

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

**Scheme Number: TR010041**

## **6.1 Environmental Statement Appendix 2.5 South Embankment Haul Road Construction Methodology**

APFP Regulation 5(2)(a)

Planning Act 2008

Infrastructure Planning (Applications: Prescribed  
Forms and Procedure) Regulations 2009

June 2020

Infrastructure Planning

Planning Act 2008

**The Infrastructure Planning  
(Applications: Prescribed Forms and  
Procedure) Regulations 2009**

**The A1 in Northumberland: Morpeth to Ellingham  
Development Consent Order 20[xx]**

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**Environmental Statement**

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<b>Regulation Reference:</b>	APFP Regulation 5(2)(a)
<b>Planning Inspectorate Scheme Reference</b>	TR010041
<b>Application Document Reference</b>	TR010041/APP/6.1
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<b>Version</b>	<b>Date</b>	<b>Status of Version</b>
Rev 0	June 2020	Application Issue



A1 Morpeth to Felton

Buildability

Morgan Sindall-WSP-Highways England

Coquet Bridge

South Embankment Haul Road Construction Methodology

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11<sup>th</sup> March 2019

## Introduction

For the purposes of constructing the new Coquet Bridge spanning the Coquet Valley, suitable means of access will be required for pier construction works. The gently sloped Northern embankment provides suitable means of access to construct the Northern pier, however the steeply sloped South embankment necessitates a haul road to be cut into the existing rock embankment to allow access to the pier base construction area. An alternative means of access to this site from the North side by crossing the River channel has been prohibited due to concerns raised by the Environment Agency. This construction methodology narrative outlines the constraints and provides an outline method for constructing this haul road, taking cognisance of environmental restrictions which exist at the site.

## Constraints

A number of constraints exist which must be considered in developing a solution for positioning and constructing this haul road. The existing South abutment is anchored to the bedrock with ground anchors which must not be compromised and therefore it is imperative that the haul road does not interfere with the zone of influence of these anchors. The haul road must allow a suitable separation from the construction zone for the new South abutment must be provided such that any working areas and temporary works associated with the abutment are considered in positioning the haul road. The existing red line boundary in this area has been determined to minimise the impact on the SSSI and therefore the haul road requires constructing within this zone. Specific environmental control measures must be implemented to minimize any impact on the SSSI. The construction activities associated with installing the South abutment and pier require access for plant and materials and a maximum gradient of 1 in 4 and minimum width of 4m on the haul road will be required for these purposes. The geology of the embankment comprises largely of bedrock of variable hardness which needs consideration in the method of working. Consideration in avoiding any materials entering the watercourse from the haul road construction and operation must be given. Due to the steep nature of the Southern embankment, the subsequent solution to the geometry of the haul road must also consider its safe method of construction and safe operation.

## Haul Road Solution

The ground level at the top of the Southern Embankment is approx. 63 AOD, with river level at approx. 32 AOD. The South pier location is such that a working platform at approx. 36 AOD will be required to be constructed. Due to this large vertical differential between the GL at the top of the embankment and the working platform required at the base of the embankment, and the constraints identified above, it will be necessary to construct the haul road with two changes in direction and to provide two intermediate turning areas at 52 AOD and 44 AOD. It will also be required to reduce the ground level at the top of the embankment to 59 AOD to reduce the gradient and length of the haul road.

## Method of Construction of Haul Road

Establish 30T tracked excavator with breaker attachments and 20T ADT/12T Tracked dumper. Establish suitable safety zones around working area and establish a laydown/stockpile area within the RLB to the South East of the working area. Excavate top level bench down to 59 AOD with tracked excavator ripping/breaking and loading rock into ADT or tracked dumper for stockpiling in adjacent laydown area, ensuring excavation is

battered at safe gradient. Construct a suitable ramped access from laydown area to the bench with a maximum 1 in 4 gradient . Commence breaking haul road from 59 AOD down to first bench at 52AOD, working progressively down with pneumatic tracked excavator breaker and ripping bucket, taking care that debris does not enter watercourse. Load materials into tracked dumper for local stockpile deposition.

Dependant on competency of rock, vertical rock drilling may be required to establish the line of the haul road from the crest. This can be carried out with a tracked rock drill, prior to the tracked excavator and pneumatic breaker breaking/ripping the rock. As the excavation for the haul road progresses, ensure that any loose or fractured rock within the excavated surfaces are removed to minimise risk of falling debris.

On establishment of 52AOD level, widen platform to accommodate turning area and commence cutting of haul road from 52AOD down to second bench at 44AOD, removing excavated rock to stockpile by tracked dumper .On reaching 44AOD, widen platform to provide turning area and commence excavating final length of haul road down to working platform at 36 AOD. Widen and level working platform and complete haul road route by removing any uneven surfaces and loose debris. Some form of edge protection should be established to minimise the risk of plant overrunning the edges of the haul road-this may take the form of balk timbers affixed to the bedrock or a rock bund.

Water run off from the haul road into the water course will need consideration. It is suggested that surface water run- offs are channelled to the benches where sediment settlement areas may be established to avoid contaminants entering the water course-The details of this will be considered in the final design.

On completion of the haul road construction, a regular inspection and maintenance regime shall be established to ensure the ongoing safe operation of the route during bridge pier construction, to ensure that environmental control measures are met and to protect the public from entering the construction zone.

A gated entry point to the haul road may be established which may be secured out of hours.

All plant , personnel and material movements through this haul route shall be suitably assessed such that they may safely navigate the route.

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