Your ref: TR010039

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17 January 2023

By Email to transportinfrastructure@dft.gov.uk
Cc:A47WansfordtoSutton@planninginspectorate.gov.uk

Dear Ms Dominey,

APPLICATION BY NATIONAL HIGHWAYS FOR AN ORDER GRANTING DEVELOPMENT CONSENT FOR THE A47 WANSFORD TO SUTTON SCHEME (TR010039)

CONSULTATION SEEKING COMMENTS FROM THE SECRETARY OF STATE FOR LEVELLING UP, HOUSING AND COMMUNITIES, NATURAL ENGLAND AND THE APPLICANT

Please find below the response by National Highways ("the Applicant") to the letter from the Secretary of State dated 10 January 2023.

Crown Land

Points 1 and 2

The Secretary of State notes that a response is yet to be received from the Secretary of State for Levelling Up, Housing and Communities ("the Secretary of State for LUHC") following the question in his consultation letters of 28 October 2022 and 12 December 2022 in which he sought confirmation as to whether the Secretary of State for LUHC was content with the powers sought by the Applicant for the temporary possession and permanent acquisition of rights in plot 1/5a and the permanent acquisition of all rights and interests in plot 1/6a.

1. *The Secretary of State requests the Secretary of State for LUHC confirm whether he is content with the powers sought by the Applicant.*
2. *In the event that the necessary authority for Crown Land is not obtained, the Applicant is required to advise what are the implications for the project if*

affected land were to be removed (as set out in the Book of Reference at Deadline 10).

Applicant's Response

The Applicant has been notified by letter dated 17 January 2023 from the Secretary of State for LUHC that he is content with the powers sought by the Applicant. The Applicant is also able to confirm that the planned works will not interfere with the Preserved Right to Buy interest (to the extent that any such right remains) as understood by the Secretary of State for LUHC in his letter of consent. A copy of the letter has been provided.

Protected Species

The Secretary of State requests that the Applicant submit the 2022 great crested newt survey data to evidence the conclusion in the response ***REP11-001*** *(National Highway's Deadline 11 submission – Cover Letter and response to Rule 17 request for further information) which states that great crested newts are absent from the site and surrounding area of the Scheme*.

Applicant's Response

As requested, the Applicant has submitted 2022 Great Creased Newt survey data *(***TR10039/EXAM/9.44***)*

Ground Investigation Report

Point 5

The Secretary of State notes the Applicant's response of 11 December 2022 in regard to the Ground Investigation report and its comment that, should shear surfaces within the Whitby Mudstone be encountered, that mitigation measures may include reducing the gradient of proposed earthworks in affected areas and the installation of "hard engineering solutions". The Secretary of State requests that the Applicant confirm that, in the event of such mitigation measures being required, this would not impact the cost of the scheme. If there is a change, can the Applicant provide evidence and details of what that change is and how this would be funded?

Applicant's Response

The referenced geotechnical risk is noted under Section 2.3.4 of the Stage 3 Ground Investigation Report (**REP1-009**).

Whilst use of hard engineering solutions may aid risk mitigation (and hence its inclusion in the Applicant's earlier response), the Applicant's preferred geotechnical design approach in the area will seek to minimise the requirement for any additional hard engineering solutions (such as concrete). As part of the detailed design process, detailed consideration of the ground model and assessment of the loading and unloading of the potentially unstable areas will be undertaken, alongside control

of the alignment and earthworks design (within the constraints of the proposed Scheme).

Geotechnical specialists with expertise in the ground conditions across the scheme (Whitby Mudstone - Lias Group in particular) have been and will continue to be consulted as part of the detailed design.

The Applicant confirms that, in line with the Funding Statement (**APP-021**), the estimate for the scheme already includes allowances for funding risk (see paragraph 2.1.2). As the geotechnical mitigation proposals are still being designed and developed the Applicant cannot confirm or provide details regarding any funding change to the construction budget, however the Applicant can confirm that any increased costs would be accommodated within the existing risk allowance for the scheme. As noted above the Applicant is working towards minimising the need for hard engineering solutions. In the unlikely event that the costs exceed the provisions for risk, and a funding shortfall is subsequently identified, it will be addressed via change control process by National Highways. The Applicant has therefore set out how any potential shortfalls would be met in accordance with paragraph 17 of the Planning Act 2008: Guidance related to procedures for the compulsory acquisition of land.

Point 6

The Secretary of State understands the construction of the section of the main line and link road between the Wansford east roundabout and Wittering Brook is subject to geotechnical risk and further understands the Applicant has solutions to resolve the risks, some of which would result in greater quantities of concrete being used. The Secretary of State requests that the Applicant confirms whether the carbon emissions resulting from the manufacture and laying of concrete for the purposes of constructing potential mitigation measures has been assessed and captured in the assessment of carbon emissions set out in Chapter 14 of the Environmental Statement. If not, can this assessment be updated accordingly and confirmation provided as to whether this changes the outcome of the Environmental Assessment?

Applicant's Response

As noted above the applicant is working towards minimising the need for hard engineering solutions. However, if there are any resulting localised hard engineering solutions which lead to an increase in GHG emissions during construction, it is unlikely that this would alter the conclusion reached in Chapter 14 of the Environmental Statement (ES) (**APP-052**). Following the same reasoning as within ES Chapter 14, given the scale of construction emissions from the scheme relative to the UK's National Budget, it is unlikely the scheme will have a 'material impact' on the UK Government meeting its carbon reduction target.

Carbon emissions during construction

Point 7

The Secretary of State notes that Chapter 14 of the Environmental Statement indicates that plant emissions during construction include those for site clearance, earthworks, and drainage and understands from REP 02-035 the Applicant considers that construction emissions beyond those matters could not be estimated due to uncertainties about fuel use. The Secretary of State requests that the Applicant confirms whether the assessment of construction emissions reflects a "worst case" estimate of the remaining carbon emissions and if not, that the assessment is updated to provide this.

Applicant's Response

Section 14.5.1 of ES Chapter 14 (**APP-052**) lists in the assumptions and limitations that plant process emissions could not be quantified for elements outside of site clearance, earthworks, and drainage at the time of writing and that plant emissions from other areas would be considered further at PCF Stage 5.

At the start of Stage 5, the baseline for construction emissions, summarised in ES Chapter 14 (**APP-052**), were recalculated to incorporate construction plant emissions for other DMRB series (fencing, road restraint systems, pavements, kerbing, traffic signs and road markings, lighting, structures, and brickwork). The approach taken here was to use SPONS Price Book to create outline task schedules, including typical plant / machinery for each construction activity. Once these 'gangs' had been created, SPONS was used to estimate the amount of time each piece of machinery was used to complete one unit of each activity, and the litres of fuel per hour from each machine. Using the estimates on fuel consumption per hour, it was possible to derive a total volume of fuel needed for each activity. This volume of fuel was then input to the National Highway's Carbon Tool to provide a total fuel quantity. The table below summarises the PCF Stage 3 baseline (excluding plant emissions) and the revised baseline at the start of PCF Stage 5 (which includes plant emissions).

Stage 3 Baseline (tCO_2e)	19,823
Revised Stage 5 Baseline (tCO_2e)	22,142
Difference (tCO_2e)	2,319
Percentage Increase (%)	11.7%

The table below provides an updated summary of Table 14-10 from ES Chapter 14 (**APP-052**). This provides comparison against the relevant UK Government carbon budgets.

Project Stage	Carbon emissions distributed per relevant carbon budget (tCO_2e)				Estimated total emissions over 60-year appraisal period (tCO_2e)
	Fourth (2023 to 2027)	Fifth (2028 to 2032)	Sixth (2033 to 2037)	2038 to 2087	
Baseline (DM)	4,599,108	7,465,037	7,214,859	65,498,023	84,777,027
Construction (DS)	22,142	-	-	-	22,142
Operation (DS)	4,603,419	7,471,531	7,220,487	65,542,897	84,838,334
Total (DS)	4,625,561	7,471,531	7,220,487	65,542,897	84,860,476
Difference (DS-DM)	+26,453	+6,494	+5,628	+44,874	+83,449

Note: The construction carbon value is representative of the National Highways Carbon Tool assessment. The operational carbon value is representative of estimated operational energy plus estimated user utilisation emissions for the ARN over the 60-year appraisal period. DM = Do Minimum, DS = Do Something

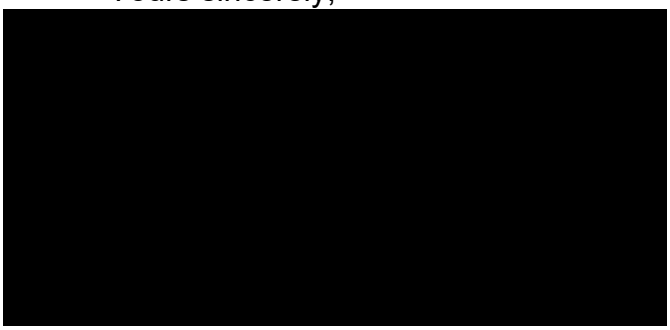
The addition of construction emissions to the Stage 3 baseline now provides a 'worst case' of emissions of the design at PCF Stage 3. The increase in construction emissions is not expected to change the conclusion reached within ES Chapter 14 (**APP-052**) and it remains unlikely the scheme will have a 'material impact' on the UK Government meeting its carbon reduction target.

Through PCF Stage 5, work has been undertaken to mitigate and reduce construction emissions from this baseline. The project team has undertaken Carbon Management workshops to consider how, through value engineering and the use of low-carbon technologies, carbon emissions can be reduced from this baseline. Some of the carbon opportunities that are being pursued include:

- Using warm mix, rather than hot mix asphalt
- Use of recycled materials for car parks, haul roads and hard stands
- Reducing the length of wingwalls to minimise materials
- Reduction in width of underpass structure

Other low carbon solutions to reduce emissions through construction (e.g., electric plant, low-carbon welfare units etc.) are to be considered further.

Yours sincerely,



Craig Stirzaker
Project Manager
National Highways