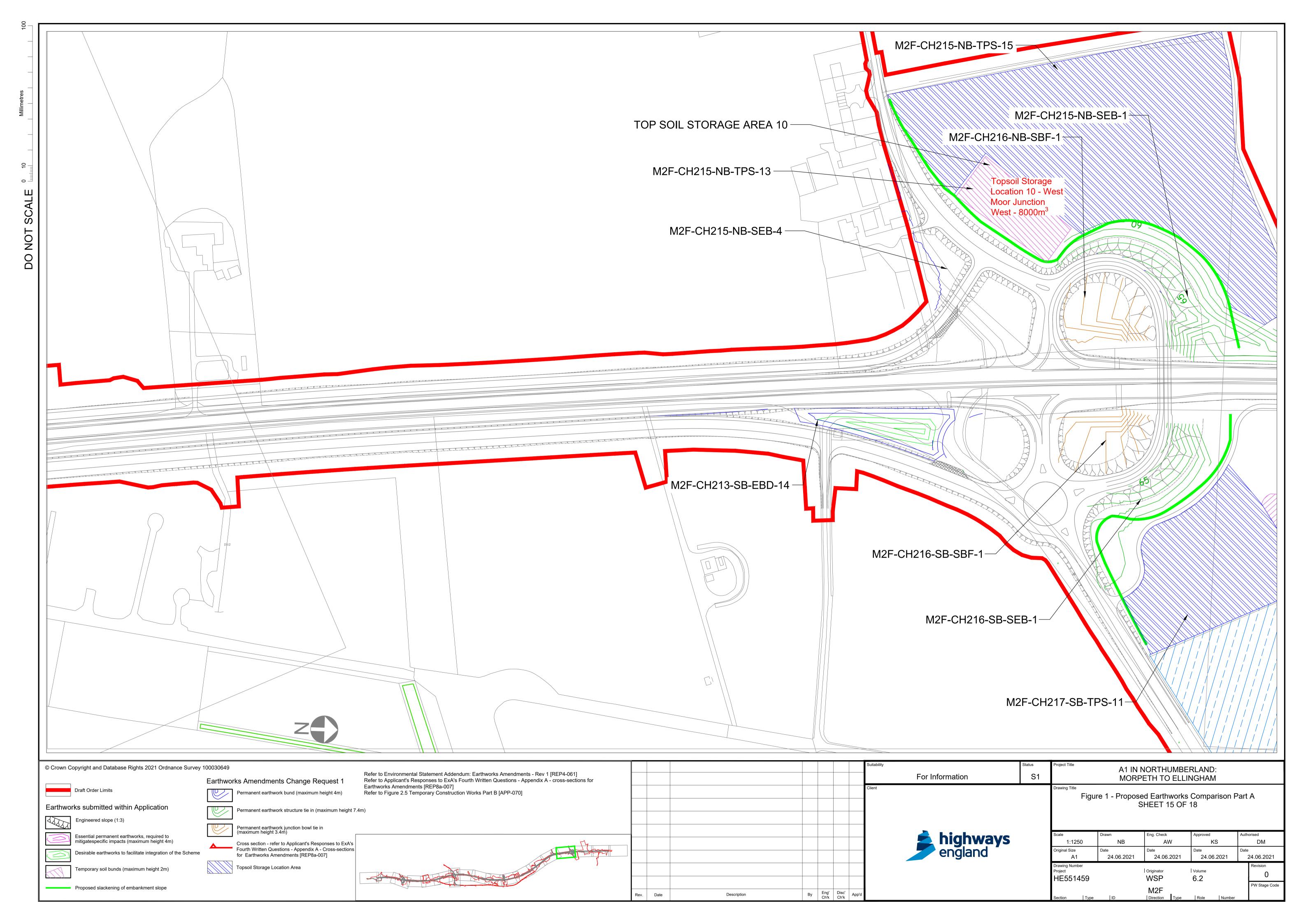


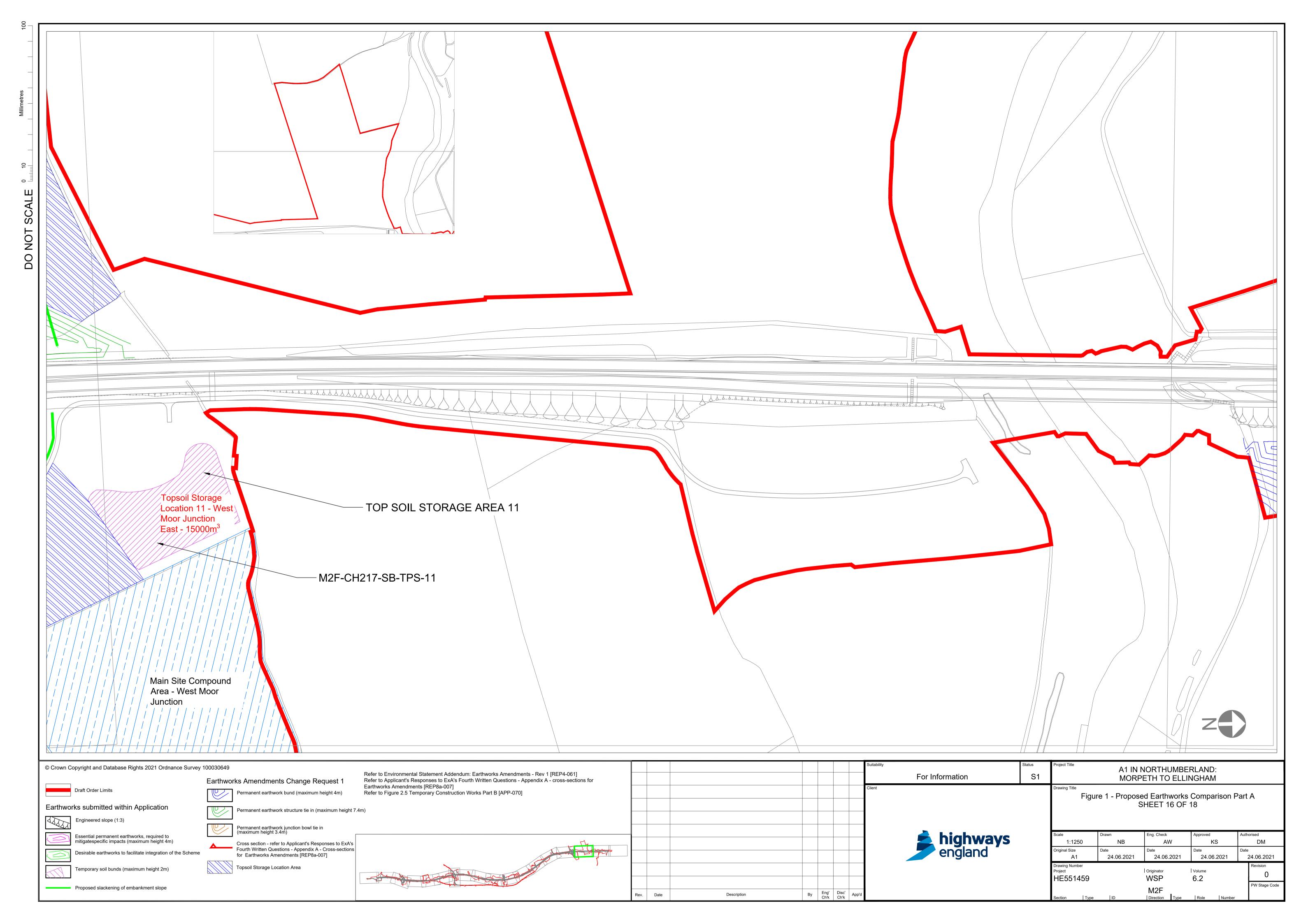


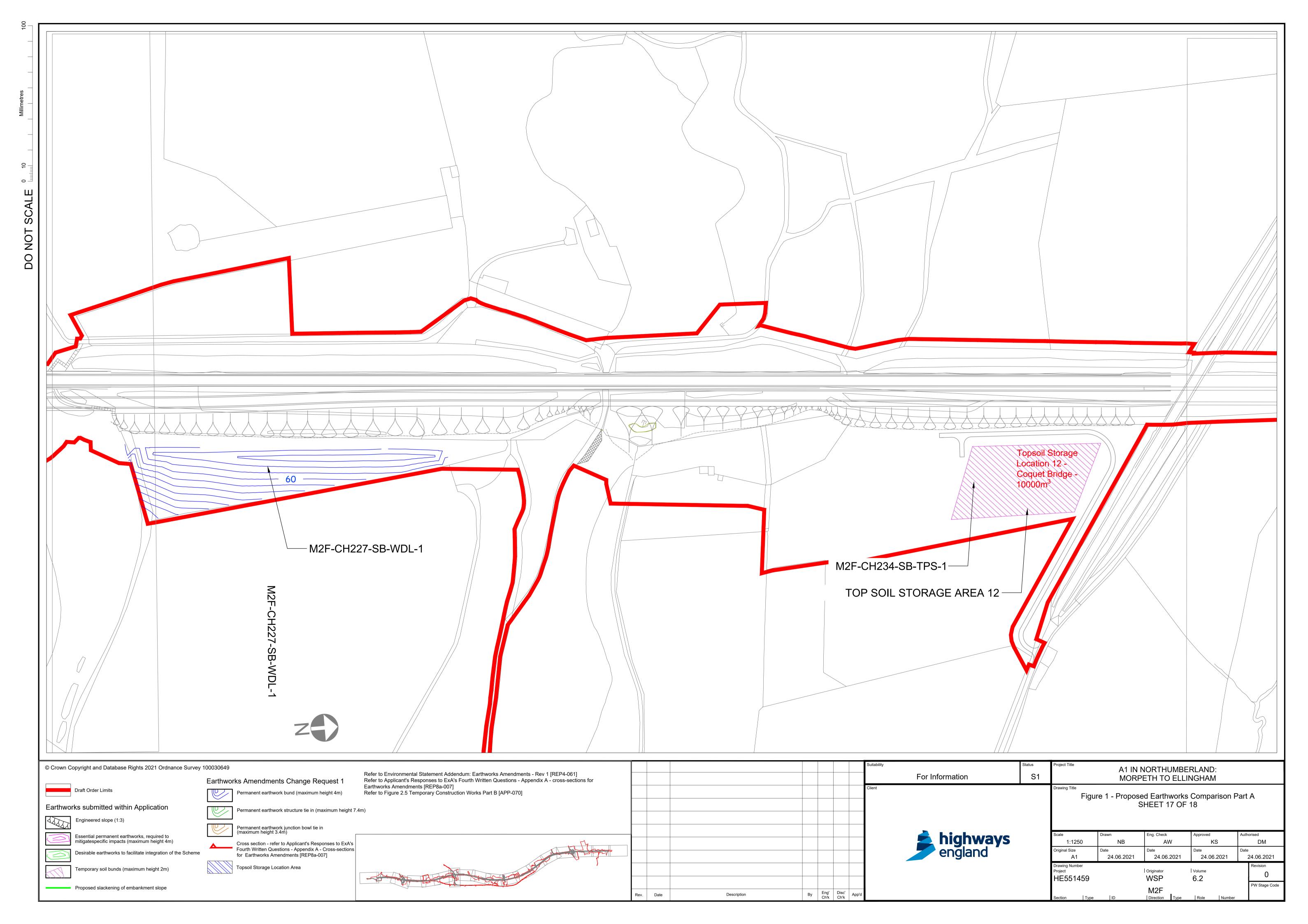


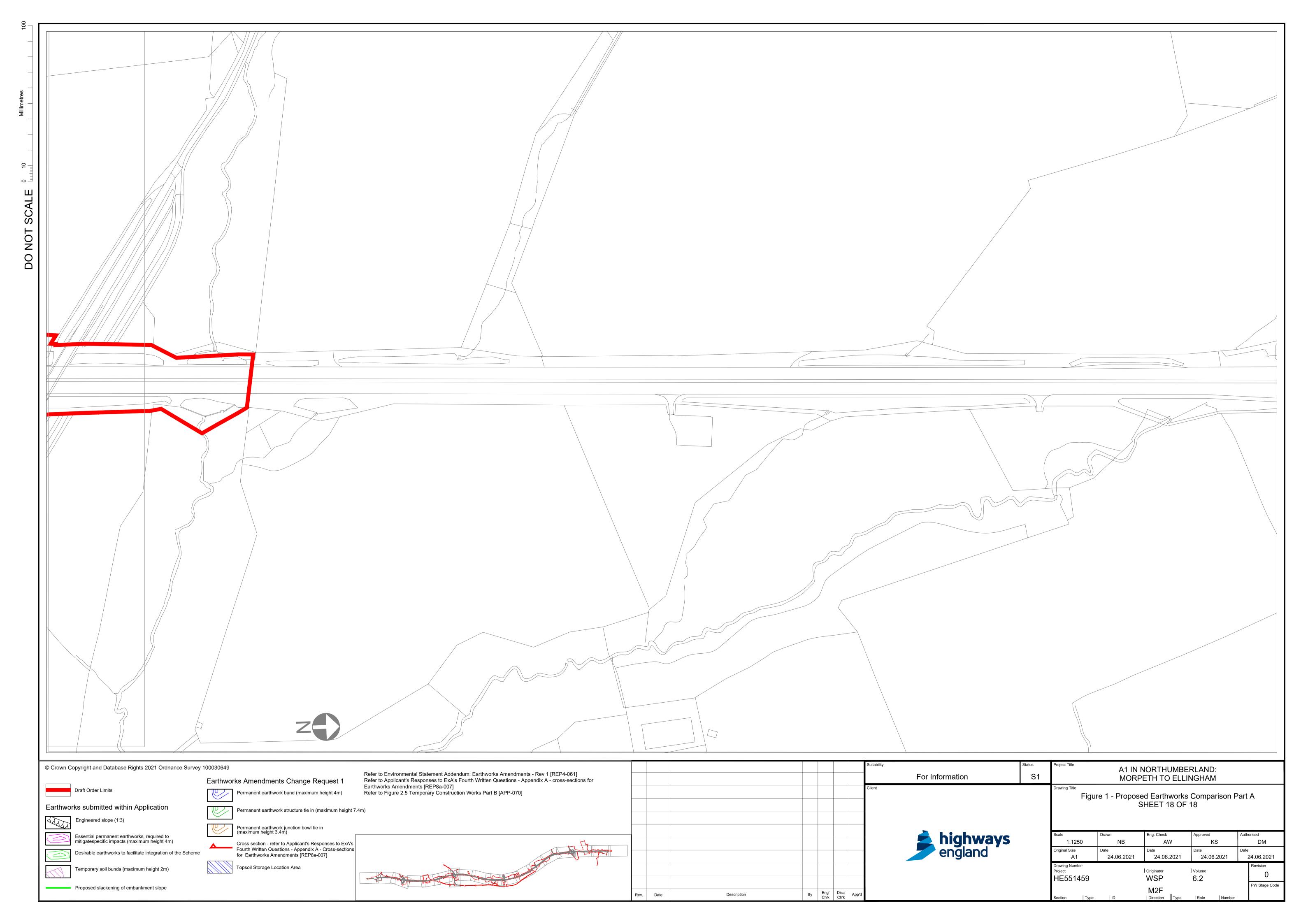


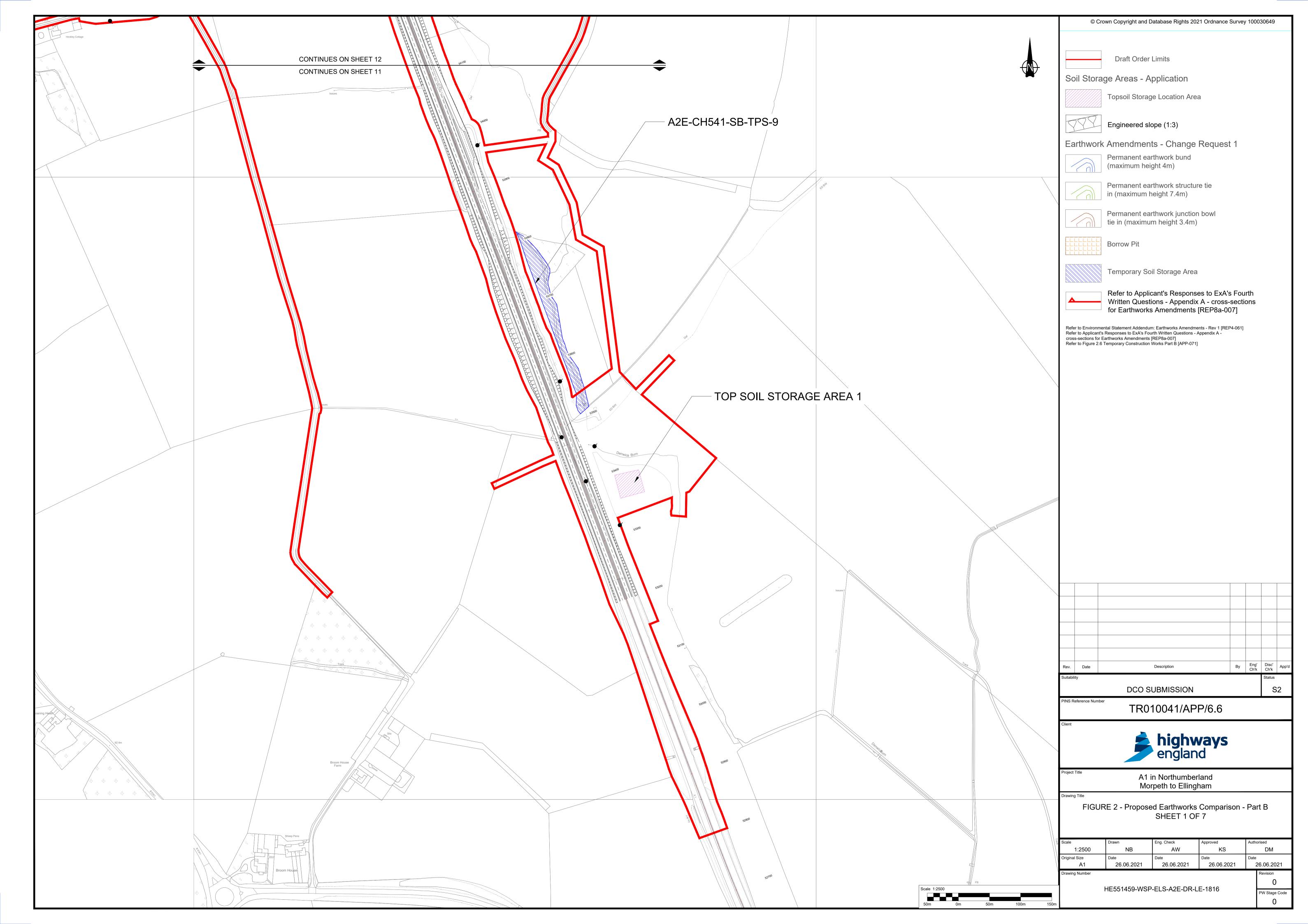


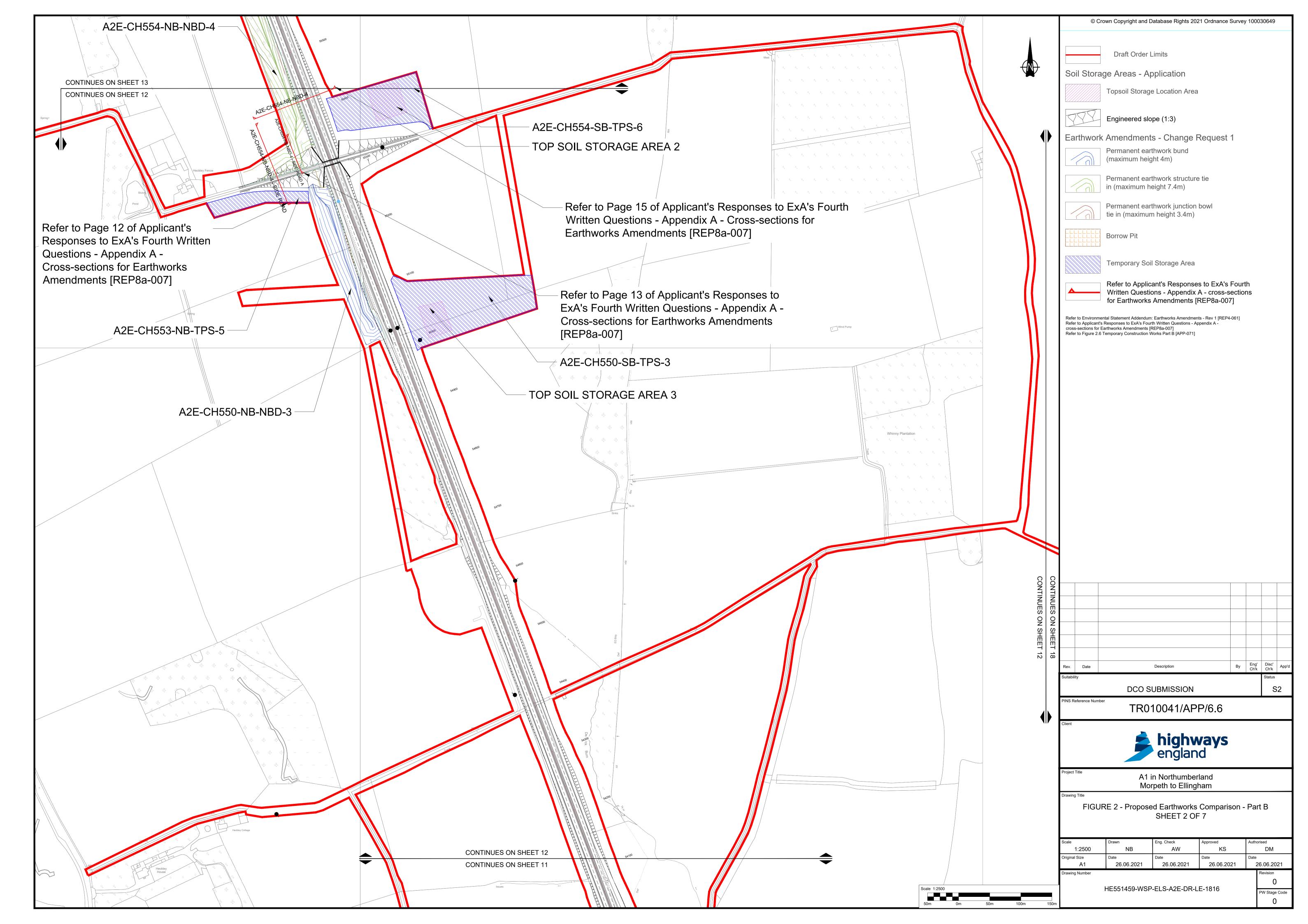


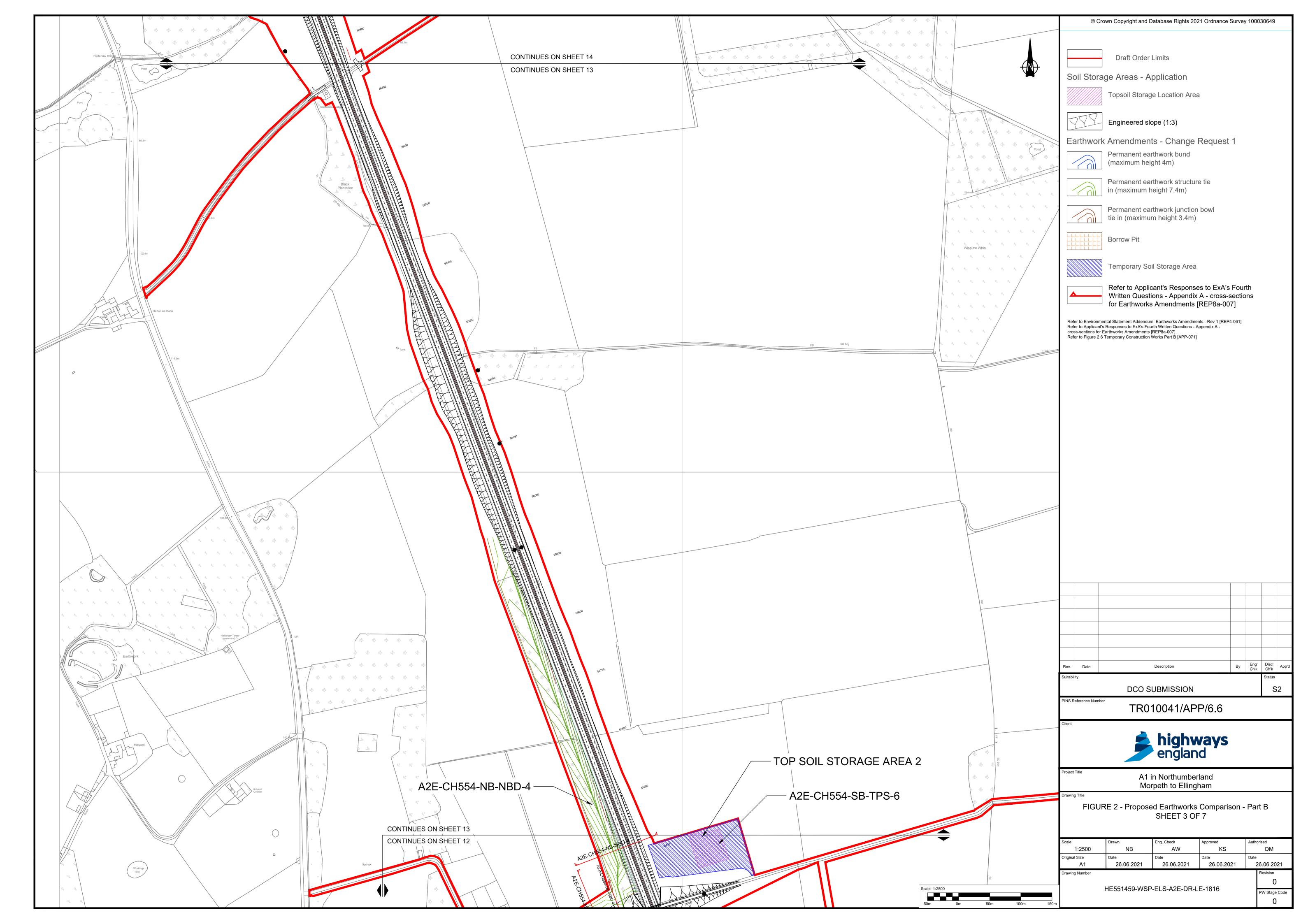


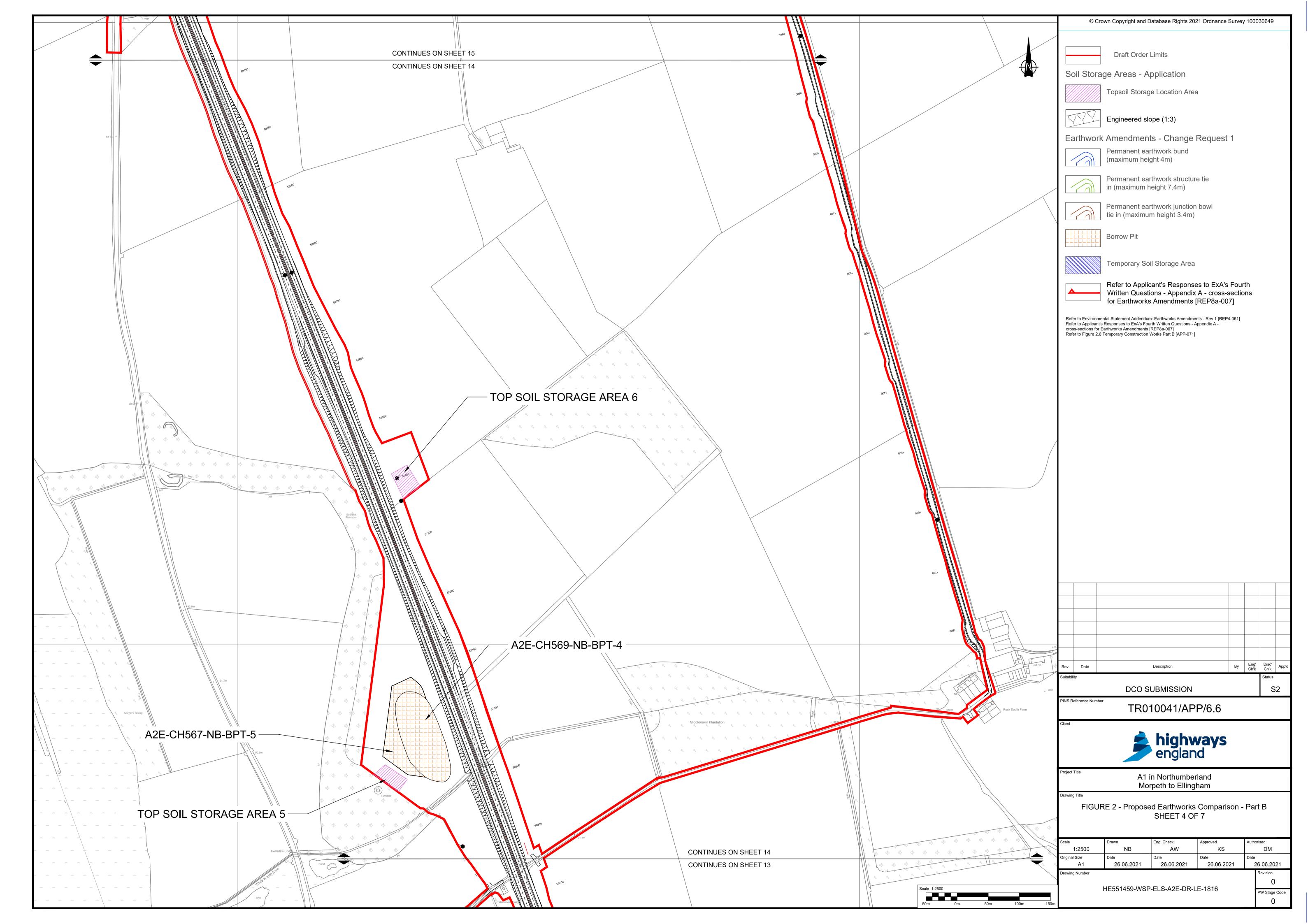


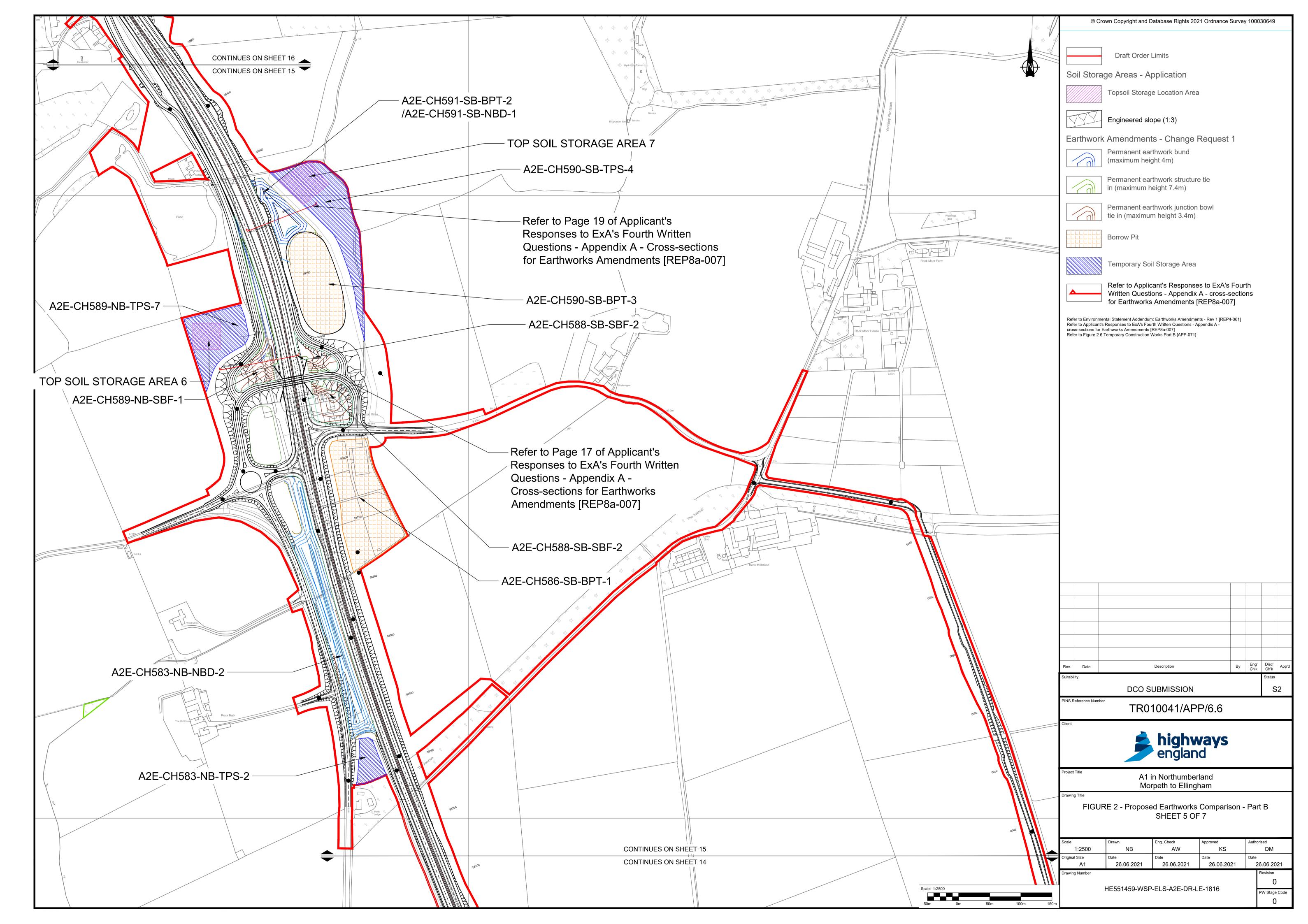


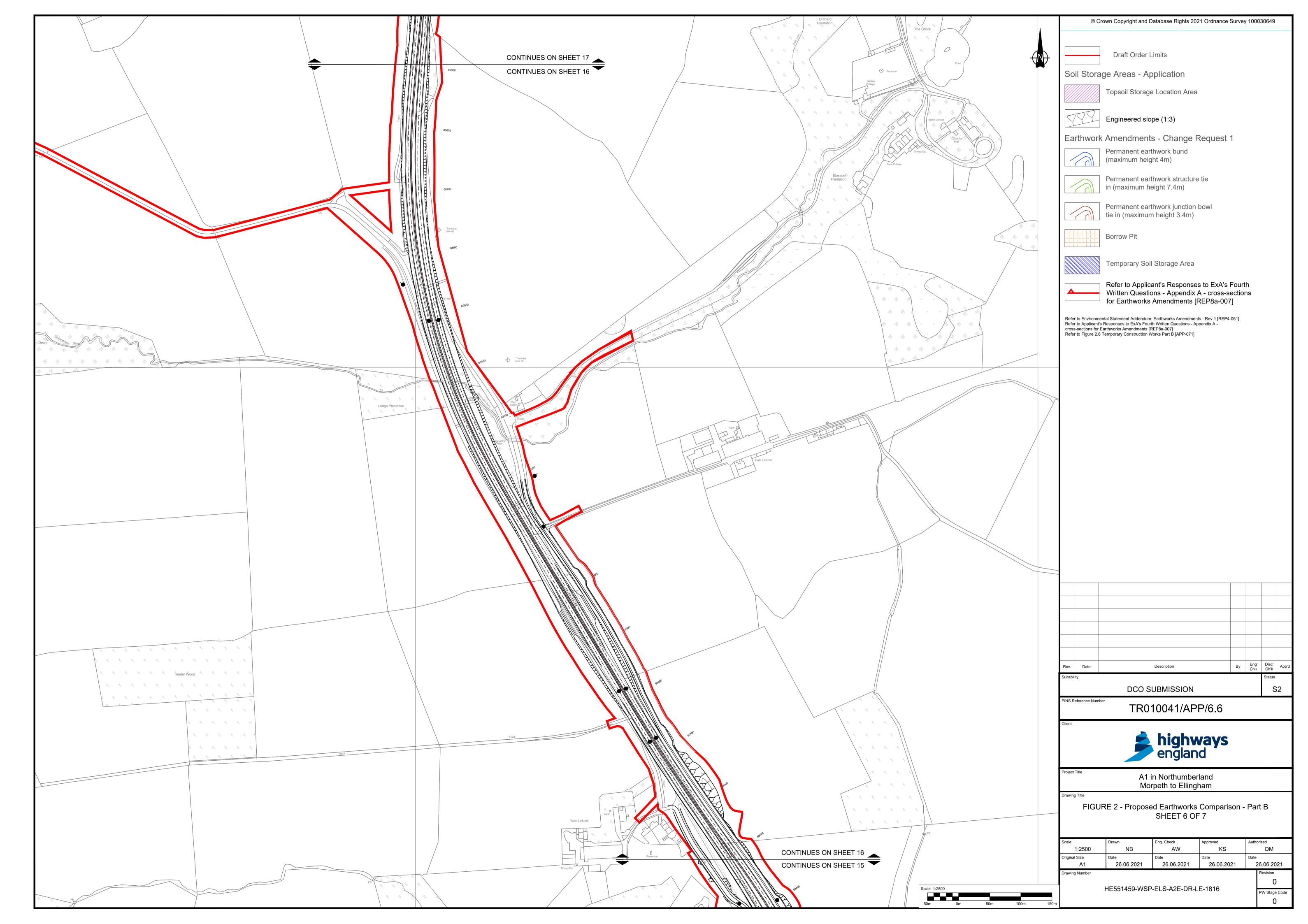


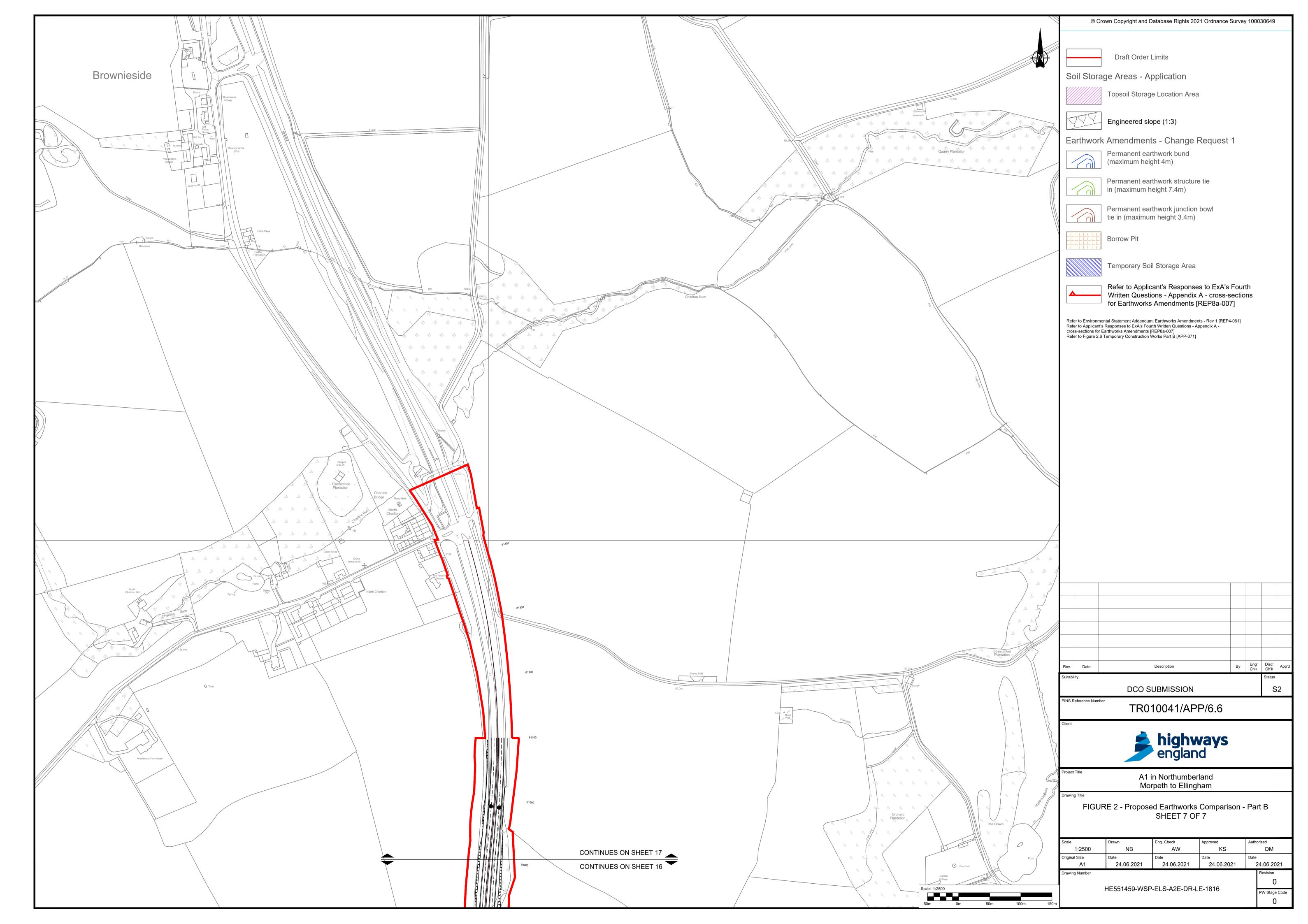












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