Cambridge Waste Water Treatment Plant Relocation Project
Anglian Water Services Limited

Review Note of Chapter 19 Updates Implications for other ES Chapters

Application Document Reference: 5.4.19.14
PINS Project Reference: WW010003
APFP Regulation No. 5(2)a

Revision No. 01
April 2024

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1 Introduction

1.1 Background

1.1.1 Issue Specific Hearing (ISH) 5 on Traffic and Transport matters was held on 9th April 2024. This Review Note has been prepared in response to Action Point 1 as listed in the Action Points from ISH5 [EV-009b], which states:

> "Update Noise and Vibration [REP6-033] and Air Quality [REP6-013] Environmental Statement (ES) chapters relating to traffic and transport changes and provide a note to explain no updates needed to other ES chapters which draw on traffic data or the conclusions of the transport assessment (such as Biodiversity, Community, Health, Historic Environment, Landscape and Visual and Cumulative)."

1.2 Summary of changes to vehicle movements

1.2.1 During the course of the DCO examination for the Proposed Development, there have been updates to the construction and operational vehicle movements as stated in ES Chapter 2 Project Description (App Doc Ref 5.2.2) and ES Chapter 19 Traffic and Transport (App Doc Ref 5.2.19), as well as updates to modelling completed for the purpose of ES Appendix 19.3 Transport Assessment (TA) (App Doc Ref 5.4.19.3).

Construction phase

1.2.2 The changes to the peak daily two-way construction vehicle movements associated with the proposed WWTP and transfer tunnel are summarised in Table 1.1. Vehicle movements are split into Light Duty Vehicles (LDVs) and Heavy Duty Vehicles (HDVs), as defined in ES Chapter 7 Air Quality[1].

Table 1.1 Changes to daily two-way construction vehicle movements at the proposed WWTP and transfer tunnels

Development element	Road link	Vehicle type	Original value	Revised value	Change
Proposed WWTP	Horningsea Road bridge and A14 slips at junction 34 of the A14	LDVs	258	267	+9
		HDVs	370	360	-10
		All vehicles	628	627	-1
Transfer Tunnel	Horningsea Road south of junction 34 of the A14	LDVs	27	27	0
		HDVs	45	40	-5
		All vehicles	72	67	-5

[1] A light duty vehicle (LDV) has a gross weight less than 3.5 tonnes. A heavy duty vehicles (HDV) has a gross weight greater than 3.5 tonnes and includes heavy goods vehicles (HGVs), buses and coaches.

1.2.3 The revised figures are consistent with the Combined Construction Peak scenario reported in paragraph 4.2.9 in ES Chapter 19 Traffic and Transport (App Doc Ref 5.2.19) [REP6-037].

1.2.4 In summary, the changes to daily two-way construction vehicle movements on Horningsea Road and the slip roads at junction 34 of the A14 are:

- 10 fewer HDVs and 9 more LDVs accessing the proposed WWTP; and
- 5 fewer HDVs and no change to LDVs accessing the transfer tunnel.

1.2.5 The changes to the peak daily two-way construction vehicle movements associated with the Waterbeach pipeline are summarised in Table 1.2.

Table 1.2 Changes to daily two-way construction vehicle movements at the Waterbeach pipeline (peak construction)

Development element	Road link	Vehicle type	Original value	Revised value	Change
Waterbeach pipeline north site(peak)	The A10 and local roads in Waterbeach[2]	LDVs	14	28	+14
		HDVs	82	82	0
		All vehicles	96	110	+14
Waterbeach pipeline south site(peak)	A1309 Milton Road (south of Junction 33) and local roads in Chesterton[3]	LDVs	14	28	+14
		HDVs	90	90	0
		All vehicles	104	118	+14

1.2.6 These revised figures are consistent with the peak daily two-way construction vehicle movements associated reported in paragraph 4.2.239 in ES Chapter 19 Traffic and Transport (App Doc Ref 5.2.19) [REP6-037], which relate to the peak in construction activity associated with the Waterbeach pipeline north and south sites during the first and last 8 weeks of construction.

1.2.7 In summary, the changes to the peak daily two-way construction vehicle movements on the construction routes to the north of junction 33 of the A14 are:

- No change to HDVs and 14 more LDVs using the A10 and local roads for the Waterbeach Pipeline north works.

1.2.8 The changes to the peak daily two-way construction movements on the construction routes to the south of junction 33 of the A14 are summarised as:

[2] Long Drove, Bannold Drove, Bannold Road, Burgess's Drove, Clayhithe Road and, Station Road.
[3] Cowley Road, Green End Lane and Water Lane (including Water Street and Fen Road)

- No change to HDVs and 8 more LDVs using the A1309 Milton Road (south of Junction 33) and local roads for the existing WWTP and transfer tunnel south access[4].

Operation phase

1.2.9 The changes to the peak daily two-way operational vehicle movements associated with the proposed WWTP are summarised in Table 1.3.

Table 1.3 Changes to daily two-way operational vehicle movements at the proposed WWTP

Development Element	Road link	Vehicle type	Original value	Revised value	Change
Proposed WWTP	Horningsea Road bridge and the A14 slip roads at junction 34 of the A14	LDVs	92	176	+84
		HDVs	146	146	0
		All vehicles	238	322	+84

1.2.10 These revised figures are consistent with the reasonable worst-case scenario reported in Table 4-79 in ES Chapter 19 Traffic and transport (App Doc Ref 5.2.19), which are derived from the operational movements set out in Table 2-5 in ES Chapter 2 Project Description (App Doc Ref 5.2.2) [REP6-009].

1.2.11 In summary, the changes to the peak daily two-way vehicle on Horningsea Road and the slip roads at junction 34 of the A14 are:

- No change to HDVs and 84 more LDVs accessing the proposed WWTP.

Implications on Traffic and transport assessment

1.2.12 The ES Chapter 19 Traffic and Transport (App Doc Ref 5.2.19) [REP6-037] and ES Appendix 19.3 Transport Assessment (App Doc Ref 5.4.19.3) [REP6-075] were updated at Examination Deadline 6 to reflect the revised construction and operational vehicle movements. However, the revisions to both construction and operational vehicle movements as well as updates to modeling have not changed the assessment conclusions; there are no new or different residual significant effects reported.

[4] This represents the highest change in construction traffic movements on Milton Road associated with construction of the Waterbeach pipeline south works and transfer tunnel at the existing WWTP in combination.

1.3 Purpose of this Review Note

1.3.1 This purpose of this document is to review of the changes in peak daily construction movements and document whether these changes result in any subsequent changes to other ES Chapters.

1.3.2 This document identifies:

- ES Chapters and their assessments that are not reliant or are unrelated to ES Chapter 19 or the TA and therefore unaffected by the changes;
- ES Chapters and their assessments that are reliant on the significant effects reported within other ES Chapters that do directly refer the vehicle movements; and
- ES Chapters and their assessments that are directly affected by the changes to vehicle movements numbers and that may require amendments.

2 Review of Chapter 19 updates on ES Chapters

2.1 Chapters not reliant or unrelated to Chapter 19 or the TA

2.1.1 The following ES Chapters do not refer to the vehicle movements as referred to within ES Chapter 19 Traffic and Transport (App Doc Ref 5.2.19) or ES Appendix 19.3 Transport Assessment (App Doc Ref 5.4.19.3):

- ES Chapter 6 Agricultural Land and Soils (App Doc Ref 5.2.6) [REP6-011]
- ES Chapter 9 Climate Resilience (App Doc Ref 5.2.9) [REP6-017]
- ES Chapter 10 Carbon (App Doc Ref 5.2.10) [REP6-019]
- ES Chapter 14 Land Quality (App Doc Ref 5.2.14) [REP6-027]
- ES Chapter 16 Material Resources and Waste (App Doc Ref 5.2.16) [REP6-031]
- ES Chapter 18 Odour (App Doc Ref 5.2.18) [REP6-035]
- ES Chapter 20 Water Resources (App Doc Ref 5.2.20) [REP6-039]

2.1.2 In relation to ES Chapter 9 Climate Resilience (App Doc Ref 5.2.9) [REP6-017], the quantity of construction and operational vehicle movements are unrelated to the consideration of the physical effects of climate change on the infrastructure, operation, use and maintenance of the Proposed Development. Vehicle emissions as they relate to greenhouse gas (GHG) emissions are considered within the assessments as part of the ES Chapter 10 Carbon (App Doc Ref 5.2.10) [REP6-019].

2.1.3 ES Chapter 10 Carbon (App Doc Ref 5.2.10) [REP6-019] does include assessment of carbon emissions during construction, but the carbon model used does this without direct reference to vehicle movements. The carbon model was built up on an asset by asset basis, rather than looking at individual journeys. This is because the carbon model is not structured in a way that directly relates to the construction vehicle movements referred to in ES Chapter 19 Traffic and Transport (App Doc Ref 5.2.19) and ES Appendix 19.3 Transport Assessment (App Doc Ref 5.4.19.3). There is therefore no change to the construction assessment in ES Chapter 10 Carbon (App Doc Ref 5.2.10) [REP6-019].

2.2 Chapters reliant on significant effect reporting of Chapters directly referring the vehicle movements

2.2.1 The following ES Chapters rely on residual significant effects that are reported within ES Chapter 7 Air Quality (App Doc Ref 5.2.7), ES Chapter 17 Noise and Vibration (App Doc Ref 5.2.17) and ES Chapter 19 Traffic and Transport (App Doc Ref 5.2.19) are:

- ES Chapter 8 Biodiversity (App Doc Reg 5.2.8) [REP6-015]
- ES Chapter 11 Community (App Doc Ref 5.2.11) [REP6-021]
- ES Chapter 12 Health (App Doc Ref 5.2.11) [REP6-023]

- ES Chapter 13 Historic Environment (App Doc Ref 5.2.13) [REP6-025],
- ES Chapter 15 Landscape and Visual Amenity (App Doc Ref 5.2.15) [REP6-029]
- ES Chapter 21 Major Accidents and Disasters (App Doc Ref 5.2.21) [REP6-041]
- ES Chapter 22 Cumulative Effects Assessment (App Doc Ref 5.2.22) [REP6-043]

2.2.2 However, although vehicle movement numbers have changed slightly, this does not have any effect on the conclusions within these ES Chapters or their related Appendices and therefore no updates are required. Table 2.1 provides the justification for this position for each ES Chapter.

Table 2.1 Review of chapters reliant on significant effect reporting of Chapters directly referring the vehicle movements

Chapter	Review of impacts to Chapter	Changes to assessment documents
ES Chapter 8 Biodiversity (App Doc Ref 5.2.8) [REP6-015]	ES Chapter 8 Biodiversity (App Doc Ref 5.2.8) [REP6-015] inherently considers in-combination effects on ecological receptors, therefore considering how separate effects such as those relating to air quality, noise, lighting and others may have a combined effect on the same ecological receptor. This in-combination assessment is informed by the outcomes of ES Chapter 7 Air Quality (App Doc Ref 5.2.7) and ES Chapter 17 Noise and Vibration (App Doc Ref 5.2.17). As discussed further in Section 2.3 of this Review Note, the changes in vehicle movement numbers do not materially change the conclusions of ES Chapter 7 Air Quality (App Doc Ref 5.2.7) in relation to nitrogen oxides and deposition impacts to designated ecological sites. There is therefore no change to ES Chapter 8 Biodiversity (App Doc Ref 5.2.8) [REP6-015] as air quality effects on biodiversity receptors are not materially different. As discussed further in Section 2.3 of this Review Note, the changes in vehicle movement numbers do not materially change the conclusions of ES Chapter 17 Noise and Vibration (App Doc Ref 5.2.17) in relation to noise and vibration effects on ecological receptors. There is therefore no change to ES Chapter 8 Biodiversity (App Doc Ref 5.2.8) [REP6-015] as noise and vibration effects on biodiversity receptors are not materially different. With reference to the appendices associated with ES Chapter 8 Biodiversity (App Doc Ref 5.2.8) [REP6-015], there are no changes required. ES Appendices 8.1 to 8.12 relate to baseline ecological surveys, the results of which remain the same. ES Appendices 8.13 to 8.14 relate to Biodiversity Net Gain and the Landscape, Ecological and Recreational Masterplan, which remains the same as the Order Limits and habitats proposed are unchanged. ES Appendices 8.15 to 8.16 relate to Habitat Regulations Assessment, which remains the same given the air quality and noise assessments are not materially different. ES Appendices 8.17 to 8.19 relate to arboricultural reports and the Wildlife Hazard Management Plan, which are unaffected by changes in vehicle movement numbers. ES Appendices 8.20 to 8.22 relate to ghost licences with Natural England, which are unaffected by changes in vehicle movement numbers. ES Appendix 8.23 relates to the Preliminary Ecological Appraisal, which is a baseline report unaffected by changes in vehicle movement numbers. ES Appendix 8.24 relates to the	None required.

Chapter	Review of impacts to Chapter	Changes to assessment documents
	Outline Outfall Management and Monitoring Plan, which is also unaffected by changes in vehicle movement numbers.	
ES Chapter 11 Community (App Doc Ref 5.2.11) [REP6-021]	ES Chapter 11 Community (App Doc Ref 5.2.11) [REP6-021] inherently considers the effects from other assessments, such as ES Chapter 19 Traffic and Transport (App Doc Ref 5.2.19), ES Chapter 7 Air Quality (App Doc Ref 5.2.7) and ES Chapter 17 Noise and Vibration (5.2.17), to conclude the effects of the Proposed Development on community receptors. However, as the updates to ES Chapter 19 Traffic and Transport (App Doc Ref 5.2.19) and ES Appendix 19.3 Transport Assessment (App Doc Ref 5.4.19.3) do not result in new or different significant environmental effects, there are no changes to the conclusions of ES Chapter 11 Community (App Doc Ref 5.2.11) [REP6-021]. It is recognised that seeking to limit the number of vehicle movements during peak periods aims to avoid or reduce impacts experienced by local people, in particular in relation to avoiding school drop off times. However, the change of 14 more LDV movements for the construction of the Waterbeach pipeline represents a 25% increase from the original values. This could be perceived by a very few number of people in the community as a very short term impact that is worse than the previous position. Notwithstanding, as discussed further in Section 2.3 of this Review Note, the changes in vehicle movement numbers do not materially change the conclusions of ES Chapter 7 Air Quality (App Doc Ref 5.2.7) and ES Chapter 17 Noise and Vibration (App Doc Ref 5.2.17). There are therefore no changes to the conclusions of ES Chapter 11 Community (App Doc Ref 5.2.11) [REP6-021]. With reference to appendices associated with ES Chapter 11 Community (App Doc Ref 5.2.11) [REP6-021], there are no changes required. ES Appendix 11.1 relates to the community questionnaire, which is a baseline survey and the changes in construction vehicle numbers would not affect the questions asked within this.	None required.
ES Chapter 12 Health (App Doc Ref	ES Chapter 12 Health (App Doc Ref 5.2.12) [REP6-023] draws on the effects from other assessments, such as ES Chapter 19 Traffic and Transport (App Doc Ref 5.2.19), ES Chapter 7 Air Quality (App Doc Ref	None required.

Chapter	Review of impacts to Chapter	Changes to assessment documents
5.2.12) [REP6-023]	5.2.7) and ES Chapter 17 Noise and Vibration (5.2.17), to conclude the effects of the Proposed Development on health. However, as the updates to ES Chapter 19 Traffic and Transport (App Doc Ref 5.2.19) and ES Appendix 19.3 Transport Assessment (App Doc Ref 5.4.19.3) do not result in new or different significant environmental effects, there are no changes to the conclusions of ES Chapter 12 Health (App Doc Ref 5.2.12) [REP6-023]. As discussed further in Section 2.3 of this Review Note, the changes in vehicle movement numbers do not materially change the conclusions of ES Chapter 7 Air Quality (App Doc Ref 5.2.7) and ES Chapter 17 Noise and Vibration (App Doc Ref 5.2.17). There are therefore no changes to the conclusions of ES Chapter 12 Health (App Doc Ref 5.2.12) [REP6-023]. With reference to appendices associated with ES Chapter 12 Health (App Doc Ref 5.2.12) [REP6-023], there are no changes required. ES Appendices 12.1 to 12.2 relates to the wider review of health determinants and the links between these and health requirements, which is baseline information unaffected by the changes in construction vehicle numbers. ES Appendix 12.3 Mental Health Wellbeing Impact Assessment (App Doc Re 5.4.12.3), the responses to which are unaffected by the changes in vehicle movement numbers given that these have not resulted in new or different significant environmental effects.	
ES Chapter 13 Historic Environment (App Doc Ref 5.2.13) [REP6-025]	ES Chapter 13 Historic Environment (App Doc Ref 5.2.13) [REP6-025] refer to the outcomes of other assessments insofar as they may affect the setting of designated heritage assets. The changes in predicted vehicle movements have been reviewed and will not alter the magnitude of impact or significance of effect reported on heritage assets resulting from changes to their settings. As discussed further in Section 2.3 of this Review Note, the changes in vehicle movement numbers do not materially change the conclusions of ES Chapter 7 Air Quality (App Doc Ref 5.2.7) and ES Chapter 17 Noise and Vibration (App Doc Ref 5.2.17). There are therefore no changes to the conclusions of ES Chapter 13 Historic Environment (App Doc Ref 5.2.13) [REP6-025].	None required.

Chapter	Review of impacts to Chapter	Changes to assessment documents
	With reference to appendices associated with ES Chapter 13 Historic Environment (App Doc Ref 5.2.13) [REP6-025], there are no changes required. ES Appendices 13.1 to 13.7 all relate to baseline studies and surveys, the results of which remain the same. ES Appendix 13.8 relates to the Framework Archaeological Investigation Mitigation Strategy, which is unaffected by the changes in vehicle movement numbers.	
ES Chapter 15 Landscape and Visual Amenity (App Doc Ref 5.2.15) [REP6-029]	ES Chapter 15 Landscape and Visual Amenity (App Doc Ref 5.2.15) [REP6-029] considers the effects insofar as they may affect landscape character and visual amenity. The changes in predicted vehicle movements have been reviewed and will not alter the magnitude of impact or significance of effect reported on landscape character or visual amenity. As discussed further in Section 2.3 of this Review Note, the changes in vehicle movement numbers do not materially change the conclusions of ES Chapter 7 Air Quality (App Doc Ref 5.2.7) and ES Chapter 17 Noise and Vibration (App Doc Ref 5.2.17). There are therefore no changes to the conclusions of ES Chapter 15 Landscape and Visual Amenity (App Doc Ref 5.2.15) [REP6-029]. A short term increase of 14 LDVs for construction of the Waterbeach pipeline would not materially reduce tranquility further in the area around the Waterbeach pipeline than already assessed. The assessment identifies a temporary reduction in tranquility in the Waterbeach Lode Fen LCA, but this is mainly attributed to ground works rather than vehicle movements. It is not a tranquil area owing to the presence of the existing railway as well as activity from the nearby sailing club, as well as existing road traffic using roads and streets in Waterbeach. With reference to appendices associated with ES Chapter 15 Landscape and Visual Amenity (App Doc Ref 5.2.15) [REP6-029], there are no changes required. ES Appendices 15.1 to 15.2 relate to photomontages and viewpoint photography, which do not include visualisations or baseline photography of construction activity. ES Appendices 15.3 to 15.4 relate to lighting and glint and glare assessments, which are unaffected by changes in vehicle movement numbers. ES Appendix 15.5 relates to the assessment methodology, which remains unchanged.	None required.

Chapter	Review of impacts to Chapter	Changes to assessment documents
ES Chapter 21 Major Accidents and Disasters (App Doc Ref 5.2.21) [REP6-041]	ES Chapter 21 Major Accidents and Disasters (App Doc Ref 5.2.21) [REP6-041] overlaps with ES Chapter 19 Traffic and Transport (App Doc Ref 5.2.19) in relation to the potential for incidents involving hazardous loads. None of the changes to the vehicle movements numbers in the updated ES Chapter 19 Traffic and Transport (App Doc Ref 5.2.19) and ES Appendix 19.3 Transport Assessment (App Doc Ref 5.4.19.3) provided at Deadline 7 are additional hazardous loads. There is therefore no subsequent change required to ES Chapter 21 Major Accidents and Disasters (App Doc Ref 5.2.21) [REP6-041]. With reference to appendices associated with ES Chapter 21 Major Accidents and Disasters (App Doc Ref 5.2.21) [REP6-041], there are no changes required. ES Appendix 21.1 relates to the Preliminary COMAH Assessment, which is unaffected by changes in vehicle movement numbers.	None required.
ES Chapter 22 Cumulative Effects Assessment [REP6-043]	ES Chapter 22 Cumulative Effects Assessment [REP6-043] considers the potential for residual effects identified across all technical ES chapters to generate inter-related or cumulative effects. Since there are no new or different residual effects as a result of the changes to vehicle movement numbers, there are no changes to ES Chapter 22 Cumulative Effects Assessment (App Doc Ref 5.2.22) [REP6-043].	None required.

2.3 Chapters for which assessments directly incorporate the same data as Chapter 19 and TA

2.3.1 ES Chapter 7 Air Quality (App Doc Ref 5.2.7) and ES Chapter 17 Noise and Vibration (App Doc Ref 5.2.17) directly refer to vehicle movement numbers and these have been updated, as requested in Action Point 1, and provided at Deadline 7. The assessment conclusions, however, remain unchanged.

2.3.2 Table 2.2 summarises the changes made to those ES Chapters.

Table 2.2 Chapters where traffic flows are directly used in assessments

Chapter	Review of impacts to Chapter	Changes to assessment documents
ES Chapter 7 Air Quality (App Doc Ref 5.2.7)	The air quality model makes use of the same information for vehicle movements as used for ES Chapter 19 Traffic and Transport (App Doc Ref 5.2.19) and ES Appendix 19.3 Transport Assessment (TA) Part 1 (App Doc Ref 5.4.19.3). The Applicant has reviewed how changes to construction and operational vehicle movements values affect the air quality assessment for construction and operational vehicle movements. The assessment of air quality from road sources is local in nature and considers sensitive receptor locations likely to experience the largest change or the largest concentrations within 200m of an 'affected road'[5]. Outside of an air quality management area (AQMA), affected roads are those with a daily change (on an AADT basis[6]) in vehicle movements of • more than 500 light duty vehicles (LDVs[7]); or • more than 100 heavy duty defined (HDVs[8]). The air quality assessment considers the change in construction vehicles on routes to/from the different aspects of the Proposed Development and screens them against the EPUK/IAQM affected road criteria. This includes vehicles for the: • Proposed WWTP – this includes construction vehicle movements travelling in and out of the land required for the construction of the proposed WWTP and relates to movements on the A14 and on Horningsea Road up to the Proposed WWTP access/egress.	Addition of explanation in section 1 at paragraph 1.1.4 within ES Chapter 7 Air Quality (App Doc Ref 5.2.7) that changes in vehicle movement data does not necessitate updates to quantitative assessment and the conclusions of the air quality assessment do not change.

[5] Criteria from EPUK/IAQM '*Land-Use Planning & Development Control: Planning For Air Quality*'
[6] AADT means the total volume of traffic on a road divided by 365
[7] LDV – vehicles with gross weight less than 3.5 tonnes
[8] HDV – vehicle with gross weight greater than 3.5 tonnes (heavy goods vehicles, buses and coaches)

Chapter	Review of impacts to Chapter	Changes to assessment documents
	• Transfer Tunnel – relates to movements from A14 and along Horningsea Road to access/egress the area of land used to construct the transfer tunnel and shafts 4 and 5. • Waterbeach pipeline north site – relates to routes using the A10 and roads within Waterbeach to access the northern extent of the land required to construct the Waterbeach Pipeline. • Waterbeach pipeline south site - relates to routes using Milton Road (A1309) and local roads to access the southern extent of the land required to construct the Waterbeach Pipeline. Construction vehicles movements are considered in aggregate and not just for single aspects of the Proposed Development. The following roads were screened in for assessment and included in the air quality modelling undertaken for the ES Chapter 7 Air Quality (App Doc Ref 5.2.7): • the A14 between junction 32 and 34 • A14 J34 entry and exit ramps; and • Horningsea Road between A14 J34 and the access to the proposed WWTP This review concerns only routes where construction traffic movements are different to those that have been assessed – proposed WWTP, Transfer tunnel and Waterbeach. As explained in ES Chapter 7 Air Quality (App Doc Ref 5.2.7), air quality modelling assessments use AADT flows for comparison with the annual mean air quality objectives as an AADT is representative of the average number of vehicle movements on a road on an average day. The total number of existing vehicles on all assessed roads without the Proposed Development uses the AADT flow. AADT have not been adopted when considering construction traffic movements and instead the typical daily construction vehicle movements during the combined construction peak are used. These represent the maximum construction vehicle movements should peak construction activities all occur at the same time across all	

Chapter	Review of impacts to Chapter	Changes to assessment documents

aspects of the Proposed Development. This is an extremely conservative approach as the number of movements for a combined construction peak would lead to considerably higher emissions than an annual average daily traffic flow and a combined peak is unlikely given the construction methodology (e.g. the Waterbeach Pipeline will be built working from the north to the south progressively and not concurrently).

The air quality assessment uses:

- AADT without development traffic data to predict the without development impacts.
- AADT without development traffic data + the combined construction peak to predict the with development impacts.

Impacts are then assessed against the EPUK/IAQM[9] effects matrix and changes in air quality at assessed receptor locations were concluded to be negligible effect and not significant.

Construction phase assessment review

Proposed WWTP & Transfer tunnel via Horningsea Road: The changes to the peak construction vehicle movements at the proposed WWTP and the waste transfer tunnel are reductions in construction movements and would therefore decrease emissions to air from the construction phase, albeit by a marginal and non-material quantity. The assessment is within the 'worst case' envelope already assessed and the conclusions remain unchanged.

Waterbeach Pipeline north and south: The increase of 14 additional peak construction LDV movements, from 54 to 68, for the Waterbeach pipeline north and the increase of 8 additional peak construction LDV movements, from 47 to 55. for the Waterbeach south remains less than the threshold for assessment of 500 LDVs movement per day. The

[9] Environmental Protection UK (EPUK) and the Institute of Air Quality Management (IAQM) 'Land-Use Planning & Development Control: Planning For Air Quality'

Chapter	Review of impacts to Chapter	Changes to assessment documents

screening conclusion therefore remains the same and overall, the change to peak construction movements would not change the conclusions of the air quality assessment.

Operation phase assessment review

The operational assessment methodology matches the construction methodology in all aspects. The revised traffic data includes a:

- change from 92 to 176 LDV movements per day, an increase of 84 movements at the Proposed WWTP.
- There is no change in HDV movements.

The combination of 146 HDVs and 92 LDVs equated to a predicted change in NO_2, PM_{10} and $PM_{2.5}$ of less than 0.1µg/m^3 at modelled sensitive receptors as presented in Table 3-1 of ES Appendix 7.2 Dispersion Model Results (App Doc Ref 5.4.7.2) [AS-062].

As the long term average concentrations at the modelled receptors is less than 75%[10] of the nitrogen dioxide and particulate matter air quality standards, the EPUK/IAQM assessment criteria adopted for the assessment[11] would allow a change of up to 2µg/m^3 for NO_2 and PM_{10} and up to 1µg/m^3 to cause a change in the effect descriptors from a 'negligible' effect to a 'slight' effect. This equates to a substantial change in emissions well beyond the number of movements being considered here.

The assessment conclusion therefore remains the same, the change to operational movements of LDVs would not change the conclusions of the air quality assessment.

[10] Approximately 30% for NO_2, 40% for PM_{10}, 50% for $PM_{2.5}$
[11] Table 2-11, Table 2-13 and Table 2-14 of ES Volume 2 Chapter 7 Air Quality (App Doc Ref 5.2.7)

Chapter	Review of impacts to Chapter	Changes to assessment documents
ES Chapter 17 Noise and Vibration (App Doc Ref 5.2.17)	**Construction Traffic Noise Assessment** ES Chapter 17 Noise and Vibration (App Doc Ref 5.2.17) relates to ES Chapter 19 Traffic and Transport (App Doc Ref 5.2.19) as follows: • Section 4.2 of ES Chapter 17 Noise and Vibration (App Doc Ref 5.2.17) makes reference to construction traffic data from ES Chapter 19 Traffic and Transport (App Doc Ref 5.2.19). These traffic flow values have undergone slight amendments. • Section 4.2 of ES Chapter 17 Noise and Vibration (App Doc Ref 5.2.17) makes reference to construction traffic routes in ES Appendix 19.3 Transport Assessment (App Doc Ref 5.4.19.3). These are unchanged. Table 1-5 of ES Appendix 17.3 Construction Noise Assessment (App Doc Ref 5.4.17.3) refers to baseline traffic data (these data remain unaltered) and daily construction vehicle movements (cars/LGVs and HGVs) for construction traffic routes during peak activity for each area/route (these values have undergone slight amendments). Accounting for these minor changes in traffic flow values predicted, baseline noise levels (BNL) are found to increase or decrease by no more than 0.1dB compared to the previously reported results. The resulting magnitude of impact and assessment outcomes are therefore unchanged. These small changes to traffic flow values make no material difference to predicted BNL used within construction traffic noise assessment or within the assessment outcomes. **Operational Traffic Noise Assessment** Chapter 17 Noise and Vibration (App Doc Ref 5.2.17) relates to ES Chapter 19 Traffic and Transport (App Doc Ref 5.2.19) as follows:	Table 1-5 within ES Appendix 17.3 Construction Noise Assessment (App Doc Ref 5.4.17.3) has been updated for Deadline 7 to incorporate the minor difference in assessment numbers with the final values presented in ES Chapter 19 Traffic and Transport (App Doc Ref 5.2.19) ES Appendix 19.3 Transport Assessment (App Doc Ref 5.4.19.3) also provided at Deadline 7. Table 4-1 of ES Chapter 17 Noise and Vibration (App Doc Ref 5.2.17) has been updated to account for associated changes.

Chapter	Review of impacts to Chapter	Changes to assessment documents
	• Section 4.3.20 of ES Chapter 17 Noise and Vibration (App Doc Ref 5.2.17) refers to the number of daily cars/vans and HGVs that would access the site during operation (these numbers are from Table 5-2: Estimated operational visits associated with proposed WWTP staff (two Way), and Table 5-3: Estimated future operational HGV movements vs current operational HGV movements (two way) in ES Chapter 2 Project Description (App Doc Ref 5.2.2) [REP6-009] and Table 4-4 in ES Chapter 19 Traffic and Transport (App Doc Ref 5.2.19). • The operational HGV movements remain unchanged (146 HGV daily movements). The number of cars/LGV movements assessed have increased from 92 to 176. The increase to 176 vehicle movements per day is consistent with the reasonable worst case scenario reported in Table 4-79 in ES Chapter 19 Traffic and Transport (App Doc Ref 5.2.19), which are derived from the operational movements set out in Table 2-5 in ES Chapter 2 Project Description (App Doc Ref 5.2.2) [REP6-009]. Revised calculations show predicted noise levels increase by 0.1dB for operational road traffic using Horningsea Road compared to the previously predicted values. There is no change in the magnitude of impact reported, which remains negligible. These small changes to traffic flow values make no material difference to noise level results or to the assessment outcomes.	ES Chapter 17 Noise and Vibration (App Doc Ref 5.2.17) has been updated for Deadline 7 at paragraph 4.3.20, Table 4-25 Operational traffic noise and paragraph 4.3.23 to reflect values associated with the updated operational vehicle numbers.

3 Summary

3.1.1 This Review Note was prepared in response to Action Point 1 from ISH5. It is confirmed that the changes in construction vehicle numbers do not materially affect the conclusions of any ES Chapters.

3.1.2 The Applicant has updated ES Chapter 17 Noise and Vibration (App Doc Ref 5.2.17) and Table 1-5 within ES Appendix 17.3 Construction Noise Assessment (App Doc Ref 5.4.17.3) has been updated for Deadline 7 to incorporate the minor difference in assessment numbers as are result of the updated construction vehicle numbers and provided at Deadline 7.

3.1.3 Chapter 7 Air Quality (App Doc Ref 5.2.7) has been updated in section 1 Introduction to include the following at paragraph 1.1.4:

"Section 2.3 of this Chapter and Section 2 and 3 of ES Volume 4 Appendix 7.2: Dispersion Model Results (App Doc Ref 5.4.7.2) presents the Proposed Development's construction and operational vehicle movements based on data from Chapter 19 Traffic and Transport (App Doc Ref 5.2.19) and Transport Assessment (TA) Part 1 (App Doc Ref 5.4.19.3) and apply to the quantitative assessment (Section 2.2) of air quality impacts and effects. The vehicle movements have undergone slight amendments since the air quality assessment was undertaken and therefore values presented in this Chapter and Appendices have been superseded. A review of the changes in vehicle movements, for both the construction and operation phase, has been undertaken and is provided within the Review Note of Chapter 19 Updates Implications for other ES Chapters (App Doc Ref 5.4.19.14). This review concluded the changes to be of a marginal and non-material quantity with respect to the air quality assessment. On this basis, there is no requirement to update the quantitative assessment and there is no change to the conclusions presented in Section 5."

3.1.4 No other ES Chapters or associated appendices require updates.

Get in touch

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https://infrastructure.planninginspectorate.gov.uk/projects/eastern/cambridge-waste-water-treatment-plant-relocation/