

A1 in Northumberland: Morpeth to Ellingham

Scheme Number: TR010059

7.26.3 Applicant's Written Summaries of Oral Submissions to Hearings - Appendix E - Combined Effects Technical Note

Rule 8(1)(c)

Planning Act 2008

Infrastructure Planning (Examination Procedure) Rules 2010

Infrastructure Planning

Planning Act 2008

**The Infrastructure Planning
(Examination Procedure) Rules
2010**

**The A1 in Northumberland: Morpeth to
Ellingham**

Development Consent Order 20[xx]

Appendix E - Combined Effects Technical Note

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1 COMBINED EFFECTS TECHNICAL NOTE

1.1 INTRODUCTION

- 1.1.1. During Issue Specific Hearing 3 (ISH3) held on 22 April 2021, the Examining Authority (ExA) asked the Applicant to provide further detail on how they have arrived at the conclusions included in **Table 15-4 of Chapter 15: Assessment of Combined Effects Part A** of the ES [APP-060] and **Table 16-9 of Chapter 16: Assessment of Cumulative Effects** of the ES [APP-062].
- 1.1.2. This Appendix provides an overview of the methodology used to group individual receptors and determine the residual effects experienced by each receptor group identified in **Table 15-4 of Chapter 15: Assessment of Combined Effects Part A** of the ES [APP-060] and **Chapter 15: Assessment of Combined Effects Part B** of the ES [APP-061], and **Table 16-9 in Chapter 16: Assessment of Cumulative Effects** of the ES [APP-062].
- 1.1.3. The full details of the screening of receptor groups for cross topic combined effects will be provided for all receptor groups and associated individual receptors (as identified in **Chapter 15: Assessment of Combined Effects Part A [APP-060]** and **Chapter 15: Assessment of Combined Effects Part B [APP-061]**, and **Table 16-9 in Chapter 16: Assessment of Cumulative Effects [APP-062]**) at Deadline 7 of the Examination.
- 1.1.4. **Table 1-2** below represents a sample of receptor group screening for combined effects during construction for Part B, so that the process can be understood. The full screening is carried out in the same way and therefore will be apparent in the full details to be submitted at Deadline 7.

1.2 SCREENING MATRIX

- 1.2.1. Common sensitive receptors from Technical Chapters 5 to 13 for Part A and Part B of the Environmental Statement (ES) [APP-040 to APP-059] that are exposed to residual effects of 'minor' or above by one or more technical topics as a result of the Scheme were collated into a cross topic combined effects screening matrix. This matrix provides the residual effects identified for each individual receptor that make up the receptor groups identified in **Table 15-4 of Chapter 15: Assessment of Combined Effects Part A [APP-060]** and **Chapter 15: Assessment of Combined Effects Part B [APP-061]**, and **Table 16-9 in Chapter 16: Assessment of Cumulative Effects [APP-062]**. For example, all individual residential receptors that are exposed to residual effects of 'minor' or above for more than one technical topic have been listed within the cross topic combined effects screening matrix under the group receptor heading 'Residents'.
- 1.2.2. An extract of the cross topic combined effects screening matrix for residual effects during construction for Part B is provided in **Table 1-1** below.

1.3 RECEPTOR GROUPS

- 1.3.1. The screening matrix is then used to provide more detail on how individual receptors have been grouped and the residual effects that the grouped receptors. For example, residential receptors would be exposed to effects as a result of the Scheme, which results in the overall cross topic combined effect reported in **Table 15-4** in **Chapter 15: Assessment of Combined Effects Part A [APP-060]** and **Chapter 15: Assessment of Combined Effects Part B [APP-061]**, and **Table 16-9** in **Chapter 16: Assessment of Cumulative Effects [APP-062]**. This has been collated into a screening of receptor groups for cross topic combined effects table for construction and operation for Part A and Part B, as well as a separate table for the screening of receptor groups for cross topic combined effect interactions considered for the Scheme (refer to **Table 16-9, Chapter 16: Assessment of Cumulative Effects [APP-062]**).
- 1.3.2. An extract of the screening of receptor groups table for combined effects during construction for Part B is provided in **Table 1-2** below.

1.4 TECHNICAL NOTE TO BE SUBMITTED AT DEADLINE 7

- 1.4.1. The full details of the screening of receptor groups for cross topic combined effects as shown in **Table 1-2** below will be provided for all receptor groups and associated individual receptors identified in **Chapter 15: Assessment of Combined Effects Part A [APP-060]** and **Chapter 15: Assessment of Combined Effects Part B [APP-061]**, and **Table 16-9** in **Chapter 16: Assessment of Cumulative Effects [APP-062]** at Deadline 7.

Table 1-1 - Extract of Screening Matrix for Common Sensitive Receptors and Residual Effects during Construction (Part B)

Sensitive Receptor	Air Quality	Noise and Vibration	Landscape and Visual	Cultural Heritage	Biodiversity	Road Drainage and Water	Geology and Soils	Population and Human Health	Material Resources
CONSTRUCTION									
RESIDENTS	ü	ü	ü					ü	
1. Broom House (5 properties)	No Residual Effects After Mitigation	No Residual Effects After Mitigation	Moderate Adverse					<u>Human Health</u> Slight Adverse <u>Community Severance</u> Slight to Moderate Adverse <u>Reduced Access to PRoW</u> Slight to Moderate Adverse <u>Socio-economic Effects</u> Minor Beneficial	
2. Loaning Head			Moderate Adverse					<u>Human Health</u> Slight Adverse <u>Community Severance</u> Slight to Moderate Adverse <u>Reduced Access to PRoW</u> Slight to Moderate Adverse <u>Socio-economic Effects</u> Minor Beneficial	
3. Heckley House and Heckley Cottage (2 properties)			Large Adverse					<u>Human Health</u> Slight Adverse <u>Community Severance</u> Slight to Moderate Adverse <u>Reduced Access to PRoW</u> Slight to Moderate Adverse <u>Socio-economic Effects</u> Minor Beneficial	
4. Heckley Fence			Large Adverse					<u>Private Assets and Land Use</u> Slight Adverse <u>Human Health</u> Slight Adverse <u>Community Severance</u> Slight to Moderate Adverse <u>Reduced Access to PRoW</u> Slight to Moderate Adverse <u>Socio-economic Effects</u> Minor Beneficial	

Table 1-2 - Extract of Screening of Receptor Groups for Cross Topic Combined Effects during Construction (Part B)

Receptor	Relevant factor	Potential impact	Significance of residual effects	Potential cross topic combined effects	Cross topic combined effect reported in Table 15-4 of Chapter 15: Assessment of Combined Effects Part B [APP-061]
Residents	Air Quality	Changes to air quality within 200 m of construction activities	Residents within 200m of Part B would experience no residual effects after mitigation (not significant)	<p>There are no residual effects on residents from air quality and noise and vibration after the implementation of mitigation measures as outlined within Chapter 5: Air Quality Part B and Chapter 6: Noise and Vibration Part B [APP-041 and APP-043].</p> <p>Some residents have the potential for cross topic combined effects from Population and Human Health effects including human health, private assets, community severance and reduced access to PRow. The following residents have the potential to experience a slight to moderate adverse cross topic combined effect on human health, private assets, community severance and reduced access to PRow:</p> <ul style="list-style-type: none"> - Properties at South Charlton (18) - Silvermoor (22) - Goldenmoor (23) - Properties at Denwick (24) <p>The following residents have the potential to experience moderate adverse cross topic combined effects from change to views, human health, private assets, community severance and reduced access to PRow:</p> <ul style="list-style-type: none"> - Broom House (1) - Loaning Head (2) - Broxfield and Surrounding Properties (9) - Rock Midstead Cottages and Rock Midstead Farmhouse (11) - Rock South Farm (12) - Rock Moor House (14) - West Lodge (15) - Properties at East Linkhall (16) - Properties at North Charlton (17) <p>The following residents have the potential to experience large adverse cross topic combined effects from change</p>	Overall, Part B would have a combined, temporary residual effect of no greater than large adverse significance on residents during construction.
	Noise and Vibration	Increased noise and vibration levels within 300 m of construction activities	Residents within 300m of Part B would experience no residual effects after mitigation (not significant)		
	Landscape and Visual	Change to views	<p>Residents at the following properties would experience temporary, direct short-term moderate adverse (significant) residual effects:</p> <ul style="list-style-type: none"> - Broom House (1) - Loaning Head (2) - Broxfield and Surrounding Properties (9) - Rock Midstead Cottages and Rock Midstead Farmhouse (11) - Rock South Farm (12) - Rock Moor House (14) - West Lodge (15) - Properties at East Linkhall (16) - Properties at North Charlton (17) <p>Residents at the following properties would experience temporary, direct short-term large adverse (significant) residual effects:</p> <ul style="list-style-type: none"> - Heckley House and Heckley Cottage (3) - Heckley Fence (4) - Heiferlaw Bank (5) - Rock Lodge (6) - Rock Nab (7) - Holywell Cottage (8) - West Linkhall Farmhouse and surrounding properties (including Patterson Cottage) (10) - Drythrople (13) 		

Receptor	Relevant factor	Potential impact	Significance of residual effects	Potential cross topic combined effects	Cross topic combined effect reported in Table 15-4 of Chapter 15: Assessment of Combined Effects Part B [APP-061]
	Population and Human Health	Effects on community severance, access, socio-economic benefits, human health and private property	<p>Residents at the following properties would experience temporary, direct short-term slight adverse (not significant) residual effects for human health:</p> <ul style="list-style-type: none"> - Broom House (1) - Loaning Head (2) - Heckley House and Heckley Cottage (3) - Heckley Fence (4) - Heiferlaw Bank (5) - Rock Lodge (6) - Rock Nab (7) - Holywell Cottage (8) - Broxfield and Surrounding Properties (9) - West Linkhall Farmhouse and surrounding properties (10) - Rock Midstead Cottages and Farmhouse (11) - Rock South Farm (12) - Drythropple (13) - Rock Moor House (14) - West Lodge (15) - Properties at East Linkhall (16) - Properties at North Charlton (17) - Properties at South Charlton (18) - Silvermoor (22) - Goldenmoor (23) - Properties at Denwick (24) <p>Residents at the following properties would experience temporary, direct short-term slight to moderate adverse (significant) residual effects for community severance and reduced access to PRow:</p> <ul style="list-style-type: none"> - Broom House (1) - Loaning Head (2) - Heckley House and Heckley Cottage (3) - Heckley Fence (4) - Heiferlaw Bank (5) - Rock Lodge (6) 	<p>to views, human health, private assets, community severance and reduced access to PRow:</p> <ul style="list-style-type: none"> - Heckley House and Heckley Cottage (3) - Heckley Fence (4) - Heiferlaw Bank (5) - Rock Lodge (6) - Rock Nab (7) - Holywell Cottage (8) - West Linkhall Farmhouse and surrounding properties (including Patterson Cottage) (10) - Drythropple (13) <p>All residents have the potential for minor beneficial effects from socio-economic effects during construction of the Scheme.</p>	

Receptor	Relevant factor	Potential impact	Significance of residual effects	Potential cross topic combined effects	Cross topic combined effect reported in Table 15-4 of Chapter 15: Assessment of Combined Effects Part B [APP-061]
			<ul style="list-style-type: none"> - Rock Nab (7) - Holywell Cottage (8) - Broxfield and Surrounding Properties (9) - West Linkhall Farmhouse and surrounding properties (10) - Rock Midstead Cottages and Farmhouse (11) - Rock South Farm (12) - Drythrople (13) - Rock Moor House (14) - West Lodge (15) - Properties at East Linkhall (16) - Properties at North Charlton (17) - Properties at South Charlton (18) - Silvermoor (22) - Goldenmoor (23) - Properties at Denwick (24) <p>Residents at the following properties would experience temporary, direct short-term minor beneficial (not significant) residual effects for socio-economic:</p> <ul style="list-style-type: none"> - Broom House (1) - Loaning Head (2) - Heckley House and Heckley Cottage (3) - Heckley Fence (4) - Heiferlaw Bank (5) - Rock Lodge (6) - Rock Nab (7) - Holywell Cottage (8) - Broxfield and Surrounding Properties (9) - West Linkhall Farmhouse and surrounding properties (10) - Rock Midstead Cottages and Farmhouse (11) - Rock South Farm (12) - Drythrople (13) - Rock Moor House (14) - West Lodge (15) 		

Receptor	Relevant factor	Potential impact	Significance of residual effects	Potential cross topic combined effects	Cross topic combined effect reported in Table 15-4 of Chapter 15: Assessment of Combined Effects Part B [APP-061]
			<ul style="list-style-type: none"> - Properties at East Linkhall (16) - Properties at North Charlton (17) - Properties at South Charlton (18) - Silvermoor (22) - Goldenmoor (23) - Properties at Denwick (24) <p>Residents at the following properties would experience temporary, direct short-term slight adverse (not significant) residual effects for private assets and land use:</p> <ul style="list-style-type: none"> - Heckley Fence (4) - Rock Nab (7) - West Linkhall Farmhouse and surrounding properties (10) - Rock South Farm (12) - West Lodge (15) - Properties at East Linkhall (16) - Properties at South Charlton (18) 		

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