A1 in Northumberland: Morpeth to Ellingham

Scheme Number: TR010059

6.36 Environmental Statement Addendum: Earthworks Amendments for Change Request

Rule 8(1)(c)

Planning Act 2008

Infrastructure Planning (Examination Procedure) Rules 2010

March 2021

Infrastructure Planning

Planning Act 2008

The Infrastructure Planning (Examination Procedure) Rules 2010

The A1 in Northumberland: Morpeth to Ellingham

Development Consent Order 20[xx]

Environmental Statement Addendum: Earthworks Amendments for Change Request

Rule Reference:	8(1)(c)
Planning Inspectorate Scheme Reference:	TR010059
Doc Reference:	6.36
Author:	A1 in Northumberland: Morpeth to Ellingham Project Team, Highways England

Version	Date	Status of Version
Rev 0	January 2021	Consultation
Rev 1	March 2021	Deadline 4 Submission

CONTENTS

1	INTRODUCTION	1
1.1	PURPOSE OF ES ADDENDUM	1
1.2	SCOPE OF THE ES ADDENDUM	2
1.3	CONSULTATION	3
1.4	STRUCTURE OF THE ES ADDENDUM	8
2	EARTHWORKS AMENDMENTS	10
2.1	INTRODUCTION	10
2.2	NEED FOR THE AMENDMENT TO THE APPLICATION	10
2.3	EARTHWORKS AMENDMENTS LOCATION	10
2.4	EARTHWORKS AMENDMENTS DESCRIPTION	11
2.5	ENVIRONMENTAL DESIGN	12
2.6	CONSTRUCTION	12
2.7	OPERATIONAL MAINTENANCE AND MANAGEMENT	14
3	AIR QUALITY	15
3.1	INTRODUCTION	15
3.2	COMPETENT EXPERT EVIDENCE	15
3.3	LEGISLATIVE AND POLICY FRAMEWORK	16
3.4	ASSESSMENT METHODOLOGY	16
3.5	ASSESSMENT ASSUMPTIONS AND LIMITATIONS	16
3.6	STUDY AREA	16
3.7	BASELINE CONDITIONS	16
3.8	POTENTIAL IMPACTS	17
3.9	DESIGN, MITIGATION AND ENHANCEMENT MEASURES	17
3.10	ASSESSMENT OF LIKELY SIGNIFICANT EFFECTS	17

3.11 MONITORING 17
3.12 UPDATED DMRB GUIDANCE 17

4 NOISE AND VIBRATION 19

4.1 INTRODUCTION 19
4.2 COMPETENT EXPERT EVIDENCE 19
4.3 LEGISLATIVE AND POLICY FRAMEWORK 19
4.4 ASSESSMENT METHODOLOGY 19
4.5 ASSESSMENT ASSUMPTIONS AND LIMITATIONS 19
4.6 STUDY AREA 20
4.7 BASELINE CONDITIONS 20
4.8 POTENTIAL IMPACTS 20
4.9 DESIGN, MITIGATION AND ENHANCEMENT MEASURES 21
4.10 ASSESSMENT OF LIKELY SIGNIFICANT EFFECTS 21
4.11 MONITORING 21
4.12 UPDATED DMRB GUIDANCE 21

5 LANDSCAPE AND VISUAL 23

5.1 INTRODUCTION 23
5.2 COMPETENT EXPERT EVIDENCE 23
5.3 LEGISLATIVE AND POLICY FRAMEWORK 24
5.4 ASSESSMENT METHODOLOGY 24
5.5 ASSESSMENT ASSUMPTIONS AND LIMITATIONS 24
5.6 STUDY AREA 24
5.7 BASELINE CONDITIONS 25
5.8 POTENTIAL IMPACTS 25
5.9 DESIGN, MITIGATION AND ENHANCEMENT MEASURES 25
5.10 ASSESSMENT OF LIKELY SIGNIFICANT EFFECTS 26
5.11 MONITORING 47
5.12 UPDATED DMRB GUIDANCE 47

6 CULTURAL HERITAGE 48

6.1 INTRODUCTION 48
6.2 COMPETENT EXPERT EVIDENCE 48
6.3 LEGISLATIVE AND POLICY FRAMEWORK 49
6.4 ASSESSMENT METHODOLOGY 49
6.5 ASSESSMENT ASSUMPTIONS AND LIMITATIONS 49
6.6 STUDY AREA 49
6.7 BASELINE CONDITIONS 49
6.8 POTENTIAL IMPACTS 49
6.9 DESIGN, MITIGATION AND ENHANCEMENT MEASURES 54
6.10 ASSESSMENT OF LIKELY SIGNIFICANT EFFECTS 55
6.11 MONITORING 58
6.12 UPDATED DMRB GUIDANCE 58

7 ROAD DRAINAGE AND THE WATER ENVIRONMENT 59

7.1 INTRODUCTION 59
7.2 COMPETENT EXPERT EVIDENCE 59
7.3 LEGISLATIVE AND POLICY FRAMEWORK 60
7.4 ASSESSMENT METHODOLOGY 61
7.5 ASSESSMENT ASSUMPTIONS AND LIMITATIONS 61
7.6 STUDY AREA 62
7.7 BASELINE CONDITIONS 63
7.8 POTENTIAL IMPACTS 64
7.9 DESIGN, MITIGATION AND ENHANCEMENT MEASURES 65
7.10 ASSESSMENT OF LIKELY SIGNIFICANT EFFECTS 66
7.11 MONITORING 70
7.12 UPDATED DMRB GUIDANCE 70

8 GEOLOGY AND SOILS 72

8.1 INTRODUCTION 72

8.2 COMPETENT EXPERT EVIDENCE 72
8.3 LEGISLATIVE AND POLICY FRAMEWORK 73
8.4 ASSESSMENT METHODOLOGY 73
8.5 ASSESSMENT ASSUMPTIONS AND LIMITATIONS 73
8.6 STUDY AREA 73
8.7 BASELINE CONDITIONS 73
8.8 POTENTIAL IMPACTS 73
8.9 DESIGN, MITIGATION AND ENHANCEMENT MEASURES 74
8.10 ASSESSMENT OF LIKELY SIGNIFICANT EFFECTS 74
8.11 MONITORING 75
8.12 UPDATED DMRB GUIDANCE 75

9 MATERIAL RESOURCES 76

9.1 INTRODUCTION 76
9.2 COMPETENT EXPERT EVIDENCE 76
9.3 LEGISLATIVE AND POLICY FRAMEWORK 76
9.4 ASSESSMENT METHODOLOGY 76
9.5 ASSESSMENT ASSUMPTIONS AND LIMITATIONS 76
9.6 STUDY AREA 77
9.7 BASELINE CONDITIONS 77
9.8 POTENTIAL IMPACTS 77
9.9 DESIGN, MITIGATION AND ENHANCEMENT MEASURES 77
9.10 ASSESSMENT OF LIKELY SIGNIFICANT EFFECTS 78
9.11 MONITORING 79
9.12 UPDATED DMRB GUIDANCE 79

10 SUMMARY 81

10.1 INTRODUCTION 81
10.2 SUMMARY OF LIKELY SIGNIFICANT EFFECTS 81
10.3 CONCLUSIONS 83

11 ABBREVIATIONS 84

TABLES

Table 1-1 - Summary of Consultation by Topic 3
Table 1-2 - Summary of Non-statutory Consultation 6
Table 3-1 – Air Quality Professional Competence 15
Table 5-1 – Landscape and Visual Professional Competence 23
Table 6-1 – Cultural Heritage Professional Competence 48
Table 7-1 – Road Drainage and the Water Environment Professional Competence 59
Table 7-2 – Effects During Construction arising from Changes in Flood Risk 66
Table 7-3 – Borrow Pit Details 67
Table 7-4 – Borrow Pit Sichardt Equation Inputs 68
Table 7-5 – Effects During Construction Arising from Changes in Hydrogeology 69
Table 8-1 – Geology and Soils Professional Competence 72
Table 9-1 – Re-Use of Site-Won arisings for Temporary and Permanent Earthworks 78

APPENDICES

APPENDIX A

PROPOSED AMENDMENT TO TEMPORARY AND PERMANENT EARTHWORKS SCHEDULE

APPENDIX B

FIGURES

APPENDIX C

SUMMARY OF PROPOSED CHANGES TO APPLICATION

APPENDIX D

REGISTER OF ENVIRONMENTAL ACTIONS AND COMMITMENTS

1 INTRODUCTION

1.1 PURPOSE OF ES ADDENDUM

1.1.1. This Environmental Statement Addendum (this "ES Addendum") to the Environmental Statement (ES) [**APP-035** to **APP-336**] supports a request to amend an application for development consent [**REP3-004** and **REP3-005**].

1.1.2. An application for development consent [**REP3-004** and **REP3-005**], which included the ES [**APP-035** to **APP-336**], was submitted by Highways England (the "Applicant") to the Secretary of State for Transport via the Planning Inspectorate (the "Inspectorate") on 7 July 2020 for the A1 in Northumberland: Morpeth to Ellingham (the "Scheme").

1.1.3. The Scheme is formed of two parts known as Part A (Morpeth to Felton) and Part B (Alnwick to Ellingham). A full description of the Scheme can be found at **Chapter 2: The Scheme** of the ES [**APP-037**]. The ES sets out the findings of the Environmental Impact Assessment (EIA) that was carried out for the Scheme.

1.1.4. The application was accepted for Examination on 4 August 2020.

1.1.5. As is normal in relation to any engineering project, further design development of the Scheme has continued to be undertaken by the Applicant since the application for the Development Consent Order (DCO) was made in order to release efficiencies and design benefits. This is particularly important in optimising a scheme being delivered by the public sector in the public interest.

1.1.6. The proposed amendments to the application ("Earthworks Amendments") that this ES Addendum relates to includes changes to temporary and permanent earthworks within the Order limits along both Part A and Part B in order to reduce earthwork movement.

a. The changes for Part A are:

i. An extension to Parameters 4 and 5 for Part A, as set out in **Chapter 2: The Scheme** of the ES [**APP-037**].
ii. Permanent changes in the gradient and height of proposed earthworks.
iii. Additional temporary storage areas.

b. The changes for Part B are:

i. Permanent changes in the gradient and height of proposed earthworks.
ii. Additional temporary storage areas.
iii. Borrow pits.

1.1.7. The details of the Earthworks Amendments are described further in **Chapter 2: Earthworks Amendments** of this ES Addendum and shown in **Appendix A: Proposed Amendment to Temporary and Permanent Earthworks Schedule** and **Figure 1: Landscape Mitigation Masterplan Part A** and **Figure 2: Landscape Mitigation Plan Part B** in **Appendix B: Figures** of this ES Addendum.

1.1.8. The purpose of this ES Addendum is to ensure that the environmental impacts of the proposed amendment have been appropriately assessed with any likely significant environmental effects identified, and to satisfy the requirements of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (EIA Regulations).

1.1.9. This ES Addendum presents an assessment of the likely significant effects as a result of the inclusion of the Earthworks Amendments in the application. It is not a duplication of the ES submitted with the application for development consent and should be read in conjunction with the ES.

1.2 SCOPE OF THE ES ADDENDUM

1.2.1. In order to understand if there would be significant environmental effects as a result of the inclusion of the Earthworks Amendments in the application, a desktop assessment was carried out. The purpose of the desktop assessment was to consider whether the Earthworks Amendments would alter the conclusion of the EIA already undertaken and reported in the ES. The outcome of the desktop assessment then informed a scoping exercise to identify if further EIA, in accordance with the EIA Regulations, would be required. The findings of the scoping exercise are presented in **Appendix C: Summary of Proposed Changes to Application** of this ES Addendum. Certain topics have been scoped out of the assessment and reasonings are provided within this appendix.

1.2.2. **Appendix C: Summary of Proposed Changes to Application** of this ES Addendum indicated that the Earthworks Amendments have the potential to change the conclusions of Part A and Part B of the ES, including the:

a. Construction assessment for **Chapter 5: Air Quality Part A** of the ES [**APP-040**] and **Chapter 5: Air Quality Part B** of the ES [**APP-041**];
b. Construction and operational assessment for **Chapter 6: Noise and Vibration Part A** of the ES [**APP-042]** and **Chapter 6: Noise and Vibration Part B** of the ES [**APP-043**];
c. Construction and operational assessment for **Chapter 7: Landscape and Visual** Part A of the ES [**APP-044**] and **Chapter 7: Landscape and Visual Part B** of the ES [**APP-045**];
d. Construction and operational assessment for **Chapter 8: Cultural Heritage Part A** of the ES [**APP-046**] and **Chapter 8: Cultural Heritage Part B** of the ES [**APP-047**];
e. Construction and operational assessment for **Chapter 10: Road Drainage and the Water Environment Part A** of the ES [**APP-050**] and **Chapter 10: Road Drainage and the Water Environment Part B** of the ES [**APP-051**];
f. Construction assessment for **Chapter 11: Geology and Soils Part A** of the ES [**APP-052**] and **Chapter 11: Geology and Soils Part B** of the ES [**APP-053**]; and
g. Construction assessment for **Chapter 13: Material Resources Part A** of the ES [**APP-056**] and **Chapter 13: Material Resources Part B** of the ES [**APP-057**].

1.2.3. This ES Addendum therefore presents an assessment of the likely significant effects as a result of the Earthworks Amendments upon these environmental topics.

1.2.4. The Earthworks Amendments would not alter assessment of effects presented in the ES and therefore the conclusions of **Chapter 15: Assessment of Combined Effects Part A** of this ES [**APP-060**], **Chapter 15: Assessment of Combined Effects Part B** of the ES [**APP-061**], and **Chapter 16: Assessment of Cumulative Effects** of the ES [**APP-052**]. The assessment of combined and cumulative effects has therefore been scoped out of this ES Addendum.

APPROACH TO THE ASSESSMENT

1.2.5. The assessment has been carried out in line with the methodologies described in the ES, using the professional judgement of the competent experts detailed within the ES, unless otherwise stated in the relevant technical chapters in this ES Addendum.

1.3 CONSULTATION

1.3.1. A summary of consultation undertaken prior to the non-statutory consultation which commenced on 29 January 2021 is presented in **Table 1-1** below.

Table 1-1 - Summary of Consultation by Topic

Date / Method of Contact	Consultee / Name of Consultee	Overview of Consultation
Air Quality		
There has been no change to the assessment of significance and assessment methodology. Therefore, no consultation has been undertaken for the assessment on the Earthworks Amendments.		
Noise and Vibration		
There has been no change to the assessment of significance and assessment methodology, therefore no consultation has been undertaken for the assessment on the Earthworks Amendments.		
Landscape and Visual		
17/12/2020 Teleconference	Northumberland County Council (NCC)	**Key Topics** The Applicant presented to NCC the Earthworks Amendments. **Key Outcomes** The NCC Landscape Officer was generally in support of the changes to the earthwork strategy. However, raised concerns regarding the temporary storage proposed near West Moor, Causey Park Bridge and small hamlets which would result in additional temporary adverse

Date / Method of Contact	Consultee / Name of Consultee	Overview of Consultation
		visual impacts experienced by residential receptors during the construction phase. **Response to Consultation** The Applicant proposes that the north-east edge of the proposed temporary storage/stockpile of soils at Part A approximate ch17400 (M2F-CH172-SB-NGA-4) would be allowed to naturally self-seed with grass to provide a more natural visual screen for residential receptors R48 (Causey Park Lodge (North)) and R49 (Causey Park Lodge (South)), which are both located within 100-150 m to the north-east. This is set out in **Appendix D: Register of Environmental Actions and Commitments** of this ES Addendum. Although there would be a slight increase in the magnitude of change, the significance of effect would remain unchanged at all receptor locations during the construction phase.
Cultural Heritage		
01/02/2021 Teleconference 02/02/2021 Email	Northumberland County Council and Historic England	**Key Topics** Presentation of the proposed amendments to the Scheme and assessment of the impacts on the Historic Environment relating to the Earthworks Amendments. **Key Outcomes** Potential for adverse impacts on Scheduled Monument Ellsnook Round Barrow (NHL 1006564) from excavation of borrow pits on land immediately adjacent would be mitigated through the design measures (reduction of the size of the borrow pit) and by ensuring it is backfilled with appropriate material. Potential for adverse impacts on any currently unknown heritage assets outside of the Order limits at Charlton Mires from the excavation of borrow pits would be evaluated during the post-consent trial trenching. Mitigation measures, including changing the design of borrow pits,

Date / Method of Contact	Consultee / Name of Consultee	Overview of Consultation
		would be determined following the completion of the trial trenching. Assessment has established that there would no additional impacts and no change in the reported effects on the setting of heritage assets as a result of the earthwork amendments.
Road Drainage and the Water Environment		
16/12/2020 Teleconference	Natural England (NE) and Environment Agency (EA)	**Key Topics** The Applicant presented to the EA and NE the Earthworks Amendments. **Key Outcomes** No issues or concerns were raised in relation to the Earthworks Amendments.
23/12/2020 Email	NCC	**Key Topics** Silt provision when working in and adjacent to a watercourse. **Key Outcomes** NCC confirmed that silt provision (e.g. silt fencing, matting, etc) would be required when working in and adjacent to a watercourse. As set out in the **Outline Construction Environmental Management Plan (Outline CEMP)** [**REP3-013** and **REP3-014**], silt mitigation measures would be implemented during the construction of the Scheme. No other mitigation measures were identified by NCC.
Geology and Soils		
There has been no change to the assessment of significance and assessment methodology. Therefore, no consultation has been undertaken for the assessment on the Earthworks Amendments.		
Material Resources		
There has been no change to the assessment of significance and assessment methodology. Therefore, no consultation has been undertaken for the assessment on the Earthworks Amendments.		

1.3.2. Non-statutory consultation was held between 29 January and 25 February 2021. **Table 1-2** sets out the consultation responses relevant to the Earthworks Amendments and the actions taken.

Table 1-2 - Summary of Non-statutory Consultation

Consultee	Consultation Response	Action
Environment Agency	The EA confirmed that a water resources abstraction licence from the Environment Agency may be required for the Earthworks Amendments.	The potential requirement for a water resources abstraction licence is captured in **Appendix D: Register of Environmental Actions and Commitments** of this ES Addendum.
	The dewatering assessment should consider impacts to unknown licensed and private water supplies and groundwater dependent designations such as peat bogs if present.	The Applicant previously consulted with NCC (Lead Local Flood Authority) to ascertain private water supply information, and this was not available at this time. NCC would be further consulted at detailed design stage to identify any further information that could assist with the dewatering assessment. As detailed in **Appendix 10.6: Road Drainage and the Water Environment DMRB Sensitivity Test Part A** of the ES **[APP-259]** and **Appendix 10.5: Road Drainage and the Water Environment DMRB Sensitivity Test Part B** of the ES **[APP-315]**, no impacts on groundwater dependent terrestrial ecosystems were identified due to lack of such ecosystems and lack of groundwater flow impacts.

Consultee	Consultation Response	Action
	Further information was requested in relation to the restoration proposals for the borrow pits.	**Paragraph 2.4.5** of this ES Addendum has been updated to include information on the restoration proposals.
	A plan which identifies the borrow pits, which require dewatering and daily quantity and duration/ restoration proposals should be submitted as part of the DCO submission.	A plan showing the borrow pits, dewatering and daily quantity and duration / restoration proposals will be submitted at Deadline 5 of the Examination.
NCC	NCC had no objection to the proposed Borrow Pit A2E-CH569-NB-BPT-4 and A2E-CH570-NB-BPT-5. This is because they are located over 35m away from the Scheduled Monument at Ellsnook Plantation and are unlikely to impact on the hydrology of archaeological remains within the barrow.	As detailed in **Appendix D: Register of Environmental Actions and Commitments** of this ES Addendum, Borrow Pit A2E-CH570-NB-BPT-5 would be located over 35m from the Scheduled Monument at Ellsnook Plantation
	The physical impact on below ground archaeological remains within the road scheme would be assessed as part of the programme of trial trenching with the requirement for subsequent archaeological mitigation work, dependent on results.	Noted. No response required.
Historic England	Historic England had no comments on the Earthworks Amendments.	N/A
The Coal Authority	The Coal Authority had no additional comments to make in respect of the amendments proposed. They did, however, reiterate their previous comments.	N/A
West End Angler's Club	West End Angler's Club had no comments on the Earthworks Amendments.	N/A

Consultee	Consultation Response	Action
Natural England	Natural England had no comments on the Earthworks Amendments.	N/A

1.3.3. Further detail of the consultation responses is provided within the Consultation Statement submitted at Deadline 4 of the Examination.

1.4 STRUCTURE OF THE ES ADDENDUM

1.4.1. This ES Addendum includes the following:

a. ES Addendum Main Text, setting out the environmental assessment.
b. ES Addendum Technical Appendices (including ES Addendum Figures)

   i. **Appendix A: Proposed Amendment to Temporary and Permanent Earthworks Schedule;**
   ii. **Appendix B: Figures;**
   iii. **Appendix C: Summary of Proposed Changes to Application;** and
   iv. **Appendix D: Register of Environmental Actions and Commitments.**

c. Non-Technical Summary (NTS)

1.4.2. The ES Addendum Main Text follows the content structure set out below:

a. **Chapter 1**: **Introduction** – Provides introduction to this ES Addendum including the purpose of the document, a brief overview of the Earthworks Amendments, the scope of the assessment and a summary of consultation.
b. **Chapter 2**: **Earthwork Amendments** - Provides a description of the Earthworks Amendments.
c. **Chapter 3 – 9** - Details the EIA process, legislative and policy framework, methodology, design, mitigation and enhancement measures and the likely significant effects for each of the environmental topics assessed in this ES Addendum, including:

   i. **Chapter 3: Air Quality**
   ii. **Chapter 4: Noise and Vibration**
   iii. **Chapter 5: Landscape and Visual**
   iv. **Chapter 6: Cultural Heritage**
   v. **Chapter 7: Road Drainage and the Water Environment**
   vi. **Chapter 8: Geology and Soils**
   vii. **Chapter 9: Material Resources**
   viii. **Chapter 10**: **Summary** - Provides a summary of the likely significant effects reported in this ES Addendum
   ix. **Chapter 11**: **Abbreviations**

1.4.3. Within each chapter of this ES Addendum, updated information is presented under the same section headings as the original assessment of the ES. Where text has not changed, it is stated under the section headings, unless otherwise indicated.

2 EARTHWORKS AMENDMENTS

2.1 INTRODUCTION

2.1.1. The content of **Chapter 2: The Scheme** of the ES [**APP-037**] remains unchanged and valid, with the exceptions of the additions and changes to the sections of that chapter outlined below.

2.2 NEED FOR THE AMENDMENT TO THE APPLICATION

JUSTIFICATION FOR EARTHWORKS AMENDMENTS

2.2.1. The Applicant proposes to maximise the re-use of materials (via excavation, deposition and temporary storage), within the existing Order limits. A recent review of the earthworks strategy has identified an opportunity to reduce earthwork movement and as a result greater flexibility in temporary and permanent storage of site won material is required to achieve this.

2.2.2. The benefits for the Earthworks Amendments for the Scheme would be:

2.2.3. Greater flexibility during construction to reduce road haul and offsite disposal, therefore reducing vehicle emissions including greenhouse gas.

2.2.4. Greater flexibility during construction to reduce the importation of material, therefore reducing vehicle emissions including greenhouse gas.

a. By keeping the majority of material transportation within the Site, vehicle movements between Part A and Part B and for disposal, would be minimised, reducing construction traffic and disruption along this stretch of the road.

b. Where constructed, the addition of new bunds would provide positive impacts, such as provision of additional screening of the A1, and integrating the earthworks into the landscape and immediate landform.

c. Where constructed, the addition of new bunds would facilitate screening for sensitive receptors near the A1, especially during initial woodland establishment, softening the appearance.

d. The increase in height of soil bunds already proposed would facilitate better screening of the A1, especially during the woodland establishment, softening the appearance.

e. Uplift / slackening of slopes to areas would provide positive impacts in integrating the earthworks into the landscape and immediate landform.

f. Infilling of junction “bowls” would achieve better integration with the existing landform.

2.3 EARTHWORKS AMENDMENTS LOCATION

2.3.1. The Scheme would remain between Warreners House Interchange at Morpeth (at approximately easting: 418218, northing: 588444 and the existing dual carriageway at Felton (at approximately easting: 417482, northing: 600795) for approximately 12.6 km in length (Part A), and between Alnwick (at approximately easting: 420007, northing: 614583)

and Ellingham (at approximately easting: 416944, northing 623054) for approximately 8 km in length (Part B). The Earthworks Amendments would be located within the Order limits and therefore **Figure 1.1: Location Plan Part A** of the ES [**APP-064**] and **Figure 1.2: Location Plan Part B** of the ES [**APP-065**] remain unchanged.

2.3.2. There are 61 areas of Earthworks Amendments, which are located across the Scheme. The earthworks locations are shown in **Appendix A: Proposed Amendment to Temporary and Permanent Earthworks Schedule** of this ES Addendum.

2.3.3. The remaining content of **Chapter 2: The Scheme, Section 2.3** of the ES [**APP-037**] remains unchanged and valid.

EARTHWORKS AMENDMENTS FOOTPRINT

2.3.4. There would be no change to the existing Order limits and the Earthworks Amendments would be undertaken within the existing Order limits shown in **Figure 1.1: Location Plan Part A** of the ES [**APP-064**] and **Figure 1.2: Location Plan Part B** of the ES [**APP-065**].

OVERVIEW OF SURROUNDING AREA

2.3.5. Given the Earthworks Amendments are all located within the Order limits, the area surrounding the Earthworks Amendments is the same as that described in **Chapter 2: The Scheme, Section 2.3** of the ES [**APP-037**].

2.4 EARTHWORKS AMENDMENTS DESCRIPTION

2.4.1. The content of **Chapter 2: The Scheme, Section 2.5** of the ES [**APP-037**] remains unchanged and valid, with the exception of the additions and changes outlined below.

2.4.2. The **General Arrangement Plans** [**APP-008**] (revised General Arrangement to be submitted at Deadline 4) illustrate the main components of the Scheme and an updated drawing have been submitted at Deadline 4 (12 March 2021) of the Examination.

2.4.3. The Earthworks Amendments would be located along the Scheme. For Part A, the changes include some alteration to Parameters 4 and 5, as set out in **Chapter 2: The Scheme** of the ES [**APP-037**]. The Earthworks Amendments would be designed to accommodate these measures and take into consideration the diverted 66 kV Extra High Voltage cable (Work Number: 24, Schedule 1 of the **draft DCO** [**REP3-004** and **REP3-005**]) as shown on **Figure 7.14: Landscape Mitigation Plan including Assessment Parameter 3 for Part B** of the ES [**APP-148**].

2.4.4. The Earthworks Amendments include:

a. Utilising borrow pits to exchange and win additional material suitable for construction.
b. Maximising use of soil bunds already specified within the **Figure 7.8: Landscape Mitigation Masterplan Part A** of the ES [**REP3-008**], **Figure 7.10 Landscape Mitigation Plan Part B** of the ES [**APP-144**] and Fi**gure 7.14: Landscape Mitigation Plan including Assessment Parameter 3 for Part B** of the ES [**APP-148**], for disposal of excess site material, in Part A.

c. Maximising of fill within slopes, already specified within **Figure 7.8: Landscape Mitigation Masterplan Part** A of the ES [**REP3-008**], **Figure 7.10 Landscape Mitigation Plan Part B** of the ES [**APP-144**] and **Figure 7.14: Landscape Mitigation Plan including Assessment Parameter 3 for Part B** of the ES [**APP-148**], for re-use of site material, in Part A.
d. Creation of new soil bunds within Part B to maximise re-use of excess site material.
e. Maximising of slopes for re-use of excess Site material, in Part B.
f. Laying down additional material increasing some localised ground levels.
g. Raising levels of junction "bowls" (level or rounded rather than dished).
h. Creating new, temporary soil storage areas within both Part A and Part B.

2.4.5. Borrow Pits A2E-CH590-SB-BPT-3 and A2E-CH569-NB-BPT-4 would be backfilled with suitable material and lined to form detention basins as set out in **Appendix 10.5: Drainage Strategy Report Part A** of the ES [**APP-258**] and **Appendix 10.4: Drainage Strategy Report Part B** of the ES [**APP-314**]. Borrow Pits A2E-CH586-SB-BPT-1, A2E-CH591-SB-BPT-2 and A2E-CH570-NB-BPT-5 would be backfilled with suitable materials as detailed in **Appendix A: Proposed Amendment to Temporary and Permanent Earthworks Schedule** and **Appendix D: Register of Environmental Actions and Commitments** of this ES Addendum.

2.4.6. Refer to **Appendix A: Proposed Amendment to Temporary and Permanent Earthworks Schedule** of this ES Addendum for further details on the Earthworks Amendments. The contours of the heights of the bunds are shown on **Figure 1: Landscape Mitigation Masterplan Part A** and **Figure 2: Landscape Mitigation Plan Part B** in **Appendix B: Figures** of this ES Addendum. The bunds would have a maximum gradient of 1:4 and would not exceed 4 m in height.

2.5 ENVIRONMENTAL DESIGN

2.5.1. The environmental design would not change from that contained in **Chapter 2: The Scheme** of the ES [**APP-037**], however there would be some additional permanent bunds associated with the proposed amendment to the permanent earthworks. Mitigation measures such as detention basins, grassed areas, trees, shrubs and hedgerow planting would remain the same as originally proposed in **Figure 7.8: Landscape Mitigation Masterplan Part A** of the ES [**REP3-008], Figure 7.10 Landscape Mitigation Plan Part B** of the ES [**APP-144**] and **Figure 7.14: Landscape Mitigation Plan including Assessment Parameter 3 for Part B** of the ES [**APP-148**].

2.6 CONSTRUCTION

2.6.1. The Earthworks Amendments seek to balance materials within the Order limits; seeking to reduce the need for imported suitable material for earthworks construction (with the exception of specialist fill materials for structure and drainage) or any off-site disposal. It is proposed that the bulk of materials would be managed within the Order limits.

2.6.2. For Part A, the amount of imported material would remain the same as detailed in **Chapter 13: Material Resources Part A** of the ES [**APP-056**]. However, the Earthworks Amendments would minimise the need to haul material between Part A and Part B and reduce the need for substantial amounts of unacceptable material (i.e. material unsuitable for use for any application on site) being disposed off-site.

2.6.3. For Part B, there would be a reduction of approximately 132,000 m3 of imported material (of which approximately 88,000 m3 is from Part A) when compared to **Chapter 13: Material Resources Part B** of the ES [**APP-057**]. This is anticipated to lead to approximately 110,000 m3 of material to be used onsite rather than being disposed of offsite.

2.6.4. For both Part A and Part B, the Applicant would seek to limit off-site disposal to contaminated materials only. Materials retained within the Site would be either used to refill borrow areas, recycled or recovered for use in footway foundations or access tracks where possible (i.e. material of suitable strength and cleanliness) or as thickened topsoil where appropriate.

2.6.5. Disposal within licensed and suitable tips would be used for those materials deemed contaminated and not suitable for reuse. This would include (but not be limited to) tar bound aggregates or materials contaminated with leachate for instance associated with the foot and mouth pit.

2.6.6. The Earthworks Amendments would lead to the following material re-use in Part A:

a. Topsoil: approximately 256,000 m³ (167,000 m3 ᵒf which would be used to re-soil, and 89,000 m3 ᵒf which would be used in landscaping proposals).
b. Acceptable Class 2: 364,000 m³ which would be used in embankment fill.
c. Acceptable rock: 89,000 m³ unsuitable in non-structural fill, 26,000 m³ class 1 fill.
d. Acceptable Slope/drainage: 68,000 m³ which would be used in landscape proposals (extending toe of slopes or reprofiling existing / proposed bunds, as shown in Figure 1: Landscape Mitigation Masterplan Part A and Figure 2: Landscape Mitigation Plan Part B in **Appendix B: Figures** of this ES Addendum).
e. Unacceptable: 150,000 m³ which would be used in landscape proposals (extending toe of slopes or reprofiling existing / proposed bunds or backfilling borrow pits, as shown in **Figure 1: Landscape Mitigation Masterplan Part A** and **Figure 2: Landscape Mitigation Plan Part B** in **Appendix B: Figures** of this ES Addendum).

2.6.7. The Earthworks Amendments would lead to the following material re-use in Part B:

a. Topsoil: 131,000 m³ (90,000 m³ of which would be used to re-soil, and 41,000 m³ of which would be used in landscape proposals).
b. Acceptable Class 2: 12,000 m³ which would be used in embankment fill.
c. Acceptable rock: 6,700 m³ class 1 fill, 18,000 m³ structural fill.
d. Unsuitable: 35,000 m³ which would be used in refill borrow pits.
e. Unacceptable: 36,000 m³ which would be used in refill borrow pits.

2.6.8. The construction methodology outlined in Part A and Part B of the ES and the **Outline CEMP** [**REP3-013** and **REP3-014**] would remain the same as originally proposed. The main contractor would prepare a Materials Management Plan containing the updated material quantities as part of the CEMP prior to commencement of the Scheme.

2.7 OPERATIONAL MAINTENANCE AND MANAGEMENT

2.7.1. The operational maintenance and management measures outlined in Part A and Part B of the ES and the **Outline CEMP** [**REP3-013 and REP3-014**] would remain the same as originally proposed. Following completion of construction, the main contractor would be responsible for defects over a set period (generally 12 months). After this period has lapsed, all roads, bridges, footways and other infrastructure associated with the Scheme would be adopted by the Applicant or NCC (as detailed in **Chapter 2: The Scheme** of the ES [**APP-037**] and fall within their routine schedule of maintenance and inspections. Towards the end of the construction period the CEMP would be developed as a Handover Environmental Management Plan (HEMP) which would include the monitoring and management arrangements going forward during future maintenance and operation of the Scheme.

3 AIR QUALITY

3.1 INTRODUCTION

3.1.1. **Chapter 5: Air Quality Part A** of the ES [**APP-040**] and **Chapter 5: Air Quality Part B** of the ES [**APP-041**] consider the likely significant effects of the Scheme on Air Quality. This comprises a review of the dust and particulate matter generated as a result of the construction works. The result of the assessment show that there are no significant air quality effects resulting from the Scheme.

3.1.2. This section of the ES Addendum considers only the likely significant effects of the Earthworks Amendments on Air Quality. As detailed in **Appendix C: Summary of Proposed Changes to Application** of this ES Addendum, the Earthwork Amendments are not anticipated to impact operational Air Quality and therefore this has not been considered in this chapter.

3.2 COMPETENT EXPERT EVIDENCE

3.2.1. As detailed in **Table 3-1**, the professionals contributing to the production of this assessment have sufficient expertise to ensure the completeness and quality of this assessment. The table sets out the details of expertise where this is different to those presented in the ES.

Table 3-1 – Air Quality Professional Competence

Name	Role	Qualifications and Professional Membership	Experience
Sioni Hole	Author	MPhys, Physics Member of the Institution of Environmental Sciences (MIES) Member of the Institute of Air Quality Management (MIAQM)	Six years of relevant Environmental Impact Assessment (EIA) experience - Air Quality specialist on the A1 Birtley to Coal House Stages 2 and 3 Assessments - Air Quality specialist on the A1 Scotswood to North Brunton Stages 2 and 3 Assessments - Air Quality specialist for the A1(M), M27 and M3 smart motorway schemes
Bethan Tuckett-Jones	Reviewer	BSc, Physics PhD Meteorology Member of the Institution of Environmental Sciences (MIES)	20 years of relevant EIA experience: - Air Quality technical lead on the A1 Birtley to Coal House Stages 2 and 3 Assessments

Name	Role	Qualifications and Professional Membership	Experience
		Member of the Institute of Air Quality Management (MIAQM)	- Air Quality technical lead on the A1 Scotswood to North Brunton Stages 2 and 3 Assessments - Air Quality technical lead for the A1(M), M27 and M3 smart motorway schemes

3.3 LEGISLATIVE AND POLICY FRAMEWORK

3.3.1. The legislative and policy framework for Air Quality has not changed since the publication of the ES. Therefore, the text within **Section 5.3, Chapter 5: Air Quality Part A** of the ES [**APP-040**] and **Section 5.3 Chapter 5: Air Quality Part B** of the ES [**APP-041**] remains valid.

3.4 ASSESSMENT METHODOLOGY

3.4.1. In order to ensure a comparable assessment with the ES, the assessment methodology followed for Air Quality has not changed in response to the proposed amendment to the temporary and permanent earthworks. Therefore, the text within **Section 5.4, Chapter 5: Air Quality Part A** of the ES [**APP-040**] and **Section 5.4, Chapter 5: Air Quality Part B** of the ES [**APP-041**] remains unchanged and valid.

3.5 ASSESSMENT ASSUMPTIONS AND LIMITATIONS

3.5.1. The assessment assumptions and limitations for Air Quality for the proposed amendment to the l temporary and permanent earthworks have not changed from the ES. Therefore, the text within **Section 5.5, Chapter 5: Air Quality Part A** of the ES [**APP-040**] and Section 5.5 Chapter 5: Air Quality Part B of the ES [**APP-041**] remains unchanged and valid.

3.6 STUDY AREA

3.6.1. The Study Area for both the construction Air Quality assessment has not changed as a result of the Earthworks Amendments. Therefore, the text covering both aspects of the Scheme set out within **Section 5.6, Chapter 5: Air Quality Part A** of the ES [**APP-040**] and **Section 5.6, Chapter 5: Air Quality Part B** of the ES [**APP-041**] remains unchanged and valid.

3.7 BASELINE CONDITIONS

3.7.1. The Earthworks Amendments are located within the Orders Limits presented in the ES, meaning the baseline for the Air Quality assessment has not changed. Therefore, the text

within **Section 5.7, Chapter 5: Air Quality Part A** of the ES [**APP-040**] and **Section 5.7, Chapter 5: Air Quality Part B** of the ES [**APP-041**] remains unchanged and valid.

3.8 POTENTIAL IMPACTS

CONSTRUCTION

3.8.1. The assessment of impacts arising from construction dust detailed within **Section 5.8, Chapter 5: Air Quality Part A** of the ES [**APP-040**] and **Section 5.8, Chapter 5: Air Quality Part B** of the ES [**APP-041**] considers the potential impacts of all dust generating activities arising from construction of the Scheme. Inherent within the assessment methodology is the assumption that dust generating activities may occur at any location within the Order limits. Whilst there are changes to the construction activities with the Earthworks Amendments, including the location of temporary stockpiles, there are no changes to the Orders limits presented in the ES. Therefore, all impacts during construction remain unchanged.

3.9 DESIGN, MITIGATION AND ENHANCEMENT MEASURES

3.9.1. The mitigation requirements for Air Quality have not changed due to the Earthworks Amendments. Therefore, the text within **Section 5.9, Chapter 5: Air Quality Part A** of the ES [**APP-040**] and **Section 5.9, Chapter 5: Air Quality Part B** of the ES [**APP-041**] remains unchanged and valid. Additional mitigation measures are not required as a result of the Earthworks Amendments.

3.10 ASSESSMENT OF LIKELY SIGNIFICANT EFFECTS

CONSTRUCTION

3.10.1. As set out within **Section 5.10, Chapter 5: Air Quality Part A** of the ES [**APP-040**] and **Section 5.10, Chapter 5: Air Quality Part B** of the ES [**APP-041**], with the application of appropriate mitigation measures there are no significant effects expected as a result of the Scheme. This assessment would remain valid and unchanged with the Earthworks Amendments.

3.11 MONITORING

3.11.1. The monitoring requirements for Air Quality have not changed due to the Earthworks Amendments. Therefore, the text within **Section 5.11, Chapter 5: Air Quality Part A** of the ES [**APP-040**] and **Section 5.11, Chapter 5: Air Quality Part B** of the ES [**APP-041**] remains unchanged and valid.

3.12 UPDATED DMRB GUIDANCE

3.12.1. Since the assessments in the ES were completed, the DMRB methodology was superseded and replaced with updated guidance as detailed in **Section 5.4, Chapter 5: Air Quality Part A** of the ES [**APP-040**] and **Section 5.4, Chapter 5: Air Quality Part B** of the ES [**APP-041**]. An Air Quality DMRB sensitivity test for likely significant effects has been undertaken for the Scheme as detailed in **Appendix 5.8: Air Quality DMRB Sensitivity**

Test Part A of the ES [**APP-205**] and **Appendix 5.7: Air Quality DMRB Sensitivity Test Part B** of the ES [**APP-275**]. It was determined that there would be a non-material change to the methodology of the assessment of construction dust as a result of the updated methodology. Therefore, there would be no change to the results of the assessment in this ES Addendum as a result of the updated DMRB guidance.

4 NOISE AND VIBRATION

4.1 INTRODUCTION

4.1.1. **Chapter 6: Noise and Vibration Part A** of the ES [**APP-042**], **Chapter 6: Noise and Vibration Part B** of the ES [**APP-043**] and the **Noise Addendum** [**REP1-019**] consider the likely significant effects of the Scheme on Noise and Vibration during the construction and operational stages.

4.1.2. This section of the ES Addendum considers only the likely significant effects of the Earthworks Amendments with respect to Noise and Vibration.

4.2 COMPETENT EXPERT EVIDENCE

4.2.1. The competent expert evidence for the Noise and Vibration assessment has not changed for this assessment. Therefore, the text relating to Michael Ashcroft, Nicola Bolton and Steve Fisher within **Section 6.2, Chapter 6: Noise and Vibration Part A** of the ES [**APP-042**] and **Section 6.2, Chapter 6: Noise and Vibration Part B** of the ES [**APP-043**] remains unchanged and valid.

4.3 LEGISLATIVE AND POLICY FRAMEWORK

4.3.1. The legislative and policy framework for the Noise and Vibration assessment has not changed since the publication of the ES. Therefore, the text within **Section 6.3, Chapter 6: Noise and Vibration Part A** of the ES [**APP-042**] and **Section 6.3, Chapter 6: Noise and Vibration Part B** of the ES [**APP-043**] (applicable to the construction stage), and Section 1.6 of the **Noise Addendum** [**REP1-019**] (applicable to the operational stage) remains valid.

4.4 ASSESSMENT METHODOLOGY

4.4.1. In order to ensure a comparable assessment with the ES, the methodology followed for the Noise and Vibration assessment has not changed in response to the Earthworks Amendments. Therefore, the text within **Section 6.4, Chapter 6: Noise and Vibration Part A** of the ES [**APP-042**] and **Section 6.4, Chapter 6: Noise and Vibration Part B** of the ES [**APP-043**] (applicable to the construction stage), and **Section 1.7** of the **Noise Addendum** [**REP1-019**] (applicable to the operational stage), remains unchanged and valid.

4.5 ASSESSMENT ASSUMPTIONS AND LIMITATIONS

4.5.1. The assumptions and limitations for the Noise and Vibration assessment have not changed from the ES as a result of the Earthworks Amendments.

4.5.2. For the purpose of the construction noise and vibration assessments presented within **Chapter 6: Noise and Vibration Part A** of the ES [**APP-042**] and **Chapter 6: Noise and Vibration Part B** of the ES [**APP-043**], it was assumed that earthwork activities would be undertaken within the Order limits, which is where the Earthworks Amendments would also be located.

4.5.3. Therefore, the text within **Section 6.5, Chapter 6: Noise and Vibration Part A** of the ES [**APP-042**] and **Section 6.5, Chapter 6: Noise and Vibration Part B** of the ES [**APP-043**] (applicable to the construction stage), and **Section 1.8** of the **Noise Addendum [REP1-019]** (applicable to the operational stage) remains unchanged and valid.

4.6 STUDY AREA

4.6.1. The Study Area for the Noise and Vibration assessment has not changed as a result of the Earthworks Amendments. Therefore, the text within **Section 6.6, Chapter 6: Noise and Vibration Part A** of the ES [**APP-042**] and **Section 6.6, Chapter 6: Noise and Vibration Part B** of the ES [**APP-043**] (applicable to the construction stage), and **Section 1.9** of the **Noise Addendum** [**REP1-019**] (applicable to the operational stage) remains unchanged and valid.

4.7 BASELINE CONDITIONS

4.7.1. The Earthworks Amendments are located within the Order limits presented in the ES. Therefore, the baseline conditions defined within **Section 6.7, Chapter 6: Noise and Vibration Part A** of the ES [**APP-042**], **Section 6.7, Chapter 6: Noise and Vibration Part B** of the ES [**APP-043**] and **Section 1.10** of the **Noise Addendum** [**REP1-019**] are still appropriate and valid.

4.8 POTENTIAL IMPACTS

CONSTRUCTION

4.8.1. The construction noise and vibration assessments detailed within **Section 6.8, Chapter 6: Noise and Vibration Part A** of the ES [**APP-042**] and **Section 6.8, Chapter 6: Noise and Vibration Part B** of the ES [**APP-043**], assume that earthwork activities would be undertaken within the Order limits, which is where the Earthworks Amendments would also be located, including at the closest points to noise sensitive receptors.

4.8.2. The Earthworks Amendments would be located within the Order limits presented within the ES and so these activities would be no closer to existing receptors than has already been assumed and assessed.

4.8.3. The construction noise and vibration assessments presented within **Section 6.8, Chapter 6: Noise and Vibration Part A** of the ES [**APP-042**] and **Section 6.8, Chapter 6: Noise and Vibration Part B** of the ES [**APP-043**] therefore remain unchanged and valid.

4.8.4. All impacts during construction of the Scheme, detailed within **Section 6.8, Chapter 6: Noise and Vibration Part A** of the ES [**APP-042**] and **Section 6.8, Chapter 6: Noise and Vibration Part B** of the ES [**APP-043**], remain unchanged and are valid.

OPERATION

4.8.5. The Earthworks Amendments including the introduction of additional permanent bunds is expected to result in no further adverse operational stage effects. The bunds do however

have the potential to provide additional screening of noise from the Scheme, therefore potentially reducing adverse effects and increasing beneficial effects.

4.8.6. The Earthworks Amendments are not a substitute for the proposed noise barriers. It is necessary that the heights and extents of the noise barriers are maintained to ensure that the predicted noise reductions at properties as discussed within **Section 1.12** of the **Noise Addendum** [**REP1-019**] can still be achieved from the noise barriers.

4.8.7. Given that noise reductions achieved by the proposed noise barriers are to be unaffected by the additional permanent bunds, all impacts during operation of the Scheme should be no worse than those detailed within **Section 1.11** of the **Noise Addendum** [**REP1-019**].

4.9 DESIGN, MITIGATION AND ENHANCEMENT MEASURES

4.9.1. The measures detailed within **Section 6.9, Chapter 6: Noise and Vibration Part A** of the ES [**APP-042**], **Section 6.9, Chapter 6: Noise and Vibration Part B** of the ES [**APP-043**] and **Section 1.12** of the **Noise Addendum** [**REP1-019**] remain unchanged and valid. Additional mitigation measures are not required as a result of the Earthworks Amendments.

4.10 ASSESSMENT OF LIKELY SIGNIFICANT EFFECTS

4.10.1. The assessment of likely significant effects for Noise and Vibration has not changed due to the Earthworks Amendments. Therefore, the text within **Section 6.10, Chapter 6: Noise and Vibration Part A** of the ES [**APP-042**] and **Section 6.10, Chapter 6: Noise and Vibration Part B** of the ES [**APP-043**] (applicable to the construction stage) and **Section 1.13** of the **Noise Addendum** [**REP1-019**] (applicable to the operational stage), remains unchanged and valid.

4.11 MONITORING

4.11.1. The monitoring requirements for Noise and Vibration have not changed due to the Earthworks Amendments. Therefore, the text within **Section 6.11, Chapter 6: Noise and Vibration Part A** of the ES [**APP-042**] and **Section 6.11, Chapter 6: Noise and Vibration Part B** of the ES [**APP-043**] (applicable to the construction stage), and **Section 1.16** of the **Noise Addendum** [**REP1-019**] (applicable to the operational stage) remains unchanged and valid.

4.12 UPDATED DMRB GUIDANCE

4.12.1. Since the assessments in the ES were completed, the DMRB methodology has been superseded and replaced with updated guidance in the form of DMRB LA111 Noise and Vibration Revision 2 (LA 111).

4.12.2. The methodology used to undertake the construction Noise and Vibration assessments detailed within **Section 6.4, Chapter 6: Noise and Vibration Part A** of the ES [**APP-042**] and **Section 6.4, Chapter 6: Noise and Vibration Part B** of the ES [**APP-043**] is sufficiently similar to that presented within LA 111 that the potential for changes to the

conclusions of the construction stage assessments as a result of the updated guidance is considered to be low.

4.12.3. The Earthworks Amendments are expected not to worsen the operational stage noise assessment presented within **Section 1.13** of the **Noise Addendum** [**REP1-019**] which follows the LA 111 guidance. The updated DMRB guidance therefore does not alter the operational stage conclusions presented within this ES Addendum.

5 LANDSCAPE AND VISUAL

5.1 INTRODUCTION

5.1.1. **Chapter 7: Landscape and Visual Part A** of the ES [**APP-044**] and **Chapter 7: Landscape and Visual Part B** of the ES [**APP-045**] considers the likely significant effects of the Scheme on Landscape and Visual.

5.1.2. This section of the ES Addendum considers only the likely significant effects of the Earthworks Amendments on Landscape and Visual.

5.2 COMPETENT EXPERT EVIDENCE

5.2.1. As detailed in **Table 5-1**, the professionals contributing to the production of this assessment have sufficient expertise to ensure the completeness and quality of this assessment. The table sets out the details of expertise where this is different to those presented in the ES.

Table 5-1 – Landscape and Visual Professional Competence

Name	Role	Qualifications and Professional Membership	Experience
Kevin Paterson	Author	Master of Landscape Architecture BA (Hons) Fine Art: Painting & Printmaking CMLI (Chartered Member of the Landscape Institute)	Over five years of relevant Landscape and Visual Impact Assessment (LVIA) experience on a range of road schemes including: - A9 Dualling (Lot 2 – Pass of Birnam to Glen Garry) - A90/A96 Haudagain Improvement - A9/A96 Inshes to Smithton - A9/A82 Longman Junction Improvement Scheme
David Barker	Checker/reviewer	BA (Hons) Landscape Architecture MA Landscape Architecture	Over 25 years of relevant LIVA experience including

Name	Role	Qualifications and Professional Membership	Experience
		Grad Dip Urban Design CMLI (Chartered Member of the Landscape Institute)	a range or road schemes such as - Manchester North West Quadrant - M6 Smart Motorway Improvements - A19 Testo's Junction Alteration - M1 J47 Improvements

5.3 LEGISLATIVE AND POLICY FRAMEWORK

5.3.1. The legislative and policy framework for Landscape and Visual has not changed since the publication of the ES. Therefore, the text within **Section 7.3, Chapter 7: Landscape and Visual Part A** of the ES [**APP-044**] and **Section 7.3, Chapter 7: Landscape and Visual Part B** of the ES [**APP-045**] remains valid.

5.4 ASSESSMENT METHODOLOGY

5.4.1. In order to ensure a comparable assessment with the ES, the assessment methodology followed for Landscape and Visual has not changed in response to the Earthworks Amendments. Therefore, the text within **Section 7.4, Chapter 7: Landscape and Visual Part A** of the ES [**APP-044**] and **Section 7.4, Chapter 7: Landscape and Visual Part B** of the ES [**APP-045**] remains unchanged and valid.

5.5 ASSESSMENT ASSUMPTIONS AND LIMITATIONS

5.5.1. The assessment assumptions and limitations for Landscape and Visual for the Earthworks Amendments have not changed from the ES. Therefore, the text within **Section 7.5, Chapter 7: Landscape and Visual Part A** of the ES [**APP-044**] and **Section 7.5, Chapter 7: Landscape and Visual Part B**, of the ES [**APP-045**] remains unchanged and valid.

5.6 STUDY AREA

5.6.1. The Study Area for the Landscape and Visual assessment has not changed as a result of the Earthworks Amendments. Therefore, the text within **Section 7.6, Chapter 7: Landscape and Visual Part A** [**APP-044**] and **Section 7.6, Chapter 7: Landscape and Visual Part B** of the ES [**APP-045**] remains unchanged and valid.

5.7 BASELINE CONDITIONS

5.7.1. The baseline for the Landscape and Visual assessment has not changed for the Earthworks Amendments. Therefore, the text within **Section 7.7, Chapter 7: Landscape and Visual Part A** of the ES [**APP-044**] and **Section 7.7, Chapter 7: Landscape and Visual Part B** of the ES [**APP-045**] remains unchanged and valid.

5.8 POTENTIAL IMPACTS

CONSTRUCTION

5.8.1. During construction, visual impacts of the Earthworks Amendments within the Scheme would result from:

a. Creation of new soil bunds to maximise re-use of excess Site material.

b. Laying down additional material increasing some localised ground levels.

c. Raising levels of junction "bowls" (level or rounded rather than dished).

d. Creating new, temporary soil storage areas.

5.8.2. All other impacts during construction, detailed within **Section 7.8, Chapter 7: Landscape and Visual Part A** of the ES [**APP-044**] and **Section 7.8, Chapter 7: Landscape and Visual Part B** of the ES [**APP-045**], remain unchanged and valid.

OPERATION

5.8.3. During operation, the visual impacts of the Earthworks Amendments within the Scheme are:

a. Where constructed, the addition of new bunds would provide positive impacts by integrating the earthworks into the landscape and immediate landform.

b. Where constructed, the addition of new bunds would provide additional screening for sensitive receptors near the A1, especially during initial woodland establishment, before planting matures.

c. The increase in height of soil bunds already proposed would provide additional screening of the A1, especially during woodland establishment, before planting matures.

d. Uplift / slackening of slopes to areas would provide positive impacts in integrating the earthworks into the landscape and immediate landform. This would also aid the establishment of proposed planting and grassland.

e. Infilling of junction "bowls" would achieve better integration with the existing landform.

5.8.4. All other impacts during operation, detailed within **Section 7.8, Chapter 7: Landscape and Visual Part A** of the ES [**APP-044**] and **Section 7.8**, **Chapter 7: Landscape and Visual Part B** of the ES [**APP-045**], remain unchanged and valid.

5.9 DESIGN, MITIGATION AND ENHANCEMENT MEASURES

5.9.1. In addition to the measures detailed within **Section 7.9, Chapter 7: Landscape and Visual Part A** of the ES [**APP-044**] and **Section 7.9, Chapter 7: Landscape and Visual Part B** of

the ES [**APP-045**], the mitigation measures set out in **paragraphs 5,9.2, 5.9.4** and **5.9.5** below would be implemented.

CONSTRUCTION

5.9.2. The north-east edge of the proposed temporary storage/stockpile of soils at Part A approximate ch17400 (M2F-CH172-SB-NGA-4) would be allowed to naturally self-seed with grass and would be left untouched for as long as possible (minimum three months during the growing season). This would be to provide a more natural visual screen for residential receptors R48 (Causey Park Lodge (North)) and R49 (Causey Park Lodge (South)), which are both located within 100-150 m to the north-east. This is set out in **Appendix D: Register of Environmental Actions and Commitments** of this ES Addendum.

5.9.3. All other construction mitigation measures detailed within **Section 7.9, Chapter 7: Landscape and Visual Part A** of the ES [**APP-044**] and **Section 7.9, Chapter 7: Landscape and Visual Part B** of the ES [**APP-045**], remain unchanged and valid.

OPERATION

5.9.4. The proposed slackening of slopes at various locations along the length of Part A would result in a slight beneficial change to the magnitude of visual impacts within the affected area due to providing better visual integration with the adjoining landscape (Assessment Parameter 4, as described within **Table 7-25** of **Section 7.10, Chapter 7: Landscape and Visual Part A** of the ES [**APP-044**]).

5.9.5. The proposed increase in height (greater than 2 m) of proposed earth bunds 3, 5 and 6 along the length of Part A (described as desirable mitigation within **Section 7.9** and detailed as 2 m high earth bunds within **Table 7-25** of **Section 7.10, Chapter 7: Landscape and Visual Part A** of the ES [**APP-044**]) would be an addition to Assessment Parameter 5 for Part A as set out in **Chapter 2: The Scheme** of the ES [**APP-037**].

5.9.6. All other operation mitigation measures detailed within **Section 7.9, Chapter 7: Landscape and Visual Part A** of the ES [**APP-044**] and **Section 7.9, Chapter 7: Landscape and Visual Part B** of the ES [**APP-045**], remain unchanged and valid.

ENHANCEMENT

5.9.7. No enhancement measures have been proposed.

5.10 ASSESSMENT OF LIKELY SIGNIFICANT EFFECTS

5.10.1. This section sets out the anticipated effects on visual receptors as a result of the Earthworks Amendments and their significance, taking into account the mitigation described above. Part A residential visual receptors are detailed in **Table 5-2** below, Part A Public Rights of Way (PRoW) visual receptors in **Table 5-3** below, Part A commercial and community visual receptors in **Table 5-4** below and Part B visual receptors in **Table 5-5** below. Variances in the effects predicted within the ES are then summarised at the end of this section.

5.10.2. Visual receptors that have not been mentioned in **Tables 5-2 to 5-5** but assessed in **Chapter 7: Landscape and Visual Part A** of the ES [**APP-044**] and **Chapter 7: Landscape and Visual Part B** of the ES [**APP-045**] would experience no change in view as a result of the Earthworks Amendments.

5.10.3. For the purpose of this assessment only those effects identified as being of moderate significance or greater are assessed as significant. As **Tables 5-2 to 5-5** demonstrate, the Earthworks Amendments would not result in any changes in significance of effect from non-significant to significant.

Table 5-2 – Part A Residential Visual Effects Schedule

Receptor Ref. No.	Additional Earthworks Visible	Change in View from the Scheme as assessed in ES	Sensitivity	Magnitude of Change in ES	Significance of Effect in ES	Magnitude of Change (from existing baseline) with ES Proposals and Additional Earthworks	New Significance of Effect
R20 (Felton Park)	M2F-CH227-SB-WDL-1	Additional temporary adverse impacts during the construction phase associated with the bunding of proposed area of woodland planting. The additional impacts would not however be sufficient to change the overall significance of effect as assessed in the ES. The significance of visual effects would reduce following the establishment of woodland planting on the bund.	High	Construction: Minor Winter Year 1 of operation: Minor Summer Year 15 of operation: No Change	Construction: Slight Adverse Winter Year 1 of operation: Slight Adverse Summer Year 15 of operation: Neutral	Construction: Minor/ Moderate Winter Year 1 of operation: Minor Summer Year 15 of operation: No Change	Construction: Slight Adverse Winter Year 1 of operation: Slight Adverse Summer Year 15 of operation: Neutral
R21 (St. Mary's House)	M2F-CH227-SB-WDL-1	Additional temporary adverse impacts during the construction phase associated with the bunding of proposed area of woodland planting. The additional impacts would not however be sufficient to change the overall significance of effect as assessed in the ES. The significance of visual effects would reduce following the establishment of woodland planting on the bund.	High	Construction: Minor Winter Year 1 of operation: Minor Summer Year 15 of operation: No Change	Construction: Slight Adverse Winter Year 1 of operation: Slight Adverse Summer Year 15 of operation: Neutral	Construction: Minor/ Moderate Winter Year 1 of operation: Minor Summer Year 15 of operation: No Change	Construction: Slight Adverse Winter Year 1 of operation: Slight Adverse Summer Year 15 of operation: Neutral
R32 (Tithemans Cottage)	M2F-CH217-SB-TPS-11	Minor additional temporary adverse impacts during the construction phase as a result of the proposed temporary storage/stockpile of soils and other materials within 450 m to the west of the property. The	High	Construction: Negligible Winter Year 1 of operation:	Construction: Slight Adverse Winter Year 1 of operation:	Construction: Negligible Winter Year 1 of operation:	Construction: Slight Adverse Winter Year 1 of operation:

Receptor Ref. No.	Additional Earthworks Visible	Change in View from the Scheme as assessed in ES	Sensitivity	Magnitude of Change in ES	Significance of Effect in ES	Magnitude of Change (from existing baseline) with ES Proposals and Additional Earthworks	New Significance of Effect
		additional impacts would not however be sufficient to change the overall significance of effect as assessed in the ES.		Negligible Summer Year 15 of operation: No Change	Slight Adverse Summer Year 15 of operation: Neutral	Negligible Summer Year 15 of operation: No Change	Slight Adverse Summer Year 15 of operation: Neutral
R34 (Thirston New House)	M2F-CH217-SB-TPS-11	Minor additional temporary adverse impacts during the construction phase as a result of the proposed temporary storage/stockpile of soils and other materials within 450 m to the west of the property. The additional impacts would not however be sufficient to change the overall significance of effect as assessed in the ES.	High	Construction: Moderate Winter Year 1 of operation: Moderate Summer Year 15 of operation: Minor	Construction: Moderate Adverse Winter Year 1 of operation: Moderate Adverse Summer Year 15 of operation: Slight Adverse	Construction: Moderate Winter Year 1 of operation: Moderate Summer Year 15 of operation: Minor	Construction: Moderate Adverse Winter Year 1 of operation: Moderate Adverse Summer Year 15 of operation: Slight Adverse
R35 (The Cottage)	M2F-CH215-NB-TPS-15	Additional temporary adverse impacts during the construction phase as a result of the proposed temporary storage/stockpile of soils within 100 m to the north of the property. The additional impacts would not however be sufficient to change the overall significance of effect as assessed in the ES.	High	Construction: Major Winter Year 1 of operation: Major Summer Year 15 of operation: Moderate	Construction: Large Adverse Winter Year 1 of operation: Large Adverse Summer Year 15 of operation: Moderate Adverse	Construction: Major Winter Year 1 of operation: Major Summer Year 15 of operation: Moderate	Construction: Large Adverse Winter Year 1 of operation: Large Adverse Summer Year 15 of operation: Moderate Adverse

Receptor Ref. No.	Additional Earthworks Visible	Change in View from the Scheme as assessed in ES	Sensitivity	Magnitude of Change in ES	Significance of Effect in ES	Magnitude of Change (from existing baseline) with ES Proposals and Additional Earthworks	New Significance of Effect
R36 (West Moor House)	M2F-CH215-NB-TPS-15	Additional temporary adverse impacts during the construction phase as a result of the proposed temporary storage/stockpile of soils within 100 m to the north of the property. The additional impacts would not however be sufficient to change the overall significance of effect as assessed in the ES.	High	Construction: Major Winter Year 1 of operation: Major Summer Year 15 of operation: Minor	Construction: Large Adverse Winter Year 1 of operation: Large Adverse Summer Year 15 of operation: Moderate Adverse	Construction: Major Winter Year 1 of operation: Major Summer Year 15 of operation: Minor	Construction: Large Adverse Winter Year 1 of operation: Large Adverse Summer Year 15 of operation: Moderate Adverse
R37 (West Moorhouse (4 properties))	M2F-CH215-NB-TPS-15	Additional temporary adverse impacts during the construction phase as a result of the proposed temporary storage/stockpile of soils within 100 m to the north of the properties. The additional impacts would not however be sufficient to change the overall significance of effect as assessed in the ES.	High	Construction: Major Winter Year 1 of operation: Major Summer Year 15 of operation: Moderate	Construction: Large Adverse Winter Year 1 of operation: Large Adverse Summer Year 15 of operation: Moderate Adverse	Construction: Major Winter Year 1 of operation: Major Summer Year 15 of operation: Moderate	Construction: Large Adverse Winter Year 1 of operation: Large Adverse Summer Year 15 of operation: Moderate Adverse
R48 (Causey Park Lodge (North))	M2F-CH176-SB-SEB-1; M2F-CH174-SB-NGA-3; and M2F-CH172-SB-NGA-4	Additional temporary adverse impacts during the construction phase as a result of the proposed temporary storage/stockpile of soils within 100-150 m to the south-west of the property. These additional impacts would be mitigated by allowing the north-east edge of the stockpile to naturally self-seed with grass, and	High	Construction: Minor Winter Year 1 of operation: Minor	Construction: Moderate Adverse Winter Year 1 of operation: Moderate Adverse	Construction: Minor/ Moderate Winter Year 1 of operation: Minor	Construction: Moderate Adverse Winter Year 1 of operation: Moderate Adverse

Receptor Ref. No.	Additional Earthworks Visible	Change in View from the Scheme as assessed in ES	Sensitivity	Magnitude of Change in ES	Significance of Effect in ES	Magnitude of Change (from existing baseline) with ES Proposals and Additional Earthworks	New Significance of Effect
		by leaving this area untouched for as long as possible (minimum three months during the growing season), to provide a more natural visual screen. Slight beneficial visual effect during operation resulting from the proposed slackening of the proposed embankment, improving integration with the adjacent landform. Proposed slackening may also result in improved establishment of proposed woodland planting. These slight beneficial visual effects would not however be sufficient to reduce the overall significance of effect as assessed in the ES.		Summer Year 15 of operation: Minor	Summer Year 15 of operation: Slight Adverse	Summer Year 15 of operation: Minor	Summer Year 15 of operation: Slight Adverse
R49 (Causey Park Lodge (South))	M2F-CH176-SB-SEB-1; M2F-CH174-SB-NGA-3; and M2F-CH172-SB-NGA-4	Additional temporary adverse impacts during the construction phase as a result of the proposed temporary storage/stockpile of soils within 100-150 m to the south-west of the property. These additional impacts would be mitigated by allowing the north-east edge of the stockpile to naturally self-seed with grass, and by leaving this area untouched for as long as possible (minimum three months during the growing season), to provide a more natural visual screen. Slight beneficial visual effect during operation resulting from the proposed slackening of the proposed embankment, improving integration with the adjacent landform. Proposed slackening	High	Construction: Minor Winter Year 1 of operation: Neutral Summer Year 15 of operation: Neutral	Construction: Slight Adverse Winter Year 1 of operation: No Change Summer Year 15 of operation: No Change	Construction: Minor/ Moderate Winter Year 1 of operation: Neutral Summer Year 15 of operation: Neutral	Construction: Slight Adverse Winter Year 1 of operation: No Change Summer Year 15 of operation: No Change

Receptor Ref. No.	Additional Earthworks Visible	Change in View from the Scheme as assessed in ES	Sensitivity	Magnitude of Change in ES	Significance of Effect in ES	Magnitude of Change (from existing baseline) with ES Proposals and Additional Earthworks	New Significance of Effect
		may also result in improved establishment of proposed woodland planting.					
R50 (Causey Park Hag (2 properties))	M2F-CH176-NB-SEB-1; M2F-CH176-NB-SEB-2; M2F-CH171-NB-NGA-1; and M2F-CH170-NB-NGA-2	Additional temporary adverse impacts during the construction phase as a result of the proposed temporary storage/stockpile of soils within 150 m to the south-east of the property. Slight beneficial visual effect during operation resulting from the proposed slackening of the proposed embankments, improving their integration with the adjacent landform. Proposed slackening may also result in improved establishment of proposed woodland planting. These slight beneficial visual effects would not however be sufficient to reduce the overall significance of effect as assessed in the ES.	High	Construction: Minor Winter Year 1 of operation: Minor Summer Year 15 of operation: Negligible	Construction: Moderate Adverse Winter Year 1 of operation: Moderate Adverse Summer Year 15 of operation: Slight Adverse	Construction: Minor/ Moderate Winter Year 1 of operation: Minor Summer Year 15 of operation: Negligible	Construction: Moderate Adverse Winter Year 1 of operation: Moderate Adverse Summer Year 15 of operation: Slight Adverse
R56 (New Build Off Causey Park)	M2F-CH174-SB-NGA-3; and M2F-CH172-SB-NGA-4	Additional temporary adverse impacts during the construction phase as a result of the proposed temporary storage/stockpile of soils within 100-150 m to the north-west of the property. The additional impacts would not however be sufficient to change the overall significance of effect as assessed in the ES.	High	Construction: Minor Winter Year 1 of operation: Minor Summer Year 15 of operation:	Construction: Moderate Adverse Winter Year 1 of operation: Moderate Adverse Summer Year 15 of operation:	Construction: Minor/ Moderate Winter Year 1 of operation: Minor Summer Year 15 of operation:	Construction: Moderate Adverse Winter Year 1 of operation: Moderate Adverse Summer Year 15 of operation:

Receptor Ref. No.	Additional Earthworks Visible	Change in View from the Scheme as assessed in ES	Sensitivity	Magnitude of Change in ES	Significance of Effect in ES	Magnitude of Change (from existing baseline) with ES Proposals and Additional Earthworks	New Significance of Effect
				Negligible	Slight Adverse	Negligible	Slight Adverse
R57 (Four Gables)	M2F-CH174-SB-NGA-3; and M2F-CH172-SB-NGA-4	Additional temporary adverse impacts during the construction phase as a result of the proposed temporary storage/stockpile of soils within 100-150 m to the north-west of the property. The additional impacts would not however be sufficient to change the overall significance of effect as assessed in the ES.	High	Construction: Minor Winter Year 1 of operation: Minor Summer Year 15 of operation: Negligible	Construction: Moderate Adverse Winter Year 1 of operation: Moderate Adverse Summer Year 15 of operation: Slight Adverse	Construction: Minor/ Moderate Winter Year 1 of operation: Minor Summer Year 15 of operation: Negligible	Construction: Moderate Adverse Winter Year 1 of operation: Moderate Adverse Summer Year 15 of operation: Slight Adverse
R58 (Joiners Cottage)	M2F-CH166-SB-EBD-11; M2F-CH171-NB-NGA-1; M2F-CH170-NB-NGA-2; M2F-CH174-SB-NGA-3; and M2F-CH172-SB-NGA-4	Additional temporary adverse impacts during the construction phase as a result of the proposed temporary storage/stockpiles of soils within 100-150 m to the west and north-west of the property. The additional impacts would not however be sufficient to change the overall significance of effect as assessed in the ES. Slight beneficial visual effect during operation resulting from the additional visual screening provided by the extension of proposed Bund 11. The visual screening function would improve further following the establishment of proposed woodland planting. These slight beneficial visual effects would not however be sufficient to reduce the overall	High	Construction: Moderate Winter Year 1 of operation: Moderate Summer Year 15 of operation: Minor	Construction: Large Adverse Winter Year 1 of operation: Large Adverse Summer Year 15 of operation: Moderate Adverse	Construction: Moderate Winter Year 1 of operation: Moderate Summer Year 15 of operation: Minor	Construction: Large Adverse Winter Year 1 of operation: Large Adverse Summer Year 15 of operation: Moderate Adverse

Receptor Ref. No.	Additional Earthworks Visible	Change in View from the Scheme as assessed in ES	Sensitivity	Magnitude of Change in ES	Significance of Effect in ES	Magnitude of Change (from existing baseline) with ES Proposals and Additional Earthworks	New Significance of Effect
		significance of effect as assessed in the ES.					
R59 (The Bungalow)	M2F-CH166-SB-EBD-11; M2F-CH171-NB-NGA-1; M2F-CH170-NB-NGA-2; M2F-CH174-SB-NGA-3; and M2F-CH172-SB-NGA-4	Additional temporary adverse impacts during the construction phase as a result of the proposed temporary storage/stockpiles of soils within 100-150m to the west and north-west of the property. The additional impacts would not however be sufficient to change the overall significance of effect as assessed in the ES. Slight beneficial visual effect during operation resulting from the additional visual screening provided by the extension of proposed Bund 11. The visual screening function would improve further following the establishment of proposed woodland planting. These slight beneficial visual effects would not however be sufficient to reduce the overall significance of effect as assessed in the ES.	High	Construction: Moderate Winter Year 1 of operation: Moderate Summer Year 15 of operation: Minor	Construction: Large Adverse Winter Year 1 of operation: Large Adverse Summer Year 15 of operation: Moderate Adverse	Construction: Moderate Winter Year 1 of operation: Moderate Summer Year 15 of operation: Minor	Construction: Large Adverse Winter Year 1 of operation: Large Adverse Summer Year 15 of operation: Moderate Adverse
R60 (Bridge House)	M2F-CH166-SB-EBD-11	Slight beneficial visual effect during operation resulting from the additional visual screening provided by the extension of proposed Bund 11. The visual screening function would improve further following the establishment of proposed woodland planting. These slight beneficial visual effects would not however be sufficient to reduce the overall	High	Construction: Moderate Winter Year 1 of operation: Moderate Summer Year 15 of operation:	Construction: Large Adverse Winter Year 1 of operation: Large Adverse	Construction: Moderate Winter Year 1 of operation: Moderate Summer Year 15 of operation:	Construction: Large Adverse Winter Year 1 of operation: Large Adverse

Receptor Ref. No.	Additional Earthworks Visible	Change in View from the Scheme as assessed in ES	Sensitivity	Magnitude of Change in ES	Significance of Effect in ES	Magnitude of Change (from existing baseline) with ES Proposals and Additional Earthworks	New Significance of Effect
		significance of effect as assessed in the ES.		Negligible	Summer Year 15 of operation: Slight Adverse	Negligible	Summer Year 15 of operation: Slight Adverse
R61 (The Oak Inn)	M2F-CH166-SB-EBD-11	Slight beneficial visual effect during operation resulting from the additional visual screening provided by the extension of proposed Bund 11. The visual screening function would improve further following the establishment of proposed woodland planting. These slight beneficial visual effects would not however be sufficient to reduce the overall significance of effect as assessed in the ES.	High	Construction: Minor Winter Year 1 of operation: Minor Summer Year 15 of operation: Negligible	Construction: Moderate Adverse Winter Year 1 of operation: Slight Adverse Summer Year 15 of operation: Slight Adverse	Construction: Minor Winter Year 1 of operation: Minor Summer Year 15 of operation: Negligible	Construction: Moderate Adverse Winter Year 1 of operation: Slight Adverse Summer Year 15 of operation: Slight Adverse
R64 (Thornbank)	M2F-CH166-SB-EBD-11; and M2F-CH167-NB-EBD-12	Slight beneficial visual effect during operation resulting from the additional visual screening provided by the extension of proposed Bund 11. The visual screening function would improve further following the establishment of proposed woodland planting. These slight beneficial visual effects would not however be sufficient to reduce the overall significance of effect as assessed in the ES.	High	Construction: Negligible Winter Year 1 of operation: Negligible Summer Year 15 of operation: Negligible	Construction: Slight Adverse Winter Year 1 of operation: Slight Beneficial Summer Year 15 of operation: Slight Beneficial	Construction: Negligible Winter Year 1 of operation: Negligible Summer Year 15 of operation: Negligible	Construction: Slight Adverse Winter Year 1 of operation: Slight Beneficial Summer Year 15 of operation: Slight Beneficial
R65 (New Houses Farm)	M2F-CH160-NB-EBD-13	Very slight beneficial visual effect during operation resulting from the additional visual screening provided by the extension of	High	Construction: Minor	Construction: Moderate Adverse	Construction: Minor	Construction: Moderate Adverse

Receptor Ref. No.	Additional Earthworks Visible	Change in View from the Scheme as assessed in ES	Sensitivity	Magnitude of Change in ES	Significance of Effect in ES	Magnitude of Change (from existing baseline) with ES Proposals and Additional Earthworks	New Significance of Effect
		proposed Bund 13. The visual screening function would improve further following the establishment of proposed woodland planting. These slight beneficial visual effects would not however be sufficient to reduce the overall significance of effect as assessed in the ES.		Winter Year 1 of operation: Minor Summer Year 15 of operation: Negligible	Winter Year 1 of operation: Slight Adverse Summer Year 15 of operation: Slight Adverse	Winter Year 1 of operation: Minor Summer Year 15 of operation: Negligible	Winter Year 1 of operation: Slight Adverse Summer Year 15 of operation: Slight Adverse
R68 (Tindale Hill)	M2F-CH159-SB-EBD-10	Slight beneficial visual effect during operation resulting from the additional visual screening provided by the 90m extension to the length of proposed Bund 10. The visual screening function would improve further following the establishment of proposed woodland planting. These slight beneficial visual effects would not however be sufficient to reduce the overall significance of effect as assessed in the ES.	High	Construction: Major Winter Year 1 of operation: Major Summer Year 15 of operation: Minor	Construction: Large Adverse Winter Year 1 of operation: Large Adverse Summer Year 15 of operation: Moderate Adverse	Construction: Major Winter Year 1 of operation: Major Summer Year 15 of operation: Minor	Construction: Large Adverse Winter Year 1 of operation: Large Adverse Summer Year 15 of operation: Moderate Adverse
R71 (Portland House)	M2F-CH149-NB-EBD-8; M2F-CH150-SB-EBD-9; and M2F-CH150-SB-WDL-1	Slight beneficial visual effects during operation resulting from the additional visual screening provided by the extension of proposed Bunds 8 and 9 at Fenrother Junction and the raising of the area of proposed woodland planting to the immediate north of Broom Plantation. The visual screening function of these additional earthworks would improve further following the establishment of the proposed woodland planting. These slight beneficial visual effects would not	High	Construction: Moderate Winter Year 1 of operation: Moderate Summer Year 15 of operation: Moderate	Construction: Moderate Adverse Winter Year 1 of operation: Moderate Adverse Summer Year 15 of operation: Moderate Adverse	Construction: Moderate Winter Year 1 of operation: Moderate Summer Year 15 of operation: Moderate	Construction: Moderate Adverse Winter Year 1 of operation: Moderate Adverse Summer Year 15 of operation: Moderate Adverse

Receptor Ref. No.	Additional Earthworks Visible	Change in View from the Scheme as assessed in ES	Sensitivity	Magnitude of Change in ES	Significance of Effect in ES	Magnitude of Change (from existing baseline) with ES Proposals and Additional Earthworks	New Significance of Effect
		however be sufficient to reduce the overall significance of effect as assessed in the ES.					
R72 (Welbeck House (2 properties)	M2F-CH150-SB-SBF-2; M2F-CH149-SB-VLS-3; M2F-CH149-NB-EBD-8; M2F-CH150-SB-EBD-9; and M2F-CH150-SB-WDL-1	Slight beneficial visual effects during operation resulting from the additional visual screening provided by the proposed filling of the bowl (minor bunding) at Fenrother Junction, the extension of proposed Bunds 8 and 9, the minor bunding of the area of proposed woodland planting to the immediate east of the junction and the raising of the area of proposed woodland planting to the immediate north of Broom Plantation. The visual screening function of these additional earthworks would improve further following the establishment of proposed grass seeding and woodland planting. These slight beneficial visual effects would not however be sufficient to reduce the overall significance of effect as assessed in the ES.	High	Construction: Moderate Winter Year 1 of operation: Moderate Summer Year 15 of operation: Moderate	Construction: Moderate Adverse Winter Year 1 of operation: Moderate Adverse Summer Year 15 of operation: Moderate Adverse	Construction: Moderate Winter Year 1 of operation: Moderate Summer Year 15 of operation: Moderate	Construction: Moderate Adverse Winter Year 1 of operation: Moderate Adverse Summer Year 15 of operation: Moderate Adverse
R73 (The Old School (1 property)	M2F-CH150-SB-SBF-2; M2F-CH149-SB-VLS-3; M2F-CH149-NB-EBD-8; M2F-CH150-SB-EBD-9; and M2F-CH150-SB-WDL-1	Slight beneficial visual effects during operation resulting from the additional visual screening provided by the proposed filling of the bowl (minor bunding) at Fenrother Junction, the extension of proposed Bunds 8 and 9, the minor bunding of the area of proposed woodland planting to the immediate east of the junction and the raising of the area of proposed woodland planting to the	High	Construction: Moderate Winter Year 1 of operation: Minor	Construction: Moderate Adverse Winter Year 1 of operation: Slight Adverse	Construction: Moderate Winter Year 1 of operation: Minor	Construction: Moderate Adverse Winter Year 1 of operation: Slight Adverse

Receptor Ref. No.	Additional Earthworks Visible	Change in View from the Scheme as assessed in ES	Sensitivity	Magnitude of Change in ES	Significance of Effect in ES	Magnitude of Change (from existing baseline) with ES Proposals and Additional Earthworks	New Significance of Effect
		immediate north of Broom Plantation. The visual screening function of these additional earthworks would improve further following the establishment of proposed grass seeding and woodland planting. These slight beneficial visual effects would not however be sufficient to reduce the overall significance of effect as assessed in the ES.		Summer Year 15 of operation: Minor	Summer Year 15 of operation: Slight Adverse	Summer Year 15 of operation: Minor	Summer Year 15 of operation: Slight Adverse
R78 (Stonebrook Cottage (5 properties))	M2F-CH148-NB-EBD-7; and M2F-CH149-NB-EBD-8	Slight beneficial visual effects during operation resulting from the additional visual screening provided by the extension of proposed Bunds 7 and 8 at Fenrother Junction. The visual screening function would improve further following the establishment of proposed woodland planting. These slight beneficial visual effects would not however be sufficient to reduce the overall significance of effect as assessed in the ES.	High	Construction: Moderate Winter Year 1 of operation: Moderate Summer Year 15 of operation: Minor	Construction: Moderate Adverse Winter Year 1 of operation: Moderate Adverse Summer Year 15 of operation: Slight Adverse	Construction: Moderate Winter Year 1 of operation: Moderate Summer Year 15 of operation: Minor	Construction: Moderate Adverse Winter Year 1 of operation: Moderate Adverse Summer Year 15 of operation: Slight Adverse
R84 (Gamekeepers Cottage)	M2F-CH135-NB-EBD-4	Slight beneficial visual effects during operation resulting from the additional visual screening provided by the increase in height of proposed Bund 4. The visual screening function would improve further following the establishment of proposed woodland planting. These slight beneficial visual effects would not however be sufficient to reduce the overall	High	Construction: Minor Winter Year 1 of operation: Minor Summer Year 15 of operation:	Construction: Slight Adverse Winter Year 1 of operation: Slight Adverse Summer Year 15 of operation:	Construction: Minor Winter Year 1 of operation: Minor Summer Year 15 of operation:	Construction: Slight Adverse Winter Year 1 of operation: Slight Adverse Summer Year 15 of operation:

Receptor Ref. No.	Additional Earthworks Visible	Change in View from the Scheme as assessed in ES	Sensitivity	Magnitude of Change in ES	Significance of Effect in ES	Magnitude of Change (from existing baseline) with ES Proposals and Additional Earthworks	New Significance of Effect
		significance of effect as assessed in the ES.		Negligible	Neutral	Negligible	Neutral
R87 (Hebron Hill (The Cottage))	M2F-CH122-SB-EBD-3; M2F-CH122-SB-SEB-1; and M2F-CH123-SB-PWA-1	Slight beneficial visual effects during operation resulting from the additional visual screening provided by the increase in height of proposed Bund 3 (an addition to Assessment Parameter 5) at Highlaws Junction and the 5.5m high bunding of the proposed woodland area to the immediate east of the Highlaws Junction. The visual screening function would improve further following the establishment of proposed woodland planting. These slight beneficial visual effects would not however be sufficient to alter the overall significance of effect as assessed in the ES.	High	Construction: Negligible Winter Year 1 of operation: Negligible Summer Year 15 of operation: Negligible	Construction: Slight Adverse Winter Year 1 of operation: Slight Adverse Summer Year 15 of operation: Slight Adverse	Construction: Negligible Winter Year 1 of operation: Negligible Summer Year 15 of operation: Negligible	Construction: Slight Adverse Winter Year 1 of operation: Slight Adverse Summer Year 15 of operation: Slight Adverse
R93 (Strafford House)	M2F-CH122-SB-EBD-3; M2F-CH122-SB-SEB-1; and M2F-CH123-SB-PWA-1	Minor additional impacts resulting from the proposed increase in height of proposed Bund 3 (an addition to Assessment Parameter 5) at Highlaws Junction and the proposed bunding of the proposed woodland area to the immediate east of the Highlaws Junction, increasing their visual prominence. The additional impacts would not however be sufficient to change the overall significance of effect as assessed in the ES. The visual prominence of the bunds would reduce following the establishment of proposed woodland planting.	High	Construction: Moderate Winter Year 1 of operation: Moderate Summer Year 15 of operation: Minor	Construction: Large Adverse Winter Year 1 of operation: Moderate Adverse Summer Year 15 of operation: Moderate Adverse	Construction: Moderate Winter Year 1 of operation: Moderate Summer Year 15 of operation: Minor/ Moderate	Construction: Large Adverse Winter Year 1 of operation: Moderate Adverse Summer Year 15 of operation: Moderate Adverse

Receptor Ref. No.	Additional Earthworks Visible	Change in View from the Scheme as assessed in ES	Sensitivity	Magnitude of Change in ES	Significance of Effect in ES	Magnitude of Change (from existing baseline) with ES Proposals and Additional Earthworks	New Significance of Effect
R94 (High Highlaws Cottage)	M2F-CH121-NB-VLS-2; M2F-CH121-NB-SBF-1; M2F-CH120-NB-EBD-1; and M2F-CH121-NB-EBD-2	Slight beneficial visual effects during operation resulting from the additional visual screening provided by the proposed minor (1.5 m high) bund, the filling of the bowl at Highlaws Junction with minor (2.7 m high) bunding and the increase in height of proposed Bunds 1 and 2. The visual screening function of the bunds would improve further following the establishment of proposed grass seeding and woodland planting. These slight beneficial visual effects would not however be sufficient to reduce the overall significance of effect as assessed in the ES.	High	Construction: Moderate Winter Year 1 of operation: Moderate Summer Year 15 of operation: Minor	Construction: Moderate Adverse Winter Year 1 of operation: Moderate Adverse Summer Year 15 of operation: Slight Adverse	Construction: Moderate Winter Year 1 of operation: Moderate Summer Year 15 of operation: Minor	Construction: Moderate Adverse Winter Year 1 of operation: Moderate Adverse Summer Year 15 of operation: Slight Adverse
R95 High Highlaws	M2F-CH121-NB-VLS-2; M2F-CH121-NB-SBF-1; M2F-CH120-NB-EBD-1; and M2F-CH121-NB-EBD-2	Slight beneficial visual effects during operation resulting from the additional visual screening provided by the proposed minor (1.5 m high) bund, the filling of the bowl at Highlaws Junction with minor (2.7 m high) bunding and the increase in height of proposed Bunds 1 and 2. The visual screening function of the bunds would improve further following the establishment of proposed grass seeding and woodland planting. These slight beneficial visual effects would not however be sufficient to reduce the overall significance of effect as assessed in the ES.	High	Construction: Moderate Winter Year 1 of operation: Minor Summer Year 15 of operation: Minor	Construction: Moderate Adverse Winter Year 1 of operation: Slight Adverse Summer Year 15 of operation: Slight Adverse	Construction: Moderate Winter Year 1 of operation: Minor/ Moderate Summer Year 15 of operation: Minor	Construction: Moderate Adverse Winter Year 1 of operation: Slight Adverse Summer Year 15 of operation: Slight Adverse

Table 5-3 – Part A PRoW Visual Effects Schedule

PRoW Ref. No.	Additional Earthworks Visible	Change in View from the Scheme as assessed in ES	Sensitivity	Magnitude of Change in ES	Significance of Effect in ES	Magnitude of change (from existing baseline) with ES Proposals and Additional Earthworks	New Significance of Effect
422/018	M2F-CH196-SB-SEB-3; and M2F-CH195-NB-SEB-3	Slight beneficial visual effects during operation resulting from the proposed slackening of the proposed embankments, improving integration with the adjacent landform. Proposed slackening may also result in improved establishment of proposed woodland planting. These slight beneficial visual effects would not however be sufficient to reduce the overall significance of effect as assessed in the ES.	High	Construction: Minor Winter Year 1 of operation: Minor Summer Year 15 of operation: Negligible	Construction: Slight Adverse Winter Year 1 of operation: Slight Adverse Summer Year 15 of operation: Neutral	Construction: Minor Winter Year 1 of operation: Minor Summer Year 15 of operation: Negligible	Construction: Slight Adverse Winter Year 1 of operation: Slight Adverse Summer Year 15 of operation: Neutral
115/008	M2F-CH227-SB-WDL-1	Additional temporary adverse impacts at western end of PRoW during the construction phase associated with the bunding of proposed area of woodland planting. The additional impacts would not however be sufficient to change the overall significance of effect as assessed in the ES. The significance of visual effects would reduce following the establishment of woodland planting on the bund.	High	Construction: Minor Winter Year 1 of operation: Negligible Summer Year 15 of operation: No Change	Construction: Slight Adverse Winter Year 1 of operation: Slight Adverse Summer Year 15 of operation: Neutral	Construction: Minor Winter Year 1 of operation: Negligible Summer Year 15 of operation: No Change	Construction: Slight Adverse Winter Year 1 of operation: Slight Adverse Summer Year 15 of operation: Neutral

Table 5-4 – Part A Commercial and Community Visual Effects Schedule

Commercial Receptor	Additional Earthworks Visible	Change in View from the Scheme as assessed in ES	Sensitivity	Magnitude of Change in ES	Significance of Effect in ES	Magnitude of Change (from existing baseline) with ES Proposals and Additional Earthworks	New Significance of Effect
Bockenfield Holiday Park / Felmoor Park	M2F-CH196-SB-SEB-3; and M2F-CH195-NB-SEB-3	Slight beneficial visual effects during operation resulting from the proposed slackening of the proposed embankments, improving integration with the adjacent landform. Proposed slackening may also result in improved establishment of proposed woodland planting. These slight beneficial visual effects would not however be sufficient to reduce the overall significance of effect as assessed in the ES.	High	Construction: Minor Winter Year 1 of operation: Minor Summer Year 15 of operation: Negligible	Construction: Slight Adverse Winter Year 1 of operation: Slight Adverse Summer Year 15 of operation: Neutral	Construction: Minor Winter Year 1 of operation: Minor Summer Year 15 of operation: Negligible	Construction: Slight Adverse Winter Year 1 of operation: Slight Adverse Summer Year 15 of operation: Neutral
Jackson GK and Sons garage (commercial receptor)	M2F-CH141-NB-EBD-6	Minor additional impact resulting from the proposed increase of proposed Bund 6 (an addition to Assessment Parameter 5). The additional impact would not however be sufficient to change the overall significance of effect as assessed in the ES. The visual prominence of the bund would reduce following the establishment of proposed woodland planting.	Low	Construction: Major Winter Year 1 of operation: Moderate Summer Year 15 of operation: Minor	Construction: Moderate Adverse Winter Year 1 of operation: Slight Adverse Summer Year 15 of operation: Slight Adverse	Construction: Major Winter Year 1 of operation: Moderate Summer Year 15 of operation: Minor	Construction: Moderate Adverse Winter Year 1 of operation: Slight Adverse Summer Year 15 of operation: Slight Adverse

Table 5-5 – Part B Visual Effects Schedule

Receptor Ref. No.	Additional Earthworks Visible	Change in View from the Scheme as assessed in ES	Sensitivity	Magnitude of Change in ES	Significance of Effect in ES	Magnitude of Change (from existing baseline) with ES Proposals and Additional Earthworks	New Significance of Effect
1 (Broom House)	A2E-CH541-SB-TPS-9	Minor additional temporary adverse impacts during the construction phase resulting from the proposed temporary storage/stockpile of various materials (over 500 m east of the property). The additional impacts would not however be sufficient to change the overall significance of effect as assessed in the ES.	High	Construction: Moderate Winter Year 1 of operation: Moderate Summer Year 15 of operation: Minor	Construction: Moderate Adverse Winter Year 1 of operation: Moderate Adverse Summer Year 15 of operation: Slight Adverse	Construction: Moderate Winter Year 1 of operation: Moderate Summer Year 15 of operation: Minor	Construction: Moderate Adverse Winter Year 1 of operation: Moderate Adverse Summer Year 15 of operation: Slight Adverse
3 (Heckley House)	A2E-CH541-SB-TPS-9	Minor additional temporary adverse impacts during the construction phase resulting from the proposed temporary storage/stockpile of various materials (over 500 m east of the property). The additional impacts would not however be sufficient to change the overall significance of effect as assessed in the ES.	High	Construction: Major Winter Year 1 of operation: Major Summer Year 15 of operation: Moderate	Construction: Large Adverse Winter Year 1 of operation: Large Adverse Summer Year 15 of operation: Moderate Adverse	Construction: Major Winter Year 1 of operation: Major Summer Year 15 of operation: Moderate	Construction: Large Adverse Winter Year 1 of operation: Large Adverse Summer Year 15 of operation: Moderate Adverse
4 (Heckley Fence)	A2E-CH550-NB-NBD-3; A2E-CH554-NB-NBD-4; and A2E-CH553-NB-TPS-5	Additional temporary adverse impacts during the construction phase resulting from the proposed temporary storage/stockpile of various	High	Construction: Major	Construction: Large Adverse	Construction: Major	Construction: Large Adverse

Receptor Ref. No.	Additional Earthworks Visible	Change in View from the Scheme as assessed in ES	Sensitivity	Magnitude of Change in ES	Significance of Effect in ES	Magnitude of Change (from existing baseline) with ES Proposals and Additional Earthworks	New Significance of Effect
		materials within 50 m to the east of the property. The additional impacts would not however be sufficient to change the overall significance of effect as assessed in the ES. Slight beneficial visual effects during operation resulting from the additional visual screening provided by the proposed bunds. The visual screening function would improve further following the establishment of proposed woodland planting. These slight beneficial visual effects would not however be sufficient to reduce the overall significance of effect as assessed in the ES.		Winter Year 1 of operation: Major Summer Year 15 of operation: Moderate	Winter Year 1 of operation: Large Adverse Summer Year 15 of operation: Moderate Adverse	Winter Year 1 of operation: Major Summer Year 15 of operation: Moderate	Winter Year 1 of operation: Large Adverse Summer Year 15 of operation: Moderate Adverse
6 (Rock Lodge) & 7 (Rock Nab)	A2E-CH583-NB-NBD-2; and A2E-CH583-NB-TPS-2	Additional temporary adverse impacts during the construction phase resulting from the proposed temporary storage/stockpile of various materials within 50 m of Rock Lodge. The additional impacts would not however be sufficient to change the overall significance of effect as assessed in the ES. Slight beneficial visual effects during operation resulting from the additional visual screening provided by the proposed bund. The visual screening function would improve further following the establishment of proposed woodland planting.	High	Construction: Major Winter Year 1 of operation: Major Summer Year 15 of operation: Moderate	Construction: Large Adverse Winter Year 1 of operation: Large Adverse Summer Year 15 of operation: Moderate Adverse	Construction: Major Winter Year 1 of operation: Major Summer Year 15 of operation: Moderate	Construction: Large Adverse Winter Year 1 of operation: Large Adverse Summer Year 15 of operation: Moderate Adverse

Receptor Ref. No.	Additional Earthworks Visible	Change in View from the Scheme as assessed in ES	Sensitivity	Magnitude of Change in ES	Significance of Effect in ES	Magnitude of Change (from existing baseline) with ES Proposals and Additional Earthworks	New Significance of Effect
		These slight beneficial visual effects would not however be sufficient to reduce the overall significance of effect as assessed in the ES.					
10 (West Linkhall Farmhouse)	A2E-CH591-SB-NBD-1	Minor additional impact resulting from the proposed bund. The additional impact would not however be sufficient to change the overall significance of effect as assessed in the ES. The visual prominence of the bund would reduce following the establishment of proposed woodland planting.	High	Construction: Major Winter Year 1 of operation: Major Summer Year 15 of operation: Moderate	Construction: Large Adverse Winter Year 1 of operation: Large Adverse Summer Year 15 of operation: Moderate Adverse	Construction: Major Winter Year 1 of operation: Major Summer Year 15 of operation: Moderate	Construction: Large Adverse Winter Year 1 of operation: Large Adverse Summer Year 15 of operation: Moderate Adverse

5.10.4. As detailed above in **Table 5-2**, eight of the residential receptors (R20, R21, R48, R49, R50, R56, R57 and R93) would experience a slight increase in the magnitude of change from that reported in **Appendix 7.3: Residential Visual Effects Schedule - Part A** of the ES [**APP-218**] as a result of the Earthworks Amendments in Part A. The significance of effect would however remain unchanged at all eight of these residential receptor locations.

5.10.5. As detailed above in **Table 5-3**, the magnitude of change and significance of effect would remain unchanged at both of the two PRoW (422/018 and 115/008) affected by the Earthworks Amendments in Part A.

5.10.6. As detailed above in **Table 5-4**, the magnitude of change and significance of effect would remain unchanged at both of the two commercial and community receptor locations (Bockenfield Holiday Park/Felmoor Park and Jackson GK and Sons garage) affected by the Earthworks Amendments in Part A.

5.10.7. As detailed above in **Table 5-5**, the magnitude of change and significance of effect would remain unchanged at all six residential receptor locations (1, 3, 4, 6, 7 and 10) affected by the Earthworks Amendments in Part B.

5.10.8. Twenty-two of the 38 receptors detailed above in **Table 5-2, Table 5-3, Table 5-4 and Table 5-5** would experience slight beneficial visual effects during the operation of the Scheme as a result of the proposed slackening of permanent earthwork slopes (Assessment Parameter 4 as set out in **Chapter 2: The Scheme** of the ES [**APP-037**]) and additional visual screening provided by proposed new permanent bunds. These slight beneficial visual effects would not however be sufficient to reduce the overall magnitude of change, or significance of effect, experienced at any of these receptor locations.

5.10.9. As detailed above in **Table 5-2** and **Table 5-4**, the proposed increase in height (greater than 2 m) of proposed Bunds 3 and 6 would be an addition to Assessment Parameter 5 for Part A as set out in **Chapter 2: The Scheme** of the ES [**APP-037**].

5.10.10. The proposed increase in height of proposed Bunds 3 and 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 shown on **Figure 7.8: Landscape Mitigation Masterplan Part A** of the ES [**REP3-008**] as secured within the **Outline CEMP** [**REP3-013** and **REP3-014**].

5.10.11. Residential receptors at R87 (Hebron Hill (The Cottage)) would experience slight beneficial visual effects during the operation of the Scheme (Part A) as a result of the proposed increase in height of proposed Bund 3 due to the additional visual screening that the heightened bund would provide. The visual screening function would improve further following the establishment of proposed woodland planting as shown on **Figure 7.8: Landscape Mitigation Masterplan Part A** of the ES [**REP3-008**] as secured within the **Outline CEMP** [**REP3-013** and **REP3-014**].

5.10.12. At all three receptor locations (R87, R93 and Jackson GK and Sons garage), the changes to visual impacts resulting from the increase in height of proposed Bunds 3 and 6 would not however be sufficient to change the significance of effect experienced at each of these locations as assessed in **Appendix 7.3: Residential Visual Effects Schedule - Part A** of the ES [**APP-218**].

5.11 MONITORING

5.11.1. The monitoring requirements for Landscape and Visual have not changed as a result of the Earthworks Amendments. Therefore, the text within **Section 7.11, Chapter 7: Landscape and Visual Part A** of the ES [**APP-044**] and **Section 7.11, Chapter 7: Landscape and Visual Part B** of the ES [**APP-045**] remains unchanged and valid.

5.12 UPDATED DMRB GUIDANCE

5.12.1. Since the assessments in the ES were completed, the DMRB methodology was superseded and replaced with updated guidance as detailed in **Section 7.4, Chapter 7: Landscape and Visual Part A** of the ES [**APP-044**] and **Section 7.4, Chapter 7: Landscape and Visual Part B** of the ES [**APP-045**].

5.12.2. The DMRB sensitivity test as described in **Section 7.4, Chapter 7: Landscape and Visual Part A** of the ES [**APP-044**] and **Section 7.4, Chapter 7: Landscape and Visual Part B** of the ES [**APP-045**] has determined that the application of the updated guidance would not change the likely significance of effects and therefore the conclusions of the assessment remain unchanged. The findings of the sensitivity test are set out in detail in **Appendix 4.5: DMRB Sensitivity Test** of the ES [**APP-197**].

5.12.3. The findings of the DMRB sensitivity test also apply to the assessment of visual effects presented in this ES Addendum and therefore the conclusions of the assessment remain unchanged.

6 CULTURAL HERITAGE

6.1 INTRODUCTION

6.1.1. **Chapter 8: Cultural Heritage Part A** of the ES [**APP-046**] and **Chapter 8: Cultural Heritage Part B** of the ES [**APP-047**] considers the likely significant effects of the Scheme on Cultural Heritage. This comprises buried heritage assets (archaeological remains) and above ground heritage assets (structures and landscapes of heritage interest) within or immediately around the Scheme. It also considers the impact of the Scheme on historic character and setting of designated assets within and beyond the Scheme (e.g. views to and from listed buildings and conservation areas).

6.1.2. This section of the ES Addendum considers only the likely significant effects of the Earthworks Amendments on Cultural Heritage.

6.2 COMPETENT EXPERT EVIDENCE

6.2.1. As detailed in **Table 6-1**, the professionals contributing to the production of this assessment have sufficient expertise to ensure the completeness and quality of this assessment. The table sets out the details of expertise where this is different to those presented in **Section 8.2, Chapter 8: Cultural Heritage Part A** of the ES [**APP-046**] and **Section 8.2, Chapter 8: Cultural Heritage Part B** of the ES [**APP-047**].

Table 6-1 – Cultural Heritage Professional Competence

Name	Role	Qualifications and Professional Membership	Experience
Natasha Powers	Reviewer	BSc (Hons) Archaeological Science MSc Osteology, Palaeopathology and Funerary Archaeology Fellow of the Society of Antiquaries (FSA)	Associate Director 25 years professional experience managing heritage projects in Scotland and England. Other recent relevant experience includes: - Project Manager/Specialist Consultant for Lincoln Cathedral Connected Project - Specialist Consultant for HS2 - Project Manager, Triton Knoll Offshore Windfarm

6.3 LEGISLATIVE AND POLICY FRAMEWORK

6.3.1. The legislative and policy framework for Cultural Heritage has not changed since the publication of the ES. Therefore, the text within **Section 8.3, Chapter 8: Cultural Heritage Part A** of the ES [**APP-046**] and **Section 8.3, Chapter 8: Cultural Heritage Part B** of the ES [**APP-047**] remains valid.

6.4 ASSESSMENT METHODOLOGY

6.4.1. In order to ensure a comparable assessment with the ES, the assessment methodology followed for Cultural Heritage has not changed in response to the Earthworks Amendments. Therefore, the text within **Section 8.4, Chapter 8: Cultural Heritage Part A** of the ES [**APP-046**] and **Section 8.4, Chapter 8: Cultural Heritage Part B** of the ES [**APP-047**] remains unchanged and valid.

6.5 ASSESSMENT ASSUMPTIONS AND LIMITATIONS

6.5.1. The assessment assumptions and limitations for Cultural Heritage for the Earthworks Amendments have not changed from the ES. Therefore, the text within **Section 8.5, Chapter 8: Cultural Heritage Part A** of the ES [**APP-046**] and **Section 8.5, Chapter 8: Cultural Heritage Part B** of the ES [**APP-047**] remains unchanged and valid.

6.6 STUDY AREA

6.6.1. The Study Area for the Cultural Heritage assessment has not changed as a result of the Earthworks Amendments. Therefore, the text within **Section 8.6, Chapter 8: Cultural Heritage Part A** of the ES [**APP-046**] and **Section 8.6, Chapter 8: Cultural Heritage Part B** of the ES [**APP-047**] remains unchanged and valid.

6.7 BASELINE CONDITIONS

6.7.1. The Earthworks Amendments are located within the Orders limits presented in the ES, meaning the baseline for the Cultural Heritage assessment has not changed. Therefore, the text within **Section 8.7, Chapter 8: Cultural Heritage Part A** of the ES [**APP-046**] and **Section 8.7, Chapter 8: Cultural Heritage Part B** of the ES [**APP-047**] remains unchanged and valid.

6.8 POTENTIAL IMPACTS

CONSTRUCTION

6.8.1. During construction of the Scheme, the anticipated impacts of Earthworks Amendments are:

a. Permanent direct impacts on below ground heritage assets outside of the Order limits due to changes in hydrology associated with the excavation of the borrow pits resulting in the compaction and desiccation of buried remains; and
b. Temporary direct impacts on the setting of heritage assets outside of the Order limits due to a change in the views to and from heritage assets from:
    i. The increase in the height and/or width of the soil bunds;

ii. The creation of new soil bunds within Part B;
iii. Laying down additional material increasing some localised ground levels;
iv. Raising levels of junction "bowls"; and
v. Creating new, temporary soil storage areas within both Part A and Part B.

6.8.2. Details of the impacts of the Earthworks Amendments on heritage assets is outlined below.

6.8.3. All other impacts during construction, detailed within **Section 8.8, Chapter 8: Cultural Heritage Part A** of the ES [**APP-046**] **and Section 8.8, Chapter 8: Cultural Heritage Part B** of the ES [**APP-047**], remain unchanged and valid.

Below Ground Heritage Assets

6.8.4. The impacts of construction of the Scheme on below ground heritage assets located within the Order limits are detailed within **Section 8.8, Chapter 8: Cultural Heritage Part B** of the ES [**APP-047**] and remain unchanged as a result of the proposed borrow pits. The depths of the borrow pits and the magnitude of the volume of material to be removed has the potential to change the current groundwater levels and hydrology beyond the Order limits.

Scheduled Monument Ellsnook Round Barrow (NHL 1006564)

6.8.5. Two of the borrow pits are located immediately to the east of Ellsnook Plantation. Borrow pit A2E-CH569-NB-BPT-4 would be located within the footprint of a detention basin and would be over excavated to a maximum depth to 4 m, over a 4,500 m^2 area resulting in the removal of 18,000 m^3 of material. Borrow Pit A2E-CH570-NB-BPT-5 would be excavated to a maximum depth of 6.5 m, over a 5,500 m^2 area, resulting in the removal of up to 35,750 m^3 of material. Together, the borrow pits would result in ground disturbance potentially across the entire field parcel to the west of Ellsnook Plantation (up to 3 hectare area).

6.8.6. Scheduled Monument Ellsnook Round Barrow, 175 m north east of Heiferlaw Bridge (NHL 1006564) is located 6 m from the Order limits within Ellsnook Plantation. It is a high value heritage asset. Although the heritage asset is positioned outside of the Order limits, there is a potential that it would be subject to direct impacts from a change in hydrology as a result of the deep excavations in its proximity.

6.8.7. An assessment of the potential impacts of the proposed borrow pits on the water environment is presented in **Chapter 7: Road Drainage and the Water Environment** of this ES Addendum. This identifies that one of the potential impacts includes changes to hydrodynamics through excavation activities (including groundwater dewatering measures where applicable) with subsequent effects on groundwater receptors (including heritage sites). Were this to occur, the heritage assets could be subject to permanent adverse impacts from compaction, desiccation or waterlogging.

Below Ground Heritage Assets at Charlton Mires Junction

6.8.8. Three of the five borrow pits are located at Charlton Mires. Borrow Pit A2E-CH586-SB-BPT-1 would be excavated to a maximum depth of 5 m, over a 12,350 m^2 area, resulting in the

removal of 61,750 m^3 of material. Borrow Pit A2E-CH591-SB-BPT-2 would be excavated to a maximum depth to 9 m, over a 3,000 m^2 area resulting in the removal of 25,500 m^3 of material. Borrow Pit A2E-CH590-SB-BPT-3 would be located within the footprint of a detention basin and would be over excavated to a maximum depth to 5 m, over a 7,500 m^2 area resulting in the removal of 37,500 m^3 of material.

6.8.9. No heritage assets have been identified outside of the Order limits at Charlton Mires in either the desk-based assessment (**Appendix 8.1: Historic Environment Desk Based Assessment Part B** of the ES [**APP-291**]) or the geophysical survey (**Appendix 8.2: Geophysical Survey Report Part B** of the ES [**APP-292**]) which extended beyond the Order limits. There is a find spot of two flint flakes of Neolithic and Bronze Age date (HER 5062) within the Order limits at Charlton Mires which suggests human activity and indicate the potential for further evidence of human activity during the Prehistoric period. Any prehistoric heritage assets identified would be of low to medium value. There is also the potential for Medieval, Post-Medieval, Industrial and Modern date which would likely range in value from negligible to medium.

6.8.10. An assessment of the potential impacts of the proposed borrow pits on the water environment is presented in **Chapter 7: Road Drainage and the Water Environment** of this ES Addendum. This identifies that one of the potential impacts includes changes to hydrodynamics through excavation activities (including groundwater dewatering measures where applicable) with subsequent effects on groundwater receptors (including heritage sites). Were this to occur, any currently unknown heritage assets could be subject to permanent adverse impacts from compaction, desiccation or waterlogging.

Above Ground Heritage Assets

Grade II Listed Building Church of St Cuthbert, Hebron (NHL 1153555)

6.8.11. There is a potential for additional temporary impacts on the setting of Grade II Listed Building Church of St Cuthbert, Hebron (NHL 1153555) of medium value during construction due the proposed increase in height of proposed Bund 3 (an extension to Parameter 5) at Highlaws Junction (M2F-CH122-SB-EBD-3, M2F-CH122-SB-SEB-1 and M2F-CH123-SB-PWA-1), which would increase their visual prominence. The setting is judged to contribute to the value of the asset. The impacts would be largely limited by the existing screening provided by the dense, mature vegetation around the western boundary of the churchyard which reduces the visibility of Part A, particularly in the summer months, however there is a potential for the bunds to be visible during the winter months when there is less foliage. The distance between Bund 3 and the designated heritage asset (approximately 800 m) would also reduce the magnitude of impacts on the setting of the Church of St Cuthbert.

Grade II Listed Building Causey Park House (NHL 1370647) and associated Grade II Listed Buildings (NHL 1042880, NHL 1304007, NHL 1042881 and NHL 1154074)

6.8.12. The proposed temporary storage/stockpiles of soils within the area to the south of Causey Park Overbridge, on the west side of Part A (M2F-CH171-NB-NGA-1 and M2F-CH170-NB-NGA-2) have the potential to adversely impact the setting of the following Grade II Listed Buildings:

a. Causey Park House (NHL 1370647);
b. Garden Walls to West and South-West of Causey Park House (NHL 1042880);
c. Garden Walls East and South-East of Causey Park (NHL 1304007);
d. Sundial (NHL 1042881); and
e. Ha-Ha Wall to South of Causey Park (NHL 1154074).

6.8.13. All assets are of medium value and their setting is judged to contribute to the value of the assets due to the rural context in which they sit and the limited alteration to the landscape since the assets were created. The assets are currently largely screened from Part A by existing vegetation; however its elevated position is predicted to afford some views over parts of Part A, particularly to the east and south-east, towards the locations of the temporary storage/stockpiles of soils. The temporary storage of soils in stockpiles would, therefore, provide an additional temporary adverse impact on the setting of these assets during the construction phase.

Grade II Listed Building Thirston New Houses (NHL 1041875)

6.8.14. Thirston New Houses is a Grade II Listed Building and is of medium value. It is located approximately 650 m east of the temporary storage/stockpile of soils at West Moor Junction (M2F-CH217-SB-TPS-11). The heritage asset is situated to the south-west of the village of West Thirston, and occupies an isolated location surrounded by open agricultural land. The property has tree cover to the west and south, with open views across agricultural land to the north and east. The setting is judged to contribute in part to the value of the farmhouse.

6.8.15. The introduction of the temporary storage/stockpiles would result in additional loss of agricultural landscape and a change in views to and from the heritage asset during the construction phase. The impacts would be in addition to the temporary ones already predicted to arise from the use of the land north-west of the temporary storage/stockpiles for a temporary compound.

Felton Park

6.8.16. Felton Park comprises several heritage assets situated within the non-designated park (HER 24276). The park includes the main Grade II Listed Building (NHL 1303774), a Grade II* Greenhouse (NHL 1154561), the Grade II Listed Roman Catholic Church of St Mary (NHL 1371126) and World War II remains comprising a Military Camp (HER 26889) and Tank Turning Circle (HER 27238). Due to the rarity of the architectural form of the greenhouse and the historical value associated with the region, the asset group is assessed as being of high value. The setting of the asset group contributes greatly to the value of the

assets. This is due to the presence of surviving built heritage and the legibility of the park's historic landscape in the immediate vicinity.

6.8.17. There is a potential for additional temporary adverse impacts on the setting of Felton Park during the construction phase associated with the bunding of proposed area of woodland planting (M2F-CH227-SB-WDL-1). The impacts on setting would arise from the increased visual impact of the construction works during the creation of the bunds, making the proximity of the works more prominent.

OPERATION

6.8.18. During operation, the anticipated impacts of the Earthworks Amendments are:

a. Permanent direct adverse impacts on below ground heritage assets outside of the Order limits due to changes in hydrology following the deep excavation of the borrow pits resulting in the compaction and desiccation of buried remains; and
b. Permanent direct adverse impacts on the setting of heritage assets outside of the Order limits due to a change in the views to and from heritage assets from:

   i. The increase in the height and/or width of the soil bunds;
   ii. The creation of new soil bunds within Part B;
   iii. Laying down additional material increasing some localised ground levels; and
   iv. Raising levels of junction "bowls".

Below Ground Heritage Assets

Scheduled Monument Ellsnook Round Barrow (NHL 1006564)

6.8.19. Borrow pits A2E-CH570-NB-BPT-5 would be completely backfilled as part of the construction works, while Borrow pit A2E-CH569-NB-BPT-4 would only be partially backfilled to allow for the creation of a detention basin. Any permanent changes to groundwater hydrodynamics as a result of the deep excavations has a potential to result in permanent adverse impacts on the Scheduled Monument Ellsnook Round Barrow, 175 m north east of Heiferlaw Bridge (NHL 1006564), located 6 m from the Order limits within Ellsnook Plantation. The Scheduled Monument is a high value asset. Changes in the local ground water levels around the Scheduled Monument could result in permanent adverse impacts from compaction, desiccation or waterlogging, leading to the permanent loss of the asset.

Below Ground Heritage Assets at Charlton Mires Junction

6.8.20. The three borrow pits located at Charlton Mires (A2E-CH586-SB-BPT-1, A2E-CH591-SB-BPT-2 and A2E-CH590-SB-BPT-3) would also be completely backfilled as part of the construction works. Depending on the materials used to backfill these, there is a potential for permanent changes in the local ground water levels around the borrow pits that could result in permanent adverse impacts from compaction, desiccation or waterlogging, leading to the permanent loss of any heritage assets outside of the Order limits.

Above Ground Heritage Assets

Grade II Listed Building Church of St Cuthbert, Hebron (NHL 1153555)

6.8.21. There is a potential for additional impacts on the setting of Grade II Listed Building Church of St Cuthbert, Hebron (NHL 1153555) of medium value during operation due to the proposed bunding of the proposed woodland planting at Highlaws Junction (M2F-CH122-SB-EBD-3, M2F-CH122-SB-SEB-1 and M2F-CH123-SB-PWA-1), which would increase their visual prominence. The impacts would be largely limited by the existing screening provided by the dense, mature vegetation around the western boundary of the churchyard which reduces the visibility of Part A, particularly in the summer months. Any adverse impacts on the setting would, however, likely decrease as the vegetation in the woodland planting matures as it would provide additional screening of Highlaws Junction from the asset, limiting the visual intrusion of the traffic using Part A. The introduction of the additional screening may, however, limit or remove any existing long-distance views from the asset to the west, particularly in the winter months.

Felton Park

6.8.22. There is a potential for the introduction of adverse impacts on the setting of the non-designated Felton Park (HER 24276) and the designated heritage assets contained within it (NHL 1303774, 1154561 and 1371126) of high value during the operation phase associated with the bunding of proposed area of woodland planting (M2F-CH227-SB-WDL-1). The impacts on setting would arise from the increased prominence of the Part A from the asset due to the increase in ground level, however any adverse visual effects are predicted to be removed following the establishment of woodland planting on the bund embankment. This is due to the existence of woodland along this boundary already. Therefore, no permanent, long term impacts are predicted on the setting of the Felton Park during operation.

6.9 DESIGN, MITIGATION AND ENHANCEMENT MEASURES

6.9.1. In addition to the measures detailed **within Section 8.9, Chapter 8: Cultural Heritage Part A** of the ES [**APP-046**] and **Section 8.9, Chapter 8: Cultural Heritage Part B** of the ES [**APP-047**], the following mitigation measures would be implemented.

CONSTRUCTION

6.9.2. The potential impacts on the Scheduled Monument Ellsnook Round Barrow (NHL 1006564) during construction would be mitigated through alterations in design. The extent of the area used for borrow pit A2E-CH570-NB-BPT-5 would be reduced to ensure it is not within 35 m of the location of the heritage asset. The area of potential impact would therefore decrease from approximately 3 hectares to approximately 1.2 hectares. Based on the results of the Road Drainage and Water Environment assessment (see **Chapter 7: Road Drainage and Water Environment** of this ES Addendum), it is anticipated the impacts of the excavation of the borrow pits would be up to 35 m from the edge of the borrow pit excavation. Therefore, by reducing the size of the Borrow pit A2E-CH570-NB-BPT-5 the impacts would be removed.

6.9.3. Due to the distance of Borrow pit A2E-CH570-NB-BPT-4, no mitigation through design is required, at present, however based on the results of the pre-commencement trial trenching (see **Appendix 8.5 Written Scheme of Investigation for an Archaeological Trial Trench Evaluation Part B [APP-295**]), there may be a requirement to review this. The mitigation measures adopted would be dependent on the nature and value of heritage assets identified. This process of refinement is secured through references **S-CH3** and **S-CH7** of the **Outline CEMP [REP3-013 and 014]**.

6.9.4. Borrow pits A2E-CH586-SB-BPT-1, A2E-CH591-SB-BPT-2, A2E-CH590-SB-BPT-3 located at Charlton Mires, which is identified as an area of archaeological potential, will be subject to investigative trial trenching, see **Appendix 8.5: Written Scheme of Investigation for an Archaeological Trial Trench Evaluation Part B [APP-295].** Following trial trenching, should archaeological remains of value be found that extend outside of the Order limits, which would be impacted by the borrow pits due to changes in hydrogeology, mitigation through the detailed consideration of the design (size, depth and location) of the borrow pits would be considered to reduce and remove any potential adverse impacts. The mitigation measures adopted would be dependent on the nature and value of heritage assets identified. This process of refinement is secured through references **S-CH3** and **S-CH7** of the **Outline CEMP [REP3-013 and 014]**.

OPERATION

6.9.5. There is a potential for long term impacts on below-ground heritage assets outside of the Order limits as a result of the excavation and backfilling of Borrow pits A2E-CH586-SB-BPT-1, A2E-CH591-SB-BPT-2, A2E-CH590-SB-BPT-3, A2E-CH570-NB-BPT-4 and A2E-CH570-NB-BPT-5, including the Scheduled Monument Ellsnook Round Barrow (NHL 1006564). The impacts would be removed through the use of a suitable fill material with a similar permeability and fill quality within the borrow pits. The placement of higher permeability material beneath or around the borrow pits that are proposed to function as detention basins during the operation of the Scheme would be used to allow groundwater to move freely around the lined basins. This is set out in **Appendix D: Register of Environmental Actions and Commitments** of this ES Addendum.

6.10 ASSESSMENT OF LIKELY SIGNIFICANT EFFECTS

CONSTRUCTION

Below Ground Heritage Assets

Scheduled Monument Ellsnook Round Barrow (NHL 1006564)

6.10.1. There is a potential for impacts and effects on the Scheduled Monument Ellsnook Round Barrow (NHL 1006564) of high value during construction from Borrow pits A2E-CH569-NB-BPT-4 and A2E-CH569-NB-BPT-5 due to temporary changes in the hydrology from the excavation and removal of material, resulting in the compaction and desiccation of archaeological remains. With mitigation through design measures, in addition to those ES outlined in **Chapter 7: Road Drainage and Water Environment, Section 7.9** of this

Addendum, the magnitude of impact would be no change with a neutral effect (not significant).

Below Ground Heritage Assets at Charlton Mires Junction

6.10.2. There is a potential for currently unknown below ground heritage assets to be present within and immediately around the Order limits of Prehistoric, Medieval, Post-Medieval, Industrial and Modern date. The value of any such resource is currently unknown but are likely to range from medium to negligible. The excavations associated with Borrow Pits A2E-CH586-SB-BPT-1; A2E-CH591-SB-BPT-2 and A2E-CH590-SB-BPT-3 have the potential to result in permanent, direct impact on currently unknown below heritage assets outside of the Order limits from a temporary change in hydrology from the excavation and removal of material, resulting in the compaction and desiccation of archaeological remains. With mitigation, the magnitude of impact would be no change with a neutral effect (not significant).

Above Ground Heritage Asset

Grade II Listed Building Church of St Cuthbert, Hebron (NHL 1153555)

6.10.3. There is a potential for additional impacts on the setting of Grade II Listed Building Church of St Cuthbert, Hebron (NHL 1153555) of medium value during construction due to the proposed increase in height of proposed Bund 3 (an extension to Parameter 5) at Highlaws Junction (M2F-CH122-SB-EBD-3, M2F-CH122-SB-SEB-1 and M2F-CH123-SB-PWA-1), which would increase their visual prominence. The impacts would be largely limited by the existing screening provided by the dense, mature vegetation around the western boundary of the churchyard which reduces the visibility of Part A, particularly in the summer months. Any adverse impacts on the setting would, however, likely decrease as the vegetation in the woodland planting matures as it would provide additional screening of Highlaws Junction from the asset, limiting the visual intrusion of the traffic using Part A. The additional impact of the stockpiling would not, however, increase the existing impact of minor adverse impact on the setting already reported in **Section 8.10, Chapter 8: Cultural Heritage Part A** of the ES [**APP-046**] during the construction phase and the result would remain as a temporary slight adverse effect (not significant).

Grade II Listed Building Causey Park House (NHL 1370647) and associated Grade II Listed Buildings (NHL 1042880, NHL 1304007, NHL 1042881 and NHL 1154074)

6.10.4. The proposed temporary storage/stockpiles of soils within the area to the south of Causey Park Overbridge, on the west side of Part A (M2F-CH171-NB-NGA-1 and M2F-CH170-NB-NGA-2) would provide an additional temporary adverse impact on the setting of five Grade II listed buildings at Causey Park House (NHL 1370647, NHL 1042880, NHL 1304007, NHL 1042881 and NHL 1154074) of medium value. The additional impact of the stockpiling would not, however, increase the existing impact of minor adverse impact on the setting already reported in **Section 8.10, Chapter 8: Cultural Heritage Part A** of the ES [**APP-046**] during the construction phase due the intrusion on views, noise, lighting, dust and

construction traffic. Therefore, the result would remain as a temporary slight adverse effect (not significant).

Grade II Listed Building Thirston New Houses (NHL 1041875)

6.10.5. The proposed temporary storage/stockpiles of soils at West Moor Junction (M2F-CH217-SB-TPS-11) would result in an additional temporary adverse impact on the setting of Grade II Listed Building Thirston New Houses, which is of medium value. It is located approximately 650 m east of the temporary storage/stockpile of soils at West Moor Junction (M2F-CH217-SB-TPS-11). The additional impact of the stockpiling would not, however, increase the existing impact of minor adverse impact on the setting already reported in **Section 8.10, Chapter 8: Cultural Heritage Part A** of the ES [**APP-046**] during the construction phase due the intrusion on views, noise, lighting, dust and construction traffic. Therefore, the result would remain as a temporary slight adverse effect (not significant).

Felton Park

6.10.6. There is a potential for additional temporary adverse impacts on the setting of the non-designated Felton Park non-designated Felton Park (HER 24276) and the designated heritage assets contained within it (NHL 1303774, 1154561 and 1371126) of high value during the construction phase associated with the bunding of proposed area of woodland planting (M2F-CH227-SB-WDL-1). The impacts would be due to the visual intrusion on views, and an increase in noise, lighting, dust and construction traffic. The magnitude of impacts are predicted to remain temporary moderate adverse, and therefore would not exceed those previously reported in **Section 8.10, Chapter 8: Cultural Heritage Part A** of the ES [**APP-046**] as construction works were already required in this area. The effects would therefore remain as a temporary moderate adverse.

OPERATION

Below Ground Heritage Assets

Scheduled Monument Ellsnook Round Barrow (NHL 1006564)

6.10.7. There is a potential for permanent adverse impacts and effects on the Scheduled Monument Ellsnook Round Barrow (NHL 1006564) of high value during operation following the complete backfilling of Borrow pits A2E-CH569-NB-BPT-5 and the partial backfilling of A2E-CH569-NB-BPT-4 due to permanent changes in hydrology. With mitigation, the magnitude of impact would be no change with a neutral effect (not significant).

Below Ground Heritage Assets at Charlton Mires Junction

6.10.8. There is a potential for permanent adverse impacts and effects from the excavations and backfilling of Borrow Pits A2E-CH586-SB-BPT-1; A2E-CH591-SB-BPT-2 and A2E-CH590-SB-BPT-3 on currently unknown below ground heritage assets of probable negligible to medium value from permanent changes in hydrology. With mitigation, the magnitude of impact would be no change with a neutral effect (not significant).

Above Ground Heritage Asset

Grade II Listed Building Church of St Cuthbert, Hebron (NHL 1153555)

6.10.9. There is a potential for impacts on the setting of Grade II Listed Building Church of St Cuthbert, Hebron (NHL 1153555) of medium value during operation due the proposed increase in height of the proposed bunding of the proposed woodland planting at Highlaws Junction (M2F-CH122-SB-EBD-3, M2F-CH122-SB-SEB-1 and M2F-CH123-SB-PWA-1), which would increase their visual prominence. The impacts would be largely limited by the existing screening and due to the distance between the Highlaws Junction and the heritage asset. Any adverse impacts would be reduced as the woodland plantation matures and it provides additional screening between Part A and the asset, decreasing the visual impacts. This would reduce the magnitude of permanent impacts on the setting from minor adverse initially to negligible adverse, however it is judged to still result in a slight adverse effect (not significant), as reported previously in **Section 8.10, Chapter 8: Cultural Heritage Part A** of the ES [**APP-046**], as the setting would still be altered and any existing long-distance views to the west of the asset be lost.

6.11 MONITORING

6.11.1. The monitoring requirements for Cultural Heritage have not changed due to the Earthworks Amendments. Therefore, the text within **Section 8.11, Chapter 8: Cultural Heritage Part A** of the ES [**APP-046**] and **Section 8.11, Chapter 8: Cultural Heritage Part B** of the ES [**APP-047**] remains unchanged and valid.

6.12 UPDATED DMRB GUIDANCE

6.12.1. Since the assessments in the ES were completed, the DMRB methodology was superseded and replaced with updated guidance as detailed in **Section 8.4, Chapter 8: Cultural Heritage Part A** of the ES [**APP-046**] and **Section 8.4, Chapter 8: Cultural Heritage Part B** of the ES [**APP-047**]. A DMRB sensitivity test for likely significant effects has been undertaken to determine whether the Study Areas applied remained appropriate and if the value of any heritage assets required amending (in particular Grade II Listed Buildings). No updates were judged to be required.

7 ROAD DRAINAGE AND THE WATER ENVIRONMENT

7.1 INTRODUCTION

7.1.1. **Chapter 10: Road Drainage and the Water Environment Part A** of the ES [**APP-050**] and **Chapter 10: Road Drainage and the Water Environment Part B** of the ES [**APP-051**] considers the likely significant effects of the Scheme on Road Drainage and the Water Environment.

7.1.2. This section of the ES Addendum considers only the likely significant effects of the Earthworks Amendments on Road Drainage and the Water Environment. This comprises changes to the local hydrogeology in the vicinity of the borrow pits (including groundwater lowering and flooding), impact of groundwater to the functionality of the borrow pits (including dewatering) and changes to local flood risk.

7.2 COMPETENT EXPERT EVIDENCE

7.2.1. The competent expert advice for the Road Drainage and Water Environment assessment in relation to flood risk has not changed for the assessment on the Earthworks Amendments. The text within **Section 10.2, Chapter 10: Road Drainage and the Water Environment Part A** of the ES [**APP-050**] and **Section 10.2, Chapter 10: Road Drainage and the Water Environment Part B** of the ES [**APP-051**] remains unchanged and valid. The hydrogeology sections of this ES Addendum have been undertaken by additional technical professionals who are competent experts in the field of hydrogeological assessment.

7.2.2. As detailed in **Table 7-1**, the hydrogeological professionals contributing to the production of this assessment have sufficient expertise to ensure the completeness and quality of this assessment. The table sets out the details of expertise where this is different to those presented in the ES.

Table 7-1 – Road Drainage and the Water Environment Professional Competence

Name	Role	Qualifications and Professional Membership	Experience
Niyaz Ali	Author	MSc Hydrogeology BSc (Hons) Geoscience	Assistant Hydrogeological Consultant 3.5 years' experience in hydrogeological assessment. Other recent relevant experience includes: – Lead hydrogeologist for hydrogeological studies for Northampton Northwest Relief Road – Lead hydrogeologist for Wokingham Borough Council Link Road (composed of five road schemes:

Name	Role	Qualifications and Professional Membership	Experience
			West of Five Road scheme, Winnersh Relief Road, Spine Road, Lower Early Way and Ashridge Farm) – Hydrogeologist providing groundwater input for the A27 Arundel Bypass – Hydrogeologist providing groundwater input for the A27 Worthing to Lancing scheme
Siobhan McGarry	Reviewer	Doctor of Geography MSc Hydrogeology BSc (Hons) Earth Science Chartered Geologist (CGeol)	Senior Hydrogeological Consultant 15 years' experience in hydrogeological assessment Other relevant experience includes: – Discipline lead for M20, Ireland – Senior Hydrogeologist for groundwater input to A5 WTC (Northern Ireland) ES
Thomas Eckhardt	Approver	MSc Hydrogeology BSc (Hons) Geology Chartered Geologist (CGeol)	Associate Director 20 years' experience in hydrogeological assessment Other relevant experience includes: – Discipline lead for the A5 WTC (Northern Ireland) ES – Discipline lead for the North Lowther Windfarm ES – Discipline lead for the Viridor ES

7.3 LEGISLATIVE AND POLICY FRAMEWORK

7.3.1. The legislative and policy framework for Road Drainage and the Water Environment has not changed since the publication of the ES. Therefore, the text within **Section 10.3, Chapter 10: Road Drainage and the Water Environment Part A** of the ES [**APP-050**] and **Section 10.3, Chapter 10: Road Drainage and the Water Environment Part B**, of the ES [**APP-051**] remains valid. Additional legislation relating to the hydrogeological assessment of the borrow pits is outlined below to inform this ES addendum.

7.3.2. The Water Abstraction and Impounding (Exemptions) Regulations 2017 provides for exemptions from the restriction on abstraction and the restriction on impounding works in the Water Resources Act 1991.

7.4 ASSESSMENT METHODOLOGY

7.4.1. In order to ensure a comparable assessment with the ES, the assessment methodology followed for Road Drainage and the Water Environment has not changed in response to the Earthworks Amendments. Therefore, the text within **Section 10.4, Chapter 10: Road Drainage and the Water Environment Part A** of the ES [**APP-050**] and **Section 10.4, Chapter 10: Road Drainage and the Water Environment Part B** of the ES [**APP-051**] remains unchanged and valid.

7.4.2. As the construction of the borrow pits and the potential impacts to groundwater resources was not considered in the **Chapter 10: Road Drainage and the Water Environment Part A** of the ES [**APP-050**] and **Chapter 10: Road Drainage and the Water Environment Part B** of the ES [**APP-051**], the assessment methodology for hydrogeological impacts has been expanded accordingly.

7.4.3. The Sichardt equation (CIRIA 750) was used to estimate the potential rate of groundwater inflow into borrow pits A2E-CH569_NB-BPT-4 and A2E-CH567_NB-BPT-5 and the potential radius of influence (lateral extent of the groundwater drawdown). Groundwater inflow estimations have been calculated for the specified borrow pits due to their proximity to the Ellsnook Round Barrow Scheduled Monument burial site located to the south-west of the borrow pit structures.

7.4.4. The equation used to calculate potential discharge from a cutting is based on an expansion of the Sichardt equation which incorporates volumetric flow and the length of the cut section (trench one side (UC) CIRIA 750). The equation for two-sided cutting was used, as while the cuttings would mostly intercept the groundwater through the western and southern faces, groundwater inflow could occur from all sides. The equation used is the following:

$$Q = ((0.73 + (0.27 * P / H)) * (k * x * ((H2) – (h2))) / L)$$

Where:

P = Penetration below original water table (m)

H = Initial piezometric level (m)

k = Assigned permeability based on GI and BGS info (m/s)

x = Linear length of cutting (m)

h = Piezometric level (drawn down) (m)

L = Distance of influence (m, derived using Sichardt equation, with an empirical calibration factor

7.5 ASSESSMENT ASSUMPTIONS AND LIMITATIONS

7.5.1. The assessment assumptions and limitations for Road Drainage and the Water Environment for the proposed Earthworks Amendments have not changed from the ES, with the exception of the hydrogeology assessment with additional assumptions listed below.

Therefore, the text within **Section 10.5, Chapter 10: Road Drainage and the Water Environment Part A** of the ES [**APP-050**] and **Section 10.5, Chapter 10: Road Drainage and the Water Environment Part B** of the ES [**APP-051**] remains unchanged and valid.

7.5.2. The following assumptions apply to the Sichardt equation:

a. Aquifer is confined.
b. Aquifer has an infinite areal extent.
c. Aquifer is homogenous, isotropic and of uniform thickness.

7.5.3. The following assumptions apply to the equation used to determine the dewatering volume (trench one side (UC) CIRIA 750):

a. Aquifer is unconfined.
b. Initial water table is horizontal.
c. Aquifer is homogenous, isotropic and of uniform thickness.
d. Lo is obtained using the Sichardt formula, taking C as between 1500 - 2000, the default value for C used in this spreadsheet is 2000. However, in high permeability soils where very large values of Lo are calculated, caution is needed. Chapmans equations were developed for ratios L0/H of <5 and may not be suitable for application where Lo is very large; flow rates may be significantly underestimated.
e. Cuttings are only partial penetrating the unconfined aquifer below the original water table.
f. Calculation assumes the cut area is completely dewatered.
g. Recorded groundwater level (for a Ground Investigation (GI) location) is assumed to be the original water table.
h. Aquifer thickness may not have been proven in GI. If this is the case, a value that best represents conditions on site, based on experience and judgement, will be applied as is the case here.
i. The equation assumes that the impact from dewatering affects the full aquifer thickness. In reality a minor cut (i.e. 5 m into a 30 m thick aquifer) is unlikely to impact the full aquifer depth beneath the base of the cut. In a deep or thick aquifer and for anisotropic conditions where Kv<Kh the influence of partial penetration on the yield of a well (or cut) is likely to be significantly diminished. This is not considered in the equation adopted.
j. Permeability may vary along the cut i.e. variable lithologies and variations in measured values may occur and there may not be fully represented by available GI data or the simplified approach to estimate discharge.
k. Only groundwater inflow into the structures from the sides have been calculated. No consideration has been made for rainfall and runoff data.

7.6 STUDY AREA

7.6.1. The Study Area for the Road Drainage and the Water Environment assessment has not changed as a result of the Earthworks Amendments. Therefore, the text within **Section 10.6, Chapter 10: Road Drainage and the Water Environment Part A** of the ES [**APP-050**] and **Section 10.6, Chapter 10: Road Drainage and the Water Environment Part B** of the ES [**APP-051**] remains unchanged and valid.

7.7 BASELINE CONDITIONS

7.7.1. The Earthworks Amendments are located within the Orders limits presented in the ES, meaning the baseline for the Road Drainage and the Water Environment assessment has not changed. Therefore, the text within **Section 10.7, Chapter 10: Road Drainage and the Water Environment Part A** of the ES [**APP-050**] and **Section 10.7, Chapter 10: Road Drainage and the Water Environment Part B** of the ES [**APP-051**] remains unchanged and valid. Additional baseline information regarding the hydrogeology within the Study Area is provided below to inform this ES Addendum.

GEOLOGY

7.7.2. The Scheme is underlain by shallow superficial deposits comprising glacial till and glaciofluvial deposits which are overlain by localised alluvium and peat. The thicknesses of the superficial deposits vary across the Site with typical thickness of 3 m, but locally ranging between 13 m - 20 m.

7.7.3. Shallow alluvium deposits which were found to be generally less than 2 m thick, comprising sand, silt, clay, peat have been located adjacent to watercourses. These overlie extensive deposits of glacial till, glaciolacustrine laminated clays and glaciofluvial sand and gravels. The predominately cohesive glacial till deposit, which is classified as generally firm to stiff, is described as sandy gravelly silty clay, with occasional granular layers of gravel, cobbles and boulders. Glaciofluvial deposits (comprising gravelly silty sand and gravels) were widespread to the north of Charlton Mires, at Charlton Mires and at West Linkhall.

7.7.4. The underlying bedrock, the Oxford Limestone, Alston Formation and Tyne Formation are present across the majority of the Site, comprising of a sandstone, siltstone, mudstone and limestone succession with a number of thin coal seams within the strata. The Scremeston Coal Member is located north of Heckley Fence up to Rock Lodge, comprising sandstone, siltstone, mudstone and coal. No significant coal seams have been identified in the immediate vicinity of the Scheme.

HYDROGEOLOGY

7.7.5. The cohesive glacial till deposits underlying most of the Study Area are designated by the Environment Agency as a Secondary Undifferentiated aquifer. The Environment Agency define a Secondary Undifferentiated aquifer as *"assigned in cases where it has not been possible to attribute either category A or B to a rock type. In most cases, this means that the layer in question has previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type".* This indicates that groundwater is likely to be present within the deposits but may only yield small amounts of groundwater. The alluvial, glacio-fluvial bedrock deposits present at the Site are assigned as Secondary A aquifers. The Environment Agency define Secondary 'A' Aquifers as "permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers". The peat deposits are designated by the Environment Agency as Unproductive Strata. The

Environment Agency define Unproductive Strata as “rock layers or drift deposits with low permeability that have negligible significance for water supply or river baseflow.”

7.7.6. The bedrock (Oxford limestone, Alston Formation and Tyne Formation) is designated by the Environment Agency as a Secondary A aquifer.

7.7.7. Groundwater was encountered at between 1.0 m – 3.5 mBGL during the 2018 Ground Investigation site works. The relatively shallow groundwater table was predominantly located in the superficial deposits; within glacial and alluvial materials overlying bedrock. Groundwater levels were encountered at depths of approximately 1 mBGL or less in close proximity to watercourses. Groundwater levels in the bedrock ranged between 1.7 mBGL (A2E-CH569_NB-BPT-4) – 3.4 mBGL (BH\17\06), 83.8 m AOD – 84.3 mAOD.

7.7.8. Four soakaway tests were undertaken in the cohesive glacial till, however very little infiltration was achieved indicating that the ground material has a very low permeability.

7.7.9. The groundwater bodies can be separated into two different groundwater resources based on the different importance of each receptor. The groundwater found in the cohesive glacial till, assigned as a Secondary Undifferentiated aquifer is classified as a receptor of low importance. The groundwater in cohesive alluvium, glaciofluvial sand and gravel, sandstone and limestone bedrock, all of which are Secondary A aquifers are classified as a receptor of medium importance.

7.8 POTENTIAL IMPACTS

CONSTRUCTION

7.8.1. During construction, the anticipated impacts of the Earthworks Amendments are:

a. Increased flood risk associated with temporary works within areas of fluvial flood storage and associated changes to catchment permeability and hydrology including surface water runoff.

b. Increased groundwater vulnerability.

c. Changes to hydrodynamics through excavation activities (including groundwater dewatering measures where applicable) with subsequent effects on groundwater receptors (including heritage sites).

7.8.2. All other impacts during construction, detailed within **Section 10.8, Chapter 10: Road Drainage and the Water Environment Part A** of the ES [**APP-050**] and **Section 10.8, Chapter 10: Road Drainage and the Water Environment Part B** of the ES [**APP-051**], remain unchanged and are valid.

OPERATION

7.8.3. During the operation of the Scheme, the anticipated impacts of the Earthworks Amendments are:

a. Permanent impacts to catchment hydrology caused by the introduction of barriers (including permanent earthworks) to natural overland flow and changes to natural catchment dynamics.

b. Permanent changes to groundwater hydrodynamics through cuttings and excavations constructed as part of the Scheme (including groundwater dewatering control measures where applicable).

7.9 DESIGN, MITIGATION AND ENHANCEMENT MEASURES

7.9.1. In addition to the measures detailed within **Section 10.9, Chapter 10: Road Drainage and the Water Environment Part A** of the ES [**APP-050**] and **Section 10.9, Chapter 10: Road Drainage and the Water Environment Part B** of the ES [**APP-051**], the following mitigation measures would be implemented.

CONSTRUCTION

7.9.2. A detailed assessment of flood risk is provided within **Appendix 10.1: Flood Risk Assessment Part A** of the ES [**APP-254**] and **Appendix 10.1: Flood Risk Assessment Part B** of the ES [**APP-311**].

7.9.3. Reference S-W13 of the **Outline CEMP [REP3-013 and 014**] sets out the measures for managing flood risks during construction, such as ensuring flood conveyance routes are maintained and monitoring of Environment Agency's flood warnings. Additional measures are outlined in the Register of Environmental Actions and Commitments in Appendix D of this ES Addendum and would include:

a. Ensuring that flood conveyance routes are maintained during construction. This would include temporary earth bunds that are located along overland flow paths.
b. Ensuring that a minimum buffer of 8 m between bunds and any watercourses is maintained to ensure that local flood risk is not increased.
c. Groundwater level dewatering of aquifer drainage would be required for the construction of the borrow pits. Captured groundwater would be treated to settle any sediments prior to discharge into local watercourses.

7.9.4. Construction works would avoid high flow events where practicable to reduce the risk of shallow groundwater levels.

OPERATION

7.9.5. Design and implementation of suitable fill material with a similar permeability and fill quality within the borrow pits. This is set out in **Appendix D: Register of Environmental Actions and Commitments** of this ES Addendum.

7.10 ASSESSMENT OF LIKELY SIGNIFICANT EFFECTS

CONSTRUCTION

Increased Flood Risk During Construction

7.10.1. The land immediately adjacent to the culverts and watercourse crossings in close proximity to the Earthworks Amendments is considered to have a low vulnerability in terms of flood risk. Any effects would be very localised due to the small working areas.

7.10.2. Borrow pit A2E-CH586-SB-BPT-1 is located within an area of flood risk associated with the southern tributary of Kittycarter Burn as identified in **Appendix 10: Flood Risk Assessment Part B** of the ES [**APP-311**]. The borrow pit would not increase local flood risk as there is no reduction in flood storage; any out of bank flows close to the borrow would be likely to flow into the borrow pit. If this were to occur, dewatering of the borrow pit would be carried out in line with the measures detailed in reference S-W13 of the **Outline CEMP [REP3-013 and 014]**, as identified in **paragraph 7.9.3** above. The other borrow pits are not located in areas at risk of flooding.

7.10.3. The majority of the new and extended stockpiling areas are not located within an area identified to be at risk from flooding from fluvial or surface water sources. In line with reference S-W9 of the **Outline CEMP [REP3-013 and 014**] topsoil stores would be located away from the banks of watercourses and outside of fluvial floodplains, and flood conveyance routes would be maintained during the construction.

7.10.4. It is considered unlikely that the Earthworks Amendments would have a notable effect on flood risk during the construction works, although it is recognised that the works would affect overland flows and during the construction programme. Through maintaining an 8 m buffer between the earthworks and adjacent watercourses, any effects would be very localised due to the small working areas. **Table 7-2** below provides a summary of the likely significant effects associated with changes in flood risk during construction in relation to the Earthworks Amendments to each relevant receptor.

Table 7-2 – Effects During Construction arising from Changes in Flood Risk

Receptor	Importance	Magnitude of Impact	Significance of Effect
Surrounding rural agricultural land	Low	Negligible	Neutral (Not significant)

7.10.5. The assessment of flood risk during construction, detailed **within Section 10.10, Chapter 10: Road Drainage and the Water Environment Part A** of the ES [**APP-050**] **and Section 10.10, Chapter 10: Road Drainage and the Water Environment Part B** of the ES [**APP-051**], remains unchanged and are valid.

Changes to Hydrogeology During Construction

7.10.6. During the construction phase there would be a number of activities which would disturb the ground. Groundwater vulnerability would also be heightened during excavation works for ground clearance, construction and cuttings.

7.10.7. Proposed subsurface intrusive features (the borrow pits) may require active groundwater dewatering to allow for construction activities. Changes to the hydrodynamics (cuttings and excavations) below the water table or potentiometric surface may occur during the construction phase dewatering. Dewatering may alter groundwater levels, groundwater flow pathways, reducing groundwater resources locally.

7.10.8. **Table 7-3** below summarises the relevant construction details of the features relative to estimated groundwater levels.

Table 7-3 – Borrow Pit Details

Borrow Pit Reference	Base Level (mAOD)	Geology	Depth Approximate Metres Below Current Ground Level (Maximum)	Borrow Pit Base Elevation Relative to Water Table
A2E-CH569-NB-BPT-4	79	Topsoil, Cohesive Glacial Till, Limestone Bedrock/Sandstone Bedrock*	6.5	1.7 m below
A2E-CH567-NB-BPT-5	81.5	Topsoil, Cohesive Glacial Till, Limestone Bedrock/Sandstone Bedrock*	4	1.7 m below
A2E-CH590-NB-BPT-3	82.7	Cohesive Glacial Till, Glaciolacustrine, Glaciofluvial Sand and Gravel, Limestone Bedrock*	5	1.7 - 3.4 m below
A2E-CH591-NB-BPT-2	77.1	Topsoil, Glaciofluvial Sand and Gravel	9	1.7 m below
A2E-CH586-NB-BPT-1	82.4	Cohesive Glacial Till, Glaciofluvial Sand and Gravel	5	1.5 m below

Borrow Pit Reference	Base Level (mAOD)	Geology	Depth Approximate Metres Below Current Ground Level (Maximum)	Borrow Pit Base Elevation Relative to Water Table

Based on available GI information; exploratory holes may not always be at the exact location of the feature, depth below ground level/above/below water table are approximate

* water table in bedrock expected contact

7.10.9. The Sichardt equation has been used calculate the potential radius of influence and flow rates resulting from the construction of borrow pits A2E-CH569-NB-BPT-4 & A2E-CH567-NB-BPT-5. Dewatering activities may create significant drawdown (10 m – 35 m radius of influence) and therefore it is likely to impact upon groundwater resources and Scheduled Monument Ellsnook Round Barrow, 175 m north east of Heiferlaw Bridge (National Heritage List Reference 1006564). It should be noted that the bedrock aquifer is considered to be productive, potentially producing 1835 m^3/d - 3670 m^3/d of discharge. For the purpose of this calculation the two borrow pit structures have been assessed as a single structure. **Table 7-4** below shows the results of the calculations. However, the groundwater inflow rates calculated therein should be regarded as potential inflow rates and such rates are extremely unlikely to be sustained over any significant length of time.

7.10.10. The final design of the borrow pit A2E-CH569-NB-BPT-4 would be completed as a detention basin. The design of the detention basins has not changed since the ES. The assessment undertaken in **Appendix 10.6: Road Drainage and the Water Environment DMRB Sensitivity Test Part A** of the ES [**APP-259**] and **Appendix 10.5: Road Drainage and the Water Environment DMRB Sensitivity Test Part B** of the ES [**APP-315**] remains unchanged and valid.

Table 7-4 – Borrow Pit Sichardt Equation Inputs

A2E-CH569-NB-BPT-4 & A2E-CH567-NB-BPT-5 (Combined)	
Located at Ellsnook Plantation. Approx. chainage 56900-57100	
Cutting Length (m)	160
Ground Level (mAOD)	86
Piezometric Elevation (Maximum Groundwater Level) (mAOD)	84.3
Borrow Pit Base Elevation (m)	79.5

A2E-CH569-NB-BPT-4 & A2E-CH567-NB-BPT-5 (Combined)	
Aquifer Base Elevation (mAOD)	-254
Hydraulic Conductivity (permeability) (m/s)	$1.16x10^{-6}$
Distance of Influence (m)	10.34
Flow rate	0.021 m^3/s - 0.042 m^3/s 1835 m^3/d - 3670 m^3/d
Cutting length has been determined as the southern slopes of the pond. Maximum groundwater level derived from GI information Aquifer base derived from BGS Lexicon, BGS Map Sheet 6 as the aquifer base was not proven by GI information. Hydraulic conductivity of sandstone bedrock formation, derived from Kruseman & DeRidder and taking into account the nearest borehole logs	

7.10.11. **Table 7-5** below provides a summary of the likely significant effects associated with changes in hydrogeology during construction to each relevant receptor.

Table 7-5 – Effects During Construction Arising from Changes in Hydrogeology

Receptor	Importance	Magnitude of Impact	Significance of Effect
Cohesive glacial till	Low	Negligible	Neutral
Cohesive alluvium, glaciofluvial sand and gravel, sandstone and limestone bedrock	Medium	Minor	Slight Adverse

OPERATION

Increased Flood Risk During Operation

7.10.12. The land immediately adjacent to the culverts and watercourse crossings in close proximity to the Earthworks Amendments is considered to have a low vulnerability in terms of flood risk. Any effects would be very localised due to the small working areas.

7.10.13. Topsoil stores would be removed, and existing ground levels would be reinstated. The borrow pits that are not intended to be used as detention basins will be infilled with levels reinstated to existing ground levels. No flood risk impacts are predicted. The borrow pits that are intended to be used as detention basins have been assessed in **Appendix 10.1: Flood Risk Assessment Part A** of the ES [APP-254] and **Appendix 10.1: Flood Risk Assessment Part B** of the ES [**APP-311**] and the findings of these assessments remain unchanged and are valid. All of the additional permanent bunds proposed as part of the proposed amendment to the permanent earthworks are not located in areas at risk of flooding from fluvial and surface water sources.

7.10.14. It is considered unlikely that the proposed amendment to the permanent earthworks would have a notable effect on flood risk during the operation of the Scheme. The assessment of flood risk during operation, detailed within **Section 10.10, Chapter 10: Road Drainage and the Water Environment Part A** of the ES [**APP-050**] and **Section 10.10, Chapter 10: Road Drainage and the Water Environment Part B** of the ES [**APP-051**], remain unchanged and are valid.

Changes to Hydrogeology During Operation

7.10.15. Permanent groundwater control would not be required in borrow pit locations where the feature would be backfilled to the existing ground level. A2E-CH586_NB-BPT-1 and A2E-CH591-NB-BPT-2 would be backfilled to the existing ground level, not requiring dewatering mitigation measures.

7.10.16. The design of the detention basins has not changed since the ES. The assessment undertaken in **Appendix 10.6: Road Drainage and the Water Environment DMRB Sensitivity Test Part A [APP-259]** and **Appendix 10.5: Road Drainage and the Water Environment DMRB Sensitivity Test Part B [APP-315]** remains unchanged and valid.

7.11 MONITORING

7.11.1. The monitoring requirements for Road Drainage and the Water Environment have not changed due to the Earthworks Amendments. Therefore, the text within **Section 10.11, Chapter 10: Road Drainage and the Water Environment Part A** of the ES [**APP-050**] and **Section 10.11, Chapter 10: Road Drainage and the Water Environment Part B** of the ES [**APP-051**] remains unchanged and valid.

7.12 UPDATED DMRB GUIDANCE

7.12.1. Since the assessments in the ES were completed, the DMRB methodology was superseded and replaced with updated guidance as detailed in **Section 10.4, Chapter 10: Road Drainage and the Water Environment Part A** of the ES [**APP-050**] and **Section 10,4, Chapter 10: Road Drainage and the Water Environment Part B** of the ES [**APP-051**]. A DMRB sensitivity test for likely significant effects has been undertaken and can be found in **Appendix 10.6: Road Drainage and the Water Environment DMRB Sensitivity Test Part A** of the ES [**APP-259**] and **Appendix 10.5: Road Drainage and the Water**

Environment DMRB Sensitivity Test Part B of the ES [**APP-315**]. The results of the DMRB sensitivity assessments remain valid for the assessment within this ES Addendum.

8 GEOLOGY AND SOILS

8.1 INTRODUCTION

8.1.1. **Chapter 11: Geology and Soils Part A** of the ES [**APP-052**] and **Chapter 11: Geology and Soils Part B** of the ES [**APP-053**] considers the likely significant effects of the Scheme on Geology and Soils.

8.1.2. This section of the ES Addendum considers only the likely significant effects of the Earthworks Amendments on Geology and Soils. As detailed in **Appendix C: Summary of Proposed Changes to Application of this ES Addendum**, the Earthwork Amendments are not anticipated to impact Geology and Soils during operation and therefore this has not been considered in this chapter.

8.2 COMPETENT EXPERT EVIDENCE

8.2.1. As detailed in **Table 8-1**, the professionals contributing to the production of this assessment have sufficient expertise to ensure the completeness and quality of this assessment. The table sets out the details of expertise where this is different to those presented in **Section 11.2, Chapter 11: Geology and Soils Part A** of the ES [**APP-052**] and **Section 11.2, Chapter 11: Geology and Soils Part B** of the ES [**APP-053**].

Table 8-1 – Geology and Soils Professional Competence

Name	Role	Qualifications and Professional Membership	Experience
Claire Smith	Author	BSc (Hons) Applied and Environmental Geology	Associate 18 years' experience in Geo-environmental assessment. Relevant EIA experience: - Geology and soils specialist on Northampton North West Relief Road - Geology and soils checker on A59 Kex Gill - Geology and soils specialist on Beaulieu New Station Scoping Report A1 Birtley to Coal House – project team for Soils and Geology chapter.

8.3 LEGISLATIVE AND POLICY FRAMEWORK

8.3.1. The legislative and policy framework for Geology and Soils has not changed since the publication of the ES. Therefore, the text within **Section 11.3, Chapter 11: Geology and Soils Part A**, of the ES [**APP-052**] and **Section 11.3, Chapter 11: Geology and Soils Part B** of the ES [**APP-053**] remains valid.

8.4 ASSESSMENT METHODOLOGY

8.4.1. In order to ensure a comparable assessment with the ES, the assessment methodology followed for Geology and Soils has not changed as a result of the Earthworks Amendments. Therefore, the text within **Section 11.4, Chapter 11: Geology and Soils Part A, Section 11.4** of the ES [**APP-052**] and **Section 11.4, Chapter 11: Geology and Soils Part B** of the ES [**APP-053**] remains unchanged and valid.

8.5 ASSESSMENT ASSUMPTIONS AND LIMITATIONS

8.5.1. The assessment assumptions and limitations for Geology and Soils for Earthworks Amendments have not changed from the ES. Therefore, the text within **Section 11.5, Chapter 11: Geology and Soils Part A** of the ES [**APP-052**] and **Section 11.5, Chapter 11: Geology and Soils Part B** of the ES [**APP-053**] remains unchanged and valid.

8.6 STUDY AREA

8.6.1. The Study Area for the Geology and Soils assessment has not changed as a result of the Earthworks Amendments. Therefore, the text within **Section 11.6, Chapter 11: Geology and Soils Part A** of the ES [**APP-052**] and **Section 11.6, Chapter 11: Geology and Soils Part B** of the ES [**APP-053**] remains unchanged and valid.

8.7 BASELINE CONDITIONS

8.7.1. The Earthworks Amendments are located within the Orders Limits presented in the ES, meaning the baseline for the Geology and Soils assessment has not changed. Therefore, the text within **Section 11.7, Chapter 11: Geology and Soils Part A** of the ES [**APP-052**] and **Section 11.7, Chapter 11: Geology and Soils Part B** of the ES [**APP-053**] remains unchanged and valid.

8.8 POTENTIAL IMPACTS

CONSTRUCTION

8.8.1. During construction, the anticipated impacts of the Earthworks Amendments are:

a. Creation of borrow pits to win material suitable for use within construction;
b. Winning of material from Mineral Safeguarding Areas (MSAs); and,
c. Potential to encounter contaminants associated with the foot and mouth burial pit.

8.8.2. All other impacts during construction, detailed within **Section 11.8, Chapter 11: Geology and Soils Part A** of the ES [**APP-052**] and **Section 11.8, Chapter 11: Geology and Soils Part B** of the ES [**APP-053**], remain unchanged are valid.

8.9 DESIGN, MITIGATION AND ENHANCEMENT MEASURES

8.9.1. In addition to the measures detailed within **Section 11.9, Chapter 11: Geology and Soils Part A** of the ES [**APP-052**] and **Section 11.9, Chapter 11: Geology and Soils Part B** of the ES [**APP-053**], the following mitigation measures would be implemented:

CONSTRUCTION

8.9.2. Preparation of specific Risk Assessments and Method Statements (RAMS) for works to be completed in the area of the former foot and mouth burial site. RAMS to be prepared in line with specific guidance to be obtained from the Department for Environment, Food & Rural Affairs (DEFRA). This is set out in **Appendix D: Register of Environmental Actions and Commitments** of this ES Addendum.

8.10 ASSESSMENT OF LIKELY SIGNIFICANT EFFECTS

8.10.1. This section sets out the likely effects of the Earthworks Amendments within the Scheme and their significance. It is anticipated that the likely effects are relevant only to the construction phase.

CONSTRUCTION

Detriment to Human Health

8.10.2. Localised areas of potential contamination have been identified within **Chapter 11: Geology and Soils Part A** of the ES [**APP-052**] and **Chapter 11: Geology and Soils Part B** of the ES [**APP-053**]. A proposed change included within the Earthworks Amendments is the increase in height of two bunds in the area of the former foot and mouth burial pit, shown as 'Carcass Pit' on **Figure 11.7: Potential Contamination Sources [REP1-068].** Given the proposed change includes the increase in height of currently proposed bunds and does not include additional excavation in the area of the former foot and mouth burial pit the significance of effects on human health associated with the proposed change remains Neutral. This is taking into consideration the mitigation measures to be implemented as outlined in **Section 11.9, Chapter 11: Geology and Soils Part A** of the ES [**APP-052**] and the preparation of RAMS in accordance with additional guidance obtained from DEFRA as outlined in **Section 8.9** of this ES Addendum.

Sterilisation of Mineral Resources

8.10.3. The impact of permanent sterilisation of mineral resources was scoped out of **Chapter 11: Geology and Soils Part A,** of the ES [**APP-052**]. Within **Section 11.9, Chapter 11: Geology and Soils Part B** of the ES [**APP-053**], it was stated that approximately 33 hectares of mineral resource including sand and gravel, limestone and coal located within the Mineral Safeguarding Areas (MSAs) would be affected by permanent land take. The magnitude of change was assessed as negligible due to the size of the area to be sterilised. The outcome of the assessment of significance of effects was that there is likely to be a direct, permanent, slight adverse effect on mineral resources.

8.10.4. The proposed increase in number of borrow pits throughout the Scheme reduces the total area of MSA to be sterilised as such the significance of effects remains Slight Adverse.

8.11 MONITORING

8.11.1. The monitoring requirements for Geology and Soils have not changed as a result of the Earthworks Amendments. Therefore, the text within **Section 11.11, Chapter 11: Geology and Soils Part A** of the ES [**APP-052**] and **Section 11.11, Chapter 11: Geology and Soils Part B** of the ES [**APP-053**] remains unchanged and valid.

8.12 UPDATED DMRB GUIDANCE

8.12.1. Since the assessments in the ES were completed, the DMRB methodology was superseded and replaced with updated guidance as detailed in **Section 11.4, Chapter 11: Geology and Soils Part A** of the ES [**APP-052**] and **Section 11.4, Chapter 11: Geology and Soils Part B** of the ES [**APP-053**]. The DMRB sensitivity tests as provided in **Appendix 11.5: Geology and Soils DMRB Sensitivity Test Part A [APP-265]** and **Appendix 11.7: Geology and Soils DMRB Sensitivity Test Part B [APP-323]** determine that the application of the updated DMRB guidance will not change the overall outcome of the assessment.

8.12.2. The findings of the DMRB sensitivity test also apply to the assessment of Geology and Soils in this ES Addendum and therefore the conclusions of the assessment remain unchanged.

9 MATERIAL RESOURCES

9.1 INTRODUCTION

9.1.1. **Chapter 13: Material Resources Part A** of the ES [**APP-056**] and **Chapter 13: Material Resources Part B** of the ES [**APP-057**] considers the likely significant effects of the Scheme on Material Resources. This comprises an assessment of material resource consumption and waste generation and disposal during the construction phase and first year of operation of the Scheme.

9.1.2. This section of the ES Addendum considers the potential for changes to the likely significant effects identified within **Chapter 13: Material Resources Part A** of the ES [**APP-056**] and **Chapter 13: Material Resources Part B** of the ES [**APP-057]** as the result of the Earthworks Amendments.

9.1.3. As detailed in **Appendix C: Summary of Proposed Changes to Application** of this ES Addendum, the Earthwork Amendments are not anticipated to impact Material Resources during operation and therefore this has not been considered in this chapter.

9.2 COMPETENT EXPERT EVIDENCE

9.2.1. The competent expert advice for the Material Resources assessment has not changed for this assessment. The text within **Section 13.2, Chapter 13: Material Resources Part A** of the ES [**APP-056**] and **Section 13.2, Chapter 13: Material Resources Part B** of the ES [**APP-057**] remains unchanged and valid.

9.3 LEGISLATIVE AND POLICY FRAMEWORK

9.3.1. The legislative and policy framework for Material Resources has not changed since the publication of the ES. Therefore, the text within **Section 13.3, Chapter 13: Material Resources Part A** of the ES [APP-056] and **Section 13.3, Chapter 13: Material Resources Part B** of the ES [**APP-057**] remains valid.

9.4 ASSESSMENT METHODOLOGY

9.4.1. In order to ensure a comparable assessment with the ES, the assessment methodology followed for Material Resources has not changed in response to the Earthworks Amendments. Therefore, the text within **Section 13.4, Chapter 13: Material Resources Part A** of the ES [**APP-056**] and **Section 13.4, Chapter 13: Material Resources Part B** of the ES [**APP-057**] remains unchanged and valid.

9.5 ASSESSMENT ASSUMPTIONS AND LIMITATIONS

9.5.1. The assessment assumptions and limitations for Material Resources for the Earthworks Amendments have not changed from the ES. Therefore, the text within **Section 13.5, Chapter 13: Material Resources Part A** of the ES [**APP-056**] and **Section 13.5, Chapter 13: Material Resources Part B** of the ES [**APP-057**] remains unchanged and valid.

9.6 STUDY AREA

9.6.1. The Study Area for the Material Resources assessment has not changed as a result of the Earthworks Amendments. Therefore, the text within **Section 13.6, Chapter 13: Material Resources Part A** of the ES [APP-056] and **Section 13.6, Chapter 13: Material Resources Part B** of the ES [**APP-057**] remains unchanged and valid.

9.7 BASELINE CONDITIONS

9.7.1. The Earthworks Amendments are located within the Orders limits presented in the ES, meaning the baseline for the Material Resources assessment has not changed. Therefore, the text within **Section 13.7, Chapter 13: Material Resources Part A** of the ES [**APP-056**] and **Section 13.7, Chapter 13: Material Resources Part B** of the ES [**APP-057**] remains unchanged and valid.

9.8 POTENTIAL IMPACTS

CONSTRUCTION

9.8.1. During construction, the Earthworks Amendments have the potential to change (positively impact):

a. Consumption of natural and non-renewable resources; and
b. Reduction in landfill capacity.

9.8.2. All other impacts during construction, as detailed within **Section 13.8, Chapter 13: Material Resources Part A** of the ES [APP-056] and **Section 13.8, Chapter 13: Material Resources Part B** of the ES [**APP-057**], remain unchanged and are valid.

9.9 DESIGN, MITIGATION AND ENHANCEMENT MEASURES

9.9.1. In addition to the measures detailed within **Section 13.9, Chapter 13: Material Resources Part A** of the ES [**APP-056**] and **Section 13.9, Chapter 13: Material Resources Part B** of the ES [**APP-057**], the following design measures are planned to be implemented as part of the Earthworks Amendments, and are set out in **Appendix D: Register of Environmental Actions and Commitments** of this ES Addendum:

CONSTRUCTION

a. Where site-won material meets re-use criteria it would be retained within the Scheme as part of, for example, refill of borrow areas, footway foundations or access tracks, or as thickened topsoil spread; and
b. Any additional unsuitable material (beyond that which has already been identified from the Scheme) would be treated (for example, with lime) to improve materials for reuse and retention on the Scheme.

9.9.2. At this time, off-site disposal is planned to be limited to contaminated materials only, which are expected to be limited in volume.

9.10 ASSESSMENT OF LIKELY SIGNIFICANT EFFECTS

CONSTRUCTION

9.10.1. The Earthworks Amendments are intended to reduce the volume of materials required to be imported to the Scheme; the approach has been adopted so as to recover and reuse as much of the site-won material as far as reasonably practicable (subject to legislative requirements and standard guidelines). The overall aim of the approach is to manage materials within the Order limits and hence greatly reduce (potentially eliminate) the need for importation of material for earthworks construction (excluding specialist structural and drainage fill) and to minimise off-site disposal.

9.10.2. There is an anticipated reduction in 165,000 tonnes of imported materials to Part B, of which 110,000 tonnes would comprise earthworks from Part A. This would further reduce the earthworks haul material between Part A and Part B.

9.10.3. In terms of site arisings, **Table 9-1** describes the planned volumes of site-won material to be reused for the temporary and permanent earthworks. The application in which materials are to be reused within the Scheme is also noted.

Table 9-1 – Re-Use of Site-Won arisings for Temporary and Permanent Earthworks

Arisings description	Volume (tonnes)	Application
Topsoil	320,000	208,750 tonnes as topsoil 111,250 tonnes within the landscape design
Acceptable Class 2	455,000	Embankment fill
Acceptable rock	111,250	Non-structural fill
Acceptable rock	32,500	Class 1 fill
Acceptable slope/drainage	85,000	Landscape works
Unacceptable	187,500	Landscape works
Total arisings to be reused Part A	**1,191,250**	
Topsoil	163,750	112,500 tonnes as topsoil 51,250 tonnes within the landscape design

Arisings description	Volume (tonnes)	Application
Unsuitable	43,750	Refill borrow pits
Unacceptable	45,000	Refill borrow pits
Acceptable Class 2	15,000	Embankment fill
Acceptable rock	8,375	Class 1 fill
Acceptable rock	22,500	Structural fill
Total arisings to be reused Part B	**298,375**	

9.10.4. In line with the above reuse proposals, there would be an overall reduction in disposal volumes from across both the Scheme and additional works, as follows:

a. 250,000 tonnes diverted from landfill for Part A; and
b. 137,500 tonnes diverted from landfill for Part B.

9.10.5. Therefore, the Earthworks Amendments is not expected to generate new or worsened significant adverse effects by comparison with those reported in **Section 13.10, Chapter 13: Material Resources Part A** of the ES [**APP-056**], **Section 13.10, Chapter 13: Material Resources Part B** of the ES [**APP-057**] and for the Scheme as reported in **Table 16-8, Chapter 16 Assessment of Cumulative Effects** of the ES [**APP-062**].

9.11 MONITORING

9.11.1. The monitoring requirements for Material Resources have not changed as a result of the Earthworks Amendments. Therefore, the text within **Section 13.11, Chapter 13: Material Resources Part A** of the ES [**APP-056**] and **Section 13.11, Chapter 13: Material Resources Part B** of the ES [**APP-057**] remains unchanged and valid.

9.12 UPDATED DMRB GUIDANCE

9.12.1. Since the assessments in the ES were completed, the DMRB methodology was superseded and replaced with updated guidance as detailed in **Section 13.4, Chapter 13: Material Resources Part A** of the ES [**APP-056**] and **Section 13.4, Chapter 13: Material Resources Part B** of the ES [**APP-057**]. A DMRB sensitivity test for likely significant effects was undertaken for the Earthworks Amendments. The changes inherent to this ES Addendum are not expected to materially worsen or add further risk to any of the conclusions set out the DMRB sensitivity test in **Section 13.10, Chapter 13: Material**

Resources Part A of the ES [**APP-056**] and **Section 13.10, Chapter 13: Material Resources Part B**, of the ES [**APP-057].**

10 SUMMARY

10.1 INTRODUCTION

10.1.1. **Chapter 17: Summary of the ES [APP-063]** describes the likely significant effects of the Scheme.

10.1.2. A summary of the likely significant effects as a result of the Earthworks Amendments is presented below. All other conclusions within **Chapter 17: Summary of the ES [APP-063]** remain valid.

10.2 SUMMARY OF LIKELY SIGNIFICANT EFFECTS

AIR QUALITY

10.2.1. Following the successful implementation of mitigation, the Earthworks Amendments would result in no change to the conclusions of the assessment of construction effects reported in **Chapter 5: Air Quality Part A** of the ES [**APP-040**] and **Chapter 5: Air Quality Part B** of the ES [**APP-041**].

NOISE AND VIBRATION

10.2.2. Following the successful implementation of mitigation, the Earthworks Amendments would result in no change to the conclusions of the assessment of construction effects reported in **Chapter 6: Noise and Vibration Part A** of the ES [APP-042] or **Chapter 6: Noise and Vibration Part B** of the ES [**APP-043**].

LANDSCAPE AND VISUAL

10.2.3. The Earthworks Amendments would result in no change to the conclusions of the assessment of construction and operational effects on residential, PRoW, commercial and community receptors reported in **Chapter 7: Landscape and Visual Part A** of the ES [**APP-044**] and **Chapter 7: Landscape and Visual Part B** of the ES [**APP-045**].

CULTURAL HERITAGE

Construction

Below Ground Heritage Assets

10.2.4. With mitigation through design measures, the Earthworks Amendments would result in no change to the conclusions of the assessment of construction effects on the below ground Scheduled Monument 'Ellsnook Round Barrow' reported in **Chapter 8: Cultural Heritage Part B** of the ES [**APP-047**]. The significance would remain as neutral (not significant).

10.2.5. The Earthworks Amendments could potentially result in additional direct adverse impacts on currently unknown below ground heritage assets located within the Order limits during construction. Depending on the value of the heritage assets, the effects would vary, however assuming the successful implementation of mitigation, the significance of effect would be neutral (not significant). As such, the significance of effects reported in **Chapter 8:**

Cultural Heritage Part A of the ES [**APP-046]** and **Chapter 8: Cultural Heritage Part B** of the ES [**APP-047**] remains unchanged and valid.

Above ground heritage assets

10.2.6. The Earthworks Amendments would result in no change to the conclusions of the assessment of construction effects on 'Grade II Listed Building Church of St Cuthbert, Hebron', on 'Grade II Listed Building Causey Park House and associated Grade II Listed Buildings', and on 'Grade II Listed Building Thirston New Houses' reported in **Chapter 8: Cultural Heritage Part A** of the ES [**APP-046**]. The significance would remain as slight adverse (not significant).

10.2.7. The Earthworks Amendments would result in no change to the conclusions of the assessment of construction effects on the non-designated Felton Park, reported in **Chapter 8: Cultural Heritage Part A** of the ES [**APP-046**]. The significance would remain as moderate adverse (significant).

Operation

Below Ground Heritage assets

10.2.8. The Earthworks Amendments would result in no change to the conclusions of the assessment of operational effects on the below ground Scheduled Monument 'Ellsnook Round Barrow' reported in **Chapter 8: Cultural Heritage Part B** of the ES [**APP-047].** The significance would remain as neutral (not significant).

10.2.9. The Earthworks Amendments could potentially result in additional direct adverse impacts on currently unknown below ground heritage assets located within the Order limits during operation. Depending on the value of the heritage assets, the effects would vary, however assuming the successful implementation of mitigation, the significance of effect would be neutral (not significant). As such, the significance of effects reported **in Chapter 8: Cultural Heritage Part A** of the ES [**APP-046**] and **Chapter 8: Cultural Heritage Part B** of the ES [**APP-047**] remains unchanged and valid.

Above Ground Heritage Assets

10.2.10. The Earthworks Amendments would ultimately result in no change to the conclusions of the assessment of operational effects on the Grade II Listed Building Church of St Cuthbert reported in **Chapter 8: Cultural Heritage Part A** of the ES [**APP-046**]. The significance would remain as slight adverse (not significant).

ROAD DRAINAGE AND THE WATER ENVIRONMENT

CONSTRUCTION

10.2.11. Following the successful implementation of the mitigation measures detailed in the **Outline CEMP [REP3-013 and 014**], the effects of the Earthworks Amendments during construction on flood risk would be neutral (not significant), which would result in no change to the conclusions of the assessment of construction effects reported in **Chapter 10: Road**

Drainage and the Water Environment Part A of the ES [**APP-050**] or **Chapter 10: Road Drainage and the Water Environment Part B** of the ES [**APP-051**].

10.2.12. The Earthworks Amendments would cause new effects on local hydrogeology. It would cause a neutral (not significant) effect on cohesive glacial till, and a slight adverse (not significant) effect on cohesive alluvium, glaciofluvial sand and gravel, sandstone and limestone bedrock. These are in addition to the construction effects reported in **Chapter 10: Road Drainage and the Water Environment Part A** of the ES [**APP-050**] or **Chapter 10: Road Drainage and the Water Environment Part B** of the ES [**APP-051**].

OPERATION

10.2.13. The Earthworks Amendments would result in no change to the conclusions of the assessment of construction effects on flood risk or hydrogeology reported in **Chapter 10: Road Drainage and the Water Environment Part A** of the ES [**APP-050**] or **Chapter 10: Road Drainage and the Water Environment Part B** of the ES [**APP-051**].

GEOLOGY AND SOILS

10.2.14. Following the successful implementation of mitigation, the Earthworks Amendments would result in no change to the conclusions of the assessment of construction effects on human health or sterilisation of mineral resources, as reported in **Chapter 11: Geology and Soils Part A** of the ES [**APP-052**] and **Chapter 11: Geology and Soils Part B** of the ES [**APP-053**].

MATERIAL RESOURCES

10.2.15. Following the successful implementation of mitigation, the Earthworks Amendments would result in no change to the conclusions of the assessment of construction effects as reported in **Chapter 13: Material Resources Part A** of the ES [**APP-056**] and **Chapter 13: Material Resources Part B** of the ES [**APP-057**].

10.3 CONCLUSIONS

10.3.1. The assessments presented in this ES addendum have concluded that although the environmental impacts of the Earthworks Amendments vary between topics, overall this amendment to the Scheme would not alter the findings of the ES with comparable effects to those assessed previously.

11 ABBREVIATIONS

Acronym	Definition
CA	Conservation Area
CEnv	Chartered Environmentalist
CEMP	Construction Environmental Management Plan
CiFA	Chartered Institute for Archaeologists
CMRA	Coal Mining Risk Assessment
CMLI	Chartered Member for Landscape Institute
DCO	Development Consent Order
DMRB	Design Manual for Roads and Bridges
ECML	East Coast Main Line
EIA	Environmental Impact Assessment
ES	Environmental Statement
ExA	Examining Authority
HER	Historic Environment Records
HGV	Heavy Goods Vehicle
HPI	Habitats of Principle Importance
IEMA	Institute of Environmental Management and Assessment
LBAP	Local Biodiversity Action Plan
LWS	Local Wildlife Site
LVIA	Landscape Visual Impact Assessment
NERC	Natural Environment and Rural Committees
NTS	Non-Technical Summary
OS	Ordinance Survey
PEA	Preliminary Ecological Appraisal

Acronym	Definition
SNCI	Site of Nature Conservation Importance
WSI	Written Scheme of Investigation
ZTV	Zone of Theoretical Visibility

Appendix A

PROPOSED AMENDMENT TO TEMPORARY AND PERMANENT EARTHWORKS SCHEDULE

A1 in Northumberland

Earthworks Opportunities

1-page summaries

Contents

M2F	
Unique ID	Page
M2F-CH116-NB-VLS-1	4
M2F-CH121-NB-VLS-2	5
M2F-CH120-NB-EBD-1	6
M2F-CH121-NB-EBD-2	7
M2F-CH121-NB-SBF-1	8
M2F-CH122-SB-EBD-3	9
M2F-CH122-SB-SEB-1	10
M2F-CH123-SB-PWA-1	11
M2F-CH123-SB-VLS-2	12
M2F-CH126-NB-NBD-15	13
M2F-CH132-SB-WDL-1	14
M2F-CH134-SB-WDL-2	15
M2F-CH135-NB-EBD-4	16
M2F-CH136-SB-WDL-3	17
M2F-CH136-NB-EBD-5	18
M2F-CH136-NB-VLS-1	19
M2F-CH141-NB-EBD-6	20
M2F-CH148-NB-EBD-7	21
M2F-CH149-SB-VLS-3	22
M2F-CH150-SB-SBF-2	23
M2F-CH149-NB-EBD-8	24
M2F-CH150-SB-EBD-9	25
M2F-CH159-SB-EBD-10	26
M2F-CH160-NB-EBD-13	27
M2F-CH166-SB-EBD-11	28
M2F-CH167-NB-EBD-12	29

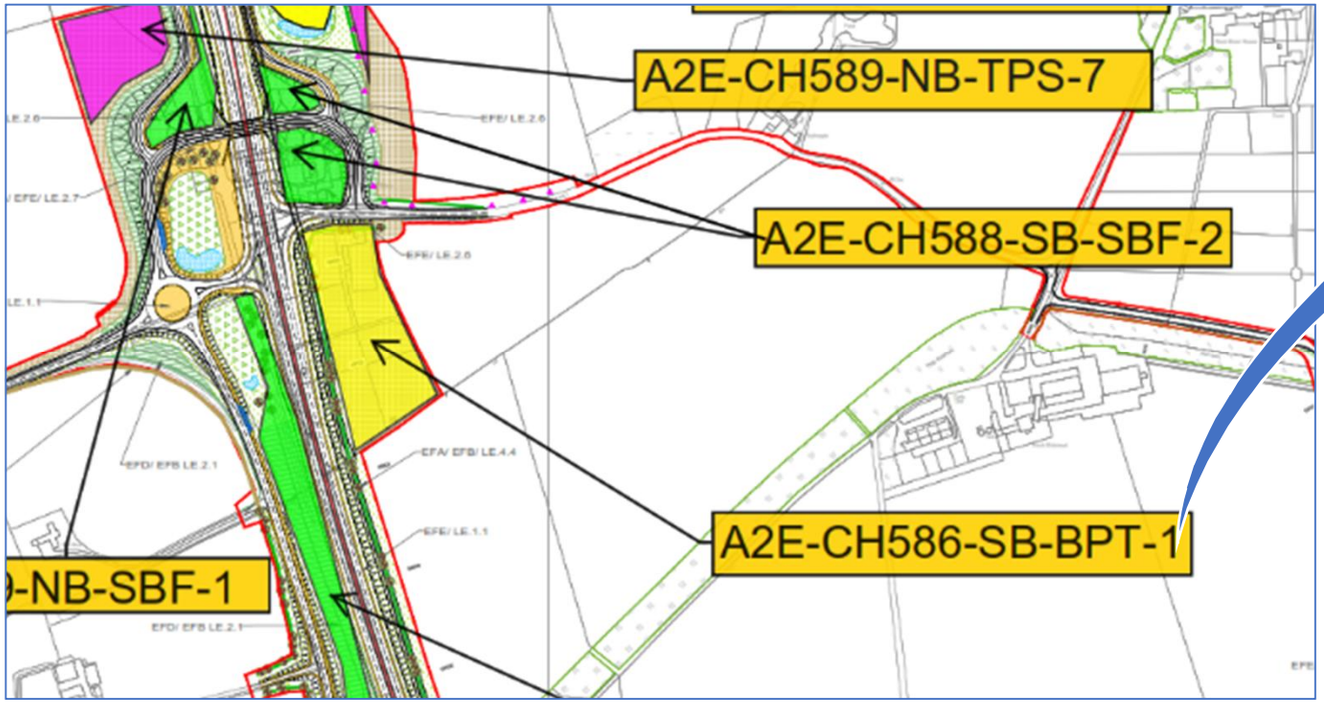
M2F	
Unique ID	Page
M2F-CH171-NB-NGA-1	30
M2F-CH174-SB-NGA-3	31
M2F-CH176-NB-SEB-1	32
M2F-CH176-SB-SEB-1	33
M2F-CH176-NB-SEB-2	34
M2F-CH192-SB-SEB-2	35
M2F-CH192-NB-SEB-1	36
M2F-CH196-SB-SEB-3	37
M2F-CH195-NB-SEB-3	38
M2F-CH213-SB-EBD-14	39
M2F-CH215-NB-SEB-1	40
M2F-CH215-NB-TPS-15	41
M2F-CH216-SB-SBF-1	42
M2F-CH216-NB-SBF-1	43
M2F-CH216-SB-SEB-1	44
M2F-CH217-SB-TPS-11	45
M2F-CH217-SB-TPS-11	46
M2F-CH227-SB-WDL-1	47
A2E	
A2E-CH541-SB-TPS-9	48
A2E-CH550-NB-NBD-3	49
A2E-CH553-NB-TPS-5	50
A2E-CH554-NB-NBD-4	51
A2E-CH567-NB-BPT-5	52
A2E-CH569-NB-BPT-4	53
A2E-CH583-NB-TPS-2	54
A2E-CH583-NB-NBD-2	55

A2E	
Unique ID	Page
A2E-CH586-SB-BPT-1	56
A2E-CH588-SB-SBF-2	57
A2E-CH589-NB-SBF-1	58
A2E-CH590-SB-BPT-3	59
A2E-CH591-SB-BPT-2	60
A2E-CH591-SB-NBD-1	61

Revision / Updates	
No.	Comments
00	First issue
01	Added key ES info, further assessments, relative heights
	Removed River Coquet land pages
02	Added assessment against ES CH2, 2.12, Parameters 4 & 5
03	Removed proposals within parameters of the DCO/ES (namely temporary stockpiles already assessed)

Explanation of Unique ID and Markups

- Naming convention to identify each opportunity alongside Landscape Mitigation PDF markups.
- Example below:



Scheme – Approx. CH (3 sig. figs) – Carriageway direction – Description short form – Number

A2E – CH56800 – Southbound – Borrow Pit – 1

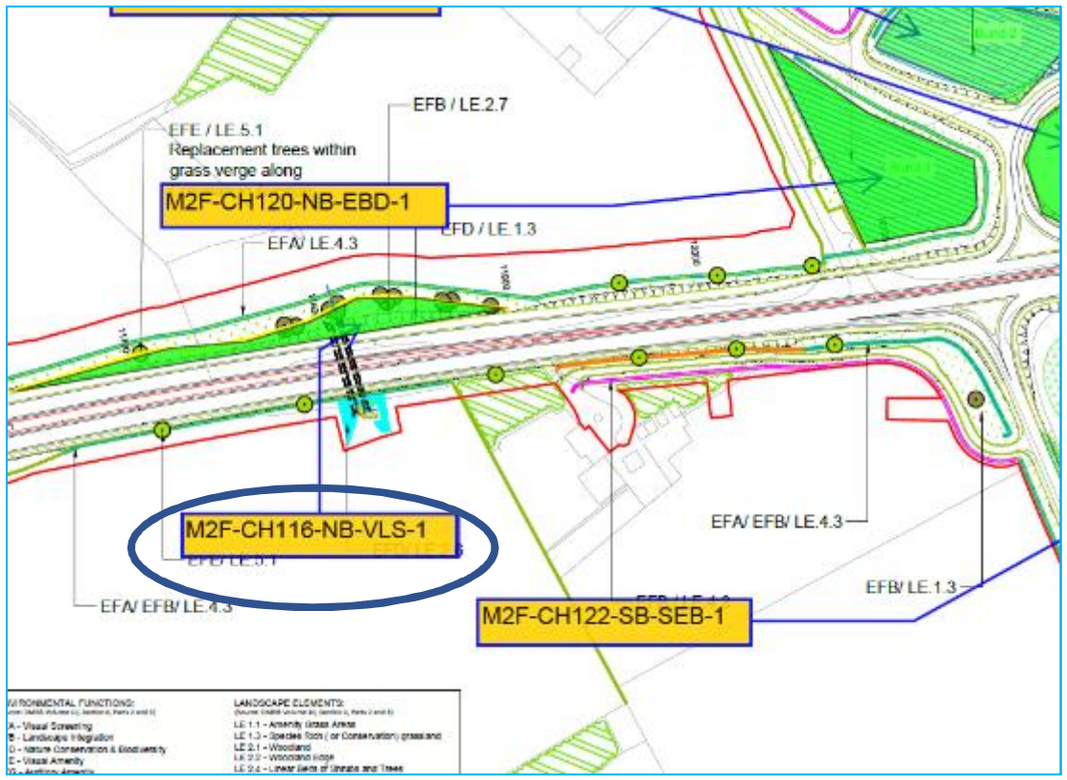
Associated information/files:

- FULL Earthworks Opportunities review schedule – Spreadsheet (searchable/filter ID)
- Opportunity Markups w/ Unique ID – A2E and M2F – PDF Markups

Description Short Form	Opportunity Description
TPS	Topsoil Storage
VLS	Verge Landscape
EBD	Existing Bund
NBD	New Bund
PWA	Proposed Woodland (Vis. Screening)
SBF	Structure Bowl Fill
SEB	Structure Embankments
WDL	Proposed Woodland (Landscape Int.)
BPT	Borrow Pit
NGA	National Grid Area

PART A - Morpeth to Felton

M2F-CH116-NB-VLS-1



Environmental Function:
Landscape Integration**,** Nature Conservation & Biodiversity, Visual Amenity.

Landscape Elements:
Species Rich (or Conservation) grassland, Individual Trees

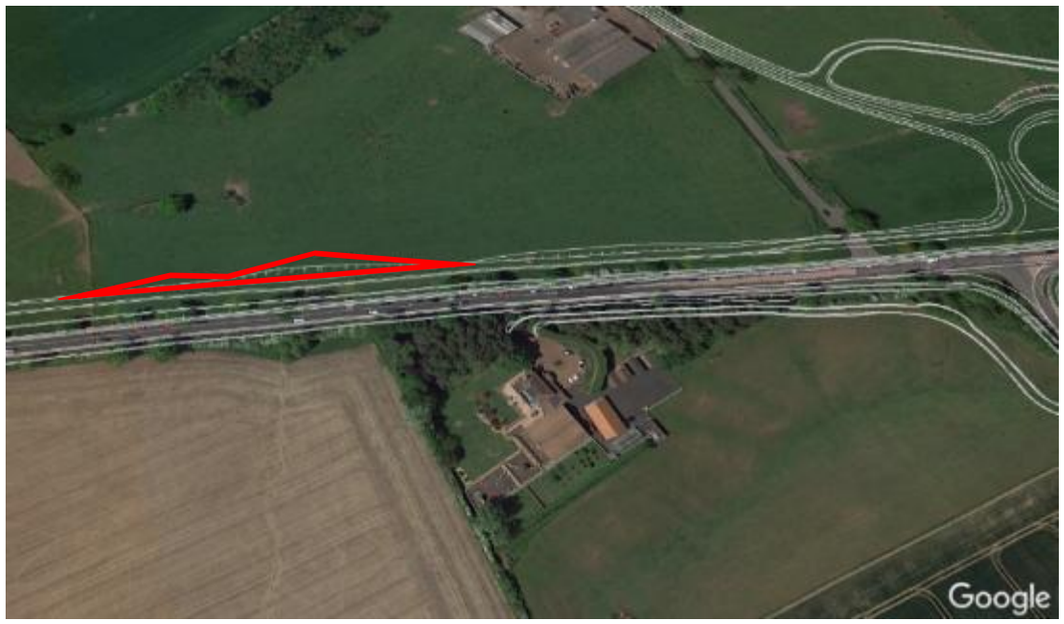
Proposed changes:

- Proposed soil bund, slackening of slope or disposal of excess site material (as per Landscape Mitigation Masterplan) with grass seeding & tree planting

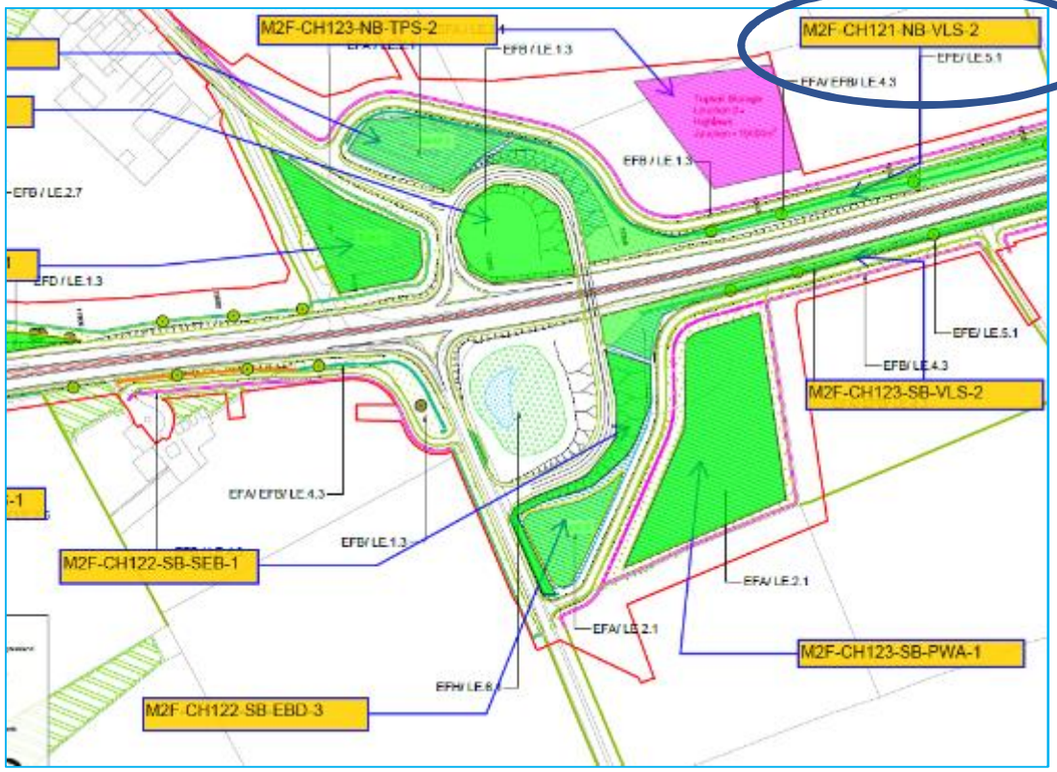
Chainage

- CH11650 to 11900

In line with existing Parameter 4 or 5:
Yes



M2F-CH121-NB-VLS-2



Environmental Function:
Visual Screening, Landscape Integration, Visual Amenity

Landscape Elements:
Species Rich (or Conservation) grassland, Native Species Hedgerows, Individual Trees

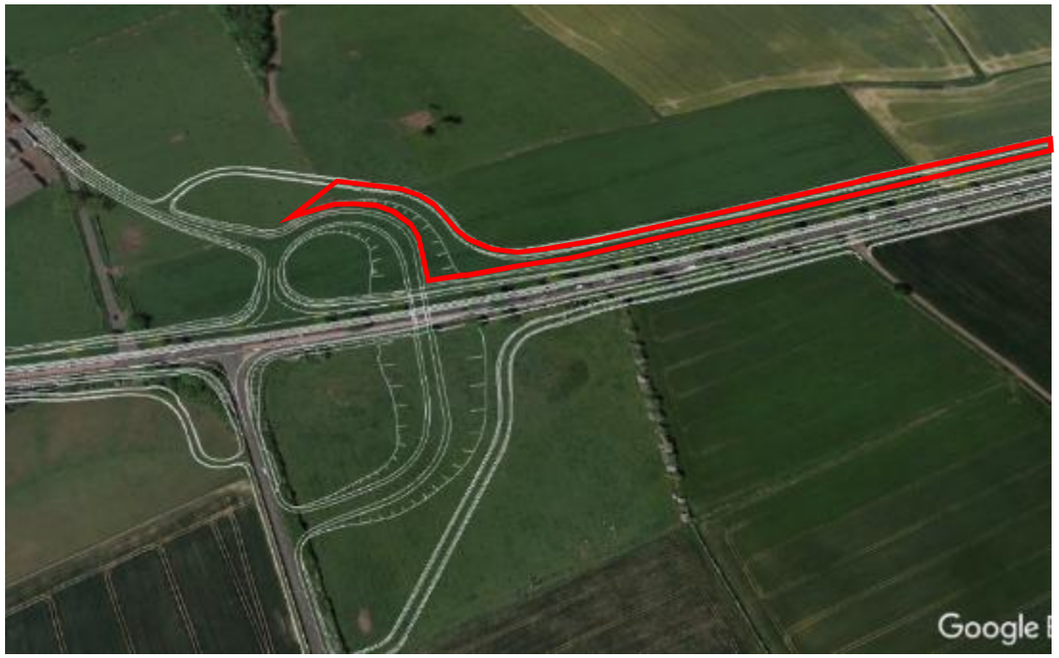
Proposed changes:

- Proposed minor bund with grass seeding, hedgerow to toe and trees

Chainage:

- CH12200 to 12620

In line with existing Parameter 4 or 5:
No



M2F-CH120-NB-EBD-1

Environmental Function:
Visual Screening

Landscape Elements:
Woodland

Proposed changes:

- Proposed increased height of bund, maintaining woodland planting

Dimensions

- CH12050 to 12160
- Volume 26657m³
- Area 10529m²

In line with existing Parameter 4 or 5:
No

M2F-CH121-NB-EBD-2

Environmental Function:
Visual Screening

Landscape Elements:
Woodland

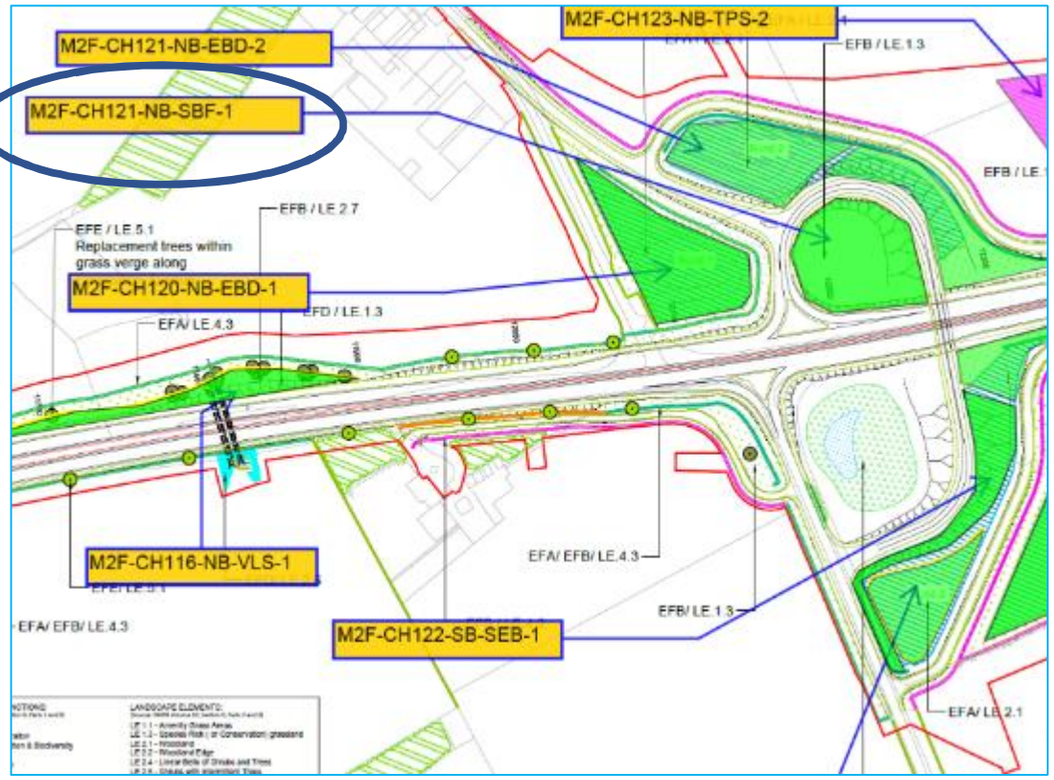
Proposed changes:

- Proposed increased height of bund, maintaining woodland planting

Chainage
CH12100 to 12130

In line with existing Parameter 4 or 5:
No

M2F-CH121-NB-SBF-1



Environmental Function:
Landscape Integration

Landscape Elements:
Species Rich (or Conservation) grassland

Proposed changes:
- Proposed filling of bowl (minor bunding) with grass seeding

Chainage:
- CH12180 to 12260

In line with existing Parameter 4 or 5:
No

M2F-CH122-SB-EBD-3

Environmental Function:
Visual Screening

Landscape Elements:
Woodland

Additional Information:
Proposed soil bund, slackening of slope or disposal of excess site materials

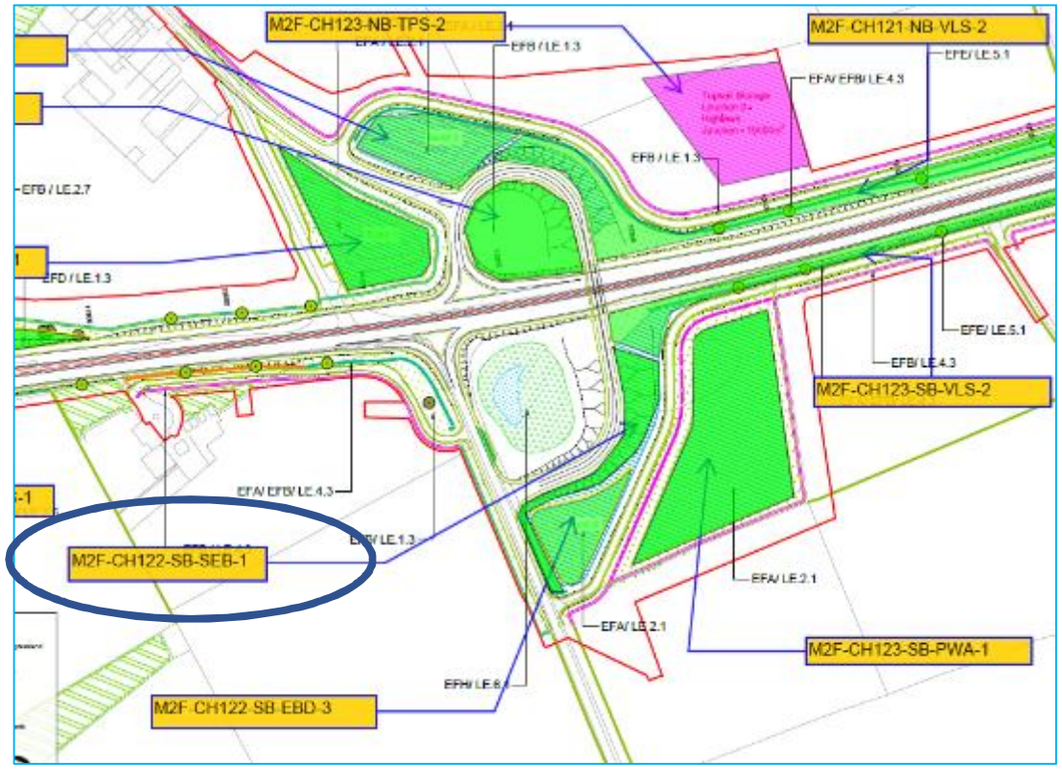
Proposed changes:

- Proposed increased height of bund, maintaining woodland planting

Chainage
CH12200 to 12280

In line with existing Parameter 4 or 5:
No

M2F-CH122-SB-SEB-1



Environmental Function:
Visual Screening, Landscape Integration

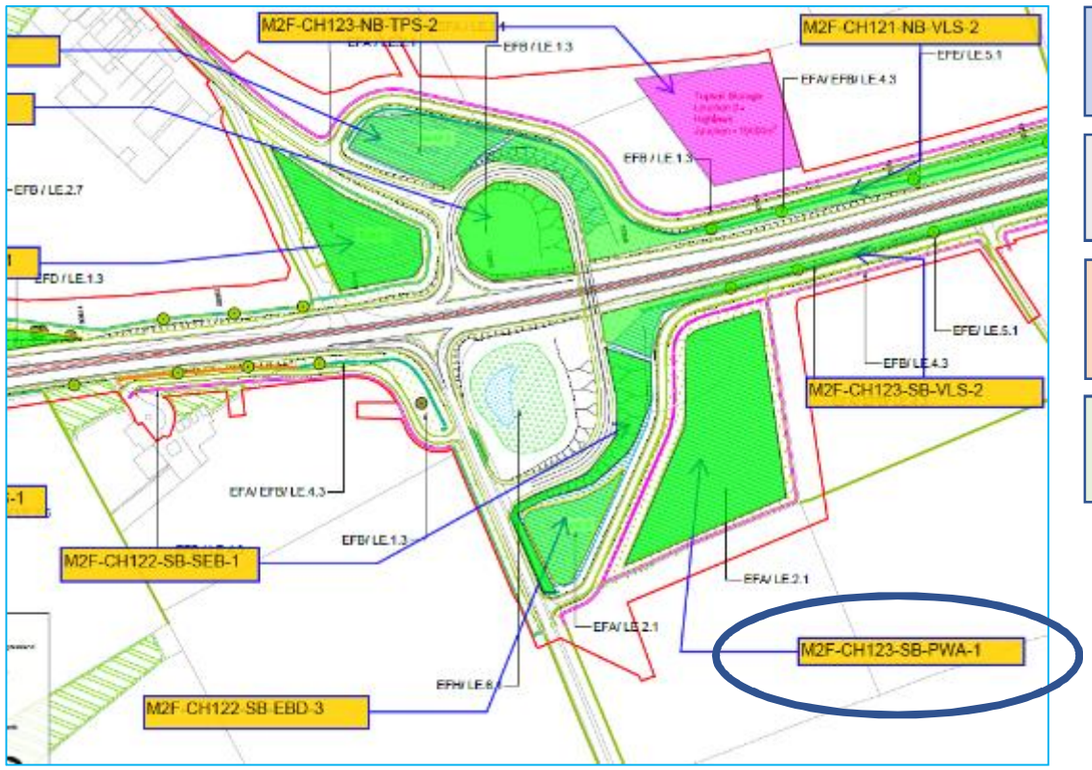
Landscape Elements:
Woodland, Native Species Hedgerows

Proposed changes:
- Proposed embankment fill maintaining woodland planting, with hedgerow to toe

Chainage
CH12200 to 12280

In line with existing Parameter 4 or 5:
No

M2F-CH123-SB-PWA-1



Environmental Function:
Visual Screening

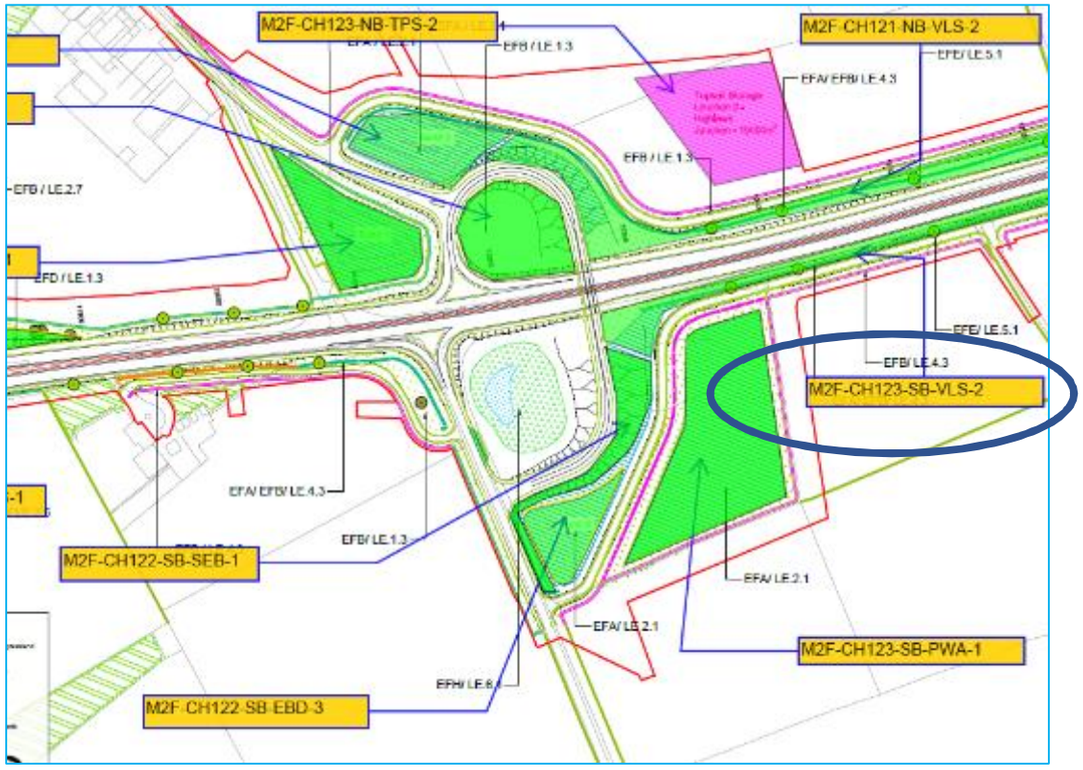
Landscape Elements:
Woodland

Proposed changes:
- Proposed bunding of woodland area, maintaining woodland planting

Chainage:
- CH12240 to 12380

In line with existing Parameter 4 or 5:
No

M2F-CH123-SB-VLS-2



Environmental Function:
Visual Screening, Landscape Integration, Visual Amenity

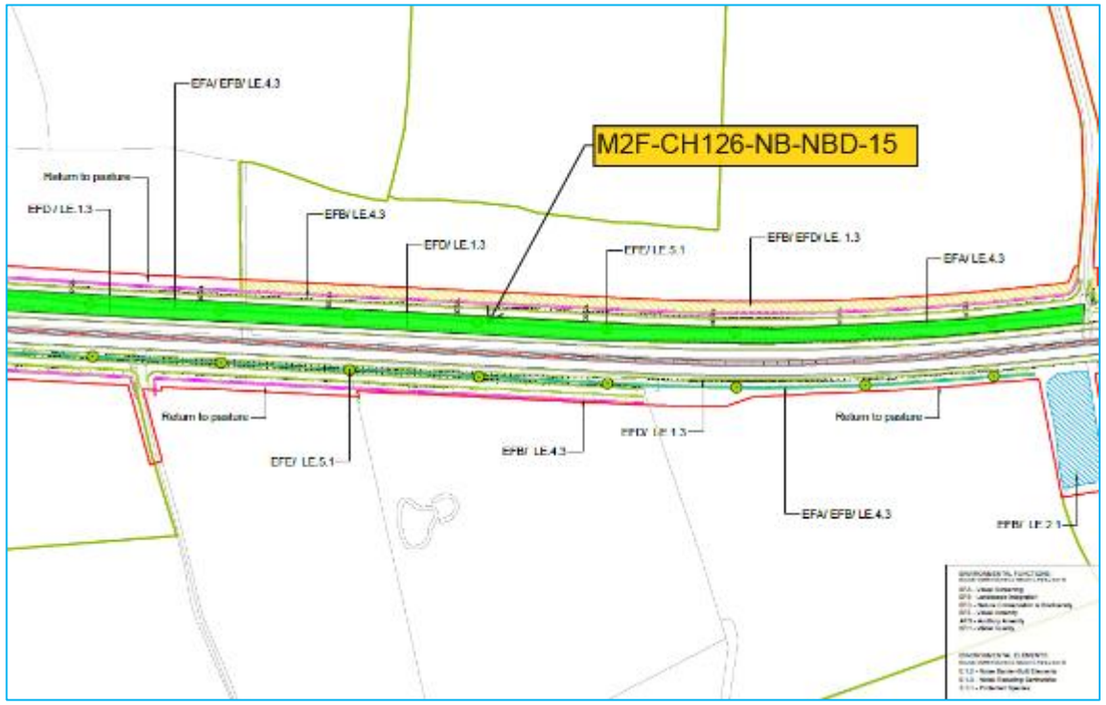
Landscape Elements:
Woodland/"Coronation Avenue" trees, Native Species Hedgerows

Proposed changes:
- Proposed minor bunding with hedgerow to toe and woodland

Chainage:
CH12300 to 12530

In line with existing Parameter 4 or 5:
No

M2F-CH126-NB-NBD-15



Environmental Function:
Visual Screening, Landscape Integration, Visual Amenity, Nature Conservation & Biodiversity

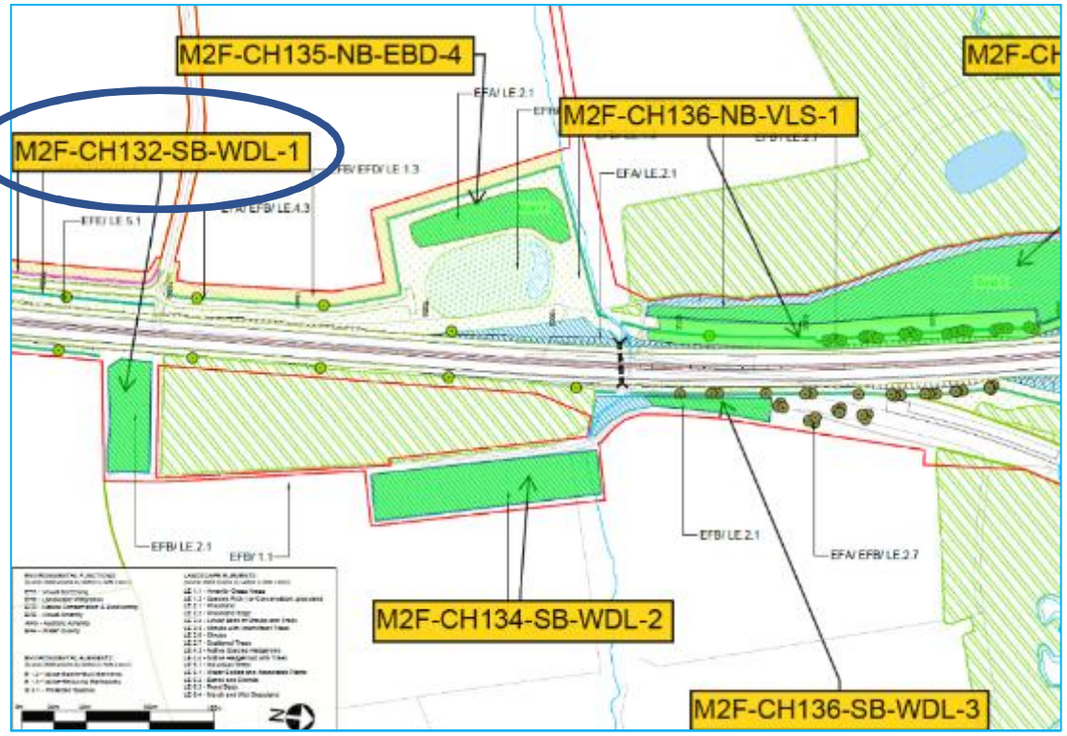
Landscape Elements:
Species Rich (or Conservation) grassland, Native Species Hedgerows, Individual Trees

Proposed changes:
- Proposed bunding with grass seeding, hedgerow to toe and individual trees

Chainage
CH12600 to 13300

In line with existing Parameter 4 or 5:
No

M2F-CH132-SB-WDL-1



Environmental Function:
Landscape Integration

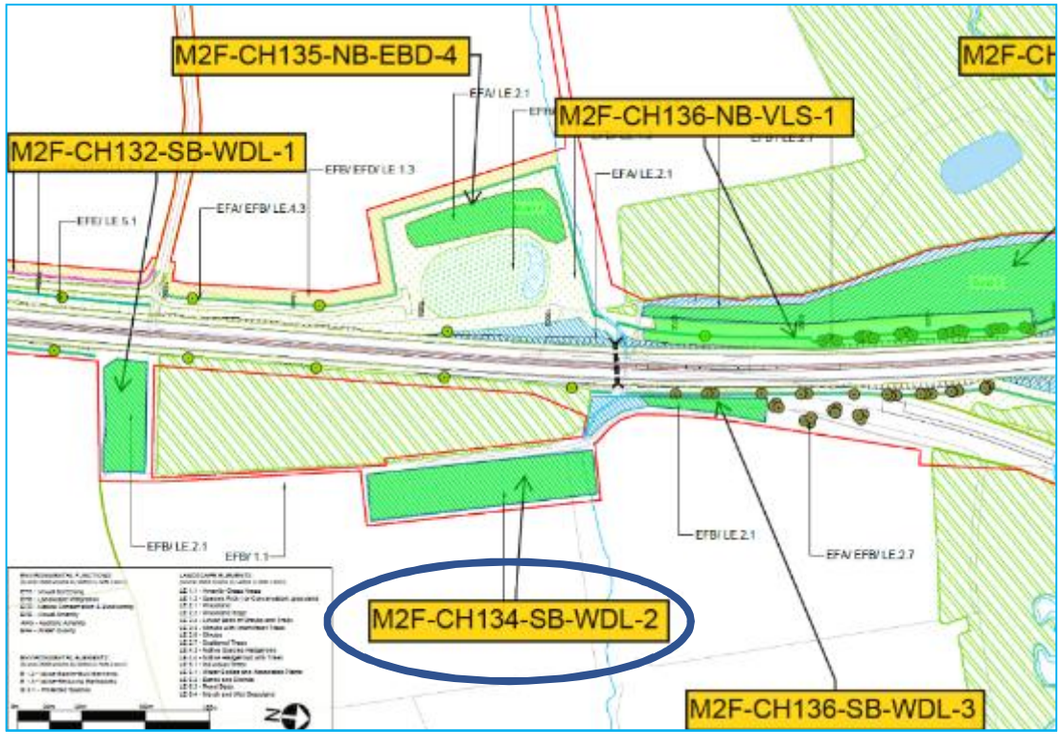
Landscape Elements:
Woodland

Proposed changes:
- Proposed minor bunding, maintaining woodland planting

Chainage:
CH13260 to 13290

In line with existing Parameter 4 or 5:
No

M2F-CH134-SB-WDL-2



Environmental Function:
Landscape Integration

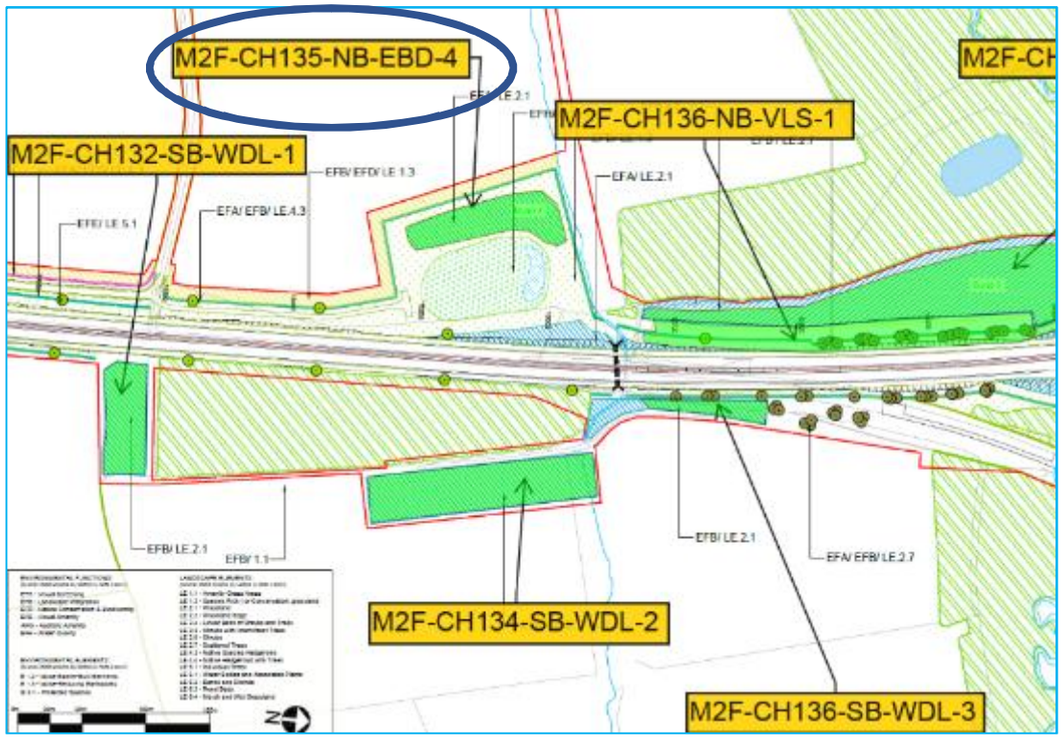
Landscape Elements:
Woodland

Proposed changes:
- Proposed minor bunding, maintaining woodland planting

Chainage:
CH13460 to 13640

In line with existing Parameter 4 or 5:
No

M2F-CH135-NB-EBD-4



Environmental Function:
Visual Screening

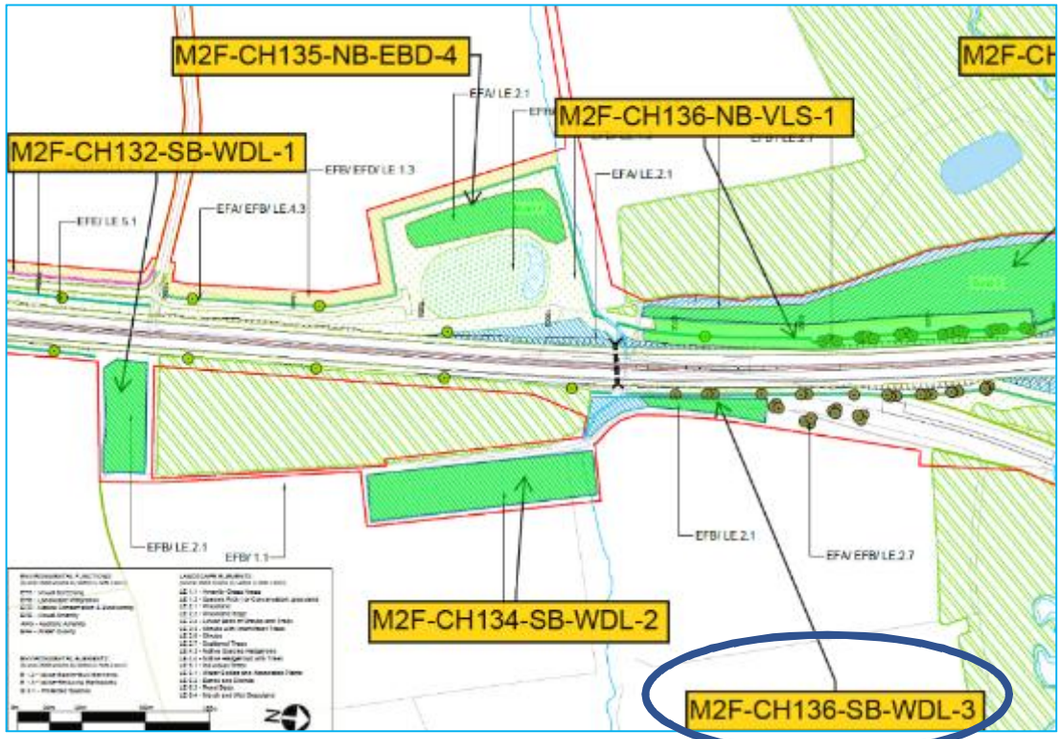
Additional Information:
Proposed soil bund, slackening of slope or disposal of excess site material

Proposed changes:
- Increased height of existing bund, maintaining woodland planting

Chainage:
CH13480 to 13610

In line with existing Parameter 4 or 5:
No

M2F-CH136-SB-WDL-3



Environmental Function:
Landscape Integration

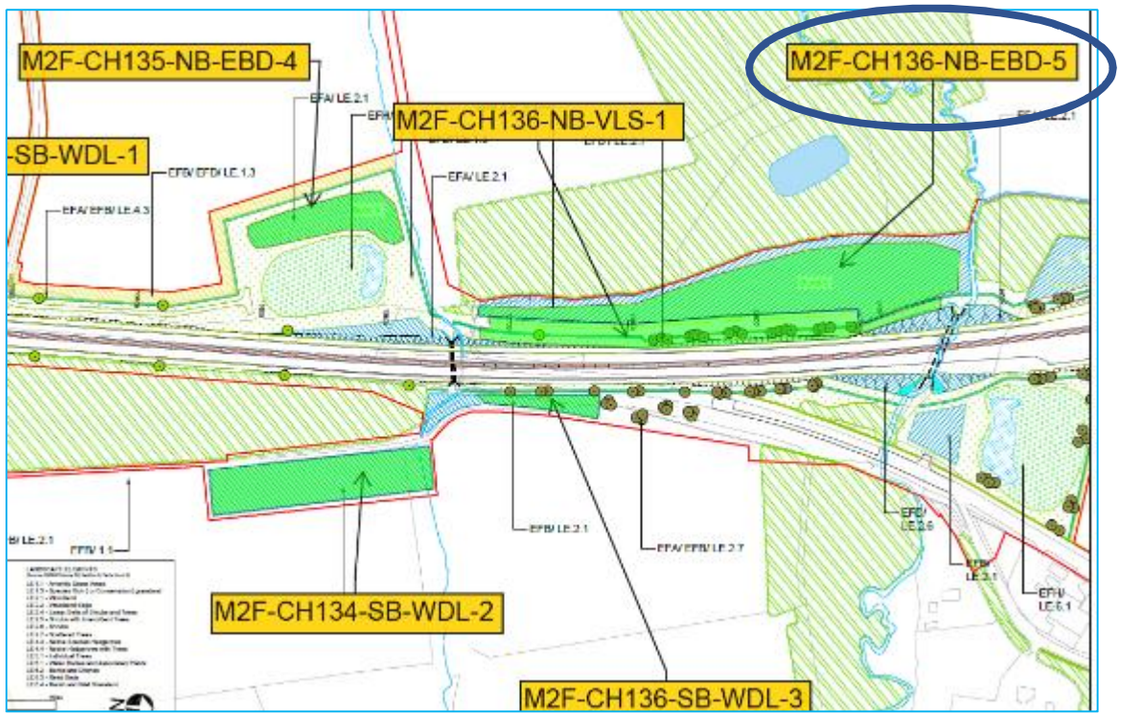
Landscape Elements:
Woodland

Proposed changes:
- Proposed minor increased height of woodland area, with hedgerow to toe

Dimensions:
CH13670 to 13775

In line with existing Parameter 4 or 5:
No

M2F-CH136-NB-EBD-5



Environmental Function:
Landscape Integration

Landscape Elements:
Woodland, Scattered Trees, Native Species Hedgerows

Additional Information:
Proposed soil bund, slackening of slope or disposal of excess site material

Proposed changes:

- Proposed increased soil bund, slackening of slope maintaining woodland planting with hedgerow to toe

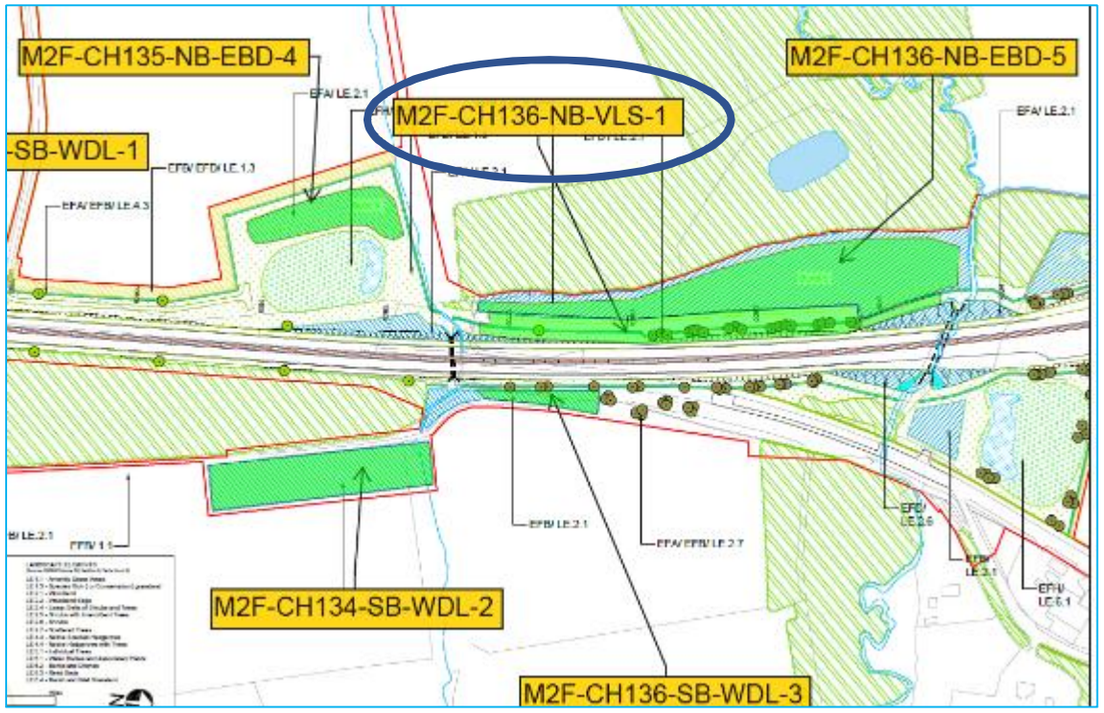
Chainage:
CH13680 to 14060

In line with existing Parameter 4 or 5:
No

Within ES CH 2, 2.12 Parameter 4:
No

Within ES CH 2, 2.12 Parameter 5:
No (greater than 2m height)

M2F-CH136-NB-VLS-1



Environmental Function:
Landscape Integration

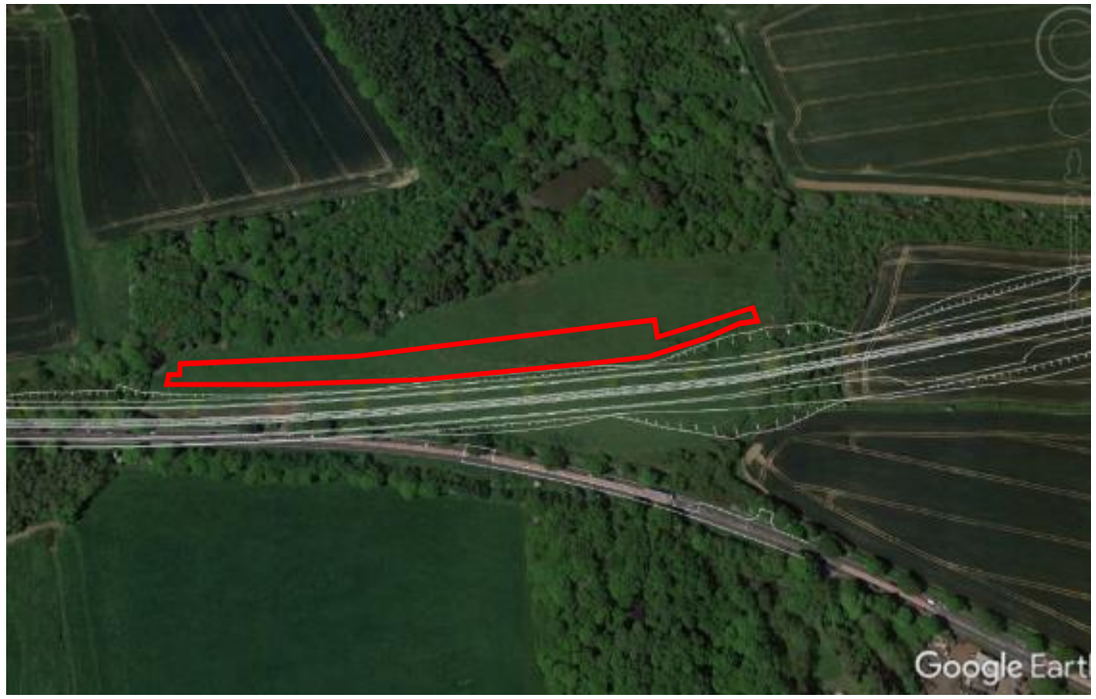
Landscape Elements:
Scattered Trees, Native Species Hedgerows

Proposed changes:

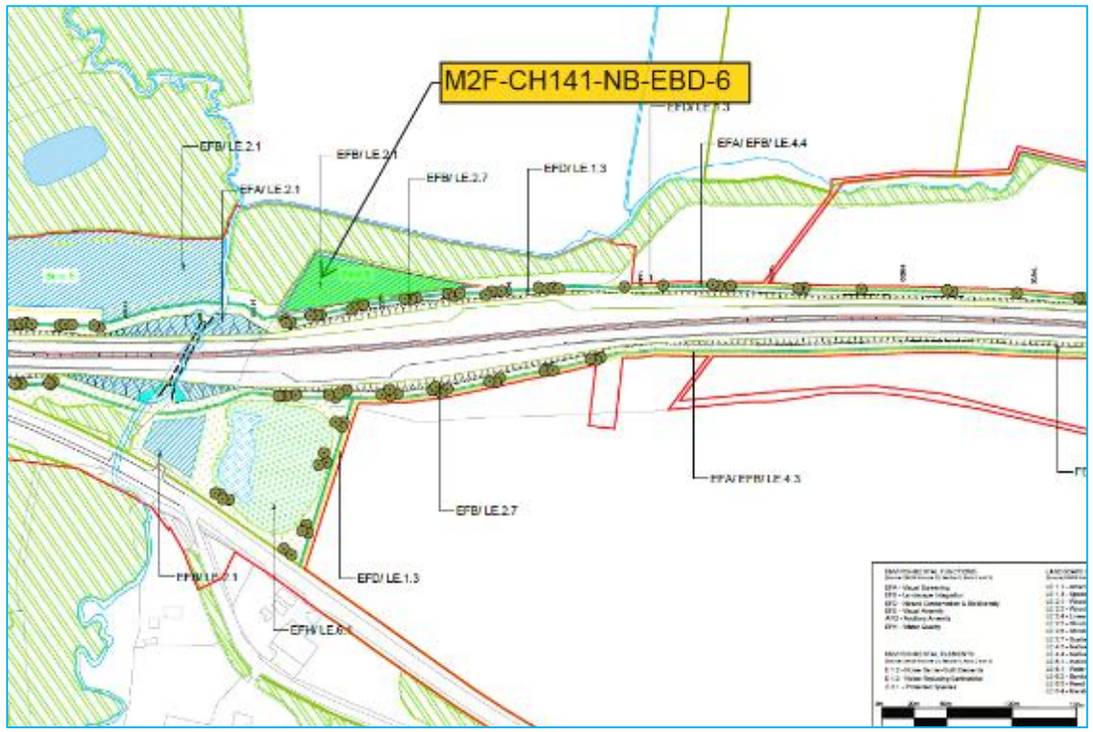
- Proposed increased soil bund, slackening of slope. Maintaining scattered tree planting, with relocation of hedgerow to toe of slope if required

Chainage:
CH13680 to 14050

In line with existing Parameter 4 or 5:
No



M2F-CH141-NB-EBD-6



Environmental Function:
Landscape Integration

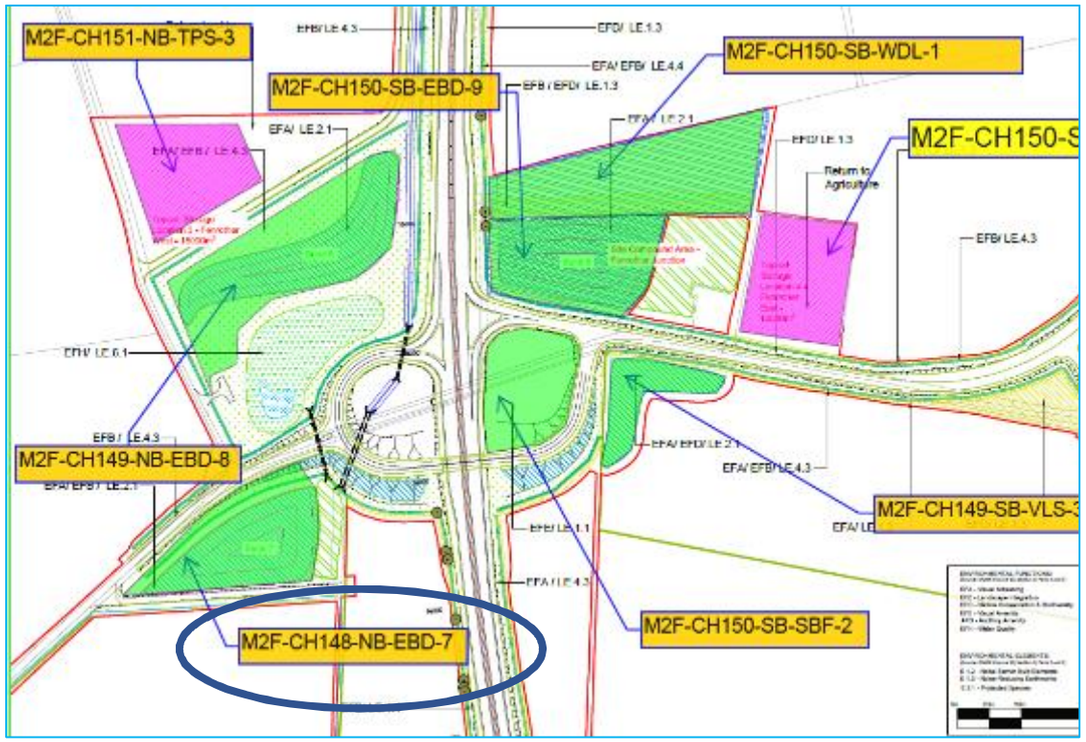
Landscape Elements:
Woodland

Proposed changes:
- Proposed increased soil bund, slackening of slope. Maintain woodland planting

Chainage
CH14120 to 14380

In line with existing Parameter 4 or 5:
No

M2F-CH148-NB-EBD-7



Environmental Function:
Landscape Integration, Visual Screening

Landscape Elements:
Woodland, Native Species Hedgerows

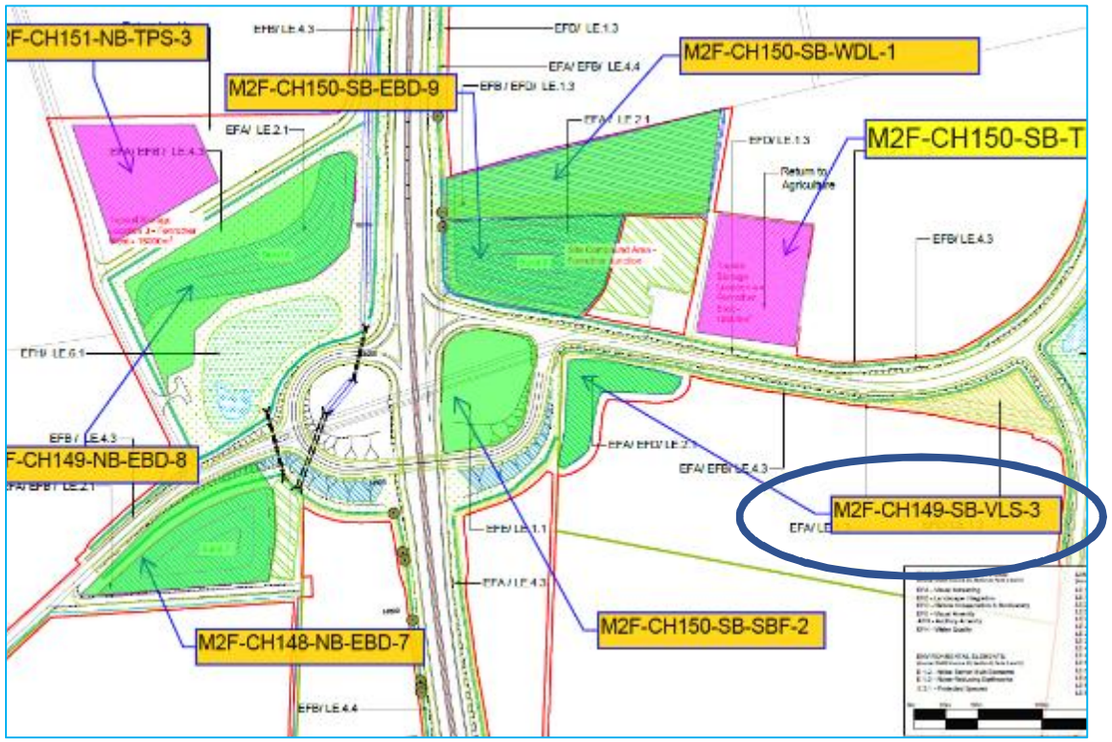
Proposed changes:

- Proposed extension of soil bund, maintaining woodland planting with hedgerow to toe of slope

Chainage:
CH14830 to 14925

Within ES CH 2, 2.12 Parameter 4:
No

M2F-CH149-SB-VLS-3



Environmental Function:
Nature Conservation & Biodiversity, Visual Screening

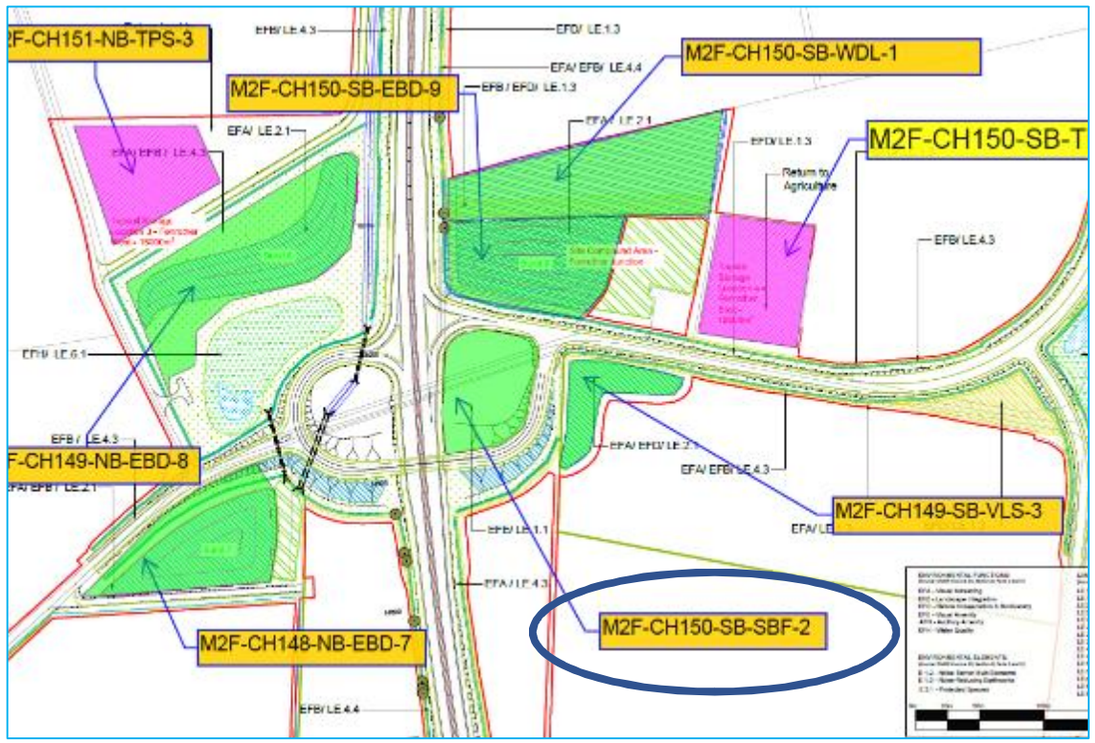
Landscape Elements:
Woodland, Native Species Hedgerows

Proposed changes:
- Proposed minor bunding of woodland area. Woodland planting to be maintained with hedgerow to toe of slope

Chainage
- CH14900 to 14980

In line with existing Parameter 4 or 5:
No

M2F-CH150-SB-SBF-2



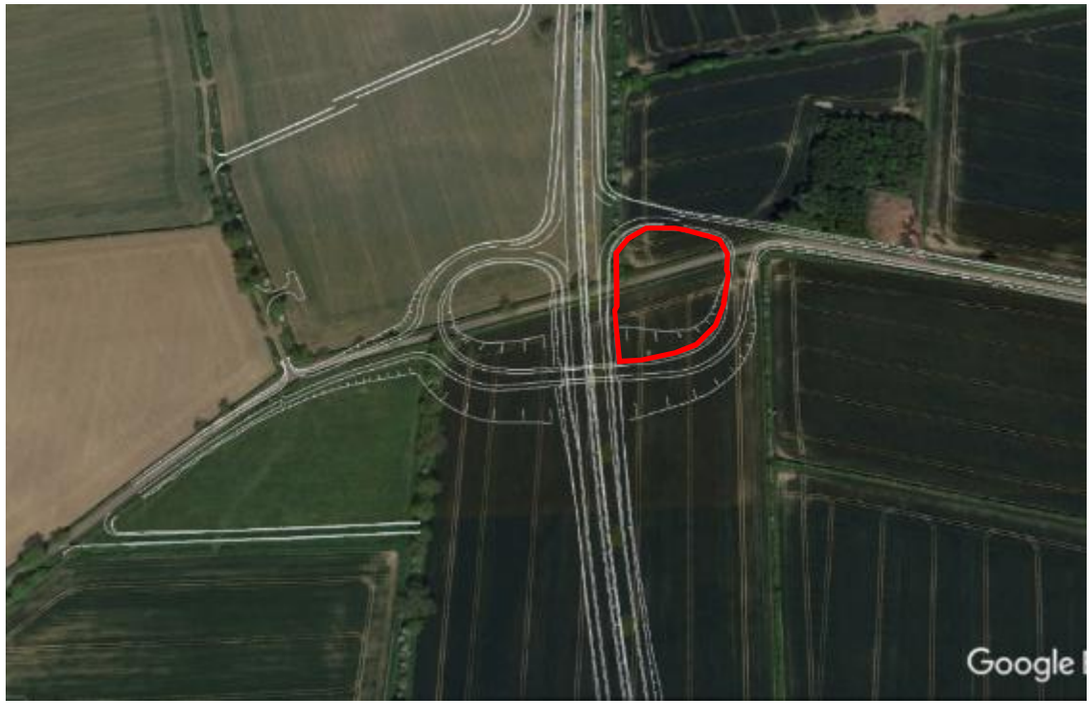
Environmental Function:
Visual Amenity

Landscape Elements:
Amenity Grass Areas

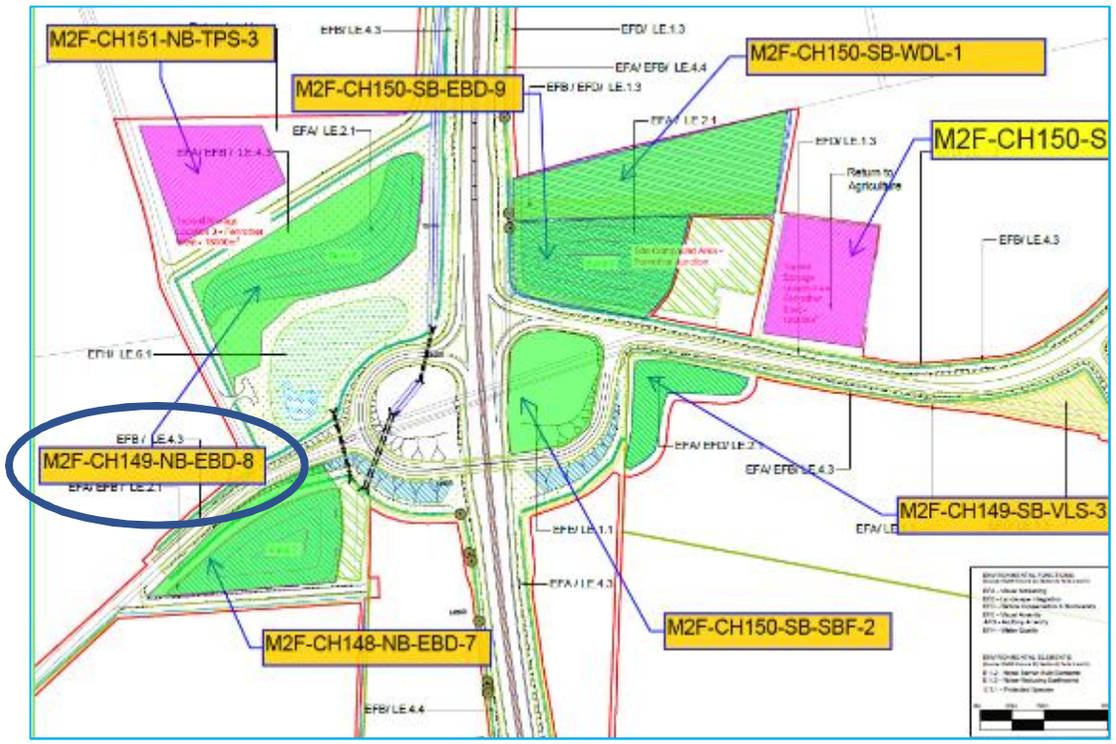
Proposed changes:
- Proposed filling of bowl (minor bunding) with grass seeding

Chainage:
- CH14920 to 15015

In line with existing Parameter 4 or 5:
No



M2F-CH149-NB-EBD-8



Environmental Function:
Visual Screening, Nature Conservation & Biodiversity

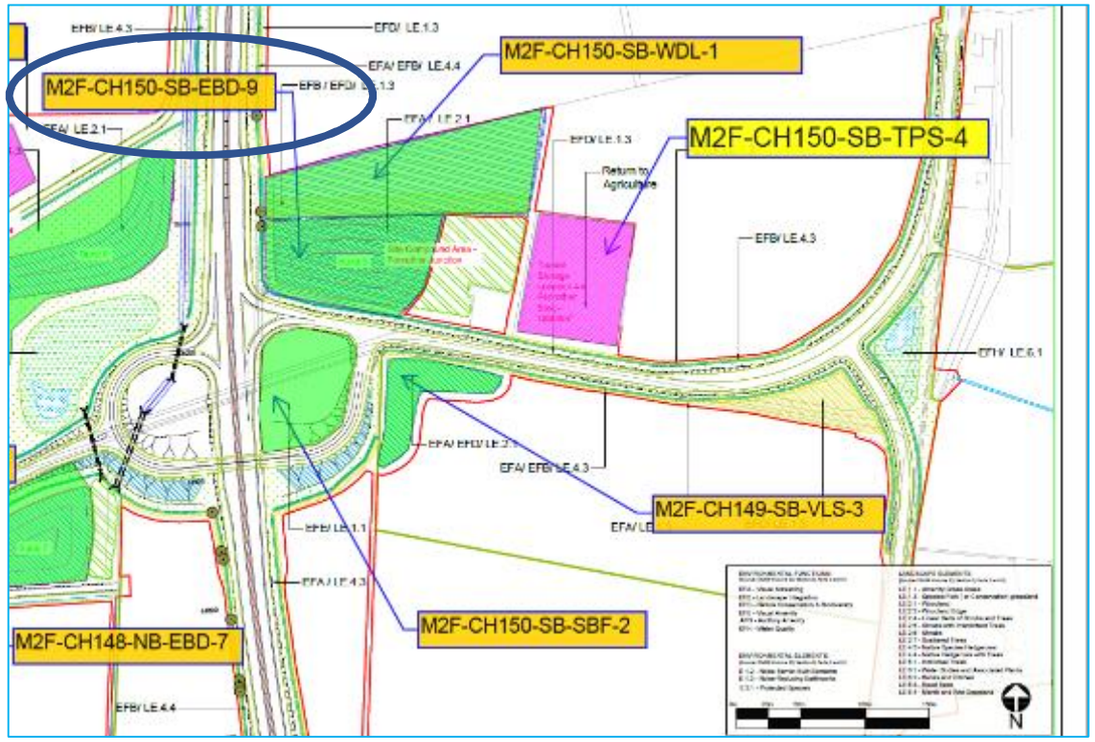
Landscape Elements:
Woodland, Species Rich (or Conservation) grassland

Proposed changes:
- Proposed extension of soil bund, with grass seeding and maintaining woodland planting

Chainage:
CH14930 to 15175

In line with existing Parameter 4 or 5:
No

M2F-CH150-SB-EBD-9



Environmental Function:
Visual Screening

Landscape Elements:
Woodland, Native Species Hedgerows

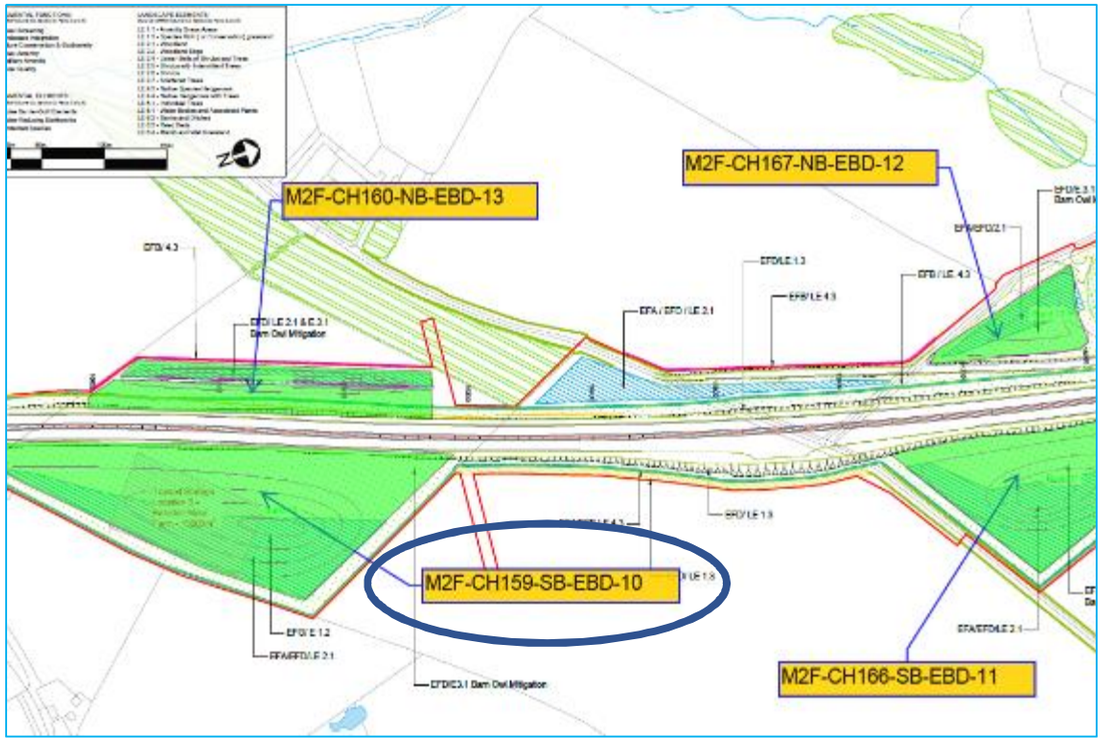
Proposed changes:

- Proposed extension of soil bund, maintaining woodland planting with hedgerow to toe of slope

Chainage:
CH15010 to 15100

In line with existing Parameter 4 or 5:
No

M2F-CH159-SB-EBD-10



Environmental Function:
Visual Screening, Nature Conservation & Biodiversity, Auditory Amenity

Landscape Elements:
Woodland, Species Rich (or Conservation) grassland

Environmental Elements:
Noise-Reducing Earthworks, Protected Species

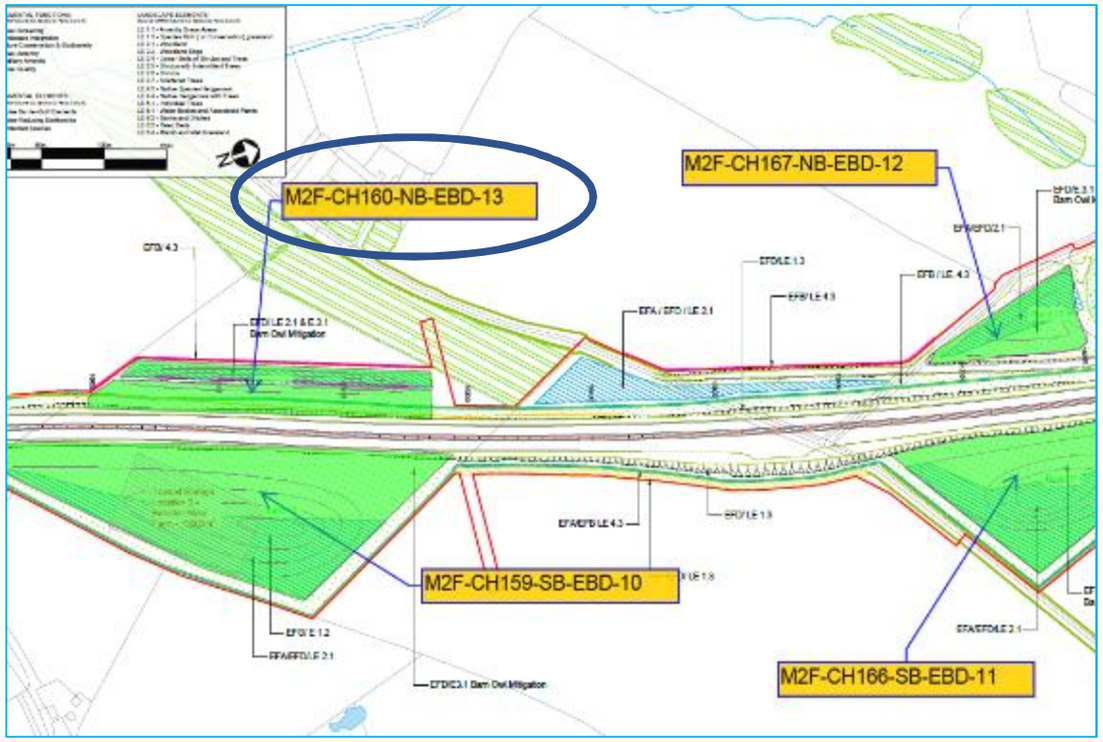
Proposed changes:

- Proposed extension of soil bund with grass seeding, maintaining woodland planting and hedgerow to toe of slope

Chainage:
CH15900 to 16275

In line with existing Parameter 4 or 5:
Yes

M2F-CH160-NB-EBD-13



Environmental Function:
Landscape Integration, Nature Conservation & Biodiversity, Native Species Hedgerows

Landscape Elements:
Woodland, Native Species Hedgerows, Species Rich (or Conservation) grassland

Environmental Elements:
Protected Species (Barn Owl Mitigation)

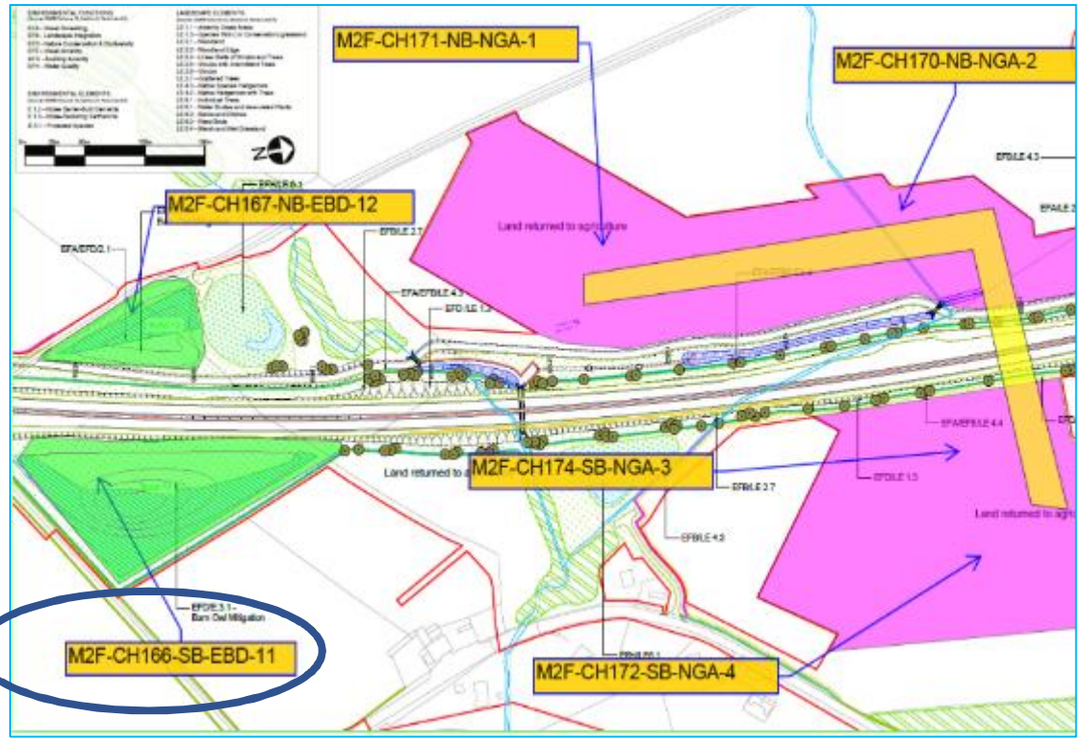
Proposed changes:

- Proposed extension of soil bund with grass seeding, woodland planting and hedgerow to toe of slope

Chainage:
CH16000 to 16275

In line with existing Parameter 4 or 5:
No

M2F-CH166-SB-EBD-11



Environmental Function:
Visual Screening, Landscape Integration, Nature Conservation & Biodiversity

Landscape Elements:
Woodland, Species Rich (or Conservation) grassland, Native Species Hedgerows

Environmental Elements:
Protected Species (Barn Owl Mitigation)

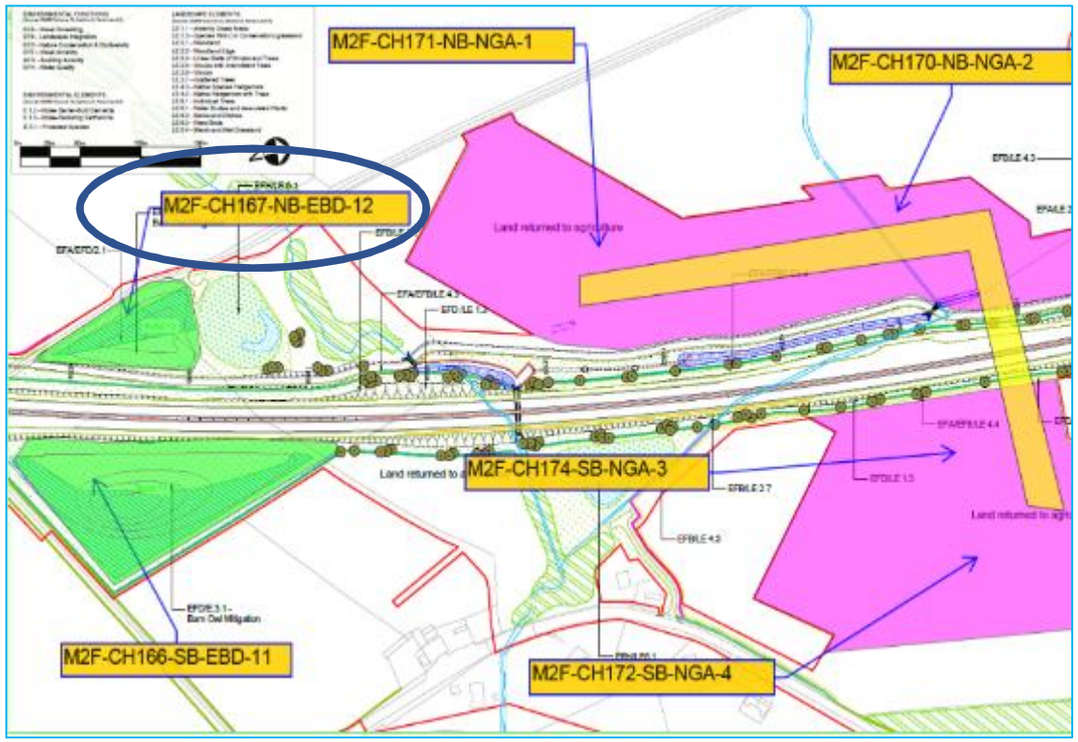
Proposed changes:

- Proposed extension of soil bund, woodland planting, grass seeding and hedgerow to toe of slope

Chainage:
CH16625 to 16925

In line with existing Parameter 4 or 5:
No

M2F-CH167-NB-EBD-12



Environmental Function:
Visual Screening, Nature Conservation & Biodiversity

Landscape Elements:
Woodland, Species Rich (or Conservation) grassland, Native Species Hedgerows

Environmental Elements:
Protected Species (Barn Owl Mitigation)

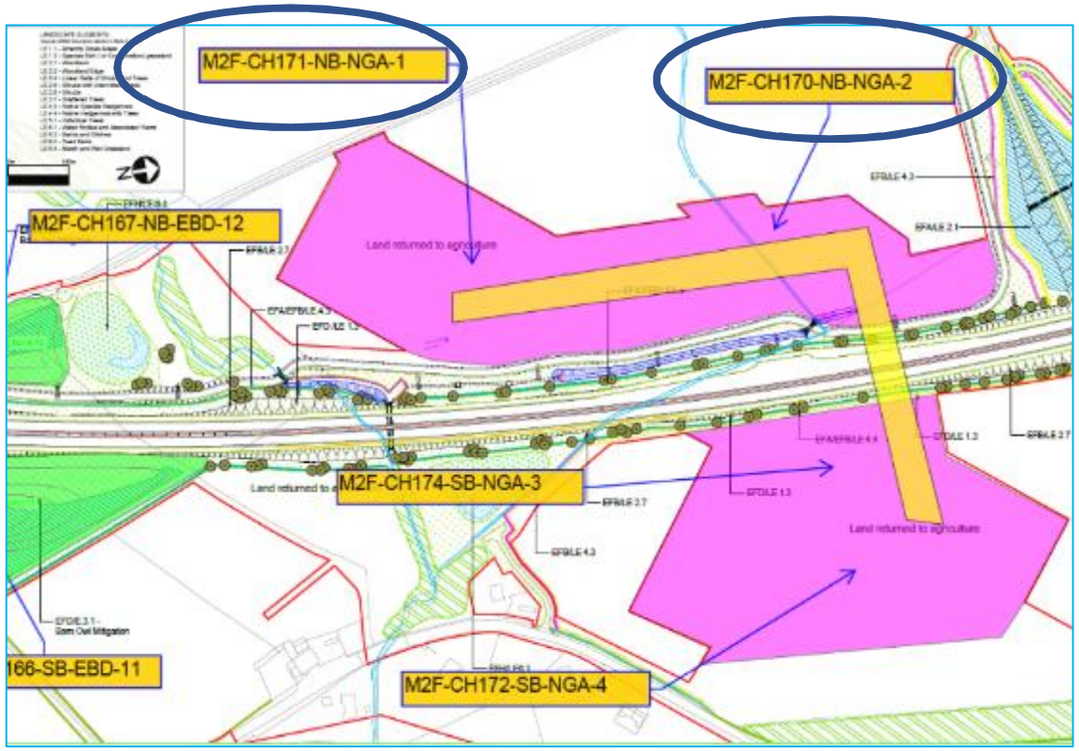
Proposed changes:

- Proposed extension of soil bund, woodland planting, grass seeding and hedgerow to toe of slope

Chainage:
CH16700 to 16800

In line with existing Parameter 4 or 5:
No

M2F-CH171-NB-NGA-1 & 2



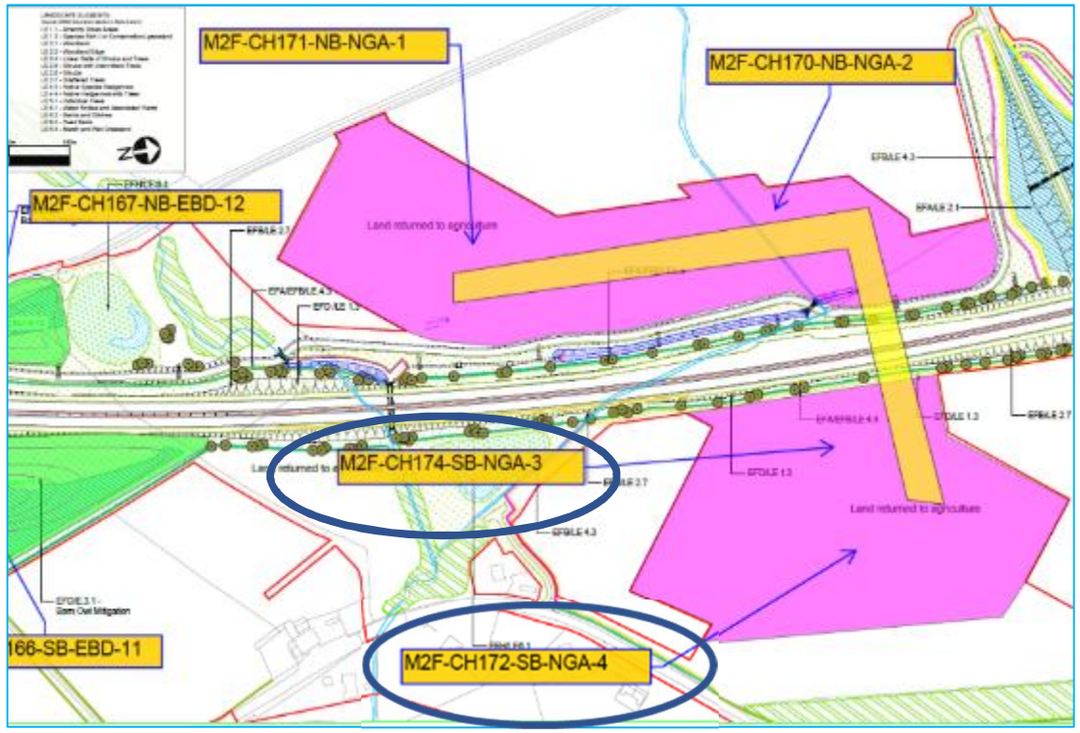
Original designation/function:
Land returned to agriculture

Proposed changes:
- Allow temporary storage/stockpile of soils (in separate mounds), to aid in construction
- Max 2m high stockpiles as per OCEMP

Dimensions
- CH17150 to 17490

In line with existing Parameter 4 or 5:
No

M2F-CH174-SB-NGA-3 & 4



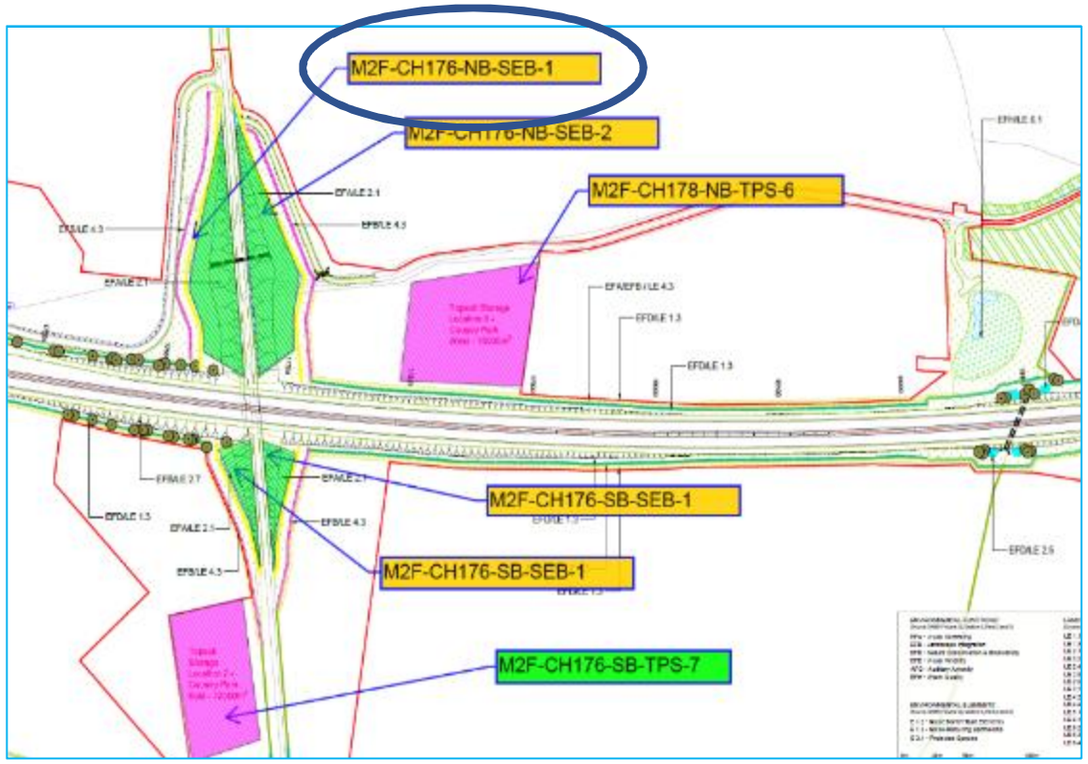
Original designation/function:
Land returned to agriculture

Proposed changes:
- Allow temporary storage/stockpile of soils (in separate mounds), to aid in construction.
- Max 2m high stockpiles as per OCEMP

Chainage:
CH17400

In line with existing Parameter 4 or 5:
No

M2F-CH176-NB-SEB-1



Environmental Function:
Visual Screening

Landscape Elements:
Woodland

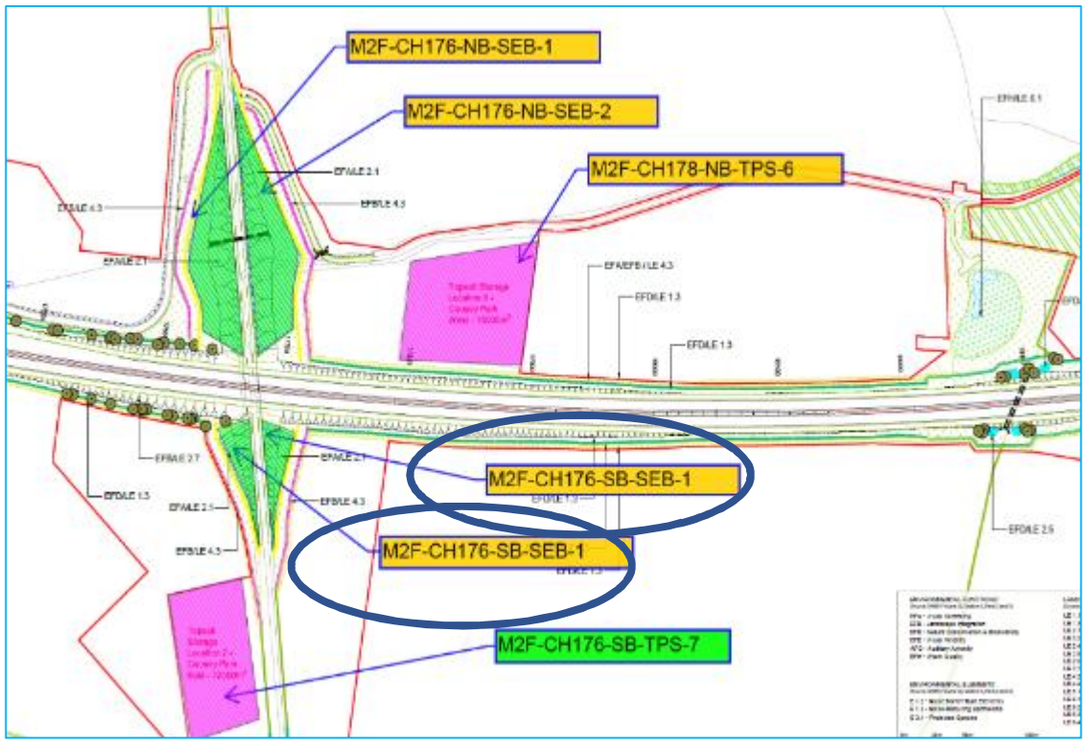
Additional Information:
Proposed soil bund, slackening of slope or disposal of excess site material

Proposed changes:
- Proposed embankment fill maintaining woodland planting

Chainage:
CH17610 to 17660

In line with existing Parameter 4 or 5:
Yes

M2F-CH176-SB-SEB-1



Environmental Function:
Visual Screening

Landscape Elements:
Woodland

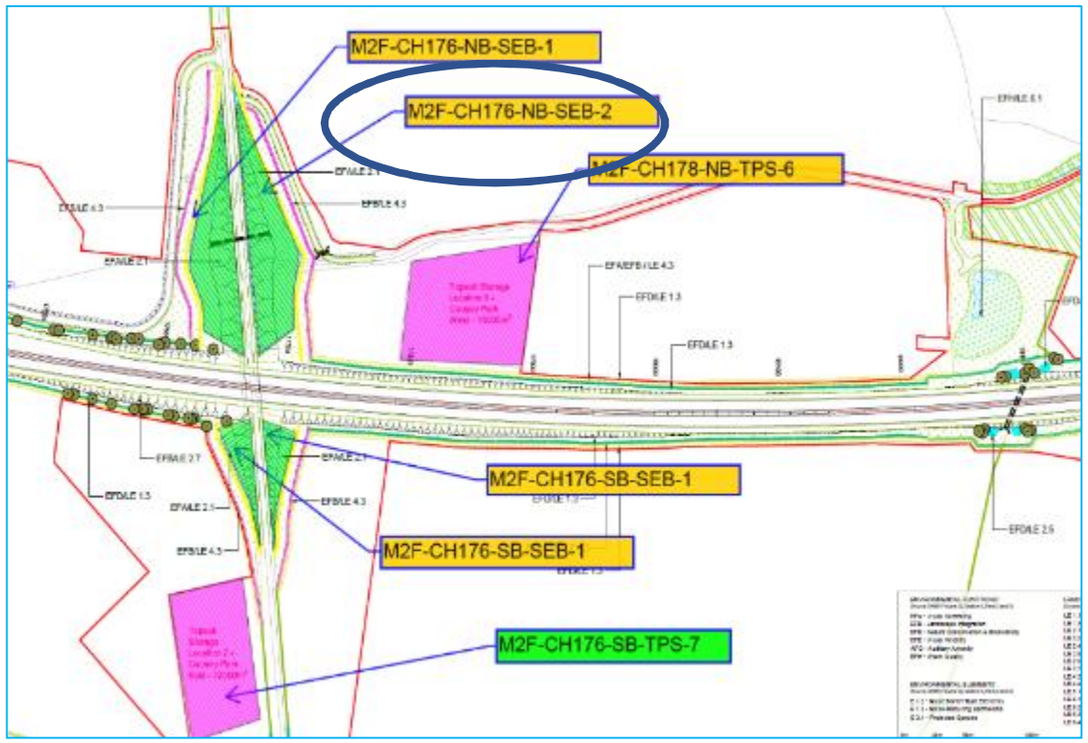
Additional Information:
Proposed soil bund, slackening of slope or disposal of excess site material

Proposed changes:
- Proposed embankment fill maintaining woodland planting

Chainage:
CH17650 to 17710

In line with existing Parameter 4 or 5:
Yes

M2F-CH176-NB-SEB-2



Environmental Function:
Visual Screening

Landscape Elements:
Woodland

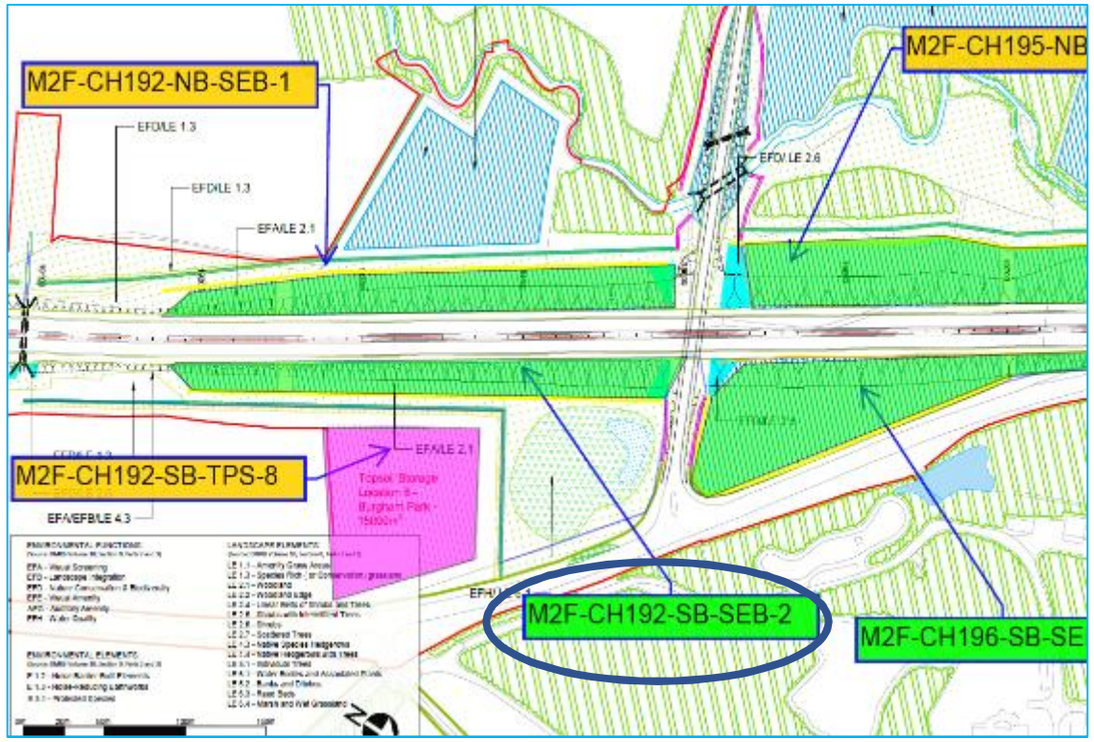
Additional Information:
Proposed soil bund, slackening of slope or disposal of excess site material

Proposed changes:
- Proposed embankment fill

Chainage:
- CH17650 to 17700

In line with existing Parameter 4 or 5:
Yes

M2F-CH192-SB-SEB-2



Environmental Function:
Visual Screening

Landscape Elements:
Woodland

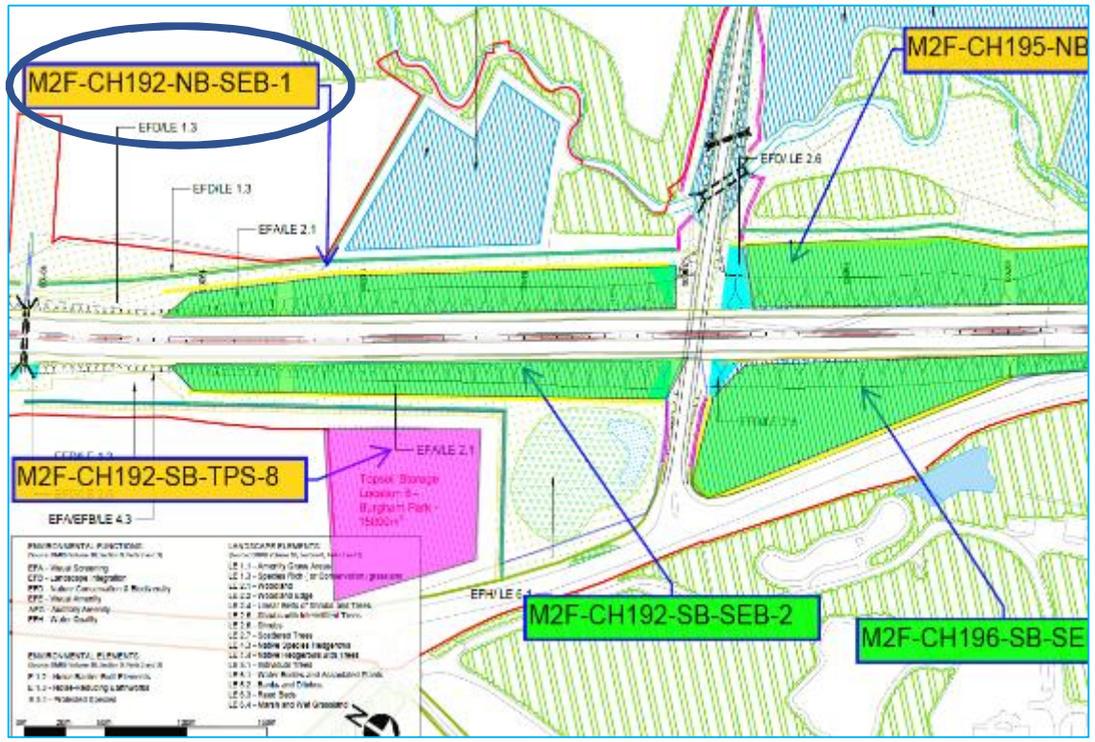
Additional Information:
Proposed soil bund, slackening of slope or disposal of excess site material

Proposed changes:
- Proposed embankment fill maintaining woodland planting

Chainage:
- CH19175 to 19490

Within ES CH 2, 2.12 Parameter 4:
Yes

M2F-CH192-NB-SEB-1



Environmental Function:
Visual Screening

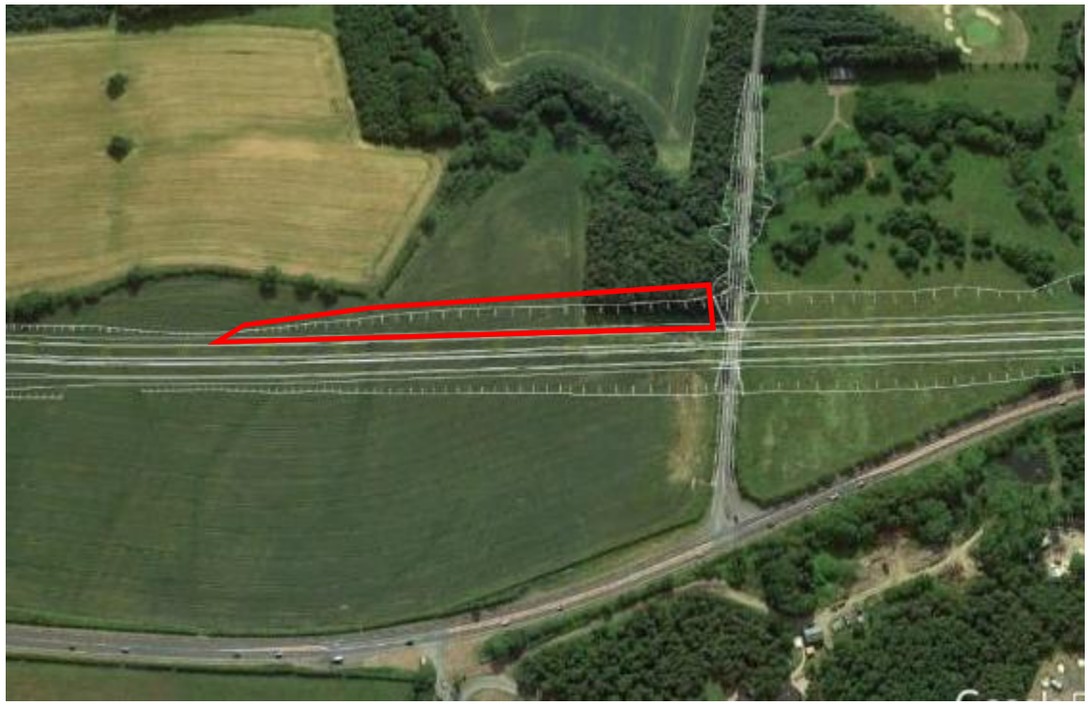
Landscape Elements:
Woodland

Additional Information:
Proposed soil bund, slackening of slope or disposal of excess site material

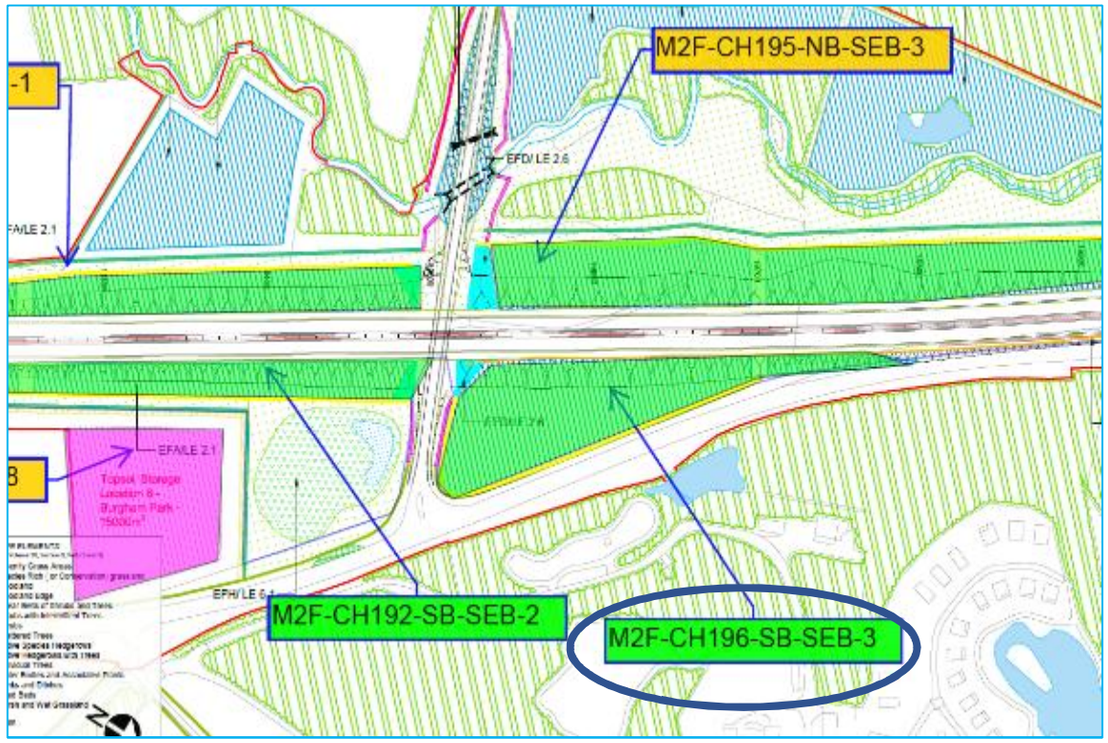
Proposed changes:
- Proposed embankment fill

Chainage:
CH19175 to 19490

In line with existing Parameter 4 or 5:
Yes



M2F-CH196-SB-SEB-3



Environmental Function:
Visual Screening

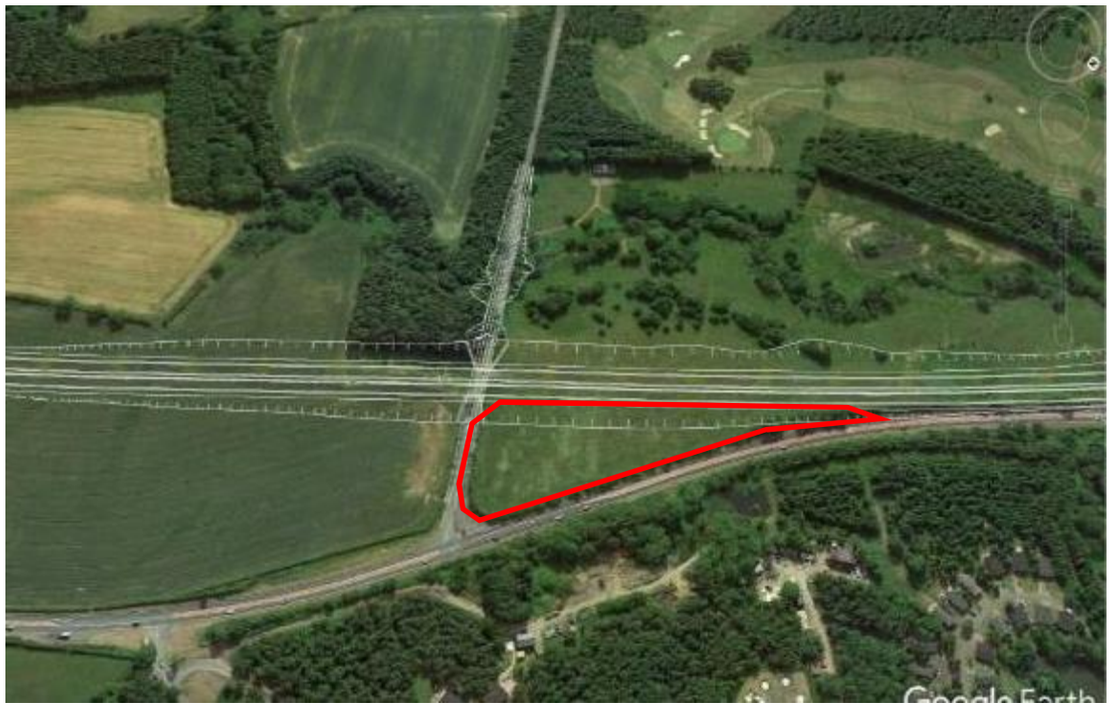
Landscape Elements:
Woodland

Additional Information:
Proposed soil bund, slackening of slope or disposal of excess site material

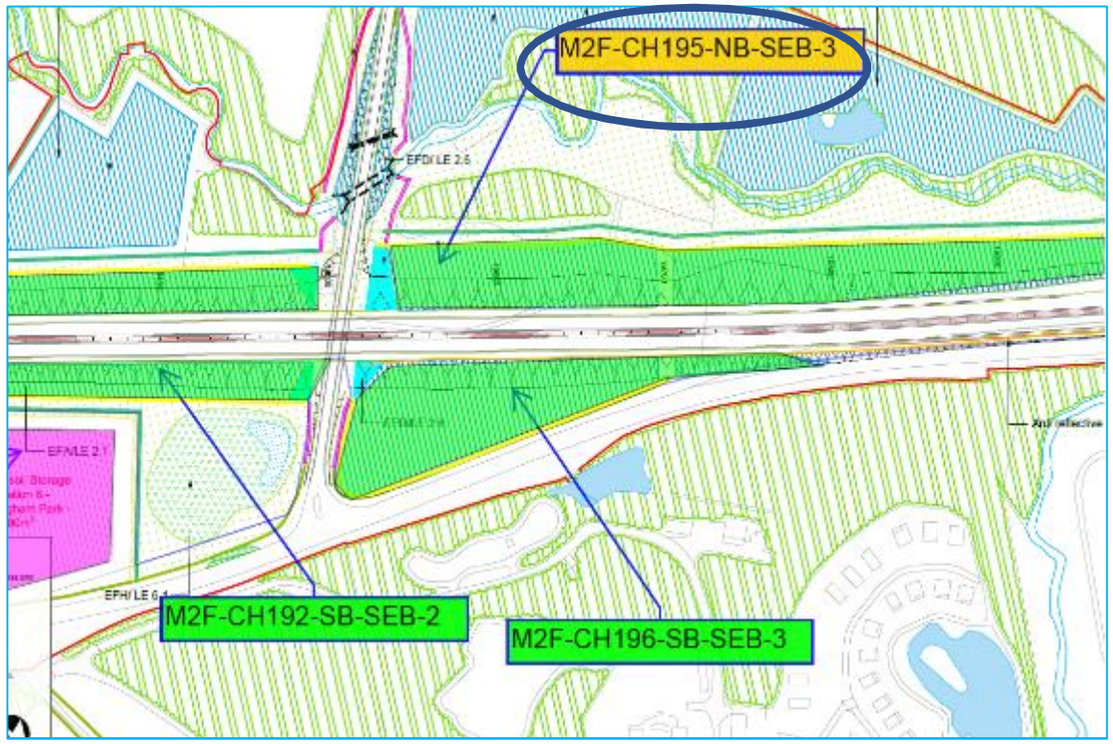
Proposed changes:
- Proposed embankment fill

Dimensions
- CH19500 to 19690

In line with existing Parameter 4 or 5:
Yes



M2F-CH195-NB-SEB-3



Environmental Function:
Visual Screening

Landscape Elements:
Woodland

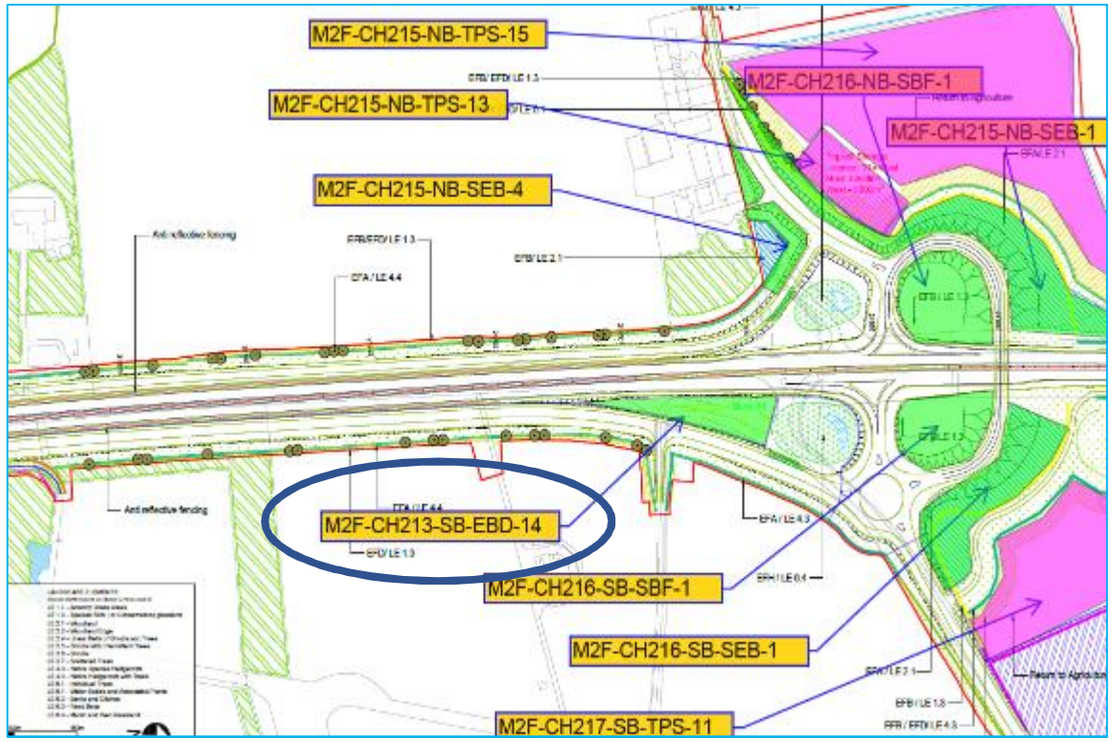
Additional Information:
Proposed soil bund, slackening of slope or disposal of excess site material

Proposed changes:
- Proposed embankment fill, maintaining woodland planting

Dimensions
- CH19700 to 19975

In line with existing Parameter 4 or 5:
Yes

M2F-CH213-SB-EBD-14



Environmental Function:
Grass bund

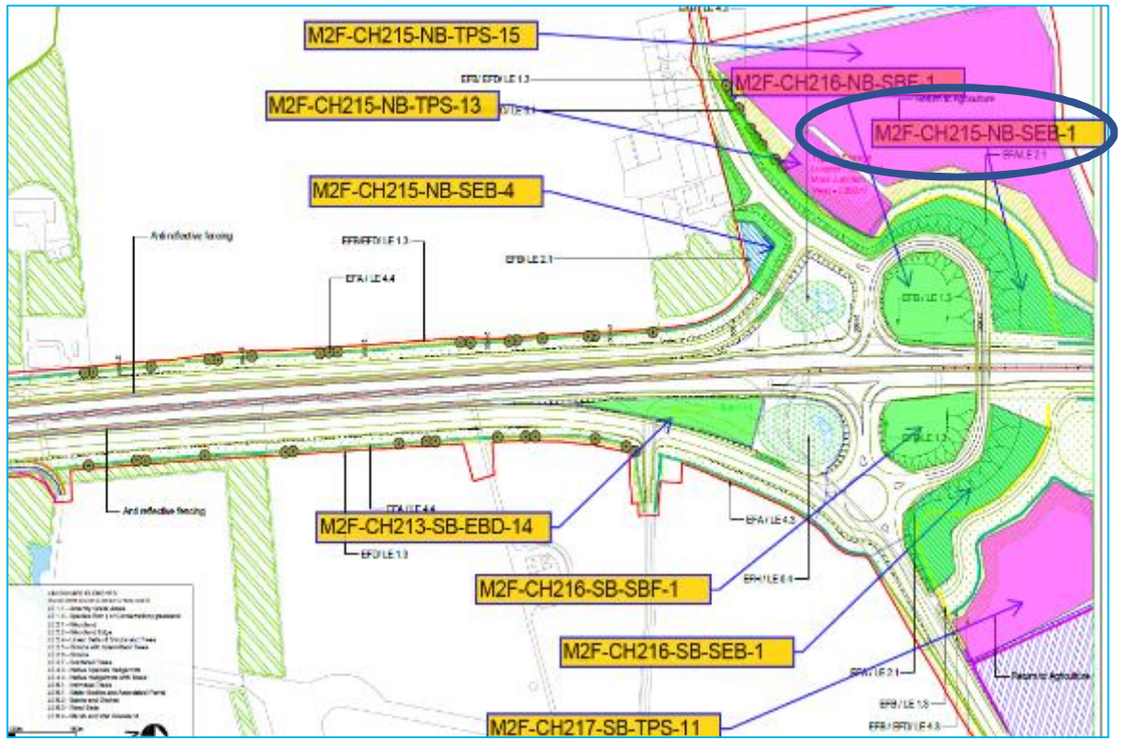
Landscape Elements:
Amenity Grass Areas

Proposed changes:
- Proposed extension of soil bund with grass seeding, Maximum height 2.0m

Chainage:
CH21280 to 21550

In line with existing Parameter 4 or 5:
Yes

M2F-CH215-NB-SEB-1



Environmental Function:
Visual Screening

Landscape Elements:
Woodland, Individual Trees, Native Species Hedgerows,

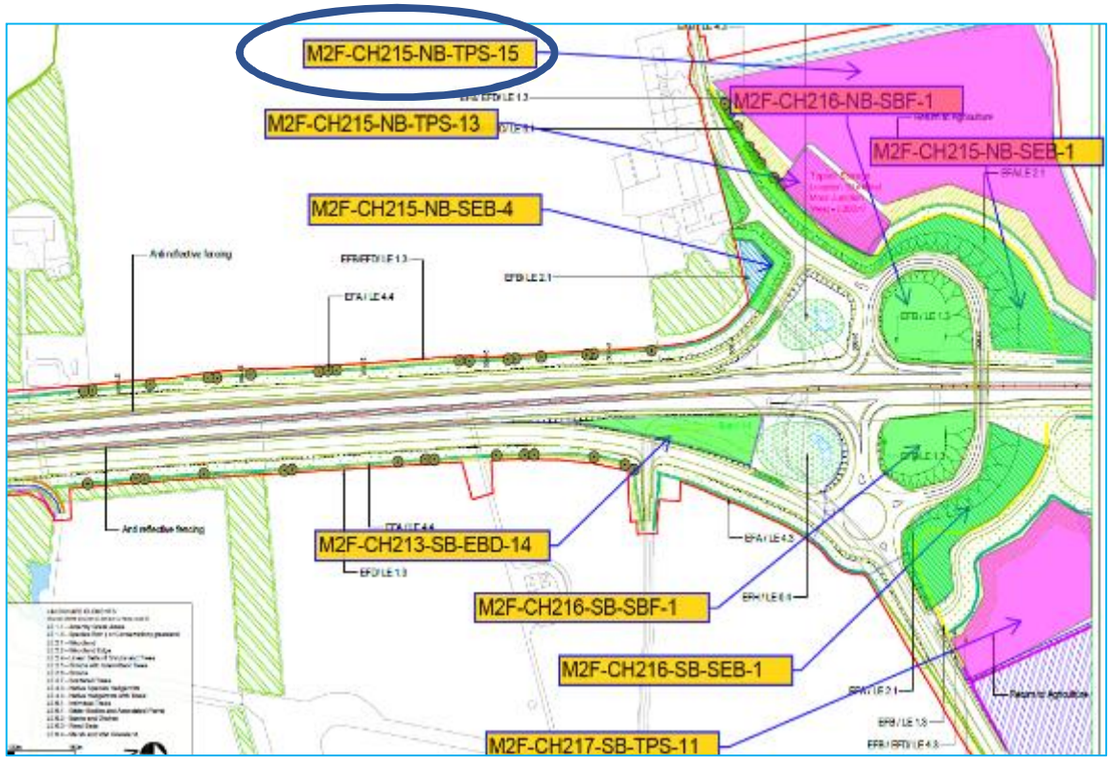
Additional Information:
Proposed soil bund, slackening of slope or disposal of excess site material

Proposed changes:
- Proposed embankment fill maintaining woodland planting with hedgerow to toe of slope

Chainage:
CH21500 to 21825

In line with existing Parameter 4 or 5:
Yes

M2F-CH215-NB-TPS-15



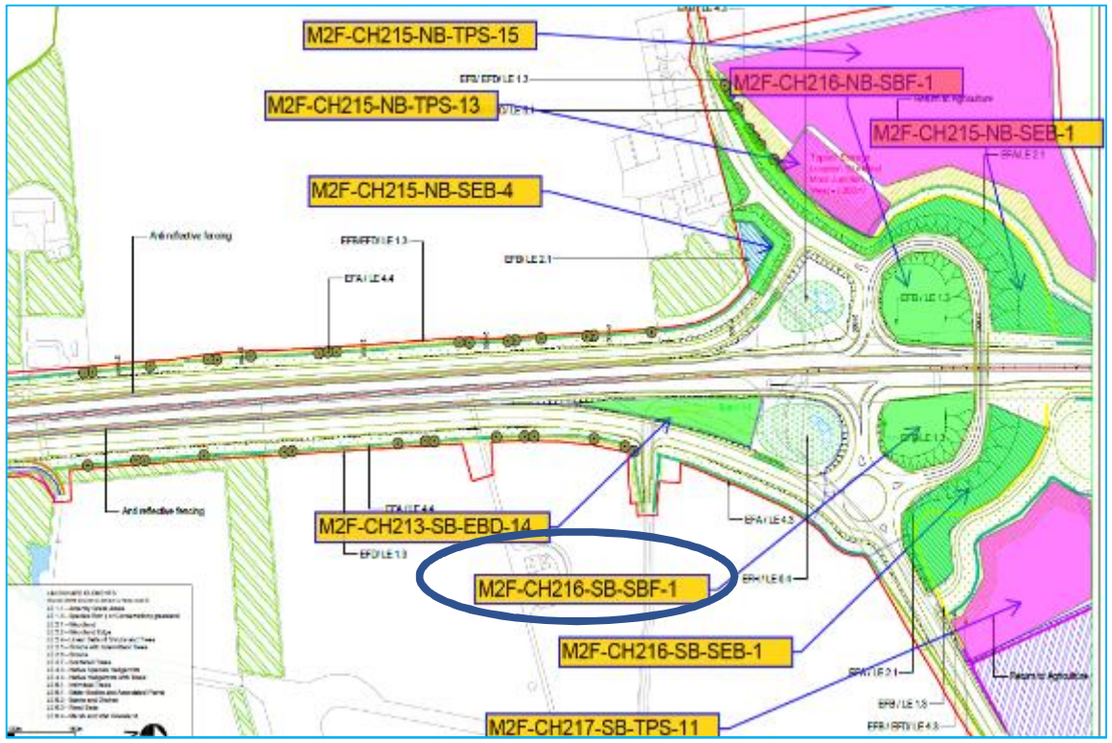
Additional Information:
Return to agriculture

Proposed changes:
- Allow temporary storage/stockpile of soils (in separate mounds), to aid in construction.
- Max 2m high stockpiles as per OCEMP

Chainage:
CH21500 to 21800

In line with existing Parameter 4 or 5:
No

M2F-CH216-SB-SBF-1



Environmental Function:
Landscape Integration

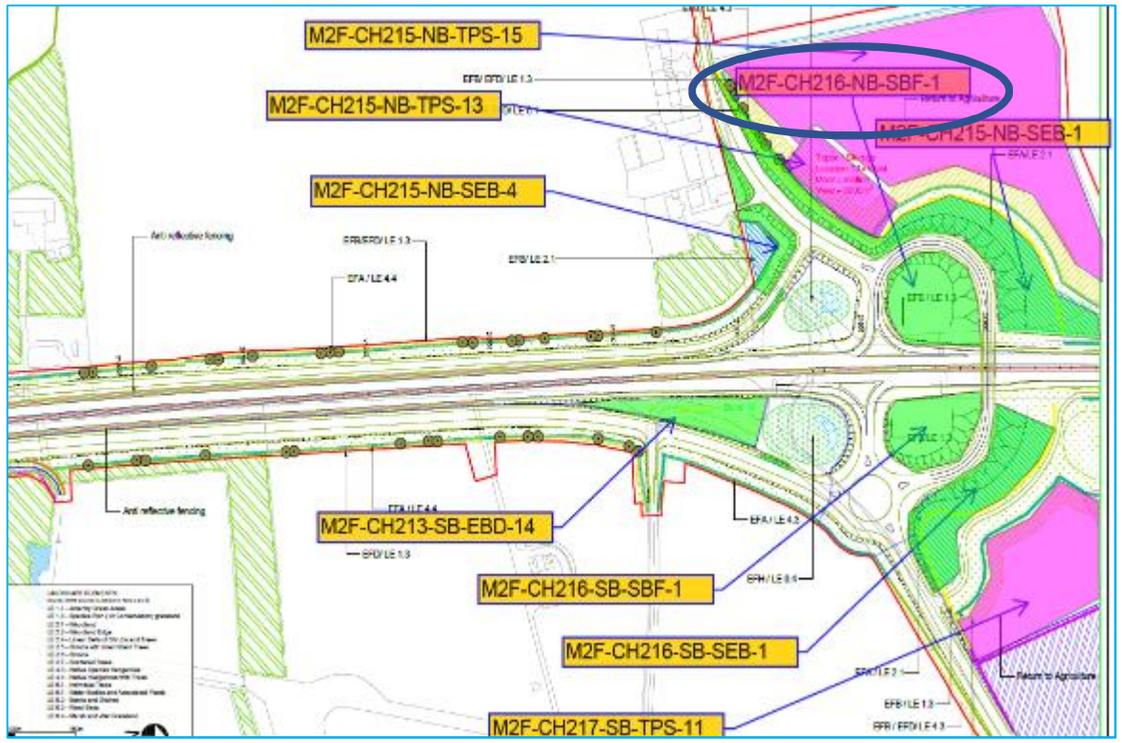
Landscape Elements:
Amenity Grass Areas

Proposed changes:
- Proposed filling of bowl (minor bunding) with grass seeding

Chainage:
CH21620 to 21690

In line with existing Parameter 4 or 5:
No

M2F-CH216-NB-SBF-1



Environmental Function:
Landscape Integration

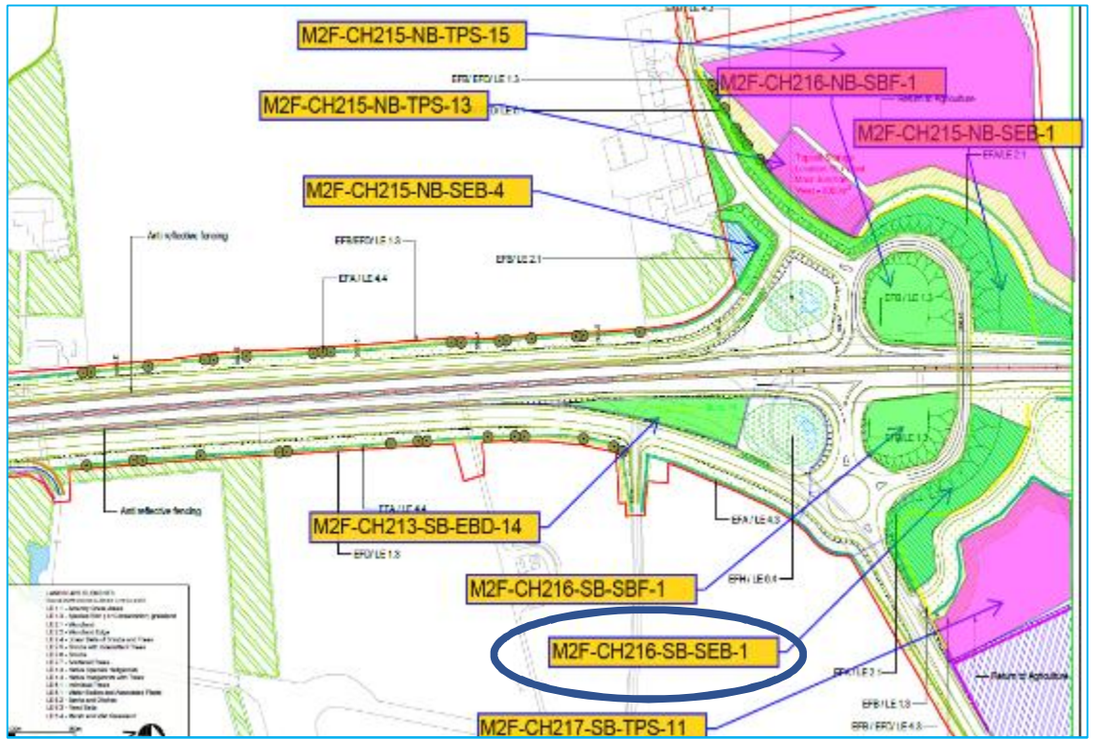
Landscape Elements:
Amenity Grass Areas

Proposed changes:
- Proposed filling of bowl (minor bunding) with grass seeding

Chainage:
CH21620 to 21690

In line with existing Parameter 4 or 5:
No

M2F-CH216-SB-SEB-1



Environmental Function:
Visual Screening

Landscape Elements:
Woodland

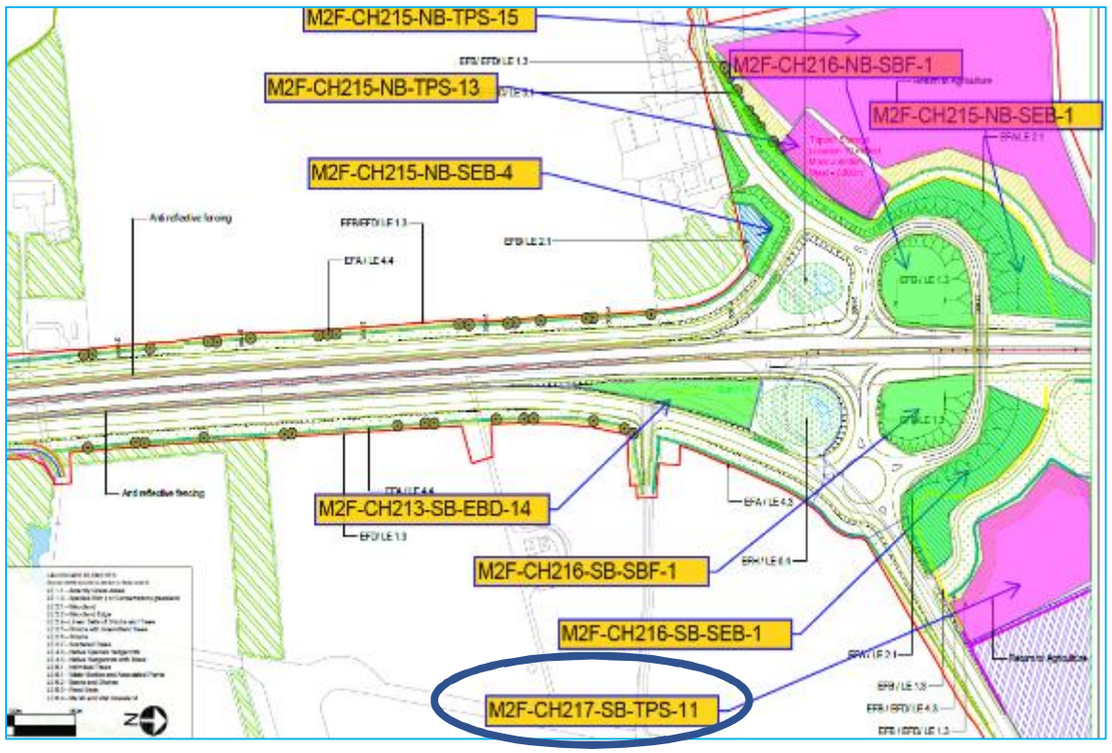
Additional Information:
Proposed soil bund, slackening of slope or disposal of excess site material

Proposed changes:
- Proposed embankment fill, maintaining woodland planting

Chainage:
CH21630 to 21750

In line with existing Parameter 4 or 5:
Yes

M2F-CH217-SB-TPS-11



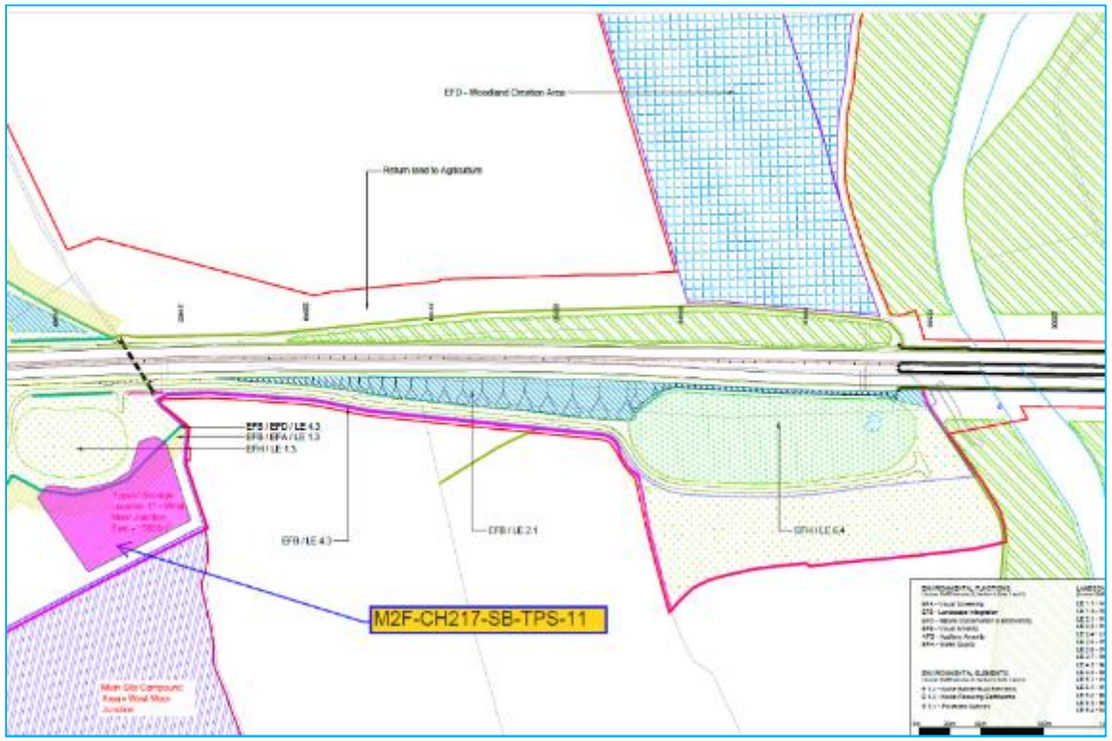
Additional Information:
Return to agriculture

Proposed changes:
- Allow temporary storage/stockpile of soils (in separate mounds), to aid in construction.
- Max 2m high stockpiles as per OCEMP

Chainage:
CH21680 to 21780

In line with existing Parameter 4 or 5:
No

M2F-CH217-SB-TPS-11



Original designation/function:
Temporary storage of topsoil.

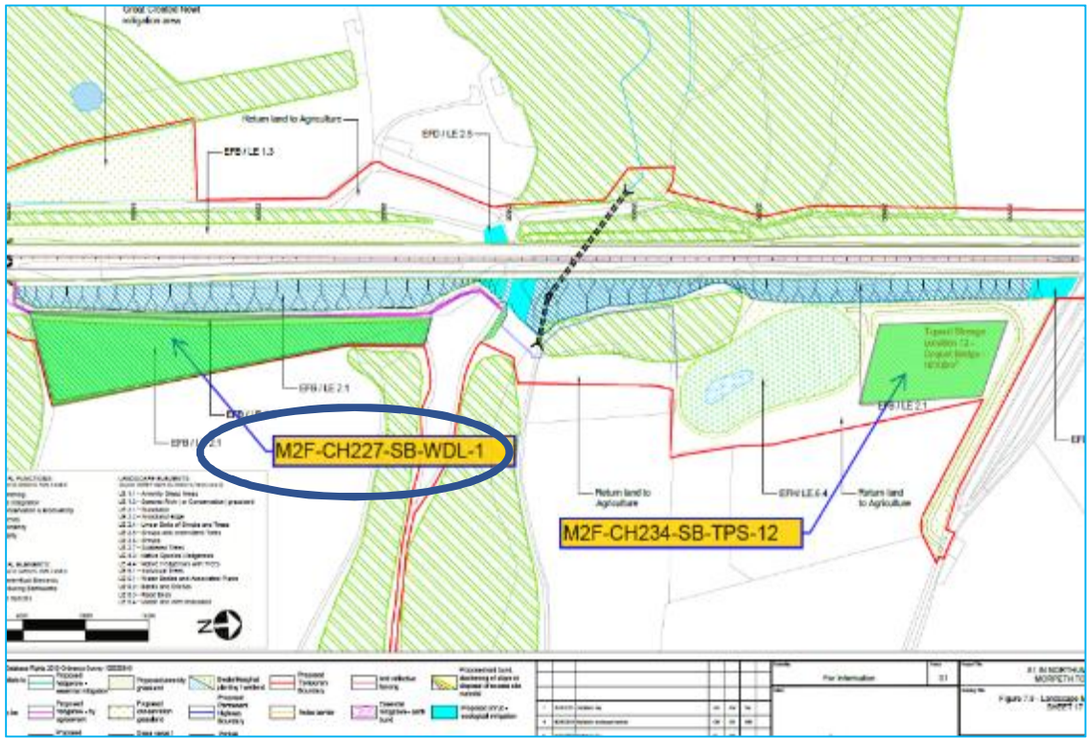
Additional Information:
Return to agriculture

Proposed changes:
- Allow temporary storage/stockpile of other material (in separate mounds), to aid in construction.
- Max 2m high stockpiles as per OCEMP

Chainage:
CH21780 to 21900

In line with existing Parameter 4 or 5:
No

M2F-CH227-SB-WDL-1



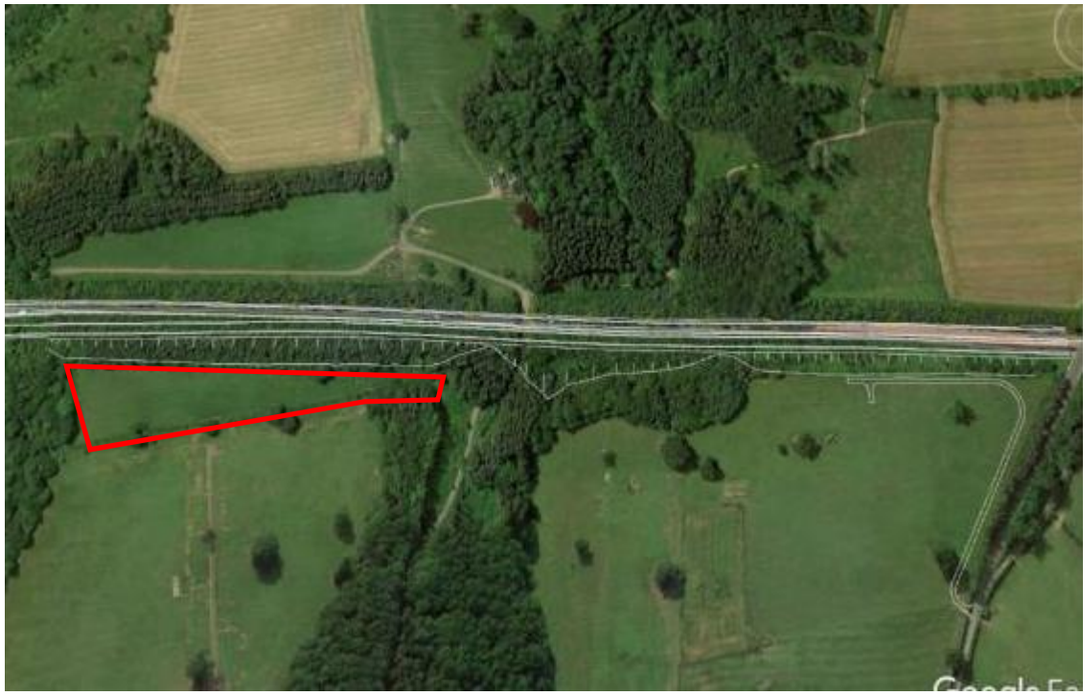
Environmental Function:
Landscape Integration

Landscape Elements:
Woodland, Native Species Hedgerows

Proposed changes
- Proposed embankment fill maintaining woodland planting with hedgerow to toe of slope

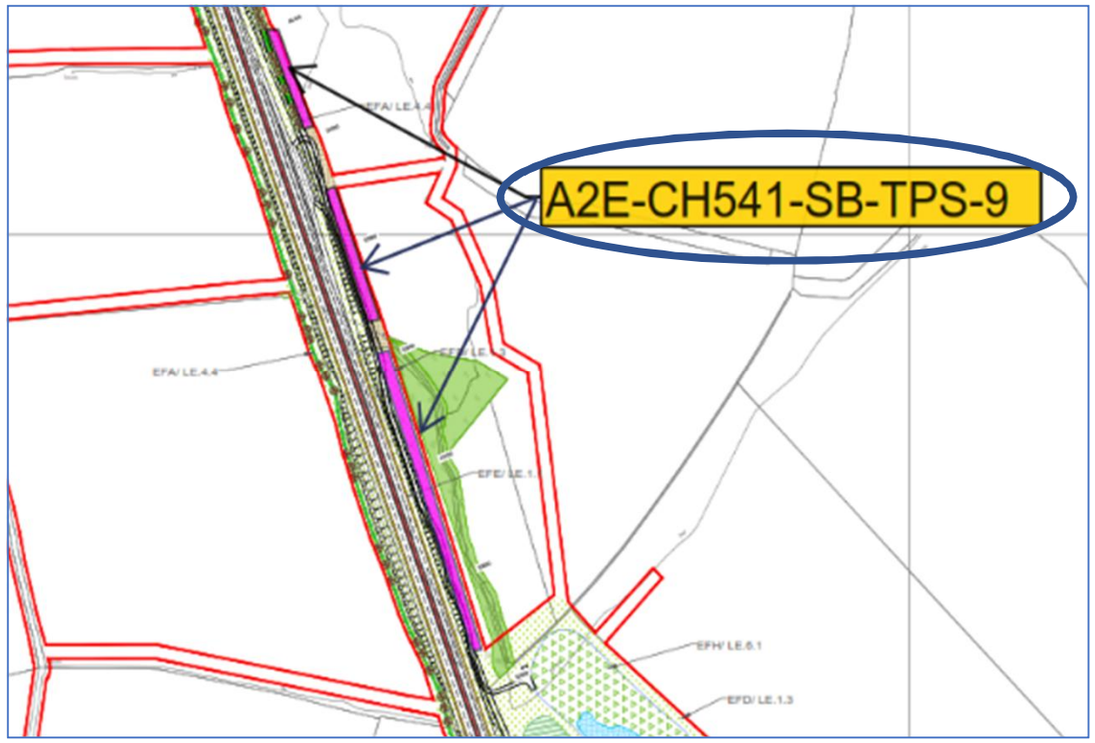
Chainage:
- CH22720 to 22975

In line with existing Parameter 4 or 5:
No



PART B - Alnwick to Ellingham

A2E-CH541-SB-TPS-9

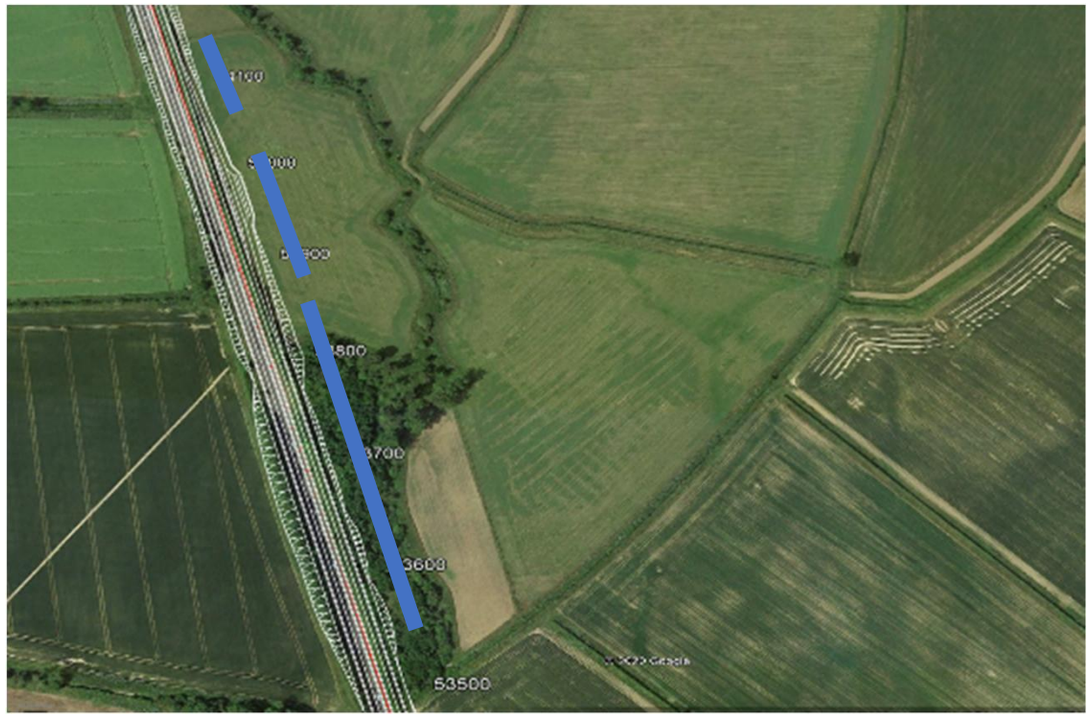


Environmental Function:
Nature Conservation & Biodiversity

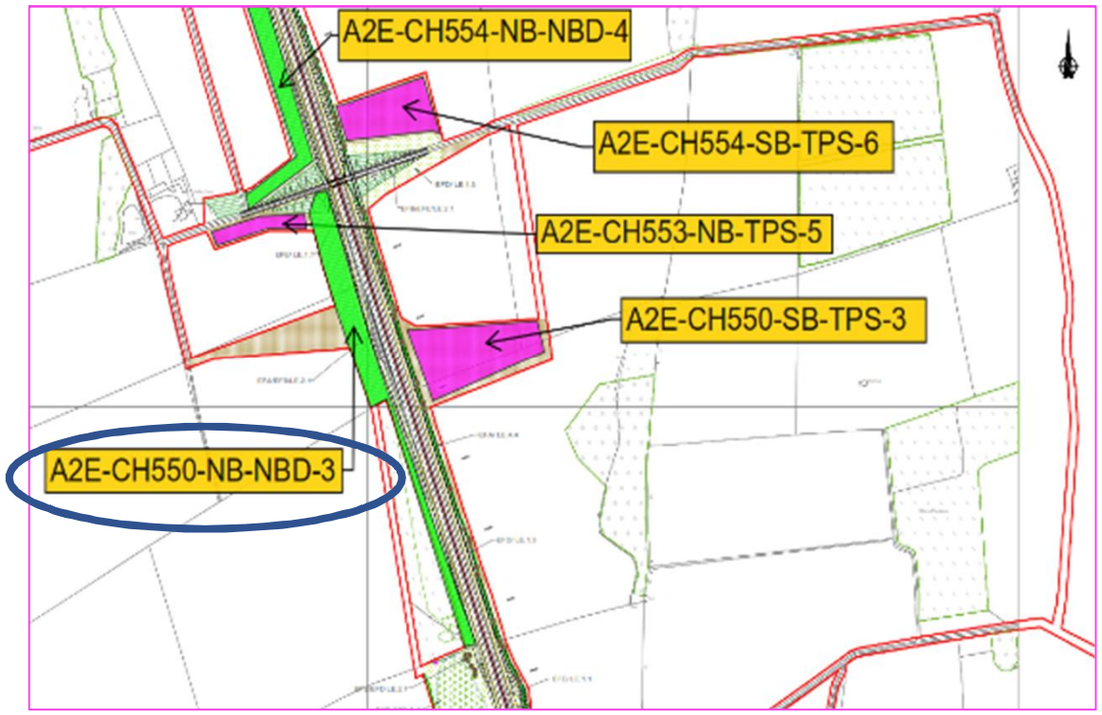
Landscape Elements:
Species Rich (or Conservation) grassland

Proposed changes:
- Establishment of a temporary storage area and associated access.
- Allow temporary storage/stockpile of various material (in separate mounds), to aid in construction.
- Max 2m high stockpiles as per OCEMP

Chainage:
- **CH53550 to CH54150**



A2E-CH550-NB-NBD-3



Environmental Function:
Visual Screening, Landscape Integration

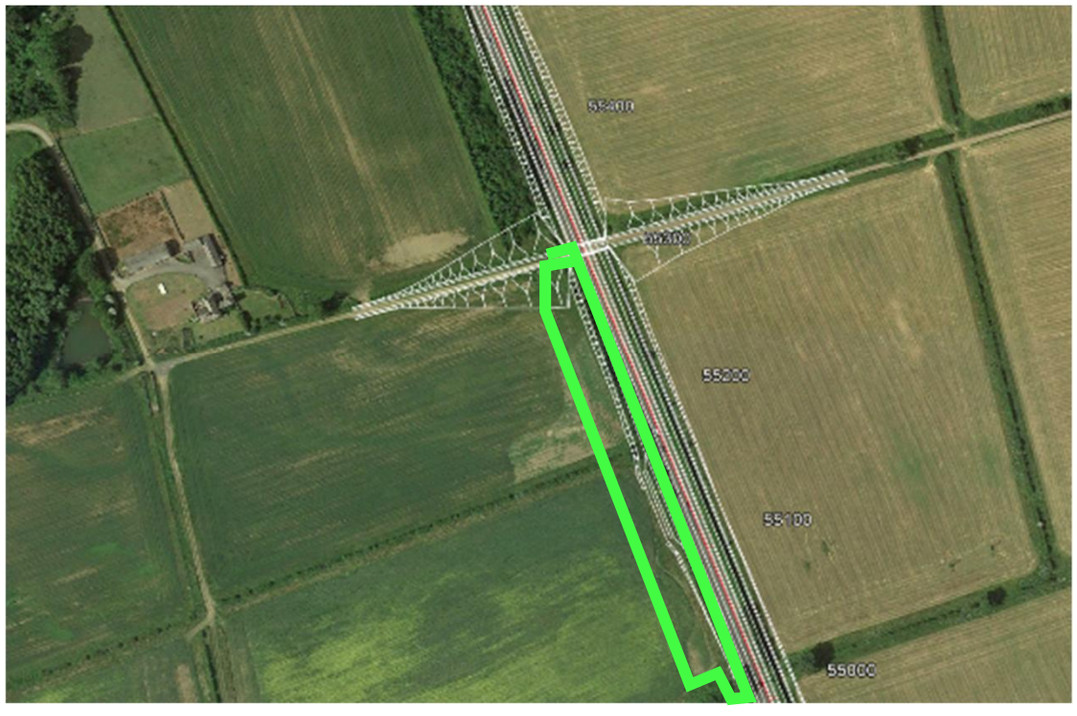
Landscape Elements:
Woodland

Proposed changes:
- New bund prior to woodland planting, Max height 3m

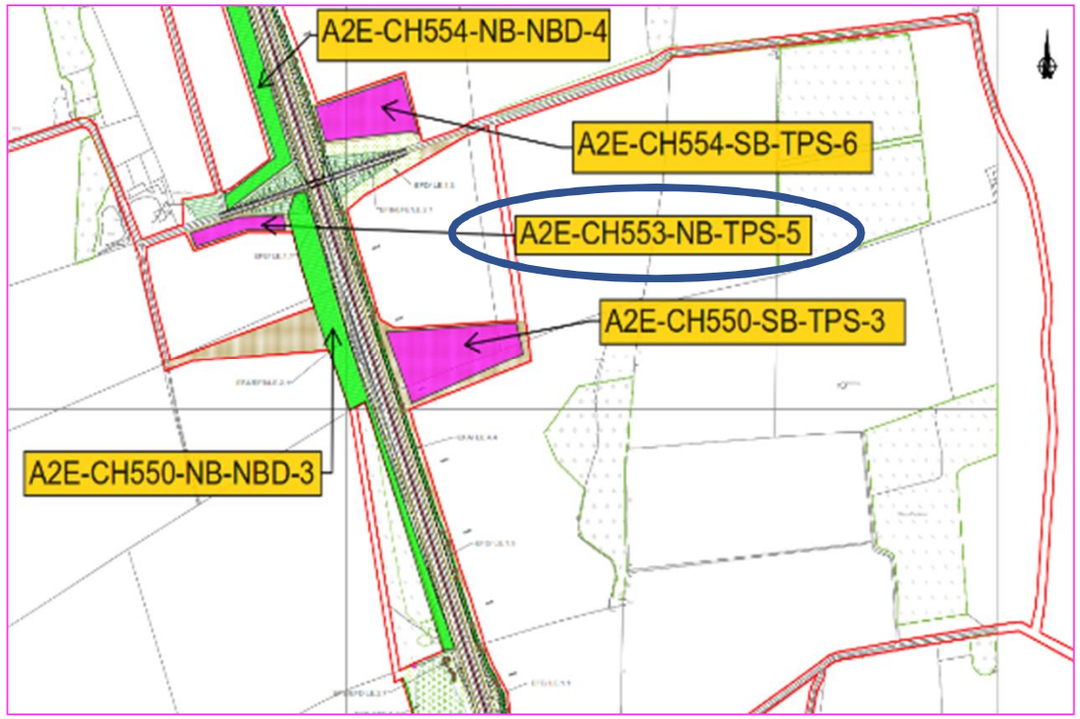
Chainage:
CH55150

Within ES CH 2, 2.12 Parameter 4:
N/A

Within ES CH 2, 2.12 Parameter 5:
N/A



A2E-CH553-NB-TPS-5



Within ES CH 2, 2.12 Parameter 4:
N/A

Within ES CH 2, 2.12 Parameter 5:
N/A

Environmental Function:
Nature Conservation & Biodiversity

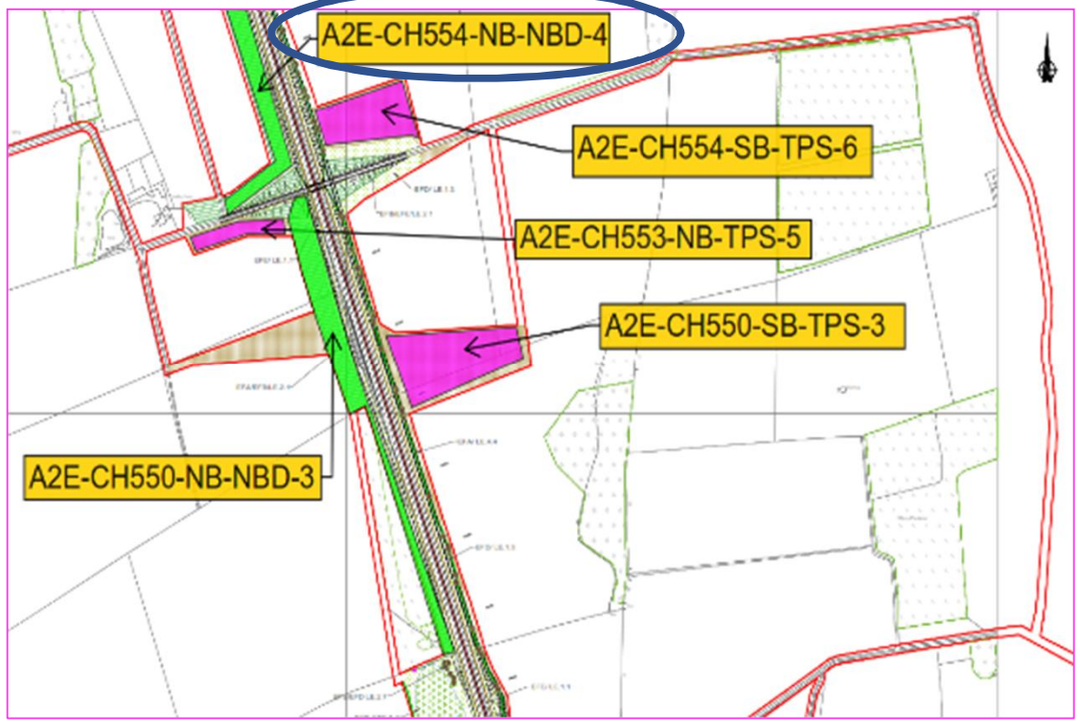
Landscape Elements:
Species Rich (or Conservation) grassland

Additional Information
Return to agriculture

Proposed changes:
- Allow temporary storage/stockpile of various material (in separate mounds), to aid in construction.
- Max 2m high stockpiles as per OCEMP

Chainage:
CH55300

A2E-CH554-NB-NBD-4



Environmental Function:
Visual Screening, Landscape Integration

Landscape Elements:
Woodland

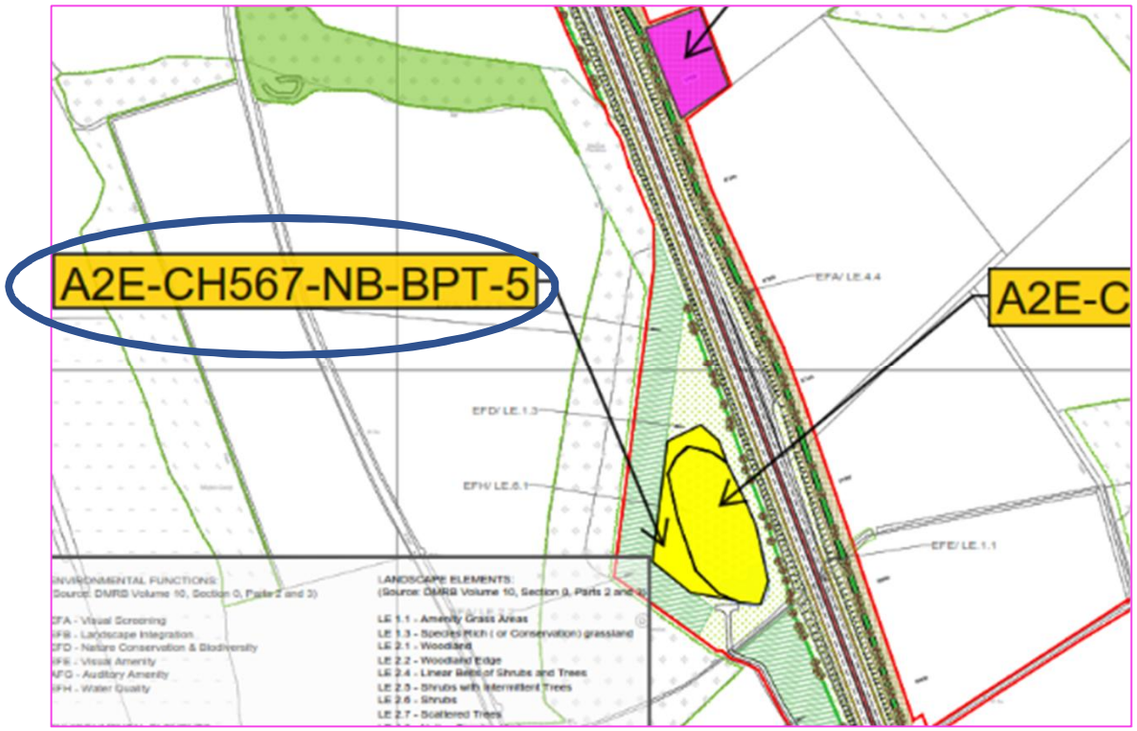
Proposed changes:
- New bund prior to woodland planting.
- Max height 3m

Chainage:
CH55590

Within ES CH 2, 2.12 Parameter 4:
N/A

Within ES CH 2, 2.12 Parameter 5:
N/A

A2E-CH570-NB-BPT-5



Environmental Function:
Nature Conservation & Biodiversity

Landscape Elements:
Species Rich (or Conservation) grassland

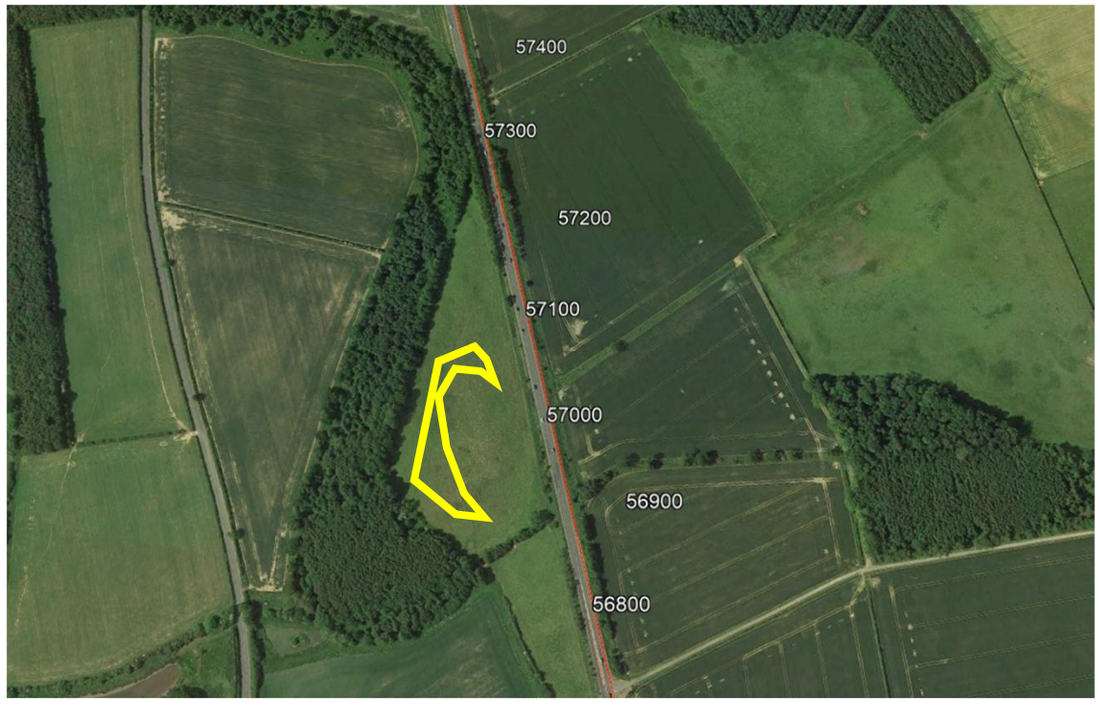
Proposed changes:

- Extend excavation for/below pond base to retrieve “good” material for main works.
- Refill with u/s up to base level as per original design, (to be grass seeded)
- Max depth 6.5 m
- 35m Buffer from Scheduled Monument

Chainage:
CH57000

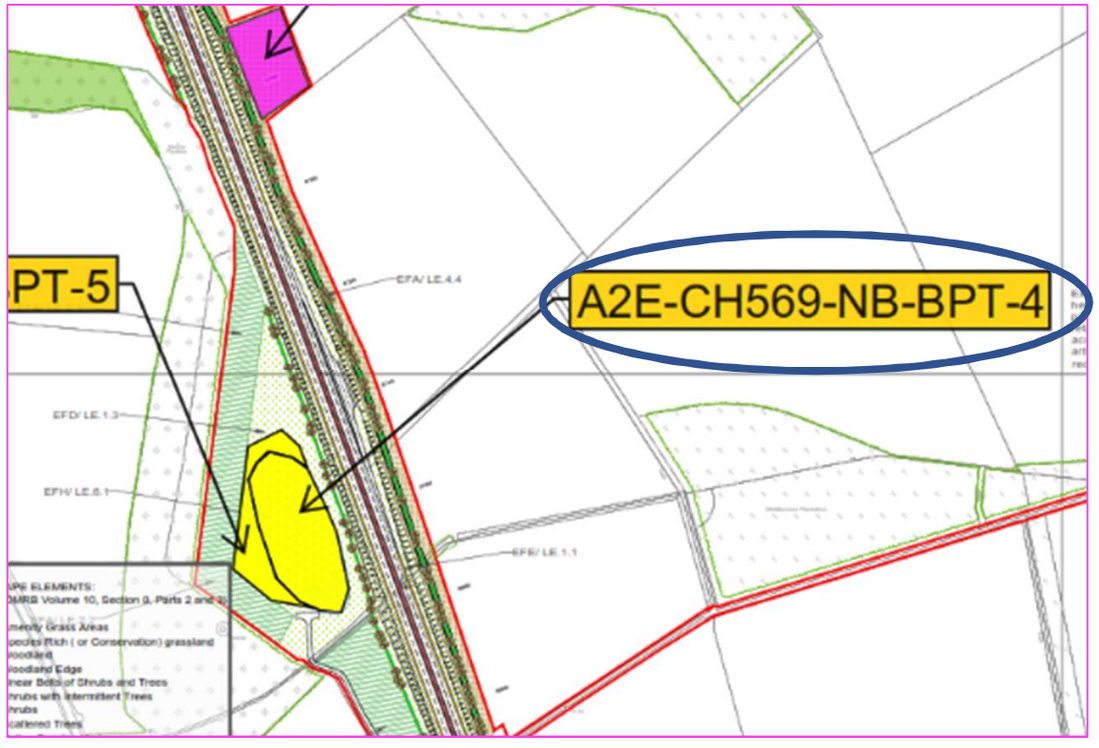
Within ES CH 2, 2.12 Parameter 4:
N/A

Within ES CH 2, 2.12 Parameter 5:
N/A



JB13

A2E-CH569-NB-BPT-4



Environmental Function:
Water Quality

Landscape Elements:
Water Bodies and Associated Plants

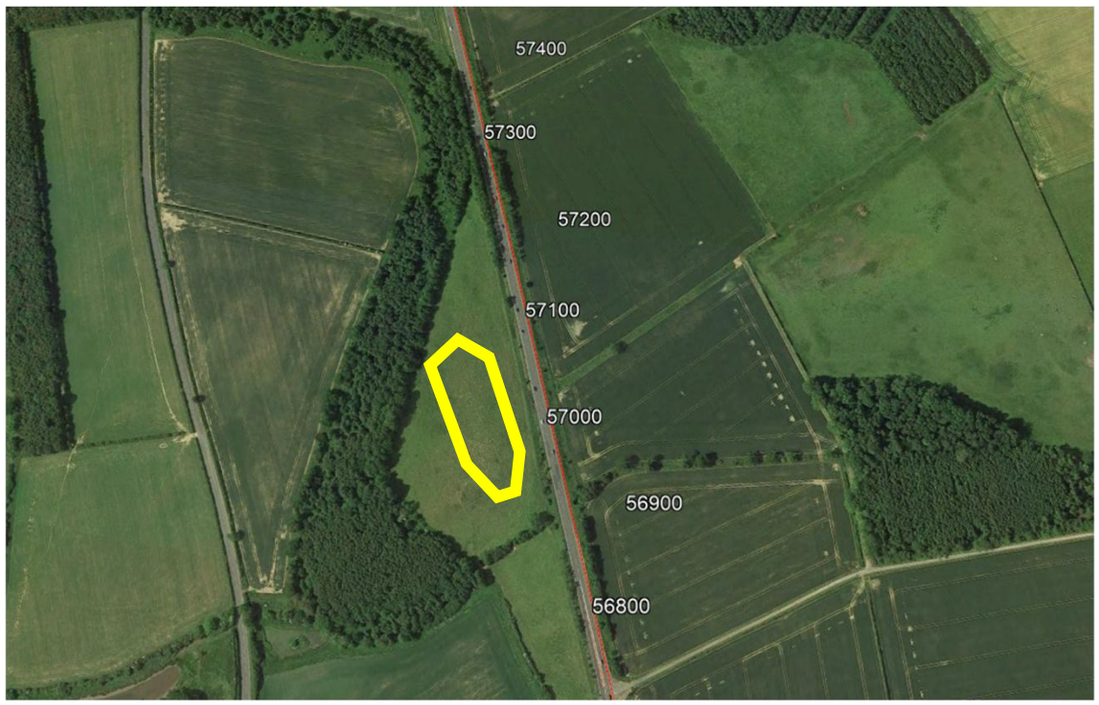
Proposed changes:

- Extend excavation for/below pond base to retrieve “good” material for main works.
- Refill with u/s up to base level as per original design
- Max depth 4 m
- 35m Exclusion zone from Scheduled Monument.

Chainage:
CH57000

Within ES CH 2, 2.12 Parameter 4:
N/A

Within ES CH 2, 2.12 Parameter 5:
N/A

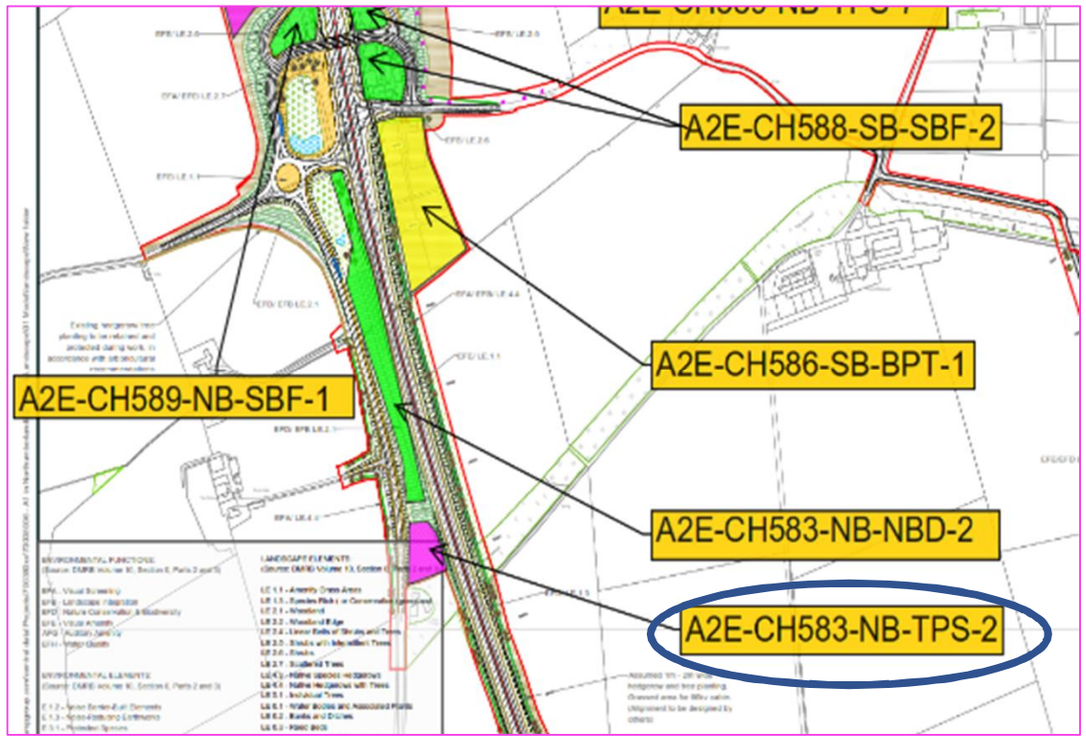


JB13

Formatting of ES Key Information

Jon Booth, 09/10/2020

A2E-CH583-NB-TPS-2

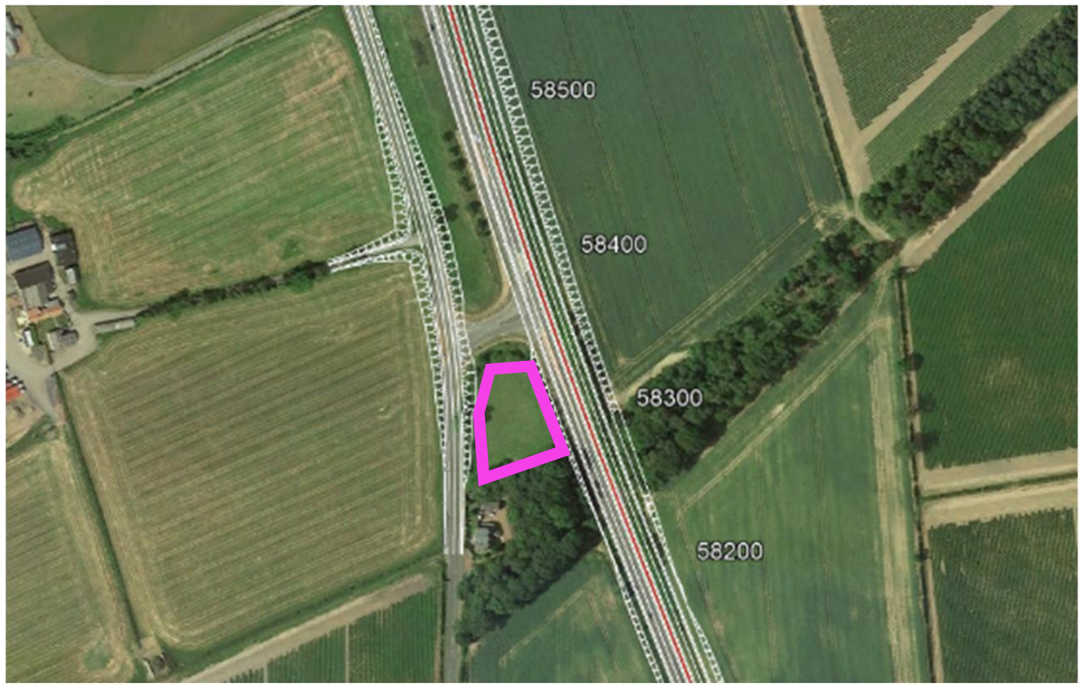


Environmental Function:
Nature Conservation & Biodiversity

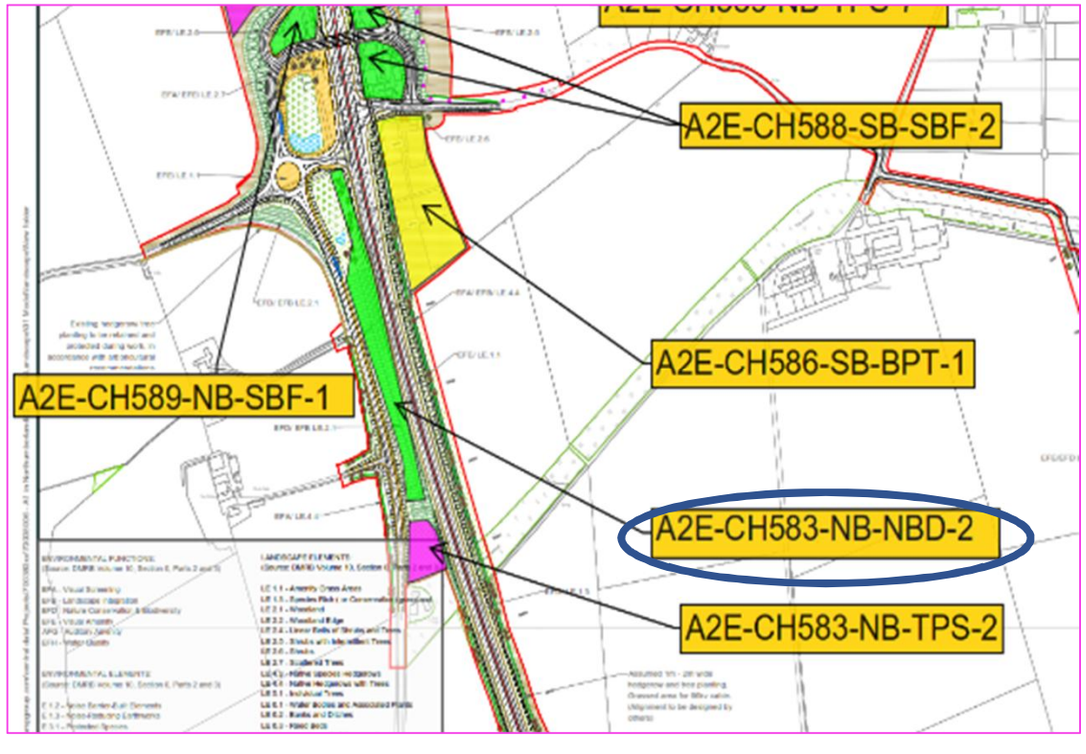
Landscape Elements:
Species Rich (or Conservation) grassland

Proposed changes:
- Allow temporary storage/stockpile of various material (in separate mounds), to aid in construction.
- Max 2m high stockpiles as per OCEMP

Chainage:
CH58325



A2E-CH583-NB-NBD-2



Environmental Function:
Landscape Integration, Nature Conservation & Biodiversity, Visual Screening

Landscape Elements:
Scattered Trees, Woodland, Species Rich (or Conservation) grassland

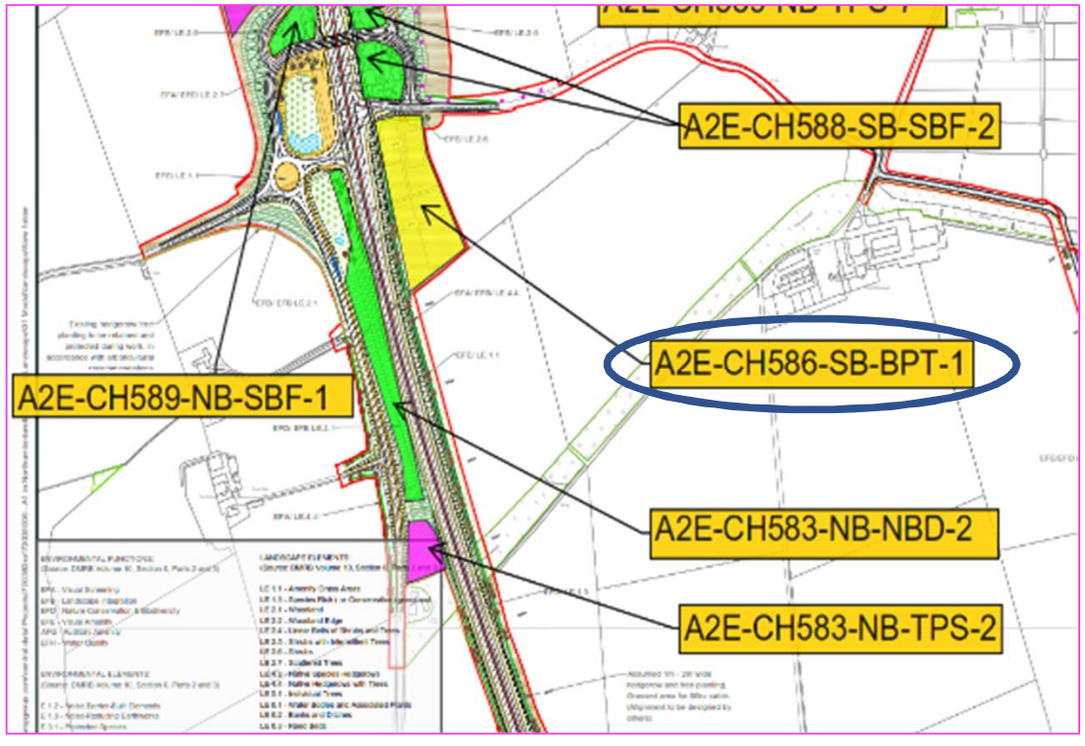
Proposed changes:
- New bund prior to grass seeding and woodland planting, Max height 3m

Chainage:
CH58520

Within ES CH 2, 2.12 Parameter 4:
N/A

Within ES CH 2, 2.12 Parameter 5:
N/A

A2E-CH586-SB-BPT-1



Additional Information:
Return to agriculture

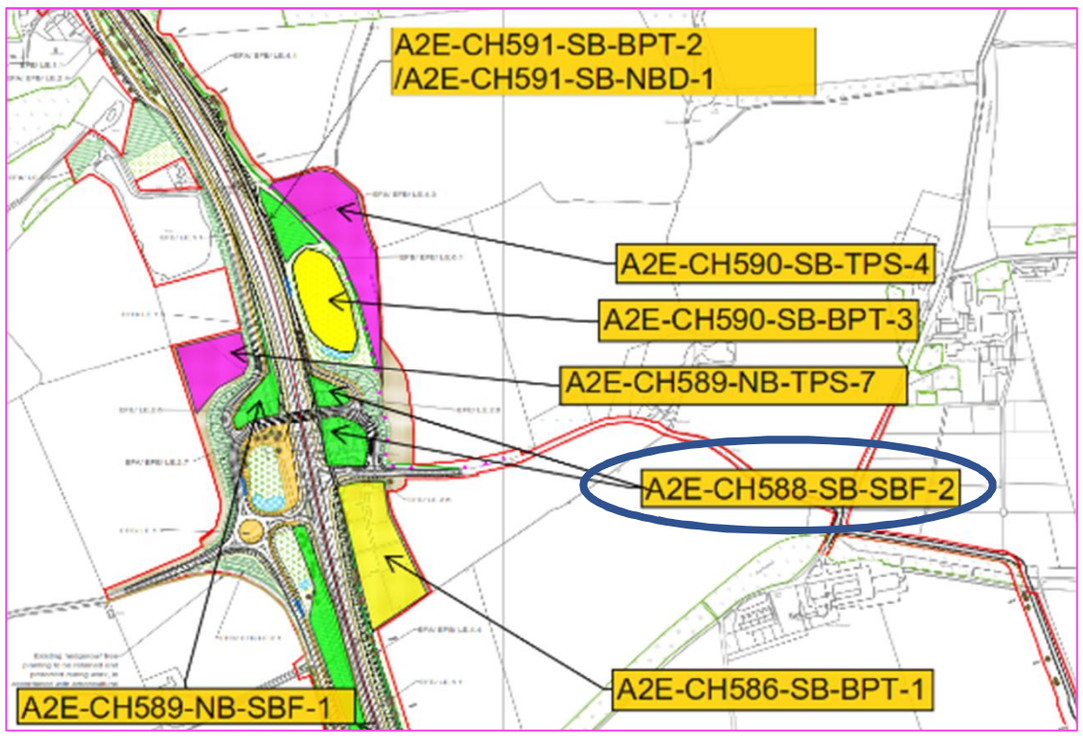
Proposed changes:
- Borrow in fields within essential license.
- Refill to existing ground level with U/S. (Return to agriculture)
- Max depth 5m

Chainage:
CH58705

Within ES CH 2, 2.12 Parameter 4:
N/A

Within ES CH 2, 2.12 Parameter 5:
N/A

A2E-CH588-SB-SBF-2



Environmental Function:
Visual Amenity

Landscape Elements:
Shrubs

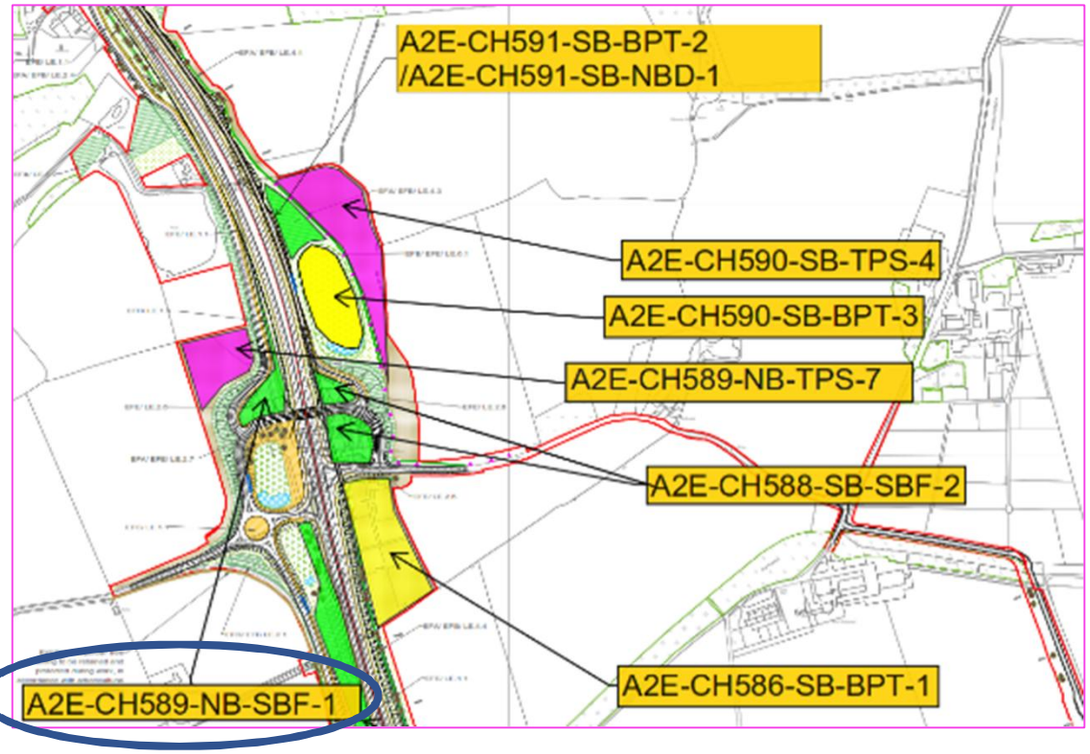
Proposed changes:
- Filling in junction “bowls” with planting of shrubs. Max height 3.5 m

Chainage:
CH58920

Within ES CH 2, 2.12 Parameter 4:
N/A

Within ES CH 2, 2.12 Parameter 5:
N/A

A2E-CH589-NB-SBF-1



Environmental Function:
Visual Amenity

Landscape Elements:
Shrubs

Proposed changes:

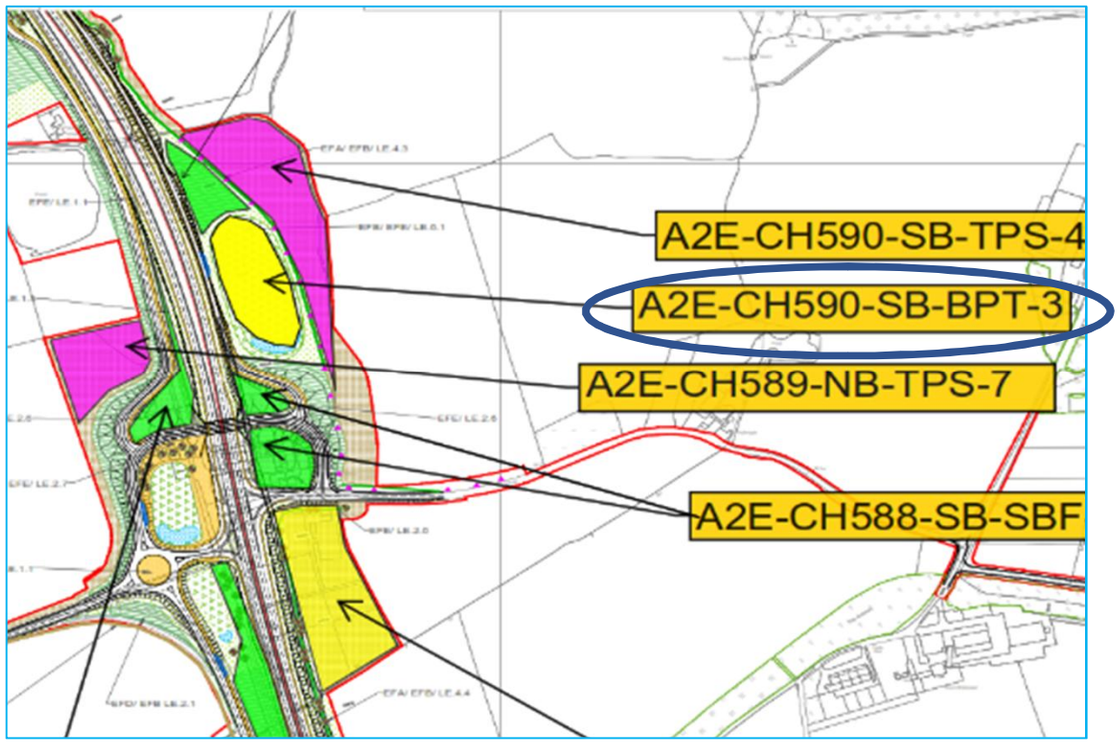
- Filling in junction “bowls” with planting of shrubs.
- Max height 3 m

Chainage:
CH58950

Within ES CH 2, 2.12 Parameter 4:
N/A

Within ES CH 2, 2.12 Parameter 5:
N/A

A2E-CH590-SB-BPT-3



Environmental Function:
Landscape Integration, Visual Amenity

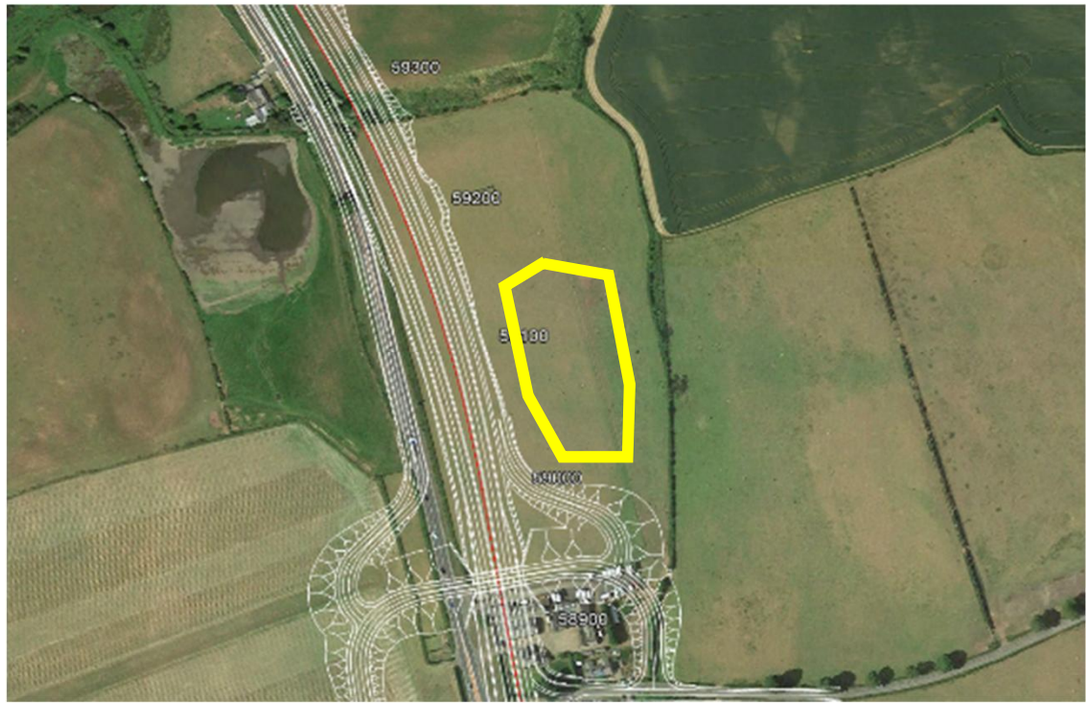
Landscape Elements:
Water Bodies and Associated Plants

Proposed changes:
- Extend excavation below pond base to retrieve “good” material for main works..
- Refill to original proposed level with U/S.
- Max depth 5m

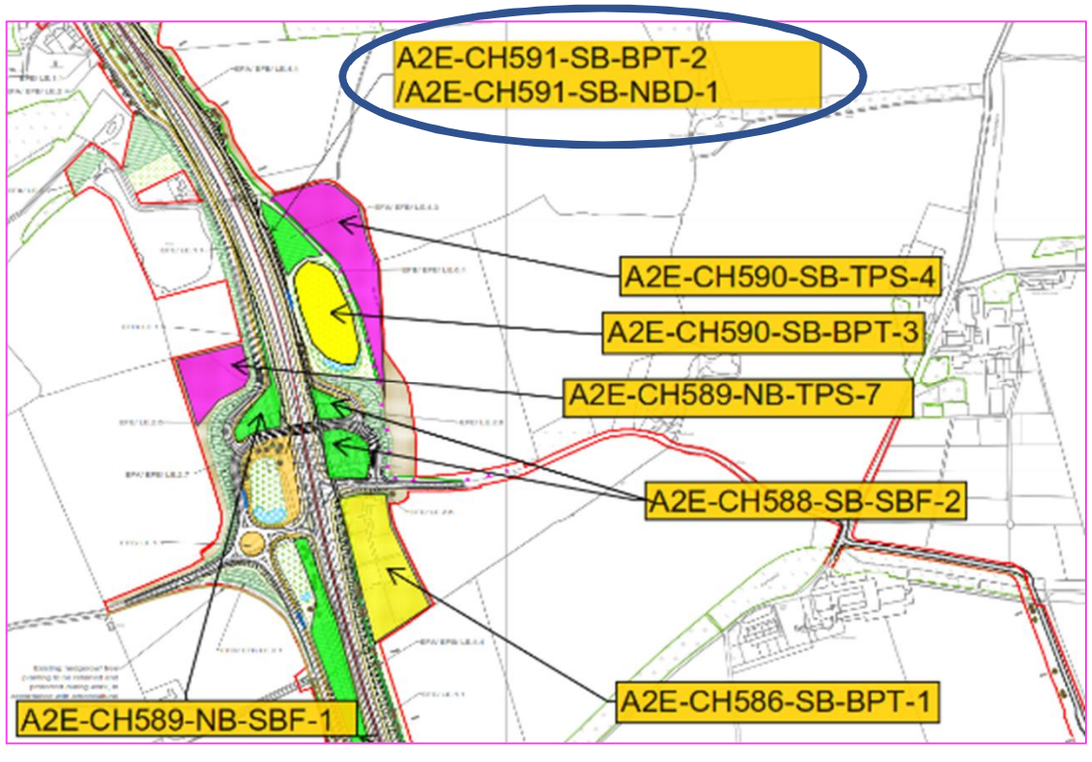
Chainage:
CH59100

Within ES CH 2, 2.12 Parameter 4:
N/A

Within ES CH 2, 2.12 Parameter 5:
N/A



A2E-CH591-SB-BPT-2



Environmental Function:
Landscape Integration

Landscape Elements:
Woodland

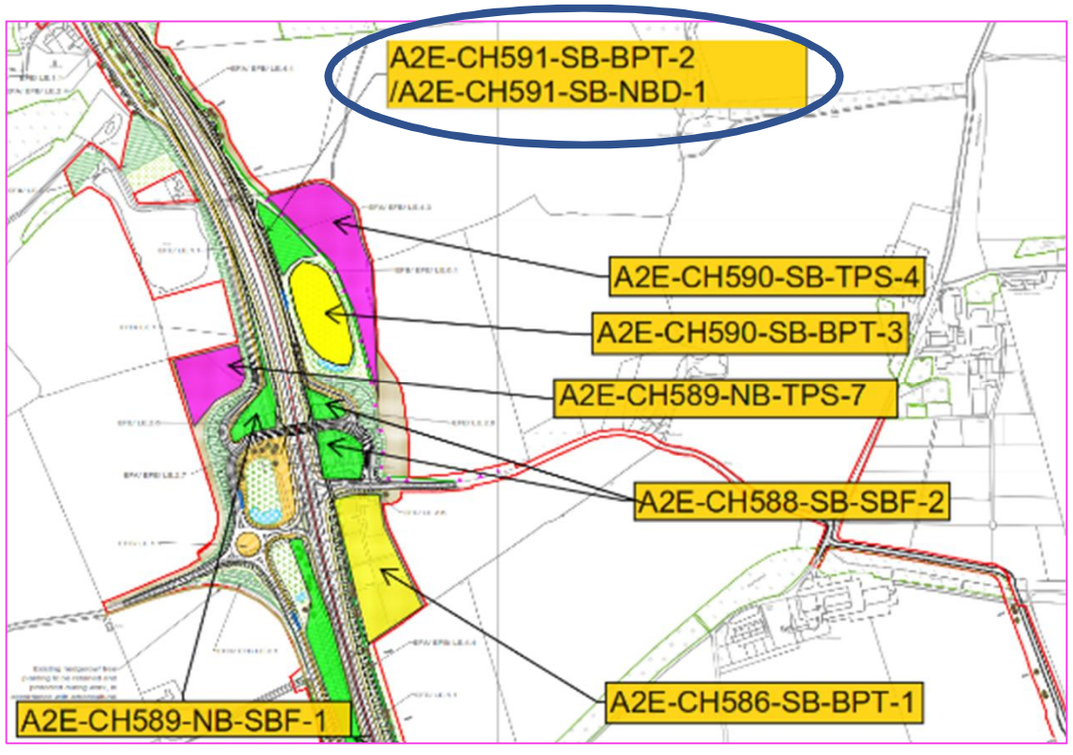
Proposed changes:
- Borrow in field north of proposed pond maintaining woodland planting
- Refill to form bund A2E-CH591-SB-NBD-1
- Max depth 9 m

Chainage:
CH59200

Within ES CH 2, 2.12 Parameter 4:
N/A

Within ES CH 2, 2.12 Parameter 5:
N/A

A2E-CH591-SB-NBD-1



Environmental Function:
Landscape Integration

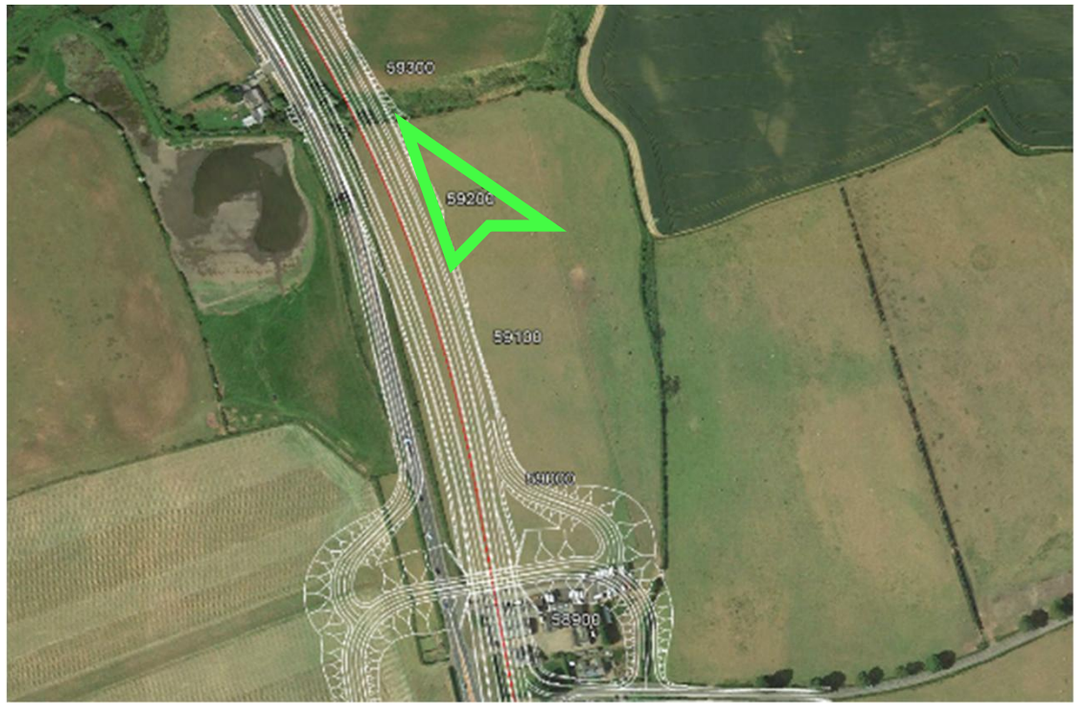
Landscape Elements:
Woodland

Proposed changes:
- Refill with U/S and above proposed ground levels, maintaining woodland planting
- Max height 3 m

Chainage:
CH59200

Within ES CH 2, 2.12 Parameter 4:
N/A

Within ES CH 2, 2.12 Parameter 5:
N/A

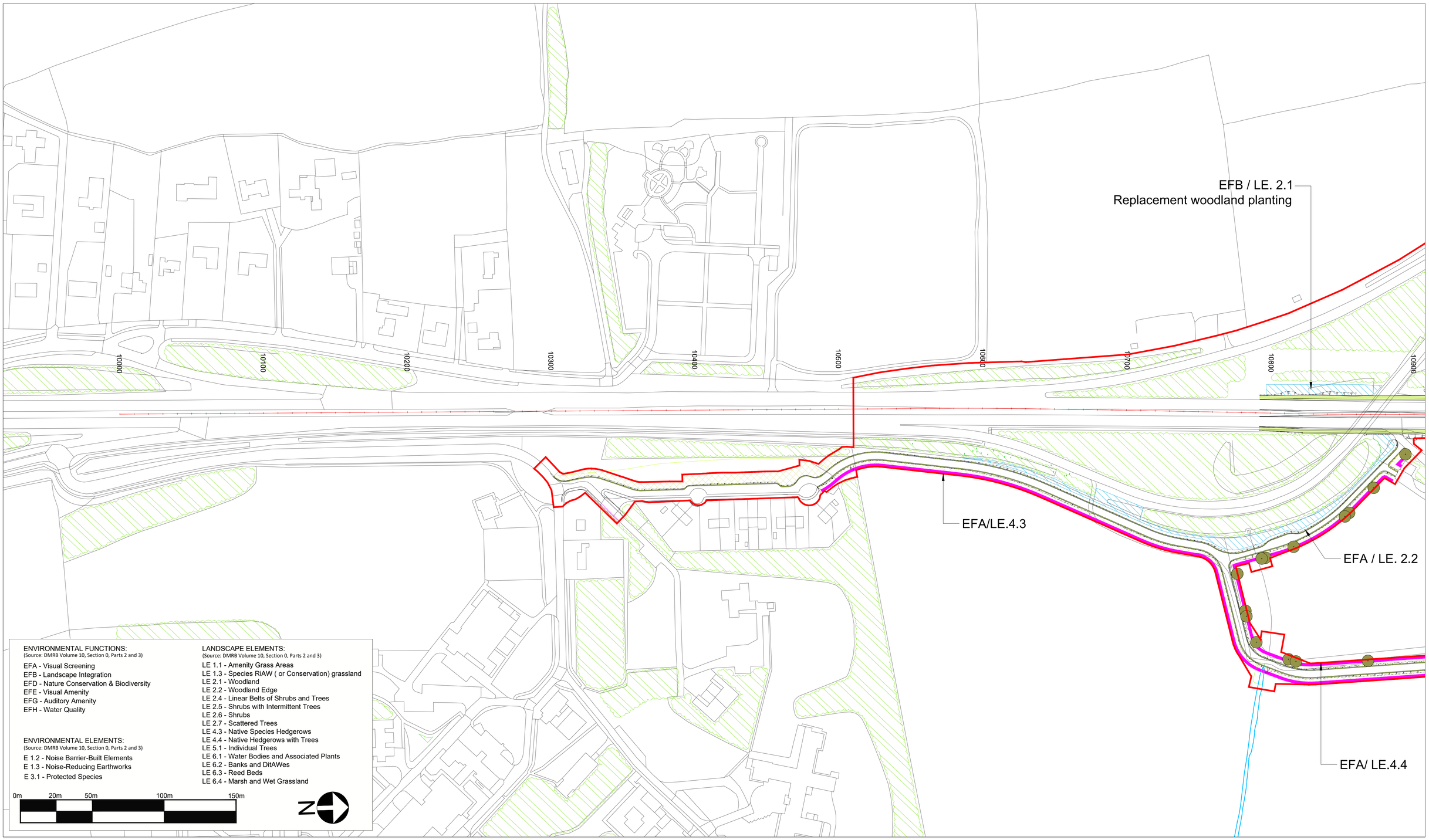


Appendix B

FIGURES

DO NOT SCALE

Millimetres 0 10 100



ENVIRONMENTAL FUNCTIONS:
(Source: DMRB Volume 10, Section 0, Parts 2 and 3)

EFA - Visual Screening
EFB - Landscape Integration
EFD - Nature Conservation & Biodiversity
EFE - Visual Amenity
EFG - Auditory Amenity
EFH - Water Quality

ENVIRONMENTAL ELEMENTS:
(Source: DMRB Volume 10, Section 0, Parts 2 and 3)

E 1.2 - Noise Barrier-Built Elements
E 1.3 - Noise-Reducing Earthworks
E 3.1 - Protected Species

LANDSCAPE ELEMENTS:
(Source: DMRB Volume 10, Section 0, Parts 2 and 3)

LE 1.1 - Amenity Grass Areas
LE 1.3 - Species RiAW (or Conservation) grassland
LE 2.1 - Woodland
LE 2.2 - Woodland Edge
LE 2.4 - Linear Belts of Shrubs and Trees
LE 2.5 - Shrubs with Intermittent Trees
LE 2.6 - Shrubs
LE 2.7 - Scattered Trees
LE 4.3 - Native Species Hedgerows
LE 4.4 - Native Hedgerows with Trees
LE 5.1 - Individual Trees
LE 6.1 - Water Bodies and Associated Plants
LE 6.2 - Banks and DitAWes
LE 6.3 - Reed Beds
LE 6.4 - Marsh and Wet Grassland

0m 20m 50m 100m 150m

© Crown Copyright and Database Rights 2021 Ordnance Survey 100030649

- Existing habitats to be retained
- Existing hedgerow to be retained
- Proposed woodland
- Woodland Creation Area
- Existing running water
- Proposed hedgerow - essential mitigation
- Proposed hedgerow - by agreement
- Proposed `Coronation Avenue` trees
- Proposed individual trees
- Existing waterbodies
- Proposed amenity grassland
- Proposed conservation grassland
- Grass verge / central reservations
- Arable field margins
- Proposed amended earthwork contours
- Swale/Marginal planting / wetland
- Proposed Permanent Highway Boundary
- Vehicle Restraint Sytem
- Proposed Great Crested Newt Pond
- Proposed Temporary Boundary
- Noise barrier
- Anti reflective fencing
- Essential mitigation - earth bund
- Proposed shrub - ecological mitigation

Rev.	Date	Description	By	Eng' CH'k	Disc' CH'k	App'd
2	15/2/21	DCO Limits amended	NB	AW	AW	KS
1	05.01.2021	FIRST ISSUE	NB	AW	AW	KS

Suitability: For Information
Status: S1

Client: highways england

Project Title: A1 IN NORTHUMBERLAND: MORPETH TO FELTON

Drawing Title: FIGURE 1 - LANDSCAPE MITIGATION PLAN (ADDENDUM - AMENDED EARTHWORKS) SHEET 1 OF 19

Scale	Drawn	Eng. AWeck	Approved	Authorised
1:1250	FS	AW	KS	DM
Original Size	**Date**	**Date**	**Date**	**Date**
A1	05.01.2021	05.01.2021	05.01.2021	05.01.2021

Drawing Number: Project HE551459 | Originator WSP | Volume M2F | Section | Type | ID | Direction | Type | Role | Number
Revision: P01
PW Stage Code

DO NOT SCALE

Millimetres 100 10 0

EFD / LE.1.3

Topsoil Storage Location 1 - 12000m³

EFD / LE.1.3

EFA / EFB/ LE.4.3

EFE / LE.5.1
Replacement trees within grass verge along Coronation Avenue

10900 11000 11100 11200 11300 11400 11500 11600 11700

EFB/ LE.1.1

EFA/ EFB/ LE.4.3

EFG

EFA/ LE.2.2

EFB/ LE.4.3

EFB/ LE.1.1

EFA/ LE.4.4

EFE/ LE.5.1

ENVIRONMENTAL FUNCTIONS:
(Source: DMRB Volume 10, Section 0, Parts 2 and 3)

EFA - Visual Screening
EFB - Landscape Integration
EFD - Nature Conservation & Biodiversity
EFE - Visual Amenity
EFG - Auditory Amenity
EFH - Water Quality

ENVIRONMENTAL ELEMENTS:
(Source: DMRB Volume 10, Section 0, Parts 2 and 3)

E 1.2 - Noise Barrier-Built Elements
E 1.3 - Noise-Reducing Earthworks
E 3.1 - Protected Species

LANDSCAPE ELEMENTS:
(Source: DMRB Volume 10, Section 0, Parts 2 and 3)

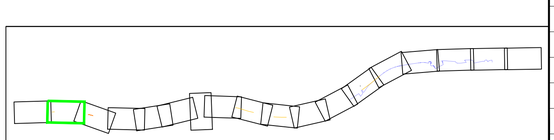
LE 1.1 - Amenity Grass Areas
LE 1.3 - Species RiAW (or Conservation) grassland
LE 2.1 - Woodland
LE 2.2 - Woodland Edge
LE 2.4 - Linear Belts of Shrubs and Trees
LE 2.5 - Shrubs with Intermittent Trees
LE 2.6 - Shrubs
LE 2.7 - Scattered Trees
LE 4.3 - Native Species Hedgerows
LE 4.4 - Native Hedgerows with Trees
LE 5.1 - Individual Trees
LE 6.1 - Water Bodies and Associated Plants
LE 6.2 - Banks and DitAWes
LE 6.3 - Reed Beds
LE 6.4 - Marsh and Wet Grassland

0m 20m 50m 100m 150m

N

© Crown Copyright and Database Rights 2021 Ordnance Survey 100030649

- Existing habitats to be retained
- Proposed hedgerow - essential mitigation
- Proposed amenity grassland
- Swale/Marginal planting / wetland
- Proposed Temporary Boundary
- Anti reflective fencing
- Proposed shrub - ecological mitigation
- Existing hedgerow to be retained
- Proposed hedgerow - by agreement
- Proposed conservation grassland
- Proposed Permanent Highway Boundary
- Noise barrier
- Essential mitigation - earth bund
- Proposed woodland
- Proposed `Coronation Avenue` trees
- Grass verge / central reservations
- Vehicle Restraint Sytem
- Woodland Creation Area
- Proposed individual trees
- Arable field margins
- Proposed Great Crested Newt Pond
- Existing running water
- Existing waterbodies
- Proposed amended earthwork contours



Rev.	Date	Description	By	Eng' CH'k	Disc' CH'k	App'd
1	05.01.2021	FIRST ISSUE	NB	AW	AW	KS

Suitability: For Information
Status: S1

Client: highways england

Project Title: A1 IN NORTHUMBERLAND: MORPETH TO FELTON

Drawing Title: FIGURE 1 - LANDSCAPE MITIGATION PLAN (ADDENDUM - AMENDED EARTHWORKS) SHEET 2 OF 19

Scale	Drawn	Eng. AWeck	Approved	Authorised
1:1250	FS	AW	KS	DM
Original Size	**Date**	**Date**	**Date**	**Date**
A1	05.01.2021	05.01.2021	05.01.2021	05.01.2021

Drawing Number
Project: HE551459 | Originator: WSP | Volume: M2F | Section | Type | ID | Direction | Type | Role | Number: 6.2
Revision: P01
PW Stage Code

DO NOT SCALE

Millimetres 100 10 0

M2F-CH121-NB-SBF-1
EFA / LE.2.1
M2F-CH121-NB-EBD-2
EFB / LE.2.7
EFE / LE.5.1
Replacement trees within grass verge along Coronation Avenue
EFA / LE.2.1
M2F-CH120-NB-EBD-1
EFA/ LE.4.3
EFD / LE.1.3
EFE/ LE.5.1
EFA/ EFB/ LE.4.3
M2F-CH116-NB-VLS-1
EFB / LE.4.3
EFD/ LE.2.6
EFA/ EFB/ LE.4.3
EFB/ LE.1.3
EFB/ LE.1.3
EFH/ LE.6.1
EFB/ LE.4.3
M2F-CH122-SB-EBD-3
EFB / LE.1.3
EFB / LE.1.3
M2F-CH123-NB-TPS-2
EFA/ EFB/ LE.4.3
M2F-CH121-NB-VLS-2
EFE/ LE.5.1
EFB / LE.1.3
EFE/ LE.5.1
EFB/ LE.4.3
M2F-CH123-SB-VLS-2
EFA/ EFB/ LE.4.3
EFA/ LE.2.1
M2F-CH123-SB-PWA-1
EFB/ LE.1.3
EFA/ LE.2.1
M2F-CH122-SB-SEB-1

Topsoil Storage Location 2 - Highlaws Junction - 15000m^3

Bund 1
Bund 2
Bund 3
DB2

ENVIRONMENTAL FUNCTIONS:
(Source: DMRB Volume 10, Section 0, Parts 2 and 3)
EFA - Visual Screening
EFB - Landscape Integration
EFD - Nature Conservation & Biodiversity
EFE - Visual Amenity
EFG - Auditory Amenity
EFH - Water Quality

ENVIRONMENTAL ELEMENTS:
(Source: DMRB Volume 10, Section 0, Parts 2 and 3)
E 1.2 - Noise Barrier-Built Elements
E 1.3 - Noise-Reducing Earthworks
E 3.1 - Protected Species

LANDSCAPE ELEMENTS:
(Source: DMRB Volume 10, Section 0, Parts 2 and 3)
LE 1.1 - Amenity Grass Areas
LE 1.3 - Species RiAW (or Conservation) grassland
LE 2.1 - Woodland
LE 2.2 - Woodland Edge
LE 2.4 - Linear Belts of Shrubs and Trees
LE 2.5 - Shrubs with Intermittent Trees
LE 2.6 - Shrubs
LE 2.7 - Scattered Trees
LE 4.3 - Native Species Hedgerows
LE 4.4 - Native Hedgerows with Trees
LE 5.1 - Individual Trees
LE 6.1 - Water Bodies and Associated Plants
LE 6.2 - Banks and DitAWes
LE 6.3 - Reed Beds
LE 6.4 - Marsh and Wet Grassland

0m 20m 50m 100m 150m

N

© Crown Copyright and Database Rights 2021 Ordnance Survey 100030649

- Existing habitats to be retained
- Existing hedgerow to be retained
- Proposed woodland
- Woodland Creation Area
- Existing running water
- Proposed hedgerow - essential mitigation
- Proposed hedgerow - by agreement
- Proposed `Coronation Avenue` trees
- Proposed individual trees
- Existing waterbodies
- Proposed amenity grassland
- Proposed conservation grassland
- Grass verge / central reservations
- Arable field margins
- Proposed amended earthwork contours
- Swale/Marginal planting / wetland
- Proposed Permanent Highway Boundary
- Vehicle Restraint Sytem
- Proposed Great Crested Newt Pond
- Proposed Temporary Boundary
- Noise barrier
- 2m Proposed Fence
- Anti reflective fencing
- Essential mitigation - earth bund
- Proposed shrub - ecological mitigation

Rev.	Date	Description	By	Eng' CH'k	Disc' CH'k	App'd
1	05.01.2021	FIRST ISSUE	NB	AW	AW	KS

Suitability: For Information
Status: S1

Client: highways england

Project Title: A1 IN NORTHUMBERLAND: MORPETH TO FELTON

Drawing Title: FIGURE 1 - LANDSCAPE MITIGATION PLAN (ADDENDUM - AMENDED EARTHWORKS) SHEET 3 OF 19

Scale	Drawn	Eng. AWeck	Approved	Authorised
1:1250	FS	AW	KS	DM
Original Size	**Date**	**Date**	**Date**	**Date**
A1	05.01.2021	05.01.2021	05.01.2021	05.01.2021

Drawing Number: Project HE551459 | Originator WSP | Volume 6.2 | M2F | Section | Type | ID | Direction | Type | Role | Number
Revision: P01
PW Stage Code

DO NOT SCALE

Millimetres 100 0 10

EFA/ EFB/ LE.4.3

M2F-CH126-NB-NBD-15

Return to pasture

EFD / LE.1.3

EFB/ LE.4.3

EFD/ LE.1.3

EFE/ LE.5.1

EFB/ EFD/ LE. 1.3

EFA/ LE.4.3

EFB/ EFD/ LE. 1.3

EFA/EFB/ LE. 4.3

OTI

12600 12800 12700 12800 12900 13000 13100 13200 13300 13400

Return to pasture

EFB/ LE.4.3

EFE/ LE.5.1

EFB/ LE.4.3

EFD/ LE.1.3

Return to pasture

EFA/ EFB/ LE.4.3

EFB/ LE.2.1

ENVIRONMENTAL FUNCTIONS:
(Source: DMRB Volume 10, Section 0, Parts 2 and 3)

EFA - Visual Screening
EFB - Landscape Integration
EFD - Nature Conservation & Biodiversity
EFE - Visual Amenity
EFG - Auditory Amenity
EFH - Water Quality

ENVIRONMENTAL ELEMENTS:
(Source: DMRB Volume 10, Section 0, Parts 2 and 3)

E 1.2 - Noise Barrier-Built Elements
E 1.3 - Noise-Reducing Earthworks
E 3.1 - Protected Species

LANDSCAPE ELEMENTS:
(Source: DMRB Volume 10, Section 0, Parts 2 and 3)

LE 1.1 - Amenity Grass Areas
LE 1.3 - Species RiAW (or Conservation) grassland
LE 2.1 - Woodland
LE 2.2 - Woodland Edge
LE 2.4 - Linear Belts of Shrubs and Trees
LE 2.5 - Shrubs with Intermittent Trees
LE 2.6 - Shrubs
LE 2.7 - Scattered Trees
LE 4.3 - Native Species Hedgerows
LE 4.4 - Native Hedgerows with Trees
LE 5.1 - Individual Trees
LE 6.1 - Water Bodies and Associated Plants
LE 6.2 - Banks and DitAWes
LE 6.3 - Reed Beds
LE 6.4 - Marsh and Wet Grassland

0m 20m 50m 100m 150m

N

© Crown Copyright and Database Rights 2021 Ordnance Survey 100030649

- Existing habitats to be retained
- Proposed hedgerow - essential mitigation
- Proposed amenity grassland
- Swale/Marginal planting / wetland
- Proposed Temporary Boundary
- Anti reflective fencing
- Proposed shrub - ecological mitigation
- Existing hedgerow to be retained
- Proposed hedgerow - by agreement
- Proposed conservation grassland
- Proposed Permanent Highway Boundary
- Noise barrier
- Essential mitigation - earth bund
- Proposed woodland
- Proposed `Coronation Avenue` trees
- Grass verge / central reservations
- Vehicle Restraint Sytem
- Woodland Creation Area
- Proposed individual trees
- Arable field margins
- Proposed Great Crested Newt Pond
- Existing running water
- Existing waterbodies
- Proposed amended earthwork contours

Rev.	Date	Description	By	Eng' Ch'k	Disc' Ch'k	App'd
1	05.01.2021	FIRST ISSUE	NB	AW	AW	KS

Suitability: For Information
Status: S1

Client: highways england

Project Title: A1 IN NORTHUMBERLAND: MORPETH TO FELTON

Drawing Title: FIGURE 1 - LANDSCAPE MITIGATION PLAN (ADDENDUM - AMENDED EARTHWORKS) SHEET 4 OF 19

Scale	Drawn	Eng. AWeck	Approved	Authorised
1:1250	FS	AW	KS	DM
Original Size: A1	Date: 05.01.2021	Date: 05.01.2021	Date: 05.01.2021	Date: 05.01.2021

Drawing Number: Project HE551459 | Originator WSP | Volume 6.2 | Section | Type | ID M2F | Direction | Type | Role | Number
Revision: P01
PW Stage Code

DO NOT SCALE

Millimetres 100 10 0

EFB /LE. 4.3
EFB /LE. 2.1
EFA/ LE.2.1
M2F-CH135-NB-EBD-4
EFH/ LE.6.1
EFD/ LE.1.3
EFB / LE.2.7
EFA/ LE.2.1
EFB/ LE.4.3
M2F-CH132-SB-WDL-1
EFB/ LE.4.3
EFA/ EFB/ LE.4.3
EFB/ EFD/ LE.1.3
EFE/ LE.5.1
EFA/ EFB/ LE.4.3
EFA/ LE.2.1
M2F-CH136-NB-EBD-5
Bund 4
DB4
Bund 5
DB5
DB6
EFD/ LE.2.6
M2F-CH136-NB-VLS-1
EFB/ LE.2.1
EFB/ LE.2.1
EFB/ LE.2.1
EFA/ EFB/ LE.2.7
M2F-CH134-SB-WDL-2
EFA/ EFB/ LE.4.3
EFB/ LE.2.1
M2F-CH136-SB-WDL-3
EFB/ LE.4.3
EFH/ LE.6.1

ENVIRONMENTAL FUNCTIONS:
(Source: DMRB Volume 10, Section 0, Parts 2 and 3)

EFA - Visual Screening
EFB - Landscape Integration
EFD - Nature Conservation & Biodiversity
EFE - Visual Amenity
EFG - Auditory Amenity
EFH - Water Quality

ENVIRONMENTAL ELEMENTS:
(Source: DMRB Volume 10, Section 0, Parts 2 and 3)

E 1.2 - Noise Barrier-Built Elements
E 1.3 - Noise-Reducing Earthworks
E 3.1 - Protected Species

LANDSCAPE ELEMENTS:
(Source: DMRB Volume 10, Section 0, Parts 2 and 3)

LE 1.1 - Amenity Grass Areas
LE 1.3 - Species RiAW (or Conservation) grassland
LE 2.1 - Woodland
LE 2.2 - Woodland Edge
LE 2.4 - Linear Belts of Shrubs and Trees
LE 2.5 - Shrubs with Intermittent Trees
LE 2.6 - Shrubs
LE 2.7 - Scattered Trees
LE 4.3 - Native Species Hedgerows
LE 4.4 - Native Hedgerows with Trees
LE 5.1 - Individual Trees
LE 6.1 - Water Bodies and Associated Plants
LE 6.2 - Banks and DitAWes
LE 6.3 - Reed Beds
LE 6.4 - Marsh and Wet Grassland

0m 20m 50m 100m 150m

N

© Crown Copyright and Database Rights 2021 Ordnance Survey 100030649

- Existing habitats to be retained
- Existing hedgerow to be retained
- Proposed woodland
- Woodland Creation Area
- Existing running water
- Proposed hedgerow - essential mitigation
- Proposed hedgerow - by agreement
- Proposed `Coronation Avenue` trees
- Proposed individual trees
- Existing waterbodies
- Proposed amenity grassland
- Proposed conservation grassland
- Grass verge / central reservations
- Arable field margins
- Proposed amended earthwork contours
- Swale/Marginal planting / wetland
- Proposed Permanent Highway Boundary
- Vehicle Restraint Sytem
- Proposed Great Crested Newt Pond
- Proposed Temporary Boundary
- Noise barrier
- Anti reflective fencing
- Essential mitigation - earth bund
- Proposed shrub - ecological mitigation

Rev.	Date	Description	By	Eng' CHk	Disc' CHk	App'd
1	05.01.2021	FIRST ISSUE	NB	AW	AW	KS

Suitability: For Information
Status: S1

Client: highways england

Project Title: A1 IN NORTHUMBERLAND: MORPETH TO FELTON

Drawing Title: FIGURE 1 - LANDSCAPE MITIGATION PLAN (ADDENDUM - AMENDED EARTHWORKS) SHEET 5 OF 19

Scale	Drawn	Eng. AWeck	Approved	Authorised
1:1250	FS	AW	KS	DM
Original Size	**Date**	**Date**	**Date**	**Date**
A1	05.01.2021	05.01.2021	05.01.2021	05.01.2021

Drawing Number: Project HE551459 | Originator WSP | Volume 6.2 | M2F | Section | Type | ID | Direction | Type | Role | Number
Revision: P01
PW Stage Code

DO NOT SCALE

Millimetres 100 0 10

Return land to Agriculture

EFB/ LE.2.1

M2F-CH141-NB-EBD-6

EFD/ LE.1.3

EFA/ EFB/ LE.4.4

EFA/ LE.2.1

EFB/ LE.2.7

EFB/ LE.2.1

EFA/ EFB/ LE.4.3

EFB/ LE.2.7

EFA/ EFB/ LE.4.3

FED/ LE.1.3

EFB/ LE.2.1

EFA/ EFB/ LE.4.3

EFD/ LE.1.3

EFH/ LE.6.1

Bund 5

Bund 6

DBC

13900

14000

14100

14200

14300

14400

14500

14600

14700

14800

ENVIRONMENTAL FUNCTIONS:
(Source: DMRB Volume 10, Section 0, Parts 2 and 3)

EFA - Visual Screening
EFB - Landscape Integration
EFD - Nature Conservation & Biodiversity
EFE - Visual Amenity
EFG - Auditory Amenity
EFH - Water Quality

ENVIRONMENTAL ELEMENTS:
(Source: DMRB Volume 10, Section 0, Parts 2 and 3)

E 1.2 - Noise Barrier-Built Elements
E 1.3 - Noise-Reducing Earthworks
E 3.1 - Protected Species

LANDSCAPE ELEMENTS:
(Source: DMRB Volume 10, Section 0, Parts 2 and 3)

LE 1.1 - Amenity Grass Areas
LE 1.3 - Species RiAW (or Conservation) grassland
LE 2.1 - Woodland
LE 2.2 - Woodland Edge
LE 2.4 - Linear Belts of Shrubs and Trees
LE 2.5 - Shrubs with Intermittent Trees
LE 2.6 - Shrubs
LE 2.7 - Scattered Trees
LE 4.3 - Native Species Hedgerows
LE 4.4 - Native Hedgerows with Trees
LE 5.1 - Individual Trees
LE 6.1 - Water Bodies and Associated Plants
LE 6.2 - Banks and DitAWes
LE 6.3 - Reed Beds
LE 6.4 - Marsh and Wet Grassland

0m 20m 50m 100m 150m

N

© Crown Copyright and Database Rights 2021 Ordnance Survey 100030649

- Existing habitats to be retained
- Proposed hedgerow - essential mitigation
- Proposed amenity grassland
- Swale/Marginal planting / wetland
- Proposed Temporary Boundary
- Anti reflective fencing
- Proposed shrub - ecological mitigation
- Existing hedgerow to be retained
- Proposed hedgerow - by agreement
- Proposed conservation grassland
- Proposed Permanent Highway Boundary
- Noise barrier
- Essential mitigation - earth bund
- Proposed woodland
- Proposed `Coronation Avenue` trees
- Grass verge / central reservations
- Vehicle Restraint Sytem
- Woodland Creation Area
- Proposed individual trees
- Arable field margins
- Proposed Great Crested Newt Pond
- Existing running water
- Existing waterbodies
- Proposed amended earthwork contours

Rev.	Date	Description	By	Eng' CH'k	Disc' CH'k	App'd
1	05.01.2021	FIRST ISSUE	NB	AW	AW	KS

Suitability: For Information
Status: S1

Client: highways england

Project Title: A1 IN NORTHUMBERLAND: MORPETH TO FELTON

Drawing Title: FIGURE 1 - LANDSCAPE MITIGATION PLAN (ADDENDUM - AMENDED EARTHWORKS) SHEET 6 OF 19

Scale	Drawn	Eng. AWeck	Approved	Authorised
1:1250	FS	AW	KS	DM
Original Size	**Date**	**Date**	**Date**	**Date**
A1	05.01.2021	05.01.2021	05.01.2021	05.01.2021

Drawing Number: Project HE551459 | Originator WSP | Volume 6.2 | M2F
Section | Type | ID | Direction | Type | Role | Number

Revision: P01
PW Stage Code

DO NOT SCALE

Millimetres 100 10 0

Return land to Agriculture
EFB/ LE.4.3
EFD/ LE.1.3
EFA/ EFB/ LE.4.4
M2F-CH151-NB-TPS-3
EFB / EFD/ LE.1.3
M2F-CH150-SB-EBD-9
M2F-CH150-SB-WDL-1
Return land to Agriculture
EFA/ LE.2.1
EFA / LE.2.1
Site Compound Area - Fenrother Junction
Return to Agriculture
M2F-CH150-SB-TPS-4
EFA/ EFB / LE.4.3
Topsoil Storage Location 3 - Fenrother West - 15000m³
Bund 8
Bund 9
Topsoil Storage Location 4 - Fenrother East - 12000m³
EFD/ LE.1.3
EFD/ LE.1.3
EFB/ LE.4.3
M2F-CH149-NB-EBD-8
EFD/ LE.1.3
EFH/ LE.6.1
DB7
EFH/ LE.6.1
EFD/ LE.1.3
EFB / LE.4.3
EFA/ EFD/ LE.2.1
EFA/ EFB/ LE.4.3
EFA/ EFB / LE.2.1
M2F-CH149-SB-VLS-3
EFA/ EFB/ LE.2.1
EFE/ LE.1.1
EFA/ LE.1.3
EFD/ LE.1.3
EFA/ EFB/ LE.4.3
Bund 7
M2F-CH150-SB-SBF-2
EFA / LE.4.3
EFA/ EFB/ LE.2.1
EFE/ LE.1.1
M2F-CH148-NB-EBD-7
EFB/ LE.4.4

15200 15100 15000 14900 14800 14700

ENVIRONMENTAL FUNCTIONS:
(Source: DMRB Volume 10, Section 0, Parts 2 and 3)

EFA - Visual Screening
EFB - Landscape Integration
EFD - Nature Conservation & Biodiversity
EFE - Visual Amenity
EFG - Auditory Amenity
EFH - Water Quality

ENVIRONMENTAL ELEMENTS:
(Source: DMRB Volume 10, Section 0, Parts 2 and 3)

E 1.2 - Noise Barrier-Built Elements
E 1.3 - Noise-Reducing Earthworks
E 3.1 - Protected Species

LANDSCAPE ELEMENTS:
(Source: DMRB Volume 10, Section 0, Parts 2 and 3)

LE 1.1 - Amenity Grass Areas
LE 1.3 - Species RiAW (or Conservation) grassland
LE 2.1 - Woodland
LE 2.2 - Woodland Edge
LE 2.4 - Linear Belts of Shrubs and Trees
LE 2.5 - Shrubs with Intermittent Trees
LE 2.6 - Shrubs
LE 2.7 - Scattered Trees
LE 4.3 - Native Species Hedgerows
LE 4.4 - Native Hedgerows with Trees
LE 5.1 - Individual Trees
LE 6.1 - Water Bodies and Associated Plants
LE 6.2 - Banks and DitAWes
LE 6.3 - Reed Beds
LE 6.4 - Marsh and Wet Grassland

0m 20m 50m 100m 150m

N

© Crown Copyright and Database Rights 2021 Ordnance Survey 100030649

- Existing habitats to be retained
- Proposed hedgerow - essential mitigation
- Proposed amenity grassland
- Swale/Marginal planting / wetland
- Proposed Temporary Boundary
- Anti reflective fencing
- Proposed shrub - ecological mitigation
- Existing hedgerow to be retained
- Proposed hedgerow - by agreement
- Proposed conservation grassland
- Proposed Permanent Highway Boundary
- Noise barrier
- Essential mitigation - earth bund
- Proposed woodland
- Proposed `Coronation Avenue` trees
- Grass verge / central reservations
- Vehicle Restraint Sytem
- Woodland Creation Area
- Proposed individual trees
- Arable field margins
- Proposed Great Crested Newt Pond
- Existing running water
- Existing waterbodies
- Proposed amended earthwork contours

Rev.	Date	Description	By	Eng' CH'k	Disc' CH'k	App'd
1	05.01.2021	FIRST ISSUE	NB	AW	AW	KS

Suitability: For Information
Status: S1

Client: highways england

Project Title: A1 IN NORTHUMBERLAND: MORPETH TO FELTON

Drawing Title: FIGURE 1 - LANDSCAPE MITIGATION PLAN (ADDENDUM - AMENDED EARTHWORKS) SHEET 7 OF 19

Scale	Drawn	Eng. AWeck	Approved	Authorised
1:1250	FS	AW	KS	DM
Original Size: A1	Date: 05.01.2021	Date: 05.01.2021	Date: 05.01.2021	Date: 05.01.2021

Drawing Number
Project: HE551459
Originator: WSP
Volume: 6.2
Section | Type | ID | Direction | Type | Role | Number: M2F
Revision: P01
PW Stage Code

DO NOT SCALE

Millimetres 100 0 10

Topsoil Storage Location 3 - Fenrother West - 15000m³

EFB/ LE.4.3

Return to Agriculture

EFA/ LE.4.3

Return to Agriculture

EFD/ LE.1.3

EFG

EFD/ LE.1.3

EFD/ LE.1.3

EFA/ LE.4.4

EFB/EFD/ LE.4.4

Site Compound Area - Fenrother Junction

Topsoil Storage Location 4 - Fenrother East - 12000m³

Topsoil Stora Location 5 - Earsdon Moo Farm - 15000

EFG/ E 1.3

EFA/EFD/LE 2.1

EFD/E3.1 Barn Owl Mitigation

ENVIRONMENTAL FUNCTIONS:
(Source: DMRB Volume 10, Section 0, Parts 2 and 3)

EFA - Visual Screening
EFB - Landscape Integration
EFD - Nature Conservation & Biodiversity
EFE - Visual Amenity
EFG - Auditory Amenity
EFH - Water Quality

ENVIRONMENTAL ELEMENTS:
(Source: DMRB Volume 10, Section 0, Parts 2 and 3)

E 1.2 - Noise Barrier-Built Elements
E 1.3 - Noise-Reducing Earthworks
E 3.1 - Protected Species

LANDSCAPE ELEMENTS:
(Source: DMRB Volume 10, Section 0, Parts 2 and 3)

LE 1.1 - Amenity Grass Areas
LE 1.3 - Species RiAW (or Conservation) grassland
LE 2.1 - Woodland
LE 2.2 - Woodland Edge
LE 2.4 - Linear Belts of Shrubs and Trees
LE 2.5 - Shrubs with Intermittent Trees
LE 2.6 - Shrubs
LE 2.7 - Scattered Trees
LE 4.3 - Native Species Hedgerows
LE 4.4 - Native Hedgerows with Trees
LE 5.1 - Individual Trees
LE 6.1 - Water Bodies and Associated Plants
LE 6.2 - Banks and DitAWes
LE 6.3 - Reed Beds
LE 6.4 - Marsh and Wet Grassland

0m 20m 50m 100m 150m

N

© Crown Copyright and Database Rights 2021 Ordnance Survey 100030649

- Existing habitats to be retained
- Existing hedgerow to be retained
- Proposed woodland
- Woodland Creation Area
- Existing running water
- Proposed hedgerow - essential mitigation
- Proposed hedgerow - by agreement
- Proposed `Coronation Avenue` trees
- Proposed individual trees
- Existing waterbodies
- Proposed amenity grassland
- Proposed conservation grassland
- Grass verge / central reservations
- Arable field margins
- Proposed amended earthwork contours
- Swale/Marginal planting / wetland
- Proposed Permanent Highway Boundary
- Vehicle Restraint Sytem
- Proposed Great Crested Newt Pond
- Proposed Temporary Boundary
- Noise barrier
- Anti reflective fencing
- Essential mitigation - earth bund
- Proposed shrub - ecological mitigation

Rev.	Date	Description	By	Eng' Chk	Disc' Chk	App'd
1	05.01.2021	FIRST ISSUE	NB	AW	AW	KS

Suitability: For Information
Status: S1

Client: highways england

Project Title: A1 IN NORTHUMBERLAND: MORPETH TO FELTON

Drawing Title: FIGURE 1 - LANDSCAPE MITIGATION PLAN (ADDENDUM - AMENDED EARTHWORKS) SHEET 8 OF 19

Scale	Drawn	Eng. AWeck	Approved	Authorised
1:1250	FS	AW	KS	DM
Original Size	**Date**	**Date**	**Date**	**Date**
A1	05.01.2021	05.01.2021	05.01.2021	05.01.2021

Drawing Number: Project HE551459 | Originator WSP | Volume 6.2 | Section | Type | ID | Direction M2F | Type | Role | Number
Revision: P01
PW Stage Code

DO NOT SCALE

Millimetres 100 10 0

ENVIRONMENTAL FUNCTIONS:
(Source: DMRB Volume 10, Section 0, Parts 2 and 3)

EFA - Visual Screening
EFB - Landscape Integration
EFD - Nature Conservation & Biodiversity
EFE - Visual Amenity
EFG - Auditory Amenity
EFH - Water Quality

ENVIRONMENTAL ELEMENTS:
(Source: DMRB Volume 10, Section 0, Parts 2 and 3)

E 1.2 - Noise Barrier-Built Elements
E 1.3 - Noise-Reducing Earthworks
E 3.1 - Protected Species

LANDSCAPE ELEMENTS:
(Source: DMRB Volume 10, Section 0, Parts 2 and 3)

LE 1.1 - Amenity Grass Areas
LE 1.3 - Species RiAW (or Conservation) grassland
LE 2.1 - Woodland
LE 2.2 - Woodland Edge
LE 2.4 - Linear Belts of Shrubs and Trees
LE 2.5 - Shrubs with Intermittent Trees
LE 2.6 - Shrubs
LE 2.7 - Scattered Trees
LE 4.3 - Native Species Hedgerows
LE 4.4 - Native Hedgerows with Trees
LE 5.1 - Individual Trees
LE 6.1 - Water Bodies and Associated Plants
LE 6.2 - Banks and DitAWes
LE 6.3 - Reed Beds
LE 6.4 - Marsh and Wet Grassland

0m 20m 50m 100m 150m

EFB/ 4.3
EFD/ LE 2.1 & E 3.1 Barn Owl Mitigation
M2F-CH160-NB-EBD-13
EFG
EFA / EFD / LE 2.1
EFD/LE.1.3
EFB/ LE 4.3
EFB / LE. 4.3
M2F-CH167-NB-EBD-12
EFA/EFD/2.1
EFD/LE 1.3
EFD/E.3.1 Barn Owl Mitigation
DB9
Bund 12
Bund 13
Bund 11
Bund 10
Topsoil Storage Location 5 - Earsdon Moor Farm - 15000m^3
EFA/EFB LE 4.3
EFD/ LE 1.3
EFD/ LE 1.3
M2F-CH169-SB-EBD-10
M2F-CH166-SB-EBD-11
EFD/E.3.1 - Barn Owl Mitigation
EFG/ E 1.3
EFA/EFD/ LE 2.1 & E 3.1 Barn Owl Mitigation
EFA/EFD/LE 2.1

© Crown Copyright and Database Rights 2021 Ordnance Survey 100030649

Existing habitats to be retained
Existing hedgerow to be retained
Proposed woodland
Woodland Creation Area
Existing running water
Proposed hedgerow - essential mitigation
Proposed hedgerow - by agreement
Proposed `Coronation Avenue` trees
Proposed individual trees
Existing waterbodies
Proposed amenity grassland
Proposed conservation grassland
Grass verge / central reservations
Arable field margins
Proposed amended earthwork contours
Swale/Marginal planting / wetland
Proposed Permanent Highway Boundary
Vehicle Restraint Sytem
Proposed Great Crested Newt Pond
Proposed Temporary Boundary
Noise barrier
Anti reflective fencing
Essential mitigation - earth bund
Proposed shrub - ecological mitigation

Rev.	Date	Description	By	Eng' CH'k	Disc' CH'k	App'd
1	05.01.2021	FIRST ISSUE	NB	AW	AW	KS

Suitability: For Information
Status: S1

Client: highways england

Project Title: A1 IN NORTHUMBERLAND: MORPETH TO FELTON

Drawing Title: FIGURE 1 - LANDSCAPE MITIGATION PLAN (ADDENDUM - AMENDED EARTHWORKS) SHEET 9 OF 19

Scale	Drawn	Eng. AWeck	Approved	Authorised
1:1250	FS	AW	KS	DM
Original Size	**Date**	**Date**	**Date**	**Date**
A1	05.01.2021	05.01.2021	05.01.2021	05.01.2021

Drawing Number: Project HE551459 | Originator WSP | Volume 6.2 | Revision P01
Section | Type | ID | Direction M2F | Type | Role | Number | PW Stage Code

DO NOT SCALE

Millimetres 100 10 0

ENVIRONMENTAL FUNCTIONS:
(Source: DMRB Volume 10, Section 0, Parts 2 and 3)

EFA - Visual Screening
EFB - Landscape Integration
EFD - Nature Conservation & Biodiversity
EFE - Visual Amenity
EFG - Auditory Amenity
EFH - Water Quality

ENVIRONMENTAL ELEMENTS:
(Source: DMRB Volume 10, Section 0, Parts 2 and 3)

E 1.2 - Noise Barrier-Built Elements
E 1.3 - Noise-Reducing Earthworks
E 3.1 - Protected Species

LANDSCAPE ELEMENTS:
(Source: DMRB Volume 10, Section 0, Parts 2 and 3)

LE 1.1 - Amenity Grass Areas
LE 1.3 - Species RiAW (or Conservation) grassland
LE 2.1 - Woodland
LE 2.2 - Woodland Edge
LE 2.4 - Linear Belts of Shrubs and Trees
LE 2.5 - Shrubs with Intermittent Trees
LE 2.6 - Shrubs
LE 2.7 - Scattered Trees
LE 4.3 - Native Species Hedgerows
LE 4.4 - Native Hedgerows with Trees
LE 5.1 - Individual Trees
LE 6.1 - Water Bodies and Associated Plants
LE 6.2 - Banks and DitAWes
LE 6.3 - Reed Beds
LE 6.4 - Marsh and Wet Grassland

0m 20m 50m 100m 150m

N

M2F-CH167-NB-EBD-12
EFD/E.3.1
Barn Owl Mitigation
EFH/LE.6.1
EFB/LE 2.7
EFA/EFD/2.1
M2F-CH171-NB-NGA-1
Land returned to agriculture
M2F-CH170-NB-NGA-2
EFB/LE 4.3
EFA/LE 2.1
EFD/ LE 1.3
EFA/ EFB/ LE 4.4
EFG
EFA/EFB/LE 4.4
DB9
Bund 12
95
96
16700
16800
16900
17000
17100
17200
17300
17400
17500
17600
EFA/EFB/LE 4.4
EFD/LE 1.3
EFB/LE 2.7
Land returned to agriculture
DB11
EFB/LE 2.7
EFD/LE 1.3
M2F-CH174-SB-NGA-3
Land returned to agriculture
M2F-CH172-SB-NGA-4
Bund 11
EFA/ EFB/ LE 4.3
LEA/ EFB/ LE 4.4
EFB/LE 4.3
EFD/ LE 1.3
EFD/E.3.1 -
Barn Owl Mitigation
EFH/ LE 6.1
EFD/ LE 1.3
M2F-CH166-SB-EBD-11

© Crown Copyright and Database Rights 2021 Ordnance Survey 100030649

Existing habitats to be retained
Existing hedgerow to be retained
Proposed woodland
Woodland Creation Area
Existing running water
Proposed hedgerow - essential mitigation
Proposed hedgerow - by agreement
Proposed `Coronation Avenue` trees
Proposed individual trees
Existing waterbodies
Proposed amenity grassland
Proposed conservation grassland
Grass verge / central reservations
Arable field margins
Proposed amended earthwork contours
Swale/Marginal planting / wetland
Proposed Permanent Highway Boundary
Vehicle Restraint Sytem
Proposed Great Crested Newt Pond
Proposed Temporary Boundary
Noise barrier
Anti reflective fencing
Essential mitigation - earth bund
Proposed shrub - ecological mitigation

Rev.	Date	Description	By	Eng' CH'k	Disc' CH'k	App'd
1	05.01.2021	FIRST ISSUE	NB	AW	AW	KS

Suitability: For Information
Status: S1

Client: highways england

Project Title: A1 IN NORTHUMBERLAND: MORPETH TO FELTON

Drawing Title: FIGURE 1 - LANDSCAPE MITIGATION PLAN (ADDENDUM - AMENDED EARTHWORKS) SHEET 10 OF 19

Scale	Drawn	Eng. AWeck	Approved	Authorised
1:1250	FS	AW	KS	DM
Original Size	Date	Date	Date	Date
A1	05.01.2021	05.01.2021	05.01.2021	05.01.2021

Drawing Number: Project HE551459 | Originator WSP | Volume 6.2 | Revision P01
Section | Type | ID | Direction M2F | Type | Role | Number | PW Stage Code

DO NOT SCALE

Millimetres 0 10 100

M2F-CH176-NB-SEB-1
EFD/LE 1.3
M2F-CH176-NB-SEB-2
EFD/LE 1.3
EFA/LE 2.1
EFB/LE 4.3
EFB/LE 4.3
M2F-CH178-NB-TPS-6
EFH/LE 6.1
EFA/LE 2.1
Topsoil Storage Location 6 - Causey Park West - 15000m³
EFA/EFB / LE 4.3
EFD/LE 1.3
EFD/LE 1.3
EFD/LE 1.3
EFD/LE.2.6
D812
1750
1760
1770
1780
1790
1800
1810
1820
1830
1840
EFB/LE 2.7
EFD/LE 1.3
EFA/LE 2.1
M2F-CH176-SB-SEB-1
EFB/LE 4.3
EFA/LE 2.1
EFD/LE 1.3
EFB/LE 4.3
EFD/LE 1.3
M2F-CH176-SB-SEB-1
EFD/LE 1.3
EFA/EFB/LE 4.3
EFD/LE 1.3
EFD/LE 2.6
Topsoil Storage Location 7 - Causey Park East - 12000m³
M2F-CH176-SB-TPS-7

ENVIRONMENTAL FUNCTIONS:
(Source: DMRB Volume 10, Section 0, Parts 2 and 3)
EFA - Visual Screening
EFB - Landscape Integration
EFD - Nature Conservation & Biodiversity
EFE - Visual Amenity
EFG - Auditory Amenity
EFH - Water Quality

ENVIRONMENTAL ELEMENTS:
(Source: DMRB Volume 10, Section 0, Parts 2 and 3)
E 1.2 - Noise Barrier-Built Elements
E 1.3 - Noise-Reducing Earthworks
E 3.1 - Protected Species

LANDSCAPE ELEMENTS:
(Source: DMRB Volume 10, Section 0, Parts 2 and 3)
LE 1.1 - Amenity Grass Areas
LE 1.3 - Species RiAW (or Conservation) grassland
LE 2.1 - Woodland
LE 2.2 - Woodland Edge
LE 2.4 - Linear Belts of Shrubs and Trees
LE 2.5 - Shrubs with Intermittent Trees
LE 2.6 - Shrubs
LE 2.7 - Scattered Trees
LE 4.3 - Native Species Hedgerows
LE 4.4 - Native Hedgerows with Trees
LE 5.1 - Individual Trees
LE 6.1 - Water Bodies and Associated Plants
LE 6.2 - Banks and DitAWes
LE 6.3 - Reed Beds
LE 6.4 - Marsh and Wet Grassland

0m 20m 50m 100m 150m

N

© Crown Copyright and Database Rights 2021 Ordnance Survey 100030649

- Existing habitats to be retained
- Existing hedgerow to be retained
- Proposed woodland
- Woodland Creation Area
- Existing running water
- Proposed hedgerow - essential mitigation
- Proposed hedgerow - by agreement
- Proposed `Coronation Avenue` trees
- Proposed individual trees
- Existing waterbodies
- Proposed amenity grassland
- Proposed conservation grassland
- Grass verge / central reservations
- Arable field margins
- Proposed amended earthwork contours
- Swale/Marginal planting / wetland
- Proposed Permanent Highway Boundary
- Vehicle Restraint Sytem
- Proposed Great Crested Newt Pond
- Proposed Temporary Boundary
- Noise barrier
- Anti reflective fencing
- Essential mitigation - earth bund
- Proposed shrub - ecological mitigation

Rev.	Date	Description	By	Eng' CH'k	Disc' CH'k	App'd
1	05.01.2021	FIRST ISSUE	NB	AW	AW	KS

Suitability: For Information
Status: S1

Client: highways england

Project Title: A1 IN NORTHUMBERLAND: MORPETH TO FELTON

Drawing Title: FIGURE 1 - LANDSCAPE MITIGATION PLAN (ADDENDUM - AMENDED EARTHWORKS) SHEET 11 OF 19

Scale	Drawn	Eng. AWeck	Approved	Authorised
1:1250	FS	AW	KS	DM
Original Size	**Date**	**Date**	**Date**	**Date**
A1	05.01.2021	05.01.2021	05.01.2021	05.01.2021

Drawing Number: Project HE551459 | Originator WSP | Volume 6.2 | Section M2F | Type | ID | Direction | Type | Role | Number
Revision: P01
PW Stage Code

DO NOT SCALE

Millimetres 100 10 0

EFH/LE 6.1

EFD/LE.2.6

Return land to Agriculture

EFD/LE 1.3

EFA/EFB / LE 4.3

EFD/LE 1.3

EFD/LE 1.3

EFH/LE 6.2

EFD/LE 2.6

EFD/LE 2.6

Return land to Agriculture

EFD/LE 1.3

EFA/EFB/LE 4.3

EFD/LE 1.3

D42

18300 18400 18500 18600 18700 18800 18900 19000 19100 1920

ENVIRONMENTAL FUNCTIONS:
(Source: DMRB Volume 10, Section 0, Parts 2 and 3)

EFA - Visual Screening
EFB - Landscape Integration
EFD - Nature Conservation & Biodiversity
EFE - Visual Amenity
EFG - Auditory Amenity
EFH - Water Quality

ENVIRONMENTAL ELEMENTS:
(Source: DMRB Volume 10, Section 0, Parts 2 and 3)

E 1.2 - Noise Barrier-Built Elements
E 1.3 - Noise-Reducing Earthworks
E 3.1 - Protected Species

LANDSCAPE ELEMENTS:
(Source: DMRB Volume 10, Section 0, Parts 2 and 3)

LE 1.1 - Amenity Grass Areas
LE 1.3 - Species RiAW (or Conservation) grassland
LE 2.1 - Woodland
LE 2.2 - Woodland Edge
LE 2.4 - Linear Belts of Shrubs and Trees
LE 2.5 - Shrubs with Intermittent Trees
LE 2.6 - Shrubs
LE 2.7 - Scattered Trees
LE 4.3 - Native Species Hedgerows
LE 4.4 - Native Hedgerows with Trees
LE 5.1 - Individual Trees
LE 6.1 - Water Bodies and Associated Plants
LE 6.2 - Banks and DitAWes
LE 6.3 - Reed Beds
LE 6.4 - Marsh and Wet Grassland

0m 20m 50m 100m 150m

N

© Crown Copyright and Database Rights 2021 Ordnance Survey 100030649

- Existing habitats to be retained
- Existing hedgerow to be retained
- Proposed woodland
- Woodland Creation Area
- Existing running water
- Proposed hedgerow - essential mitigation
- Proposed hedgerow - by agreement
- Proposed `Coronation Avenue` trees
- Proposed individual trees
- Existing waterbodies
- Proposed amenity grassland
- Proposed conservation grassland
- Grass verge / central reservations
- Arable field margins
- Proposed amended earthwork contours
- Swale/Marginal planting / wetland
- Proposed Permanent Highway Boundary
- Vehicle Restraint Sytem
- Proposed Great Crested Newt Pond
- Proposed Temporary Boundary
- Noise barrier
- Anti reflective fencing
- Essential mitigation - earth bund
- Proposed shrub - ecological mitigation

Rev.	Date	Description	By	Eng' CH'k	Disc' CH'k	App'd
1	05.01.2021	FIRST ISSUE	NB	AW	AW	KS

Suitability: For Information
Status: S1

Client: highways england

Project Title: A1 IN NORTHUMBERLAND: MORPETH TO FELTON

Drawing Title: FIGURE 1 - LANDSCAPE MITIGATION PLAN (ADDENDUM - AMENDED EARTHWORKS) SHEET 12 OF 19

Scale	Drawn	Eng. AWeck	Approved	Authorised
1:1250	FS	AW	KS	DM
Original Size	**Date**	**Date**	**Date**	**Date**
A1	05.01.2021	05.01.2021	05.01.2021	05.01.2021

Drawing Number: Project HE551459 | Originator WSP | Volume 6.2 | Section | Type | ID M2F | Direction | Type | Role | Number

Revision: P01

PW Stage Code

DO NOT SCALE

Millimetres 0 10 100

EFD/E 3.1 - Great Crested Newt Habitat Creation (to include ponds)

EFB / EFD / LE 2.1

EFD/E 3.1 - Great Crested Newt - Habitat Creation (to include ponds)

EFB/EFD / LE 2.1 & E 3.1

EFA / LE 2.1

EFB/EFD/LE 2.1 & E 3.1

EFD / LE 1.3

EFB / LE 4.3

EFA / LE 2.1

EFB/LE 4.3

EFB/LE 4.3

EFB/ LE 2.1

EFA/ EFB/ LE 4.3

EFD/LE 1.3

M2F-CH192-NB-SEB-1

EFD/ LE 2.6

EFD/LE 1.3

EFA/ LE 2.1

EFA/LE 2.1

M2F-CH195-NB-SEB-3

M2F-CH196-SB-SEB-3

Anti reflective fencing

EFG

EFA/EFB/LE 4.3

EFA/LE 2.1

EFA/LE 2.1

EFD/LE 2.6

EFE/LE 1.3

Topsoil Storage Location 8 - Burgham Park - 15000m^3

M2F-CH192-SB-TPS-8

EFD/LE 2.6

EFB/LE 4.3

EFB/LE 4.3

M2F-CH192-SB-SEB-2

EFH/ LE 6.1

EFA/LE 2.1

EFA/LE 2.1

ENVIRONMENTAL FUNCTIONS:
(Source: DMRB Volume 10, Section 0, Parts 2 and 3)

EFA - Visual Screening
EFB - Landscape Integration
EFD - Nature Conservation & Biodiversity
EFE - Visual Amenity
EFG - Auditory Amenity
EFH - Water Quality

ENVIRONMENTAL ELEMENTS:
(Source: DMRB Volume 10, Section 0, Parts 2 and 3)

E 1.2 - Noise Barrier-Built Elements
E 1.3 - Noise-Reducing Earthworks
E 3.1 - Protected Species

LANDSCAPE ELEMENTS:
(Source: DMRB Volume 10, Section 0, Parts 2 and 3)

LE 1.1 - Amenity Grass Areas
LE 1.3 - Species RiAW (or Conservation) grassland
LE 2.1 - Woodland
LE 2.2 - Woodland Edge
LE 2.4 - Linear Belts of Shrubs and Trees
LE 2.5 - Shrubs with Intermittent Trees
LE 2.6 - Shrubs
LE 2.7 - Scattered Trees
LE 4.3 - Native Species Hedgerows
LE 4.4 - Native Hedgerows with Trees
LE 5.1 - Individual Trees
LE 6.1 - Water Bodies and Associated Plants
LE 6.2 - Banks and DitAWes
LE 6.3 - Reed Beds
LE 6.4 - Marsh and Wet Grassland

0m 20m 50m 100m 150m

© Crown Copyright and Database Rights 2021 Ordnance Survey 100030649

- Existing habitats to be retained
- Existing hedgerow to be retained
- Proposed woodland
- Woodland Creation Area
- Existing running water
- Proposed hedgerow - essential mitigation
- Proposed hedgerow - by agreement
- Proposed `Coronation Avenue` trees
- Proposed individual trees
- Existing waterbodies
- Proposed amenity grassland
- Proposed conservation grassland
- Grass verge / central reservations
- Arable field margins
- Proposed amended earthwork contours
- Swale/Marginal planting / wetland
- Proposed Permanent Highway Boundary
- Vehicle Restraint Sytem
- Proposed Great Crested Newt Pond
- Proposed Temporary Boundary
- Noise barrier
- Anti reflective fencing
- Essential mitigation - earth bund
- Proposed shrub - ecological mitigation

Rev.	Date	Description	By	Eng' Chk	Disc' Chk	App'd
1	05.01.2021	FIRST ISSUE	NB	AW	AW	KS

Suitability: For Information
Status: S1

Client: highways england

Project Title: A1 IN NORTHUMBERLAND: MORPETH TO FELTON

Drawing Title: FIGURE 1 - LANDSCAPE MITIGATION PLAN (ADDENDUM - AMENDED EARTHWORKS) SHEET 13 OF 19

Scale	Drawn	Eng. AWeck	Approved	Authorised
1:1250	FS	AW	KS	DM
Original Size	**Date**	**Date**	**Date**	**Date**
A1	05.01.2021	05.01.2021	05.01.2021	05.01.2021

Drawing Number: Project HE551459 | Originator WSP | Volume 6.2 | M2F | Section | Type | ID | Direction | Type | Role | Number
Revision: P01
PW Stage Code

DO NOT SCALE

Millimetres 0 10 100

EFA / LE 4.4

EFD / LE 1.3

EFB / LE 4.3

EFB / LE 4.3

EFA / LE 2.1

EFD / LE 1.3

Topsoil Storage Location 9 - Bywell Road - 6000m^3

EFB / EFD / LE 1.3

Return land to Agriculture

EFA/ EFB / LE 4.3

EFG

DB15

DB15a

EFD / LE.1.3

EFH / LE.6.1

Anti reflective fencing

EFB/ LE 4.3

EFD/ LE 1.3

ENVIRONMENTAL FUNCTIONS:
(Source: DMRB Volume 10, Section 0, Parts 2 and 3)

EFA - Visual Screening
EFB - Landscape Integration
EFD - Nature Conservation & Biodiversity
EFE - Visual Amenity
EFG - Auditory Amenity
EFH - Water Quality

ENVIRONMENTAL ELEMENTS:
(Source: DMRB Volume 10, Section 0, Parts 2 and 3)

E 1.2 - Noise Barrier-Built Elements
E 1.3 - Noise-Reducing Earthworks
E 3.1 - Protected Species

LANDSCAPE ELEMENTS:
(Source: DMRB Volume 10, Section 0, Parts 2 and 3)

LE 1.1 - Amenity Grass Areas
LE 1.3 - Species RiAW (or Conservation) grassland
LE 2.1 - Woodland
LE 2.2 - Woodland Edge
LE 2.4 - Linear Belts of Shrubs and Trees
LE 2.5 - Shrubs with Intermittent Trees
LE 2.6 - Shrubs
LE 2.7 - Scattered Trees
LE 4.3 - Native Species Hedgerows
LE 4.4 - Native Hedgerows with Trees
LE 5.1 - Individual Trees
LE 6.1 - Water Bodies and Associated Plants
LE 6.2 - Banks and DitAWes
LE 6.3 - Reed Beds
LE 6.4 - Marsh and Wet Grassland

0m 20m 50m 100m 150m

N

© Crown Copyright and Database Rights 2021 Ordnance Survey 100030649

- Existing habitats to be retained
- Proposed hedgerow - essential mitigation
- Proposed amenity grassland
- Swale/Marginal planting / wetland
- Proposed Temporary Boundary
- Anti reflective fencing
- Proposed shrub - ecological mitigation
- Existing hedgerow to be retained
- Proposed hedgerow - by agreement
- Proposed conservation grassland
- Proposed Permanent Highway Boundary
- Noise barrier
- Essential mitigation - earth bund
- Proposed woodland
- Proposed `Coronation Avenue` trees
- Grass verge / central reservations
- Vehicle Restraint Sytem
- Woodland Creation Area
- Proposed individual trees
- Arable field margins
- Proposed Great Crested Newt Pond
- Existing running water
- Existing waterbodies
- Proposed amended earthwork contours

Rev.	Date	Description	By	Eng' CH'k	Disc' CH'k	App'd
1	05.01.2021	FIRST ISSUE	NB	AW	AW	KS

Suitability: For Information
Status: S1

Client: highways england

Project Title: A1 IN NORTHUMBERLAND: MORPETH TO FELTON

Drawing Title: FIGURE 1 - LANDSCAPE MITIGATION PLAN (ADDENDUM - AMENDED EARTHWORKS) SHEET 14 OF 19

Scale	Drawn	Eng. AWeck	Approved	Authorised
1:1250	FS	AW	KS	DM
Original Size	**Date**	**Date**	**Date**	**Date**
A1	05.01.2021	05.01.2021	05.01.2021	05.01.2021

Drawing Number / Project: HE551459
Originator: WSP
Volume: 6.2
Section / Type / ID: M2F
Direction / Type / Role / Number:
Revision: P01
PW Stage Code:

DO NOT SCALE

Millimetres 100 0 10

EFH / LE 6.4

M2F-CH215-NB-TPS-13

M2F-CH125-NB-TPS-15

EFB/ EFD/ LE 1.3

EFB/ EFD/ LE 5.1

EFB / LE 4.3

EFB / LE 1.1

Return to Agriculture

M2F-CH216-NB-SBF-1

EFD/LE 1.3

EFA/LE 2.1

Topsoil Storage Location 10 - West Moor Junction West - 8000m^3

M2F-CH215-NB-SEB-4

EFB/ LE 2.1

EFA / LE 4.4

Anti reflective fencing

EFB/EFD/ LE 1.3

EFA / LE 4.4

EFB / EFD / LE 1.3

2900 2000 2100 2200 2300 2400 2500 2600 2700

DB17a

Bund 14

DB17b

M2F-CH213-SB-EBD-14

M2F-CH215-NB-SEB-1

EFA / LE 4.4

Anti reflective fencing

EFD/ LE 1.3

EFH / LE 6.4

EFB/LE 1.1

M2F-CH216-SB-SBF-1

Return to Agriculture

EFA / LE 2.1

M2F-CH216-SB-SEB-1

EFB / LE 1.3

EFB / EFD/ LE 4.3

EFB / EFD/ LE 1.3

M2F-CH217-SB-TPS-11

ENVIRONMENTAL FUNCTIONS:
(Source: DMRB Volume 10, Section 0, Parts 2 and 3)

EFA - Visual Screening
EFB - Landscape Integration
EFD - Nature Conservation & Biodiversity
EFE - Visual Amenity
EFG - Auditory Amenity
EFH - Water Quality

ENVIRONMENTAL ELEMENTS:
(Source: DMRB Volume 10, Section 0, Parts 2 and 3)

E 1.2 - Noise Barrier-Built Elements
E 1.3 - Noise-Reducing Earthworks
E 3.1 - Protected Species

LANDSCAPE ELEMENTS:
(Source: DMRB Volume 10, Section 0, Parts 2 and 3)

LE 1.1 - Amenity Grass Areas
LE 1.3 - Species RiAW (or Conservation) grassland
LE 2.1 - Woodland
LE 2.2 - Woodland Edge
LE 2.4 - Linear Belts of Shrubs and Trees
LE 2.5 - Shrubs with Intermittent Trees
LE 2.6 - Shrubs
LE 2.7 - Scattered Trees
LE 4.3 - Native Species Hedgerows
LE 4.4 - Native Hedgerows with Trees
LE 5.1 - Individual Trees
LE 6.1 - Water Bodies and Associated Plants
LE 6.2 - Banks and DitAWes
LE 6.3 - Reed Beds
LE 6.4 - Marsh and Wet Grassland

0m 20m 50m 100m 150m

N

© Crown Copyright and Database Rights 2021 Ordnance Survey 100030649

- Existing habitats to be retained
- Existing hedgerow to be retained
- Proposed woodland
- Woodland Creation Area
- Existing running water
- Proposed hedgerow - essential mitigation
- Proposed hedgerow - by agreement
- Proposed `Coronation Avenue` trees
- Proposed individual trees
- Existing waterbodies
- Proposed amenity grassland
- Proposed conservation grassland
- Grass verge / central reservations
- Arable field margins
- Proposed amended earthwork contours
- Swale/Marginal planting / wetland
- Proposed Permanent Highway Boundary
- Vehicle Restraint Sytem
- Proposed Great Crested Newt Pond
- Proposed Temporary Boundary
- Noise barrier
- Anti reflective fencing
- Essential mitigation - earth bund
- Proposed shrub - ecological mitigation

Rev.	Date	Description	By	Eng' Chk	Disc' Chk	App'd
1	05.01.2021	FIRST ISSUE	NB	AW	AW	KS

Suitability: For Information
Status: S1

Client: highways england

Project Title: A1 IN NORTHUMBERLAND: MORPETH TO FELTON

Drawing Title: FIGURE 1 - LANDSCAPE MITIGATION PLAN (ADDENDUM - AMENDED EARTHWORKS) SHEET 15 OF 19

Scale	Drawn	Eng. AWeck	Approved	Authorised
1:1250	FS	AW	KS	DM
Original Size	**Date**	**Date**	**Date**	**Date**
A1	05.01.2021	05.01.2021	05.01.2021	05.01.2021

Drawing Number
Project: HE551459 | Originator: WSP | Volume: 6.2
Section | Type | ID | Direction: M2F | Type | Role | Number

Revision: P01
PW Stage Code

Millimetres 100 0 10

DO NOT SCALE

EFD/ LE 2.1 - Woodland Creation Area

EFB/ LE 4.3

Extent of EFD/ LE 2.1 - Woodland Creation Area
Scale 1:5000

EFD/ LE 2.1 - Woodland Creation Area

Return land to Agriculture

21800 21900 22000 22100 22200 22300 22400 22500 22600 22700

DB17

DB18

EFB / EFD / LE 4.3
EFB / EFA / LE 1.3
EFH / LE 1.3

Topsoil Storage Location 11 - West Moor Junction East - 15000m^3

EFB/ LE 4.3

M2F-CH217-SB-TPS-11

EFB / LE 4.3

EFD / LE 1.3

EFB / LE 2.1

EFH / LE 6.4

EFD / LE 1.3

Main Site Compound Area - West Moor Junction

ENVIRONMENTAL FUNCTIONS:
(Source: DMRB Volume 10, Section 0, Parts 2 and 3)

EFA - Visual Screening
EFB - Landscape Integration
EFD - Nature Conservation & Biodiversity
EFE - Visual Amenity
EFG - Auditory Amenity
EFH - Water Quality

ENVIRONMENTAL ELEMENTS:
(Source: DMRB Volume 10, Section 0, Parts 2 and 3)

E 1.2 - Noise Barrier-Built Elements
E 1.3 - Noise-Reducing Earthworks
E 3.1 - Protected Species

LANDSCAPE ELEMENTS:
(Source: DMRB Volume 10, Section 0, Parts 2 and 3)

LE 1.1 - Amenity Grass Areas
LE 1.3 - Species RiAW (or Conservation) grassland
LE 2.1 - Woodland
LE 2.2 - Woodland Edge
LE 2.4 - Linear Belts of Shrubs and Trees
LE 2.5 - Shrubs with Intermittent Trees
LE 2.6 - Shrubs
LE 2.7 - Scattered Trees
LE 4.3 - Native Species Hedgerows
LE 4.4 - Native Hedgerows with Trees
LE 5.1 - Individual Trees
LE 6.1 - Water Bodies and Associated Plants
LE 6.2 - Banks and DitAWes
LE 6.3 - Reed Beds
LE 6.4 - Marsh and Wet Grassland

0m 20m 50m 100m 150m

N

© Crown Copyright and Database Rights 2021 Ordnance Survey 100030649

- Existing habitats to be retained
- Proposed hedgerow - essential mitigation
- Proposed amenity grassland
- Swale/Marginal planting / wetland
- Proposed Temporary Boundary
- Anti reflective fencing
- Proposed shrub - ecological mitigation
- Existing hedgerow to be retained
- Proposed hedgerow - by agreement
- Proposed conservation grassland
- Proposed Permanent Highway Boundary
- Noise barrier
- Essential mitigation - earth bund
- Proposed woodland
- Proposed `Coronation Avenue` trees
- Grass verge / central reservations
- Vehicle Restraint Sytem
- Woodland Creation Area
- Proposed individual trees
- Arable field margins
- Proposed Great Crested Newt Pond
- Existing running water
- Existing waterbodies
- Proposed amended earthwork contours

Rev.	Date	Description	By	Eng' Ch'k	Disc' Ch'k	App'd
02	16/02/21	Update to Order Limit boundary	NB	AW	AW	KS
01	05.01.2021	FIRST ISSUE	NB	AW	AW	KS

Suitability: For Information
Status: S1

Client: highways england

Project Title: A1 IN NORTHUMBERLAND: MORPETH TO FELTON

Drawing Title: FIGURE 1 - LANDSCAPE MITIGATION PLAN (ADDENDUM - AMENDED EARTHWORKS) SHEET 16 OF 19

Scale	Drawn	Eng. AWeck	Approved	Authorised
1:1250	FS	AW	KS	DM
Original Size	**Date**	**Date**	**Date**	**Date**
A1	05/01/21	05/01/21	05.01.2021	05.01.2021

Drawing Number: Project HE551459 | Originator WSP | Volume 6.2 | Section | Type | ID M2F | Direction | Type | Role | Number
Revision: P01
PW Stage Code

DO NOT SCALE

Millimetres 100 10 0

EFD/LE2.1
Woodland habitat - precautionary compensation for air quality impacts on biodiversity

EFD / LE 1.3 / E.3.1
Great Crested Newt mitigation area

Return land to Agriculture

EFB / LE 1.3

EFD / LE 2.5

22700 22800 22900 23000 23100 23200 23300 23400 23500 23600

60

EFB / LE 2.1

EFB / LE 4.3

M2F-CH227-SB-WDL-1

EFB / LE 2.1

Topsoil Storage Location 12 - Coquet Bridge - 10000m^3

EFB / LE 2.1

EFD / LE 2.5

M2F-CH234-SB-TPS-12

DB19

Return land to Agriculture

EFD/ LE.2.5

EFH/ LE.6.4

EFD/ LE.1.3

Return land to Agriculture

ENVIRONMENTAL FUNCTIONS:
(Source: DMRB Volume 10, Section 0, Parts 2 and 3)

EFA - Visual Screening
EFB - Landscape Integration
EFD - Nature Conservation & Biodiversity
EFE - Visual Amenity
EFG - Auditory Amenity
EFH - Water Quality

ENVIRONMENTAL ELEMENTS:
(Source: DMRB Volume 10, Section 0, Parts 2 and 3)

E 1.2 - Noise Barrier-Built Elements
E 1.3 - Noise-Reducing Earthworks
E 3.1 - Protected Species

LANDSCAPE ELEMENTS:
(Source: DMRB Volume 10, Section 0, Parts 2 and 3)

LE 1.1 - Amenity Grass Areas
LE 1.3 - Species RiAW (or Conservation) grassland
LE 2.1 - Woodland
LE 2.2 - Woodland Edge
LE 2.4 - Linear Belts of Shrubs and Trees
LE 2.5 - Shrubs with Intermittent Trees
LE 2.6 - Shrubs
LE 2.7 - Scattered Trees
LE 4.3 - Native Species Hedgerows
LE 4.4 - Native Hedgerows with Trees
LE 5.1 - Individual Trees
LE 6.1 - Water Bodies and Associated Plants
LE 6.2 - Banks and DitAWes
LE 6.3 - Reed Beds
LE 6.4 - Marsh and Wet Grassland

0m 20m 50m 100m 150m

N

© Crown Copyright and Database Rights 2021 Ordnance Survey 100030649

- Existing habitats to be retained
- Existing hedgerow to be retained
- Proposed woodland
- Woodland Creation Area
- Existing running water
- Proposed hedgerow - essential mitigation
- Proposed hedgerow - by agreement
- Proposed `Coronation Avenue` trees
- Proposed individual trees
- Existing waterbodies
- Proposed amenity grassland
- Proposed conservation grassland
- Grass verge / central reservations
- Arable field margins
- Proposed amended earthwork contours
- Swale/Marginal planting / wetland
- Proposed Permanent Highway Boundary
- Vehicle Restraint Sytem
- Proposed Great Crested Newt Pond
- Proposed Temporary Boundary
- Noise barrier
- Anti reflective fencing
- Essential mitigation - earth bund
- Proposed shrub - ecological mitigation

Rev.	Date	Description	By	Eng' CH'k	Disc' CH'k	App'd
1	05.01.2021	FIRST ISSUE	NB	AW	AW	KS

Suitability: For Information
Status: S1

Client: highways england

Project Title: A1 IN NORTHUMBERLAND: MORPETH TO FELTON

Drawing Title: FIGURE 1 - LANDSCAPE MITIGATION PLAN (ADDENDUM - AMENDED EARTHWORKS) SHEET 17 OF 19

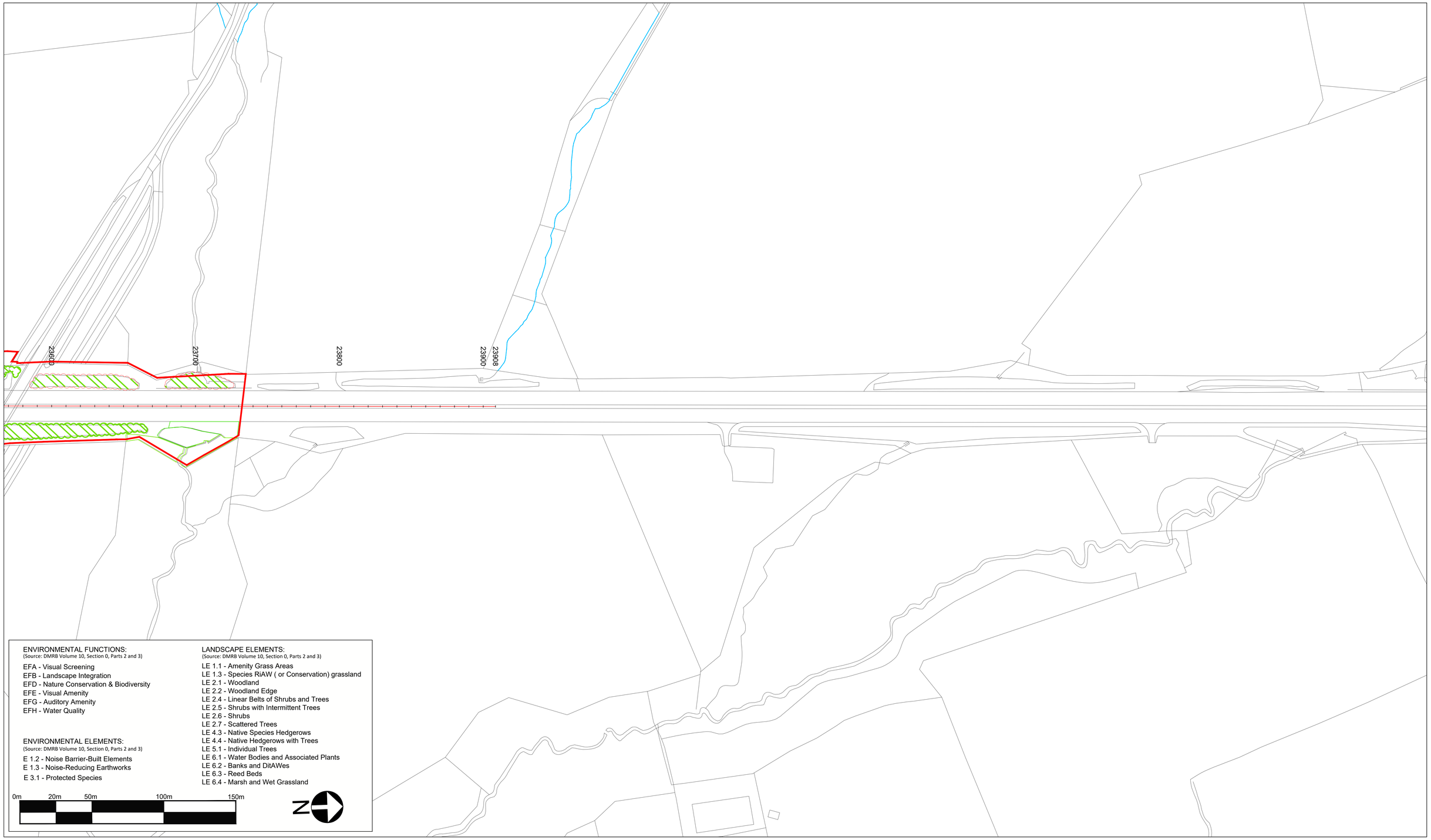
Scale	Drawn	Eng. AWeck	Approved	Authorised
1:1250	FS	AW	KS	DM
Original Size	**Date**	**Date**	**Date**	**Date**
A1	05.01.2021	05.01.2021	05.01.2021	05.01.2021

Drawing Number
Project: HE551459 | Originator: WSP | Volume: 6.2
Section | Type | ID | Direction: M2F | Type | Role | Number

Revision: P01
PW Stage Code

DO NOT SCALE

Millimetres 0 10 100



ENVIRONMENTAL FUNCTIONS:
(Source: DMRB Volume 10, Section 0, Parts 2 and 3)

EFA - Visual Screening
EFB - Landscape Integration
EFD - Nature Conservation & Biodiversity
EFE - Visual Amenity
EFG - Auditory Amenity
EFH - Water Quality

ENVIRONMENTAL ELEMENTS:
(Source: DMRB Volume 10, Section 0, Parts 2 and 3)

E 1.2 - Noise Barrier-Built Elements
E 1.3 - Noise-Reducing Earthworks
E 3.1 - Protected Species

LANDSCAPE ELEMENTS:
(Source: DMRB Volume 10, Section 0, Parts 2 and 3)

LE 1.1 - Amenity Grass Areas
LE 1.3 - Species RiAW (or Conservation) grassland
LE 2.1 - Woodland
LE 2.2 - Woodland Edge
LE 2.4 - Linear Belts of Shrubs and Trees
LE 2.5 - Shrubs with Intermittent Trees
LE 2.6 - Shrubs
LE 2.7 - Scattered Trees
LE 4.3 - Native Species Hedgerows
LE 4.4 - Native Hedgerows with Trees
LE 5.1 - Individual Trees
LE 6.1 - Water Bodies and Associated Plants
LE 6.2 - Banks and DitAWes
LE 6.3 - Reed Beds
LE 6.4 - Marsh and Wet Grassland

0m 20m 50m 100m 150m

N

© Crown Copyright and Database Rights 2021 Ordnance Survey 100030649

- Existing habitats to be retained
- Existing hedgerow to be retained
- Proposed woodland
- Woodland Creation Area
- Existing running water
- Proposed hedgerow - essential mitigation
- Proposed hedgerow - by agreement
- Proposed `Coronation Avenue` trees
- Proposed individual trees
- Existing waterbodies
- Proposed amenity grassland
- Proposed conservation grassland
- Grass verge / central reservations
- Arable field margins
- Proposed amended earthwork contours
- Swale/Marginal planting / wetland
- Proposed Permanent Highway Boundary
- Vehicle Restraint Sytem
- Proposed Great Crested Newt Pond
- Proposed Temporary Boundary
- Noise barrier
- Anti reflective fencing
- Essential mitigation - earth bund
- Proposed shrub - ecological mitigation

Rev.	Date	Description	By	Eng' CH'k	Disc' CH'k	App'd
1	05.01.2021	FIRST ISSUE	NB	AW	AW	KS

Suitability: For Information
Status: S1

Client: highways england

Project Title: A1 IN NORTHUMBERLAND: MORPETH TO FELTON

Drawing Title: FIGURE 1 - LANDSCAPE MITIGATION PLAN (ADDENDUM - AMENDED EARTHWORKS) SHEET 18 OF 19

Scale	Drawn	Eng. AWeck	Approved	Authorised
1:1250	FS	AW	KS	DM
Original Size	**Date**	**Date**	**Date**	**Date**
A1	05.01.2021	05.01.2021	05.01.2021	05.01.2021

Drawing Number: Project HE551459 | Originator WSP | Volume 6.2 | Section | Type | ID M2F | Direction | Type | Role | Number
Revision: P01
PW Stage Code

Millimetres 100 10 0

DO NOT SCALE

Indicative Grassland Seed Mixes

Botanical Name	Common Name
Landscape Element	Discription
LE.1.1	Amenity Grass Areas
LE1.3	Species Rich (or Conservation) grassland
LE1.3	Species Rich (or Conservation) grassland Arable Field Margins
LE1.3	Species Rich (or Conservation) grassland Ancient Woodland - understory
LE1.3	Species Rich (or Conservation) grassland verges / junctions
LE6.3	Marsh an Wet Grassland
Seed mixes based on those supplied by Germinal Seeds.	

Indicative Native Hedgerow Mix

Botanical Name	Common Name	% Mix
Prunus spinosa	Blackthorn	30
Sambucus nigra	Elder	5
Crataegus monogyna	Haw thorn	40
Corylus avellana	Hazel	10
Ilex aquifolium	Holly	7.5
Rosa arvensis	Field Rose	5
Lonicera periclymenum	Honeysuckle	2.5
Prunus padus	Bird Cherry	
Quercus robur	Common Oak	
Sorbus aucuparia	Row an	
Total		**100%**

Indicative Ancient Woodland Replacement Mix

Botanical Name	Common Name	% Mix
Aesculus hippocastanum	Horse Chestnut	5
Fagus sylvatica	Beech	15
Quercus petraea	Sessile Oak	10
Quercus robur	Common Oak	10
Sorbus aucuparia	Row an	10
Betula pendula	Silver Birch	10
Acer campestre	Field Maple	7.5
Sambucus nigra	Elder	5
Prunus avium	Gean Cherry	7.5
Viburnum opulus	Guelder Rose	5
Ilex aquifolium	Holly	5
Corylus avellana	Hazel	10
Total		**100%**

Indicative Shrubs & Shrubs with Intermittent Trees Mix

Botanical Name	Common Name	% Mix
Shrubs		
Prunus spinosa	Blackthorn	20
Sambucus nigra	Elder	15
Rosa canina	Dog Rose	15
Acer campestre	Field Maple	20
Corylus avellana	Hazel	30
Feathered Trees		
Prunus padus	Bird Cherry	
Quercus robur	Common Oak	
Sorbus aucuparia	Row an	
Total		**100%**

Indicative Woodland Block Planting Mix

Botanical Name	Common Name	% Mix
Fagus sylvatica	Beech	10
Quercus robur	Common Oak	20
Sorbus aucuparia	Row an	10
Betula pendula	Silver Birch	10
Acer campestre	Field Maple	7.5
Sambucus nigra	Elder	5
Prunus avium	Gean Cherry	7.5
Viburnum opulus	Guelder Rose	5
Ilex aquifolium	Holly	5
Corylus avellana	Hazel	10
Tilia platyphyllos	Large Leaved Lime	10
Total		**100%**

© Crown Copyright and Database Rights 2021 Ordnance Survey 100030649

Rev.	Date	Description	By	Eng' CH'k	Disc' CH'k	App'd
1	05.01.2021	FIRST ISSUE	NB	AW	AW	KS

Suitability: For Information
Status: S1

Client: highways england

Project Title: A1 IN NORTHUMBERLAND: MORPETH TO FELTON

Drawing Title: FIGURE 1 - LANDSCAPE MITIGATION PLAN (ADDENDUM - AMENDED EARTHWORKS) SHEET 19 OF 19

Scale	Drawn	Eng. AWeck	Approved	Authorised
1:1250	FS	AW	KS	DM
Original Size	**Date**	**Date**	**Date**	**Date**
A1	05.01.2021	05.01.2021	05.01.2021	05.01.2021

Drawing Number: Project HE551459 | Originator WSP | Volume 6.2 | Section | Type | ID M2F | Direction | Type | Role | Number
Revision: P01
PW Stage Code

© Crown Copyright and Database Rights 2021 Ordnance Survey 100030649

CONTINUES ON SHEET 12

CONTINUES ON SHEET 11

EFD/ LE.1.3

EFE/ LE.1.1

EFA/ LE.4.4

A2E-CH541-SB-TPS-9

EFD/ LE.1.3

EFD/ LE.1.3

EFA/ LE.4.4

EFE/ LE.1.1

EFD/ LE.1.3

EFD/ LE.1.3

EFH/ LE.6.1

EFD/ LE.1.3

EFA/ LE.2.2

EFA/ LE.4.4

EFE/ LE.1.1

EFD/ LE.1.3

ENVIRONMENTAL FUNCTIONS:
(Source: DMRB Volume 10, Section 0, Parts 2 and 3)

EFA - Visual Screening
EFB - Landscape Integration
EFD - Nature Conservation & Biodiversity
EFE - Visual Amenity
AFG - Auditory Amenity
EFH - Water Quality

ENVIRONMENTAL ELEMENTS:
(Source: DMRB Volume 10, Section 0, Parts 2 and 3)

E 1.2 - Noise Barrier-Built Elements
E 1.3 - Noise-Reducing Earthworks
E 3.1 - Protected Species

LANDSCAPE ELEMENTS:
(Source: DMRB Volume 10, Section 0, Parts 2 and 3)

LE 1.1 - Amenity Grass Areas
LE 1.3 - Species Rich (or Conservation) grassland
LE 2.1 - Woodland
LE 2.2 - Woodland Edge
LE 2.4 - Linear Belts of Shrubs and Trees
LE 2.5 - Shrubs with Intermittent Trees
LE 2.6 - Shrubs
LE 2.7 - Scattered Trees
LE 4.3 - Native Species Hedgerows
LE 4.4 - Native Hedgerows with Trees
LE 5.1 - Individual Trees
LE 6.1 - Water Bodies and Associated Plants
LE 6.2 - Banks and Ditches
LE 6.3 - Reed Beds
LE 6.4 - Marsh and Wet Grassland

Red Line Boundary

Existing Vegetation

Existing Habitats

Existing Hedgerow to be Retained

Proposed Vegetation

LE 1.1 Amenity Grass Areas

LE 1.3 Species Rich (or Conservation) Grassland

LE 2.1 and 2.2 Woodland Planting *(Understorey to be seeded)*

LE 2.4 Linear Belts of Shrubs and Trees

LE 2.6 Shrubs

LE 2.7 Scattered Trees

LE 4.4 Native Hedgerows with Trees

LE 6.1 Swale/ Marginal Planting/ Wetland (for Attenuation Pond)

Areas assumed to be return to agriculture

Ecological Mitigation: Indicative Bat Box Locations

Proposed amended earthwork contours

Scale 1:2500
50m 0m 50m 100m 150m

Rev.	Date	Description	By	Eng' Ch'k	Disc' Ch'k	App'd
P01	05/01/2021	FIRST ISSUE	NB	AW	AW	KS

Suitability: DCO SUBMISSION
Status: S2

PINS Reference Number: TR010041/APP/6.6

Client: highways england

Project Title: A1 in Northumberland
Morpeth to Ellingham

Drawing Title: FIGURE 2 - LANDSCAPE MITIGATION PLAN
PART B (ADDENDUM - EARTHWORKS AMENDMENTS) SHEET 1 OF 7

Scale	Drawn	Eng. Check	Approved	Authorised
1:2500	NB	AW	KS	AF
Original Size	**Date**	**Date**	**Date**	**Date**
A1	05.01.2021	05.01.2021	05.01.2021	05.01.2021

Drawing Number: HE551459-WSP-ELS-A2E-DR-LE-1816

Revision: P01

PW Stage Code: 0

\\uk.wspgroup.com\central data\Projects\70038006xx\70038006 - A1 in Northumberland\02 WIP\LA Landscape\01 Model\landscape\New folder

© Crown Copyright and Database Rights 2021 Ordnance Survey 100030649

A2E-CH554-NB-NBD-4

A2E-CH554-SB-TPS-6

CONTINUES ON SHEET 13

CONTINUES ON SHEET 12

A2E-CH553-NB-TPS-5

A2E-CH550-SB-TPS-3

A2E-CH550-NB-NBD-3

EFA/EFB/LE.2.1

EFD/ LE.1.3

EFB/EFE/LE.2.1

EFE/ LE.1.1

EFA/ LE.4.4

EFE/EFD LE.2.7

EFB/ EFE.6.1

CONTINUES ON SHEET 18

CONTINUES ON SHEET 12

CONTINUES ON SHEET 12

CONTINUES ON SHEET 11

ENVIRONMENTAL FUNCTIONS:
(Source: DMRB Volume 10, Section 0, Parts 2 and 3)

EFA - Visual Screening
EFB - Landscape Integration
EFD - Nature Conservation & Biodiversity
EFE - Visual Amenity
AFG - Auditory Amenity
EFH - Water Quality

ENVIRONMENTAL ELEMENTS:
(Source: DMRB Volume 10, Section 0, Parts 2 and 3)

E 1.2 - Noise Barrier-Built Elements
E 1.3 - Noise-Reducing Earthworks
E 3.1 - Protected Species

LANDSCAPE ELEMENTS:
(Source: DMRB Volume 10, Section 0, Parts 2 and 3)

LE 1.1 - Amenity Grass Areas
LE 1.3 - Species Rich (or Conservation) grassland
LE 2.1 - Woodland
LE 2.2 - Woodland Edge
LE 2.4 - Linear Belts of Shrubs and Trees
LE 2.5 - Shrubs with Intermittent Trees
LE 2.6 - Shrubs
LE 2.7 - Scattered Trees
LE 4.3 - Native Species Hedgerows
LE 4.4 - Native Hedgerows with Trees
LE 5.1 - Individual Trees
LE 6.1 - Water Bodies and Associated Plants
LE 6.2 - Banks and Ditches
LE 6.3 - Reed Beds
LE 6.4 - Marsh and Wet Grassland

Red Line Boundary

Existing Vegetation

Existing Habitats

Existing Hedgerow to be Retained

Proposed Vegetation

LE 1.1 Amenity Grass Areas

LE 1.3 Species Rich (or Conservation) Grassland

LE 2.1 and 2.2 Woodland Planting *(Understorey to be seeded)*

LE 2.4 Linear Belts of Shrubs and Trees

LE 2.6 Shrubs

LE 2.7 Scattered Trees

LE 4.4 Native Hedgerows with Trees

LE 6.1 Swale/ Marginal Planting/ Wetland (for Attenuation Pond)

Areas assumed to be return to agriculture

Ecological Mitigation: Indicative Bat Box Locations

Proposed amended earthwork contours

Scale 1:2500
50m 0m 50m 100m 150m

Rev.	Date	Description	By	Eng' Ch'k	Disc' Ch'k	App'd
P01	05/01/2021	FIRST ISSUE	NB	AW	AW	KS

Suitability: DCO SUBMISSION
Status: S2

PINS Reference Number: TR010041/APP/6.6

Client: highways england

Project Title: A1 in Northumberland
Morpeth to Ellingham

Drawing Title: FIGURE 2 - LANDSCAPE MITIGATION PLAN
PART B (ADDENDUM - EARTHWORKS
AMENDMENTS) SHEET 2 OF 7

Scale	Drawn	Eng. Check	Approved	Authorised
1:2500	NB	AW	KS	AF
Original Size	Date	Date	Date	Date
A1	05.01.2021	05.01.2021	05.01.2021	05.01.2021

Drawing Number: HE551459-WSP-ELS-A2E-DR-LE-1816

Revision: P01

PW Stage Code: 0

\\uk.wspgroup.com\central data\Projects\700380xx\700038006 - A1 in Northumberland\02 WIP\LA Landscape\01 Model\landscape\New folder

© Crown Copyright and Database Rights 2021 Ordnance Survey 100030649

CONTINUES ON SHEET 14

CONTINUES ON SHEET 13

EFA/ LE.2.2

EFE/ LE.1.1

EFD/ LE.1.3

EFA/ LE.4.4

EFA/ LE.4.4

EFE/ LE.1.1

EFA/EFB/LE.2.1

EFD/LE.1.3

EFD/ LE.1.3

EFD/ LE.1.3

EFA/EFB/LE.2.1

EFA/EFB/LE.2.1

EFA/EFB/LE.2.1

CONTINUES ON SHEET 13

CONTINUES ON SHEET 12

EFA/EFB/LE.2.1

EFA/EFB/LE.2.1

EFA/EFB/LE.2.1

ENVIRONMENTAL FUNCTIONS:
(Source: DMRB Volume 10, Section 0, Parts 2 and 3)

EFA - Visual Screening
EFB - Landscape Integration
EFD - Nature Conservation & Biodiversity
EFE - Visual Amenity
AFG - Auditory Amenity
EFH - Water Quality

ENVIRONMENTAL ELEMENTS:
(Source: DMRB Volume 10, Section 0, Parts 2 and 3)

E 1.2 - Noise Barrier-Built Elements
E 1.3 - Noise-Reducing Earthworks
E 3.1 - Protected Species

LANDSCAPE ELEMENTS:
(Source: DMRB Volume 10, Section 0, Parts 2 and 3)

LE 1.1 - Amenity Grass Areas
LE 1.3 - Species Rich (or Conservation) grassland
LE 2.1 - Woodland
LE 2.2 - Woodland Edge
LE 2.4 - Linear Belts of Shrubs and Trees
LE 2.5 - Shrubs with Intermittent Trees
LE 2.6 - Shrubs
LE 2.7 - Scattered Trees
LE 4.3 - Native Species Hedgerows
LE 4.4 - Native Hedgerows with Trees
LE 5.1 - Individual Trees
LE 6.1 - Water Bodies and Associated Plants
LE 6.2 - Banks and Ditches
LE 6.3 - Reed Beds
LE 6.4 - Marsh and Wet Grassland

Red Line Boundary

Existing Vegetation

Existing Habitats

Existing Hedgerow to be Retained

Proposed Vegetation

LE 1.1 Amenity Grass Areas

LE 1.3 Species Rich (or Conservation) Grassland

LE 2.1 and 2.2 Woodland Planting *(Understorey to be seeded)*

LE 2.4 Linear Belts of Shrubs and Trees

LE 2.6 Shrubs

LE 2.7 Scattered Trees

LE 4.4 Native Hedgerows with Trees

LE 6.1 Swale/ Marginal Planting/ Wetland (for Attenuation Pond)

Areas assumed to be return to agriculture

Ecological Mitigation: Indicative Bat Box Locations

Proposed amended earthwork contours

Scale 1:2500
50m 0m 50m 100m 150m

Rev.	Date	Description	By	Eng' Ch'k	Disc' Ch'k	App'd
P01	05/01/2021	FIRST ISSUE	NB	AW	AW	KS

Suitability: DCO SUBMISSION
Status: S2

PINS Reference Number: TR010041/APP/6.6

Client: highways england

Project Title: A1 in Northumberland
Morpeth to Ellingham

Drawing Title: FIGURE 2 - LANDSCAPE MITIGATION PLAN PART B (ADDENDUM - EARTHWORKS AMENDMENTS) SHEET 3 OF 7

Scale	Drawn	Eng. Check	Approved	Authorised
1:2500	NB	AW	KS	AF
Original Size	Date	Date	Date	Date
A1	05.01.2021	05.01.2021	05.01.2021	05.01.2021

Drawing Number: HE551459-WSP-ELS-A2E-DR-LE-1816

Revision: P01

PW Stage Code: 0

\\uk.wspgroup.com\central data\Projects\70038xx\70038006 - A1 in Northumberland\02 WIP\LA Landscape\01 Model\landscape\New folder

© Crown Copyright and Database Rights 2021 Ordnance Survey 100030649

CONTINUES ON SHEET 15
CONTINUES ON SHEET 14

Assumed 1m - 2m wide hedgerow and tree planting. Grassed area for 66kv cable. (Alignment to be designed by others)

EFD/ LE.1.3
EFA/ EFB/ LE.4.4
EFD/ LE.1.3
EFD/ LE.1.3
EFE/ LE.1.1
EFD/ LE.1.3
EFA/ LE.4.4
EFD/ LE.1.3
EFD/ LE.1.3
EFA/ LE.2.1
EFD/ LE.1.3
EFH/ LE.6.1
A2E-CH567-NB-BPT-5
A2E-CH569-NB-BPT-4
EFE/ LE.1.1
EFA/ LE.2.2

Existing hedgerow/ tree planting to be retained in accordance with arboricultural recommendations

CONTINUES ON SHEET 14
CONTINUES ON SHEET 13

ENVIRONMENTAL FUNCTIONS:
(Source: DMRB Volume 10, Section 0, Parts 2 and 3)

EFA - Visual Screening
EFB - Landscape Integration
EFD - Nature Conservation & Biodiversity
EFE - Visual Amenity
AFG - Auditory Amenity
EFH - Water Quality

ENVIRONMENTAL ELEMENTS:
(Source: DMRB Volume 10, Section 0, Parts 2 and 3)

E 1.2 - Noise Barrier-Built Elements
E 1.3 - Noise-Reducing Earthworks
E 3.1 - Protected Species

LANDSCAPE ELEMENTS:
(Source: DMRB Volume 10, Section 0, Parts 2 and 3)

LE 1.1 - Amenity Grass Areas
LE 1.3 - Species Rich (or Conservation) grassland
LE 2.1 - Woodland
LE 2.2 - Woodland Edge
LE 2.4 - Linear Belts of Shrubs and Trees
LE 2.5 - Shrubs with Intermittent Trees
LE 2.6 - Shrubs
LE 2.7 - Scattered Trees
LE 4.3 - Native Species Hedgerows
LE 4.4 - Native Hedgerows with Trees
LE 5.1 - Individual Trees
LE 6.1 - Water Bodies and Associated Plants
LE 6.2 - Banks and Ditches
LE 6.3 - Reed Beds
LE 6.4 - Marsh and Wet Grassland

Red Line Boundary

Existing Vegetation

Existing Habitats

Existing Hedgerow to be Retained

Proposed Vegetation

LE 1.1 Amenity Grass Areas

LE 1.3 Species Rich (or Conservation) Grassland

LE 2.1 and 2.2 Woodland Planting *(Understorey to be seeded)*

LE 2.4 Linear Belts of Shrubs and Trees

LE 2.6 Shrubs

LE 2.7 Scattered Trees

LE 4.4 Native Hedgerows with Trees

LE 6.1 Swale/ Marginal Planting/ Wetland (for Attenuation Pond)

Areas assumed to be return to agriculture

Ecological Mitigation: Indicative Bat Box Locations

Proposed amended earthwork contours

Scale 1:2500
50m 0m 50m 100m 150m

Rev.	Date	Description	By	Eng' Ch'k	Disc' Ch'k	App'd
P01	05/01/2021	FIRST ISSUE	NB	AW	AW	KS

Suitability: DCO SUBMISSION
Status: S2

PINS Reference Number: TR010041/APP/6.6

Client: highways england

Project Title: A1 in Northumberland
Morpeth to Ellingham

Drawing Title: FIGURE 2 - LANDSCAPE MITIGATION PLAN
PART B (ADDENDUM - EARTHWORKS AMENDMENTS) SHEET 4 OF 7

Scale	Drawn	Eng. Check	Approved	Authorised
1:2500	NB	AW	KS	AF
Original Size	**Date**	**Date**	**Date**	**Date**
A1	05.01.2021	05.01.2021	05.01.2021	05.01.2021

Drawing Number: HE551459-WSP-ELS-A2E-DR-LE-1816
Revision: P01
PW Stage Code: 0

\\uk.wspgroup.com\central data\Projects\700380xx\700380006 - A1 in Northumberland\02 WIP\LA Landscape\01 Model\landscapeNew folder

10/02/2020

© Crown Copyright and Database Rights 2021 Ordnance Survey 100030649

CONTINUES ON SHEET 16

CONTINUES ON SHEET 15

EFE/ LE.1.1

EFA/ EFB/ LE.2.4

A2E-CH591-SB-BPT-2
/A2E-CH591-SB-NBD-1

EFA/ EFB/ LE.4.3

A2E-CH590-SB-TPS-4

EFB/ LE.2.1

EFD/ LE.1.3

EFE/ LE.1.1

EFB/ EFE/ LE.6.1

A2E-CH590-SB-BPT-3

EFA/ LE.2.2

EFD/ LE.1.3

EFB/ EFE/ LE.6.1

A2E-CH589-NB-TPS-7

A2E-CH589-NB-SBF-1

A2E-CH588-SB-SBF-2

EFE/ LE.2.6

EFE/ LE.2.6

A2E-CH588-SB-SBF-2

EFA/ EFE/ LE.2.7

EFE/ LE.2.6

EFE/ LE.1.1

EFD/ LE.6.1

EFD/ LE.6.1

EFE/ LE.2.6

EFE/ LE.1.1

A2E-CH586-SB-BPT-1

EFD/ EFB LE.2.1

EFD/ LE.6.1

EFD/ LE.6.1

EFA/ EFB/ LE.4.4

Existing hedgerow/ tree planting to be retained and protected during work, in accordance with arboricultural recommendations

EFE/ LE.1.1

EFD/ EFB LE.2.1

A2E-CH583-NB-NBD-2

EFE/EFD LE.2.7

EFA/ LE.4.4

A2E-CH583-NB-TPS-2

EFD/ LE.1.3

Assumed 1m - 2m wide hedgerow and tree plantir
Grassed area for 66kv cable.
(Alignment to be designed by others)

CONTINUES ON SHEET 15

CONTINUES ON SHEET 14

ENVIRONMENTAL FUNCTIONS:
(Source: DMRB Volume 10, Section 0, Parts 2 and 3)

EFA - Visual Screening
EFB - Landscape Integration
EFD - Nature Conservation & Biodiversity
EFE - Visual Amenity
AFG - Auditory Amenity
EFH - Water Quality

ENVIRONMENTAL ELEMENTS:
(Source: DMRB Volume 10, Section 0, Parts 2 and 3)

E 1.2 - Noise Barrier-Built Elements
E 1.3 - Noise-Reducing Earthworks
E 3.1 - Protected Species

LANDSCAPE ELEMENTS:
(Source: DMRB Volume 10, Section 0, Parts 2 and 3)

LE 1.1 - Amenity Grass Areas
LE 1.3 - Species Rich (or Conservation) grassland
LE 2.1 - Woodland
LE 2.2 - Woodland Edge
LE 2.4 - Linear Belts of Shrubs and Trees
LE 2.5 - Shrubs with Intermittent Trees
LE 2.6 - Shrubs
LE 2.7 - Scattered Trees
LE 4.3 - Native Species Hedgerows
LE 4.4 - Native Hedgerows with Trees
LE 5.1 - Individual Trees
LE 6.1 - Water Bodies and Associated Plants
LE 6.2 - Banks and Ditches
LE 6.3 - Reed Beds
LE 6.4 - Marsh and Wet Grassland

Red Line Boundary

Existing Vegetation

Existing Habitats

Existing Hedgerow to be Retained

Proposed Vegetation

LE 1.1 Amenity Grass Areas

LE 1.3 Species Rich (or Conservation) Grassland

LE 2.1 and 2.2 Woodland Planting *(Understorey to be seeded)*

LE 2.4 Linear Belts of Shrubs and Trees

LE 2.6 Shrubs

LE 2.7 Scattered Trees

LE 4.4 Native Hedgerows with Trees

LE 6.1 Swale/ Marginal Planting/ Wetland (for Attenuation Pond)

Areas assumed to be return to agriculture

Ecological Mitigation: Indicative Bat Box Locations

Proposed amended earthwork contours

Scale 1:2500

50m 0m 50m 100m 150m

Rev.	Date	Description	By	Eng' Ch'k	Disc' Ch'k	App'd
P01	05/01/2021	FIRST ISSUE	NB	AW	AW	KS

Suitability: DCO SUBMISSION

Status: S2

PINS Reference Number: TR010041/APP/6.6

Client: highways england

Project Title: A1 in Northumberland
Morpeth to Ellingham

Drawing Title: FIGURE 2 - LANDSCAPE MITIGATION PLAN
PART B (ADDENDUM - EARTHWORKS AMENDMENTS) SHEET 5 OF 7

Scale	Drawn	Eng. Check	Approved	Authorised
1:2500	NB	AW	KS	AF
Original Size	**Date**	**Date**	**Date**	**Date**
A1	05.01.2021	05.01.2021	05.01.2021	05.01.2021

Drawing Number: HE551459-WSP-ELS-A2E-DR-LE-1816

Revision: P01

PW Stage Code: 0

\\uk.wspgroup.com\central data\Projects\700380xx\700380006 - A1 in Northumberland\02 WIP\LA Landscape\01 Model\landscapeNew folder

© Crown Copyright and Database Rights 2021 Ordnance Survey 100030649

CONTINUES ON SHEET 17

CONTINUES ON SHEET 16

EFA/ EFB/ LE.4.4

EFB/ LE.2.1

EFD/ LE.1.3

EFB/ LE.2.1

EFD/ LE.1.3

EFE/ LE.1.1

EFA/ LE.4.3

EFA/ LE.4.4

EFD/ LE.2.2

EFE/ LE.1.1

EFE/ LE.1.1

EFB/ LE.2.1

EFD/ LE.1.3

EFA/ LE.2.2

EFD/ LE.1.3

EFA/ EFB/ LE.4.4

EFA/ EFB/ LE.4.4

EFE/ LE.1.1

EFB/ LE.2.1

EFB/ LE.2.1

CONTINUES ON SHEET 16

CONTINUES ON SHEET 15

EFE/ LE.1.1

EFA/ EFB/ LE.2.4

Orchard Plantation
The Grove
Pond
Fountain
Garden Cottage
Stable Cottage
Charlton Hall
Sheep Dip
Farm Cottage
Blossom Plantation
Tumulus (site of)
Lodge Plantation
Slidgerton Burn
Tank
East Linkhall
West Linkhall
Reservoir
Heater Wood
Track
FB

ENVIRONMENTAL FUNCTIONS:
(Source: DMRB Volume 10, Section 0, Parts 2 and 3)

EFA - Visual Screening
EFB - Landscape Integration
EFD - Nature Conservation & Biodiversity
EFE - Visual Amenity
AFG - Auditory Amenity
EFH - Water Quality

ENVIRONMENTAL ELEMENTS:
(Source: DMRB Volume 10, Section 0, Parts 2 and 3)

E 1.2 - Noise Barrier-Built Elements
E 1.3 - Noise-Reducing Earthworks
E 3.1 - Protected Species

LANDSCAPE ELEMENTS:
(Source: DMRB Volume 10, Section 0, Parts 2 and 3)

LE 1.1 - Amenity Grass Areas
LE 1.3 - Species Rich (or Conservation) grassland
LE 2.1 - Woodland
LE 2.2 - Woodland Edge
LE 2.4 - Linear Belts of Shrubs and Trees
LE 2.5 - Shrubs with Intermittent Trees
LE 2.6 - Shrubs
LE 2.7 - Scattered Trees
LE 4.3 - Native Species Hedgerows
LE 4.4 - Native Hedgerows with Trees
LE 5.1 - Individual Trees
LE 6.1 - Water Bodies and Associated Plants
LE 6.2 - Banks and Ditches
LE 6.3 - Reed Beds
LE 6.4 - Marsh and Wet Grassland

Red Line Boundary

Existing Vegetation

Existing Habitats

Existing Hedgerow to be Retained

Proposed Vegetation

LE 1.1 Amenity Grass Areas

LE 1.3 Species Rich (or Conservation) Grassland

LE 2.1 and 2.2 Woodland Planting *(Understorey to be seeded)*

LE 2.4 Linear Belts of Shrubs and Trees

LE 2.6 Shrubs

LE 2.7 Scattered Trees

LE 4.4 Native Hedgerows with Trees

LE 6.1 Swale/ Marginal Planting/ Wetland (for Attenuation Pond)

Areas assumed to be return to agriculture

Ecological Mitigation: Indicative Bat Box Locations

Proposed amended earthwork contours

Scale 1:2500
50m 0m 50m 100m 150m

Rev.	Date	Description	By	Eng' Ch'k	Disc' Ch'k	App'd
P01	05/01/2021	FIRST ISSUE	NB	AW	AW	KS

Suitability: DCO SUBMISSION
Status: S2

PINS Reference Number: TR010041/APP/6.6

Client: highways england

Project Title: A1 in Northumberland
Morpeth to Ellingham

Drawing Title: FIGURE 2 - LANDSCAPE MITIGATION PLAN PART B (ADDENDUM - EARTHWORKS AMENDMENTS) SHEET 6 OF 7

Scale	Drawn	Eng. Check	Approved	Authorised
1:2500	NB	AW	KS	AF
Original Size	**Date**	**Date**	**Date**	**Date**
A1	05.01.2021	05.01.2021	05.01.2021	05.01.2021

Drawing Number: HE551459-WSP-ELS-A2E-DR-LE-1816

Revision: P01

PW Stage Code: 0

\\uk.wspgroup.com\central data\Projects\700380xx\70038006 - A1 in Northumberland\02 WIP\LA Landscape\01 Model\landscapeNew folder

© Crown Copyright and Database Rights 2021 Ordnance Survey 100030649

Brownieside

EFA/ EFB/ LE.4.4

EFE/ LE.1.1

EFA/ EFB/ LE.4.4 — EFB/ LE.2.1

EFD/ LE.1.3

CONTINUES ON SHEET 17

CONTINUES ON SHEET 16

ENVIRONMENTAL FUNCTIONS:
(Source: DMRB Volume 10, Section 0, Parts 2 and 3)

EFA - Visual Screening
EFB - Landscape Integration
EFD - Nature Conservation & Biodiversity
EFE - Visual Amenity
AFG - Auditory Amenity
EFH - Water Quality

ENVIRONMENTAL ELEMENTS:
(Source: DMRB Volume 10, Section 0, Parts 2 and 3)

E 1.2 - Noise Barrier-Built Elements
E 1.3 - Noise-Reducing Earthworks
E 3.1 - Protected Species

LANDSCAPE ELEMENTS:
(Source: DMRB Volume 10, Section 0, Parts 2 and 3)

LE 1.1 - Amenity Grass Areas
LE 1.3 - Species Rich (or Conservation) grassland
LE 2.1 - Woodland
LE 2.2 - Woodland Edge
LE 2.4 - Linear Belts of Shrubs and Trees
LE 2.5 - Shrubs with Intermittent Trees
LE 2.6 - Shrubs
LE 2.7 - Scattered Trees
LE 4.3 - Native Species Hedgerows
LE 4.4 - Native Hedgerows with Trees
LE 5.1 - Individual Trees
LE 6.1 - Water Bodies and Associated Plants
LE 6.2 - Banks and Ditches
LE 6.3 - Reed Beds
LE 6.4 - Marsh and Wet Grassland

Existing Vegetation

- Red Line Boundary
- Existing Habitats
- Existing Hedgerow to be Retained

Proposed Vegetation

- LE 1.1 Amenity Grass Areas
- LE 1.3 Species Rich (or Conservation) Grassland
- LE 2.1 and 2.2 Woodland Planting *(Understorey to be seeded)*
- LE 2.4 Linear Belts of Shrubs and Trees
- LE 2.6 Shrubs
- LE 2.7 Scattered Trees
- LE 4.4 Native Hedgerows with Trees
- LE 6.1 Swale/ Marginal Planting/ Wetland (for Attenuation Pond)
- Areas assumed to be return to agriculture
- Ecological Mitigation: Indicative Bat Box Locations
- Proposed amended earthwork contours

Scale 1:2500
50m 0m 50m 100m 150m

Rev.	Date	Description	By	Eng' Ch'k	Disc' Ch'k	App'd
P01	05/01/2021	FIRST ISSUE	NB	AW	AW	KS

Suitability: DCO SUBMISSION
Status: S2

PINS Reference Number: TR010041/APP/6.6

Client: highways england

Project Title: A1 in Northumberland
Morpeth to Ellingham

Drawing Title: FIGURE 2 - LANDSCAPE MITIGATION PLAN
PART B (ADDENDUM - EARTHWORKS AMENDMENTS) SHEET 7 OF 7

Scale	Drawn	Eng. Check	Approved	Authorised
1:2500	NB	AW	KS	AF
Original Size	**Date**	**Date**	**Date**	**Date**
A1	05.01.2021	05.01.2021	05.01.2021	05.01.2021

Drawing Number: HE551459-WSP-ELS-A2E-DR-LE-1816
Revision: P01
PW Stage Code: 0

\\uk.wspgroup.com\central data\Projects\700380xx\700380006 - A1 in Northumberland\02 WIP\LA Landscape\01 Model\landscape\New folder

Appendix C

SUMMARY OF PROPOSED CHANGES TO APPLICATION

A1 in Northumberland: Morpeth to Ellingham

Scheme Number: TR010059

Summary of Proposed Changes to Application

Planning Act 2008

The Infrastructure Planning (Examination Procedure Rules) 2010

Infrastructure Planning (Examination Procedure) Rules 2010

Planning Act 2008

Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

December 2020

Infrastructure Planning

Planning Act 2008

The Infrastructure Planning (Examination Procedure Rules) 2010

The A1 in Northumberland: Morpeth to Ellingham

Development Consent Order 20[xx]

Summary of Proposed Changes to Application

Regulation Reference:	Infrastructure Planning (Examination Procedure) Rules 2010
Planning Inspectorate Scheme Reference	TR010059
Document Reference	TR010059/7.5
Author:	A1 in Northumberland: Morpeth to Ellingham Project Team, Highways England

Version	Date	Status of Version
2	December 2020	Revised Submission

CONTENTS

1 INTRODUCTION....1
2 PROPOSED CHANGES TO THE APPLICATION....3
3 CONCLUSION AND PROPOSED NEXT STEPS....37

1 INTRODUCTION

1.1 Purpose of this document

1.1.1 This document describes a forthcoming request to amend the application for development consent (the "Application") under the Planning Act 2008 (the "2008 Act") submitted to the Secretary of State for Transport via Planning Inspectorate (the "Inspectorate") on 7 July 2020 by Highways England (the "Applicant") for the A1 in Northumberland: Morpeth to Ellingham (the "Scheme"). Its intention is to make the Examining Authority (ExA) and other participants in the examination aware of proposals for changes to the Application.

1.1.2 The Scheme comprises two sections known as Part A: Morpeth to Felton (Part A) and Part B: Alnwick to Ellingham (Part B).

1.1.3 On 4 August 2020, it was confirmed on behalf of the Secretary of State that the application had been accepted for examination. The ExA was appointed on 19 November 2020. This document has been produced in response to the ExA's Rule 6 Letter – Notification of the Preliminary Meeting and matters to be discussed, which was published 19 November 2020 and in which the ExA makes written submissions on the examination procedure by 10 December 2020 (Deadline A) , which is in advance of the first Preliminary Meeting to be held on 15 December 2020.

1.1.4 As is normal in relation to any engineering project, further design development of the Scheme has continued to be undertaken by the Applicant since the application for the Development Consent Order (DCO) was made in order to release efficiencies and design benefits. This is particularly important in optimizing a scheme being delivered by the public sector in the public interest. Consequently, the Applicant wishes to include certain refinements to the application accordingly and this document sets out those amendments to accommodate them and with the leave of the ExA, the proposed procedure for doing so.

1.1.5 The proposed changes to the Scheme are detailed further in this document and comprise the following:

1. Changes to temporary and permanent earthworks within the Order limits along both Part A (between Morpeth and Felton) and Part B (between Alnwick and Ellingham) in order to reduce earthwork movement. These changes are an extension to Parameters 4 and 5 for Part A, as set out in **Chapter 2: The Scheme** of the Environmental Statement (ES) [APP-037]. There would also be additional temporary and permanent earthworks. These changes to the earthworks strategy would not involve additional land and, as explained in **Section 2.1** of this document, it is not considered that there would be any new or changed environmental impacts as a result.
2. Works on the north bank of the River Coquet in order to stabilise the proposed bridge and existing bridge within Part A. The stabilisation works would include the installation of piles in the north bank of the River Coquet and the installation of erosion protection measures on the river bank. Land outside the Order limits would temporarily be required as a working area for the installation of the piles and access to works, as well as for the carrying out of the erosion protection

measures. As the installation works would lead to the loss of woodland within the Coquet River Felton Park Local Wildlife Site (LWS), there may also be a requirement for additional compensatory habitat outside the Order limits. Permanent erosion protection measures are proposed on the north bank (including outside the existing Order limits) and on the south bank.

3. Provision of a temporary access to the south bank of the River Coquet is proposed by crossing the river from the temporary works on the northern bank. It is anticipated that this would result in improved environmental performance in terms of access that would otherwise be provided from the South bank itself. The engineering solution for such a crossing is to use of a temporary bridge to span over the river. It is anticipated that there would also be some temporary river training works along each riverbank and additional erosion protection to the southern pier of the new bridge. Additional temporary rights would be required for the installation of the temporary bridge.

1.1.6 The Applicant confirms that the Scheme is deliverable without the changes to the temporary and permanent earthworks as referred to in the first sub-paragraph in **paragraph 1.1.5** above. However, as explained in **paragraphs 2.2.1** and **2.2.2**, the ongoing ground investigations have identified slope instability on the north bank of the River Coquet Valley, which means a change in circumstances has occurred. Consequently, the additional slope stabilisation referred to in the second sub-paragraph of **paragraph 1.1.5** is now necessary, but could not have been identified when the Application was made. The south bank access detailed in the third sub-paragraph of **paragraph 1.1.5** is enabled by these works.

1.1.7 An indicative timetable for progressing the amendments to the application through the DCO process is provided in **Section 3** of this document.

2 PROPOSED CHANGES TO THE SCHEME

2.1 Changes to temporary and permanent earthworks

2.1.1 The Applicant proposes to maximise the re-use of materials (via excavation, deposition and temporary storage), within the existing Scheme extents. A recent review of the earthworks strategy has identified an opportunity to reduce earthwork movement and as a result greater flexibility in temporary and permanent storage of Site won material is required to achieve this. The indicative earthworks areas are shown in the figure in the **Indicative Earthwork Change Locations** figure in **Appendix A**.

2.1.2 To balance materials across both Parts A and B, the following methods are proposed:

- **a.** Utilising borrow pits to exchange and win additional material suitable for construction.
- **b.** Maximising use of soil bunds already specified within the **Figure 7.8: Landscape Mitigation Masterplan** for Part A [APP-095], **Figure 7.10 Landscape Mitigation Masterplan** for Part B [APP-144] and **Figure 7.14: Landscape Mitigation Masterplan including Assessment Parameter 3** for Part B [APP-148], for disposal of excess site material, in Part A.
- **c.** Maximising of fill within slopes, already specified within **Figure 7.8**: **Landscape Mitigation Masterplan** for Part A [APP-095] and **Figure 7.10 Landscape Mitigation Masterplan** for Part B [APP-144] and **Figure 7.14: Landscape Mitigation Masterplan including Assessment Parameter 3** for Part B [APP-148], for re-use of site material, in Part A.
- **d.** Creation of new soil bunds within Part B to maximise re-use of excess site material.
- **e.** Maximising of slopes for re-use of excess site material, in Part B.
- **f.** Laying down additional material increasing some localised ground levels.
- **g.** Raising levels of junction “bowls” (level or rounded rather than dished).
- **h.** Creating new, temporary soil storage areas within both Part A and Part B.

2.1.3 These changes are an alteration to Parameters 4 and 5 for Part A, as set out in **Chapter 2: The Scheme** of the ES [APP-037]. There would also be additional temporary and permanent earthworks that require assessment for Part A and Part B. Therefore, it is appropriate to ensure that the environmental information before the Examination addresses the prospect of altered impacts This is addressed by sensitivity testing as described at **paragraph 2.1.6** below.

2.1.4 Mitigation measures such as detention basins, grassed areas, trees, shrubs and hedgerow planting would remain the same as originally proposed in **Figure 7.8 Landscape Mitigation Masterplan** for Part A [APP-095]and **Figure 7.10 Landscape Mitigation Masterplan** for Part B [APP-144]. The earthworks would be designed to accommodate these measures and takes into consideration the diverted 66 kV Extra High Voltage cable (Work Number: 24) as shown on **Figure 7.14: Landscape Mitigation Masterplan including Assessment Parameter 3** for Part B [APP-148].

2.1.5 The benefits for this proposed change for both Part A and Part B would be to:

- **a.** Greater flexibility during construction to reduce road haul and offsite disposal,

therefore reducing vehicle emissions including greenhouse gas.

b. Greater flexibility during construction to reduce the importation of material, therefore reducing vehicle emissions including greenhouse gas.

c. By keeping the majority of material transportation within the Site, vehicle movements between Part A and Part B and for disposal, would be minimised, reducing construction traffic.

d. Where constructed, the addition of new bunds would provide positive impacts in integrating the earthworks into the landscape and immediate landform.

e. Where constructed, the addition of new bunds would facilitate screening for sensitive receptors near the A1, especially during initial woodland establishment, softening the appearance.

f. The increase in height of soil bunds already proposed would facilitate better screening of the A1, especially during the woodland establishment, softening the appearance.

g. Uplift / slackening of slopes to areas would provide positive impacts in integrating the earthworks into the landscape and immediate landform.

h. Infilling of junction “bowls” would achieve better integration with the existing landform.

2.1.6 A sensitivity assessment of the environmental impact of the changes to the temporary and permanent earthworks in the powers contained within the draft DCO [APP-014] is being undertaken to enable the consequences in terms of the environmental impacts already assessed. The assessment will consider whether the changes to the temporary and permanent earthworks would alter the conclusions of the environmental impact assessment already undertaken. This will be concluded by and reported at Deadline 4 (12 March 2021).

2.1.7 The scope of this sensitivity assessment and anticipated outcomes is shown in **Table 1** below, which represent preliminary indications subject to completion of the assessment.

Table 1 - Changes to the temporary and permanent earthworks desktop sensitivity test

Aspect of Assessment	Construction / Operation	Likely Change to Significant Effects Y/N	Further Assessment likely required to Confirm Significance Y/N
Air Quality			
Dust and particulate matter from changes to the earthworks	Construction	N	Y
Emissions from construction traffic	Construction	N	N
Emissions from operational traffic	Operation	N	N
Noise and Vibration			

Aspect of Assessment	Construction / Operation	Likely Change to Significant Effects Y/N	Further Assessment likely required to Confirm Significance Y/N
Noise generated from construction activities	Construction	N	Y
Vibration generated from construction activities	Construction	N	Y
Noise from construction traffic	Construction	N	N
Noise from operational traffic	Operation	N	N
Changes to noise barrier effectiveness	Operation	N	Y
Landscape and Visual			
Changes to landscape character	Construction and operation	N	N
Changes to visual amenity	Construction and operation	N	Y
Cultural Heritage			
Changes to the setting of heritage assets	Construction and operation	N	Y
Disruption and disturbance to below ground archaeological remains	Construction	N	Y
Changes to historic landscapes	Construction and operation	N	N
Biodiversity			
Impacts on Statutory and non-statutory sites	Construction and operation	N	N
Changes to habitats	Construction and operation	N	N
Impacts on protected and notable species	Construction and operation	N	N

Aspect of Assessment	Construction / Operation	Likely Change to Significant Effects Y/N	Further Assessment likely required to Confirm Significance Y/N
Changes to Biodiversity No Net Loss Assessment	Construction and operation	N/A	N
Changes to groundwater dependant terrestrial ecosystems	Construction and operation	N	N
Road Drainage and the Water Environment			
Changes to local hydrogeology in the vicinity of the borrow pits (including groundwater lowering and flooding)	Construction and operation	N	Y
Impact of groundwater to the functionality of the borrow pits (including dewatering)	Construction and operation	N	Y
Changes to flood risk	Construction and operation	N	Y
Changes to water quality	Construction and operation	N	N
Geology and Soils			
Changes to temporary land take	Construction	N	N
Changes to permanent land take	Operation	N	N
Material suitability for re-use	Construction	N	N
Mineral Safeguarding Areas	Construction	N	Y
Pollution to controlled water bodies	Construction	N	N
Foot and mouth burial site	Construction	N	Y
Population and Human Health			
Changes to temporary land take	Construction	N	N

Aspect of Assessment	Construction / Operation	Likely Change to Significant Effects Y/N	Further Assessment likely required to Confirm Significance Y/N
Changes to permanent land take	Operation	N	N
Changes to recreational journey amenity	Construction and operation	N	N
Changes to direct, indirect and induced job generation	Construction	N	N
Changes to human health determinants	Construction and operation	N	N
Material Resources			
Consumption of materials	Construction	N	Y
Generation and disposal of waste to landfill	Construction	N	Y
Consumption of materials	Operation	N	N
Generation and disposal of waste to landfill	Operation	N	N
Climate			
Effect of the Scheme on climate (Carbon / GHG) due to consumption of materials and transportation of materials	Construction	N	N
Effect of the operation of the Scheme on climate (Carbon / GHG) due to end-user traffic and maintenance, repair and refurbishment.	Operation	N	N
Vulnerability of the Scheme to climate change	Construction and operation	N	N
Combined and Cumulative Assessment			
Assessment of Within Topic combined effects	Construction and Operation	N	N

Aspect of Assessment	Construction / Operation	Likely Change to Significant Effects Y/N	Further Assessment likely required to Confirm Significance Y/N
Assessment of Cross Topic combined effects	Construction and Operation	N	N
Assessment of cumulative effects	Construction and Operation	N	N

2.1.1 A justification for the aspects of the assessments that would not require further assessments is provided below. The aspects of the assessments not discussed below have been scoped into the sensitivity assessment as shown in **Table 1**. However, where all aspects of the assessments have been scoped into the sensitivity assessment this is stated in the section below for completeness.

Air Quality

Construction Traffic

2.1.2 The changes to the earthworks strategy would reduce the number of construction traffic movements, meaning emissions from construction traffic would be less than that reported in **Chapter 5: Air Quality** Park A of the ES [APP-040] and **Chapter 5: Air Quality** Part B of the ES [APP-041] of the Environmental Statement (ES). As emissions from construction traffic has been reported as not significant in the ES, would remain the same with the changes to the temporary and permanent earthworks.

Operational Traffic

2.1.3 The Scheme alignment and traffic data would remain the same with the changes to the earthworks meaning there would be no change to the operational air quality assessment presented in **Chapter 5: Air Quality** Part A [APP-040] and **Chapter 5: Air Quality** Part B [APP-041].

Noise and Vibration

Construction Traffic

2.1.4 Changes to the earthwork's strategy would reduce the number of construction traffic movements, meaning noise from construction traffic would be less than that reported in **Chapter 6: Noise and Vibration** Part A [APP-042] and **Chapter 6: Noise and Vibration** Part B [APP-043]. As noise from construction traffic has been reported as not significant in the ES, this would not change with the temporary and permanent earthworks.

Operational Traffic

2.1.5 Although additional permanent bunds are proposed, these are not likely to result in any further adverse operational stage effects. Therefore, further assessment work would not be undertaken for this element of the assessment.

Landscape and Visual

Construction and Operation - Landscape Character

2.1.6 The changes to the temporary and permanent earthworks would not change the assessment of significant effects on landscape character as presented in **Chapter 7: Landscape and Visual** Part A [APP-088] and **Chapter 7: Landscape and Visual** Part B [APP-089]. This is because the nature and form of the earthworks would support integration of the Scheme into the local landscape character.

Cultural Heritage

Construction and Operation - Historic Landscapes

2.1.7 Based on professional judgement, that the changes to the temporary and permanent earthworks would not change the assessment of significant effects for historic landscapes as presented in **Chapter 8: Cultural Heritage** Part A [APP-046] and **Chapter 8: Cultural Heritage** Part B [APP-047]. A change in the significance of effects is not predicted due to the nature and location of the additional temporary and permanent earthworks and low value of the historic landscapes.

Biodiversity

Construction and Operation

2.1.8 There would no changes to the habitats proposed in the **Figure 7.8: Landscape Mitigation Masterplan** for Part A [APP-095], **Figure 7.10: Landscape Mitigation Masterplan** for Part B [APP-144] and **Figure 7.14: Landscape Mitigation Masterplan including Assessment Parameter 3** for Part B [APP-148]. This means there would be no changes to the biodiversity assessment as set out in **Chapter 9: Biodiversity** Part A [APP-048] and **Chapter 9: Biodiversity** Part B [APP-049] including the Biodiversity No Net Loss Assessment provided at Appendix 9.20 for Part A [APP-246] and Appendix 9.11 for Part B[APP-309] of the ES.

2.1.9 Where mammal wildlife culverts are proposed the earthworks would be designed around the openings of the culverts to maintain the length shown in **Figure 7.8: Landscape Mitigation Masterplan** for Part A [APP-095].

Road Drainage and the Water Environment

Construction - Water Quality

2.1.10 The mitigation set out in **Chapter 10: Road Drainage and the Water Environment** Part A [APP-050] and **Chapter 10: Road Drainage and the Water Environment** Part B [APP-051] and **Outline Construction Environmental Management** Plan (Outline CEMP) [APP-346] for controlling sediment and pollutants in surface water runoff would be applicable for the changes to the temporary and permanent earthworks. With these measures in place, there would no change to the outcomes of the water quality assessment.

Operation - Water Quality

2.1.11 As the drainage design would not be altered, there would changes to the water quality assessment for the operation of the Scheme as presented in **Chapter 10: Road Drainage and the Water Environment** Part A [APP-050] and **Chapter 10:**

Road Drainage and the Water Environment Part B [APP-051].

Geology and Soils

Construction and Operation - Temporary and Permanent Land Take

2.1.12 There would be no change to the temporary and permanent land take and therefore the assessment presented in **Chapter 11: Geology and Soils** Part A [APP-052] and **Chapter 11: Geology and Soils** Part B [APP-053] would remain the same.

Construction - Material Re-use and Pollution to Controlled Water Bodies

2.1.13 The mitigation set out **Chapter 11: Geology and Soils** Part A [APP-052] and **Chapter 11: Geology and Soils** Part B [APP-053] and **Outline CEMP** [APP-346] for the re-use of materials and control of potential contaminants would be applicable for the changes to the temporary and permanent earthworks. With these measures in place, there would be no change to the outcomes of the assessment.

Population and Human Health

Construction and Operation - Temporary and Permanent Land Take

2.1.14 There would be no change to the temporary and permanent land take and therefore the assessment presented in **Chapter 12: Population and Health** Part A [APP-054] and **Chapter 12: Population and Human Health** Part B [APP-055] would remain the same.

Construction and Operation - Recreational Journey Amenity

2.1.15 There would be no significant changes to recreational journey amenity as presented in **Chapter 12: Population and Human Health** Part A [APP-054] and **Chapter 12: Population and Human Health** Part B [APP-055]. The assessment of recreational journey amenity has considered changes to amenity along the length of the Scheme for walkers, cyclists and horse-riders. There would be no material changes to journey recreational amenity based on the Design Manual for Bridges (DMRB) Volume 11, Section 3, Part 8: Pedestrians, Cyclists, Equestrians and Community Effects criteria for population and human health. The latest DMRB guidance (LA112 Population and Human Health) does not require recreational journey amenity to be assessed.

Construction - Direct, Indirect and Induced Job Generation

2.1.16 Based on professional judgement, there would be no change to the assessment of significance for economy and employment as presented in **Chapter 12: Population and Human Health** Part A [APP-054] and **Chapter 12: Population and Human Health** Part B [APP-055].

Construction and Operation - Human Health

2.1.17 As there would be no changes to the assessment of significance for air quality, noise and vibration as well as road drainage and the water environment, there would be no change to the assessment of significance for human health as reported in **Chapter 12: Population and Human Health** Part A [APP-054] and **Chapter 12: Population and Human Health** Part B [APP-055].

Materials Resources

Operation

2.1.18 The operational consumption of materials and generation of waste would be minimal based on professional judgement and assessments of similar schemes. Therefore, the operational materials and waste assessment would remain the same as reported in **Chapter 13: Material Resources** Part A [APP-056] and **Chapter 13: Material Resources** Part B [APP-057].

Climate

Construction – Greenhouse Gas Emissions

2.1.19 The changes to the temporary and permeant earthworks would reduce imported material or disposal to landfill which would reduce the adverse impacts of the Scheme on greenhouse gas emissions. However, there would not be a substantial enough change to alter the assessment of significance presented in **Chapter 14: Climate** Part A [APP-058] and **Chapter 14: Climate** Part B [APP-059]. Additionally, the assessment reported in **Chapter 14: Climate** Part A [APP-058] and **Chapter 14: Climate** Part B [APP-059] presents a worst-case scenario when compared to the proposed changes to the earthworks.

Operation - Greenhouse Gas Emissions

2.1.20 As there would be no change to the alignment of the Scheme and traffic data, there would be no change to the operational greenhouse gas assessment presented in **Chapter 14: Climate** Part A [APP-058] and **Chapter 14: Climate** Part B [APP-059].

Construction and Operation - Vulnerability of the Scheme to Climate Change

2.1.21 The mitigation set out in **Chapter 14: Climate** Part A [APP-058] and **Chapter 14: Climate** Part B [APP-059] and **Outline CEMP** [APP-346] for futureproofing the Scheme for climate change would be applicable for the changes to the temporary and permanent earthworks. With these measures in place, there would no change to the outcomes of the assessment.

Combined and Cumulative Assessment

Construction and Operation - Within Topic Combined Effects Assessment

2.1.22 The Within Topic combined effects assessment considers the effects of both Part A and Part B on the same common sensitive receptor in an individual environmental topic. As the further assessment work will assess the Scheme as a whole (i.e. Part A and Part B together), a Within Topic combined effects assessment is not required.

Construction and Operation - Cross Topic Combined Effects Assessment

2.1.23 As there would be no change to the assessment of significance for all environmental topics with the changes to the temporary and permanent earthworks, there would not be a change to the assessment of Cross Topic combined effect presented in **Chapter 16: Assessment of Cumulative Effects** [APP-062].

Construction and Operation - Cumulative Effects Assessment

2.1.24 As there would be no change to the assessment of significance for all

environmental topics with the changes to the temporary and permanent earthworks, there would not be a change to the cumulative effect's assessment presented in **Chapter 16: Assessment of Cumulative Effects** of the ES [APP-062].

Changes to the Application

2.1.25 The changes to the application documents would be set out in a report and documents would be updated, if required, as detailed in **Table 2**. However, the proposed changes to the earthworks would not involve an addition to the Order land and the sensitivity assessment indicates that the changes would not be likely to generate new or materially different environmental impacts. Taking into account the guidance in section 2 of Advice Note Sixteen, it is therefore not anticipated that the proposed changes to earthworks would constitute a material change to the Application.

Table 2 - Documents to be updated for changes to the temporary and permanent earthworks

Document	Proposed Update
The draft DCO [APP-014]	The tailpiece to Schedule 1 would be updated if required to reflect the proposed earthworks strategy. Schedule 8 would also be updated to reflect any necessary changes to the use of land of which temporary possession may be taken.
Statement of Reasons [APP-018]	The description of the use of the land would be updated.
Case for the Scheme [APP-344]	The Case for the Scheme would need to be updated if the sensitivity assessment predicted that there would be a change on compliance with policy.
Outline CEMP [APP-346]	This would need to be updated if there was a change in required mitigation as a result of the sensitivity assessment.
Figure 7.8: Landscape Mitigation Masterplan for Part A [APP-095]	This would need to be updated to reflect changes in the temporary and permanent earthworks.
Figure 7.10: Landscape Mitigation Masterplan for Part B [APP-144]	This would need to be updated to reflect changes in the temporary and permanent earthworks.
Figure 7.14: Landscape Mitigation Masterplan including Assessment Parameter 3 for Part B [APP-148]	This would need to be updated to reflect changes in the temporary and permanent earthworks.
Book of Reference [OD-002]	The description of temporary and permanent land take would need to be updated.
National Policy Statement for National Networks Accordance Table [APP-345]	The accordance table would need to be updated if the sensitivity assessment predicted that there would be a change on compliance with policy.

Document	Proposed Update
Lands Plans [APP-006]	This would need to be updated to reflect changes in the temporary and permanent earthworks
Works Plan [APP-007]	This would need to be updated to reflect changes in the temporary and permanent earthworks
General Arrangement [APP-008]	This would need to be updated to reflect changes in the temporary and permanent earthworks
Rights of Way and Access Plans [APP-009]	This would need to be updated to reflect changes in the temporary and permanent earthworks
Consultation Report [APP-0221]	The Consultation Report will be updated to include consultation undertaken on the change to the proposals.

Consultation

2.1.26 As detailed in Advice Note 16, an applicant who intends to make a request for a material change to a DCO application is expected to consult all those prescribed in the Planning Act 2008 under section 42(a) to (d) who would be affected by the proposed change (giving a minimum of 28 days). Even if a requested change is non material, paragraph 2.5 of Advice Note 15 advises that there may still be a need, in the interests of fairness, to carry out consultation. Applicants are recommended to consider whether consultation is required to enable affected persons to make representations on the changes to the application.

2.1.27 The proposed change to the earthworks would not require additional land. Based on the scoping exercise, the changes would not be likely to generate new or materially different environmental impacts. The Applicant therefore does not consider that these changes would constitute a material change to the Application. Nevertheless, affected landowners may have an opinion on the earthworks strategy and the Applicant therefore considers it appropriate to undertake consultation in order that they have the opportunity to make representations. As detailed in **paragraph 3.1.1**, consultation will therefore be undertaken with all persons prescribed under Section 42 of the 2008 Act will be undertaken between 29 January 2021 – 25 February 2021.

2.1.28 The consultation will also be consistent with the procedures under The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017.

2.2 Land Stabilisation North of the River Coquet – Part A

2.2.1 The DCO application was submitted on 7th July 2020. As is normal with an infrastructure project of this nature, further detailed ground investigation and design has been undertaken in parallel with the DCO application process. It was identified in December 2019 that supplementary ground investigation would be required to inform the detailed design work for the Scheme. This ground investigation was undertaken between January and May 2020 with the first draft report being issued on 17 July 2020 (i.e. after the application had been submitted). The results were reported and reviewed over the summer, with the latest report being issued on 2 December 2020.

2.2.2 The review of the available geological and geotechnical information, including the reporting of the ground investigation works undertaken earlier in 2020, has identified that the north slope of the River Coquet Valley is suffering from instability which, without treatment, could cause a failure in the slope during the construction and operation of the new bridge and could also have a detrimental impact on the existing bridge structure.

2.2.3 Whilst detailed design has not yet taken place, a number of options have been considered to address the instability and a number of piling configurations have been considered. The proposed solution is that it will comprise spaced bored piles, ensuring the stability of the northern valley sides and allowing the new pier foundation to be installed.

2.2.4 The proposal would comprise two rows of spaced piles to the north side of the proposed pier location and a third row to the south side as shown in the **Permanent Works at the River Coquet** figure in **Appendix A**. All of the permanent piling works are currently proposed to stay within the existing Order limits of Part A. However, carrying out the piling works within the existing Order limits of Part A would present engineering challenges. It is therefore necessary to expand the Order limits to provide temporary working areas in order to ensure that the proposed stabilisation construction works can be carried out.

2.2.5 The stabilisation works on the slope will include scour protection along the river's edge on the north bank of the River Coquet to provide erosion protection to the lower stabilisation piles to avoid further works during the design life of the structure, which is 120 years.

2.2.6 Should the erosion protection measures only be installed along the riverside within the current Order limits, it is highly likely that further significant engineering interventions and erosion protection measures would be required in the future in order to protect the new bridge foundations from undermining and slope instability. Therefore, in order to provide robust erosion protection and prevent a deterioration of the toe of the slope of the North bank of the River Coquet over time, it is proposed that rights are acquired for installation and retention of scour protection in additional land that extends beyond the current Order limits, the extent of this additional land is shown in the **Temporary Works at the River Coquet** in **Appendix A**.

2.2.7 As noted above, in order to install the piles and bank scour protection, additional temporary land is required for working areas as well as for construction access, including appropriate clearance to provide access to the piling works.

2.2.8 The land within the extended Order limits would be used for the provision of working platforms and access routes to and around the platforms for use by the plant and equipment required for the construction process. Given the nature of the required works, this could not be carried out within the existing Order limits. The extended limits will also support the movement of the equipment around the piles (once installed) to the rest of the works in the area in this challenging topography. The formation of the accesses and platforms will involve the localised grading of areas, as well as the cutting and filling of several benches within the existing slope.

2.2.9 Construction of the bank scour protection and temporary lower piling platform is likely to require works within the river. Mitigation for these temporary works will be considered as part of the sensitivity assessment and incorporated into the **Outline CEMP** [APP-346].

2.2.10 The proposed temporary use of land outside the current Order limits for the installation works would lead to the loss of woodland within the Coquet River Felton Park Local Wildlife Site (LWS). There may therefore be a requirement for additional compensatory habitat outside the Order limits. The maximum extent of the additional compensatory habitat would be approximately 3.4 ha in accordance with the approach detailed in Ancient Woodland Strategy Part A [APP-247]. Consultation is proposed with Northumberland County Council and Natural England to agree the approach that will be taken. A potential location for compensation land is shown on the **Potential Compensatory Habitat Location** figure in **Appendix A** and will require an extension of the Order limits in that location.

2.2.11 For the purposes of understanding how the proposed land stabilisation north of the River Coquet differs from those already contained in the Application, drawings of the proposed stabilisation works are provided in the **Permanent Works at the River Coquet** figure in **Appendix A**.

2.2.12 The benefits for this proposed change would be to:

a. Protect the River Coquet Site of Special Scientific Interest (SSSI) from damage in the future resulting from slope movements and deposition of large quantities of material into the watercourse.
b. Stabilise the northern slope such that the new bridge foundations are not adversely impacted by slope instability movement.
c. Stabilise the northern slope such that the existing bridge is not impacted by slope movement in the future.
d. Provide a position from which traditional foundations can be constructed for the northern pier and abutment.
e. Provide stabilisation of the slope such that the new bridge would not be destabilised.

2.2.13 A sensitivity assessment of the impact of including the land stabilisation works in the powers contained within the draft DCO [APP-014] is being undertaken to enable the consequences in terms of the environmental impacts already assessed to be understood. The aim of the assessment will be to consider whether the proposed land stabilisation works would alter the conclusions of the environmental impact assessment already undertaken. This will be concluded by and reported at

Deadline 4 (12 March 2021).

2.2.14 The scope of this sensitivity assessment and expected outcomes is shown in **Table 3** below, which represent preliminary indications subject to a fuller assessment.

Table 3 - Land stabilisation north of the River Coquet desktop sensitivity test

Aspect of Assessment	Construction / Operation	Likely Change to Significant Effects Y/N	Further Assessment likely required to Confirm Significance Y/N
Air Quality			
Dust and particulate matter from additional construction works	Construction	N	Y
Emissions from construction traffic	Construction	N	N
Emissions from operational traffic	Operation	N	N
Noise and Vibration			
Noise generated from construction activities	Construction	N	Y
Vibration generated from construction activities	Construction	N	Y
Noise from construction traffic	Construction	N	N
Noise from operational traffic	Operation	N	N
Landscape and Visual			
Changes to landscape character	Construction and operation	N	N
Changes to visual amenity	Operation and operation	N	Y
Cultural Heritage			

Aspect of Assessment	Construction / Operation	Likely Change to Significant Effects Y/N	Further Assessment likely required to Confirm Significance Y/N
Changes to the setting of heritage assets	Construction and operation	N	Y
Changes to below ground archaeology	Construction and operation	N	Y
Changes to historic landscapes	Construction and operation	N	Y
Biodiversity			
Impacts on Statutory and non-statutory sites	Construction and operation	N	Y
Changes to habitats	Construction and operation	N	Y
Impacts on protected and notable species	Construction and operation	N	Y
Changes to Biodiversity No Net Loss Assessment	Construction and operation	N/A	Y
Road Drainage and the Water Environment			
Changes to flood risk	Construction and operation	N	N
Changes to water quality	Construction	N	Y
Changes to groundwater flow patterns and levels	Construction and operation	N	Y
Changes to fluvial geomorphology	Construction and operation	N	Y
Geology and Soils			
Changes to land take	Construction and operation	N	Y

Aspect of Assessment	Construction / Operation	Likely Change to Significant Effects Y/N	Further Assessment likely required to Confirm Significance Y/N
Changes to land instability	Construction and operation	N	Y
Pollution of controlled waters	Construction	N	N
Population and Human Health			
Changes to temporary land use	Construction	N	N
Changes to permanent land take due to additional compensatory habitat	Operation	N	Y
Changes to recreational journey amenity	Construction and operation	N	N
Changes to direct, indirect and induced job generation	Construction	N	N
Changes to human health determinants	Construction and operation	N	N
Material Resources			
Consumption of materials	Construction	N	Y
Generation and disposal of waste to landfill	Construction	N	Y
Consumption of materials	Operation	N	N
Generation and disposal of waste to landfill	Operation	N	N
Climate			

Aspect of Assessment	Construction / Operation	Likely Change to Significant Effects Y/N	Further Assessment likely required to Confirm Significance Y/N
Effect of the Scheme on climate (Carbon / GHG) due to consumption of materials and transportation of materials	Construction	N	Y
Effect of the operation of the Scheme on climate (Carbon / GHG) due to end-user traffic and maintenance, repair and refurbishment.	Operation	N	N
Vulnerability of the Scheme to climate change	Construction and operation	N	N
Combined and Cumulative Assessment			
Assessment of Within Topic Combined Effects	Construction and Operation	N	N
Assessment of Cross Topic Combined Effects	Construction and Operation	N	N
Assessment of Cumulative Effects	Construction and Operation	N	N

2.2.15 A justification for the aspects of the assessments that would not require further assessment is provided below. The aspects of the assessments not discussed below have been scoped into the sensitivity assessment as shown in **Table 3**. However, where all aspects of the assessments have been scoped into the sensitivity assessment this is stated in the section below for completeness.

Air Quality

Construction Traffic

2.2.16 There would be extra construction vehicles due to the proposed land stabilisation works, but in the context of the Scheme these additional vehicle movements would be minimal. Therefore, there would not be a change in the assessment of significance for construction traffic emissions as presented in **Chapter 5: Air**

Quality Part A[APP-040].

Operational Traffic

2.2.17 The Scheme alignment and traffic data would remain the same with the land stabilisations works, meaning there would be no change to the operational air quality assessment presented in **Chapter 5: Air Quality** Part A [APP-040].

Noise and Vibration

Construction Traffic

2.2.18 There would be extra construction vehicles due to the proposed land stabilisation works, but in the context of the Scheme these additional vehicle movements would be minimal. Therefore, there would not be a change in the assessment of significance for construction traffic noise as presented in **Chapter 6: Noise and Vibration** Part A [APP-042].

Operational Traffic

2.2.19 The Scheme alignment and traffic data would remain the same with the land stabilisations works, meaning there would be no change to the operational noise and vibration assessment presented in **Chapter 6: Noise and Vibration** Part A [APP-042].

Landscape and Visual

Construction and Operation - Landscape Character

2.2.20 The land stabilisation works would not change the assessment of significance for landscape character as presented in the **Chapter 7: Landscape and Visual** Part A [APP-088]. The limited removal of woodland associated with the River Coquet valley would not be a substantially change to the perception of landscape character.

Cultural Heritage

2.2.21 No elements of the cultural heritage assessment have been scoped out of the sensitivity assessment. Additional work for both the construction and operational phases of the Scheme would be required as a result of the compensatory land described in **paragraph 2.2.102.2.10** of this document.

Biodiversity

2.2.22 No elements of the biodiversity assessment have been scoped out of the sensitivity assessment. There would not be a change in the assessment of significance as presented in **Chapter 9: Biodiversity** Part A [APP-048], with the inclusion of suitable mitigation and compensation. The mitigation and compensation will be progressed as part of the sensitivity assessment.

Road Drainage and the Water Environment

Construction and Operation - Flood Risk

2.2.23 As there are minimal changes to the Scheme design next to the watercourse, based on professional judgement, there would be no changes to the assessment of flood risk effects. The nearest flood risk receptors are Shothaugh Farm High Cottage and Otter House located approximately 800 m upstream of the River

Coquet bridge. The rip rap is not considered to increase the local flood risk to these receptors. Therefore, the flood risk assessment detailed in **Appendix 10.1: Flood Risk Assessment** Part A [APP-254] and **Chapter 10: Road Drainage and the Water Environment** Part A [APP-050] would remain the same. The measures set out in the **Outline CEMP** [APP-346] would also be applicable for the construction access, in particular the measures to reduce risk to construction workers during flood events.

Geology and Soils

Construction - Pollution of Controlled Waters

2.2.24 The mitigation set out in **Chapter 11: Geology and Soils** Part A [APP-052] and **Outline CEMP** [APP-346] for the management of potential contaminants would be applicable for the land stabilisation works to the north of River Coquet. With these measures in place, there would be no change to the outcomes of the assessment for the pollution of controlled waters.

Population and Human Health

Construction - Temporary Land Take

2.2.25 Due to the location of the additional temporary land take (i.e. located within Coquet River Felton Park LWS), the stabilisation works would not affect the viability of any agricultural businesses during construction. Therefore, the assessment of temporary land take on agricultural businesses would remain the same as presented in **Chapter 12: Population and Human Health** Part A [APP-054].

Construction and Operation - Recreational Journey Amenity

2.2.26 The proposed stabilisation works would not affect the assessment of recreational journey amenity presented in **Chapter 12: Population and Human Health** Part A [APP-054]. This is because there would already be disturbance at this location during the construction of the Scheme.

Construction - Direct, Indirect and Induced Job Generation

2.2.27 Based on professional judgement, there would be no change to the assessment of significance for economy and employment as presented in **Chapter 12: Population and Human Health** Part A [APP-054].

Construction and Operation - Human Health

2.2.28 As there would be no changes to the assessment of significance for air quality, noise and vibration as well as road drainage and the water environment, there would be no change to the assessment of significance for human health reported in **Chapter 12: Population and Human Health** Part A [APP-054].

Materials Resources

Operation

2.2.29 The operational consumption of materials and generation of waste would be minimal based on professional judgement and assessments of similar schemes. Therefore, the operational assessment for materials and waste would remain the same as reported in **Chapter 13: Material Resources** Part A [APP-056].

Climate

Operation - Greenhouse Gas Emissions

2.2.30 As there would be no change to the alignment of the Scheme and traffic data, there would be no change to the operational greenhouse gas assessment presented in **Chapter 14: Climate** Part A [APP-058].

Construction and Operation - Vulnerability of the Scheme to Climate Change

2.2.31 The mitigation set out in **Chapter 14: Climate** Part A [APP-058] and **Outline CEMP** [APP-346] for futureproofing the Scheme for climate change would be applicable for the land stabilisation works. With these measures in place, there would no change to the outcomes of the assessment.

Combined and Cumulative Assessment

Construction and Operation - Within Topic Combined Effects

2.2.32 As the further assessment work will assess the Scheme as whole (i.e. Part A and Part B together), a Within Topic combined effects assessment is not required.

Construction and Operation - Cross Topic Combined Effects

2.2.33 As there would be no change to the assessment of significance for all environmental topics due to the land stabilisations works, there would not be a change to the Cross Topic combined effects assessment presented in **Chapter 16: Assessment of Cumulative Effects** [APP-062].

Construction and Operation - Cumulative Effects

2.2.34 As there would be no change to the assessment of significance for all environmental topics due to the land stabilisations works, there would not be a change to the cumulative effect's assessment presented in **Chapter 16: Assessment of Cumulative Effects** [APP-062].

Changes to the Application

2.2.35 The changes to the application documents would be set out in a report and documents would be updated, if required, as detailed in **Table 4**.

Table 4 - Documents to be updated for land stabilisation north of the River Coquet

Document	Proposed Update
The draft DCO [APP-014]	Schedule 8 will require to be updated to include additional temporary land. There may also be a need for additional new rights for maintenance access in terms of Schedule 6.
Statement of Reasons [APP-018]	The Statement of reasons would need to be updated to include the additional plots to be acquired.
Case for the Scheme [APP-344]	The Case for the Scheme would need to be updated if the sensitivity assessment predicted that there would be a change on compliance with policy.
Appendix 9.24: Great Crested Newt Method	This may need to be updated to reflect changes in the Great Crested Newt method statement.

Document	Proposed Update
Statement River Coquet Part A [APP-250]	
Appendix 9.20 Biodiversity No Net Loss Assessment Part A	This may need to be updated to reflect changes in biodiversity no net loss.
Appendix 9.21: Ancient Woodland Strategy Part A [APP-247]	This would need to be updated to reflect changes in the ancient woodland strategy.
Figure 7.8: Landscape Mitigation Masterplan for Part A [APP-095]	This would need to be updated to reflect changes in the landscape design.
Book of Reference [OD-002]	The description of temporary and permanent land take would need to be updated.
National Policy Statement for National Networks Accordance Table [APP-345]	The accordance table would need to be updated if the sensitivity assessment predicted that there would be a change on compliance with policy.
Appendix 10.2: Water Framework Directive Part A [APP-255]	This would need to be updated to reflect changes in the Water Framework Directive assessment.
Habitat Regulations Assessment Report [APP-342]	This would need to be updated to reflect changes in the Habitat Regulation Assessment Report.
Outline CEMP [APP-346]	This would need to be updated if there was a change in required mitigation as a result of the sensitivity assessment.
Lands Plans [APP-006]	This would be updated to reflect changes in temporary and permanent land take.
Works Plan [APP-007]	This would be updated to reflect changes in temporary and permanent land take.
General Arrangement [APP-008]	This would be updated to reflect changes in temporary and permanent land take.
Traffic Regulation Plan [APP-010]	This would be updated to reflect changes in temporary access.
Consultation Report [APP-0221]	The Consultation Report will be updated to include consultation undertaken on the change to the proposals.

Consultation

2.2.36 As detailed in Advice Note 16, an applicant who intends to make a request for a material change to a DCO application is expected to consult all those prescribed in the Planning Act 2008 under section 42(a) to (d) who would be affected by the

proposed change (giving a minimum of 28 days. As the proposed change would include the acquisition of additional ground, it would be a material change. The Applicant proposes to consult relevant statutory bodies, including Environment Agency, Natural England and Northumberland County Council, as well as landowners on the proposals of land stabilisation to the north of River Coquet. Consultation with these relevant statutory bodies has started and is ongoing. As detailed in **paragraph 3.1.1**, consultation with all persons prescribed under Section 42 of the 2008 Act will be undertaken between 29 January 2021 – 25 February 2021.

2.2.37 The consultation will also be consistent with the procedures under The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017.

2.3 Construction access to the south bank from the north bank

2.3.1 The proposed works noted in **Section 2.2** of this document present an opportunity to provide a temporary access to the southern bank of the River Coquet by crossing the river from the temporary works on the northern bank instead of creating an access track down the southern river embankment as described in **Chapter 2 The Scheme** [APP-037]. The engineering solution for such a crossing is to use of a temporary bridge to span over the river. Temporary supports would be constructed on each side of the river then the main support beams would be assembled on the north bank and lifted into place, following which, the deck elements would be installed.

2.3.2 The works described in **Section 2.2** of this document include the construction of a temporary haul road which extends to the north riverbank. A temporary working area is already proposed on the south bank adjacent to the southern pier. It is proposed to include a temporary bridge to provide an access between these two working areas. A small area of additional temporary working area across the river will be required to provide this crossing, as shown in the **Temporary Works at the River Coquet** figure in **Appendix A**.

2.3.3 Whilst a detailed design of the solution is yet to be completed, in accordance with good engineering practicce it is expected that the solution would comprise a temporary 'open truss' type structure spanning the main river channel and seated on temporary supports each side of the river.

2.3.4 In addition, it is anticipated that there would be some temporary river training works along each riverbank, although it is intended that this should be optimised to comprise as much of the permanent scour protection works as is practicable, during the development of the detailed design of the Scheme. To the north bank the scour protection works are associated with the stabilisation requirements referred to in **paragraphs 2.2.1 to 2.2.11**. To the south, the Applicant is reviewing the need for scour protection on the southern bank in light of the latest ground investigation information and taking into account the presence of scour protection for the existing pier. Given prevailing ground conditions, such protection may be required in order to provide consistency with the existing structure which includes scour protection of the pier, and to assure the structural integrity of the new pier from the risk of channel movement over the design life. Erosion protection measures will also offer protection to the reinstated ground disturbed by the construction works close to the river edge. If required it is proposed to use rip-rap stone on the southern riverbank to act as erosion protection, although alternative options and potential refinements will be reviewed with relevant bodies through the design development. As a precaution, and in order to give fair notice of possible further changes, the maximum extent of the potential scour protection on the southern bank is shown on **Permanent Works at the River Coquet** figure in **Appendix A**.

2.3.5 The benefits for this proposed change would be to:

- **a.** Reduce impact on the southern bank SSSI by removing the need for vehicular access from the south.
- **b.** Reduce long-term impact to southern escarpment landscape
- **c.** Reduced spread of construction activity over the area, leaving some areas undisturbed and increasing coppicing only activity as opposed to full clearance

to preserve more of the SSSI. This undisturbed area equates to circa 500m^2. The additional area over the river is 360m^2, showing a net benefit of 140m^2.

2.3.6 A sensitivity assessment of the impact of including the changes to construction access to the south bank of the River Coquet in the powers contained within the draft DCO [APP-014] is being undertaken to enable the consequences in terms of the environmental impacts already assessed to be understood. The assessment will be to consider whether the proposed changes to the construction access for the south bank would alter the conclusions of the environmental impact assessment already undertaken. The construction access would only be altered if the stabilisation works described in **Section 2.2** of this document are taken forward. Therefore, the sensitivity assessment will only cover the effects of the construction access beyond that reported in **Section 2.2** of this document. This will be concluded by and reported at Deadline 4 (12 March 2021).

2.3.7 The scope of this sensitivity assessment and expected outcomes is shown in **Table 5** below, which represent preliminary indications subject to a fuller assessment.

Table 5 - Construction access to the south bank from the north bank of the River Coquet desktop sensitivity test

Aspect of Assessment	Construction / Operation	Likely Change to Significant Effects Y/N	Further Assessment likely required to Confirm Significance Y/N
Air Quality			
Dust and particulate matter from additional construction works	Construction	N	Y
Emissions from construction traffic	Construction	N	N
Emissions from operational traffic	Operation	N	N
Noise and Vibration			
Noise generated from construction activities	Construction	N	Y
Vibration generated from construction activities	Construction	N	Y
Noise from construction traffic	Construction	N	N

Aspect of Assessment	Construction / Operation	Likely Change to Significant Effects Y/N	Further Assessment likely required to Confirm Significance Y/N
Noise from operational traffic	Operation	N	N
Landscape and Visual			
Changes to landscape character	Construction and operation	N	N
Changes to visual amenity	Construction	N	Y
Changes to visual amenity	Operation	N	N
Cultural Heritage			
Changes to the setting of heritage assets	Construction and operation	N	N
Changes to below ground archaeology	Construction and operation	N	N
Changes to historic landscapes	Construction and operation	N	N
Biodiversity			
Impacts on Statutory and non-statutory sites	Construction	N	Y
Impacts on Statutory and non-statutory sites	Operation	N	N
Changes to habitats	Construction	N	Y
Changes to habitats	Operation	N	N
Impacts on protected and notable species	Construction	N	Y
Impacts on protected and notable species	Operation	N	N

Aspect of Assessment	Construction / Operation	Likely Change to Significant Effects Y/N	Further Assessment likely required to Confirm Significance Y/N
Changes to Biodiversity No Net Loss Assessment	Construction	N/A	Y
Changes to Biodiversity No Net Loss Assessment	Operation	N	N
Road Drainage and the Water Environment			
Changes to flood risk	Construction	N	N
Changes to flood risk	Operation	N	N
Changes to water quality	Construction	N	Y
Changes to water quality	Operation	N	N
Changes to groundwater flow patterns and levels	Construction	N	Y
Changes to groundwater flow patterns and levels	Operation	N	N
Changes to fluvial geomorphology	Construction	Y	Y
Changes to fluvial geomorphology	Operation	N	N
Geology and Soils			
Changes to land take	Construction	N	N
Changes to land take	Operation	N	N
Pollution of controlled waters	Construction	N	N

Aspect of Assessment	Construction / Operation	Likely Change to Significant Effects Y/N	Further Assessment likely required to Confirm Significance Y/N
Pollution of controlled waters	Operation	N	N
Population and Human Health			
Changes to temporary land use	Construction	N	N
Changes to permanent land take	Operation	N	N
Changes to recreational journey amenity	Construction	N	N
Changes to recreational journey amenity	Operation	N	N
Recreation along the River Coquet	Construction	N	Y
Recreation along the River Coquet	Operation	N	N
Changes to direct, indirect and induced job generation	Construction	N	N
Changes to direct, indirect and induced job generation	Operation	N	N
Changes to human health determinants	Construction	N	N
Changes to human health determinants	Operation	N	N
Material Resources			
Consumption of materials	Construction	N	Y

Aspect of Assessment	Construction / Operation	Likely Change to Significant Effects Y/N	Further Assessment likely required to Confirm Significance Y/N
Generation and disposal of waste to landfill	Construction	N	Y
Consumption of materials	Operation	N	N
Generation and disposal of waste to landfill	Operation	N	N
Climate			
Effect of the Scheme on climate (Carbon / GHG) due to consumption of materials and transportation of materials	Construction	N	Y
Effect of the operation of the Scheme on climate (Carbon / GHG) due to end-user traffic and maintenance, repair and refurbishment.	Operation	N	N
Vulnerability of the Scheme to climate change	Construction	N	N
Vulnerability of the Scheme to climate change	Operation	N	N
Combined and Cumulative Assessment			
Assessment of Within Topic Combined Effects	Construction and Operation	N	N
Assessment of Cross Topic Combined Effects	Construction	N	Y

Aspect of Assessment	Construction / Operation	Likely Change to Significant Effects Y/N	Further Assessment likely required to Confirm Significance Y/N
Assessment of Cross Topic Combined Effects	Operation	N	N
Assessment of Cumulative Effects	Construction	N	N
Assessment of Cumulative Effects	Operation	N	N

2.3.8 A justification for the aspects of the assessments that would not require further assessment is provided below. The aspects of the assessments not discussed below have been scoped into the sensitivity assessment as shown in **Table 5**. However, where all aspects of the assessments have been scoped into the sensitivity assessment this is stated in the section below for completeness.

Air Quality

Construction Traffic

2.3.9 There would be extra construction vehicles due to the changes to the construction access for the south bank of the River Coquet, but in the context of the Scheme these additional vehicle movements would be minimal. Therefore, there would not be a change in the assessment of significance for construction traffic emissions as presented in **Chapter 5: Air Quality** Part A [APP-040].

Operational Traffic

2.3.10 The Scheme alignment and traffic data would remain the same with the changes to the construction access, meaning there would be no change to the operational air quality assessment presented in **Chapter 5: Air Quality** Part A [APP-040].

Noise and Vibration

Construction Traffic

2.3.11 There would be extra construction vehicles due to changes to the construction access for the south bank of the River Coquet, but in the context of the Scheme these additional vehicle movements would be minimal. Therefore, there would not be a change in the assessment of significance for construction traffic noise as presented in **Chapter 6: Noise and Vibration** Part A [APP-042].

Operational Traffic

2.3.12 The Scheme alignment and traffic data would remain the same with the changes to the construction access, meaning there would be no change to the operational noise and vibration assessment presented in **Chapter 6: Noise and Vibration** Part A [APP-042].

Landscape and Visual

Construction and Operation - Landscape Character

2.3.13 The changes to the construction access for the south bank of the River Coquet would not change the assessment of significance for landscape character as presented in the **Chapter 7: Landscape and Visual** Part A [APP-088].

Cultural Heritage

Construction

2.3.14 Due to the topography and nature of the works, the proposed changes to the construction access would not affect the assessment of significance for cultural heritage as presented in **Chapter 8: Cultural Heritage** Part A [APP-046].

Operation

2.3.15 As the works are temporary, there would not be a change in the assessment of significance as presented in **Chapter 8: Cultural Heritage** Part A [APP-046] during operation.

Biodiversity

Construction

2.3.16 No elements of the biodiversity assessment have been scoped out of the sensitivity assessment. There would not be a change in the assessment of significance as presented in **Chapter 9: Biodiversity** Part A [APP-048], with the inclusion of suitable mitigation. The mitigation will be progressed as part of the sensitivity assessment.

Operation

2.3.17 As the works are temporary, there would not be a change in the assessment of significance as presented in **Chapter 9: Biodiversity** Part A [APP-048] during operation.

Road Drainage and the Water Environment

Construction and Operation – Flood Risk

2.3.18 During construction and operation, the proposals may increase flood levels locally but this would not change the assessment of flood risk presented in **Appendix 10.1: Flood Risk Assessment** Part A [APP-254] and **Chapter 10: Road Drainage and the Water Environment** Part A [APP-050] due to the distance between the proposals and closest receptors. The nearest flood risk receptors are Shothaugh Farm High Cottage and Otter House located approximately 800 m upstream of the River Coquet bridge. The measures set out in the **Outline CEMP** [APP-346] would also be applicable for the construction access, in particular the measures to reduce risk to construction workers during flood events.

Operation

2.3.19 As the works are temporary, there would not be a change in the assessment of significance as presented in **Chapter 10: Road Drainage and the Water Environment** Part A [APP-050] during operation.

Geology and Soils

Construction

2.3.20 The mitigation set out in **Chapter 11: Geology and Soils** Part A [APP-052] and **Outline CEMP** [APP-346] for the management of potential contaminants would be applicable for the construction access across for the south bank of the River Coquet. With these measures in place, there would be no change to the outcomes of the assessment for the pollution of controlled waters.

Operation

2.3.21 As the works are temporary, there would not be a change in the assessment of significance as presented in **Chapter 11: Geology and Soils** Part A [APP-052] during operation.

Population and Human Health

Construction - Temporary Land Take

2.3.22 The construction access would require temporary rights over the River Coquet but would not require additional temporary or permanent land take. Therefore, the assessment of land take presented in **Chapter 12: Population and Human Health** Part A [APP-054] would remain the same.

Construction - Recreational Journey Amenity

2.3.23 The proposed changes to the construction access would not affect the assessment of recreational journey amenity presented in **Chapter 12: Population and Human Health** Part A [APP-054]. This is because there would already be disturbance at this location during the construction of the Scheme.

Construction - Direct, Indirect and Induced Job Generation

2.3.24 Based on professional judgement, there would be no change to the assessment of significance for economy and employment as presented in **Chapter 12: Population and Human Health** Part A [APP-054].

Construction – Human Health

2.3.25 As there would be no changes to the assessment of significance for air quality, noise and vibration as well as road drainage and the water environment, there would be no change to the assessment of significance for human health reported in **Chapter 12: Population and Human Health** Part A [APP-054].

Operation

2.3.26 As the works are temporary, there would not be a change in the assessment of significance as presented in **Chapter 12: Population and Human Health** Part A [APP-054] during operation.

Materials Resources

Operation

2.3.27 The operational consumption of materials and generation of waste would be minimal based on professional judgement and assessments of similar schemes. Therefore, the operational assessment for materials and waste would remain the same as reported in **Chapter 13: Material Resources** Part A [APP-056].

Climate

Operation - Greenhouse Gas Emissions

2.3.28 As there would be no change to the alignment of the Scheme and traffic data, there would be no change to the operational greenhouse gas assessment presented in **Chapter 14: Climate** Part A [APP-058].

Construction - Vulnerability of the Scheme to Climate Change

2.3.29 The mitigation set out in **Chapter 14: Climate** Part A [APP-058] and **Outline CEMP** [APP-346] for futureproofing the Scheme for climate change would be applicable for the construction access. With these measures in place, there would no change to the outcomes of the assessment.

Operation- Vulnerability of the Scheme to Climate Change

2.3.30 As the works are temporary, there would not be a change in the assessment of significance as presented in **Chapter 14: Climate** Part A [APP-058] during operation.

Combined and Cumulative Assessment

Construction and Operation - Within Topic Combined Effects

2.3.31 As the further assessment work will assess the Scheme as whole (i.e. Part A and Part B together), a Within Topic combined effects assessment is not required.

Construction and Operation - Cumulative Effects

2.3.32 There could potentially be a significant effect on fluvial geomorphology due to the changes in the construction access for the south bank of the River Coquet. However, due to the location of the cumulative schemes identified in **Chapter 16: Assessment of Cumulative Effect**s [APP-062], there would be no significant interaction between the Scheme and the cumulative schemes for the River Coquet.

Changes to the Application

2.3.33 The changes to the application documents would be set out in a report and documents would be updated, if required, as detailed in **Table 6**.

Table 6 - Documents to be updated for changes to construction access to the south bank from the north bank of the River Coquet

Document	Proposed Update
The draft DCO [APP-014]	Schedule 8 will require to be updated to include additional rights.
Statement of Reasons [APP-018]	The Statement of reasons would need to be updated to include the additional rights that would be required.
Case for the Scheme [APP-344]	The Case for the Scheme would need to be updated if the sensitivity assessment predicted that there would be a change on compliance with policy.

Document	Proposed Update
Appendix 9.21: Ancient Woodland Strategy Part A [APP-247]	This would need to be updated to reflect changes in the ancient woodland strategy.
Figure 7.8: Landscape Mitigation Masterplan for Part A [APP-095]	This would need to be updated to reflect changes in the landscape design.
Book of Reference [OD-002]	The description of the temporary rights would need to be updated.
National Policy Statement for National Networks Accordance Table [APP-345]	The accordance table would need to be updated if the sensitivity assessment predicted that there would be a change on compliance with policy.
Appendix 10.2: Water Framework Directive Part A [APP-255]	This would need to be updated to reflect changes in the Water Framework Directive assessment.
Habitat Regulations Assessment Report [APP-342]	This would need to be updated to reflect changes in the Habitat Regulation Assessment Report.
Appendix 9.20 Biodiversity No Net Loss Assessment Part A	This may need to be updated to reflect changes in biodiversity no net loss.
Outline CEMP [APP-346]	This would need to be updated if there was a change in required mitigation as a result of the sensitivity assessment.
Lands Plans [APP-006]	This would be updated to reflect changes in temporary rights.
Works Plan [APP-007]	This would be updated to reflect changes in temporary rights.
General Arrangement [APP-008]	This would be updated to reflect changes in temporary rights.
Traffic Regulation Plan [APP-010]	This would be updated to reflect changes in temporary access.
Consultation Report [APP-0221]	The Consultation Report will be updated to include consultation undertaken on the change to the proposals.

Consultation

2.3.34 As detailed in Advice Note 16, an applicant who intends to make a request for a material change to a DCO application is expected to consult all those prescribed in the Planning Act 2008 under section 42(a) to (d) who would be affected by the proposed change (giving a minimum of 28 days. As the proposed change would include the acquisition of additional ground, it would be a material change. As detailed in **paragraph 3.1.1**, consultation with all persons prescribed under Section 42 of the 2008 Act will be undertaken between 29 January 2021 – 25 February 2021.

2.3.35 The consultation will also be consistent with the procedures under The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017.

3 CONCLUSION AND PROPOSED NEXT STEPS

3.1.1 Taking into account the guidance in PINS Advice Note 16, it is proposed that:

a. The Applicant submits its proposal to make changes to the Application in document **TR010059** – (10 December 2020)

b. The Examining Authority should consider this procedural proposal and issue advice about the procedural implications of the proposed changes at or following the first preliminary meeting – (15 December 2020)

c. Sensitivity assessments of the is undertaken and consultation documentation is prepared:
- Changes to temporary and permanent earthworks;
- Land stabilisation north of the River Coquet; and
- Changes to construction access to the south bank of River Coquet from the north bank.

d. Consultation on proposed changes and updated environmental information – 29 January 2021 – 25 February 2021.

e. Submission of formal change request, together with full supporting documents at Deadline 4 – (12 March 2021)

f. Subsequent procedure will depend on whether the Infrastructure Planning (Compulsory Acquisition) Regulations 2010 are engaged. If the 2010 Regulations are engaged then the indicative timetable set out in **Table 7** is proposed.

Table 7 – Indicative Timetable

Procedure	Deadline
Deadline for decision on acceptance of change request	9 April 2021
Notice to affected persons	12 April 2021
First newspaper notice	15 April 2021
Second newspaper notice	22 April 2021
Deadline for representations	20 May 2021
Submission of Hydraulic modelling & geomorphological information to ExA	25 May 2021 Deadline 8
Issue of updated examination timetable and preliminary consideration of issues by ExA	3 June 2021
Issue of written questions by ExA	3 June 2021
Notification of hearing date by ExA (if required)	3 June 2021
Deadline for written representations and responses to written questions	10 June 2021
Date for response to written representations and comments	17 June 2021

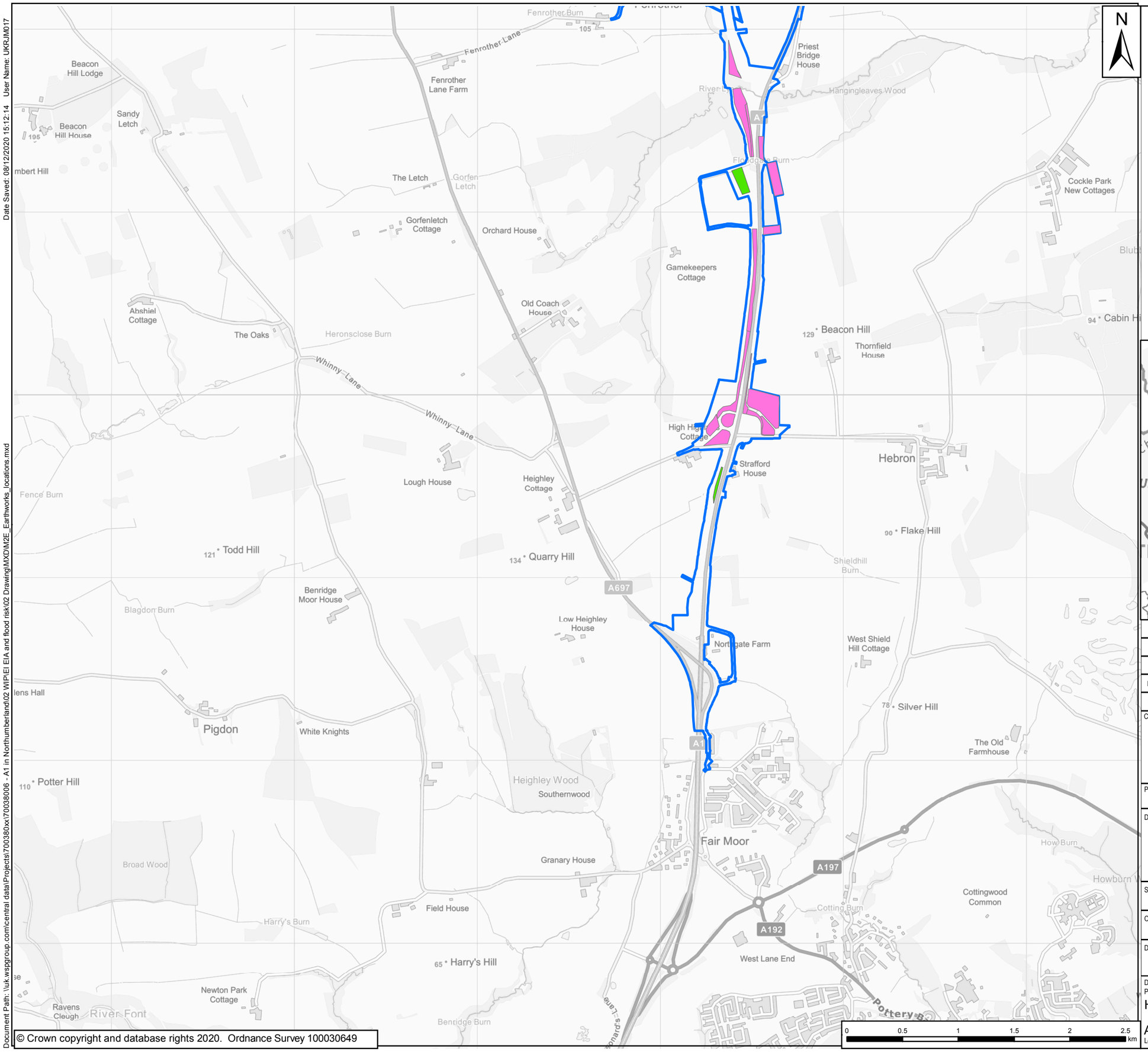
Procedure	Deadline
on responses to written questions	
Hearing date (if required)	24 June 2021
Deadline for post hearing submissions	2 July 2021 (existing deadline 11)

Appendix A: Figures

Indicative Earthwork Change Locations

Date Saved: 08/12/2020 15:12:14 User Name: UKRJM017

Document Path: \\uk.wspgroup.com\central data\Projects\70038oxx\70038006 - A1 in Northumberland\02 WIP\EI EIA and flood risk\02 Drawing\MXD\M2E_Earthworks_locations.mxd



© Crown copyright and database rights 2020. Ordnance Survey 100030649

Rev	Date	Description	By	Chk'd	App'd
P01	09/09/2020	First Issue	GH	LM	KS

Client: highways england

Project Title: A1 in Northumberland: Morpeth to Ellingham

Drawing Title: Indicative Earthwork Change Locations Page 1 of 5

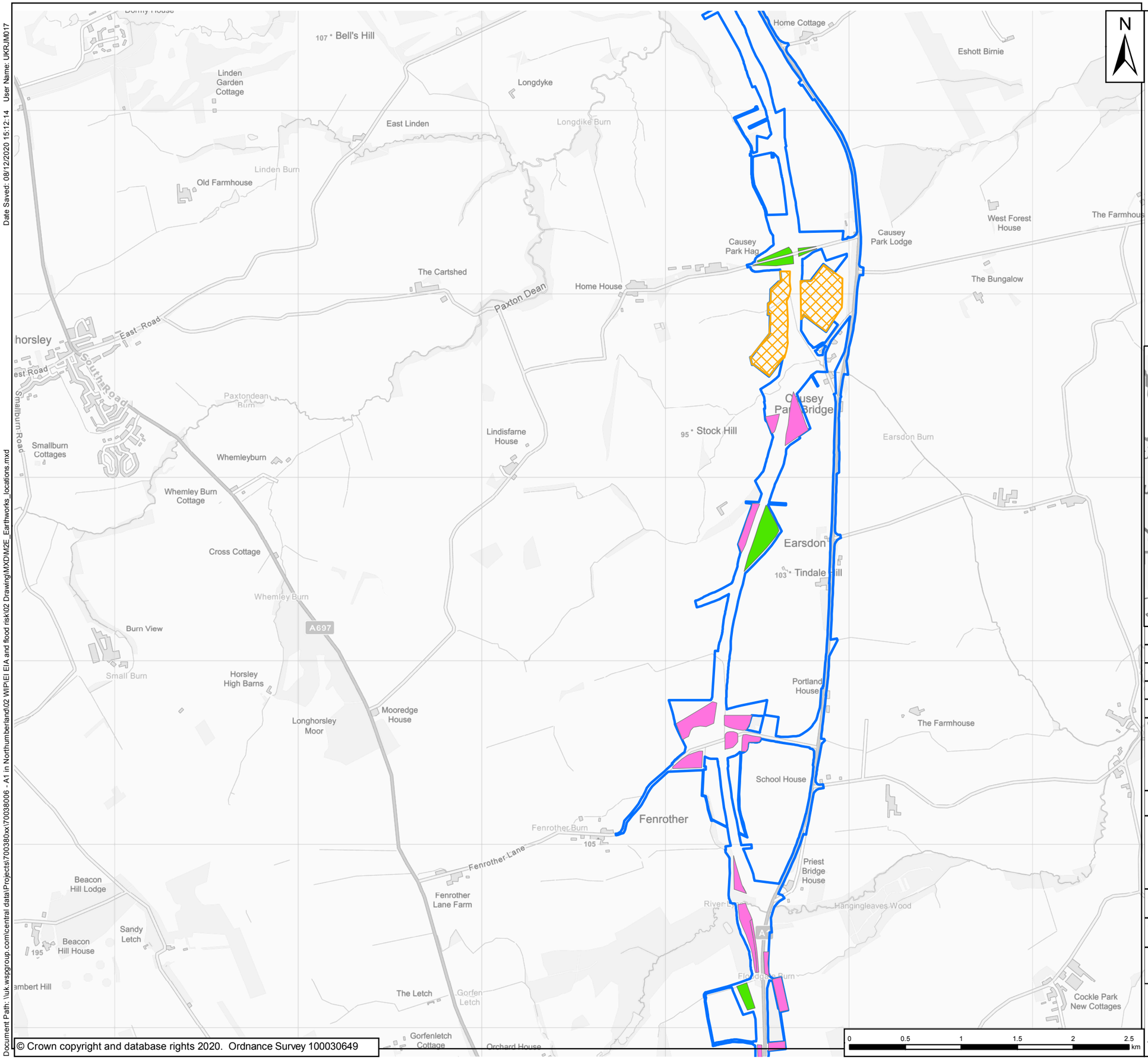
Scale	Drawn	Checked	Approved	Authorised
1:19,860	RM	LM	KS	DM
Original Size	**Date**	**Date**	**Date**	**Date**
A3	09/09/2020	09/09/2020	09/09/2020	09/09/2020

Drawing Status: For Information

Suitability: S1

Drawing Number Project	Originator	Volume	Project Ref. No.
HE551459	WSP		70044137
A2E Location	**RP Type**	**LE Role**	**2130 Number**

Revision: P01



P01	09/09/2020	First Issue	GH	LM	KS
Rev	Date	Description	By	Chk'd	App'd

Client: highways england

Project Title: A1 in Northumberland: Morpeth to Ellingham

Drawing Title: Indicative Earthwork Change Locations Page 2 of 5

Scale	Drawn	Checked	Approved	Authorised
1:19,860	RM	LM	KS	DM
Original Size	**Date**	**Date**	**Date**	**Date**
A3	09/09/2020	09/09/2020	09/09/2020	09/09/2020

Drawing Status: For Information

Suitability: S1

Drawing Number: Project HE551459 | Originator WSP | Volume

Project Ref. No.: 70044137

A2E Location | RP Type | LE Role | 2130 Number

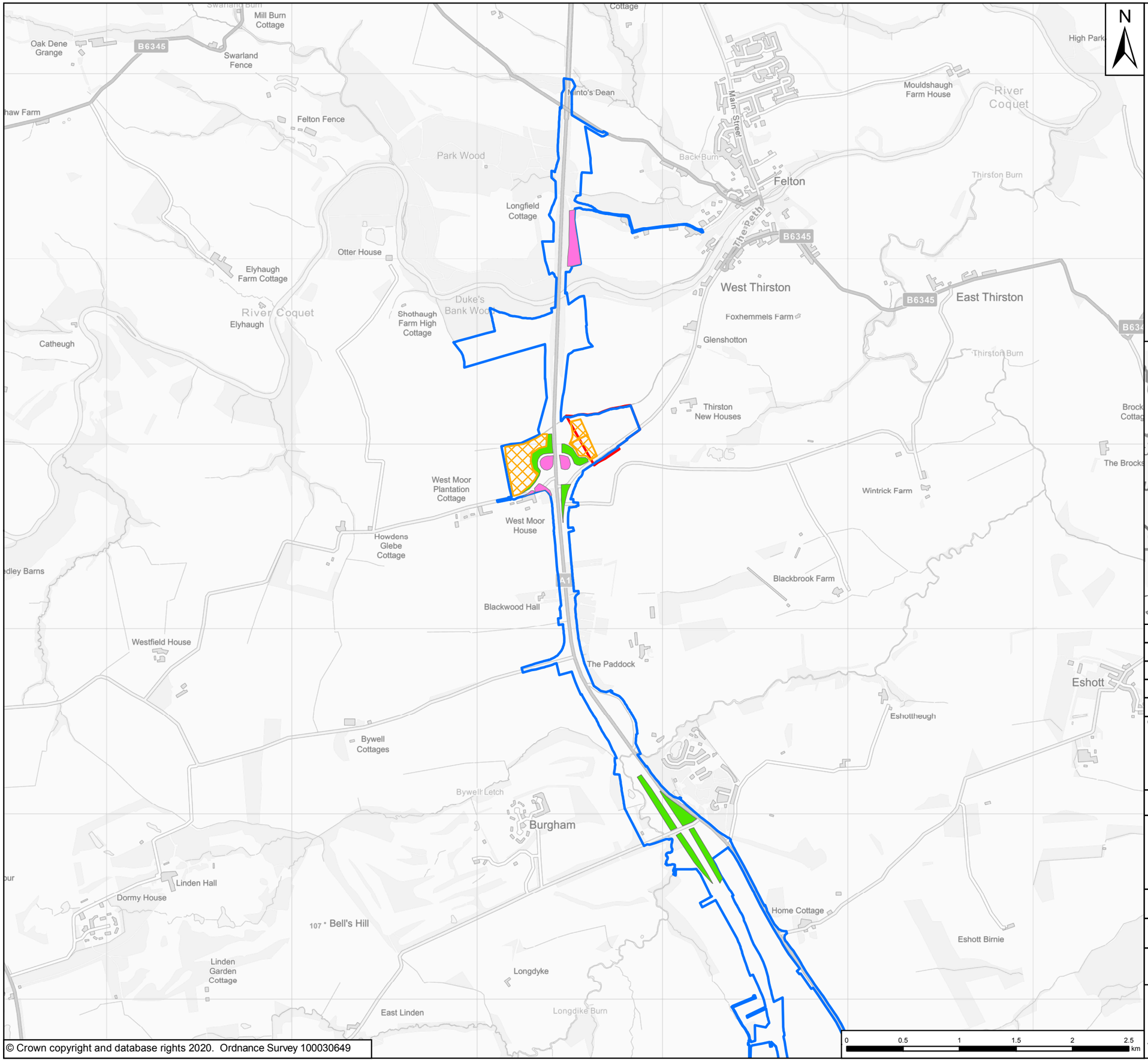
Revision: P01

© Crown copyright and database rights 2020. Ordnance Survey 100030649

Date Saved: 08/12/2020 15:12:14 User Name: UKRJM017
Document Path: \\uk.wspgroup.com\central data\Projects\70038oxx\70038006 - A1 in Northumberland\02 WIP\EI EIA and flood risk\02 Drawing\MXD\M2E_Earthworks_locations.mxd

Date Saved: 08/12/2020 15:12:14 User Name: UKRJM017

Document Path: \\uk.wspgroup.com\central data\Projects\70038xx\70038006 - A1 in Northumberland\02 WIP\EI EIA and flood risk\02 Drawing\MXD\M2E_Earthworks_locations.mxd



Key

- A2E Order Limits
- M2F Order Limits

Permanent Earthworks

- Changes to gradient and height of proposed earthworks
- Changes to gradient and height of proposed earthworks of Parameter 4 or 5 in Part A

Temporary Earthworks

- Borrow Pit
- Temporary Storage

Rev	Date	Description	By	Chk'd	App'd
P01	09/09/2020	First Issue	GH	LM	KS

Client: highways england

Project Title: A1 in Northumberland: Morpeth to Ellingham

Drawing Title: Indicative Earthwork Change Locations Page 3 of 5

Scale	Drawn	Checked	Approved	Authorised
1:19,860	RM	LM	KS	DM
Original Size	**Date**	**Date**	**Date**	**Date**
A3	09/09/2020	09/09/2020	09/09/2020	09/09/2020

Drawing Status: For Information

Suitability: S1

Drawing Number: Project HE551459 | Originator WSP | Volume

A2E Location | RP Type | LE Role | 2130 Number

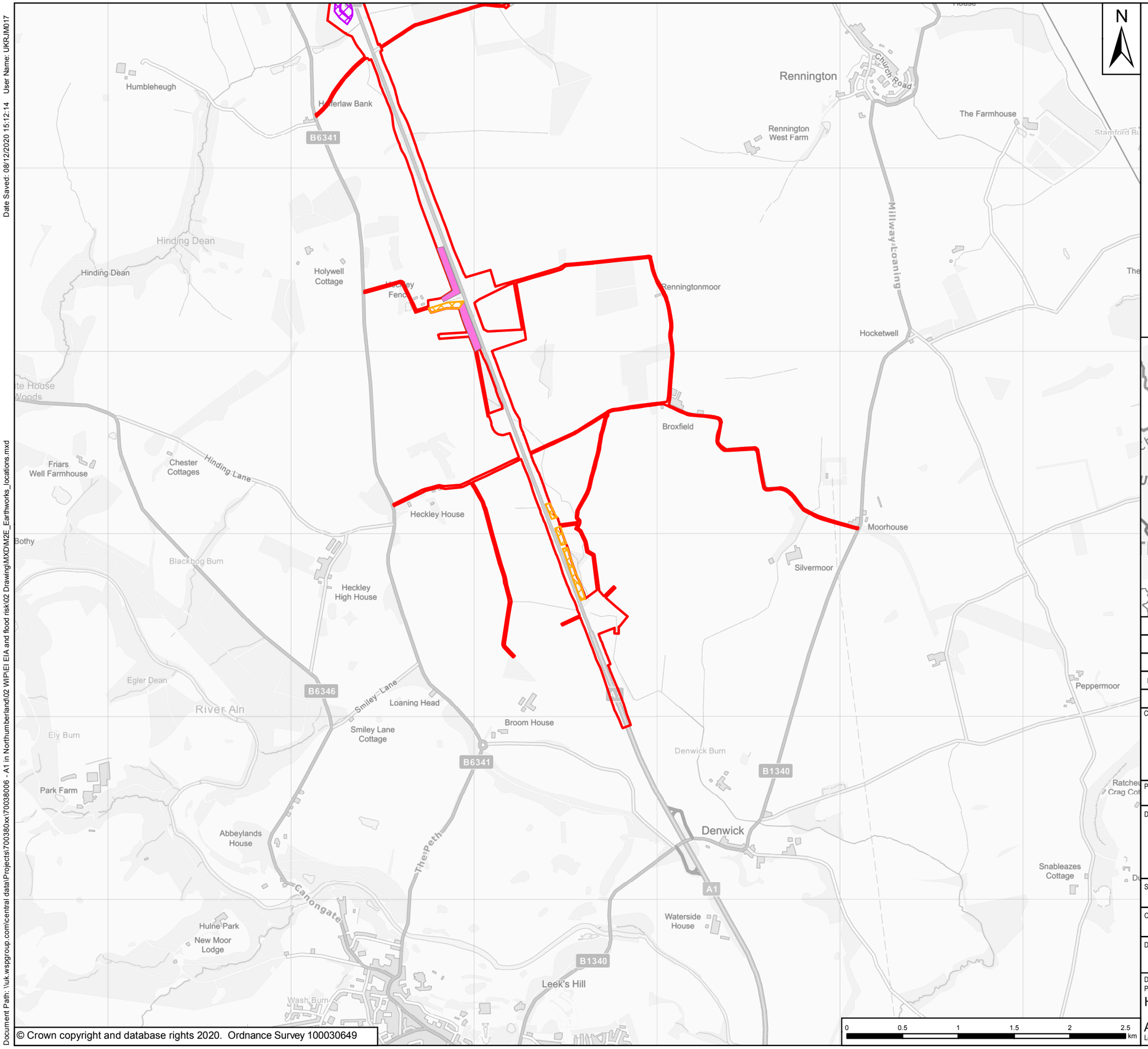
Project Ref. No.: 70044137

Revision: P01

© Crown copyright and database rights 2020. Ordnance Survey 100030649

Date Saved: 08/12/2020 15:12:14 User Name: UKRJM017

Document Path: \\uk.wspgroup.com\central data\Projects\70038xx\70038006 - A1 in Northumberland\02 WIP\EI EIA and flood risk\02 Drawing\MXD\M2E_Earthworks_locations.mxd



© Crown copyright and database rights 2020. Ordnance Survey 100030649

Rev	Date	Description	By	Chk'd	App'd
P01	09/09/2020	First Issue	GH	LM	KS

Client: highways england

Project Title: A1 in Northumberland: Morpeth to Ellingham

Drawing Title: Indicative Earthwork Change Locations Page 4 of 5

Scale	Drawn	Checked	Approved	Authorised
1:19,860	RM	LM	KS	DM
Original Size	**Date**	**Date**	**Date**	**Date**
A3	09/09/2020	09/09/2020	09/09/2020	09/09/2020

Drawing Status: For Information

Suitability: S1

Drawing Number: Project HE551459 | Originator WSP | Volume

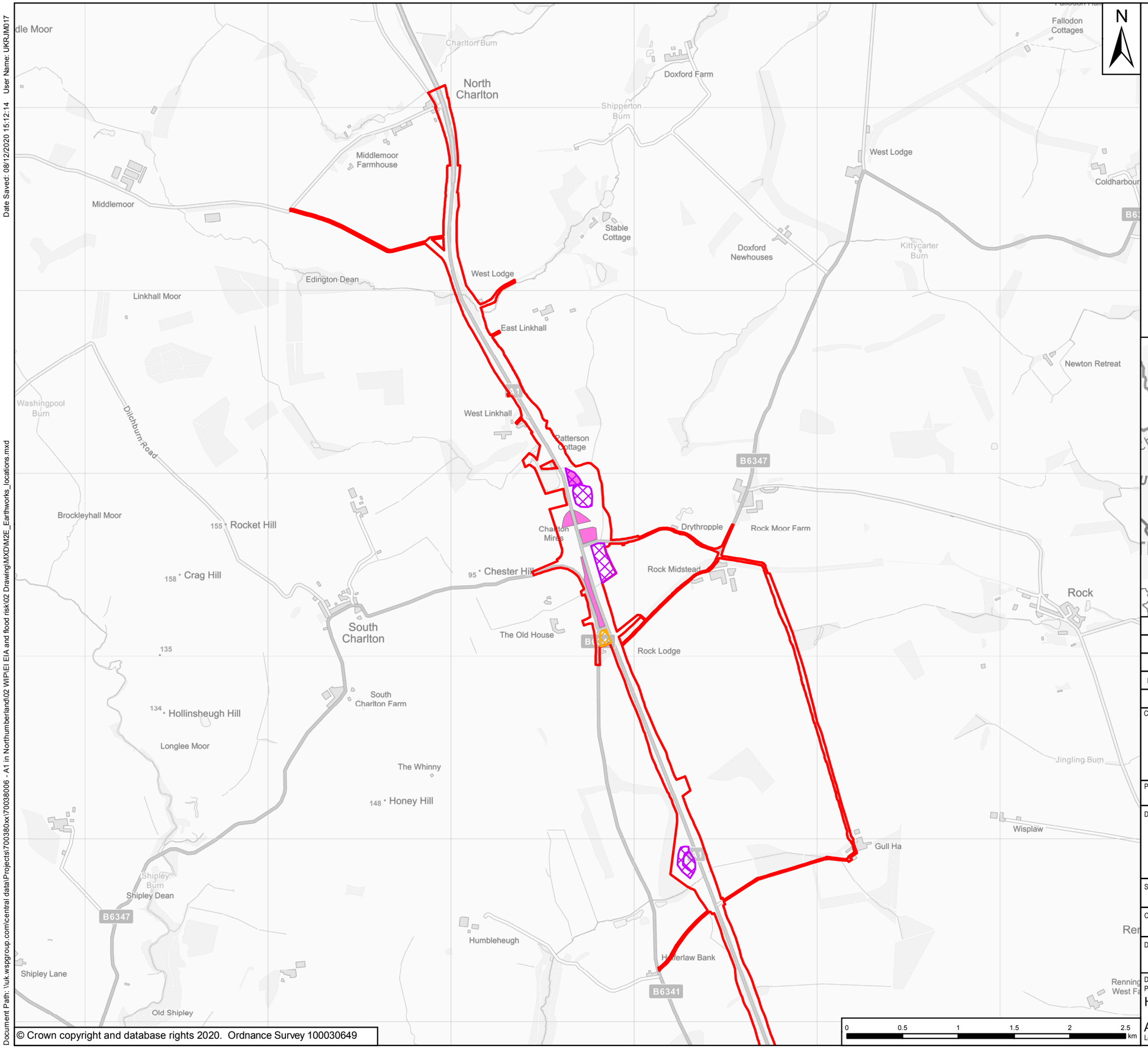
A2E Location | RP Type | LE Role | 2130 Number

Project Ref. No.: 70044137

Revision: P01

Date Saved: 08/12/2020 15:12:14 User Name: UKRJM017

Document Path: \\uk.wspgroup.com\central data\Projects\70038xx\70038006 - A1 in Northumberland\02 WIP\EI EIA and flood risk\02 Drawing\MXD\M2E_Earthworks_locations.mxd



© Crown copyright and database rights 2020. Ordnance Survey 100030649

Rev	Date	Description	By	Chk'd	App'd
P01	09/09/2020	First Issue	GH	LM	KS

Client: highways england

Project Title: A1 in Northumberland: Morpeth to Ellingham

Drawing Title: Indicative Earthwork Change Locations Page 5 of 5

Scale	Drawn	Checked	Approved	Authorised
1:19,860	RM	LM	KS	DM
Original Size	**Date**	**Date**	**Date**	**Date**
A3	09/09/2020	09/09/2020	09/09/2020	09/09/2020

Drawing Status: For Information

Suitability: S1

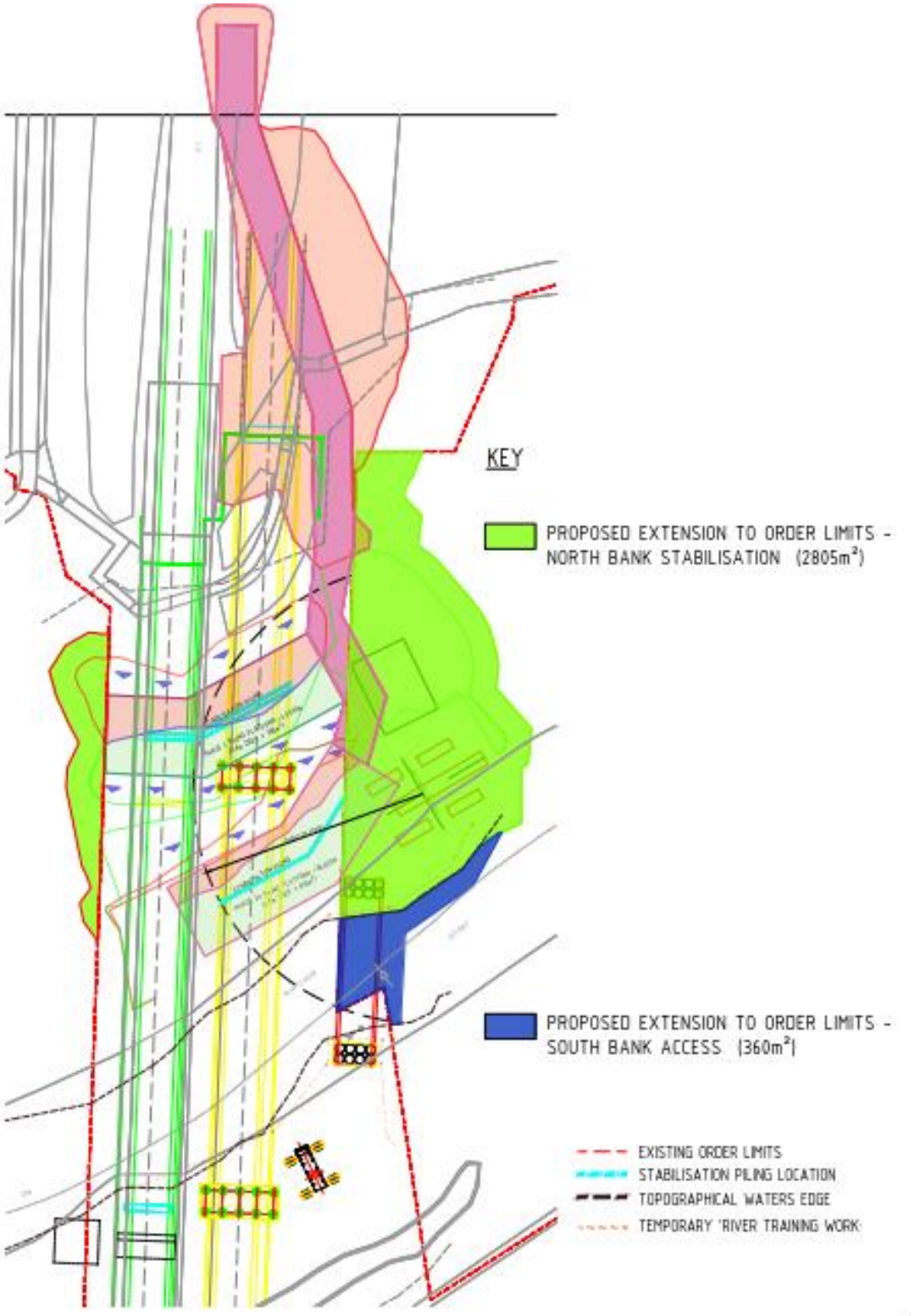
Drawing Number: Project HE551459 | Originator WSP | Volume

A2E Location | RP Type | LE Role | 2130 Number

Project Ref. No.: 70044137

Revision: P01

Temporary Works at the River Coquet



Permanent Works at the River Coquet

KEY:

- 3m wide strip of land required for erosion control
- Proposed extension to Order limits - North bank stabilisation
- Existing Order limits
- Stabilisation piling location

RIVER COQUET

A1 NORTHBOUND
(EXISTING BRIDGE)

A1 SOUTHBOUND
(PROPOSED BRIDGE)

RIVER COQUET

Reproduced by permission of Ordnance Survey on behalf of HMSO. © Crown copyright and database right 2019. All rights reserved. Ordnance Survey Licence number 100030649.

C:\pwworking\jacobs_uk_highways_ss4\apeanyr\d0140740\HE551459-JAC-SBR-M2F_S03_NS39363-SK-C-0001.dwg - 09/12/2020 18:52:41 - River orientation - ApeanyR

Potential Compensatory Habitat Location

Order limits

Proposed extension to Order limits - compensatory habitat

Appendix D

REGISTER OF ENVIRONMENTAL ACTIONS AND COMMITMENTS

APPENDIX D - REGISTER OF ENVIRONMENTAL ACTIONS AND COMMITMENTS

The mitigation measures detailed in **Outline CEMP** [**REP3-013 and 014**] still apply for the Earthworks Amendments. **Table D-1** details those measures that are additional or require amendment to those shown tin the **Outline CEMP** [**REP3-013 and 014**] for the Earthworks Amendments. If the Earthworks Amendments are accepted by the Planning Inspectorate and Secretary of State for Transport, then the measures in **Table D-1** will be incorporated into the Outline CEMP.

Table D-1 – Additional Mitigation Measures for the Register of Environmental Actions and Commitments

Ref	Action (Including Monitoring Requirements)	Objective	Source Reference	Organisation / Individual Delivering Measure	Achievement Criteria and Reporting Requirements (Reported on the Requirements Register published on the Applicant's Scheme website)	Project Phase (Design, Pre-Construction, Construction, Operation)	Record of Completion (Signature and Date)
Landscape and Visual							
EA-L1	The north-east edge of the proposed temporary storage/stockpile of soils at Part A approximate ch17400 (M2F-CH172-SB-NGA-4) will be allowed to naturally self-seed with grass to provide a more natural visual screen for residential receptors R48 (Causey Park Lodge (North)) and R49 (Causey Park Lodge (South)), which are both located within 100-150 m to the north-east.	To reduce visual impacts of the Scheme during construction.	**Paragraph 5.9.2** of this ES Addendum	Main contractor	CEMP approved by the Secretary of State following consultation with NCC as per Requirement 5, Schedule 2 of the **draft DCO** [**REP3-004 and 005**] Landscape design discharged as required by the **draft DCO.**	Construction	
Cultural Heritage							
EA-CH1	The potential impacts on below-ground heritage assets outside of the Order limits as a result of the excavation and backfilling of borrow pits A2E-CH586-SB-BPT-1, A2E-CH591-SB-BPT-2, A2E-CH590-SB-BPT-3, A2E-CH570-NB-BPT-4 and A2E-CH570-NB-BPT-5, including the Scheduled Monument Ellsnook Round Barrow (NHL 1006564) will be removed through the use of a suitable fill material with a similar permeability and fill quality within the borrow pits.	To reduce the impact of the Scheme on below-ground heritage assets.	**Paragraph 6.9.5** of this ES Addendum	Designer Main contractor	As built drawings CEMP approved by the Secretary of State following consultation with NCC as per Requirement 4, Schedule 2 of the **draft DCO** [**REP3-004 and 005**]	Design	
EA-CH2	The extent of the area used for borrow pit A2E-CH570-NB-BPT-5 will not be within 35 m of the	To reduce the impact of the Scheme on	**Paragraph 6.9.2** of this ES Addendum	Designer Main contractor	As built drawings CEMP approved by the Secretary	Design Construction	

Ref	Action (Including Monitoring Requirements)	Objective	Source Reference	Organisation / Individual Delivering Measure	Achievement Criteria and Reporting Requirements (Reported on the Requirements Register published on the Applicant's Scheme website)	Project Phase (Design, Pre-Construction, Construction, Operation)	Record of Completion (Signature and Date)
	location of the Scheduled Monument Ellsnook Round Barrow.	below-ground heritage assets.			of State following consultation with NCC as per Requirement 4, Schedule 2 of the **draft DCO** [**REP3-004 and 005**]		
Road Drainage and the Water Environment							
EA-W1	A dewatering assessment will be undertaken at detailed design stage to ensure that sensitive receptors are not adversely impacted. A dewatering strategy will be developed pre-construction and implemented during construction if needed. The Environment Agency will be consulted regarding the need for a water resources abstraction licence.	To managed dewatering activities	**Table 1-2** of this ES Addendum	Designer Main contractor	CEMP approved by the Secretary of State following consultation with NCC as per Requirement 4, Schedule 2 of the **draft DCO** [**REP3-004 and 005**] Water resources abstraction licence if needed	Pre-construction / Construction	
EA-W2	Design and implementation of suitable fill material with a similar permeability to existing within the borrow pits upon completion of extraction.	To reduce the impact of the Scheme on the water environment	**Paragraph 7.9.5** of this ES Addendum	Designer Main contractor	As built drawings CEMP approved by the Secretary of State following consultation with NCC as per Requirement 4, Schedule 2 of the **draft DCO** [**REP3-004 and 005**]	Design	
EA-W3	The following measures will be implemented: **a.** Ensuring that flood conveyance routes are maintained during construction. This would include temporary earth bunds that are located along overland flow paths. **b.** Ensuring that a minimum buffer of 8 m between bunds and any watercourses is maintained to ensure that local flood risk is not increased. **c.** Groundwater level dewatering of aquifer drainage would be required for the construction of the borrow pits. Captured groundwater would be treated to settle any sediments prior to discharge into local watercourses. **d.** Construction works would avoid high flow events where practicable to reduce the risk of shallow groundwater levels.	To manage risks to the water environment (sedimentation and pollution risks).	**Paragraph 7.9.3** of this ES Addendum	Main contractor Environment Manager (main contractor)	CEMP approved by the Secretary of State following consultation with NCC as per Requirement 4, Schedule 2 of the **draft DCO** [**REP3-004 and 005**] Signed toolbox talk records	Construction	

Ref	Action (Including Monitoring Requirements)	Objective	Source Reference	Organisation / Individual Delivering Measure	Achievement Criteria and Reporting Requirements (Reported on the Requirements Register published on the Applicant's Scheme website)	Project Phase (Design, Pre-Construction, Construction, Operation)	Record of Completion (Signature and Date)
Geology and Soils							
EA-GS1	Preparation of specific Risk Assessments and Method Statements (RAMS) for works to be completed in the area of the former foot and mouth burial site. RAMS to be prepared in line with specific guidance to be obtained from the Department for Environment, Food & Rural Affairs (DEFRA).	To prevent contamination from the former foot and mouth burial pit	**Paragraph 8.9.2** of this ES Addendum	Main contractor Environmental Manager (main contractor)	CEMP approved by the Secretary of State following consultation with NCC as per Requirement 4, Schedule 2 of the **draft DCO** [**REP3-004 and 005**] RAMS	Pre-Construction Construction	
Materials and Waste							
EA-M1	The following design measures will be implemented as part of the Earthworks Amendments: **a.** Where site-won material meets re-use criteria it will be retained within the Scheme as part of, for example, refill of borrow areas, footway foundations or access tracks, or as thickened topsoil spread; and **b.** Any additional unsuitable material (beyond that which has already been identified from the Scheme) will be treated (for example, with lime) to improve materials for reuse and retention on the Scheme. At this time, off-site disposal is planned to be limited to contaminated materials only, which are expected to be limited in volume.		**Paragraphs 9.9.1 and 9.9.2** of this ES Addendum	Designer Main contractor	Scheme design drawings CEMP approved by the Secretary of State following consultation with NCC as per Requirement 4, Schedule 2 of the **draft DCO** **[REP3-004 and 005]**	Design	

© Crown copyright 2021.
You may re-use this information (not including logos) free of charge in any format or medium, under the terms of the Open Government Licence. To view this licence:
visit **www.nationalarchives.gov.uk /doc/open-government-licence/**
write to the **Information Policy Team, The National Archives, Kew, London TW9 4DU**, or email
psi@nationalarchives.gsi.gov.uk.

This document is also available on our website at **www.gov.uk /highways**

If you have any enquiries about this document
A1inNorthumberland@highwaysengland.co.uk
or call **0300 470 4580***.