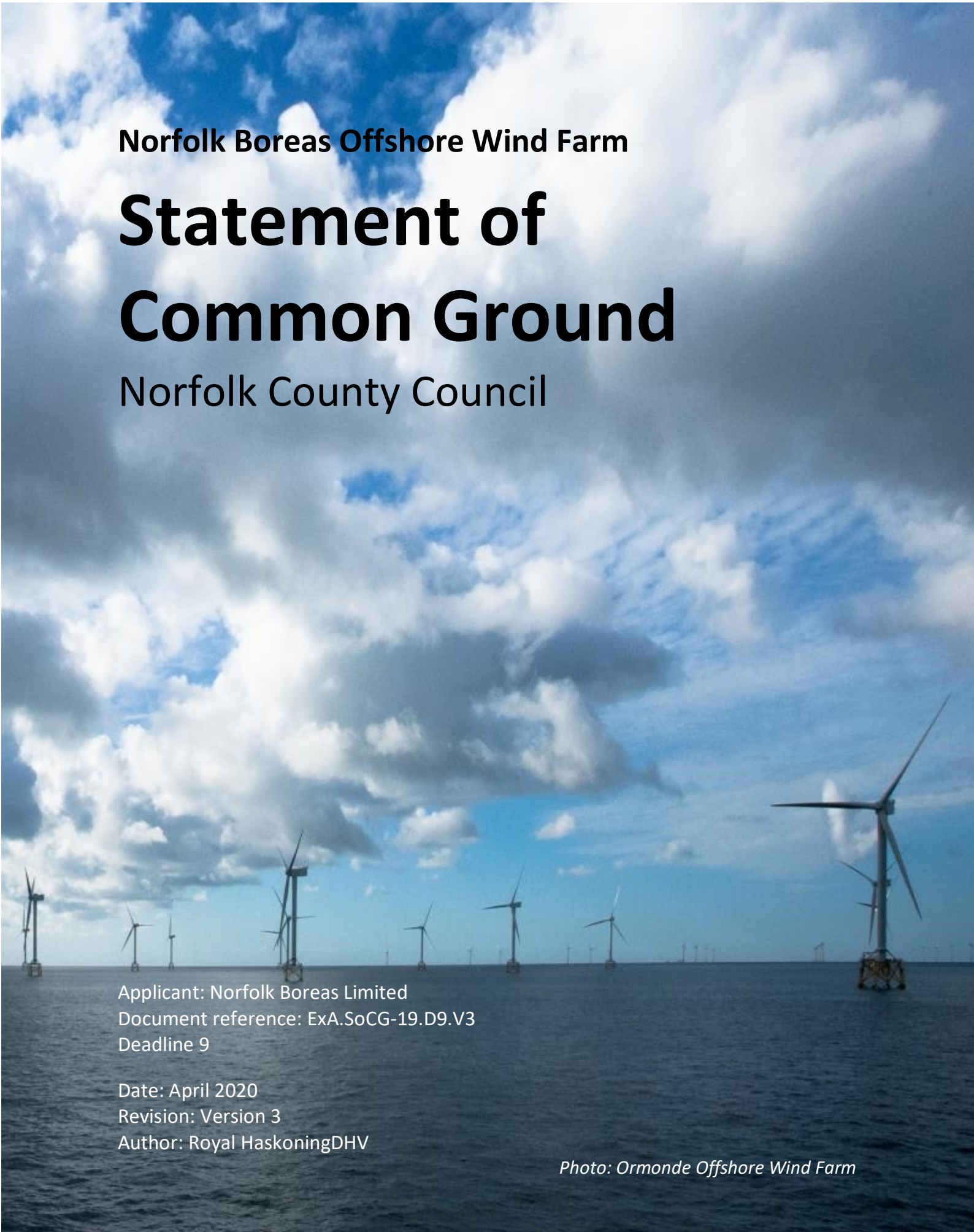
Norfolk Boreas Offshore Wind Farm

Statement of Common Ground

Norfolk County Council



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Glossary of Acronyms

ADBA	Archaeological Desk Based Assessment
AMP	Access Management Plan
CIA	Cumulative Impact Assessment
CoCP	Code of Construction Practice
CWS	County Wildlife Sites
DCO	Development Consent Order
EIA	Environmental Impact Assessment
ES	Environmental Statement
EMP	Ecological Management Plan
EPP	Evidence Plan Process
HDD	Horizontal Directional Drilling
HIA	Health Impact Assessment
HVAC	High Voltage Alternating Current
HVDC	High Voltage Direct Current
MMP	Materials Management Plan
MSA	Mineral Safeguard Area
OAMP	Outline Access Management Plan
OCoCP	Outline Code of Construction Practice
OLEMS	Outline Landscape and Environmental Management Strategy
OTMP	Outline Traffic Management Plan
OTP	Outline Travel Plan
PEIR	Preliminary Environmental Information Report
SoCG	Statement of Common Ground
TMP	Traffic Management Plan
TP	Travel Plan
WSI	Written Scheme of Investigation
VMPL	Vattenfall Wind Power Limited

Glossary of Terminology

Landfall	Where the offshore cables come ashore at Happisburgh South
Mobilisation area	Areas approx. 100 x 100m used as access points to the running track for duct installation. Required to store equipment and provide welfare facilities. Located adjacent to the onshore cable route, accessible from local highways network suitable for the delivery of heavy and oversized materials and equipment.
National Grid overhead line modifications	The works to be undertaken to complete the necessary modification to the existing 400kV overhead lines.
Necton National Grid substation	The grid connection location for Norfolk Boreas and Norfolk Vanguard.
Norfolk Boreas	The Norfolk Boreas Offshore Wind Farm project.
Norfolk Boreas Limited	The Applicant undertaking the development of the Norfolk Boreas Offshore Wind Farm project (an affiliate company of VWPL).
Norfolk Vanguard	Norfolk Vanguard Offshore Wind Farm, sister project of Norfolk Boreas.

Onshore cable route	The up to 35m working width within a 45m wide corridor which will contain the buried export cables as well as the temporary running track, topsoil storage and excavated material during construction.
Onshore project substation	A compound containing electrical equipment to enable connection to the National Grid. The substation will convert the exported power from HVDC to HVAC, to 400kV (grid voltage). This also contains equipment to help maintain stable grid voltage.
Trenchless crossing zone (e.g. HDD)	Areas within the onshore cable route which will house trenchless crossing entry and exit points.
The Applicant	Norfolk Boreas Limited

1 INTRODUCTION

1. This Statement of Common Ground (SoCG) has been prepared between Norfolk County Council and Norfolk Boreas Limited (hereafter the Applicant) to set out the areas of agreement, ongoing discussions or disagreement in relation to the Development Consent Order (DCO) application for the Norfolk Boreas Offshore Wind Farm (hereafter 'the project').

2. This SoCG comprises an agreement log which has been structured to reflect the topics of interest to Norfolk County Council with regard to the Norfolk Boreas DCO application (hereafter 'the Application'). The agreement logs (Table 3 to Table 9) outline all topic specific matters agreed, not agreed and actions to resolve between Norfolk County Council and the Applicant.

3. The Applicant has had regard to the Guidance for the examination of applications for development consent (Department for Communities and Local Government, 2015) when compiling this SoCG. Matters that are not agreed will be the subject of ongoing discussion wherever possible to resolve or refine the extent of disagreement between the parties.

1.1 The Development

4. The Application is for the development of the Norfolk Boreas Offshore Wind Farm and associated infrastructure. A full description of the project can be found in Chapter 5 Project Description of the Environmental Statement (ES) (document reference 6.1.5 of the Application, APP-218).

5. The Application is seeking consent for the following two alternative development scenarios:

   - **Scenario 1** – Norfolk Vanguard proceeds to construction and installs ducts and other shared enabling works for Norfolk Boreas.
   - **Scenario 2** – Norfolk Vanguard does not proceed to construction and Norfolk Boreas proceeds alone. Norfolk Boreas undertakes all works required as an independent project.

6. Where a topic of agreement is specific to a scenario this is identified in the Agreement Log (section 2), otherwise the agreement applies to both scenarios.

1.2 Consultation with Norfolk County Council

7. This section briefly summarises the consultation that the Applicant has had with Norfolk County Council. For further information on the consultation process please see the Consultation Report (document reference 5.1 of the Application, APP-027).

1.2.1 Pre-Application

8. The Applicant has engaged with Norfolk County Council on the project during the pre-application process, both in terms of informal non-statutory engagement and formal consultation carried out pursuant to Section 42 of the Planning Act 2008.

9. During formal (Section 42) consultation, Norfolk County Council provided comments on the Preliminary Environmental Information Report (PEIR) by way of email 28th November 2018.

10. Further to the statutory Section 42 consultation, meetings were held with Norfolk County Council through the Evidence Plan Process (EPP). For further details on these meetings see sections 9.5, 12.5, 13.5, 18.5, 21.5 and 21.6 of the Consultation Report (document 5.1 of the Application, APP-027). These included meetings for onshore archaeology, traffic and transport, onshore ecology and water resources and flood risk and the minutes of the meetings are provided as appendices to the Consultation Report (see Table 1 for details).

11. Table 1 provides a summary of pre-application correspondence with Norfolk County Council.

Table 1 Summary of pre-application consultation with Norfolk County Council

Date	Contact Type	Topic
Pre-Application		
January / February 2018	Email from the Applicant	Issue of Method Statements and Agreement Logs for relevant Environmental Impact Assessment (EIA) topics.
March 2018	EPP Meeting	Onshore and Offshore Archaeology agreement on method statements (minutes in document 5.1.9.44 of the Application, APP-081).
May 2018	EPP Meeting	Traffic and Transport agreement on method statement and traffic parameters for the scenarios (minutes in document 5.1.9.42 of the Application, APP-079)
November 2018	Section 42 consultation	Norfolk County Council response to section 42 consultation on PEIR. Appendix 24.01 of the Consultation Report (document reference 5.1.24.1 of the Application, APP-180).
January 2019	Emails from the Applicant	Offering any topic specific EPP meetings for relevant onshore EIA topics (for those topics not identified below it was concluded a meeting was not required).
February 2019	EPP Meeting	Onshore archaeology agreement on finding of geophysical survey and approach to ES Chapter (minutes in document 5.1.28.1 of the Application, APP-192).

Date	Contact Type	Topic
	EPP Meeting (conference call)	Water Resources and Flood Risk agreement on approach to the Environmental Statement and section 42 responses. (minutes in document 5.1.28.1 of the Application, APP-192). Norfolk County Council invited but not unable to attended but minutes and updated agreement log provided post meeting
	EPP Meeting (conference call)	Onshore Ecology and Ornithology process meeting to discuss section 42 responses and approach to Environmental Statement (document 5.1.28.1 of the Application, APP-192). Norfolk County Council invited but not unable to attended but minutes and updated agreement log provided post meeting
July 2019	Email from the Applicant	Providing early sight of relevant chapters of the Environmental Statement.

12. Consultation was also undertaken with Norfolk County Council concerning matters relevant to both projects by Norfolk Vanguard and has been taken into account by Norfolk Boreas. For details see Norfolk Vanguard Statement of Common Ground – Norfolk County Council (Norfolk Vanguard examination document REP9-047).

1.2.2 Post-Application

13. The Applicant met with Norfolk County Council on 24th July 2019 to agree the approach for drafting the SoCG. Norfolk County Council agreed that the SoCG should cover the same subject areas as identified in the Norfolk Vanguard SoCG, i.e. focusing on traffic and transport, onshore ecology, historic environment, flood risk, tourism and recreation and socio economics only.

14. This SoCG is a live document and will be updated throughout the examination process. This version is the original draft and takes consideration of the relevant representations submitted as part of the Section 56 Consultation (RR-037).

15. Table 2 provides a summary of post-application correspondence with Norfolk County Council.

Table 2 Summary of post-application consultation with Norfolk County Council

Date	Contact Type	Topic
Post-Application		
24th July 2019	Meeting	Project update and agreement on approach to SoCG's.
4th November 2019	Meeting	Project update and discuss comments on SoCG relating to socio-economics and traffic and transport
15th January 2020	Meeting	Norfolk Vanguard and Norfolk Boreas project update meeting
12th February 2020	Meeting	Meeting on Cawston Traffic attended by with Highways Authority, Cawston Parish Council and Broadland District Council.
16th March 2020	Meeting	Meeting to discuss Road Safety Audit of Revised Highway Intervention Scheme for Cawston

2 STATEMENT OF COMMON GROUND

16. Within the sections and tables below the different topics for agreement, ongoing discussion and disagreement for the different subject areas between Norfolk County Council and the Applicant are set out.

2.1 Project-wide considerations

17. Table 3 provides areas of agreement and disagreement for project-wide considerations.

Table 3 Project-wide considerations

Norfolk Boreas Limited position	Norfolk County Council position	Final position
Electricity supply		
The principle of offshore wind is supported, as Norfolk Boreas accords with national renewable energy targets and objectives. This was noted in Norfolk County Councils PEIR response in November 2018.	Agreed	It is agreed that both parties support offshore wind in principle and the project accords with national targets and objectives for renewable energy.
The onshore connection point was determined through a statutorily mandated process involving both the Applicant and National Grid, to identify a direct connection to the 400kV national transmission system. There are no planning or regulatory mechanisms through which the Applicant could identify direct 'infeeds' into the regional distribution network in Norfolk.	Agreed	The County Council accepts that Vattenfall are unable to influence National Grid and UK Power Networks regarding options to potentially feed electricity into the local transmission networks.
Site selection		
The methodology adopted for selecting and assessing the onshore project substation location options, including the final option, is considered robust and appropriate (ES Chapter 4 Site Selection and Assessment of Alternatives, document reference 6.1.4 of the Application, APP-127).	Agreed	It is agreed by both parties that the approach to selecting and assessing the onshore project substation location was appropriately undertaken.
The methodology adopted for selecting and assessing the landfall location options, including the final option, is considered robust and appropriate. (ES Chapter 4 Site Selection and Assessment of Alternatives, document reference 6.1.4 of the Application, APP-127).	Agreed	It is agreed by both parties that the approach to selecting and assessing landfall location was appropriately undertaken.
The proposed transition pit has been suitably set back from the cliff edge to ensure natural coastal erosion will not affect the drilled cable or	Agreed	The County Council ask that sufficient safeguards and mitigation measures are

Norfolk Boreas Limited position	Norfolk County Council position	Final position
transition pits within the conceivable lifetime of the project (approx. 30 years). In addition, the Applicant has committed to a long HDD to avoid any interaction with intertidal areas. Requirement 17 of the draft DCO (Landfall Method Statement) commits the Applicant to producing a method statement for the landfall works including the long HDD and any associated mitigation measures. This will be approved by the relevant planning authority. With this in place, measures to mitigate any impacts associated with the landfall are adequately secured.		put in place where the offshore cable route makes landfall to the south of Happisburgh (as a planning requirement), in order to ensure the onshore infrastructure does not exacerbate existing coastal erosion in the area.
Committing to a High Voltage Direct Current (HVDC) solution removes the need for additional onshore infrastructure (cable relay station) in North Norfolk and reduces the potential environmental impact associated with the cable route by narrowing the cable corridor from 50m to 35m. This was noted in Norfolk County Councils PEIR response in November 2018.	Agreed	The County Council welcomes the decision by Vattenfall to pursue a HVDC solution, particularly in terms of minimising the impacts of this development on the landscape in North Norfolk.
Health Impact Assessment (HIA)		
Detailed matters relating to construction noise and local environmental health, will be addressed by the relevant District Councils and/or other statutory body such the Environment Agency.	Agreed	The County Council would expect detailed matters relating to construction noise and local environmental health, to be addressed by the relevant District Councils. Providing the District Councils are satisfied with the proposal in relation to the above matters, the County Council would not wish to raise any public health concerns at this time.
Minerals and waste		
The provision of a Materials Management Plan (MMP) is considered suitable to mitigate any potential impacts to the Mineral Safeguarding Areas (MSA). This was noted in Norfolk County Councils PEIR response in November 2018.	Agreed	Norfolk County Council in its capacity as the Minerals and Waste Planning Authority does not object to the Proposed Boreas Wind Power Project. Requirement 20(2)(f) of the

Norfolk Boreas Limited position	Norfolk County Council position	Final position
The MMP will form part of the final Code of Construction Practice (CoCP) and is secured through Requirement 20(2)(f) of the draft DCO.		draft DCO adequately secures the request that the applicant continues to work with Norfolk County Council regarding the mitigation of impacts on the Mineral Safeguarding Areas.

2.2 Water Resources and Flood Risk

18. The project has the potential to impact upon water resources and flood risk. Chapter 20 Water Resources and Flood Risk of the ES, (document reference 6.1.20 of the Application, APP-233), provides an assessment of the significance of these impacts.

19. Details on the Evidence Plan for water resources and flood risk can be found in Consultation Report Appendix 9.22 (document reference 5.1.9.22 of the Application, APP-059) and Appendix 28.1 (document 5.1.28.1 of the Application, APP-192).

20. Table 4 outlines the topics for agreement with respect to water resources and flood risk between Norfolk County Council and the Applicant.

Table 4 Agreement Log - Water resources and flood risk

Topic	Norfolk Boreas Limited position	Norfolk County Council position	Final position
Environmental Impact Assessment			
Existing Environment	Sufficient survey data has been collected to inform the assessment. Detailed in section 20.5.2 of ES Chapter 20 Water Resources and Flood Risk (document reference 6.1.20, APP-233). The survey data collected as part of the Norfolk Vanguard project is suitable for use in the Norfolk Boreas EIA. Agreed as part of the Evidence Plan Process.	Agreed	It is agreed by both parties that sufficient survey data have been collected to undertake the assessment.
Assessment methodology	The impact assessment methodologies used for the EIA, section 20.4 of ES Chapter 20 (APP-233) provide an appropriate approach to assessing potential impacts of the project. Agreed as part of the Evidence Plan Process.	Agreed	It is agreed by both parties that the impact assessment methodologies used in the EIA are appropriate.
	The worst case assumptions presented in the assessment for Scenario 1 and Scenario 2, as outlined in ES Chapter 20 (APP-233) Table 20.15 and 20.16 respectively, are appropriate.	Agreed	It is agreed by both parties that the worst case assumptions presented in the ES are appropriate for this project.
Assessment findings	The ES adequately characterises the baseline environment in terms of water resources and flood risk as outlined in section 20.6 of ES Chapter 20 (APP-233).	Agreed	It is agreed by both parties that the ES adequately characterises the baseline environment.
	The assessment of impacts of both scenarios for construction, operation and decommissioning presented in section 20.7 of ES Chapter 20 (APP-233) are consistent with the agreed assessment methodologies.	Agreed	It is agreed by both parties that the assessment is consistent with the agreed methodologies.

Topic	Norfolk Boreas Limited position	Norfolk County Council position	Final position
	The assessment of cumulative impacts of both scenarios presented in section 20.8 of ES Chapter 20 (APP-233) is consistent with the agreed methodologies.	Agreed	It is agreed by both parties that the assessment of cumulative impact is consistent with the agreed methodologies
Approach to mitigation	Under Scenario 2 the proposed locations for trenchless crossing techniques as detailed in Schedule 1, Part 3, Requirement 16 (13) of the draft DCO are appropriate and will be explored further and details agreed at each location at detailed design stage. Under Scenario 1 trenchless crossings will not be required as these will have been pre-installed by Norfolk Vanguard.	Agreed	It is agreed by both parties that the proposed trenchless crossing techniques under Scenario 2 are appropriate, subject to detailed design.
	The onshore project substation surface water drainage plan will have sufficient storage / attenuation volume to ensure that during the 1 in 100 year rainfall event, plus an allowance for climate change, there will be no increase in surface water runoff from the site. Whilst the outline drainage design assumptions included an allowance of 40% for climate change, this was included as contingency to demonstrate proof of concept. As the operational life of the project is approximately 30 years, the relevant flood risk epoch is 2040 to 2069 using the Environment Agency's Climate Change Allowance Guidance. This identifies an allowance of 20% for climate change. Based on the operational life of the substation (30 years) the detailed design of the surface water drainage plan will therefore allow for the 1 in 100 year critical rainfall plus **20% for climate change** as a minimum (as identified within the submitted Flood Risk Assessment). This is appropriate and in accordance with the Environment Agency's Climate Change Allowance guidance. 40% climate change allowance is the worst-case allowance identified for developments that have a design life extending beyond 2070. The onshore	Agreed	While the Council's requested figure for climate change allowance (40%) is consistent with advice set out by County Council as Lead Local Flood Authority it is felt that given the operational life of the development (approximately 35 years) a reduced figure of 20% is acceptable

Topic	Norfolk Boreas Limited position	Norfolk County Council position	Final position
	project substation has a 30-year design life running from approximately 2025-2055. Whilst the Applicant is committed to adopting best practice design standards for all infrastructure, adopting elevated standards that aren't appropriate for the proposal may lead to unnecessary over-engineering within the design and potentially affect the functionality of the drainage system that is installed. These systems are designed to receive a certain volume of water to self-clean. If they are over designed and receive less water than expected there is a risk they will silt up which could lead to impacts to the sensitive chalk river catchment.		
	The outline Operational Drainage Plan (document reference 8.21, APP-712) sets out the principles for the development of the operational drainage at the onshore project substation in accordance with the principles of Sustainable Drainage Systems discharge hierarchy. The final Operational Drainage Plan will be developed in accordance with the outline plan, in consultation with Norfolk County Council. This is secured through Requirement 32 of the draft DCO, as such mitigation to manage potential flood risk impacts associated with the operation of the onshore project substation will be appropriate and adequately secured.	Agreed	It is agreed by both parties that mitigation to manage operational flood risk at the onshore project substation will be appropriate and adequately secured.
	The mitigation proposed for managing flood risk is appropriate and adequate.	Agreed	It is agreed by both parties that that mitigation to manage flood risk will be appropriate and adequate.

Topic	Norfolk Boreas Limited position	Norfolk County Council position	Final position
	Part 4 of the DCO (Supplemental Powers) Article 15 (Discharge of water and works to watercourses) sets out that the Applicant must not undertake any works to any ordinary watercourse without the consent of the relevant drainage authorities or Norfolk County Council.	Agreed	The County Council confirms that for ordinary watercourses that are to be crossed by open cut trenching or where any other temporary works proposed as part of this project are likely to affect flows in an ordinary watercourse, then the Applicant would need the approval of Norfolk County Council
Draft Development Consent Order (DCO)			
Wording of Requirement(s)	The wording of Requirements 20, 25 and 32 presented provided within the draft DCO (and supporting certified documents) for the mitigation of impacts to water resources and flood risk are considered appropriate and adequate.	Agreed	It is agreed by both parties that the wording of Requirement 20, 25 and 32 that mitigation to manage flood risk will be appropriate and adequately secured.

2.3 Onshore Ecology and Ornithology

21. The project has the potential to impact upon onshore ecology and ornithology. Chapter 22 Onshore Ecology and Chapter 23 Onshore Ornithology of the ES, (document reference 6.1.22 and 6.1.23 of the Application, APP-235 and APP-236 respectively), provides an assessment of the significance of these impacts.

22. Details on the Evidence Plan for onshore ecology and ornithology can be found in Consultation Report Appendix 9.17 (document reference 5.1.9.17 of the Application, APP-054) and Appendix 28.1 of the Consultation Report (document reference 5.1.28.1 of the Application, APP-192).

23. Table 5 outlines the topics for agreement with respect to onshore ecology and ornithology between Norfolk County Council and the Applicant.

Table 5 Agreement Log- Onshore ecology and onshore ornithology

Topic	Norfolk Boreas Limited position	Norfolk County Council position	Final position
Environmental Impact Assessment			
Survey methodology	Survey methodologies for Phase 1 Habitat Surveys are appropriate and sufficient. Agreed as part of the Evidence Plan Process.	Agreed	It is agreed by both parties that sufficient survey data have been collected to undertake the assessment.
	Survey methodologies for Phase 2 Surveys are appropriate and sufficient. Agreed as part of the Evidence Plan Process.	Agreed	Both parties agree that Phase 2 survey scopes are appropriate.
Existing Environment	Survey data collected for Norfolk Vanguard and Norfolk Boreas for the characterisation of onshore ecology and ornithology are suitable for the assessment (as summarised in section 22.5.2 of ES Chapter 22 (APP-235) and section 23.5.2 of ES Chapter 23 (APP-236)). Due to access constraints only 65% of the onshore project area and only 45% of the ponds within the onshore study area were subject to ecological field surveys. The use of the Norfolk Living Map to 'fill-in' data gaps at this stage, is appropriate to inform the assessment. The Applicant has committed to undertake field surveys of all un-surveyed areas post consent, which will inform site specific mitigation.	Agreed	The County Council recognises field surveys of the currently un-surveyed locations will be necessary post-consent, and these surveys may lead to further mitigation at specific locations.
	County Wildlife Sites (CWS) in proximity to the cable route have been sufficiently surveyed to inform the assessment of potential impacts. At an early stage, the County Council advised that surveying of CWS close to the cable corridor was necessary (Norfolk Vanguard Evidence Plan Process meeting Jan 2017, Minutes included in Appendix 9.32 of the Consultation report (APP-069)). This was accepted by the Applicant and the surveys were completed.	Agreed	It is agreed by both parties that the survey effort at CWS in proximity to the works is sufficient to inform the assessment.

Topic	Norfolk Boreas Limited position	Norfolk County Council position	Final position
	The ES adequately characterises the baseline environment in terms of onshore ecology and ornithology.	Agreed	It is agreed by both parties that the ES adequately characterises the baseline environment.
Assessment methodology	Appropriate legislation, planning policy and guidance relevant to ecology and ornithology has been considered for the project (listed in section 22.2 ES Chapter 22 Ecology (APP-235) and section 23.2 in ES Chapter 23 Onshore Ornithology (APP-236). Agreed as part of the Evidence Plan Process.	Agreed	It is agreed by both parties that the appropriate legislation, planning policy and guidance has been taken into account with regard to onshore ecology and ornithology.
	The list of potential impacts on onshore ecology (section 22.7 ES Chapter 22) and ornithology (section 23.4 in ES Chapter 23) assessed is appropriate. Agreed as part of the Evidence Plan Process.	Agreed	It is agreed by both parties that the list of potential impacts considered is appropriate.
	The impact assessment methodologies used for the EIA provide an appropriate approach to assessing potential impacts of the project. Agreed as part of the Evidence Plan Process.	Agreed	It is agreed by both parties that the impact assessment methodologies used in the EIA are appropriate.
	The worst case assumptions for Scenario 1 and Scenario 2 presented in the ES Chapter 22 (Table 22.22 and Table 22.33) for onshore ecology and ES Chapter 23 (Table 23.23 and 23.24) for onshore ornithology, are appropriate for the project.	Agreed	It is agreed by both parties that the worst case assumptions presented are appropriate.
Assessment findings	The assessment of impacts of both scenarios for construction, operation and decommissioning presented in the ES (Chapter 22 section 22.7 Chapter 22 and section 23.7 Chapter 23) are consistent with the agreed assessment methodologies.	Agreed	It is agreed by both parties that the assessment is consistent with the agreed assessment methodologies.
	The assessment findings for potential cumulative impacts for both scenarios presented in the ES (section 22.8 Chapter 22 and section 23.8 Chapter 23) are consistent with the agreed methodologies.	Agreed	It is agreed by both parties that the assessment is consistent with the agreed assessment methodologies.

Topic	Norfolk Boreas Limited position	Norfolk County Council position	Final position
Mitigation and Management			
Approach to mitigation	The provision of an Ecological Management Plan (EMP) (based on the Outline Landscape and Ecological Management Strategy (OLEMS) submitted with the DCO application, document reference 8.7 (APP-698) is considered suitable to ensure potential impacts identified in the Ecological Impact Assessment are reduced to a non-significant level. The OLEMs sets out that all hedgerows will be reinstated along the cable route and sets out additional hedgerow planting that is proposed in proximity to the onshore project substation.	Agreed	The County Council welcome the approach and agrees the content of the outline CoCP and the OLEMS.
	Under Scenario 2 the use of trenchless crossing techniques at CWS is acceptable subject to detailed design. Agreed as part of the Evidence Plan Process. Under Scenario 1 trenchless crossings will not be required as these will have been pre-installed by Norfolk Vanguard.	Agreed	It is agreed by both parties that the use of trenchless crossings at CWS are acceptable, subject to detailed design.
	The mitigation proposed for bats (ES Chapter 22 section 22.7.5.10) is appropriate and proportionate.	Agreed	The County Council is content that appropriate mitigation for bats has been identified and notes that during the design process the landfall has moved away from the key area of concerns for Barbastelle bats at the Paston Great Barn SAC colony.
Draft Development Consent Order (DCO)			
Wording of Requirement(s)	The Requirements provided in the draft DCO (and supporting certified documents) for the mitigation of impacts to onshore ecology and ornithology are considered appropriate and adequate.	Agreed	It is agreed by both parties that the Requirements provided in the draft DCO are considered appropriate and adequate.

2.4 Traffic and Transport

24. The project has the potential to impact upon traffic and transport. Chapter 24 Traffic and Transport of the ES, (document reference 6.1.24 of the Application, APP-237), provides an assessment of the significance of these impacts.

25. Further details on the Evidence Plan for traffic and transport can be found in Consultation Report Appendix 9.18 (document reference 5.1.9.18 of the Application, APP-055) and Appendix 9.42 (document reference 5.1.9.42 of the Application, APP-079).

26. Table 6 outlines the topics for agreement with respect to traffic and transport between Norfolk County Council and the Applicant.

Table 6 Agreement Log - Traffic and transport

Topic	Norfolk Boreas Limited position	Norfolk County Council position	Final position
Environmental Impact Assessment			
Existing Environment	Sufficient survey data (extent/duration) has been collected to inform the characterisation of the baseline environment.	Agreed	Agreed
Assessment methodology	The impact assessment methodologies used for the assessment represent an appropriate approach to assessing potential impacts.	NCC has no specific points to raise	n/a
	The methodology adopted for the Great Yarmouth port assessment (onshore construction traffic derived from the port) is acceptable. Agreed as part of the Evidence Plan Process. All construction traffic associated with the onshore works, including that derived from relevant ports, will be included within the relevant Travel Plan for that stage of the works.	Agreed	Agreed
	The assessment adequately defines the realistic worst case scenario for traffic demand for Scenario 1 (S1-WCS) and Scenario 2 (S2-WCS) (ES Chapter 24 section 24.7.2 and 24.7.3, respectively). Agreed as part of the Evidence Plan Process. NCC requested clarification regarding the change in HGV increase for Link 33 B1149: The 132.1% increase in HGV flows relates to traffic flows presented within the Norfolk Vanguard ES and is derived by an additional 234 HGV construction movements to the future baseline (2022) of 178 HGV movements.	Other than issues specifically identified elsewhere within this Statement of Common Ground - this is now agreed.	Agreed

Topic	Norfolk Boreas Limited position	Norfolk County Council position	Final position
	In comparison, Norfolk Boreas Scenario 2 presents a lower increase of 117.8% in HGV flows (derived by an additional 213 HGV construction movements to the future baseline (2023) of 180 HGV movements. By using professional judgement, based on the outlined HGV construction flows, character and classification of the B1149 (Main Distributer others) and baseline flows. It was deemed that the reduced % increase in HGV flows constituted a low magnitude of change from the Medium presented in Norfolk Vanguard. Thus, resulting in an impact significance of **Minor Adverse**. Notwithstanding, in the event that the magnitude of effect were to stay as Medium, the impact significance would still result in **a Minor adverse** impact and no further assessment would be required.		
	The assessment adequately defines the realistic worst case scenario for employee distribution for Scenario 1 (S1-WCS) and Scenario 2 (S2-WCS) (ES Chapter 24 section 24.7.2 and 24.7.3, respectively). Agreed as part of the Evidence Plan Process.	NCC have no specific points to raise	n/a
	The assessment adequately characterises the baseline environment in terms of traffic and transport.	NCC have no specific points to raise	n/a
Abnormal Indivisible Loads	Consideration of Abnormal Indivisible Loads (AIL) is presented within section 3.6 of the Outline Traffic Management plan (OTMP) (document reference 8.8 of the Application, APP-699). An AIL Route Access Study is included as Appendix 3 of the OTMP, which sets out the type of management measures which could be employed to minimise disruption to traffic during AIL delivery.	NCC is satisfied that any impact from abnormal loads will be insignificant and falls outside the current assessment. However, it will still need to be assessed at a later and appropriate time.	Agreed

Topic	Norfolk Boreas Limited position	Norfolk County Council position	Final position
	The movement of AILs will be subject to separate agreement with the relevant highway authorities and police through the Electronic Service Delivery for Abnormal Loads system.		
Approach to mitigation	With the exception of points identified separately in this SoCG, the measures described in the OTMP, Outline Travel Plan (OTP) and Outline Access Management Plan (OAMP) (document reference 8.8, 8.9 and 8.10 of the application (APP-699, APP-700, APP-701)) are considered appropriate. Further detail and site-specific measures will be developed in the final documents post-consent and will require approval from the relevant planning authority in consultation with the highways authority. This is secured through DCO Requirement 21 of the draft DCO. The OTMP (section 3.9), secured through DCO Requirement 21, states that "A highway condition survey would be undertaken by the contractor before the commencement of construction and after the substantial completion of construction works. Any damage to the existing road network or public highway as a consequence of the construction activities, will be made good to the reasonable satisfaction of NCC." It is proposed to update the OTMP to clarify the Applicant's approach to highway conditions surveys with the following amendment. "A highway condition survey would be undertaken by the contractor before the commencement of construction and after the substantial completion of construction works. The specification and scale of the survey would be agreed with NCC prior to implementation and would be proportional to	The TMP; TP and AMP are all in outline form only. Accordingly, they are working documents that need to be progressed as the project develops. In particular temporary signage will be required in accordance with TSRGD as well as Temporary speed limits via Temporary Traffic Regulation Orders The exact details to be confirmed via the CTMP. Also require a commitment to remove temporary construction accesses unless otherwise approved by the HA. The Applicants commitment to updating the OTMP to incorporate S278 agreements and part 1 claims is noted and accepted.	It is agreed the OTMP will be updated to include reference to S278 and S59 agreements.

Topic	Norfolk Boreas Limited position	Norfolk County Council position	Final position
	the Project's impacts using recognised UK Pavement Management Systems. Any damage to the existing road network or public highway as a consequence of the construction activities, will be made good to the reasonable satisfaction of NCC." It is anticipated NCC would utilise the powers afforded under S59 of the Highways Act to ensure that evidenced damage is adequately repaired or a financial contribution is made for the cost of repair. The Applicant will ensure effective and open communication with local stakeholders affected by the construction works (as detailed in Section 2.4 of the OCoCP) and further details will be provided in a communication plan will developed as part of the final CoCP. Under the dDCO, offsite highway works can only be undertaken with the consent of the street authority, and when providing consent, the street authority can attach reasonable conditions to the consent. In addition, the draft DCO does not preclude the use of agreements with street authorities (i.e. s278 agreements). Therefore, for offsite highway works required under the OTMP, the Applicant envisages that NCC's consent will be required and will be subject to a condition that the undertaker is responsible for Part 1 claims arising from the offsite highway works in the usual way. The OTMP will be updated to reflect this.		
	Within section 4.3.2 of the submitted Outline Traffic Management Plan TMP (Document reference 8.8, APP-699) Link 68 (The Street at Oulton) during Norfolk Boreas Scenario 2, serves mobilisation area MA7 during the duct installation	The County Council is satisfied the proposed off-site highway works for Oulton will mitigate against the impact arising from the applicant's	Agreed

Topic	Norfolk Boreas Limited position	Norfolk County Council position	Final position
	period and access points AC84, AC85, AC88 during the Scenario 1 and Scenario 2 cable pulling works. A scheme of mitigation (Table 4.2 of the OTMP) has been developed by Hornsea Project Three (and agreed with Norfolk County Council) on The Street at Oulton which incorporates all of the required traffic management measures for a single development alone, or for projects cumulatively. The Applicant has committed to adopting the mitigation under both scenarios. In effect this scheme of mitigation, on the shared part of Link 68, would be sufficient to mitigate impacts for Norfolk Boreas alone, Hornsea Project Three alone or for both projects together. The first project to proceed to construction would deliver the full scheme of mitigation and the final project remaining on site would be responsible for removing the measures once both projects' construction phases are complete. In addition, Norfolk Boreas Limited has committed not to route HGV construction traffic along Oulton Street north of the junction between the Street and Heydon Road. This commitment has been captured in the OTMP (document reference 8.8, APP-699) submitted with the Application. Norfolk Boreas will use the same cable Logistics Area, to the south east of Oulton for the same purpose as Norfolk Vanguard. It is the Applicant's preferred strategy to deliver cable drums and associated materials directly to the jointing bay locations from the supplier, and that the cable logistics area will seek to provide 'buffer' storage only should delivery or installation issues arise. The Cable Logistics Area will also include a temporary site office, welfare and space for the	development – including the cumulative scenario with Hornsea 3. The information in relation to the cable logistics area is now agreed.	

Topic	Norfolk Boreas Limited position	Norfolk County Council position	Final position
	storage of other materials associated with cable jointing such as cable joint kits and cement bound sand. The cable logistics area would only be used during the cable pulling phase of the project and would not be used during the duct installation phase or operational phases. The Applicant has provided further information on the use of the Cable Logistics Area [RE2-027] and Appendix 1 and Appendix 2 of the OTMP have been updated to note the 10 HGV movements to and from the Cable Logistics Area.		
	Substation Access - The Applicant is continuing to engage with Highways England on the approach to junction design off the A47(T). An SoCG between the Applicant and Highways England is also being progressed. The approach to the junction design is set out in the Substation Access Clarification Technical Note (SACTN) and OAMP (document reference 8.10, APP-701) and have been agreed with Highways England for Norfolk Vanguard (Highways England Norfolk Vanguard Briefing Note BN07, see Appendix 1). The same design has been brought forward and included in the Norfolk Boreas Application (see section 24.7.6.3 of ES Chapter 24 (APP-237) and SACTN in ES Appendix 24.33 (APP-648). Requirement 22 of the draft DCO ensures that the siting, design, layout and any access management measures for any new, permanent or temporary means of access to a highway must be approved by the relevant planning authority in consultation with the highway authority.	Agreed	NCC remain of the opinion that a full right turn lane is needed but acknowledge the applicant and Highways England are in discussion. Accordingly, we will leave Highways England to advise upon the suitability of the final junction design.

Topic	Norfolk Boreas Limited position	Norfolk County Council position	Final position
	Following agreement of the SACTN (and on the understanding that the work outlined within the document is delivered to the satisfaction of Highways England post-consent), and with the inclusion of Requirement 22, this will ensure that that any final junction design will be fit for purpose with regard to safety, driver delay and will not obstruct any future plans for dualling the A47(T).		
	Construction access off the A47(T) at Scarning - The Applicant is continuing engage with Highways England on the approach to junction design off the A47(T) at Scarning. A SoCG between the Applicant and Highways England is also being progressed. The approach to the access strategy for the A47 cable crossing north west of Scarning, is set out in the Cable Crossing Access Technical Note (CCATN) and has been agreed in principle for Norfolk Vanguard (Highways England Norfolk Vanguard Briefing Note BN08, see Appendix 1). The same approach has been brought forward and included in the Norfolk Boreas Application (see OAMP, document reference 8.10, APP-701). Requirement 22 of the draft DCO ensures that the siting, design, layout and any access management measures for any new, permanent or temporary means of access to a highway must be approved by the relevant planning authority in consultation with the relevant highway authority. Following agreement of the CCATN (and on the understanding that the work outlined within the document is delivered to the satisfaction of Highways England post-consent), and with the inclusion of Requirement 22, this will ensure that that any final junction design will be fit for purpose with regard to	NCC have received clarification from the Applicant that the maximum number of daily HGV movements generated from the National Grid Substation extension would be 68 (ref. SACTN, Table 4.1). With respect to the hourly traffic movements that are likely to be diverted to the Tavern Lane / Yaxham Road junction, this equates to a peak demand of 20 movements (3 HGVs and 17 employees) (ref. SACTN, Table 6.2). On the basis of these flows no further assessment is required.	Agreed

Topic	Norfolk Boreas Limited position	Norfolk County Council position	Final position
	safety, driver delay and will not obstruct any future plans for dualling the A47(T).		
Cumulative impacts	**The Street, Oulton (Link 68)** A transport cumulative transport impact assessment was undertaken and presented in section 24.8 of ES Chapter 24, to consider the potential cumulative traffic and transport impacts of Norfolk Boreas in combination with other relevant projects. For Norfolk Boreas in the absence of mitigation, potentially significant cumulative pedestrian amenity impacts were identified along The Street at Oulton (Link 68) and a suite of mitigation measures have been identified, including temporary speed restriction, priority vehicle signage and passing bays to reduce impacts down to no greater than minor adverse significance. A scheme of mitigation has been developed by Hornsea Project Three (and agreed with Norfolk County Council) on The Street at Oulton which incorporates all of these requirements. This mitigation scheme has been reviewed by the Applicant and will deliver the measures identified within the Applicant's own cumulative impact assessment. The Applicant has therefore committed to also adopt this scheme of mitigation in full under both scenarios. The first project to proceed to construction would deliver the full scheme of mitigation and the final project would be responsible for	NCC supports a mitigation scheme proposed for Hornsea 3 which we believe overcomes the issue of either Norfolk Boreas or Ørsted using link 68 independently of each other. NCC would want to ensure that the two projects work together to ensure that the mitigation delivered for link 68 is introduced in full and retained for the duration of both projects and then removed, in order to minimise disruption. The information in relation to the cable logistics area is now agreed.	Agreed

Topic	Norfolk Boreas Limited position	Norfolk County Council position	Final position
	removing the measures once both projects' construction phases are complete. This commitment has been captured in the OTMP (document reference 8.8, APP-699) submitted with the Application. Norfolk Boreas will use the same cable Logistics Area, to the south east of Oulton for the same purpose as Norfolk Vanguard. It is the Applicant's preferred strategy to deliver cable drums and associated materials directly to the jointing bay locations from the supplier, and that the cable logistics area will seek to provide 'buffer' storage only should delivery or installation issues arise. The Cable Logistics Area will also include a temporary site office, welfare and space for the storage of other materials associated with cable jointing such as cable joint kits and cement bound sand. The cable logistics area would only be used during the cable pulling phase of the project and would not be used during the duct installation phase or operational phases. The Applicant has provided further information on the use of the Cable Logistics Area [RE2-027] and Appendix 1 and Appendix 2 of the OTMP have been updated to note the 10 HGV movements to and from the Cable Logistics Area.		
	B1145 at Cawston (Link 34) A transport cumulative transport impact assessment was undertaken and presented in section 24.8 of ES Chapter 24. The assessment identified the requirement for mitigation along the B1145 through Cawston (Link 34) to mitigate potentially significant pedestrian amenity impacts associated with the combined peak construction traffic flows for both Norfolk Boreas and Hornsea Project Three. The measures	Whilst NCC have no objection to the Applicants highway intervention scheme for link 34 at Cawston, there still remains a possible driver compliance issue. Whilst the scheme passed the RSA, nevertheless the RSA also recommended a review of "…the compliance of drivers following the introduction	Still need to agree the method for overcoming potential driver compliance issues.

Topic	Norfolk Boreas Limited position	Norfolk County Council position	Final position
	identified included enhanced pedestrian facilities, managed parking and road safety measures. The Applicant committed to peak traffic not exceeding 133 daily HGV movements for Norfolk Boreas alone during the cumulative scenario. This would ensure that cumulative HGV movements (combined with Hornsea Project Three) would not exceed 260, which would reduce the identified pedestrian amenity impacts to minor adverse. Following discussions with Cawston Parish Council as part of Norfolk Vanguard, the Applicant has sought to further reduce this peak traffic to as low as practicable within the existing construction programme. The Applicant is able to commit to a Norfolk Boreas peak of 112 daily HGV movements (in both the single project and cumulative scenario). This further commitment has been captured within an updated OTMP submitted at Deadline 1. This reduction does not change the findings of the CIA (the residual impacts remains minor adverse), however, they recognise the concerns of Cawston Parish Council and represent a further effort by the Applicant to reduce these short-term peaks to as low as practicable. A Stage 1 Road Safety Audit has been undertaken by Hornsea Project Three for the proposed scheme of mitigation and NCC's own auditors have also reviewed the proposed scheme. The Applicant understands that NCC's position is that the proposed scheme of mitigation along Link 34 would be suitable to mitigate traffic impacts with the incorporation of a small number of amendments to address issues raised through the Road Safety Audit, which will be addressed during detailed design post-consent.	of the reduced speed limits and introduce further measures if necessary" In summary, if parking occurs outside the designated parking areas; traffic fails to yield at the correct points; or if traffic speeds are much higher than 20mph, the proposed intervention scheme could fail. In response to our concern, the Applicant has agreed to intensify the monitoring regime to facilitate early warning of issues. Whilst this is welcome and would help identify the exact nature of any problem, it does not in itself provide the solution. NCC wish to see a commitment to reducing the volume of traffic downwards from 239 HGV movements per day until a point is reached where (via on site monitoring) there is no longer a compliance issue - should this prove necessary.	

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	The adopted scheme would be sufficient to mitigate impacts for Norfolk Boreas alone, Hornsea Project Three alone or for both projects together. The first project to proceed to construction would deliver the full scheme of mitigation and the second project would be responsible for removing the measures once both project's construction phases are complete. Norfolk Boreas Limited is committed to continuing to engage with Norfolk Vanguard, Hornsea Project Three, NCC, Broadland District Council and Cawston Parish Council to finalise the scheme post-consent. It has been agreed with Norfolk Vanguard and Hornsea Project Three that the Applicant would take forward the scheme design to address the concerns raised in the Road Safety Audit (RSA) and by Norfolk County Council. A revised Cawston Highway Intervention Scheme (HIS) was submitted to the Examination at Deadline 4 [REP4-016]. The scheme revisions were designed to address the remaining road safety concerns. A Stage 1 RSA was undertaken on the revised HIS and submitted at Deadline 5, together with a RSA decision log [REP5-055]. The decision log confirms the Applicant's acceptance of all RSA recommendations and accordingly details minor revisions to the D4 HIS [RE4-016]. The Applicant considers that all residual road safety matters have now been addressed and the HIS concept design is finalised.		

Topic	Norfolk Boreas Limited position	Norfolk County Council position	Final position
	The Applicant understands following a meeting with NCC Highways Authority on 16th March, that NCC do not require any further amendments to the HIS and there are no remaining technical objections. Accordingly, NCC also indicated they will be completing the RSA log to finalise the scheme. NCC have raised a concern with regard to driver compliance, that drivers may potentially fail to yield at pinch points causing traffic to back up, inducing unacceptable delays. In response to this concern, the Applicant has agreed to intensify the monitoring regime to facilitate early warning of issues and to work with NCC to develop correction measures to be introduced should driver compliance concerns manifest. A commitment to an intensification of monitoring and intervention measures has been included within the OTMP Version 4 submitted at Deadline 8.		
	Cawston Access Alternatives A review of a number of proposed options for traffic movements through Cawston was undertaken, full details are provided the Position Statement Cawston Traffic submitted at Deadline 5 [ExA.AS-2.D5.V1]. Four alternative options were reviewed (Option 1 being the existing proposal to use the B1145 and the Highways Intervention Scheme); • Option 2 (Norfolk Boreas Scenario 2 only) a full bypass from the B1149 requiring a new separate haulage route parallel to the cable corridor;	In highway terms NCC favour Option 2 as it has the potential to remove all of the traffic from Cawston. Failing that we would also support Options 4; 3; and 1 (listed in order of preference due to traffic impact) subject to safety audit. We do not support Option 5 as the highway network is not suitable to cater for the traffic proposed.	Both sides differ in relation to which access proposal should be pursued but agree the HIS design has received technical approval. Whilst other options may be desirable (noting environmental impact and

Topic	Norfolk Boreas Limited position	Norfolk County Council position	Final position
	• Option 3 (Norfolk Boreas Scenario 2 only) a light bypass where traffic uses the running track when not in use for duct installation; • Option 4 (Norfolk Boreas Scenario 2 only) moving mobilisation MA6 adjacent to the B1149; and • Option 5 (Norfolk Boreas Scenario 1 and 2) Implementing a one-way system using Heydon Road. Option 2 - Due to the additional significant constraints relating to construction methodology, traffic demand, environment and land, (see Appendix 2) the full bypass option does not represent a viable alternative. Options 3 and 4 go against the principles of construction and associated embedded mitigation to minimise the amount of land required and duration of works and is constrained by the need for additional land outside the existing Order Limits. Therefore, are not considered an appropriate alternative. Option 5 with appropriate highway measures represents a viable route for reducing the HGV demand through Cawston High Street. An initial scheme concept was submitted at Deadline 5. The Applicant acknowledges the concerns raised by NCC on the initial scheme concept and provided updated drawings to NCC during meeting on 16th March. However, NCC indicated that they do not consider Option 5 to be a suitable alternative. The Applicant's final position on Options 2,3 4 it is they are not appropriate to take them forward, based on	Options 2 to 4: Involve a temporary access from the B1149 adjacent to the Applicant's cable crossing, which in turn links to a haul road. These options were previously dismissed by the County Council due to traffic management concerns. Our previous concerns have now been addressed by the Applicant as part of their assessment for traffic management at this same location relating to open cut trenching (albeit unrelated issues for open cut trenching remain). Out of the four possibilities presented, Norfolk County Council would favour options that can be used by Hornsea 3; Vanguard and Boreas rather than one wind farm in isolation. We fully recognise there are other environmental considerations which may render these options unacceptable. Option 5 – This option utilises a one-way system through Cawston, with the return journeys directed along existing narrow rural roads. NCC does not support this option on highway safety grounds. In addition, the fabric/construction of the road is not suitable to cater for the volume of traffic proposed. Firstly - the Applicant's concept drawings indicate the level of emerging visibility for vehicles exiting Heydon Road onto Cawston Road. However, the Applicant's vehicles will be travelling in the opposite direction. Accordingly, the assessment	cumulative traffic constraints) Option 1 accommodates cumulative traffic and subject to addressing the driver compliance issue, mitigates highway constraints. Option 5 is discounted on safety grounds.

Topic	Norfolk Boreas Limited position	Norfolk County Council position	Final position
	considerations such as construction methodology, environmental impacts, and land requirements (including associated changes to Order limits), a is set out in the Position Statement on Cawston Traffic [ExA.AS-2.D5.V1]. The Applicant's position on Option 5 is; had Option 5 been acceptable to NCC than the Applicant would have been willing to consider it further, but this is not the case. Whilst it may now not be possible to progress Option 5, there is still a suitable mitigation strategy which can be delivered in the form of the HIS.	needs to be made against forward visibility and not emerging visibility. NCC's concern is that HGVs will be stationary on the carriageway whilst making the turn into the junction at a point where forward visibility is restricted due to a bend in the road. This presents a risk of tail end collision. There has been one personal injury accident at this junction in the last 5 years, involving three vehicles and 2 casualties. Secondly – The Applicant's drawings indicate a visibility splay at the B1149 junction measuring 2.4 x 215m. However, the plans submitted are not based on a topographical survey and the presence of roadside trees significantly reduces on-site visibility below that indicated. Thirdly - These rural lanes are used by walkers; horse riders and cyclists. The volume of HGV traffic would turn a 1. mile length of public highway into a private haul road for a considerable period, rendering it inaccessible to non-motorised users. Lastly, the fabric/construction of the road is not suitable to cater for the volume of traffic proposed. The Applicant provided updated drawings for Option 5 during a meeting on the 16th March 2020, however apart from providing 4 additional passing places the updated drawings do not address the concerns we have raised. In addition,	

Topic	Norfolk Boreas Limited position	Norfolk County Council position	Final position
		it is now evident the Applicants proposal would involve filling in a drainage ditch which (apart from the obvious drainage implications) does not form part of the public highway and lies outside the Applicants order limits.	
	B1149 crossing An investigation was undertaken in response to the concerns raised by NCC on the potential impacts of open cut trenching on the B1149 and was submitted as part of the Norfolk Vanguard examination at Deadline 7.5 (see Appendix 2). The findings are summarised below: • Forecast cumulative traffic flows were examined and would fall well below the total vehicles per hour level at which single lane traffic management would lead to network disruption. • A drawing has been provided showing the swept path of vehicles (including abnormal loads) which demonstrates that the proposed traffic management is viable. • Norfolk Partnership Laboratory (NPL), investigated ground conditions at the B1149 to ascertain if an appropriate road reinstatement specification (to address additional concerns raised by NCC) would be feasible. The testing indicates that the road subsurface has good load bearing properties and a specification was identified for the reinstatement that liability.	NCC note the applicant accepts it would be possible to provide a trenchless crossing design capable of being accommodated within the existing order limits NCC accept the point that accommodating an HDD at this location would constrain the project design prior to detailed design, however we argue that when balanced against the concerns raised by both NCC and Broadland District Council, the Applicants reason is not sound or justifiable. NCC maintains its view that an open cut method of duct installation at this specific point on the B1149 is not appropriate. NCC note the Applicant now accepts traffic signals would be required 24 hours a day, reducing the carriageway to one-way flows. With this in mind, we note paragraph D5.1.6 of Chapter 8: - "…On roads where flows are very high, overload of the controlled area is possible and exceptional delays may result. This can occur with two-way flows as low as 1300 vehicles per hour (for sites about 50m long)" and with a one-way flow of 900	The Applicants and NCC are not able to agree which crossing method is appropriate. Given both methods are physically achievable, we both leave it for the SoS to determine.

Topic	Norfolk Boreas Limited position	Norfolk County Council position	Final position
	An open cut trench crossing was deemed appropriate for Norfolk Vanguard and therefore is also considered appropriate Norfolk Boreas Scenario 2, as there is no evidence from the investigations to suggest that this form of open cut crossing and associated reinstatement will cause significant adverse impacts or present a maintenance liability for Norfolk County Council. NCC's concerns regarding the 1.2m wide safety zone are noted and will be taken account in a revised traffic management drawing (incorporating the requisite 1.2m safety zone) which will be captured within an update to the OTMP submitted at Deadline 1. Under Scenario 1 the duct installation for Norfolk Boreas will have been undertaken by Norfolk Vanguard. The Applicant has produced an updated traffic management design which has been developed to address the safety concerns raised by NCC . The updated design incorporates a distance of separation of 1.5m (amply allowing for the required 1.2m safe working distance) and includes details for both sides of the carriageway. The drawings (which include Swept Path Analysis), demonstrate traffic management detail fully compliant with Chapter 8 of the Traffic Designs Manual, which can also accommodate Hornsea Project Three cumulative traffic (including Abnormal Loads) and is entirely within the current Norfolk Boreas DCO Order limits. The updated design has been included in the updated OTMP at Deadline 5.	vehicles per hour (for longer sites with balanced flows) with signal control. The B1149 peak hourly traffic flows (Norfolk Boreas; combined with Hornsea3; plus baseline traffic) are forecast to be in the order of 900 movements and signal control is required for in excess of 50m, thereby reducing the road to single flows. Accordingly, exceptional delays may result. Whilst NCC have not raised an objection relating to driver delay, nerveless we wish to point out that such an impact lies on the cusp of acceptability. NCC recognises that Norse laboratory has provided a construction specification, however the issue of long-term maintenance liability remains a significant concern, particularly given the potential for other future large-scale projects and their associated HGV load movements. Rural road structure can vary greatly, and with an increasing volume of base level traffic (notwithstanding the additional loading from these HGV movements) any weakening of the surface construction derived from breaking open the bound and subgrade layers will greatly increase the risk of carriageway failure for years to come. NCC notes no detailed project timeframe has been provided and whilst the Applicant states a	

Topic	Norfolk Boreas Limited position	Norfolk County Council position	Final position
	It is the Applicant's position that an open cut crossing method is appropriate and feasible at this location. However, it is possible to develop a bespoke design to enable trenchless crossing in this location (in the event the SoS decides that a trenching crossing of the B1149 is necessary).	full and detailed construction method statement could be included within the final CoCP, as secured by Requirement 20(2)(g) of the dDCO, that would be too late to make the appropriate assessment. Whilst the Applicants indicate active construction works would not be required outside of construction hours, that does not address the point we make. NCC's point is that disruption would take place 24 hours per day as a direct result of the traffic signals, including noise associated with traffic stopping and starting at the signals during night-time hours.	
	A1067 crossing An investigation has been undertaken in response to the concerns raised by NCC on the potential impacts of open cut trenching on the A1067 and was submitted as part of the Norfolk Vanguard examination at Deadline 7.5 (see Appendix 2). Updated traffic counts were undertaken on the A1067 in April 2019. These show increased usage of the A1067 as a result of the operation of the Norwich Northern Distributor Road and forecast traffic flows for Norfolk Vanguard would now exceed the total vehicles per hour level at which single lane traffic management may be undertaken without network disruption. As a result, under Norfolk Boreas Scenario 2 the Applicant has now committed to undertake the crossing of the A1067 using trenchless techniques. This trenchless crossing will be included on the list of trenchless crossings in DCO Requirement 16 the	The commitment to trenchless crossing of the A1067 is welcomed.	Agreed

Topic	Norfolk Boreas Limited position	Norfolk County Council position	Final position
	updated draft DCO submitted on 4th November 2019 (AS-019). The mobilisation areas either side of the A1067 (MA5a and MA5b) can be repurposed to be used as drilling and receiving compounds to enable this trenchless crossing to be undertaken within the existing Order limits. Under Scenario 1 the duct installation for Norfolk Boreas will have been undertaken by Norfolk Vanguard.		
	Link 41 – B1436, Felbrigg The Applicant has proposed to cap construction traffic to 93 daily HGV movements for Norfolk Boreas during the six week school summer holiday period. This cap represents typical average HGV demand and will be achieved by re-scheduling non-critical construction activities. After the six week school summer holiday period, the cap will revert to a maximum 287 daily HGV movements for Scenario 2 and 138 daily HGV movements for Scenario 1. This commitment has been captured within the OTMP submitted with the Application (document reference 8.8, APP-699).	This is acceptable to NCC	Agreed
	Link 36 – B1149, Holt Road	We have no objection to the alternative route proposed via links 39 and 37 but it needs be for	Agreed

Topic	Norfolk Boreas Limited position	Norfolk County Council position	Final position
	During the Norfolk Vanguard Examination Norfolk County Council requested the use of an alternative route (Shortthorn Road) to avoid the village of Horsford along Link 36 (B1149). As this proposed diversion would take traffic off the B1149 and onto a lower classification road the Norfolk Vanguard proposed an alternative diversion for the cumulative scenario with Hornsea Project Three. This alternative diversion would use Link 39 (A140) and Link 37 (B1145) and ensure that traffic remains on a road of similar or greater standard, in terms of the road hierarchy, compared to the B1149. The Applicant is of the opinion that Link 36 is suitable for the proposed Norfolk Boreas daily peak HGV traffic, with the inclusion of a traffic cap (peak daily HGV movements no greater than 136) and enhanced mitigation, and represents the most efficient route for construction traffic, in comparison to the diversion along Shortthorn Road, which would be 2km longer and require traffic to divert onto a lower classification road. However, the Applicant recognises NCC's concerns and as there is a suitable alternative that ensures traffic remains on roads of similar or greater standard, in terms of the road hierarchy, which would not result in any impacts greater than those previously assessed, the Applicant will commit to avoiding the use of Link 36 for all HGV traffic (both for Norfolk Boreas alone and cumulatively with Hornsea Project Three). HGV traffic will instead be diverted along Link 39 (A140) and Link 37 (B1145). This commitment has been captured in an updated OTMP submitted at Deadline 1.	all HGV traffic and not just in the cumulative scenario.	
	Link 32 – B1149, Edgefield The Applicant has committed to a cap of 289 cumulative daily HGV movements along Link 32. This will be achieved by a	This is acceptable to NCC	Agreed

Topic	Norfolk Boreas Limited position	Norfolk County Council position	Final position
	commitment for Norfolk Boreas Scenario 2 peak daily HGV movements to not exceed 136 in the cumulative scenario. For Scenario 1 the Applicant is committed to Norfolk Boreas peak traffic not exceeding 92 daily HGV movements alone or during the cumulative scenario. In addition, a restriction will be in place for the morning peak traffic flows between 07.30 and 09.00, i.e. no construction HGV movements along Link 32 during between 07.30 and 09.00 (this applies to Norfolk Boreas alone and in the cumulative scenario). These commitments are captured in the OTMP submitted with the Application (document reference 8.8, APP-699).		
Draft Development Consent Order (DCO)			
Wording of Requirement(s)	The wording of Requirements 21 and 22 provided within the draft DCO (and supporting certified documents) for the mitigation of impacts to traffic and transport are considered appropriate and adequate.	Agreed	Agreed
	The wording of Requirement 16 includes a list of trenchless crossings that were identified early in the project design and represent embedded mitigation that formed the basis of the design that was assessed within the Environmental Impact Assessment. Hence, they are listed in the detailed design DCO Requirement as they are considered fixed elements of the design. Further assessment work has been undertaken and the Applicant has committed to a trenchless crossing at the A1067 and this has been added to the list of trenchless crossings list	Whilst NCC disagrees with the Applicants overall assessment in relation to trenchless crossings, nevertheless we do agree that should the SoS be minded to accept trenchless crossing of the B1149, then this location will need to be included as an addition at Requirement 16(13), with reciprocal changes in Schedule 6 and Schedule 8 of the dDCO.	If the SoS agrees that trenchless crossing is required, then the applicant and NCC agree on the method to incorporate this within the dDCO.

Topic	Norfolk Boreas Limited position	Norfolk County Council position	Final position
	under Requirement 16 in an updated draft DCO submitted on the 4th November (AS-019). Further assessment work has also been undertaken and the B1149 crossing. An open cut trench crossing is still deemed appropriate as there is no evidence from the investigations to suggest that this form of open cut crossing and associated reinstatement will cause significant adverse impacts or present a maintenance liability for the Norfolk County Council.		

2.5 Onshore Archaeology and Cultural Heritage

27. The project has the potential to impact upon onshore archaeology and cultural heritage. Chapter 28 Onshore Archaeology and Cultural Heritage of the ES, (document reference 6.1.28 of the Application, APP-241), provides an assessment of the significance of these impacts.

28. Details on the Evidence Plan for onshore archaeology and cultural heritage can be found in Consultation Report Appendix 9.25 (document reference 5.1.9.25 of the Application, APP-062), Appendix 9.44 (document reference 5.1.9.44 of the Application, APP-081) and Appendix 28.1 (document reference 5.1.28.1 of the Application, APP-192).

29. Table 7 outlines the topics for agreement with respect to onshore archaeology and cultural heritage between Norfolk County Council and the Applicant.

Table 7 Agreement Log - Onshore archaeology and cultural heritage

Topic	Norfolk Boreas Limited position	Norfolk County Council position	Final position
Environmental Impact Assessment			
Existing Environment	Sufficient survey data (extent/duration) has been collected to inform the assessment (section 28.6 of ES Chapter 28 (APP-241)). Agreed as part of the Evidence Plan Process.	Agreed	It is agreed by both parties that sufficient survey data have been collected to undertake the assessment.
	It is accepted that outstanding geophysical surveys (scheme-wide) may be undertaken post-consent. Agreed as part of the Evidence Plan Process.	Agreed	It is agreed by both parties that the approach to survey data collection is appropriate to undertake the assessment.
	The approach to the selection of priority geophysical survey areas was appropriate and sufficient to inform the assessment of impacts. Agreed as part of the Evidence Plan Process.	Agreed	It is agreed by both parties that the approach to survey data collection is appropriate to undertake the assessment.
	Heritage setting viewpoint locations are representative and appropriate.	Agreed	It is agreed by both parties that the heritage setting viewpoint locations are representative.
	Archaeological trial trenching is not required to inform the assessment of impacts pre-application. Further evaluation will be completed post-consent. Agreed as part of the Evidence Plan Process.	Agreed	It is agreed by both parties that the approach to survey data collection is appropriate to undertake the assessment.
Assessment methodology	The impact assessment methodologies used for the assessment (DMRB Volume 11, Section 3, Part 2: Cultural Heritage) provide an appropriate approach to assessing potential impacts of the project. Agreed as part of the Evidence Plan Process.	Agreed	It is agreed by both parties that the impact assessment methodologies used in the EIA are appropriate.

Topic	Norfolk Boreas Limited position	Norfolk County Council position	Final position
	The worst-case assumptions for Scenario 1 and Scenario 2 as outlined in Table 28.17 and Table 28.18 of ES Chapter 28 (APP-241) assessment is appropriate. Agreed as part of the Evidence Plan Process.	Agreed	It is agreed by both parties that the worst-case assumptions presented in the ES is appropriate for this project.
	The assessment adequately characterises the baseline environment (section 28.6 of ES Chapter 28 (APP-241) in terms of onshore archaeology and cultural heritage, including the setting of designated heritage assets. Agreed as part of the Evidence Plan Process.	Agreed	It is agreed by both parties that the ES adequately characterises the baseline environment.
	The scope of the Archaeological Desk Based Assessment (ADBA) (ES Appendix 28.1, document reference 6.3.28.1, APP-666) is appropriate to inform the assessment. Agreed as part of the Evidence Plan Process.	Agreed	It is agreed by both parties that the ADBA is appropriate to inform the assessment.
Assessment findings	Based on all of the currently available information and assuming the inclusion of the mitigation described and commitment to further evaluation post-consent, impacts on onshore archaeology and cultural heritage of both scenarios (section 28.7 of ES Chapter 28, APP-241) during construction, operation and decommissioning, are very likely to be non-significant in EIA terms.	Agreed	It is agreed by both parties that based on the currently available information impacts are very likely to be non-significant. Accepting that there is a small risk that highly-significant, previously-unrecorded and unexpected heritage assets with archaeological interest could be encountered.
	The assessment of cumulative effects of both scenarios (section 28.8 of ES Chapter 28, APP-241) is appropriate and, assuming the inclusion of the mitigation described, cumulative impacts on onshore archaeology and cultural heritage are non-significant in EIA terms.	Agreed	It is agreed by both parties that the assessment of cumulative impact is appropriate and that the proposed mitigation will result in non-significant impacts.

Topic	Norfolk Boreas Limited position	Norfolk County Council position	Final position
Approach to mitigation	The provision of a pre-construction and construction Archaeological Written Scheme of Investigation (WSI) (Onshore) (to be based on the outline WSI, document reference 8.5, APP-696) is considered suitable, with respect to Set-Piece Excavation; Strip, Map and Sample and archaeological monitoring/watching brief scenarios.	Agreed	It is agreed by both parties that the provision of a WSI is considered suitable.
	The mitigation proposed for both scenarios for potential impacts on buried and above-ground archaeological remains is appropriate.	Agreed	It is agreed by both parties that the proposed mitigation will result in non-significant impacts.
Draft Development Consent Order (DCO)			
Wording of Requirement(s)	The wording of the Requirements provided within the draft DCO (and supporting certified documents) for the mitigation of impacts to onshore archaeology and cultural heritage are considered appropriate and adequate. Specifically, Requirement 23 states: "*No stage of the onshore transmission works may commence until for that stage an archaeological written scheme of investigation (which accords with the outline written scheme of investigation (onshore)) has, after consultation with Norfolk County Council and Historic England, been submitted to and approved by the relevant planning authority*". And *"In the event that archaeological site investigation is required, the scheme must include details of the following—* (a) *an assessment of significance and research questions; and* (b) *the programme and methodology of site investigation and recording;* (c) *the programme for post investigation assessment;* (d) *provision to be made for analysis of the site investigation and recording;*	Agreed	Both parties are in agreement that potential impacts to archaeology and cultural heritage impacts will be adequately managed subject to the submission and approval of a final Written Scheme of Investigation.

Topic	Norfolk Boreas Limited position	Norfolk County Council position	Final position
	(e) *provision to be made for publication and dissemination of the analysis and records of the site investigation;* (f) *provision to be made for archive deposition of the analysis and records of the site investigation. "* (g) *nomination of a competent person or persons/organisation to undertake the works set out within the written scheme of investigation.*		

2.6 Tourism and recreation

30. The project has the potential to impact upon tourism and recreation. Chapter 30 Tourism and Recreation of the ES, (document reference 6.1.30 of the Application, APP-243), provides an assessment of the significance of these impacts.

31. Details on the Evidence Plan for tourism and recreation can be found in Consultation Report Appendix 9.20 (document reference 5.1.9.20 of the Application, APP-057).

32. Table 8 provides topics for agreement with respect to tourism and recreation between Norfolk County Council and the Applicant.

Table 8 Agreement Log - Tourism and recreation

Topic	Norfolk Boreas Limited position	Norfolk County Council position	Final position
Environmental Impact Assessment			
Existing Environment	Appropriate datasets have been presented to inform the assessments (Table 30.11 of ES Chapter 30, APP-243).	Agreed	It is agreed by both parties that datasets are appropriate.
Assessment methodology	The impact assessment methodologies (section 30.4 of ES Chapter 30, APP-243) used provide an appropriate approach to assessing potential impacts of the project.	Agreed	It is agreed by both parties that the methodologies used are appropriate.
	The worst-case assumptions for Scenario 1 and Scenario 2 as outlined in section 30.7.3.1 and section 30.7.3.2 of ES Chapter 30 (APP-243) presented in the assessments are appropriate.	Agreed	It is agreed by both parties that worst case scenario presented is appropriate.
	The assessment adequately characterises the baseline environment in terms of tourism and recreation (section 30.6 of ES Chapter 30, APP-243).	Agreed	It is agreed by both parties that the baseline environment has been adequately characterised.
Assessment findings	The assessment of effects of both scenarios for construction, operation and decommissioning presented in section 30.7 of ES Chapter 30, APP-243) is appropriate and, assuming the inclusion of the mitigation described, impacts on tourism and recreation are non-significant in EIA terms.	Agreed	It is agreed by both parties that the residual impacts are non-significant.
	The assessment of cumulative effects of both scenarios is appropriate (section 30.8 of ES Chapter 30, APP-243) and, assuming the inclusion of the mitigation described, cumulative impacts on tourism and recreation are non-significant in EIA terms.	Agreed	It is agreed by both parties that the residual cumulative impacts are non-significant.

Topic	Norfolk Boreas Limited position	Norfolk County Council position	Final position
Approach to mitigation	The mitigation measures identified within the Public Right of Way Strategy (document reference 8.4 of the Application, APP-695) and the Outline Code of Construction Practice (CoCP) (document reference 8.1 of the Application, APP-692), are considered to be appropriate to mitigate impacts on the PRoW and Trails network.	Agreed	Norfolk County Council believes these documents should result in appropriate measures to manage impacts in relation to cable-laying. The County Council welcomes the intention of the applicant to liaise with the PRoW Officers and Trail Officers.
	Under Scenario 2 the Applicant has committed to trenchless crossing techniques at a number of sensitive footpaths, which will avoid direct impacts to those routes. These include the Norfolk Coast Path, and Marriott's Way, Paston Way and Wensum Way Long Distance Trails. This is detailed in Appendix 30.1 (document reference 6.3.30.1, APP-679). Under Scenario 1 trenchless crossings will have been pre-installed by Norfolk Vanguard.	Agreed	Norfolk County Council welcomes the use of HDD underneath some of the particularly heavily-used recreational routes (long-distance trails).
Draft Development Consent Order (DCO)			
Wording of Requirement(s)	Given the impacts of the project, the wording of the Requirements provided within the draft DCO (and supporting certified documents) for the mitigation of impacts to tourism and recreation are considered appropriate and adequate.	Agreed	It is agreed by both parties that the wording of Requirements within the DCO are appropriate and adequate.

2.7 Socio-economics

33. The project has the potential to impact upon socio-economics. Chapter 31 Socio-economics of the ES, (document reference 6.1.31 of the Application, APP-244), provides an assessment of the significance of these impacts.

34. Details on the Evidence Plan for socio-economics can be found in Consultation Report Appendix 9.20 (document reference 5.1.9.20 of the Application, APP-057).

35. Table 9 provides topics for agreement with respect to socio-economics between Norfolk County Council and the Applicant.

Table 9 Agreement Log - Socio-economics

Topic	Norfolk Boreas Limited position	Norfolk County Council position	Final position
Environmental Impact Assessment			
Existing Environment	Appropriate datasets have been presented to inform the assessments (Table 31.7 of ES Chapter 31, APP-244).	Agreed	It is agreed by both parties that datasets are appropriate.
Assessment methodology	The impact assessment methodologies (section 31.4 of ES Chapter 31, APP-244) used provide an appropriate approach to assessing potential impacts of the project.	Agreed	It is agreed by both parties that the methodologies used are appropriate.
	The worst-case assumptions for Scenario 1 and Scenario 2 as outlined in section 31.7.4.1 and section 31.7.4.2 of ES Chapter 31 (APP-244) scenario presented in the assessments is appropriate.	Agreed	It is agreed by both parties that worst case assumptions presented is appropriate.
	The assessment adequately characterises the baseline environment (section 31.6 of ES Chapter 31, APP-244) in terms of socio-economics.	Agreed	It is agreed by both parties that the baseline environment has been adequately characterised.
Approach to mitigation	As set out in paragraph 163 of ES Chapter 21 Land Use and Agriculture (document reference 6.1.21 of the Application, APP-234), private agreements (or compensation in line with the compulsory purchase compensation code) will be sought between Norfolk Boreas Limited and relevant landowners/occupiers regarding any measures required in relation to crop loss incurred as a direct consequence of the construction phase of the project. Norfolk Boreas Limited is committed to exploring options for delivering a provision for communities, with the aim of recognising hosts and accounting for change, where benefits acknowledge and address tangible local change. The form of the benefit and its purpose will be explored with relevant stakeholders at the appropriate time, separate to the DCO process.	Agreed	It is agreed by both parties that the commitment to delivering compensation to relevant landowners/occupiers incurred as a direct consequence of the construction phase of the project is appropriate.

Topic	Norfolk Boreas Limited position	Norfolk County Council position	Final position
	Given the impacts of the project, the mitigation proposed for socio-economics are considered appropriate and adequate. Where significant impacts are identified suitable mitigation is proposed.		
	Where there is likely to be a demonstrable impact (i.e. during: construction; operation and/or decommissioning) on commercial fishing affecting communities in Norfolk, individual agreements will be reached as necessary, with any agreements based on evidence and track record and in accordance with FLOWW Best Practice Guidance for Offshore Renewables Developments.	Agreed	The County Council welcomes the revised/amended design of the above proposal and mitigation measures set out in the applicant's ES.
	Norfolk Boreas Limited recognises the economic benefits of using local Port facilities at Great Yarmouth and Vattenfall has signed an agreement with Peel Ports that reserves space for the potential future operations and maintenance use of the site. This is subject to DCO consent award and other regulatory considerations.	Agreed	The County Council will continue to work pro-actively with Vattenfall to demonstrate the economic benefits of using the Port facilities at Great Yarmouth
	Vattenfall is actively seeking to collaborate with stakeholders to support, complement and enhance where appropriate, local skills development programmes. The aim shared with these stakeholders is to work towards a sustainable and resilient employment pipeline, and to channel into / retain more local intellectual and social capital within the green energy sector. To date this has included collaborations with University of East Anglia, UTCN Norwich, local schools, EEEGR, NCC, NALEP and others.	Agreed	The County Council will also continue to work with the Applicant to develop the creation of apprenticeships and work experience.
Draft Development Consent Order (DCO)			
Wording of Requirement(s)	A Skills and Employment Strategy Requirement has been included within the draft DCO (Requirement 33), which will demonstrate consistency with advice set out in paragraph 55 of the NPPF. An Outline Skills and Employment Strategy has been submitted with the application (document 8.22), which sets out the approach that will be adopted by the Applicant to maximise the economic benefit associated	The County Council welcomes the inclusion within the draft DCO of a Planning Requirement, which will ensure	The County Council is satisfied with the wording of the proposed Planning Requirement (33) set out in the draft DCO.

Topic	Norfolk Boreas Limited position	Norfolk County Council position	Final position
	with Norfolk Boreas in Norfolk and the East of England and the principles that must be adhered to, including the types of activities to be undertaken by the Applicant as part of the development. The strategy also includes a commitment by the Applicant to produce a Supply Chain Plan and the Applicant will continue to work closely with local communities, communities of interest and stakeholders to explore means of local optimisation of supply chain, jobs and skills opportunities associated with the project.	that a Skills and Employment Strategy is prepared.	

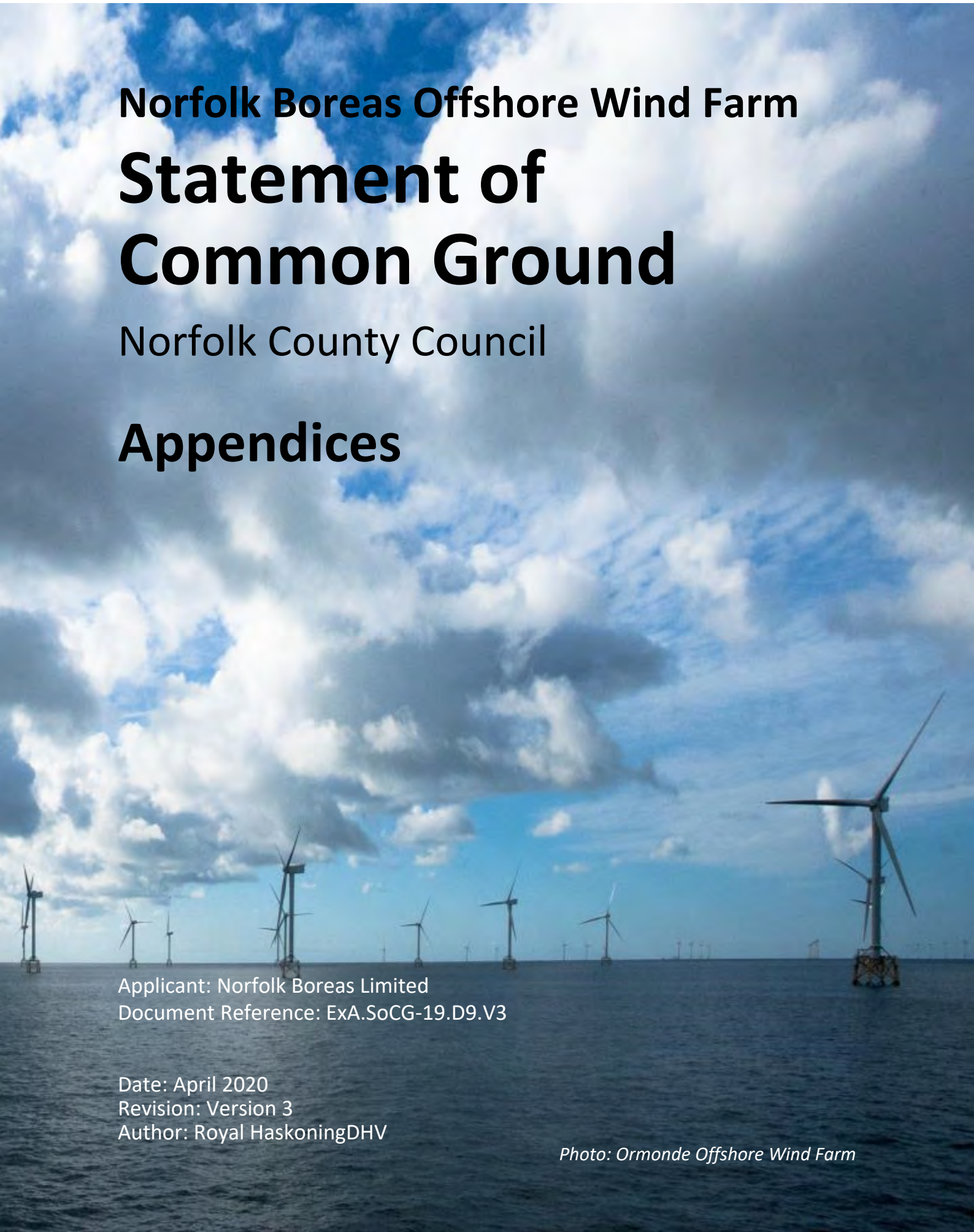
The names inserted below are to confirm that these are the current positions of the two parties contributing to this SOCG

Printed Name	Stephen Faulkner
Position	Principal Planner
On behalf of	Norfolk County Council
Date	29 April 2020

Printed Name	Jake Laws
Position	Norfolk Boreas Consents Manager
On behalf of	Norfolk Boreas Limited (the Applicant)
Date	28th April 2020

Royal HaskoningDHV
Enhancing Society Together

VATTENFALL



Norfolk Boreas Offshore Wind Farm

Statement of Common Ground

Norfolk County Council

Appendices

Applicant: Norfolk Boreas Limited
Document Reference: ExA.SoCG-19.D9.V3

Date: April 2020
Revision: Version 3
Author: Royal HaskoningDHV

Photo: Ormonde Offshore Wind Farm

Norfolk Boreas Offshore Wind Farm

Appendix 1 Highways England Norfolk Vanguard Briefing Notes BN07 and BN08

Briefing Note 07

Project:	**Highways England Spatial Planning Arrangement 2016-2020**	Job No:	**60600479/DN052.004**
Subject:	**Norfolk Vanguard Wind Farm - Substations Access Clarifications Technical Note**		
Prepared by:	**Andrew Cuthbert**	Date:	**4th April 2019**
Checked by:	**Andrew Beard**	Date:	**4th April 2019**
Verified by:	**John Alderman**	Date:	**5th April 2019**
Approved by:	**Andrew Cuthbert**	Date:	**5th April 2019**

Introduction

1. This Briefing Note (BN07) comprises a review of the ***'A47 Substation Access Clarification Technical Note'*** (SACTN), dated 12th March 2019, prepared by Royal Haskoning DHV (RHDHV) in respect of the access arrangements required to serve the existing and proposed substations adjacent to the A47 Trunk Road at Necton, to the west of Dereham.
2. The SACTN was produced in response to AECOM Briefing Notes BN04 and BN06, which provided responses to previous proposals contained in earlier documents, namely the Substation Access Technical Note (SATN) and the Substation Access Briefing Note (SABN).
3. Three access points to the substation works are proposed, A, B and D1. All of these would obtain access directly from the A47 and all require new or adjusted layouts to make them acceptable to Highways England.
4. The access points would be used for the following purposes:
   - Access A would provide access to the works required to extend the existing National Grid substation (National Grid Substation Extension, NGSE);
   - Access B would provide access to the proposed Norfolk Vanguard Onshore Project Substation, together with Mobilisation Area 1 (MA1a) serving the installation of electricity cables in the vicinity of the two substations;
   - Access D1 would provide access to the overhead line modification works to the west of the A47.
5. The locations of these access points are illustrated in **Figure 1** below.

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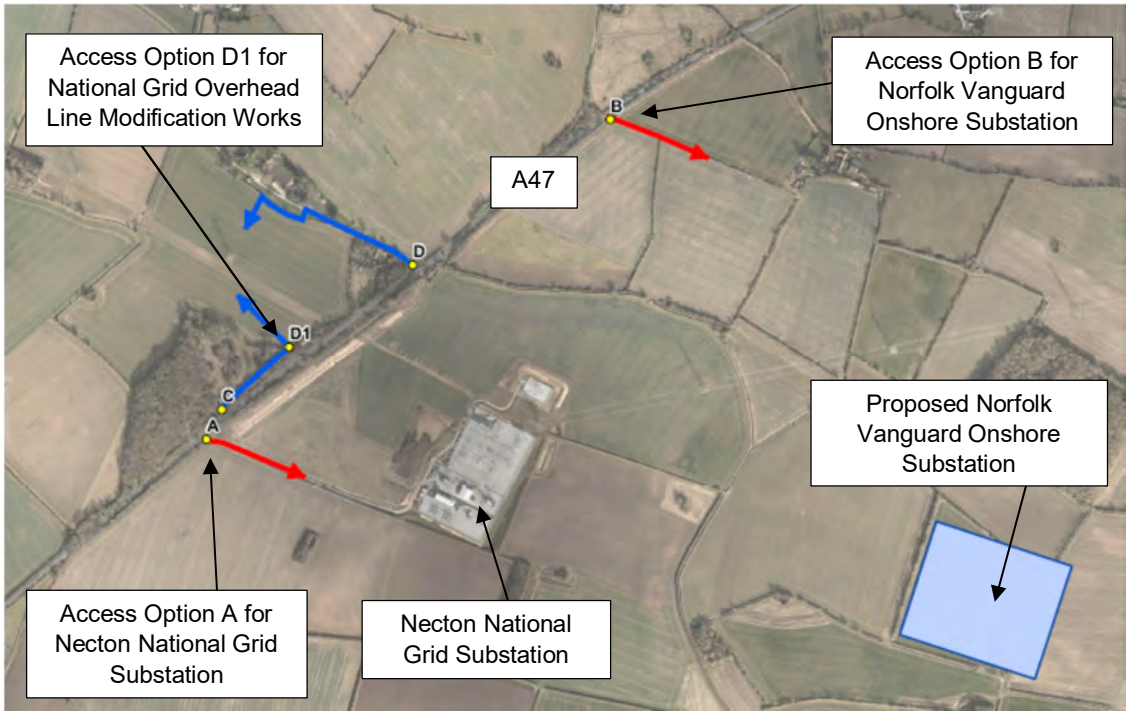

Figure 1. Location of Access A, B and D1 on the A47 at Necton

6. The issues previously raised by AECOM are set out in BN04 and BN06. These, together with the RHDHV response are summarised in Table 7.1 of the SACTN.

7. The SACTN contains the following material:
   - Updated layout plans for site accesses A, B and D1, including:
     - a general arrangement drawing (PB4476-008-006-005 rev 04);
     - swept path plots for the three access points ((PB4476-017, 018, 021, 022, 0233 & 023 rev F1.0).
   - Details of:
     - the traffic forecast to use each of these access points;
     - the duration over which this level of traffic is anticipated;
     - traffic management arrangements which will apply whilst they are in use; and
     - the flows anticipated to divert via the McDonalds roundabout at Swaffham and the Yaxham Road grade separated junction at Dereham because of the use of left-in, left-out only turning restrictions at access points A and D1.

8. Copies of Drawings PB4476-012, 014 & 015, rev F1.0, which provide a layout of each of the proposed site accesses annotated with DMRB geometric and visibility parameters, were not included in the SACTN and have been supplied separately.

9. AECOM's review of the layouts and the traffic flows reveals the following.

Access Arrangements to be provided

Item	Access A	Access B	Access D1
Drawing numbers	PB4476-DR012/F1.0 PB4476-DR017/F1.0 PB4476-DR018/F1.0	PB4476-DR014/F1.0 PB4476-DR021/F1.0 PB4476-DR022/F1.0	PB4476-DR015/F1.0 PB4476-DR023/F1.0 PB4476-DR024/F1.0
Junction type	Simple priority junction, to be limited to left-in, left-out operation	Ghost island priority junction	Simple priority junction, to be limited to left-in, left-out operation
Peak level of traffic use	100 light vehs/day; 68 HGV/ day; 50 light vehs/ peak hr; 7 HGV/ peak hr.	180 light vehs /day; 150 HGV/ day; 90 light vehs / peak hr; 16 HGV/ peak hr.	4 light vehs /day; 20 HGV/ day; 50 light vehs / peak hr; 7 HGV/ peak hr.
Duration of use	86 weeks in total, of which 16 weeks at the peak level of use	At least 100 weeks in total, of which 24 weeks at peak level of use	2 individual weeks of use, separated by a gap of 4-6 months
Design speed of main road adopted	100 km/hr	100 km/hr	60 km/hr (*)
Corner radii	15m	15m	15m
Exit tapers	25m @1:10	30m @ 1:6	25m @1:10
Visibility splays (assumes existing vegetation to be cleared/maintained as required) NB evidence still to be submitted that these can be proven in the vertical plane	4.5 x 215m	4.5 x 215m (L) 2.4 x 215m (R)	4.5 x 90m (*)
Swept path plots	These all show that HGVs can complete their turns without clipping kerb lines, and without encroaching on the wrong side of the A47		
	An HGV could enter the minor arm and stand clear of the A47 running lane whilst another HGV emerges from the minor arm	HGVs can enter and leave simultaneously without their swept paths conflicting.	An HGV could enter the minor arm and stand clear of the A47 running lane whilst another HGV emerges from the minor arm

(*) – to be operated under a temporary 30 mph speed limit

10. The layouts shown on these drawings appear to have taken on board all the issues raised in AECOM Briefing Notes 04 and 06 and, with one exception, appear to meet in full the design requirements of DMRB. The exception is that the visibility to the right out of access point B can only be achieved from a position 2.4m back from the give way line. DMRB design standard TD42 permits a relaxation to 4.5m in difficult circumstances for lightly trafficked simple junctions and to 2.4m in exceptionally difficult circumstances.

11. The SACTN contains a statement that '*Increasing the 'x' distance to 4.5m would require the removal of a large proportion of established hedgerows, vegetation and trees. This will have ecological impact and would remove much of the native mature screening required to mitigate the landscape impact*'. In the circumstances, this appears to be sufficient grounds to permit what is effectively a two-step permitted relaxation in the provision of emerging visibility at access point B.

12. In the case of access point D, where concern was expressed in BN06 about the ability of HGVs to enter and leave simultaneously, the SACTN proposes a traffic management scheme in which HGVs

arriving from the west will be held at a layby some two miles west of the site and will be called in when the site can confirm that no HGVs are about to leave the site.

13. On that basis, the layouts currently offered for access points A, B and D1 appear satisfactory, subject to:
    - visibility splays being cleared of foliage;
    - visibility being proven in the vertical plane;
    - the implementation of the traffic management measures proposed; and
    - the carrying out of Stage 1 and 2 Road Safety Audits.

Diversions

14. The SACTN contains an assessment of the volume of traffic likely to divert via the McDonalds roundabout at Swaffham and the Yaxham Road grade separated junction at Dereham, as a result of the implementation of left-in, left-out only operation at access options A and D1. This assessment appears to be soundly based and reveals that up to 65 vehicles per day (up to 36 per peak hour) are expected to U-turn at Swaffham and up to 49 per day (up to 20 per peak hour) are expected to U-turn at Dereham. These numbers can be accepted as being below the level that would normally trigger a requirement for a junction capacity assessment and, hence, that the impact of this additional traffic at these locations can be accepted as not 'severe'.

Conclusion

15. The updated layouts, traffic management arrangements and traffic flows presented in the SACTN provide sufficient confidence to allow AECOM to advise Highways England that they could now form the basis of an updated Statement of Common Ground indicating Highways England's agreement in principle with the access arrangements proposed.

Briefing Note 08

Project:	**Highways England Spatial Planning Arrangement 2016-2020**	Job No:	**60600479/DN052.004**
Subject:	**Norfolk Vanguard Wind Farm - Cable Crossing Access Technical Note**		
Prepared by:	**Andrew Cuthbert**	Date:	**29th April 2019**
Checked by:	**Andrew Beard**	Date:	**30th April 2019**
Verified by:	**Liz Judson**	Date:	**30th April 2019**
Approved by:	**Andrew Cuthbert**	Date:	**2nd May 2019**

Introduction

1. This Briefing Note (BN08) comprises a review of the ***'A47 Cable Crossing Access Technical Note'*** (CCATN), dated 17th April 2019, prepared by Royal Haskoning DHV (RHDHV) in respect of the access arrangements required to serve the proposed cable crossing of the A47 Trunk Road at Scarning, to the west of Dereham.
2. The cable crossing will use Trenchless Crossings (TC) to get the cables underneath the A47 without affecting the physical integrity of the carriageway or the users of the road. Details of the proposed TC methodology, including a Geotechnical Risk Report and a Preliminary Sources Study will follow post-consent. AECOM understand that this is acceptable to Highways England.
3. However, the TC works will require access to be gained to two construction compounds (TC1 north and south), to the north and south of the A47 respectively. The CCATN sets out how it is proposed to access these compounds. In addition, access to TC2 (Wendling Carr) and Mobilisation Area 2 (MA2-E) will use the same access point on the north side of the A47.
4. The locations of these work sites are illustrated in Figure 1 of the CCATN. There is an existing staggered priority junction between the A47 and Dale Road (to the south) and an un-named road to the north (referred to in the CCATN as Bushy Common Road) in the immediate vicinity and Highways England have previously expressed concern about the potential suitability of this low-standard junction to serve as access to these sites. The CCATN aims to address these concerns.
5. The following access arrangements are proposed:
   - Work sites TC1 (north), TC2 and MA2-E will gain access at location AC160, which is a field access on Bushy Common Road approximately 50m north of its junction with the A47. Vehicles using site access AC160 would turn on and off the A47 at its junction with Bushy Common Road, which would be improved to achieve compliance with the Design Manual for Roads and Bridges (DMRB), to provide adequate swept paths for heavy goods vehicles, adequate visibility splays and which would be restricted to left-in, left-out operation for site-related vehicles;
   - Work site TC1 (south) would share the access (AC163) proposed for Mobilisation Area MA1b. Site access AC163 is located on Dereham Road, some 500m to the south of the A47. Vehicles using site access AC163 would turn on and off the A47 at its junction with Dereham Road (known as the Greenbanks junction).
6. The locations of these access points are illustrated on Figure 1 below.

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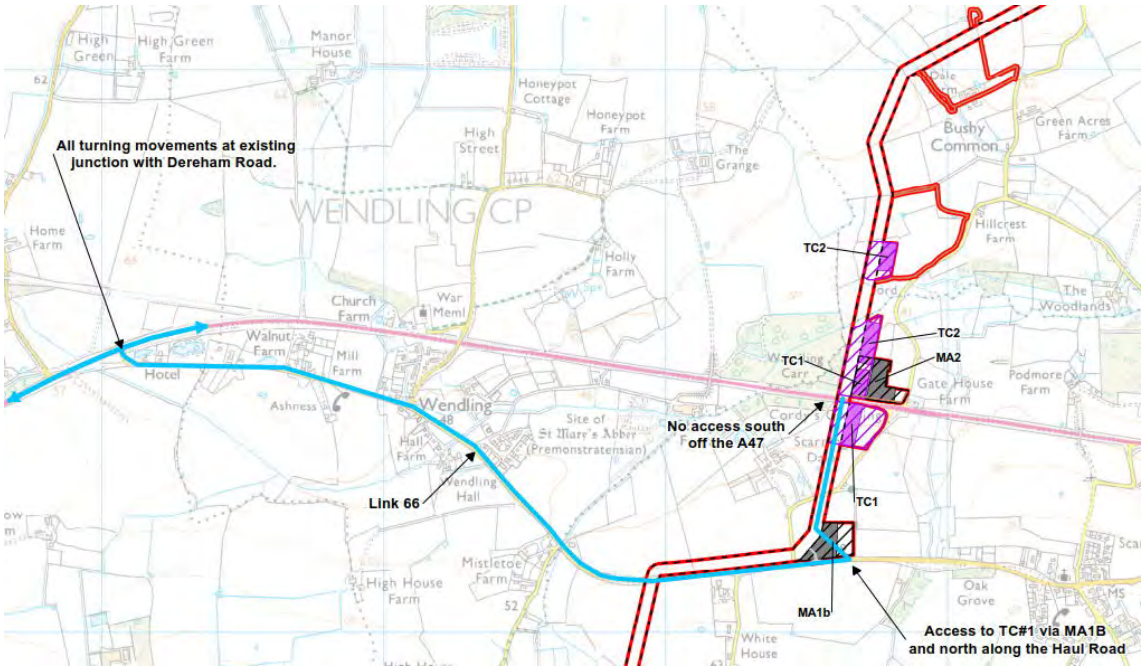

Figure 1. Location of Cable Crossing sites and proposed access routes

Existing Conditions

7. The A47 at this location is a rural single carriageway, believed to date back to the late 1970's and it provides a straight alignment likely to be characterised by high speeds;

8. The existing junctions with Dale Road and Bushy Common Road are low standard, simple T-junctions suitable to serve very minor country roads. They are not currently compliant with DMRB and the side road arms of the junctions rapidly narrow to tie in to the single track roads they serve. The existing junction with Dereham Road is of a higher standard, providing a ghost island right turn lane, generous corner radii and exit tapers and (subject to clearance of foliage) good visibility on and off the A47. Dereham Road is itself a former section of the A47, which was de-trunked when the current alignment was built.

9. The CCATN contains the following information about existing conditions at the A47/ Dale Road/ Bushy Common Road junction:
   - The A47 currently carries 15,380 vehicles per day (two-way AADT) with an HGV content of some 10%;
   - 85th percentile speeds were recorded as 62.6 mph (westbound) and 58.8 mph (eastbound);
   - The collision record contains 1 slight collision at the A47/ Dale Road junction within the five-year period 2014 - 2018.

   No details are provided in the CCATN of the existing levels of use of either Bushy Common Road or Dereham Road, nor of the speed of traffic on these roads, nor of the collision record at the A47/ Dereham Road junction.

10. AECOM can accept that existing traffic flows using Bushy Common Road are likely to be minimal and that the impact of construction traffic on the A47/ Dereham Road junction is unlikely to be significant.

11. AECOM have briefly reviewed Crashmap in respect of the collision record at the A47/ Dereham Road junction and there appear to have been no collisions there within the last 5 years.

Access Proposals

12. The CCATN contains the following drawings:

    - a general arrangement drawing of the proposed layout of site access AC160 off Bushy Common Road and the layout of the proposed upgrade to the layout of the A47/ Bushy Common Road junction (PB4476-025 rev D0.1);
    - swept path plots for the proposed layout of the A47/ Bushy Common junction (PB4476-026 & 027 rev D0.1);
    - swept path plots for the existing layout of the A47/ Dereham Road junction (PB4476-028 & 029 rev D0.1).

      (it should be noted that the scale of these latter two drawings appears to be incorrect, being stated as 1:250 at A3, whereas they appear to be 1:500).

13. The CCATN also contains details of the volume of traffic likely to be generated by the site compounds concerned and the durations over which they will be operating at 'peak' and 'average' levels of activity.

14. AECOM's review of the layouts and the traffic flows reveals the following:

Item	Site Access AC160	A47/ Bushy Common Road	A47/ Dereham Road
Drawing numbers	PB4476-DR025/ D0.1 PB4476-DR026/ D0.1 PB4476-DR027/ D0.1	PB4476-DR025/ D0.1 PB4476-DR026/ D0.1 PB4476-DR027/ D0.1	PB4476-DR028/ D0.1 PB4476-DR029/ D0.1
Junction type	Simple priority junction (assumed to be limited to left-in, right-out operation for site traffic)	Simple priority junction, to be limited to left-in, left-out operation for site traffic	Ghost island priority junction
Peak level of traffic use	60 light vehs/ day; 144 HGV/ day; 30 light vehs/ peak hr; 15 HGV/ peak hr.	60 light vehs/ day; 144 HGV/ day; 30 light vehs / peak hr; 15 HGV/ peak hr.	60 light vehs/ day; 120 HGV/ day; 30 light vehs / peak hr 12 HGV/ peak hr.
Duration of use	Up to 58 weeks in total, of which up to 23 weeks at the peak level of use	Up to 58 weeks in total, of which up to 23 weeks at the peak level of use	Not explicitly stated - likely to be of similar duration
Design speed of main road adopted	Not stated	100 km/hr	100 km/hr
Corner radii	15m	15m	20m
Exit tapers	25m @1:10	25m @1:10	23m @1:5 (estimated)
Visibility splays (assumes existing vegetation to be cleared/maintained as required) NB evidence still to be submitted that these can be proven in the vertical plane	2.4 x 22m to left; 2.4 x 45m to right (**)	4.5 x 215m	4.5 x 215m
Swept path plots	These all show that HGVs can complete their turns without clipping kerb lines, and without encroaching on the wrong side of the A47 or the minor road and that HGVs can enter and leave simultaneously without their swept paths conflicting.		

(**) - visibility actually appears to be available as far as the kerb line of the A47 some 48m away

Commentary - Site Access Junction

15. The layout of site access junction AC160 illustrated on Drawing PB4476-DR025 D0.1 appears to provide satisfactory geometry to accommodate heavy vehicles turning to and from the A47. There is no suggestion that the use of this junction by vehicles accessing the works would give rise to a queue of stationary traffic within Bushy Common Road waiting to enter the site, such as would risk generating a queue of traffic back to the A47, some 50m away.

16. It is not explicitly stated in the CCATN but AECOM assume that heavy vehicles will not be permitted to enter or leave the site to/ from the minor road to the north. The corner radius provided is minimal and would not facilitate access even by light vehicles, such as would be generated by any members of the site staff who happen to live in the area served by Bushy Common Road. This is an issue for Norfolk County Council as Local Highway Authority.

17. The visibility splay to the right illustrated for the site access junction appears to provide visibility from an x-distance of 2.4m back into the minor arm all the way to the A47, some 50m away. Whilst this does not strictly comply with the requirements of TD41 Table 2/1, a visibility splay as far as the preceding junction should in practice be adequate to allow the driver of a vehicle emerging from the site access to see a vehicle approaching from the A47 at up to 30 mph. Speeds around the 15m corner radii between the A47 and Bushy Common Road are likely to be less than this. The relaxation of the X distance from 4.5m to 2.4m would be permitted in this location (TD41 para 2.21 refers).

18. The visibility splay to the left illustrated for the site access junction provides only 2.4m x 22m emerging visibility. In the absence of speed survey data for existing users of Bushy Common Road, it is not possible to say whether this would be adequate. However, this is an issue for Norfolk County Council as Local Highway Authority.

Commentary - A47/ Bushy Common Road Junction

19. The layout of the improved junction between the A47 and Bushy Common Road, illustrated on Drawing PB4476-DR025 D0.1, appears to provide in full for the requirements of DMRB Design Standard TD42 for this type of junction. In addition, the swept path plots shown on Drawings PB4476-DR026 and 027 show that it can accommodate heavy vehicles turning on and off the A47 without clipping kerb lines, and without encroaching on the wrong side of the A47 or the minor road.

20. AECOM note that the 4.5 x 215m visibility splays proposed are currently obstructed by overgrowth of foliage (source: Google street view images dated October 2008 and June 2017). The CCATN acknowledges that this foliage will have to be cleared.

21. Whilst the visibility splays have not been proved in the vertical plane, the local topography is generally flat, although there appears to be a slight rise towards the back of the verge on the north side of the A47 to the west of the junction and this should be addressed as the design of the junction progresses. AECOM note that the land behind the highway verge lies within the red line boundary of the development and it is therefore within the power of the Applicant to address any problems.

22. The CCATN makes a commitment to operating the A47/ Bushy Common Road as a left-in, left-out only junction. This is to be welcomed, since right turns into and out of Bushy Common Road by large numbers of HGVs has the potential to become problematic with a risk that such vehicles might become stationary within the running lane of the A47 when waiting to turn right into the minor arm of the junction.

23. However, AECOM note that this will be more difficult to enforce here, where members of the general public will still be allowed to turn right into and out of the side road, than it would be at the Sub station accesses, where the right turn ban can potentially be applied to all traffic. An enhanced monitoring regime may be necessary to ensure compliance with the right turn ban and the signposted diversion.

Commentary - A47/ Dereham Road (Greenbanks) Junction

24. This is an existing junction of a relatively high standard. Whilst it does not appear to conform exactly to current DMRB standards, it broadly resembles the layout prescribed for a ghost island junction where the design speed of the main road is 100 km/hr, with corner radii of 20m, consistent with the highest standard required by TD42 at Para 7.17(e). There is a merge taper on to the A47 westbound which would not be provided were this junction being built today (TD42 para 7.59 refers). The swept path plots illustrated on Drawings PB4476 028 and 029 show that the junction can accommodate heavy vehicles turning on and off the A47 without clipping kerb lines, and without encroaching on the wrong side of the A47 or the minor road. No modifications are proposed at this junction to mitigate the impact of the proposed development and AECOM agree that none are required, other than the clearance of overgrown foliage from visibility splays.

Access Arrangements - Conclusion

25. There is no evidence that a Stage 1 Road Safety Audit has been undertaken in respect of these layouts. The CCATN contains an undertaking to carry out both a Stage 1 and a Stage 2 Road Safety Audit and to prepare detailed Traffic and Access Management Plans post consent.

26. On that basis, the layouts currently offered for access to the Cable Crossing work sites at Scarning appear satisfactory, subject to:

    - visibility splays being cleared of foliage;
    - visibility being proven in the vertical plane;
    - the implementation of the traffic management measures proposed, including the monitoring of banned right turns; and
    - the carrying out of Stage 1 and 2 Road Safety Audits.

Diversions

27. The CCATN contains an assessment of the volume of traffic likely to divert via the McDonalds roundabout at Swaffham and the Yaxham Road grade separated junction at Dereham, as a result of the implementation of left-in, left-out only operation at the A47/ Bushy Common Road. This assessment appears to be soundly based and reveals that up to 76 vehicles per day (up to 31 per peak hour) are expected to U-turn at Swaffham and up to 54 per day (up to 9 per peak hour) are expected to U-turn at Dereham.

28. The CCATN also presents a cumulative assessment, for any period in which the Cable Crossing works at Scarning overlap with that for the Sub Stations at Necton. This reveals that up to 140 vehicles per day (41 per peak hour) would be expected to U-turn at Swaffham and up to 104 per day (25 per peak hour) at Dereham.

29. These numbers can be accepted as being below the level that would normally trigger a requirement for a junction capacity assessment and, hence, that the impact of this additional traffic at these locations can be accepted as not ‘severe’.

Conclusion

30. The updated layouts, traffic management arrangements and traffic flows presented in the CCATN provide sufficient confidence to allow AECOM to advise Highways England that they could now form the basis of an updated Statement of Common Ground indicating Highways England’s agreement in principle to the access arrangements proposed.

Norfolk Boreas Offshore Wind Farm

Appendix 2 Norfolk Vanguard Technical Note Responding to Norfolk County Council's Request for Trenchless Crossings of the A1067 and B1149

Royal HaskoningDHV
Enhancing Society Together

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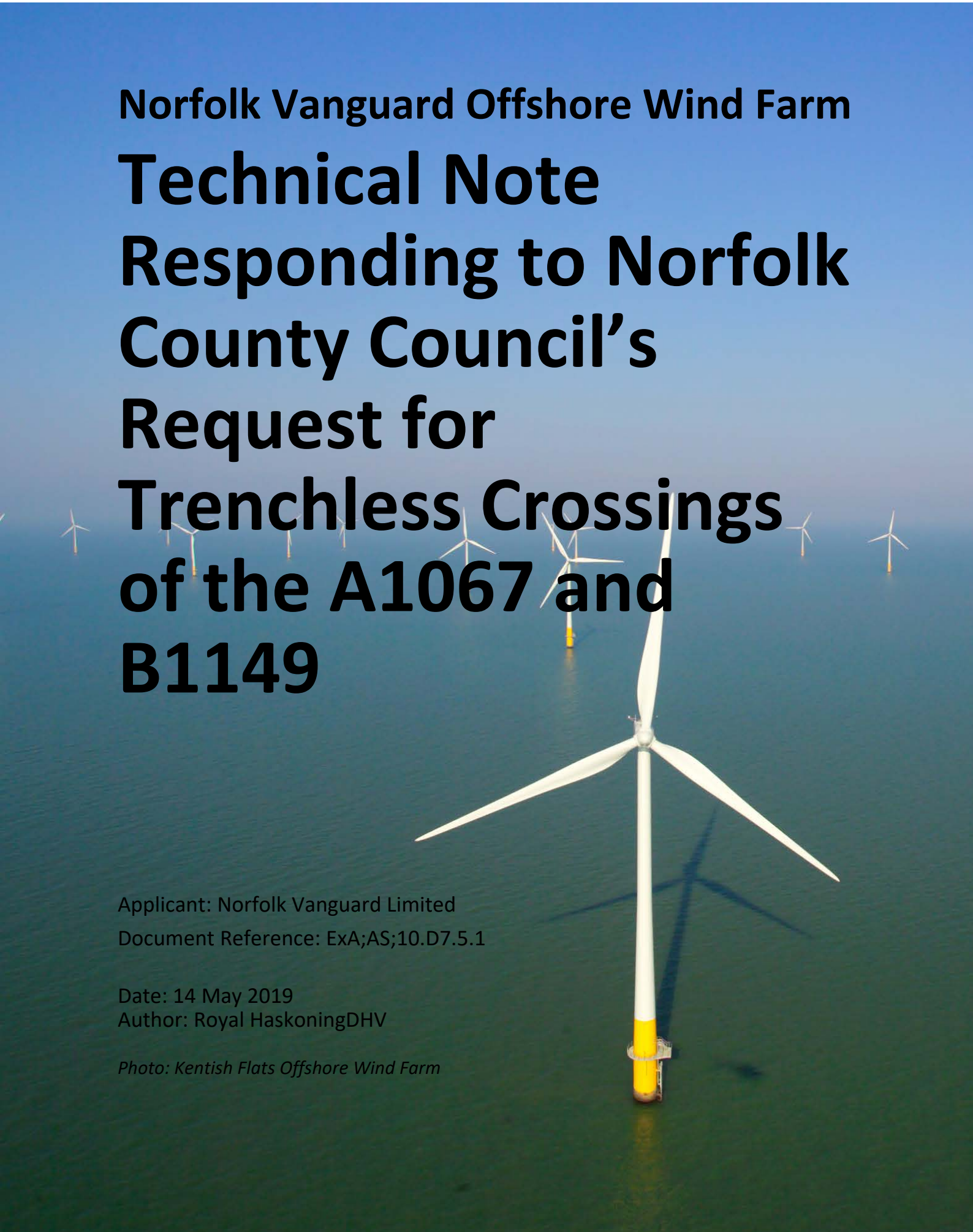
Norfolk Vanguard Offshore Wind Farm

Technical Note Responding to Norfolk County Council's Request for Trenchless Crossings of the A1067 and B1149



Applicant: Norfolk Vanguard Limited

Document Reference: ExA;AS;10.D7.5.1

Date: 14 May 2019
Author: Royal HaskoningDHV

Photo: Kentish Flats Offshore Wind Farm

Date	Issue No.	Remarks / Reason for Issue	Author	Checked	Approved
13/05/2019	01D	Draft for client review	RHDHV	JA	JA
14/05/2019	01F	Final for submission	RHDHV	JA	JA

EXECUTIVE SUMMARY

This Technical Note has been prepared on behalf of Norfolk Vanguard Ltd (the Applicant) in relation to the Norfolk Vanguard Offshore Windfarm ('the Project') to consider concerns raised by Norfolk County Council (NCC) in relation to the proposed 'open cut' method for duct installation when crossing the A1067 Fakenham Road (Sparham) and the B1149 Holt Rd (north of Cawston).

Following submission of the Norfolk Vanguard application for development consent in June 2018 NCC requested that additional trenchless crossings should be undertaken for following road crossings:

- A1067 - to take into account potential changes in traffic flows following the opening of the Norwich Northern Distributor Road (NNDR) in April 2018; and
- B1149 – to take into account disruption to the network by the potential cumulative interaction of the Project's traffic with the Hornsea Project Three main compound at Oulton, details of which became available in May 2018.

An investigation has been undertaken in response to the concerns raised by NCC on the potential impacts of open cut trenching on the A1067 and B1149, with the following findings:

- A1067 – Forecast traffic flows would exceed the total vehicles per hour level at which single lane traffic management may be undertaken without network disruption. It is therefore now recommended that a trenchless crossing is implemented to mitigate the potential road network disruption. This trenchless crossing will be captured an update to DCO Requirement 16 submitted at Deadline 8.
- B1149 – Forecast cumulative traffic flows were examined and would fall well below the total vehicles per hour level at which single lane traffic management would lead to network disruption.
- B1149 – Norfolk Partnership Laboratory (NPL), investigated ground conditions at the B1149 and ascertain if an appropriate road reinstatement specification (to address additional concerns raised by NCC) is feasible. The testing indicates that the road subsurface has good load bearing properties and a specification was identified for the reinstatement that will minimise the potential for future maintenance liability.
- B1149 – An open cut trench crossing is therefore still deemed appropriate as there is no evidence from the investigations to suggest that this form of open cut crossing and associated reinstatement will cause significant adverse impacts or present a maintenance liability for NCC.

Consideration of the potential environmental impacts of undertaking a trenchless crossing of the A1067 was also undertaken. Predicted noise levels for the nearest noise sensitive receptor were calculated during the daytime, evening, weekends, and night time periods.

The predicted noise levels at the nearest noise sensitive receptor associated with a trenchless crossing of the A1067 represent an impact of **negligible** significance during the daytime, evening and weekend reference periods.

The predicted noise levels at the nearest noise sensitive receptor associated with a trenchless crossing of the A1067 represents in impact of **major adverse** significance during the night-time reference period. A requirement for further 'enhanced mitigation' was therefore identified.

Enhanced mitigation in the form of standard 3.5m high noise absorptive barriers were introduced and the noise levels re-modelled. With enhanced mitigation, the modelled noise level at the nearest noise sensitive receptor reduced to 39.3dBA, representing a residual noise impact of **negligible** significance. A Construction Noise Management Plan (CNMP) will be included in the final Code of Construction Practice (CoCP) as required under Requirement 20 (2)(e) of the DCO. Enhanced mitigation at the closest noise sensitive receptor to the A1067 crossing will be captured within an update to the Outline CoCP.

No changes were identified for other relevant onshore environmental topics associated with the proposed trenchless crossing of the A1067. The findings of the submitted Environmental Statement therefore remain valid for those topics.

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1 INTRODUCTION

1.1 Purpose of this Document

1. This Technical Note has been prepared on behalf of Norfolk Vanguard Ltd (the Applicant) in relation to the Norfolk Vanguard Offshore Windfarm ('the Project') to consider concerns raised by Norfolk County Council (NCC) in relation to the proposed 'open cut' method for duct installation when crossing the A1067 Fakenham Road (Sparham) and the B1149 Holt Rd (north of Cawston). **Appendix A** shows these two locations, and **Appendix B** contains the relevant extract from the joint position statement submitted by the Applicant and NCC at Deadline 6 (ExA; ISH4; 10.D6.3).

2. Following submission of the Norfolk Vanguard application for development consent to the Planning Inspectorate in June 2018, NCC requested that additional trenchless crossings should be undertaken for following road crossings:

   - A1067 - to take into account potential changes in traffic flows following the opening of the Norwich Northern Distributor Road (NNDR) in April 2018; and
   - B1149 - NCC expressed concern that the disruption to the network would be exacerbated by the potential cumulative interaction of the Project's traffic with the Hornsea Project Three's main compound traffic located on The Street at Oulton and questioned if a feasible traffic management solution could be identified for the forecasted cumulative vehicle movements. The introduction of this main compound was first reported in the Hornsea Project Three application documentation submitted in May 2018.

3. The specific concerns raised by NCC in relation to the proposed open cut method are:

   1) Disruption to the network associated with temporary traffic management (i.e. delays to traffic); and
   2) The long-term maintenance liability to the reinstatement of an open cut trench on the affected roads, in the context of the Project forecast Heavy Goods Vehicle (HGV) traffic (it should be noted that after an initial guarantee period of three years the maintenance of the reinstatement would become the responsibility of the local highway authority).

4. The Applicant has undertaken further traffic count surveys along the A1067 as requested by Norfolk County Council (NCC) to investigate potential changes in traffic flows following the opening of the NNDR in April 2018. In addition, the Applicant has commissioned local pavement specialists, the Norfolk Partnership Laboratory (NPL) to investigate ground conditions at the B1149 and ascertain if an appropriate road reinstatement is feasible.

5. This note examines the points of concern raised for the proposed open cut method at both the A1067 and the B1149 and applies the latest traffic and engineering data to provide a recommendation to the Examining Authority (ExA).

2 Traffic Considerations for the Proposed Open Cut Method at the A1067 and the B1149

2.1 Road Network Disruption Review - A1067 and B1149

6. The principal guidance for temporary traffic management situations in the UK is Chapter 8 of the Traffic Signs Manual (Department for Transport, 2009) ('Chapter 8'). Chapter 8 gives detailed specification for roadworks for a wide range of traffic situations.

7. Open cut trenching for the Project would be carried out by closing a lane of the carriageway and providing traffic signal control to safely introduce single file traffic (known as 'one-way working'). Paragraph D5.1.6 of Chapter 8 details the maximum vehicle flows at which significant delays would be experienced by traffic subjected to one-way working as follows:

   'On roads where flows are very high, overload of the controlled area is possible and exceptional delays may result. This can occur with two-way flows as low as 1,300 vehicles per hour (for sites about 50m long)….' (Department for Transport, 2009)

8. Thus, the 1,300 vehicle per hour is adopted as the 'Chapter 8 thresholds' to determine if the open cut method would lead to significant network disruption at either of the two proposed open cut sites.

2.1.1 Traffic Flow Data

9. Baseline traffic flow data was captured via seven-day Automatic Traffic Counters (ATC) commissioned by Norfolk Vanguard Limited. The locations, dates and requirements of the surveys were as follows:

   - A1067, at the point of the cable crossing; undertaken on the 23rd April 2019 to 30th April 2019, data provided in **Appendix C**. An additional ATC commissioned at NCC's request to assess the potential re-assignment of traffic to/from the recently

completed A1270 (Norwich Northern Distributor Route) and calibrate the count data presented in the DCO application[1].

- B1149, approximately 65m north of crossing point; original ATC captured as part of Chapter 24 ES assessment undertaken on the 19th April 2017 to 25th April 2017, data provided in **Appendix D**.

10. The traffic count data is summarised in **Table 1.1**.

11. A review of the surveyed traffic data identifies network peak hours of 7:30am to 8:30am and 4:30pm to 5:30pm for both sites.

12. Within Table 1.1, the surveyed flows have been growthed to the forecast year of 2022 (the earliest start of construction for Norfolk Vanguard). Annual Average Weekly Traffic (AAWT) has been derived to reflect the Project's predominate weekday traffic demand. The growth factors for AAWT peak hours have been derived from the Department for Transport Trip End Model Presentation Programme (TEMPro[2]) Version 7.2 with data set 7.0 for the Breckland (A1067) and Broadland (B1149) geographical areas respectively.

13. To account for daily fluctuations in traffic flows a 10% (-5%/+5%) daily fluctuation factor has been applied to the 2022 forecast flows.

14. In addition, the daily development flows (employees and HGVs) for both Norfolk Vanguard and Hornsea Project Three have been taken from the respective examination documentation (and as presented in the cumulative impact assessment submitted at Deadline 5 - ExA; ISH1; 10.D5.3) and added to the maximum (+5%) 2022 forecast flows.

15. The final 2022 forecast flows presented in **Table 1.1** are considered to be the maximum worst case flows that both the A1067 and B1149 would experience during open cut trenching for each cable crossing location.

[1] The A1067 crossing bisects two highway links (link 24, east of crossing point and link 29, west of crossing point). The traffic flows presented in the Environmental Statement for the highway links to be crossed (were derived from DfT counts in the locality of the crossing point and an Annual Average Daily Traffic (AADT) flow of 10,328 and 13,065 respectively was presented.

[2] TEMPro growth factors have utilised National Transport Model (NTM)area providing growth rates for Annual Average Weekly Traffic (AAWT), AM and PM peak hours.

Table 1.1 Traffic Flow Data (two-way flows)

Time Periods		Surveyed Flows	TEMPro Growth Factors	2022 Daily Forecast Flows	2022 Forecast Daily Fluctuations		Norfolk Vanguard 2022 Daily Development Flows		Hornsea Project 3 Daily Development Flows		Total 2022 Daily Forecast Flows with Developments
					Min (-5%)	Max (-5%)	Employee Vehicles	HGVs	Employee Vehicles	HGVs	Total Vehicles
A1067											
24hr AAWT[1]	24hrs	11,294	1.0593	11,964	11,366	12,562	148	431	72	86	13,299
Weekday am Peak	7:30am to 8:30am	1,123	1.0556	1,185	1,126	1,244	74	43	36	9	1,406
Weekday pm Peak	4:30am to 5:30pm	1,112	1.0563	1,174	1,115	1,233	74	43	36	9	1,395
B1149											
24hr AAWT[1]	24hrs	5,645	1.1110	6,272	5,958	6,585	156	235	232	162	7,370
Weekday am Peak	7:30am to 8:30am	513	1.1038	566	538	595	78	23	116	17	828
Weekday pm Peak	4:30am to 5:30pm	561	1.1057	620	589	651	78	23	116	17	885
	[1] Annual Average Weekly Traffic										

2.1.2 Network Disruption Conclusion

2.1.2.1 A1067

16. As can be seen by **Table 1.1**, both the forecast 2022 AM (1,406) and PM (1,395) peak flows exceed the Chapter 8 threshold of 1,300 two-way vehicle flows for one-way working (for cumulative traffic). The 1,300 threshold is also exceeded with the inclusion of Norfolk Vanguard construction traffic alone.

17. Therefore, the Applicant agrees that the implementation of a trenchless crossing for the A1067 is now deemed appropriate during construction of Norfolk Vanguard, whether alone or in combination with Hornsea Project Three, to mitigate adverse network disruption. DCO Requirement 16 will be amended to capture the A1067 in the list of trenchless crossings committed to by the Applicant.

18. A consideration of environmental impacts associated with this trenchless crossing is included in section 3 of this note.

2.1.2.2 B1149

19. As can be seen by **Table 1.1**, both the forecast 2022 AM (828) and PM (885) peak flows (for both Project alone and cumulative traffic flows) are well below the Chapter 8 thresholds of 1,300 two-way vehicle flows for one-way working.

20. Therefore, it is considered that one-way working remains appropriate for the B1149 and will not result in significant network disruption. It is noted that the B1149 is defined by NCC as a traffic sensitive route and in accordance with this stipulation, all roadworks will be carried out outside of the periods of 7:30am to 9am and 4pm to 7pm and the road would be open to two-way traffic thereafter.

21. With the combination of the identified low traffic flows and previously identified traffic mitigation measures in place, no more than a **minor adverse** residual impact would be experienced on the B1149 during the open cut trench crossing works, which is not significant in EIA terms.

2.2 Long-Term Maintenance Liability Review – B1149

22. As requested by NCC, in April 2019 Norfolk Vanguard Ltd. commissioned local pavement specialists, the NPL to investigate ground conditions at the B1149 and ascertain if an appropriate road reinstatement specification (to address NCC concerns) is feasible. NPL undertook four core sample ground investigations in the approximate location of the proposed open cut trench crossings on the B1149.

23. **Appendix E** contains the core testing results. In summary, the testing indicates that there is good load bearing subgrade (known as the California Bearing Ratio test) and accordingly the road can be suitable reinstated. A specification has been developed for the reinstatements to minimise the potential for future maintenance liability by minimising the risk of differential settlement and reflective cracking. Appendix E also contains the recommended pavement specification for each trench location. The specification uses readily available material and established trenching techniques and would be adopted by a suitably accredited (New Road and Streetworks Act) contractor.

24. Based on the findings of the laboratory tests and the recommended reinstatement specification, it is concluded that adverse maintenance liability can be mitigated and therefore open cut trenching remains an appropriate treatment. The specification (and any variations as agreed with NCC) would be secured in the Outline Traffic Management Plan to be submitted at Deadline 8.

2.3 Cumulative Traffic Management – B1149

25. As previously noted, NCC has specific concerns relating to the cumulative interaction of the Project's and Hornsea Project Three's traffic. With regard to one-way working the specific concerns are:

1) Accommodating the large volume of abnormal loads delivering cable drums to the Hornsea Project Three main compound at Oulton; and
2) Ensuring the roadworks do not lead to 'blocking back' of the B1149/The Street, Oulton junction; or vehicles do not approach the back of a queue unsighted from the B1149 south, hump back bridge.

26. **Appendix F** sets out the proposed one-way traffic management concept design for the B1149. The roadworks design incorporates a wide one way lane (4.5m) to accommodate the Hornsea Project Three abnormal loads within the current Order limits for Norfolk Vanguard. It can also be observed from **Appendix F** that the road works terminate some 210m southeast of the B1149/The Street, Oulton junction ensuring that the risk of traffic blocking back to the B1149/The Street junction would be minimised. Furthermore the roadworks terminate some 430m northwest of the hump back bridge ensuring the risk of queue length collision is minimised.

27. It is therefore concluded that the specific cumulative traffic concerns have been designed out at the B1149 crossing.

2.4 Conclusion

28. An investigation has been undertaken in response to the concerns raised by Norfolk County Council on the potential impacts of open cut trenching on the A1067and B1149.

29. Based on the results of the investigations, the following recommendations are proposed from a traffic and transport perspective:

- A1067 – It is recommended that a trenchless crossing is implemented to mitigate the expected adverse network disruption. Mobilisation Area 5a and 5b are located either side of the A1067 and are available to facilitate this trenchless crossing without any changes to the Order limits.
- B1149 – An open cut trench is deemed appropriate as there is no evidence from the investigations to suggest that this form of treatment will cause significant adverse impacts or present a maintenance liability for NCC.

30. It should be noted that there are currently no temporary works areas in proximity to the B1149. As such it would not be possible to undertake a trenchless crossing in this location without additional land outside of the current Order limits. However, the evidence presented within this note demonstrates that that an open cut trench solution is appropriate for the B1149.

3 Environmental Consideration for Trenchless Crossing of the A1067

3.1 Methodology for Crossing the A1067

31. The purpose of this section is to consider whether the revised construction methodology for a trenchless crossing solution at the A1067 will give rise to any potentially significant impacts beyond those which have already been assessed and presented in the Environmental Statement (ES) submitted in June 2018 (DCO document 6.1).

32. The construction methodology assessed for the A1067 crossing within the originally submitted application documents was for an open cut trench between Mobilisation Area 5a and 5b located either side of the A1067. These locations are shown on Plate 1 below.

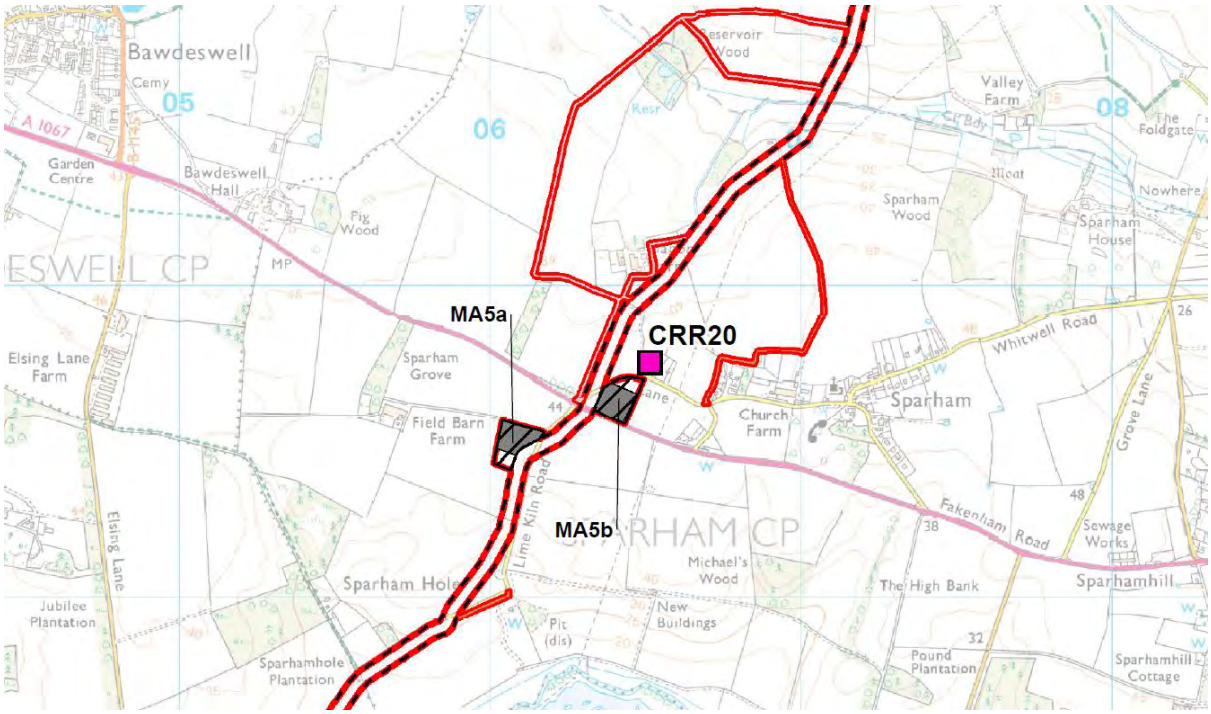


Plate 1: Proposed works area

33. The amended construction methodology is a trenchless crossing of the A1067 using Mobilisation Areas 5a and 5b as trenchless crossing drill and reception sites.

34. With reference to Section 5.5.3.6.3 of ES Chapter 5 Project Description, the worst case maximum dimensions of a trenchless crossing compound are 5,000m^2 for the drill reception site and 7,500m^2 for the drill launch site. At the crossing of the A1067, Mobilisation Areas were previously identified on each side of the A1067 (MA5a and MA5b) in order to facilitate the open cut trench solution. Each of these Mobilisation Areas has a footprint of 10,000m^2, and therefore no additional land take is required to accommodate the trenchless crossing, i.e. compounds to facilitate a trenchless crossing of the A1067 can be accommodated wholly within the current Order limits as shown on Plate 1.

35. This technical note is therefore limited to consideration of the equipment that will now be required at Mobilisation Area 5a and 5b for a trenchless crossing, the timings of the works, and the associated environmental impacts when using this area for trenchless crossing drill and reception sites. The relevant differences between the assessed open cut methodology and the trenchless crossing methodology are presented below in **Table 1.2**.

Table 1.2 Comparison of originally assessed parameters and those associated with trenchless crossing

<table>
<tr><th>Parameter</th><th>Originally assessed values (mobilisation area / open-cut trench)</th><th>Trenchless crossing values</th></tr>
<tr><td>Working hours</td><td>Consented construction hours:
07.00 – 19.00 Monday to Friday
07.00 – 13.00 Saturday
No work on Sundays or public holidays.
As set out in Requirement 26.</td><td>Consented construction hours:
07.00 – 19.00 Monday to Friday
07.00 – 13.00 Saturday

Trenchless crossings may require works to extend outside of the consented hours (for technical reasons following commencement of drilling), i.e. works may extend into the evening or night time.
Should works be required to extend beyond the consented hours then prior approval would be required from the relevant planning authority as set out in Requirement 26.</td></tr>
<tr><td>Compound footprint</td><td>MA5a = 10,000m^2
MA5b = 10,000m^2</td><td>5,000m^2 drill reception site*
7,500m^2 drill launch site*</td></tr>
<tr><td>Equipment / plant and associated noise levels</td><td>Duct installation (daytime)
<table>
<tr><th>Name</th><th>LwA dB(A)**</th><th>On time Correction***</th></tr>
<tr><td>Bulldozer</td><td>108</td><td>75%</td></tr>
<tr><td>Dump Truck</td><td>107</td><td>75%</td></tr>
<tr><td>Tracked Excavator</td><td>107</td><td>75%</td></tr>
</table></td><td>Trenchless crossing (daytime)
<table>
<tr><th>Name</th><th>LwA dB(A)**</th><th>On time Correction***</th></tr>
<tr><td>Tracked Excavator</td><td>107</td><td>50%</td></tr>
<tr><td>Backhoe Loader</td><td>96</td><td>50%</td></tr>
<tr><td>Bulldozer</td><td>108</td><td>50%</td></tr>
</table></td></tr>
</table>

Parameter	Originally assessed values (mobilisation area / open-cut trench)	Trenchless crossing values

Generator	105	100%
Water Pump	93	75%
Dump Truck	115	15km/h
Lorry	108	15km/h

Temporary work areas (daytime)

Name	LwA dB(A)	On time Correction
Tracked Excavator*	107	25%
Bulldozer*	108	25%
Dumper*	101	25%
Mobile Crane*	106	25%
Generator	105	100%

Evening / night-time activities
None

Dumper	101	50%
Mobile Crane	106	25%
Cement Mixer	103	25%
Concrete Pump	108	25%
Piling	118	10%
Drilling Rig	105	75%
Water Pump	93	75%
Generator	105	100%

Trenchless crossing (evening / night-time)

Name	LwA dB(A)	On time Correction
Backhoe Loader	96	50%
Dumper	101	50%
Drilling Rig	105	75%
Water Pump	93	75%
Generator	105	100%

* Normal duct installation works that will progress from Mobilisation Area 5a and 5b will still require the full 10,000m^2 land take.
** A-weighted sound power level in decibels
*** Percentage of assessment period that plant is expected to be in operation

3.2 Consideration of a Trenchless Crossing of the A1067

36. Table 1.3 provides consideration of the proposed change in construction methodology for the crossing of the A1067 in relation to each of the previously assessed relevant onshore EIA topics.

Table 1.3 Environmental considerations

Onshore ES topic	Consideration of potential effects	Change to previously assessed findings?
Ground conditions and contamination (Chapter 20)	The proposed change in construction methodology remains wholly within the previously assessed Order limits and is no closer to any identified sensitive receptors associated with ground conditions and contamination. On this basis there will be no change to the previously reported findings.	No change
Land use and agriculture (Chapter 21)	The proposed change in construction methodology remains wholly within the previously assessed Order limits and no additional land will be affected as a result of this change. The change in construction plant operating within this temporary works area, and the potential for works to extend into the evening / night time, is unrelated to the assessment criteria agreed for land use and agricultural receptors. Therefore there will be no change to the previously reported findings.	No change
Onshore ecology and ornithology (Chapters 22 and 23)	The proposed change in construction methodology remains wholly within the previously assessed Order limits and no additional land will be affected as a result of this change. There are no sensitive ecological receptors in proximity to Mobilisation 5a and 5b and the change in construction plant operating within these areas will not change the previously reported findings.	No change
Traffic and transport (Chapter 24)	The inclusion of a new trenchless crossing would generate a new traffic peak of 48 HGV daily movements. ES Chapter 24 Traffic and Transport details within paragraphs 146 and 147 that a maximum of three trenchless crossing work gangs would be active at any one time across the whole onshore cable route. This constrains traffic demand to a level that would be generated by three trenchless crossings active at any point within the construction programme (an effective traffic demand 'cap' associated with this activity). The A1067 has already been assessed for the maximum HGV peak demand associated with	No change

Onshore ES topic	Consideration of potential effects	Change to previously assessed findings?
	three active trenchless crossing sites, i.e. the peak traffic demand assessed will not change as a result of the inclusion of the additional trenchless crossing, because there can never be more than three active trenchless crossings at any one time. Therefore, the inclusion of an additional trenchless crossing on the A1067 would result in no change to Traffic and Transport impacts as assessed within the ES Chapter 20 and subsequently within the cumulative impact assessment submitted at Deadline 5 (ExA; ISH1; 10.D5.3).	
Noise and vibration (Chapter 25)	The nearest noise sensitive receptor is CRR20 located approximately 105m from MA5b. A detailed assessment of potential noise and vibration effects associated with the change to a trenchless crossing of the A1067 is provided in **Appendix G**. Open cut trenching was limited to the consented working hours, i.e. 07.00 – 19.00 Monday to Friday and 07.00 to 13.00 on Saturdays. Trenchless crossings include the potential for work to extend beyond the consented hours due to the continuous nature of the drilling. Therefore evening, weekend and night time working must be taken into consideration. In addition, a trenchless crossing method has the potential for percussive piling to anchor the drills, which is not present in the open-cut methodology.	The assessed noise levels associated with a trenchless crossing of the A1067 at the nearest noise sensitive receptor (CRR20) represent an impact of **negligible** significance during the daytime, evening and weekend reference periods (reported in full in **Appendix G**). The predicted noise levels associated with a trenchless crossing of the A1067 represent in an impact of **major adverse** significance (without mitigation) at receptor CRR20 should night-time working take place. However, with the inclusion of enhanced mitigation in the form of 3.5m high standard noise absorptive barriers, the residual impact is reduced **negligible** significance. A Construction Noise Management Plan (CNMP) will be included in the final Code of Construction Practice (CoCP), as required under Requirement 20 (2)(e) of the DCO. Enhanced mitigation (including noise absorptive barriers) is captured in the existing outline CoCP (document refence 8.1). The CNMP provided within the final CoCP will apply throughout that stage of construction and will detail standard mitigation (best practical means) and where applicable,

Onshore ES topic	Consideration of potential effects	Change to previously assessed findings?
		enhanced mitigation measures. The exact specification of any noise barriers that may be required to mitigate significant residual construction noise will be determined during detailed design. Noise barriers will be introduced with the appropriate specification for the location and noise reduction required. Piling, if required, at a distance of at least 105m (the distance between the works and CRR20) represents a vibration impact of **negligible** significance.
Air quality (Chapter 26)	The proposed change in construction methodology remains wholly within the previously assessed footprint and does not introduce any new dust generating activities compared to those previously assessed. No significant air quality impacts were identified in the original assessment. Therefore there will be no change to the previously reported findings.	No change
Human health (Chapter 27)	Potential health impacts are related to potential increases to construction noise, air quality and exposure to historic contaminants. There are no identified changes to the findings of the air quality and contaminated land assessments. However, as noted above, there are changes to the previously reported construction noise impacts due to the potential requirement for works to extend into the evening and night time due to the continuous nature of drilling works.	Noise impacts are considered earlier in this table and in detail in **Appendix G**. Without mitigation there is the potential for significant noise impacts should works extend into the night time reference period. With the inclusion of noise absorption barriers this potential effect will be reduced to not significant. Noise barriers will be introduced with the appropriate specification for the location and noise reduction required. This is captured within the OCoCP and secured through Requirement 20 (2)(e) of the DCO. With the inclusion of appropriately designed noise absorption barriers in the event of night time working being permitted, no significant impacts to human health are anticipated as a result of the proposed change in construction methodology.

Onshore ES topic	Consideration of potential effects	Change to previously assessed findings?
Onshore archaeology and cultural heritage (Chapter 28)	The proposed change in construction methodology remains wholly within the previously assessed footprint and will not lead to any change of effect upon known buried heritage assets or any of the receptors assessed in the heritage settings assessment. Therefore there will be no change to the previously reported findings.	No change
Landscape and visual impact (Chapter 29)	The proposed change in construction methodology remains wholly within the previously assessed footprint. it is no closer to any identified sensitive visual receptors and does not lead to any change in views from previously identified sensitive receptors. The change in methodology would not lead to any increased visibility or change in landscape character. As such, there will be no change to the previously reported findings.	No change
Tourism and recreation (Chapter 30)	The proposed change in construction methodology remains wholly within the previously assessed footprint and is no closer to any identified sensitive receptors associated with tourism and recreation, and therefore there will be no change to the previously reported findings.	No change
Socio-economics (Chapter 31)	The proposed change in construction methodology will not result in any changes to the reported construction workforce numbers, and therefore there will be no change to the previously reported findings.	No change

37. Based on the review provided in Table 2, there are changes to the reported findings associated with noise and vibration and human health impacts (also noise related). These changes relate to the potential requirement for drilling works to extend beyond the consented construction hours. A potential **major adverse** noise impact has been identified at the closet noise sensitive receptor (CRR20) should works be required to take place during the night.

38. With the inclusion of enhanced mitigation in the form of 3.5m high standard noise absorptive barriers, noise levels at CRR20 would be reduced to 39.3dBA representing a residual impact of **negligible** significance.

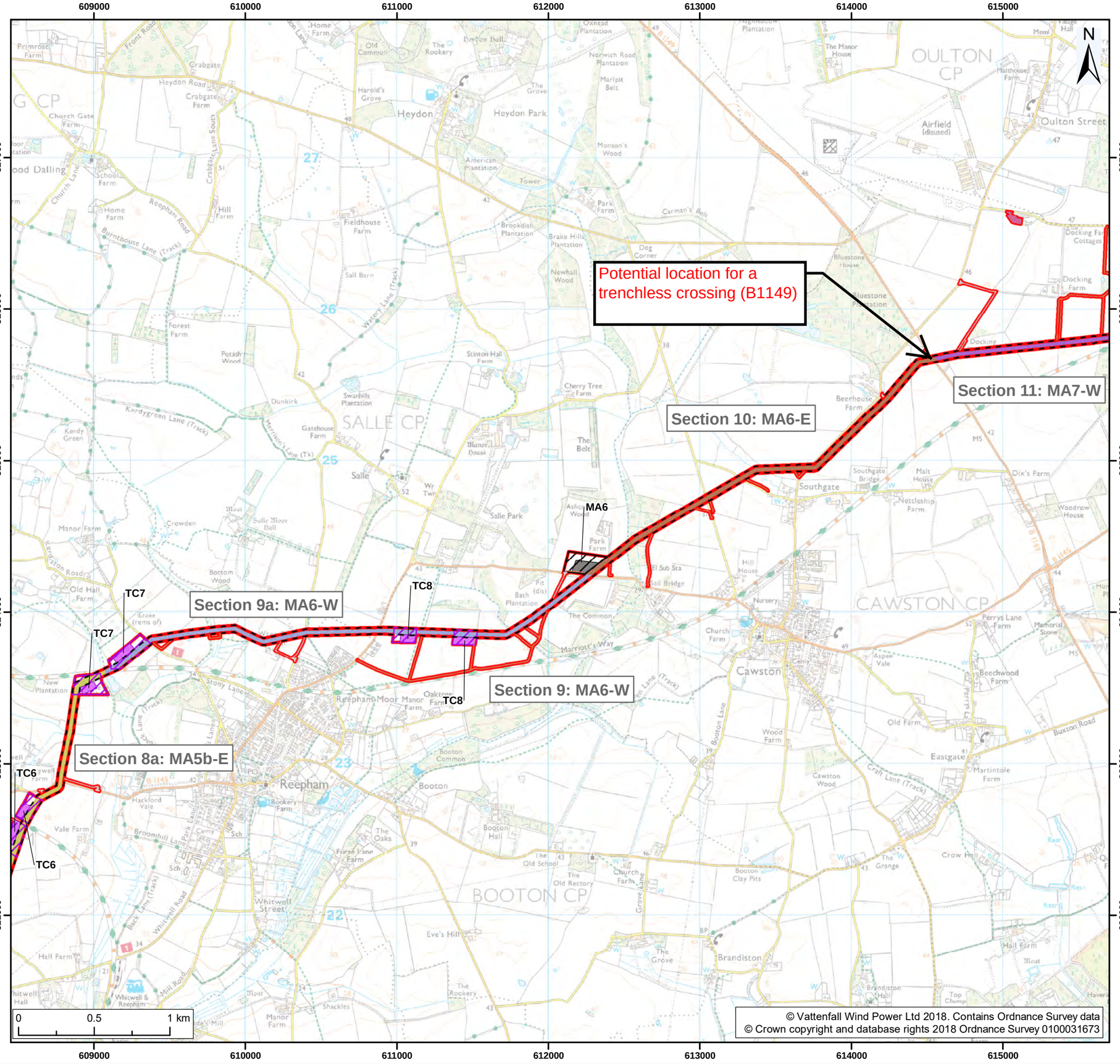
39. A CNMP will be included in the final CoCP, as required under Requirement 20 (2)(e) of the DCO. The Outline CoCP commits the Applicant to delivering a CNMP, which will apply throughout that stage of construction and will detail standard mitigation (best practical means) and where applicable, enhanced mitigation measures. The exact specification of any noise barriers that may be required to mitigate significant residual construction noise will be determined during detailed design based on the confirmed list of plant and equipment. Noise barriers will be introduced with the appropriate specification for the location and noise reduction required.

40. Piling, if required, at a distance of least 105m from the nearest noise sensitive receptor represents a vibration impact of **negligible** significance.

41. For works taking place during the daytime, evening and weekends potential noise impacts remained of **negligible** significance.

42. There are no changes to the impacts identified for other relevant onshore EIA topics associated with the proposed change in construction methodology for a trenchless crossing of the A1067. The findings of the submitted Environmental Statement therefore remain valid for those topics.

APPENDIX A Trenchless Crossings Locations



Legend:

- Norfolk Vanguard onshore red line boundary

Onshore cable route

- Onshore cable route
- Trenchless crossing zone (e.g. HDD)
- Indicative trenchless crossing compound
- Mobilisation zone
- Indicative mobilisation area compound
- Cable logistics area

Access

- Construction access
- Operation access

Cable Route Sections

- Section 8a: MA5b-E
- Section 9a: MA6-W
- Section 10: MA6-E
- Section 11: MA7-W

MA = Mobilisation Area

Project:	Report:
Norfolk Vanguard	Outline Traffic Management Plan

Title:

Onshore Cable Route Project Components (map 5 of 9)

Figure: 2 | Drawing No: PB4476-006-009-002

Revision:	Date:	Drawn:	Checked:	Size:	Scale:
02	08/06/2018	LB	RE	A3	1:25,000
01	04/06/2018	LB	RE	A3	1:25,000

Co-ordinate system: British National Grid **EPSG:** 27700

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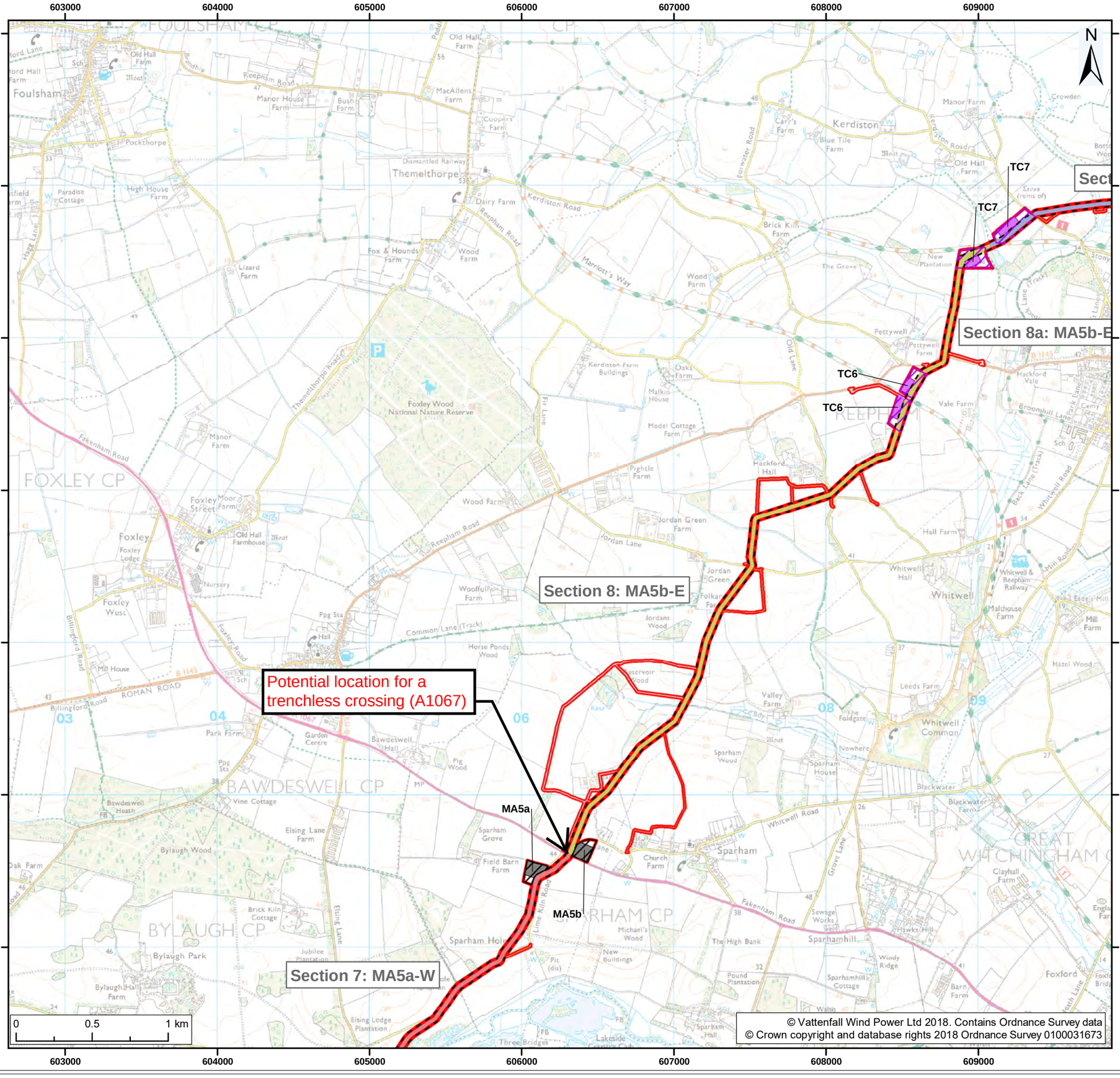

Legend:

- Norfolk Vanguard onshore red line boundary

Onshore cable route

- Onshore cable route
- Trenchless crossing zone (e.g. HDD)
- Indicative trenchless crossing compound
- Mobilisation zone
- Indicative mobilisation area compound

Access

- Construction access
- Operation access

Cable Route Sections

- Section 7: MA5a-W
- Section 8a: MA5b-E
- Section 9a: MA6-W

MA = Mobilisation Area

Project:	Report:
Norfolk Vanguard	Outline Traffic Management Plan

Title: Onshore Cable Route Project Components (map 6 of 9)

Figure: 2 | Drawing No: PB4476-006-009-002

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Co-ordinate system: British National Grid **EPSG:** 27700

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APPENDIX B Extract from NCC Deadline 6 Position Statement

Trenchless crossings of the A1067, B1149 and B1145		
The Applicant has submitted an Outline Traffic Management Plan (DCO doc: 8.8) which commits to crossing the following highway links with trenchless crossing techniques: • A47; • A140; and • A149. NCC has identified a potential requirement for trenchless crossings of the A1067 and B1149. The Applicant has previously set out its position with regard to these road crossings in response to the Q11.35 and Q11.38 of the Examiners second questions. In summary, the roads that are proposed to be crossed by trenchless crossing techniques and those that are proposed to be crossed by open cut trenching were discussed and agreed with NCC as part of the Norfolk Vanguard Evidence Plan Process. Trenchless crossings were proposed where it would necessary mitigate traffic impacts that would otherwise occur using an open cut trenching solution. The A1067 and B1149 were not identified as a road that required a trenchless crossing based on existing and proposed traffic flows and the DCO application was submitted on this basis. NCC has subsequently identified that these routes may require trenchless crossings on the basis that: • The B1149 will be used by both Norfolk Vanguard and Hornsea Project Three construction traffic and this cumulative traffic may no longer be acceptable for traffic management proposed for open cut trenching.	NCC has **not** at any time agreed an extensive list of roads that would be subject to trenchless crossing. Where a cable duct needs to cross the width of the carriageway, trenchless crossing methods offer benefits over open trench excavation. These include minimising disruption to the operation of the network and reduced levels of traffic management. In addition, the removal of the need to break the carriageway surface and reinstate provides for a much more stable and durable installation. 1) A1067 – In addition to traffic management concerns relating to higher levels of use identified by the applicants, there is also an issue of long-term maintenance to the reinstatement of an open cut trench on roads of this nature. A traffic survey alone as proposed (which is limited to only examining traffic numbers) will not address this point. 2) B1149 - Having considered the CIA, we do not believe it would be feasible to place the traffic management measures on the B1149 proposed by the applicants as they would conflict with traffic movements to and from Hornsea 3's compound. It isn't just a question of traffic numbers from this one development alone, but rather an understanding of how the two projects interact and the nature of the traffic and movements generated cumulatively. There is also an issue of long-term maintenance to the reinstatement of an	The Applicant is undertaking the following work to determine the potential requirement for further trenchless crossing sites: 1) A1067 - Further traffic surveys have been commissioned to confirm pre-application traffic counts and to inform the feasibility of 'open cut' trenching under temporary traffic signal control as currently proposed by the Applicant. The outputs from the surveys are expected in early to mid-May. 2) B1149 - Norfolk Laboratories have been commissioned to undertake a ground investigation to inform the reinstatement design. Norfolk Laboratories are expected to report their findings of the ground investigation in early May 3) Review of traffic flows (both routes).

• Traffic flows along the A1067 have increased since the pre-application surveys following the opening of the Norwich Northern Distributor Road. The Applicant is progressing workstreams to respond to these matters.	open cut trench on roads when considering the increase in HGV traffic due to the 2 projects.	The results of these workstreams will be captured in a technical note that will set out the highway crossing method for each discrete site and the rationale. Expected submission for Deadline 8 (May 30). The technical note will be shared with NCC for comment and further engagement prior to Deadline 8.

APPENDIX C A1067 ATC Results

Site 1
Location A1067, Att - Tree, OSGR: TG 06233 19642
Direction Two way
24 April 2019

9323 / Norfolk Vanguard
April 2019
Automatic Traffic Count

Time	Total	Classification												>PSL	>PSL%	>SL1	>SL1%	>SL2	>SL2%	Mean	Vpp
		1	2	3	4	5	6	7	8	9	10	11	12	50	50	57	57	65	65		85
		MCL	SV	SVT	TB2	TB3	T4	ART3	ART4	ART5	ART6	BD	DRT			ACPO	ACPO	DfT	DfT		
0000	7	0	6	0	1	0	0	0	0	0	0	0	0	7	100	5	71.4	2	28.6	59.5	-
0015	8	0	5	0	2	0	0	0	0	1	0	0	0	5	62.5	4	50	1	12.5	56.8	-
0030	10	0	10	0	0	0	0	0	0	0	0	0	0	8	80	4	40	3	30	61	-
0045	5	0	4	0	0	0	0	0	0	0	1	0	0	4	80	3	60	2	40	64	-
0100	4	0	3	0	1	0	0	0	0	0	0	0	0	4	100	2	50	2	50	64.1	-
0115	4	0	2	0	1	0	0	0	0	0	1	0	0	3	75	1	25	0	0	52.3	-
0130	5	0	3	0	2	0	0	0	0	0	0	0	0	4	80	1	20	0	0	53.3	-
0145	3	0	1	0	1	0	0	0	0	1	0	0	0	3	100	0	0	0	0	54	-
0200	6	0	5	0	1	0	0	0	0	0	0	0	0	4	66.7	1	16.7	0	0	51.1	-
0215	4	0	3	0	1	0	0	0	0	0	0	0	0	2	50	2	50	0	0	51.3	-
0230	6	0	3	0	1	0	0	0	0	2	0	0	0	6	100	3	50	1	16.7	60.3	-
0245	4	0	4	0	0	0	0	0	0	0	0	0	0	4	100	2	50	0	0	56.1	-
0300	3	0	2	0	1	0	0	0	0	0	0	0	0	3	100	3	100	2	66.7	67.6	-
0315	2	0	1	0	0	0	0	0	0	1	0	0	0	2	100	1	50	0	0	59.1	-
0330	2	0	1	0	1	0	0	0	0	0	0	0	0	2	100	2	100	0	0	59.5	-
0345	2	0	1	0	1	0	0	0	0	0	0	0	0	2	100	0	0	0	0	51.3	-
0400	3	0	1	0	0	0	0	0	0	1	1	0	0	3	100	1	33.3	0	0	55.8	-
0415	7	0	6	0	0	0	0	0	0	1	0	0	0	6	85.7	4	57.1	4	57.1	64.8	-
0430	14	1	6	0	3	1	0	0	0	2	1	0	0	10	71.4	4	28.6	0	0	52.4	60.6
0445	16	0	13	0	2	0	0	0	0	1	0	0	0	11	68.8	4	25	1	6.3	52.2	58.6
0500	20	2	11	0	7	0	0	0	0	0	0	0	0	17	85	10	50	5	25	57.5	65.8
0515	27	1	25	0	1	0	0	0	0	0	0	0	0	21	77.8	14	51.9	5	18.5	57	67.1
0530	52	0	42	1	4	2	0	0	0	1	2	0	0	48	92.3	25	48.1	9	17.3	58.5	66.7
0545	28	1	23	0	4	0	0	0	0	0	0	0	0	22	78.6	11	39.3	2	7.1	55.6	61.1
0600	75	2	55	1	6	1	2	0	3	2	3	0	0	57	76	27	36	9	12	54.9	63.1
0615	114	2	93	2	12	1	1	0	1	0	2	0	0	95	83.3	34	29.8	8	7	54.5	60.6
0630	126	2	104	0	17	0	0	0	1	2	0	0	0	101	80.2	41	32.5	12	9.5	54.8	62.2
0645	155	0	119	2	24	1	2	0	2	3	2	0	0	120	77.4	34	21.9	8	5.2	53.4	59.3
0700	207	1	170	1	27	0	2	0	1	2	2	1	0	153	73.9	32	15.5	4	1.9	52.3	57
0715	256	1	211	3	30	0	3	0	4	3	0	0	1	177	69.1	42	16.4	2	0.8	51.7	57.7
0730	**314**	**0**	**257**	**3**	**42**	**3**	**2**	**0**	**1**	**3**	**3**	**0**	**0**	**157**	**50**	**20**	**6.4**	**0**	**0**	**50**	**54.1**
0745	259	1	207	3	39	4	2	0	0	1	2	0	0	147	56.8	40	15.4	1	0.4	51.2	56.8
0800	291	3	239	1	41	3	1	0	2	0	1	0	0	164	56.4	31	10.7	2	0.7	50.3	55.9
0815	301	3	236	2	53	0	1	1	1	3	1	0	0	148	49.2	29	9.6	3	1	50.1	55.5
0830	289	1	237	6	36	0	2	0	2	1	4	0	0	167	57.8	21	7.3	1	0.3	50.2	55
0845	238	0	201	5	28	0	0	0	1	2	1	0	0	126	52.9	23	9.7	1	0.4	50.1	54.4
0900	207	0	164	3	34	2	1	0	0	1	2	0	0	123	59.4	13	6.3	3	1.4	50.5	55.5
0915	182	4	140	3	28	3	2	0	1	0	1	0	0	96	52.7	12	6.6	1	0.5	49.5	55
0930	191	3	154	2	28	2	0	0	0	0	1	0	1	90	47.1	19	9.9	1	0.5	47.7	54.6
0945	190	4	151	2	28	1	1	0	0	0	3	0	0	94	49.5	10	5.3	1	0.5	49.8	53.9
1000	176	2	143	1	25	1	1	0	2	0	1	0	0	85	48.3	19	10.8	1	0.6	48.4	55.9
1015	198	2	170	1	20	2	0	0	0	2	1	0	0	75	37.9	15	7.6	0	0	48.6	53.2
1030	179	1	152	0	21	2	1	0	0	2	0	0	0	80	44.7	18	10.1	0	0	49.1	54.8
1045	168	0	134	2	23	1	2	0	3	1	1	0	1	76	45.2	5	3	2	1.2	48.8	53
1100	181	1	146	1	25	2	2	0	2	1	1	0	0	72	39.8	11	6.1	1	0.6	48.5	53.5
1115	187	5	157	2	18	2	0	0	0	2	1	0	0	66	35.3	14	7.5	2	1.1	47.7	53.5
1130	154	3	116	1	26	2	3	0	0	3	0	0	0	69	44.8	7	4.5	0	0	49.5	53.9
1145	167	3	134	2	18	3	2	0	4	0	1	0	0	95	56.9	19	11.4	2	1.2	49.9	55.7
1200	154	1	130	0	16	0	2	1	1	2	1	0	0	80	51.9	20	13	2	1.3	50.9	56.4
1215	148	0	121	3	15	2	1	0	3	1	2	0	0	82	55.4	13	8.8	2	1.4	50.4	55
1230	166	0	141	3	14	1	1	0	0	4	2	0	0	109	65.7	16	9.6	3	1.8	51	55
1245	166	0	142	2	16	0	1	0	1	1	3	0	0	99	59.6	21	12.7	3	1.8	51.4	55.7
1300	162	2	128	2	23	2	0	1	1	1	2	0	0	75	46.3	9	5.6	2	1.2	48.2	54.6
1315	149	1	118	1	21	0	2	1	0	0	4	1	0	91	61.1	17	11.4	0	0	50.4	55.9
1330	141	5	108	3	22	0	1	0	0	1	0	0	1	106	75.2	22	15.6	1	0.7	52.5	57
1345	162	0	136	2	17	0	1	0	1	2	3	0	0	83	51.2	12	7.4	0	0	49.6	53.5
1400	178	1	147	1	15	2	1	0	5	3	3	0	0	99	55.6	18	10.1	2	1.1	50.1	55.7
1415	166	0	132	5	21	0	2	1	0	3	2	0	0	100	60.2	11	6.6	2	1.2	51.4	55.7
1430	171	2	133	2	28	1	2	0	2	1	0	0	0	99	57.9	21	12.3	1	0.6	50.8	55.9
1445	190	3	154	0	29	1	0	0	2	1	0	0	0	80	42.1	11	5.8	1	0.5	48.8	54.1
1500	188	1	156	0	20	4	1	0	2	3	1	0	0	96	51.1	13	6.9	2	1.1	49.8	54.8
1515	217	1	177	2	32	0	2	0	1	1	1	0	0	128	59	17	7.8	0	0	50.9	54.8
1530	220	0	186	1	26	0	2	1	3	0	0	0	1	127	57.7	23	10.5	1	0.5	50.2	55
1545	243	3	201	2	32	0	1	0	2	0	2	0	0	128	52.7	19	7.8	4	1.6	49.2	54.6
1600	254	3	209	4	36	0	0	0	0	1	1	0	0	154	60.6	21	8.3	2	0.8	50.2	55.3
1615	264	3	219	2	37	0	0	0	1	0	2	0	0	144	54.5	28	10.6	2	0.8	49.9	55.3
1630	257	2	231	2	20	0	1	0	0	1	0	0	0	167	65	28	10.9	3	1.2	51.6	55.9
1645	240	3	203	1	26	0	1	0	0	5	1	0	0	140	58.3	39	16.3	2	0.8	51.2	57.3
1700	268	3	226	3	34	1	0	0	0	1	0	0	0	173	64.6	40	14.9	5	1.9	51.6	56.8
1715	**299**	**1**	**267**	**3**	**26**	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**211**	**70.6**	**40**	**13.4**	**5**	**1.7**	**51.9**	**56.4**
1730	263	1	238	1	21	1	0	0	1	0	0	0	0	189	71.9	45	17.1	1	0.4	51.6	57.3
1745	200	1	186	1	11	0	1	0	0	0	0	0	0	128	64	54	27	8	4	52.1	59.9
1800	179	2	158	3	14	0	1	0	0	0	0	1	0	118	65.9	19	10.6	4	2.2	50.5	55.9
1815	195	0	181	1	11	0	1	0	0	1	0	0	0	166	85.1	49	25.1	5	2.6	54	59.3
1830	138	3	125	0	10	0	0	0	0	0	0	0	0	100	72.5	35	25.4	4	2.9	53.1	58.6
1845	113	0	100	1	11	0	0	0	1	0	0	0	0	80	70.8	36	31.9	10	8.8	53.8	59.7
1900	110	2	99	0	6	0	0	0	1	0	2	0	0	58	52.7	18	16.4	4	3.6	52.1	57.3
1915	75	1	69	1	4	0	0	0	0	0	0	0	0	52	69.3	25	33.3	5	6.7	53.3	62
1930	74	1	64	0	9	0	0	0	0	0	0	0	0	67	90.5	27	36.5	4	5.4	55.6	59.9
1945	71	0	64	0	5	1	0	0	0	1	0	0	0	52	73.2	16	22.5	2	2.8	52.5	58.8
2000	61	0	53	1	4	0	1	0	1	1	0	0	0	44	72.1	15	24.6	4	6.6	53.4	61.3
2015	64	1	59	0	4	0	0	0	0	0	0	0	0	46	71.9	18	28.1	6	9.4	54.3	60.8
2030	54	1	51	0	2	0	0	0	0	0	0	0	0	39	72.2	12	22.2	4	7.4	54.5	58.4
2045	56	1	50	0	5	0	0	0	0	0	0	0	0	37	66.1	20	35.7	8	14.3	54	63.1
2100	63	0	58	0	4	0	0	0	1	0	0	0	0	45	71.4	21	33.3	3	4.8	54.4	61.5
2115	47	0	42	1	3	0	0	0	0	1	0	0	0	32	68.1	19	40.4	9	19.1	54.9	65.1
2130	51	0	48	0	3	0	0	0	0	0	0	0	0	35	68.6	14	27.5	1	2	53.3	59.9
2145	41	1	37	0	3	0	0	0	0	0	0	0	0	36	87.8	12	29.3	1	2.4	54.4	58.4
2200	48	0	46	0	2	0	0	0	0	0	0	0	0	36	75	24	50	6	12.5	56.8	63.5
2215	37	1	31	0	4	0	0	0	1	0	0	0	0	28	75.7	14	37.8	4	10.8	54.8	59.7
2230	34	0	33	0	1	0	0	0	0	0	0	0	0	25	73.5	14	41.2	3	8.8	54.3	61.3
2245	22	0	18	0	2	0	0	0	0	2	0	0	0	18	81.8	8	36.4	2	9.1	55.2	60.8
2300	18	0	17	0	1	0	0	0	0	0	0	0	0	17	94.4	10	55.6	4	22.2	59.7	65.5
2315	14	0	14	0	0	0	0	0	0	0	0	0	0	13	92.9	9	64.3	6	42.9	62.7	74.3
2330	10	0	9	0	0	0	0	0	0	1	0	0	0	6	60	3	30	1	10	54.1	-
2345	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
07-19	**9826**	**80**	**8172**	**95**	**1194**	**49**	**54**	**6**	**51**	**60**	**57**	**3**	**5**	**5612**	**57.1**	**1097**	**11.2**	**105**	**1.1**	**50.4**	**55.7**
06-22	**11063**	**94**	**9237**	**103**	**1305**	**53**	**60**	**6**	**61**	**70**	**66**	**3**	**5**	**6528**	**59**	**1450**	**13.1**	**193**	**1.7**	**50.8**	**56.4**
06-00	**11246**	**95**	**9405**	**103**	**1315**	**53**	**60**	**6**	**62**	**73**	**66**	**3**	**5**	**6671**	**59.3**	**1532**	**13.6**	**219**	**1.9**	**50.9**	**56.6**
00-00	**11488**	**100**	**9586**	**104**	**1350**	**56**	**60**	**6**	**62**	**84**	**72**	**3**	**5**	**6872**	**59.8**	**1639**	**14.3**	**258**	**2.2**	**51**	**56.6**

Site 1
Location A1067, Att - Tree, OSGR: TG 06233 19642
Direction Two way
25 April 2019

9323 / Norfolk Vanguard
April 2019
Automatic Traffic Count

Time	Total	Classification												>PSL	>PSL%	>SL1	>SL1%	>SL2	>SL2%	Mean	Vpp
		1	2	3	4	5	6	7	8	9	10	11	12	50	50	57	57	65	65		85
		MCL	SV	SVT	TB2	TB3	T4	ART3	ART4	ART5	ART6	BD	DRT			ACPO	ACPO	DfT	DfT		
0000	7	0	6	1	0	0	0	0	0	0	0	0	0	7	100	3	42.9	2	28.6	58	-
0015	4	0	3	0	0	0	0	0	0	1	0	0	0	4	100	0	0	0	0	52.7	-
0030	10	0	9	0	0	0	0	0	0	1	0	0	0	8	80	6	60	3	30	56.8	-
0045	2	0	0	0	1	0	0	0	0	1	0	0	0	2	100	1	50	0	0	57.3	-
0100	7	0	5	0	2	0	0	0	0	0	0	0	0	4	57.1	0	0	0	0	51.1	-
0115	8	0	5	0	2	0	0	0	0	0	1	0	0	5	62.5	2	25	1	12.5	52.1	-
0130	4	0	3	0	1	0	0	0	0	0	0	0	0	3	75	2	50	2	50	63	-
0145	6	0	6	0	0	0	0	0	0	0	0	0	0	2	33.3	0	0	0	0	40.8	-
0200	7	0	6	0	1	0	0	0	0	0	0	0	0	3	42.9	1	14.3	0	0	43.3	-
0215	5	0	4	0	0	0	0	0	1	0	0	0	0	3	60	1	20	1	20	55.7	-
0230	4	0	3	0	0	0	0	0	1	0	0	0	0	3	75	2	50	1	25	55.4	-
0245	4	0	3	0	0	0	0	0	0	1	0	0	0	4	100	2	50	2	50	59.3	-
0300	5	0	3	0	2	0	0	0	0	0	0	0	0	3	60	3	60	1	20	59.5	-
0315	5	0	4	0	1	0	0	0	0	0	0	0	0	5	100	4	80	1	20	58.8	-
0330	15	0	12	0	1	0	0	0	0	1	1	0	0	11	73.3	7	46.7	3	20	56.7	65.5
0345	9	0	6	0	2	0	0	0	0	1	0	0	0	9	100	3	33.3	2	22.2	59.3	-
0400	9	0	7	0	2	0	0	0	0	0	0	0	0	9	100	6	66.7	5	55.6	72.2	-
0415	11	0	8	0	1	1	0	0	0	1	0	0	0	6	54.5	2	18.2	2	18.2	55.5	55.3
0430	11	0	7	0	3	0	0	0	0	1	0	0	0	7	63.6	2	18.2	1	9.1	50.5	56.6
0445	20	1	13	0	5	0	0	0	0	1	0	0	0	16	80	7	35	2	10	56.6	58.4
0500	21	0	16	0	3	0	0	0	1	0	1	0	0	16	76.2	5	23.8	1	4.8	54.1	57.3
0515	33	2	24	0	2	1	0	0	0	2	2	0	0	23	69.7	11	33.3	3	9.1	54.8	62.2
0530	44	0	35	0	4	0	1	0	1	3	0	0	0	41	93.2	23	52.3	12	27.3	59.5	66.7
0545	51	1	32	0	11	1	0	0	0	3	3	0	0	39	76.5	24	47.1	7	13.7	56.5	64.4
0600	73	2	60	0	7	0	1	0	1	0	2	0	0	59	80.8	33	45.2	10	13.7	55.5	61.7
0615	112	1	91	1	14	2	1	0	0	1	0	1	0	92	82.1	34	30.4	6	5.4	54.4	59.9
0630	129	2	103	1	19	1	2	0	0	1	0	0	0	85	65.9	34	26.4	7	5.4	52.6	60.8
0645	143	0	117	0	21	1	0	0	2	1	1	0	0	119	83.2	43	30.1	7	4.9	55.1	59.7
0700	202	1	169	1	26	0	3	0	0	1	1	0	0	143	70.8	52	25.7	1	0.5	52.5	58.2
0715	268	0	221	3	33	2	4	0	4	0	1	0	0	130	48.5	24	9	3	1.1	49.8	54.1
0730	273	1	248	1	20	1	1	0	0	0	1	0	0	145	53.1	32	11.7	1	0.4	50.5	55.9
0745	**293**	**1**	**238**	**1**	**42**	**2**	**2**	**1**	**0**	**1**	**4**	**1**	**0**	**170**	**58**	**18**	**6.1**	**0**	**0**	**50.3**	**55.5**
0800	268	3	223	1	30	1	2	0	1	1	6	0	0	167	62.3	17	6.3	2	0.7	51.1	54.6
0815	254	1	209	4	35	2	1	0	1	0	1	0	0	120	47.2	23	9.1	1	0.4	49.4	54.8
0830	247	2	196	3	39	0	2	0	2	0	3	0	0	111	44.9	13	5.3	1	0.4	48.3	53.7
0845	245	0	201	0	31	5	1	2	1	1	2	0	1	133	54.3	19	7.8	2	0.8	50.4	55.3
0900	209	0	163	3	31	1	3	0	1	6	1	0	0	85	40.7	17	8.1	5	2.4	47.6	53.7
0915	194	0	156	1	32	1	0	0	1	0	3	0	0	81	41.8	10	5.2	1	0.5	48.9	53.9
0930	193	0	154	3	25	2	1	0	4	2	2	0	0	79	40.9	9	4.7	1	0.5	48.4	53.2
0945	191	0	155	0	27	0	1	0	1	5	2	0	0	101	52.9	8	4.2	0	0	48.3	53.5
1000	161	0	118	2	29	2	0	1	0	5	4	0	0	63	39.1	5	3.1	1	0.6	48.4	52.1
1015	141	1	118	1	13	3	2	1	0	2	0	0	0	63	44.7	15	10.6	3	2.1	49.9	55.3
1030	169	1	127	2	26	2	4	0	4	0	2	1	0	79	46.7	9	5.3	1	0.6	49.3	53.9
1045	160	1	131	2	17	2	3	0	0	1	3	0	0	76	47.5	9	5.6	2	1.3	50	53.7
1100	168	0	139	3	19	2	1	0	1	2	1	0	0	89	53	12	7.1	1	0.6	49.4	54.6
1115	154	0	126	2	23	3	0	0	0	0	0	0	0	77	50	11	7.1	1	0.6	49.3	53.7
1130	178	0	149	1	13	3	1	0	3	4	4	0	0	93	52.2	14	7.9	1	0.6	49.8	55.3
1145	173	0	144	3	22	0	1	1	2	0	0	0	0	94	54.3	16	9.2	1	0.6	50.6	55
1200	157	0	132	3	14	1	1	0	1	3	2	0	0	82	52.2	5	3.2	1	0.6	49.7	53.2
1215	197	2	155	3	28	2	2	0	1	3	1	0	0	72	36.5	9	4.6	1	0.5	47.7	53.2
1230	172	0	148	0	16	1	1	0	0	2	3	0	1	87	50.6	10	5.8	0	0	49.7	53.7
1245	172	0	138	1	24	1	1	1	1	2	3	0	0	86	50	9	5.2	3	1.7	50.2	53.7
1300	143	1	114	1	21	2	1	0	2	0	1	0	0	58	40.6	9	6.3	2	1.4	49.3	53.2
1315	178	1	145	5	21	0	0	0	0	3	3	0	0	74	41.6	4	2.2	1	0.6	48.3	52.6
1330	170	4	138	0	23	0	2	0	0	1	2	0	0	99	58.2	16	9.4	2	1.2	49.8	55
1345	162	1	137	2	19	0	1	1	0	0	1	0	0	95	58.6	13	8	0	0	48.8	55.7
1400	158	0	132	0	18	0	3	0	3	0	2	0	0	52	32.9	12	7.6	2	1.3	46.8	53.9
1415	196	0	161	3	29	0	0	0	1	1	1	0	0	110	56.1	11	5.6	0	0	49.5	54.1
1430	163	0	134	1	22	0	2	0	1	1	2	0	0	91	55.8	13	8	2	1.2	50.9	55
1445	194	1	166	0	21	4	0	1	0	0	1	0	0	108	55.7	14	7.2	1	0.5	50.4	55
1500	170	0	141	1	15	2	2	1	3	3	2	0	0	81	47.6	14	8.2	2	1.2	50	54.1
1515	181	0	153	2	21	1	2	0	0	2	0	0	0	96	53	27	14.9	4	2.2	50.4	56.8
1530	231	2	190	2	29	0	1	1	2	1	3	0	0	119	51.5	15	6.5	1	0.4	49.5	54.6
1545	230	1	188	2	32	1	1	0	3	1	0	0	1	115	50	28	12.2	1	0.4	49.2	56.1
1600	223	1	193	2	25	1	0	0	1	0	0	0	0	143	64.1	29	13	5	2.2	51.7	56.1
1615	226	3	188	4	26	1	1	0	0	2	1	0	0	173	76.5	30	13.3	3	1.3	51.7	56.6
1630	256	2	210	2	39	1	1	0	0	1	0	0	0	151	59	20	7.8	2	0.8	49.2	55.5
1645	301	0	264	4	26	1	2	0	3	0	1	0	0	164	54.5	27	9	3	1	49.1	54.8
1700	281	1	253	2	21	0	1	0	1	2	0	0	0	161	57.3	20	7.1	0	0	49.2	54.4
1715	**340**	**1**	**302**	**2**	**34**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**189**	**55.6**	**43**	**12.6**	**4**	**1.2**	**50.1**	**56.1**
1730	250	0	220	4	24	1	0	0	0	0	1	0	0	158	63.2	42	16.8	4	1.6	51.2	57.3
1745	210	0	196	1	10	0	0	0	0	1	2	0	0	155	73.8	39	18.6	4	1.9	52.9	57.5
1800	199	1	183	1	14	0	0	0	0	0	0	0	0	138	69.3	36	18.1	4	2	52.6	57.5
1815	158	2	142	0	11	0	0	0	0	1	2	0	0	130	82.3	39	24.7	7	4.4	54	59.3
1830	168	1	161	0	4	0	0	0	1	1	0	0	0	87	51.8	34	20.2	8	4.8	49.6	58.2
1845	137	1	125	0	9	0	0	0	0	1	1	0	0	99	72.3	32	23.4	2	1.5	52.6	59.1
1900	106	2	96	1	7	0	0	0	0	0	0	0	0	94	88.7	40	37.7	8	7.5	55.4	62.2
1915	83	0	81	1	1	0	0	0	0	0	0	0	0	65	78.3	29	34.9	4	4.8	54.6	59.5
1930	82	2	71	2	5	0	0	0	0	0	2	0	0	62	75.6	21	25.6	2	2.4	52.9	60.2
1945	90	1	82	1	4	0	0	0	1	1	0	0	0	57	63.3	15	16.7	3	3.3	51.8	57.7
2000	57	0	52	0	4	0	0	0	0	1	0	0	0	37	64.9	16	28.1	4	7	53.5	61.3
2015	59	0	55	0	2	0	0	0	0	1	1	0	0	46	78	19	32.2	4	6.8	54.2	59.7
2030	49	0	45	0	4	0	0	0	0	0	0	0	0	38	77.6	13	26.5	3	6.1	53.3	59.5
2045	48	0	45	0	3	0	0	0	0	0	0	0	0	38	79.2	14	29.2	8	16.7	56.2	65.5
2100	50	0	49	0	1	0	0	0	0	0	0	0	0	42	84	20	40	9	18	56.6	65.5
2115	54	0	50	0	4	0	0	0	0	0	0	0	0	32	59.3	17	31.5	4	7.4	54.1	61.1
2130	50	0	46	0	2	1	0	0	0	1	0	0	0	31	62	6	12	3	6	51.9	55.9
2145	45	1	43	0	1	0	0	0	0	0	0	0	0	36	80	14	31.1	4	8.9	54.3	58.4
2200	30	0	29	0	1	0	0	0	0	0	0	0	0	26	86.7	11	36.7	3	10	55.8	62.4
2215	39	0	37	0	1	0	0	0	1	0	0	0	0	27	69.2	9	23.1	0	0	53.3	58.4
2230	27	0	27	0	0	0	0	0	0	0	0	0	0	22	81.5	14	51.9	9	33.3	61.6	70.2
2245	36	0	35	0	0	0	0	0	0	1	0	0	0	23	63.9	6	16.7	1	2.8	53	59.7
2300	30	0	27	0	1	0	0	0	0	1	1	0	0	21	70	8	26.7	2	6.7	54.4	62.4
2315	13	0	11	0	2	0	0	0	0	0	0	0	0	11	84.6	5	38.5	2	15.4	56.1	63.8
2330	18	0	17	0	1	0	0	0	0	0	0	0	0	16	88.9	12	66.7	3	16.7	59.8	63.5
2345	14	0	13	0	1	0	0	0	0	0	0	0	0	12	85.7	8	57.1	6	42.9	61.6	74.3
07-19	**9764**	**38**	**8194**	**85**	**1129**	**54**	**59**	**11**	**50**	**63**	**76**	**2**	**3**	**5272**	**54**	**933**	**9.6**	**98**	**1**	**49.9**	**55.3**
06-22	**10994**	**49**	**9280**	**92**	**1228**	**59**	**63**	**11**	**54**	**70**	**82**	**3**	**3**	**6205**	**56.4**	**1301**	**11.8**	**184**	**1.7**	**50.4**	**55.9**
06-00	**11201**	**49**	**9476**	**92**	**1235**	**59**	**63**	**11**	**55**	**72**	**83**	**3**	**3**	**6363**	**56.8**	**1374**	**12.3**	**210**	**1.9**	**50.5**	**56.1**
00-00	**11503**	**53**	**9696**	**93**	**1279**	**62**	**64**	**11**	**59**	**89**	**91**	**3**	**3**	**6596**	**57.3**	**1491**	**13**	**262**	**2.3**	**50.7**	**56.1**

Site 1
Location A1067, Att - Tree, OSGR: TG 06233 19642
Direction Two way
26 April 2019

9323 / Norfolk Vanguard
April 2019
Automatic Traffic Count

Time	Total	Classification												>PSL	>PSL%	>SL1	>SL1%	>SL2	>SL2%	Mean	Vpp
		1	2	3	4	5	6	7	8	9	10	11	12	50	50	57	57	65	65		85
		MCL	SV	SVT	TB2	TB3	T4	ART3	ART4	ART5	ART6	BD	DRT			ACPO	ACPO	DfT	DfT		
0000	13	0	11	0	1	0	0	1	0	0	0	0	0	9	69.2	5	38.5	1	7.7	53.7	62.6
0015	7	1	4	0	2	0	0	0	0	0	0	0	0	7	100	6	85.7	2	28.6	63.5	-
0030	10	0	9	0	1	0	0	0	0	0	0	0	0	10	100	5	50	2	20	59.2	-
0045	4	0	3	0	1	0	0	0	0	0	0	0	0	4	100	4	100	1	25	60.9	-
0100	4	0	4	0	0	0	0	0	0	0	0	0	0	4	100	4	100	1	25	64.8	-
0115	8	0	8	0	0	0	0	0	0	0	0	0	0	8	100	7	87.5	3	37.5	67.3	-
0130	6	0	4	0	2	0	0	0	0	0	0	0	0	4	66.7	1	16.7	0	0	51.4	-
0145	4	0	4	0	0	0	0	0	0	0	0	0	0	3	75	2	50	2	50	61.1	-
0200	3	0	2	0	1	0	0	0	0	0	0	0	0	3	100	2	66.7	0	0	56.8	-
0215	8	0	7	0	0	0	0	0	0	1	0	0	0	6	75	4	50	2	25	56.9	-
0230	5	0	2	0	3	0	0	0	0	0	0	0	0	2	40	2	40	0	0	53.6	-
0245	2	0	2	0	0	0	0	0	0	0	0	0	0	2	100	1	50	0	0	58	-
0300	8	0	6	0	0	0	0	0	0	1	1	0	0	7	87.5	2	25	1	12.5	56.9	-
0315	4	0	2	0	0	0	0	0	0	1	1	0	0	2	50	1	25	0	0	52.6	-
0330	6	0	3	0	2	0	0	0	0	1	0	0	0	4	66.7	3	50	1	16.7	56.3	-
0345	1	0	0	0	1	0	0	0	0	0	0	0	0	1	100	1	100	1	100	65.1	-
0400	4	0	2	0	2	0	0	0	0	0	0	0	0	4	100	3	75	2	50	73.3	-
0415	8	0	5	0	1	0	0	0	0	0	2	0	0	7	87.5	4	50	3	37.5	63.2	-
0430	10	0	7	0	1	0	0	0	2	0	0	0	0	4	40	2	20	1	10	49.1	-
0445	13	0	9	0	3	0	0	0	0	1	0	0	0	9	69.2	3	23.1	2	15.4	54.1	59.1
0500	16	1	8	0	5	1	0	0	0	0	1	0	0	11	68.8	3	18.8	0	0	52.9	57.5
0515	34	1	25	0	5	0	1	0	1	1	0	0	0	31	91.2	15	44.1	3	8.8	57	64
0530	41	0	35	0	4	0	1	0	0	1	0	0	0	38	92.7	24	58.5	4	9.8	58.3	62.6
0545	39	0	31	0	6	0	1	0	0	0	1	0	0	35	89.7	28	71.8	14	35.9	61.3	66.9
0600	60	2	41	2	11	1	0	0	1	1	1	0	0	46	76.7	18	30	7	11.7	52.9	62.2
0615	93	1	74	2	10	1	3	0	1	1	0	0	0	76	81.7	22	23.7	7	7.5	54.9	59.9
0630	115	0	100	1	6	2	0	0	2	1	3	0	0	91	79.1	42	36.5	13	11.3	55	63.3
0645	138	0	120	0	13	0	1	1	1	1	1	0	0	93	67.4	47	34.1	11	8	53.5	62.2
0700	191	3	158	3	23	0	0	0	1	2	1	0	0	152	79.6	56	29.3	13	6.8	54.4	60.6
0715	229	2	191	1	26	1	1	0	3	0	4	0	0	144	62.9	24	10.5	2	0.9	50.9	55.9
0730	**279**	**0**	**237**	**0**	**37**	**0**	**0**	**0**	**3**	**1**	**1**	**0**	**0**	**188**	**67.4**	**37**	**13.3**	**3**	**1.1**	**52**	**56.1**
0745	269	1	234	1	29	3	0	0	0	1	0	0	0	157	58.4	38	14.1	3	1.1	50.4	56.6
0800	269	1	215	2	42	4	1	0	3	0	1	0	0	176	65.4	32	11.9	0	0	51.2	55.7
0815	246	4	201	3	33	0	0	0	1	2	2	0	0	130	52.8	30	12.2	3	1.2	49.4	56.1
0830	233	2	191	7	23	0	2	0	2	2	3	0	1	121	51.9	25	10.7	2	0.9	50.6	55.3
0845	194	0	153	2	31	0	0	0	3	3	2	0	0	123	63.4	29	14.9	0	0	51.3	56.6
0900	197	0	156	5	23	0	2	0	6	3	2	0	0	84	42.6	23	11.7	3	1.5	47.7	55.5
0915	195	2	161	1	23	2	0	0	1	1	4	0	0	114	58.5	13	6.7	5	2.6	51	54.1
0930	188	2	147	4	28	1	0	0	2	0	4	0	0	82	43.6	15	8	3	1.6	48.7	54.6
0945	184	2	148	1	24	0	0	0	1	3	3	1	1	72	39.1	13	7.1	2	1.1	47.7	53.5
1000	173	1	138	6	24	1	2	0	0	0	0	0	1	90	52	16	9.2	1	0.6	50.2	54.8
1015	209	2	170	3	25	3	4	0	0	0	2	0	0	130	62.2	17	8.1	1	0.5	50.9	55.3
1030	191	0	160	1	28	0	1	0	0	1	0	0	0	123	64.4	16	8.4	2	1	51.2	55
1045	178	0	142	1	24	1	2	0	1	3	4	0	0	73	41	8	4.5	0	0	49.5	54.8
1100	174	4	137	1	23	3	1	0	1	1	2	0	1	96	55.2	21	12.1	4	2.3	49.2	56.1
1115	153	4	119	3	18	0	2	1	2	3	1	0	0	82	53.6	13	8.5	0	0	50	55.7
1130	163	1	125	5	23	0	1	0	2	4	2	0	0	74	45.4	15	9.2	2	1.2	49.8	55.3
1145	197	2	149	7	31	1	2	0	0	2	3	0	0	96	48.7	10	5.1	1	0.5	49	53.9
1200	177	1	143	1	25	1	1	0	0	2	3	0	0	105	59.3	15	8.5	3	1.7	50.6	54.4
1215	176	4	144	2	20	0	0	0	1	2	3	0	0	103	58.5	20	11.4	2	1.1	50.9	56.1
1230	207	1	169	3	26	3	0	0	0	2	3	0	0	108	52.2	23	11.1	2	1	50	55.5
1245	162	0	136	1	13	0	3	0	2	4	3	0	0	95	58.6	15	9.3	2	1.2	50.7	55.5
1300	166	1	135	3	22	0	0	2	0	1	2	0	0	128	77.1	17	10.2	5	3	52.5	56.4
1315	163	0	140	3	17	0	2	0	1	0	0	0	0	114	69.9	20	12.3	1	0.6	51.8	55.7
1330	165	1	131	2	22	1	0	0	2	4	2	0	0	100	60.6	16	9.7	3	1.8	51.7	54.8
1345	178	6	149	1	18	2	0	0	0	2	0	0	0	91	51.1	14	7.9	2	1.1	49.3	55
1400	190	4	150	1	27	1	0	1	4	0	2	0	0	90	47.4	18	9.5	0	0	48.7	55.7
1415	187	0	157	1	25	0	1	1	1	0	1	0	0	109	58.3	17	9.1	1	0.5	50.8	55.5
1430	204	1	165	1	27	2	0	0	1	4	3	0	0	98	48	18	8.8	3	1.5	50.1	54.6
1445	231	3	201	1	15	2	1	0	1	5	2	0	0	146	63.2	26	11.3	3	1.3	51.6	55.9
1500	173	0	148	1	21	0	0	0	1	1	1	0	0	97	56.1	12	6.9	2	1.2	50.6	54.4
1515	200	1	172	2	17	1	0	2	3	1	1	0	0	135	67.5	26	13	7	3.5	52.3	56.1
1530	249	2	201	3	34	2	1	0	2	3	1	0	0	148	59.4	27	10.8	3	1.2	50.8	55.7
1545	257	0	210	1	41	2	1	0	1	0	1	0	0	141	54.9	16	6.2	2	0.8	50.2	54.4
1600	281	5	238	1	32	1	1	0	1	0	2	0	0	163	58	27	9.6	1	0.4	49.2	55.7
1615	298	3	256	1	33	0	1	0	2	2	0	0	0	182	61.1	25	8.4	2	0.7	49.4	54.6
1630	244	1	200	3	36	0	0	0	1	2	1	0	0	172	70.5	34	13.9	3	1.2	52.2	56.8
1645	254	1	224	3	19	1	1	0	2	1	2	0	0	129	50.8	30	11.8	3	1.2	50.3	55.7
1700	**302**	**4**	**264**	**3**	**26**	**0**	**2**	**2**	**1**	**0**	**0**	**0**	**0**	**184**	**60.9**	**37**	**12.3**	**1**	**0.3**	**51.4**	**56.4**
1715	291	4	258	3	21	0	0	0	2	2	1	0	0	195	67	46	15.8	2	0.7	50.4	57
1730	222	1	200	0	17	0	1	0	0	2	1	0	0	153	68.9	46	20.7	12	5.4	52.8	58.8
1745	226	3	198	5	15	1	2	0	0	1	1	0	0	119	52.7	22	9.7	3	1.3	49.6	55.5
1800	179	6	157	2	14	0	0	0	0	0	0	0	0	127	70.9	28	15.6	9	5	52.5	57.3
1815	184	9	161	1	12	0	0	0	0	0	1	0	0	121	65.8	51	27.7	13	7.1	53.5	59.5
1830	140	3	122	1	11	0	0	0	0	2	1	0	0	82	58.6	30	21.4	6	4.3	50.8	58.2
1845	139	2	129	2	4	0	1	0	0	0	1	0	0	95	68.3	25	18	6	4.3	52.1	57.5
1900	131	0	124	0	7	0	0	0	0	0	0	0	0	101	77.1	32	24.4	4	3.1	53.2	58.6
1915	111	2	100	0	7	0	2	0	0	0	0	0	0	83	74.8	26	23.4	6	5.4	53.3	58.4
1930	92	2	83	0	7	0	0	0	0	0	0	0	0	66	71.7	36	39.1	8	8.7	54.9	62
1945	67	5	58	3	1	0	0	0	0	0	0	0	0	54	80.6	24	35.8	11	16.4	56.7	64.9
2000	64	2	55	0	5	0	1	0	0	1	0	0	0	44	68.8	13	20.3	3	4.7	53.2	61.1
2015	76	2	68	0	5	0	0	0	1	0	0	0	0	57	75	28	36.8	13	17.1	55.5	65.8
2030	49	1	39	3	6	0	0	0	0	0	0	0	0	37	75.5	14	28.6	4	8.2	53.6	59.7
2045	43	1	38	0	4	0	0	0	0	0	0	0	0	32	74.4	15	34.9	5	11.6	55	62
2100	46	0	43	0	2	0	0	0	1	0	0	0	0	26	56.5	9	19.6	4	8.7	51.8	59.3
2115	55	0	52	0	3	0	0	0	0	0	0	0	0	50	90.9	25	45.5	5	9.1	57.1	63.5
2130	49	0	46	0	3	0	0	0	0	0	0	0	0	35	71.4	18	36.7	5	10.2	54.7	62
2145	50	0	44	0	4	0	0	1	0	1	0	0	0	46	92	20	40	5	10	56.3	62.9
2200	48	0	44	0	4	0	0	0	0	0	0	0	0	39	81.3	10	20.8	3	6.3	54.1	57.5
2215	52	0	46	0	3	0	0	0	0	2	1	0	0	32	61.5	6	11.5	2	3.8	51.9	55.7
2230	49	0	47	0	0	1	0	0	0	1	0	0	0	36	73.5	16	32.7	7	14.3	54.9	64.2
2245	48	0	43	0	2	0	0	0	0	3	0	0	0	30	62.5	11	22.9	3	6.3	52.9	57.7
2300	41	0	34	0	2	1	0	0	0	3	1	0	0	24	58.5	10	24.4	1	2.4	51.8	59.1
2315	29	0	25	0	4	0	0	0	0	0	0	0	0	23	79.3	10	34.5	3	10.3	55.2	61.3
2330	21	0	21	0	0	0	0	0	0	0	0	0	0	18	85.7	9	42.9	1	4.8	56.5	61.7
2345	25	0	25	0	0	0	0	0	0	0	0	0	0	21	84	11	44	6	24	57.8	66.7
07-19	**9957**	**100**	**8290**	**109**	**1148**	**40**	**40**	**9**	**61**	**75**	**80**	**1**	**4**	**5837**	**58.6**	**1152**	**11.6**	**152**	**1.5**	**50.7**	**55.9**
06-22	**11196**	**118**	**9375**	**120**	**1242**	**44**	**47**	**11**	**68**	**81**	**85**	**1**	**4**	**6774**	**60.5**	**1541**	**13.8**	**263**	**2.3**	**51.1**	**56.6**
06-00	**11509**	**118**	**9660**	**120**	**1257**	**46**	**47**	**11**	**68**	**90**	**87**	**1**	**4**	**6997**	**60.8**	**1624**	**14.1**	**289**	**2.5**	**51.1**	**56.6**
00-00	**11767**	**121**	**9853**	**120**	**1298**	**47**	**50**	**12**	**71**	**97**	**93**	**1**	**4**	**7212**	**61.3**	**1756**	**14.9**	**335**	**2.8**	**51.3**	**56.8**

Site 1
Location A1067, Att - Tree, OSGR: TG 06233 19642
Direction Two way
27 April 2019

9323 / Norfolk Vanguard
April 2019
Automatic Traffic Count

Time	Total	Classification												>PSL	>PSL%	>SL1	>SL1%	>SL2	>SL2%	Mean	Vpp
		1	2	3	4	5	6	7	8	9	10	11	12	50	50	57	57	65	65		85
		MCL	SV	SVT	TB2	TB3	T4	ART3	ART4	ART5	ART6	BD	DRT			ACPO	ACPO	DfT	DfT		
0000	25	0	25	0	0	0	0	0	0	0	0	0	0	20	80	10	40	2	8	55.7	63.1
0015	18	0	14	0	3	0	0	0	1	0	0	0	0	12	66.7	7	38.9	2	11.1	56.1	64.4
0030	20	0	16	0	4	0	0	0	0	0	0	0	0	17	85	11	55	3	15	58.1	64.2
0045	17	1	15	0	1	0	0	0	0	0	0	0	0	17	100	8	47.1	1	5.9	57.3	62.4
0100	14	0	12	0	2	0	0	0	0	0	0	0	0	13	92.9	7	50	0	0	57.4	61.5
0115	5	0	2	0	2	0	0	0	1	0	0	0	0	3	60	2	40	1	20	56.2	-
0130	7	0	5	0	1	0	0	0	0	0	1	0	0	5	71.4	2	28.6	0	0	53	-
0145	8	0	7	0	1	0	0	0	0	0	0	0	0	7	87.5	2	25	1	12.5	56.6	-
0200	6	0	6	0	0	0	0	0	0	0	0	0	0	5	83.3	4	66.7	1	16.7	60.9	-
0215	5	0	5	0	0	0	0	0	0	0	0	0	0	5	100	2	40	1	20	62.5	-
0230	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	48.3	-
0245	2	0	2	0	0	0	0	0	0	0	0	0	0	2	100	2	100	0	0	64.5	-
0300	4	0	2	0	2	0	0	0	0	0	0	0	0	4	100	3	75	0	0	60.5	-
0315	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	47.4	-
0330	2	0	0	0	1	0	0	0	0	1	0	0	0	1	50	0	0	0	0	48.3	-
0345	3	0	3	0	0	0	0	0	0	0	0	0	0	3	100	3	100	1	33.3	63.9	-
0400	2	0	2	0	0	0	0	0	0	0	0	0	0	1	50	0	0	0	0	50.2	-
0415	8	0	7	0	1	0	0	0	0	0	0	0	0	6	75	6	75	5	62.5	63.9	-
0430	2	0	2	0	0	0	0	0	0	0	0	0	0	2	100	2	100	0	0	61.1	-
0445	6	0	5	0	1	0	0	0	0	0	0	0	0	5	83.3	3	50	1	16.7	59.4	-
0500	17	1	13	0	2	0	0	0	1	0	0	0	0	14	82.4	9	52.9	4	23.5	57.8	65.1
0515	14	1	12	0	0	0	0	0	0	0	1	0	0	11	78.6	9	64.3	7	50	63.2	72.5
0530	18	0	17	0	1	0	0	0	0	0	0	0	0	16	88.9	11	61.1	5	27.8	59.7	66.2
0545	11	0	6	0	2	0	0	0	0	1	2	0	0	9	81.8	4	36.4	2	18.2	55.1	58.2
0600	28	2	16	1	5	0	1	0	1	1	1	0	0	25	89.3	14	50	10	35.7	58.9	70
0615	41	1	37	1	1	1	0	0	0	0	0	0	0	38	92.7	17	41.5	6	14.6	57	62.9
0630	40	0	34	0	2	0	0	0	1	1	2	0	0	33	82.5	18	45	5	12.5	57.1	63.8
0645	40	0	30	0	9	0	1	0	0	0	0	0	0	30	75	15	37.5	3	7.5	53.8	61.5
0700	58	1	52	0	2	1	0	0	0	1	1	0	0	44	75.9	26	44.8	7	12.1	54.2	63.8
0715	50	0	40	1	6	1	0	0	2	0	0	0	0	35	70	14	28	4	8	54.3	62
0730	76	0	61	2	9	0	1	0	1	1	1	0	0	50	65.8	22	28.9	5	6.6	52.8	60.6
0745	76	1	58	0	12	0	0	0	1	1	3	0	0	54	71.1	14	18.4	2	2.6	51.4	57.9
0800	87	0	77	0	9	0	0	0	0	0	1	0	0	54	62.1	23	26.4	6	6.9	52.6	58.6
0815	88	2	71	1	10	0	1	0	1	0	2	0	0	54	61.4	16	18.2	2	2.3	51.1	57.9
0830	110	1	90	1	14	1	0	0	1	2	0	0	0	62	56.4	20	18.2	5	4.5	48.9	58.6
0845	105	0	87	0	14	0	1	1	1	1	0	0	0	57	54.3	14	13.3	1	1	50.4	55.7
0900	146	0	127	3	13	1	1	0	0	1	0	0	0	89	61	15	10.3	1	0.7	51.6	55.5
0915	146	0	132	2	11	0	0	0	1	0	0	0	0	98	67.1	26	17.8	2	1.4	51.1	57.5
0930	136	0	121	1	12	0	0	1	1	0	0	0	0	89	65.4	12	8.8	1	0.7	50.9	56.1
0945	155	0	135	1	15	1	0	0	1	2	0	0	0	101	65.2	22	14.2	2	1.3	52.4	56.8
1000	165	0	150	2	13	0	0	0	0	0	0	0	0	90	54.5	25	15.2	0	0	51.1	56.8
1015	181	0	166	2	12	0	0	0	1	0	0	0	0	107	59.1	30	16.6	6	3.3	51.8	57.3
1030	193	2	174	2	13	0	0	0	1	0	1	0	0	90	46.6	12	6.2	3	1.6	49.3	54.6
1045	172	0	158	0	10	1	0	0	2	0	1	0	0	91	52.9	24	14	3	1.7	50.6	56.6
1100	186	4	172	2	6	0	0	0	0	0	1	0	1	69	37.1	9	4.8	0	0	49.1	53.5
1115	**213**	**1**	**201**	**0**	**9**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**96**	**45.1**	**9**	**4.2**	**0**	**0**	**49**	**53.2**
1130	192	0	181	1	9	0	0	0	0	0	1	0	0	109	56.8	24	12.5	1	0.5	51.1	55.9
1145	149	1	132	0	12	0	1	0	1	0	2	0	0	73	49	9	6	1	0.7	50.7	55.5
1200	171	0	158	1	10	0	0	0	0	2	0	0	0	97	56.7	20	11.7	2	1.2	50.9	56.4
1215	187	0	176	1	8	1	0	0	0	1	0	0	0	101	54	21	11.2	0	0	50.8	55.7
1230	168	2	154	1	6	1	0	0	0	2	2	0	0	71	42.3	17	10.1	2	1.2	48.9	55.3
1245	160	1	155	0	4	0	0	0	0	0	0	0	0	71	44.4	15	9.4	1	0.6	48	54.1
1300	169	0	159	1	8	0	0	0	0	1	0	0	0	60	35.5	13	7.7	1	0.6	48.9	53.2
1315	153	0	144	2	7	0	0	0	0	0	0	0	0	101	66	28	18.3	3	2	52.2	57.3
1330	153	1	144	0	5	0	0	0	1	1	1	0	0	118	77.1	24	15.7	3	2	53	57.3
1345	184	0	169	1	12	1	0	0	1	0	0	0	0	97	52.7	25	13.6	3	1.6	51	55.3
1400	161	0	149	1	11	0	0	0	0	0	0	0	0	98	60.9	32	19.9	2	1.2	51.3	58.2
1415	155	0	146	1	8	0	0	0	0	0	0	0	0	98	63.2	23	14.8	1	0.6	51.3	56.8
1430	165	0	154	3	6	0	0	0	2	0	0	0	0	101	61.2	12	7.3	0	0	50.3	54.6
1445	169	2	155	1	9	0	0	0	2	0	0	0	0	99	58.6	17	10.1	2	1.2	50.6	55.7
1500	142	0	131	2	8	0	0	0	1	0	0	0	0	92	64.8	20	14.1	2	1.4	51.8	56.1
1515	159	0	148	0	9	0	0	1	1	0	0	0	0	85	53.5	17	10.7	1	0.6	50.2	55.7
1530	142	1	129	0	12	0	0	0	0	0	0	0	0	97	68.3	20	14.1	5	3.5	52.3	56.4
1545	154	3	139	1	10	0	0	0	0	0	1	0	0	104	67.5	21	13.6	6	3.9	52	56.1
1600	169	1	161	0	5	0	0	0	0	2	0	0	0	93	55	20	11.8	1	0.6	49.6	56.1
1615	184	1	172	1	9	0	0	0	0	1	0	0	0	77	41.8	8	4.3	2	1.1	48.3	53.7
1630	169	0	158	0	10	0	0	0	1	0	0	0	0	99	58.6	34	20.1	6	3.6	51	58.2
1645	169	2	159	1	7	0	0	0	0	0	0	0	0	106	62.7	30	17.8	3	1.8	51.9	57.7
1700	**189**	**1**	**179**	**1**	**7**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**109**	**57.7**	**22**	**11.6**	**0**	**0**	**50.4**	**55.9**
1715	166	0	157	0	9	0	0	0	0	0	0	0	0	106	63.9	23	13.9	3	1.8	51.6	56.6
1730	142	1	134	0	7	0	0	0	0	0	0	0	0	100	70.4	28	19.7	0	0	51.5	57.7
1745	140	0	132	1	7	0	0	0	0	0	0	0	0	90	64.3	30	21.4	3	2.1	51.8	58.2
1800	125	0	120	0	5	0	0	0	0	0	0	0	0	89	71.2	33	26.4	4	3.2	53.3	59.1
1815	139	1	130	1	7	0	0	0	0	0	0	0	0	91	65.5	22	15.8	1	0.7	52.3	57
1830	106	0	101	0	5	0	0	0	0	0	0	0	0	79	74.5	27	25.5	2	1.9	53.3	58.8
1845	75	0	66	0	8	1	0	0	0	0	0	0	0	64	85.3	31	41.3	2	2.7	54.5	60.8
1900	72	0	67	1	4	0	0	0	0	0	0	0	0	47	65.3	17	23.6	3	4.2	52.8	59.9
1915	68	0	62	0	6	0	0	0	0	0	0	0	0	58	85.3	26	38.2	10	14.7	56	64.4
1930	56	0	48	0	7	1	0	0	0	0	0	0	0	46	82.1	17	30.4	9	16.1	55.1	65.8
1945	40	0	38	0	2	0	0	0	0	0	0	0	0	33	82.5	15	37.5	3	7.5	54.5	61.5
2000	47	0	44	0	3	0	0	0	0	0	0	0	0	32	68.1	14	29.8	6	12.8	53.5	61.1
2015	32	0	31	0	1	0	0	0	0	0	0	0	0	27	84.4	10	31.3	5	15.6	55.8	64.9
2030	37	0	35	0	2	0	0	0	0	0	0	0	0	29	78.4	15	40.5	4	10.8	55.5	59.9
2045	35	0	34	0	1	0	0	0	0	0	0	0	0	23	65.7	11	31.4	3	8.6	54.1	62
2100	33	0	33	0	0	0	0	0	0	0	0	0	0	24	72.7	7	21.2	2	6.1	53.5	60.2
2115	23	0	20	0	2	1	0	0	0	0	0	0	0	15	65.2	8	34.8	3	13	55.1	61.3
2130	31	0	30	0	1	0	0	0	0	0	0	0	0	26	83.9	11	35.5	4	12.9	57.2	64.2
2145	49	0	48	0	1	0	0	0	0	0	0	0	0	34	69.4	14	28.6	3	6.1	54	59.9
2200	56	0	55	0	1	0	0	0	0	0	0	0	0	42	75	15	26.8	2	3.6	53.3	58.4
2215	81	0	79	0	1	0	1	0	0	0	0	0	0	46	56.8	9	11.1	2	2.5	51.7	55.7
2230	104	0	102	0	2	0	0	0	0	0	0	0	0	67	64.4	7	6.7	0	0	51.4	54.1
2245	99	0	93	1	5	0	0	0	0	0	0	0	0	49	49.5	12	12.1	2	2	50.2	55.7
2300	96	0	93	0	3	0	0	0	0	0	0	0	0	45	46.9	11	11.5	2	2.1	47	55.3
2315	49	0	45	0	4	0	0	0	0	0	0	0	0	31	63.3	10	20.4	1	2	50.6	57.9
2330	29	0	29	0	0	0	0	0	0	0	0	0	0	24	82.8	12	41.4	2	6.9	55.9	64.2
2345	31	0	28	0	3	0	0	0	0	0	0	0	0	20	64.5	9	29	5	16.1	55.5	64.2
07-19	**7049**	**30**	**6464**	**42**	**430**	**10**	**5**	**3**	**24**	**21**	**18**	**0**	**2**	**4105**	**58.2**	**999**	**14.2**	**113**	**1.6**	**51**	**56.6**
06-22	**7721**	**33**	**7071**	**45**	**477**	**13**	**7**	**3**	**26**	**23**	**21**	**0**	**2**	**4625**	**59.9**	**1228**	**15.9**	**192**	**2.5**	**51.3**	**57.3**
06-00	**8266**	**33**	**7595**	**46**	**496**	**13**	**8**	**3**	**26**	**23**	**21**	**0**	**2**	**4949**	**59.9**	**1313**	**15.9**	**208**	**2.5**	**51.3**	**57.3**
00-00	**8482**	**36**	**7775**	**46**	**520**	**13**	**8**	**3**	**29**	**25**	**25**	**0**	**2**	**5127**	**60.4**	**1420**	**16.7**	**245**	**2.9**	**51.5**	**57.5**

Site 1
Location A1067, Att - Tree, OSGR: TG 06233 19642
Direction Two way
28 April 2019

9323 / Norfolk Vanguard
April 2019
Automatic Traffic Count

Time	Total	Classification												>PSL	>PSL%	>SL1	>SL1%	>SL2	>SL2%	Mean	Vpp
		1	2	3	4	5	6	7	8	9	10	11	12	50	50	57	57	65	65		85
		MCL	SV	SVT	TB2	TB3	T4	ART3	ART4	ART5	ART6	BD	DRT			ACPO	ACPO	DfT	DfT		
0000	26	0	25	0	1	0	0	0	0	0	0	0	0	20	76.9	6	23.1	4	15.4	54.5	62
0015	18	0	16	0	2	0	0	0	0	0	0	0	0	13	72.2	9	50	1	5.6	56.2	62.6
0030	22	0	21	0	1	0	0	0	0	0	0	0	0	22	100	9	40.9	5	22.7	58.2	68
0045	16	0	14	0	2	0	0	0	0	0	0	0	0	13	81.3	10	62.5	3	18.8	59.2	69.6
0100	10	0	8	0	1	0	0	0	0	0	1	0	0	10	100	9	90	4	40	64.2	-
0115	9	0	8	0	1	0	0	0	0	0	0	0	0	9	100	8	88.9	3	33.3	63	-
0130	11	0	11	0	0	0	0	0	0	0	0	0	0	11	100	8	72.7	6	54.5	64.8	68.9
0145	7	0	7	0	0	0	0	0	0	0	0	0	0	7	100	4	57.1	3	42.9	62.7	-
0200	6	0	5	0	1	0	0	0	0	0	0	0	0	4	66.7	3	50	2	33.3	59.4	-
0215	8	0	8	0	0	0	0	0	0	0	0	0	0	6	75	4	50	2	25	55.3	-
0230	5	0	5	0	0	0	0	0	0	0	0	0	0	5	100	4	80	1	20	60.5	-
0245	4	0	3	0	1	0	0	0	0	0	0	0	0	3	75	3	75	1	25	60.9	-
0300	1	0	1	0	0	0	0	0	0	0	0	0	0	1	100	1	100	0	0	61.3	-
0315	5	0	3	0	2	0	0	0	0	0	0	0	0	3	60	2	40	1	20	58.3	-
0330	5	0	4	0	1	0	0	0	0	0	0	0	0	5	100	3	60	1	20	60.8	-
0345	6	0	6	0	0	0	0	0	0	0	0	0	0	5	83.3	3	50	1	16.7	59.3	-
0400	4	0	3	0	1	0	0	0	0	0	0	0	0	4	100	3	75	3	75	71.4	-
0415	7	0	6	0	0	0	0	0	0	0	1	0	0	6	85.7	4	57.1	1	14.3	59.5	-
0430	4	0	4	0	0	0	0	0	0	0	0	0	0	4	100	2	50	1	25	60.1	-
0445	6	0	6	0	0	0	0	0	0	0	0	0	0	6	100	5	83.3	1	16.7	59.3	-
0500	10	0	10	0	0	0	0	0	0	0	0	0	0	10	100	6	60	3	30	59.9	-
0515	13	1	12	0	0	0	0	0	0	0	0	0	0	12	92.3	10	76.9	7	53.8	63.3	71.4
0530	12	0	11	0	1	0	0	0	0	0	0	0	0	9	75	6	50	4	33.3	59.4	66.9
0545	8	0	6	0	2	0	0	0	0	0	0	0	0	7	87.5	5	62.5	0	0	57.8	-
0600	13	0	12	0	1	0	0	0	0	0	0	0	0	8	61.5	4	30.8	2	15.4	55.1	64.4
0615	14	1	12	1	0	0	0	0	0	0	0	0	0	13	92.9	6	42.9	3	21.4	58.3	66.4
0630	17	0	17	0	0	0	0	0	0	0	0	0	0	12	70.6	7	41.2	4	23.5	57.8	66
0645	30	0	27	1	0	0	0	0	0	1	1	0	0	23	76.7	10	33.3	3	10	54.7	63.3
0700	39	0	31	1	5	0	1	0	0	1	0	0	0	27	69.2	15	38.5	8	20.5	55.7	67.6
0715	37	0	35	0	2	0	0	0	0	0	0	0	0	31	83.8	16	43.2	5	13.5	55.3	61.5
0730	45	0	40	2	3	0	0	0	0	0	0	0	0	33	73.3	14	31.1	2	4.4	53	57.9
0745	54	0	46	0	8	0	0	0	0	0	0	0	0	42	77.8	21	38.9	11	20.4	55.7	67.8
0800	50	0	43	1	6	0	0	0	0	0	0	0	0	39	78	24	48	4	8	56.1	63.5
0815	44	0	42	0	2	0	0	0	0	0	0	0	0	33	75	17	38.6	7	15.9	54	63.8
0830	60	1	56	1	1	0	0	0	1	0	0	0	0	44	73.3	24	40	3	5	54.6	61.1
0845	88	1	74	0	11	1	0	0	0	0	1	0	0	55	62.5	27	30.7	2	2.3	51.7	60.4
0900	74	0	69	1	3	0	0	0	1	0	0	0	0	49	66.2	24	32.4	4	5.4	52.7	61.1
0915	142	1	129	4	7	1	0	0	0	0	0	0	0	95	66.9	23	16.2	0	0	52	57
0930	120	1	113	0	6	0	0	0	0	0	0	0	0	92	76.7	18	15	3	2.5	52.4	56.6
0945	136	1	124	3	6	0	1	0	1	0	0	0	0	68	50	14	10.3	2	1.5	50.2	55.3
1000	120	3	107	4	6	0	0	0	0	0	0	0	0	68	56.7	17	14.2	4	3.3	51	55.9
1015	149	2	134	0	13	0	0	0	0	0	0	0	0	81	54.4	17	11.4	1	0.7	50.4	55.5
1030	140	0	133	0	6	0	1	0	0	0	0	0	0	85	60.7	20	14.3	6	4.3	51.7	56.1
1045	**150**	**2**	**135**	**3**	**8**	**0**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**69**	**46**	**21**	**14**	**2**	**1.3**	**49.6**	**56.8**
1100	136	0	125	1	7	1	0	0	1	1	0	0	0	76	55.9	14	10.3	0	0	51	55.5
1115	149	0	140	2	6	0	0	0	1	0	0	0	0	67	45	13	8.7	2	1.3	50.3	55.3
1130	141	0	136	0	5	0	0	0	0	0	0	0	0	84	59.6	21	14.9	0	0	51.7	56.1
1145	149	1	145	1	2	0	0	0	0	0	0	0	0	96	64.4	26	17.4	2	1.3	52.1	57.5
1200	172	0	165	0	7	0	0	0	0	0	0	0	0	108	62.8	22	12.8	1	0.6	51.9	56.6
1215	174	0	161	0	9	0	1	0	2	0	1	0	0	86	49.4	12	6.9	2	1.1	50.2	53.9
1230	155	2	145	2	4	0	0	1	1	0	0	0	0	78	50.3	25	16.1	5	3.2	50.8	57.3
1245	158	0	155	1	2	0	0	0	0	0	0	0	0	90	57	22	13.9	4	2.5	51.3	55.9
1300	153	0	149	1	3	0	0	0	0	0	0	0	0	100	65.4	23	15	2	1.3	51.9	56.6
1315	156	1	148	0	6	0	0	0	0	0	1	0	0	68	43.6	18	11.5	4	2.6	49.8	55.7
1330	160	0	157	1	2	0	0	0	0	0	0	0	0	92	57.5	18	11.3	4	2.5	50.6	56.4
1345	167	2	153	1	9	0	1	0	1	0	0	0	0	84	50.3	14	8.4	4	2.4	50.5	54.8
1400	169	0	153	0	14	1	0	1	0	0	0	0	0	123	72.8	30	17.8	2	1.2	52.4	57.9
1415	158	0	152	2	3	0	0	0	0	1	0	0	0	107	67.7	20	12.7	1	0.6	51.9	56.1
1430	140	1	125	2	11	1	0	0	0	0	0	0	0	89	63.6	23	16.4	4	2.9	51.8	57.3
1445	147	1	138	1	7	0	0	0	0	0	0	0	0	75	51	24	16.3	3	2	51	57
1500	166	1	157	2	5	0	0	0	0	1	0	0	0	93	56	21	12.7	3	1.8	51	55.5
1515	166	0	154	4	7	0	0	1	0	0	0	0	0	71	42.8	19	11.4	3	1.8	48.5	56.1
1530	157	0	149	0	7	0	0	0	0	1	0	0	0	78	49.7	17	10.8	5	3.2	49.7	55
1545	158	0	148	3	7	0	0	0	0	0	0	0	0	92	58.2	25	15.8	1	0.6	50.6	56.8
1600	**178**	**1**	**165**	**0**	**12**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**97**	**54.5**	**25**	**14**	**3**	**1.7**	**50.7**	**56.6**
1615	136	1	123	3	9	0	0	0	0	0	0	0	0	76	55.9	26	19.1	1	0.7	51.9	58.4
1630	137	0	131	1	5	0	0	0	0	0	0	0	0	101	73.7	22	16.1	3	2.2	52.1	57
1645	137	3	129	0	4	1	0	0	0	0	0	0	0	83	60.6	30	21.9	5	3.6	51.8	58.8
1700	132	1	128	0	3	0	0	0	0	0	0	0	0	96	72.7	31	23.5	2	1.5	52.4	58.4
1715	135	2	128	2	3	0	0	0	0	0	0	0	0	89	65.9	30	22.2	8	5.9	52.7	58.8
1730	118	1	111	0	6	0	0	0	0	0	0	0	0	84	71.2	33	28	9	7.6	53.9	60.2
1745	107	3	92	2	10	0	0	0	0	0	0	0	0	78	72.9	33	30.8	3	2.8	52.7	60.6
1800	106	1	99	1	4	0	0	0	0	1	0	0	0	75	70.8	23	21.7	5	4.7	52.5	59.3
1815	106	2	96	1	7	0	0	0	0	0	0	0	0	74	69.8	27	25.5	6	5.7	53.7	60.2
1830	115	1	106	2	5	0	0	0	1	0	0	0	0	65	56.5	25	21.7	2	1.7	51.5	58.4
1845	78	0	77	0	1	0	0	0	0	0	0	0	0	48	61.5	18	23.1	3	3.8	52.6	59.5
1900	68	0	64	0	4	0	0	0	0	0	0	0	0	58	85.3	32	47.1	6	8.8	56.4	62.2
1915	68	0	62	1	5	0	0	0	0	0	0	0	0	50	73.5	24	35.3	6	8.8	54.1	61.5
1930	78	0	71	0	5	0	0	0	0	2	0	0	0	61	78.2	28	35.9	10	12.8	56.1	61.7
1945	57	0	50	0	7	0	0	0	0	0	0	0	0	46	80.7	13	22.8	5	8.8	54.4	57.7
2000	53	1	49	0	3	0	0	0	0	0	0	0	0	40	75.5	11	20.8	2	3.8	53.5	58.2
2015	46	0	44	0	2	0	0	0	0	0	0	0	0	33	71.7	16	34.8	4	8.7	54.8	61.1
2030	40	0	38	0	2	0	0	0	0	0	0	0	0	33	82.5	13	32.5	7	17.5	54.2	65.1
2045	32	0	31	0	1	0	0	0	0	0	0	0	0	19	59.4	12	37.5	5	15.6	54.4	64.4
2100	44	0	44	0	0	0	0	0	0	0	0	0	0	34	77.3	14	31.8	4	9.1	54.8	60.4
2115	36	0	34	0	2	0	0	0	0	0	0	0	0	28	77.8	15	41.7	4	11.1	55.9	63.5
2130	43	0	42	0	1	0	0	0	0	0	0	0	0	35	81.4	18	41.9	9	20.9	56.5	65.1
2145	23	0	23	0	0	0	0	0	0	0	0	0	0	16	69.6	8	34.8	3	13	56.8	61.7
2200	32	0	32	0	0	0	0	0	0	0	0	0	0	29	90.6	17	53.1	5	15.6	57.9	64.2
2215	24	0	23	0	1	0	0	0	0	0	0	0	0	18	75	9	37.5	4	16.7	55.7	64
2230	26	0	24	0	2	0	0	0	0	0	0	0	0	23	88.5	12	46.2	6	23.1	58.7	67.8
2245	18	0	17	0	1	0	0	0	0	0	0	0	0	15	83.3	8	44.4	3	16.7	56	61.1
2300	12	0	11	0	0	0	0	0	0	1	0	0	0	9	75	7	58.3	2	16.7	55.4	58.8
2315	8	0	7	0	1	0	0	0	0	0	0	0	0	8	100	8	100	3	37.5	64.5	-
2330	4	0	4	0	0	0	0	0	0	0	0	0	0	3	75	1	25	0	0	52.9	-
2345	5	0	5	0	0	0	0	0	0	0	0	0	0	5	100	4	80	1	20	59.6	-
07-19	**6064**	**37**	**5651**	**56**	**285**	**6**	**5**	**3**	**11**	**7**	**3**	**0**	**0**	**3634**	**59.9**	**1042**	**17.2**	**166**	**2.7**	**51.5**	**57.5**
06-22	**6726**	**39**	**6271**	**59**	**318**	**6**	**5**	**3**	**11**	**10**	**4**	**0**	**0**	**4143**	**61.6**	**1273**	**18.9**	**243**	**3.6**	**51.9**	**58.2**
06-00	**6855**	**39**	**6394**	**59**	**323**	**6**	**5**	**3**	**11**	**11**	**4**	**0**	**0**	**4253**	**62**	**1339**	**19.5**	**267**	**3.9**	**52**	**58.2**
00-00	**7078**	**40**	**6597**	**59**	**340**	**6**	**5**	**3**	**11**	**11**	**6**	**0**	**0**	**4448**	**62.8**	**1466**	**20.7**	**325**	**4.6**	**52.2**	**58.6**

Site 1
Location A1067, Att - Tree, OSGR: TG 06233 19642
Direction Two way
29 April 2019

9323 / Norfolk Vanguard
April 2019
Automatic Traffic Count

Time	Total	Classification												>PSL	>PSL%	>SL1	>SL1%	>SL2	>SL2%	Mean	Vpp
		1	2	3	4	5	6	7	8	9	10	11	12	50	50	57	57	65	65		85
		MCL	SV	SVT	TB2	TB3	T4	ART3	ART4	ART5	ART6	BD	DRT			ACPO	ACPO	DfT	DfT		
0000	5	0	4	0	1	0	0	0	0	0	0	0	0	5	100	2	40	1	20	58.1	-
0015	6	0	5	0	1	0	0	0	0	0	0	0	0	6	100	5	83.3	1	16.7	61.8	-
0030	10	0	10	0	0	0	0	0	0	0	0	0	0	9	90	8	80	3	30	62.5	-
0045	2	0	1	0	1	0	0	0	0	0	0	0	0	1	50	1	50	1	50	58.7	-
0100	4	0	3	0	1	0	0	0	0	0	0	0	0	2	50	1	25	0	0	51.8	-
0115	3	0	2	0	1	0	0	0	0	0	0	0	0	2	66.7	1	33.3	0	0	54.3	-
0130	3	0	2	0	1	0	0	0	0	0	0	0	0	3	100	2	66.7	1	33.3	65.4	-
0145	6	0	4	0	1	0	0	0	0	1	0	0	0	3	50	2	33.3	0	0	53.3	-
0200	6	0	6	0	0	0	0	0	0	0	0	0	0	5	83.3	4	66.7	1	16.7	56.1	-
0215	6	0	6	0	0	0	0	0	0	0	0	0	0	4	66.7	3	50	2	33.3	59	-
0230	8	0	6	0	1	0	0	0	1	0	0	0	0	6	75	3	37.5	0	0	54	-
0245	1	0	1	0	0	0	0	0	0	0	0	0	0	1	100	1	100	0	0	57.9	-
0300	1	0	0	0	1	0	0	0	0	0	0	0	0	1	100	1	100	0	0	64	-
0315	5	0	5	0	0	0	0	0	0	0	0	0	0	4	80	3	60	0	0	57.1	-
0330	4	0	3	0	0	0	0	0	1	0	0	0	0	3	75	1	25	1	25	51.3	-
0345	3	0	0	0	3	0	0	0	0	0	0	0	0	3	100	2	66.7	2	66.7	63.7	-
0400	4	0	4	0	0	0	0	0	0	0	0	0	0	4	100	3	75	1	25	62.2	-
0415	10	0	8	0	1	0	0	0	0	1	0	0	0	9	90	6	60	2	20	58.7	-
0430	12	0	7	0	0	1	0	0	0	1	3	0	0	11	91.7	3	25	0	0	53.3	59.3
0445	15	0	8	0	4	0	0	0	1	2	0	0	0	11	73.3	4	26.7	1	6.7	54.4	57.7
0500	23	2	15	0	4	1	0	0	0	0	1	0	0	16	69.6	7	30.4	3	13	55.3	64.2
0515	24	1	20	0	2	0	0	0	0	0	1	0	0	22	91.7	9	37.5	3	12.5	57.2	64
0530	36	0	32	0	4	0	0	0	0	0	0	0	0	32	88.9	17	47.2	8	22.2	58.4	67.1
0545	36	0	25	0	8	0	1	0	0	2	0	0	0	30	83.3	21	58.3	8	22.2	59.6	67.3
0600	64	0	50	0	10	1	0	0	0	1	2	0	0	45	70.3	17	26.6	7	10.9	53.1	61.1
0615	88	1	72	2	7	1	0	0	3	1	1	0	0	65	73.9	44	50	12	13.6	56.1	64.6
0630	105	0	82	4	12	4	0	0	2	1	0	0	0	83	79	30	28.6	6	5.7	53.8	59.3
0645	165	0	136	3	21	0	1	0	0	2	2	0	0	130	78.8	53	32.1	9	5.5	54.6	60.4
0700	178	1	144	2	23	1	2	0	2	0	3	0	0	134	75.3	29	16.3	4	2.2	53.2	57.5
0715	259	2	220	3	29	0	0	0	1	1	3	0	0	120	46.3	23	8.9	5	1.9	48	53.9
0730	**314**	**2**	**270**	**4**	**32**	**0**	**1**	**0**	**2**	**2**	**1**	**0**	**0**	**207**	**65.9**	**37**	**11.8**	**3**	**1**	**52**	**56.1**
0745	291	3	245	3	34	0	2	0	2	2	0	0	0	169	58.1	32	11	4	1.4	50.1	56.1
0800	280	1	247	2	23	1	1	0	1	2	2	0	0	146	52.1	20	7.1	4	1.4	49.1	54.8
0815	273	5	227	2	31	0	0	1	2	0	5	0	0	151	55.3	19	7	5	1.8	50.3	55.3
0830	216	0	172	1	38	0	1	0	1	2	1	0	0	116	53.7	21	9.7	2	0.9	49.7	55.7
0845	237	0	195	3	33	1	2	0	1	0	2	0	0	134	56.5	27	11.4	4	1.7	51.1	55.9
0900	174	0	134	3	23	3	0	1	4	1	4	0	1	88	50.6	14	8	4	2.3	49.9	54.8
0915	161	0	137	3	14	2	1	0	1	0	3	0	0	77	47.8	16	9.9	1	0.6	50.2	54.8
0930	169	0	140	4	21	1	0	0	1	0	2	0	0	98	58	29	17.2	1	0.6	51.8	57.7
0945	172	2	139	3	21	1	1	0	1	3	1	0	0	93	54.1	13	7.6	0	0	49.6	54.1
1000	155	0	119	1	31	2	0	0	1	1	0	0	0	79	51	9	5.8	1	0.6	50	53.9
1015	181	0	157	1	16	0	0	0	1	2	4	0	0	81	44.8	17	9.4	1	0.6	50.3	55.3
1030	168	2	141	0	23	1	0	0	0	0	1	0	0	72	42.9	16	9.5	5	3	50.3	54.1
1045	144	0	116	0	17	3	1	0	3	3	1	0	0	75	52.1	10	6.9	2	1.4	50.5	54.8
1100	163	1	130	2	22	3	1	0	1	2	1	0	0	62	38	13	8	4	2.5	49.6	53.7
1115	141	1	110	2	21	1	1	0	0	2	3	0	0	81	57.4	12	8.5	0	0	50.5	55
1130	128	0	107	1	16	1	2	0	1	0	0	0	0	66	51.6	11	8.6	3	2.3	49.3	55.7
1145	174	0	142	2	25	1	0	1	1	0	1	0	1	83	47.7	18	10.3	4	2.3	50.7	55.3
1200	139	3	123	1	8	0	1	1	0	1	1	0	0	82	59	20	14.4	6	4.3	51.5	56.1
1215	145	2	112	2	22	0	0	0	1	3	3	0	0	79	54.5	12	8.3	3	2.1	50.3	55
1230	150	0	125	0	19	1	1	0	1	1	2	0	0	81	54	8	5.3	1	0.7	50.1	54.4
1245	178	2	146	1	26	1	0	0	0	1	1	0	0	95	53.4	8	4.5	0	0	49.9	53.7
1300	124	0	96	2	19	2	1	0	2	0	2	0	0	75	60.5	22	17.7	5	4	51.2	57.3
1315	166	2	132	3	24	0	1	0	2	0	0	1	1	107	64.5	29	17.5	1	0.6	51.9	57
1330	162	0	128	2	23	1	2	1	1	1	2	1	0	97	59.9	29	17.9	4	2.5	51.3	57
1345	154	0	125	1	24	1	0	0	0	2	1	0	0	82	53.2	10	6.5	0	0	50.5	54.6
1400	147	0	121	0	18	2	0	0	3	0	3	0	0	65	44.2	12	8.2	3	2	50.5	54.4
1415	151	1	117	1	28	0	0	0	3	1	0	0	0	69	45.7	19	12.6	1	0.7	49.8	55.7
1430	162	0	125	4	24	2	1	0	0	1	5	0	0	120	74.1	31	19.1	3	1.9	53	57.5
1445	155	1	128	1	18	1	0	0	3	2	1	0	0	103	66.5	31	20	10	6.5	52.4	58.4
1500	168	0	142	3	18	0	1	0	1	2	1	0	0	98	58.3	26	15.5	1	0.6	51.3	57
1515	175	1	146	1	19	2	1	0	3	1	1	0	0	84	48	12	6.9	1	0.6	49.5	54.1
1530	188	1	156	2	24	0	1	1	1	1	1	0	0	116	61.7	19	10.1	3	1.6	51.3	56.1
1545	195	0	157	1	35	1	1	0	0	0	0	0	0	106	54.4	25	12.8	2	1	50	56.1
1600	221	1	177	2	30	1	2	1	3	0	3	1	0	150	67.9	25	11.3	4	1.8	51.7	56.1
1615	241	1	201	3	29	1	1	1	3	1	0	0	0	131	54.4	20	8.3	0	0	50	55
1630	264	3	226	2	30	0	0	0	0	2	1	0	0	124	47	20	7.6	3	1.1	49.2	54.4
1645	277	3	238	3	27	3	1	0	0	2	0	0	0	146	52.7	28	10.1	3	1.1	50	54.8
1700	269	3	240	3	21	0	1	0	0	0	1	0	0	144	53.5	36	13.4	3	1.1	50.3	56.4
1715	**283**	**1**	**251**	**0**	**26**	**1**	**1**	**0**	**0**	**0**	**3**	**0**	**0**	**178**	**62.9**	**33**	**11.7**	**4**	**1.4**	**51.4**	**56.6**
1730	268	2	249	0	16	1	0	0	0	0	0	0	0	174	64.9	37	13.8	4	1.5	50.6	56.6
1745	238	1	218	0	17	0	0	0	1	1	0	0	0	181	76.1	45	18.9	2	0.8	52.9	57.9
1800	199	2	179	2	16	0	0	0	0	0	0	0	0	127	63.8	42	21.1	7	3.5	52.4	57.9
1815	154	0	144	2	7	0	0	0	0	0	0	0	1	135	87.7	40	26	6	3.9	54.5	59.5
1830	125	1	114	1	6	2	0	0	0	1	0	0	0	96	76.8	48	38.4	14	11.2	55.1	62.6
1845	112	0	103	0	7	1	0	0	0	0	1	0	0	96	85.7	43	38.4	5	4.5	55.2	62
1900	112	1	96	2	10	2	0	0	0	0	1	0	0	67	59.8	28	25	8	7.1	50.7	60.6
1915	86	0	83	0	2	1	0	0	0	0	0	0	0	74	86	31	36	8	9.3	55.7	60.8
1930	60	2	51	0	7	0	0	0	0	0	0	0	0	53	88.3	24	40	9	15	54.9	64.6
1945	70	0	63	1	5	0	0	0	0	1	0	0	0	56	80	18	25.7	2	2.9	52.9	59.5
2000	45	0	41	1	2	0	1	0	0	0	0	0	0	36	80	18	40	3	6.7	54	61.5
2015	56	0	50	0	5	1	0	0	0	0	0	0	0	48	85.7	18	32.1	3	5.4	54.6	60.8
2030	53	1	47	0	4	0	0	1	0	0	0	0	0	46	86.8	25	47.2	6	11.3	57.4	62.6
2045	39	0	36	1	2	0	0	0	0	0	0	0	0	23	59	13	33.3	2	5.1	53.1	61.5
2100	41	2	36	0	2	0	0	0	0	0	1	0	0	28	68.3	11	26.8	3	7.3	54	58.6
2115	41	0	36	0	4	0	0	0	0	1	0	0	0	35	85.4	17	41.5	5	12.2	56.3	63.3
2130	38	0	37	0	1	0	0	0	0	0	0	0	0	20	52.6	7	18.4	3	7.9	52	57.3
2145	34	0	30	1	2	0	0	0	0	0	1	0	0	26	76.5	10	29.4	3	8.8	55.1	60.6
2200	26	0	20	0	6	0	0	0	0	0	0	0	0	17	65.4	9	34.6	4	15.4	56.6	62.9
2215	41	0	38	0	2	0	0	0	0	1	0	0	0	29	70.7	15	36.6	9	22	56.1	67.6
2230	23	0	23	0	0	0	0	0	0	0	0	0	0	21	91.3	6	26.1	4	17.4	57.5	67.6
2245	23	0	21	0	1	0	0	0	0	1	0	0	0	17	73.9	14	60.9	7	30.4	58.6	69.3
2300	18	0	12	0	3	0	0	0	0	1	2	0	0	11	61.1	5	27.8	3	16.7	54.6	61.3
2315	14	0	10	0	3	0	0	0	0	0	1	0	0	11	78.6	3	21.4	1	7.1	54.2	57.5
2330	8	0	7	0	0	0	0	0	0	1	0	0	0	8	100	4	50	2	25	58	-
2345	13	0	7	0	4	1	0	0	0	0	1	0	0	12	92.3	7	53.8	3	23.1	60.7	65.5
07-19	**9188**	**51**	**7711**	**85**	**1074**	**46**	**33**	**8**	**55**	**47**	**71**	**3**	**4**	**5273**	**57.4**	**1116**	**12.1**	**156**	**1.7**	**50.8**	**56.1**
06-22	**10285**	**58**	**8657**	**100**	**1170**	**56**	**35**	**9**	**60**	**54**	**79**	**3**	**4**	**6108**	**59.4**	**1480**	**14.4**	**245**	**2.4**	**51.2**	**56.8**
06-00	**10451**	**58**	**8795**	**100**	**1189**	**57**	**35**	**9**	**60**	**58**	**83**	**3**	**4**	**6234**	**59.6**	**1543**	**14.8**	**278**	**2.7**	**51.3**	**56.8**
00-00	**10684**	**61**	**8972**	**100**	**1224**	**59**	**36**	**9**	**63**	**65**	**88**	**3**	**4**	**6427**	**60.2**	**1653**	**15.5**	**317**	**3**	**51.4**	**57**

Site 1
Location A1067, Att - Tree, OSGR: TG 06233 19642
Direction Two way
30 April 2019

9323 / Norfolk Vanguard
April 2019
Automatic Traffic Count

Time	Total	Classification												>PSL	>PSL%	>SL1	>SL1%	>SL2	>SL2%	Mean	Vpp
		1	2	3	4	5	6	7	8	9	10	11	12	50	50	57	57	65	65		85
		MCL	SV	SVT	TB2	TB3	T4	ART3	ART4	ART5	ART6	BD	DRT			ACPO	ACPO	DfT	DfT		
0000	8	1	5	0	1	0	0	0	0	1	0	0	0	6	75	2	25	2	25	56.3	-
0015	5	0	5	0	0	0	0	0	0	0	0	0	0	3	60	1	20	1	20	54.3	-
0030	10	0	9	0	0	0	0	0	1	0	0	0	0	9	90	4	40	2	20	57.5	-
0045	8	0	6	0	0	1	0	0	0	1	0	0	0	7	87.5	4	50	2	25	59.3	-
0100	3	0	1	0	1	0	0	0	0	0	1	0	0	3	100	1	33.3	0	0	55.5	-
0115	7	0	4	0	2	0	0	0	0	1	0	0	0	6	85.7	4	57.1	1	14.3	57	-
0130	4	0	4	0	0	0	0	0	0	0	0	0	0	3	75	3	75	2	50	63.3	-
0145	4	0	2	0	1	1	0	0	0	0	0	0	0	4	100	1	25	0	0	54.2	-
0200	4	0	4	0	0	0	0	0	0	0	0	0	0	3	75	1	25	1	25	56.1	-
0215	2	0	2	0	0	0	0	0	0	0	0	0	0	1	50	0	0	0	0	48.6	-
0230	4	0	2	0	0	0	0	0	0	1	1	0	0	3	75	1	25	0	0	54.5	-
0245	6	0	5	0	1	0	0	0	0	0	0	0	0	6	100	4	66.7	2	33.3	60.8	-
0300	4	0	2	0	2	0	0	0	0	0	0	0	0	2	50	2	50	1	25	56.7	-
0315	3	0	2	0	0	0	0	0	0	0	1	0	0	3	100	1	33.3	0	0	55.3	-
0330	4	0	3	0	0	0	0	0	0	0	1	0	0	4	100	1	25	0	0	56.2	-
0345	4	0	3	0	1	0	0	0	0	0	0	0	0	4	100	2	50	1	25	59	-
0400	5	0	3	0	2	0	0	0	0	0	0	0	0	4	80	2	40	2	40	60.9	-
0415	10	0	10	0	0	0	0	0	0	0	0	0	0	6	60	1	10	1	10	53.7	-
0430	10	0	9	0	1	0	0	0	0	0	0	0	0	6	60	2	20	2	20	53.4	-
0445	16	0	12	0	4	0	0	0	0	0	0	0	0	14	87.5	4	25	1	6.3	56.2	58.8
0500	21	0	14	1	2	2	0	0	0	0	2	0	0	13	61.9	8	38.1	3	14.3	55.3	64.2
0515	29	4	21	0	3	0	0	0	0	0	1	0	0	24	82.8	12	41.4	2	6.9	55.9	62.2
0530	37	0	28	0	4	0	1	0	0	2	2	0	0	30	81.1	14	37.8	8	21.6	57	65.3
0545	32	1	23	0	6	0	0	0	0	0	2	0	0	31	96.9	23	71.9	4	12.5	60	64
0600	78	0	58	0	13	1	1	0	1	1	3	0	0	70	89.7	34	43.6	11	14.1	56.7	64.6
0615	106	1	86	0	12	4	1	0	2	0	0	0	0	83	78.3	42	39.6	10	9.4	55.8	62.4
0630	130	2	104	5	13	1	0	0	0	3	2	0	0	96	73.8	42	32.3	7	5.4	53.9	61.5
0645	143	0	124	0	19	0	0	0	0	0	0	0	0	119	83.2	64	44.8	15	10.5	55.8	62.2
0700	191	0	149	1	31	2	1	2	2	3	0	0	0	137	71.7	35	18.3	6	3.1	52.7	57.9
0715	260	2	207	2	37	2	1	0	5	2	2	0	0	147	56.5	38	14.6	3	1.2	51.4	56.8
0730	**294**	**5**	**249**	**3**	**32**	**0**	**2**	**0**	**1**	**0**	**1**	**0**	**1**	**180**	**61.2**	**31**	**10.5**	**1**	**0.3**	**51.1**	**55.9**
0745	281	4	235	3	32	2	1	0	0	2	2	0	0	167	59.4	41	14.6	3	1.1	49.8	56.8
0800	283	1	249	2	26	2	0	0	1	0	2	0	0	172	60.8	35	12.4	2	0.7	50.7	56.4
0815	282	5	224	2	39	2	4	0	0	1	5	0	0	126	44.7	15	5.3	0	0	49.1	54.1
0830	244	2	193	2	32	6	2	0	2	1	4	0	0	119	48.8	21	8.6	1	0.4	49.8	55
0845	244	1	193	1	42	0	1	0	1	3	2	0	0	129	52.9	24	9.8	3	1.2	50.1	55
0900	188	1	160	2	18	2	1	0	0	1	3	0	0	118	62.8	26	13.8	6	3.2	51.3	56.4
0915	176	0	142	1	27	1	0	0	3	2	0	0	0	75	42.6	8	4.5	1	0.6	48.4	53.7
0930	157	1	122	2	27	1	0	0	1	1	2	0	0	90	57.3	23	14.6	5	3.2	51.6	56.4
0945	159	1	120	3	22	1	3	1	2	2	3	0	1	88	55.3	13	8.2	1	0.6	50.5	55.3
1000	168	1	131	5	28	0	2	0	0	0	0	0	1	83	49.4	12	7.1	2	1.2	49.5	55.3
1015	157	0	128	1	22	0	2	0	0	3	1	0	0	85	54.1	9	5.7	2	1.3	50.5	54.1
1030	160	1	130	0	20	2	3	0	0	2	1	1	0	73	45.6	10	6.3	1	0.6	49.5	53
1045	163	0	136	0	20	2	1	0	1	0	2	1	0	72	44.2	12	7.4	1	0.6	47.2	53.9
1100	138	1	113	2	16	2	0	0	1	1	2	0	0	81	58.7	14	10.1	2	1.4	50.7	54.1
1115	158	1	125	4	17	1	4	0	0	5	1	0	0	87	55.1	7	4.4	0	0	50.1	53.7
1130	131	0	99	2	21	3	1	1	2	1	1	0	0	67	51.1	9	6.9	1	0.8	49.8	54.6
1145	171	2	138	2	26	1	0	0	0	1	1	0	0	94	55	19	11.1	3	1.8	50.8	55.3
1200	137	2	107	2	19	2	2	0	1	1	1	0	0	84	61.3	15	10.9	0	0	49.8	55.3
1215	150	0	120	3	21	1	3	0	1	0	1	0	0	93	62	13	8.7	4	2.7	50.6	55.7
1230	168	0	143	1	17	1	1	1	1	0	3	0	0	104	61.9	13	7.7	3	1.8	51.6	55
1245	144	1	112	3	20	2	3	1	0	1	1	0	0	77	53.5	12	8.3	4	2.8	50.1	55.5
1300	144	1	118	1	17	1	1	0	1	1	2	1	0	76	52.8	14	9.7	2	1.4	50.5	55.3
1315	153	2	112	2	20	4	2	1	3	2	5	0	0	83	54.2	11	7.2	1	0.7	50.4	54.6
1330	146	1	115	4	19	1	1	0	0	2	3	0	0	76	52.1	15	10.3	0	0	48.7	55.9
1345	166	2	130	2	25	1	2	0	1	0	3	0	0	69	41.6	14	8.4	2	1.2	49.9	55
1400	147	0	122	1	14	3	3	0	1	2	1	0	0	90	61.2	9	6.1	1	0.7	50.1	54.4
1415	147	0	121	0	20	0	1	0	2	1	2	0	0	77	52.4	17	11.6	1	0.7	50.1	54.1
1430	177	4	142	1	24	4	1	0	0	1	0	0	0	102	57.6	25	14.1	3	1.7	49.9	56.4
1445	177	3	153	1	12	0	3	0	1	2	2	0	0	81	45.8	17	9.6	3	1.7	48.7	54.6
1500	189	3	144	2	26	1	2	0	6	4	1	0	0	112	59.3	23	12.2	1	0.5	49.9	56.4
1515	186	4	151	3	21	1	3	0	1	0	2	0	0	126	67.7	33	17.7	5	2.7	52.4	57.5
1530	207	2	172	2	26	0	2	0	0	1	2	0	0	93	44.9	24	11.6	2	1	49.3	54.6
1545	210	1	169	2	33	0	2	1	2	0	0	0	0	107	51	29	13.8	4	1.9	48.9	56.6
1600	230	2	185	3	35	1	1	0	1	2	0	0	0	135	58.7	28	12.2	1	0.4	50.7	55.9
1615	256	6	217	3	23	2	1	0	0	2	2	0	0	130	50.8	31	12.1	1	0.4	48.8	55.3
1630	268	3	223	6	31	2	0	0	0	2	0	0	1	117	43.7	26	9.7	4	1.5	49.4	54.4
1645	293	2	259	0	27	1	1	1	2	0	0	0	0	153	52.2	30	10.2	4	1.4	49.9	55.9
1700	271	1	232	2	33	1	1	0	0	0	1	0	0	156	57.6	43	15.9	2	0.7	51.1	57
1715	**300**	**1**	**264**	**6**	**20**	**0**	**1**	**0**	**2**	**4**	**2**	**0**	**0**	**173**	**57.7**	**29**	**9.7**	**4**	**1.3**	**48.4**	**55.7**
1730	239	4	214	3	15	0	1	0	0	1	1	0	0	152	63.6	47	19.7	6	2.5	51.1	57.7
1745	236	2	215	1	16	0	0	0	1	1	0	0	0	137	58.1	47	19.9	13	5.5	51.4	58.8
1800	216	0	191	2	19	2	0	0	0	1	1	0	0	135	62.5	28	13	7	3.2	51.8	56.1
1815	211	1	192	1	15	0	1	0	1	0	0	0	0	137	64.9	36	17.1	7	3.3	52	57.3
1830	143	1	132	0	7	0	0	0	0	2	1	0	0	100	69.9	39	27.3	9	6.3	53.5	59.7
1845	128	1	121	1	4	1	0	0	0	0	0	0	0	90	70.3	42	32.8	8	6.3	53.8	59.9
1900	101	1	93	0	6	0	0	0	0	0	1	0	0	74	73.3	35	34.7	10	9.9	54.2	60.8
1915	78	2	69	1	5	0	0	0	0	0	1	0	0	57	73.1	30	38.5	12	15.4	55.6	64.2
1930	76	0	65	1	8	0	0	0	1	0	1	0	0	58	76.3	26	34.2	6	7.9	54	63.1
1945	60	1	56	0	3	0	0	0	0	0	0	0	0	47	78.3	19	31.7	2	3.3	53.2	60.6
2000	65	1	56	1	4	0	0	0	1	1	1	0	0	41	63.1	26	40	11	16.9	54.3	65.1
2015	48	0	45	0	3	0	0	0	0	0	0	0	0	37	77.1	21	43.8	7	14.6	54.2	63.1
2030	50	0	43	2	5	0	0	0	0	0	0	0	0	43	86	17	34	5	10	56.6	63.5
2045	50	0	47	0	3	0	0	0	0	0	0	0	0	39	78	13	26	6	12	54.3	63.1
2100	46	1	44	1	0	0	0	0	0	0	0	0	0	35	76.1	18	39.1	6	13	55.2	62.9
2115	61	0	57	0	4	0	0	0	0	0	0	0	0	47	77	19	31.1	2	3.3	54.2	60.8
2130	39	0	36	0	2	0	0	0	0	0	1	0	0	30	76.9	11	28.2	5	12.8	54.7	63.1
2145	28	1	26	0	1	0	0	0	0	0	0	0	0	21	75	8	28.6	1	3.6	52.5	59.3
2200	39	0	34	0	4	0	0	0	0	0	1	0	0	36	92.3	19	48.7	7	17.9	58.4	65.5
2215	30	0	29	0	1	0	0	0	0	0	0	0	0	21	70	8	26.7	4	13.3	56.1	62.6
2230	24	0	22	0	1	0	0	0	0	0	1	0	0	23	95.8	14	58.3	4	16.7	58.9	64.4
2245	30	0	25	0	2	1	0	0	0	2	0	0	0	24	80	17	56.7	4	13.3	57.6	64.6
2300	20	0	17	0	3	0	0	0	0	0	0	0	0	16	80	6	30	4	20	56.6	68
2315	20	0	19	0	0	0	0	0	0	0	1	0	0	13	65	9	45	2	10	55.1	62.4
2330	9	0	9	0	0	0	0	0	0	0	0	0	0	9	100	4	44.4	2	22.2	59.9	-
2345	14	0	14	0	0	0	0	0	0	0	0	0	0	11	78.6	8	57.1	1	7.1	56.7	62.4
07-19	**9444**	**79**	**7819**	**98**	**1114**	**64**	**68**	**9**	**50**	**64**	**72**	**3**	**4**	**5255**	**55.6**	**1112**	**11.8**	**146**	**1.5**	**50.3**	**55.9**
06-22	**10603**	**89**	**8828**	**109**	**1215**	**70**	**70**	**9**	**55**	**69**	**82**	**3**	**4**	**6152**	**58**	**1537**	**14.5**	**262**	**2.5**	**50.8**	**56.8**
06-00	**10789**	**89**	**8997**	**109**	**1226**	**71**	**70**	**9**	**55**	**71**	**85**	**3**	**4**	**6305**	**58.4**	**1622**	**15**	**290**	**2.7**	**50.9**	**56.8**
00-00	**11029**	**95**	**9176**	**110**	**1257**	**75**	**71**	**9**	**56**	**77**	**96**	**3**	**4**	**6500**	**58.9**	**1720**	**15.6**	**328**	**3**	**51.1**	**57**

Site 1
Location A1067, Att - Tree, OSGR: TG 06233 19642
Direction Two way

9323 / Norfolk Vanguard
April 2019
Automatic Traffic Count

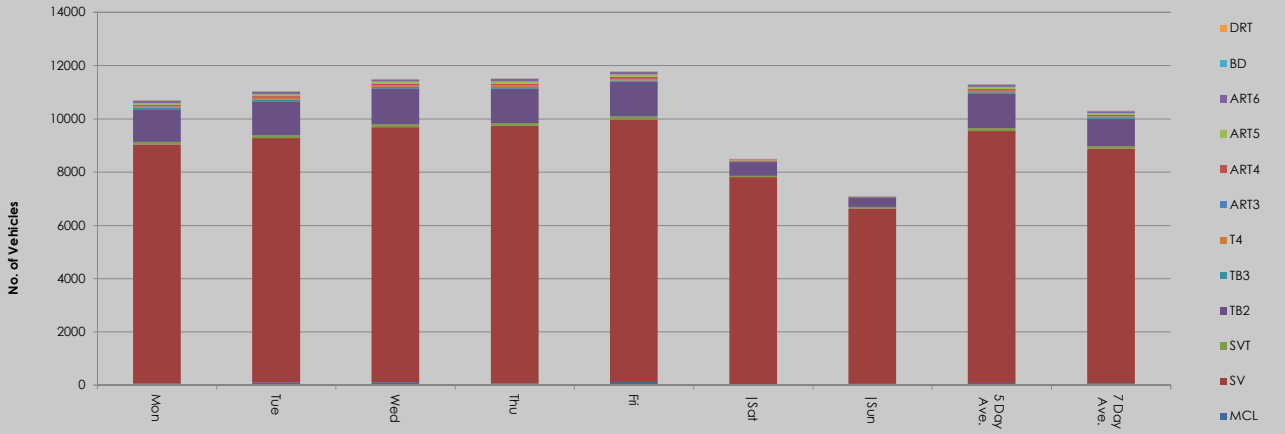
Virtual Day (7)

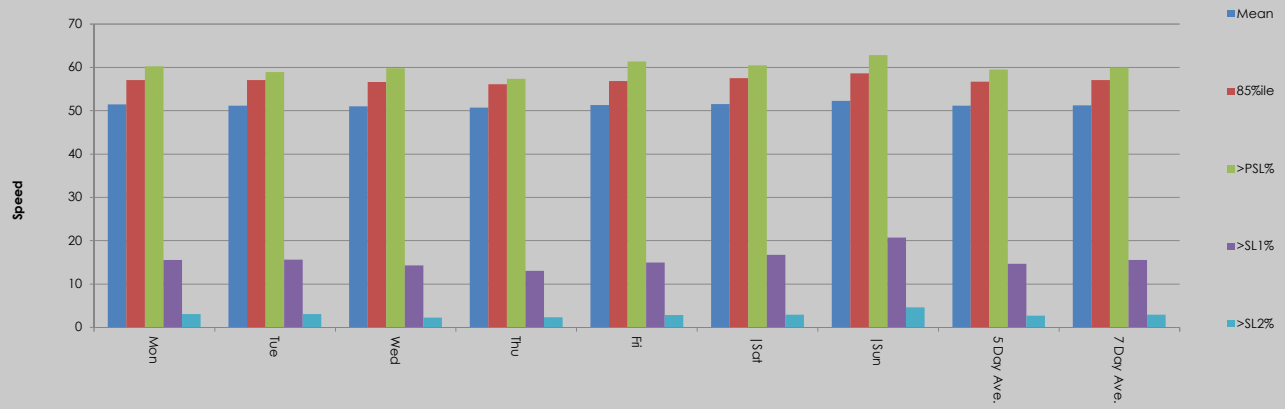
Time	Total	Classification												>PSL	>PSL%	>SL1	>SL1%	>SL2	>SL2%	Mean	Vpp
		1 MCL	2 SV	3 SVT	4 TB2	5 TB3	6 T4	7 ART3	8 ART4	9 ART5	10 ART6	11 BD	12 DRT	50	50	57 ACPO	57 ACPO	65 DfT	65 DfT		85
0000	43	0	37	0	4	0	0	0	0	1	0	0	0	36	84.2	20	47.2	8	17.5	57.6	66.2
0100	24	0	19	0	4	0	0	0	0	0	1	0	0	20	82.1	11	47	5	19.6	57.8	67.3
0200	19	0	16	0	2	0	0	0	0	1	0	0	0	14	76.5	9	47	3	15.9	56.3	64.9
0300	17	0	11	0	4	0	0	0	0	1	1	0	0	14	82.9	8	49.6	3	17.9	57.9	65.5
0400	35	0	26	0	5	0	0	0	0	2	1	0	0	27	77.3	13	37.2	6	18.2	57	68.5
0500	107	3	82	0	14	1	1	0	1	2	3	0	0	90	84.1	52	48.7	19	18.2	57.8	66.2
0600	348	3	282	4	41	3	3	0	4	4	4	0	0	272	78.3	118	33.9	31	9	54.7	62.2
0700	792	5	660	7	96	4	5	0	5	4	5	0	0	491	62.1	118	14.8	15	1.9	51.3	56.8
0800	**824**	**6**	**677**	**8**	**108**	**4**	**4**	**1**	**5**	**4**	**8**	**0**	**0**	**454**	**55.1**	**91**	**11.1**	**10**	**1.2**	**50.3**	**55.7**
0900	676	4	556	9	82	4	3	0	5	5	7	0	1	358	53	65	9.7	9	1.3	49.9	55.3
1000	667	3	560	6	76	4	5	0	3	4	4	0	0	331	49.6	59	8.8	8	1.2	49.9	55
1100	653	5	548	8	68	5	4	1	4	5	4	0	1	328	50.2	56	8.6	6	0.9	49.9	55
1200	659	3	565	6	61	3	4	1	3	6	6	0	0	358	54.3	62	9.3	9	1.3	50.3	55.3
1300	636	5	537	7	67	3	3	1	3	4	6	1	0	357	56.2	68	10.7	8	1.3	50.5	55.7
1400	679	4	576	5	72	4	3	1	5	4	5	0	0	383	56.3	76	11.2	8	1.2	50.5	55.9
1500	760	4	645	7	84	3	4	1	6	4	3	0	0	424	55.7	84	11.1	11	1.4	50.4	55.5
1600	**918**	**8**	**794**	**8**	**93**	**3**	**2**	**0**	**3**	**4**	**2**	**0**	**0**	**529**	**57.6**	**106**	**11.5**	**11**	**1.2**	**50.3**	**55.9**
1700	912	6	822	7	68	1	2	0	1	2	2	0	0	580	63.6	146	16	16	1.8	51.2	57
1800	581	6	531	4	35	1	1	0	1	2	1	0	0	406	69.9	134	23.1	24	4.1	52.8	59.1
1900	320	4	290	2	21	1	0	0	0	1	1	0	0	242	75.6	99	30.9	24	7.6	54	61.1
2000	201	2	183	1	13	0	0	0	0	1	0	0	0	149	74.1	64	32	21	10.3	54.4	62
2100	173	1	162	0	8	0	0	0	0	1	0	0	0	129	74.3	56	32.3	16	9.3	54.7	61.7
2200	164	0	153	0	7	0	0	0	0	2	0	0	0	117	71.5	48	29.1	16	9.6	54.5	61.5
2300	83	0	76	0	5	0	0	0	0	1	1	0	0	60	71.7	29	34.8	10	11.8	54.4	63.5
1200	**8756**	**59**	**7472**	**81**	**911**	**38**	**38**	**7**	**43**	**48**	**54**	**2**	**3**	**4998**	**57.1**	**1064**	**12.2**	**134**	**1.5**	**50.6**	**56.1**
1215	**9798**	**69**	**8388**	**90**	**994**	**43**	**41**	**7**	**48**	**54**	**60**	**2**	**3**	**5791**	**59.1**	**1401**	**14.3**	**226**	**2.3**	**51**	**56.6**
1230	**10045**	**69**	**8617**	**90**	**1006**	**44**	**41**	**7**	**48**	**57**	**61**	**2**	**3**	**5967**	**59.4**	**1478**	**14.7**	**252**	**2.5**	**51.1**	**56.8**
1245	**10290**	**72**	**8808**	**90**	**1038**	**45**	**42**	**8**	**50**	**64**	**67**	**2**	**3**	**6169**	**59.9**	**1592**	**15.5**	**296**	**2.9**	**51.2**	**57**

Virtual Week (1)

Time	Total	Classification												>PSL	>PSL%	>SL1	>SL1%	>SL2	>SL2%	Mean	Vpp
		1 MCL	2 SV	3 SVT	4 TB2	5 TB3	6 T4	7 ART3	8 ART4	9 ART5	10 ART6	11 BD	12 DRT	50	50	57 ACPO	57 ACPO	65 DfT	65 DfT		85
Mon	10684	61	8972	100	1224	59	36	9	63	65	88	3	4	6427	60.2	1653	15.5	317	3	51.4	57
Tue	11029	95	9176	110	1257	75	71	9	56	77	96	3	4	6500	58.9	1720	15.6	328	3	51.1	57
Wed	11488	100	9586	104	1350	56	60	6	62	84	72	3	5	6872	59.8	1639	14.3	258	2.2	51	56.6
Thu	11503	53	9696	93	1279	62	64	11	59	89	91	3	3	6596	57.3	1491	13	262	2.3	50.7	56.1
Fri	11767	121	9853	120	1298	47	50	12	71	97	93	1	4	7212	61.3	1756	14.9	335	2.8	51.3	56.8
|Sat	8482	36	7775	46	520	13	8	3	29	25	25	0	2	5127	60.4	1420	16.7	245	2.9	51.5	57.5
|Sun	7078	40	6597	59	340	6	5	3	11	11	6	0	0	4448	62.8	1466	20.7	325	4.6	52.2	58.6
5 Day Ave.	**11294**	**86**	**9457**	**105**	**1282**	**60**	**56**	**9**	**62**	**82**	**88**	**3**	**4**	**6721**	**59.5**	**1652**	**14.6**	**300**	**2.7**	**51.1**	**56.7**
7 Day Ave.	**10290**	**72**	**8808**	**90**	**1038**	**45**	**42**	**8**	**50**	**64**	**67**	**2**	**3**	**6169**	**59.9**	**1592**	**15.5**	**296**	**2.9**	**51.2**	**57.0**
--	**72031**	**506**	**61655**	**632**	**7268**	**318**	**294**	**53**	**351**	**448**	**471**	**13**	**22**	**43182**	**59.9**	**11145**	**15.5**	**2070**	**2.9**	**51.2**	**57.0**

Summary Graphs





APPENDIX D B1149 ATC Results

Site 7
Location Holt Road, Att - Signpost, OSGR: TG 14536 25672
Direction Two way
19 April 2017

7346 / Norfolk
April 2017
Automatic Traffic Count

Time	Total	Classification												>PSL	>PSL%	>SL1	>SL1%	>SL2	>SL2%	Mean	Vpp
		1 MCL	2 SV	3 SVT	4 TB2	5 TB3	6 T4	7 ART3	8 ART4	9 ART5	10 ART6	11 BD	12 DRT	60	60	68 ACPO	68 ACPO	75 DfT	75 DfT		85
0000	3	0	3	0	0	0	0	0	0	0	0	0	0	1	33.3	0	0	0	0	57.8	-
0015	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50.6	-
0030	5	1	4	0	0	0	0	0	0	0	0	0	0	1	20	0	0	0	0	53.6	-
0045	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	48.4	-
0100	3	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50.6	-
0115	5	0	4	0	1	0	0	0	0	0	0	0	0	1	20	1	20	1	20	42.9	-
0130	2	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	49.6	-
0145	2	0	1	0	0	0	0	0	0	1	0	0	0	1	50	1	50	1	50	66.6	-
0200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
0215	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
0230	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	47.2	-
0245	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	53.8	-
0300	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40.4	-
0315	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	48.3	-
0330	2	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	33.2	-
0345	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50.8	-
0400	2	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	39	-
0415	4	1	3	0	0	0	0	0	0	0	0	0	0	1	25	1	25	1	25	58.5	-
0430	2	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	38.1	-
0445	3	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	41.6	-
0500	6	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50.8	-
0515	22	0	20	0	0	0	0	0	1	1	0	0	0	2	9.1	0	0	0	0	51.8	58.4
0530	12	0	8	0	1	0	0	0	1	1	1	0	0	1	8.3	0	0	0	0	49.6	55.3
0545	27	0	22	0	2	0	0	0	1	0	2	0	0	6	22.2	1	3.7	0	0	50.9	60.6
0600	25	0	16	1	2	0	1	0	1	2	2	0	0	5	20	1	4	0	0	51.4	60.8
0615	42	0	35	0	3	0	2	0	2	0	0	0	0	4	9.5	0	0	0	0	50.8	56.1
0630	55	0	47	0	7	0	1	0	0	0	0	0	0	5	9.1	0	0	0	0	52.9	57.3
0645	68	1	61	3	3	0	0	0	0	0	0	0	0	8	11.8	1	1.5	0	0	52.1	57.9
0700	106	0	95	3	4	1	0	0	0	0	3	0	0	9	8.5	1	0.9	0	0	48.3	57
0715	125	0	103	1	17	0	0	0	1	1	2	0	0	8	6.4	0	0	0	0	49.6	56.1
0730	127	0	106	1	15	0	0	0	1	1	3	0	0	8	6.3	0	0	0	0	47.8	56.1
0745	110	0	97	0	6	1	1	0	1	1	2	0	1	4	3.6	1	0.9	0	0	49.1	55.5
0800	112	2	100	2	5	0	1	0	1	0	1	0	0	7	6.3	0	0	0	0	49.6	57
0815	**139**	**0**	**118**	**2**	**15**	**0**	**0**	**1**	**1**	**0**	**2**	**0**	**0**	**3**	**2.2**	**1**	**0.7**	**0**	**0**	**46.4**	**53.5**
0830	122	1	104	2	9	1	2	0	1	1	1	0	0	4	3.3	1	0.8	0	0	46.4	52.6
0845	102	2	89	2	5	1	1	0	1	0	1	0	0	5	4.9	0	0	0	0	47.4	56.1
0900	68	1	56	1	6	0	1	0	0	1	2	0	0	2	2.9	0	0	0	0	48.7	54.1
0915	88	2	71	4	6	1	2	0	1	0	1	0	0	1	1.1	0	0	0	0	45.1	52.6
0930	96	1	83	3	2	3	0	0	1	0	3	0	0	5	5.2	2	2.1	1	1	45.1	52.8
0945	92	1	78	1	7	0	2	0	2	1	0	0	0	1	1.1	0	0	0	0	44.5	51.2
1000	100	1	84	1	12	0	0	0	0	1	1	0	0	3	3	0	0	0	0	44.6	49.9
1015	88	0	73	2	9	0	0	0	2	1	1	0	0	1	1.1	0	0	0	0	44	50.8
1030	101	0	86	1	9	1	1	0	1	1	1	0	0	3	3	2	2	2	2	44	52.1
1045	112	1	97	1	10	1	1	0	0	1	0	0	0	0	0	0	0	0	0	44.5	50.1
1100	82	0	71	0	7	0	2	0	2	0	0	0	0	1	1.2	0	0	0	0	45.6	52.1
1115	95	2	79	0	9	1	0	0	2	0	2	0	0	2	2.1	0	0	0	0	44.5	53.2
1130	93	1	85	0	5	0	0	0	0	0	2	0	0	2	2.2	0	0	0	0	44.8	51.2
1145	81	0	68	3	8	0	2	0	0	0	0	0	0	4	4.9	1	1.2	0	0	42.4	49.7
1200	79	3	58	1	11	1	2	0	1	0	2	0	0	1	1.3	0	0	0	0	42.8	51
1215	94	1	77	2	10	0	0	0	0	0	4	0	0	3	3.2	1	1.1	0	0	45.5	51.4
1230	86	0	72	0	9	0	1	0	2	0	1	1	0	2	2.3	0	0	0	0	46.9	53.5
1245	88	0	79	1	4	0	0	0	1	2	1	0	0	2	2.3	0	0	0	0	46.3	53.7
1300	98	1	79	5	6	2	0	0	2	1	2	0	0	2	2	1	1	0	0	45.8	52.3
1315	81	0	67	3	10	1	0	0	0	0	0	0	0	2	2.5	1	1.2	0	0	45.6	52.3
1330	88	1	76	0	6	0	0	0	2	1	2	0	0	1	1.1	0	0	0	0	46.2	51.9
1345	74	1	60	2	7	1	1	1	0	0	1	0	0	2	2.7	0	0	0	0	44.5	51.7
1400	86	2	75	1	6	0	0	0	0	1	1	0	0	1	1.2	0	0	0	0	45.2	52.1
1415	109	4	92	2	7	1	1	0	0	0	2	0	0	3	2.8	0	0	0	0	45	51.4
1430	86	3	71	1	9	0	1	0	1	0	0	0	0	9	10.5	1	1.2	0	0	46.9	54.8
1445	92	0	76	3	8	1	0	0	1	2	1	0	0	0	0	0	0	0	0	43.2	49.4
1500	77	1	61	2	10	0	0	0	0	1	2	0	0	3	3.9	0	0	0	0	46.4	53
1515	99	0	86	1	9	1	1	0	1	0	0	0	0	5	5.1	0	0	0	0	47	54.6
1530	105	0	93	2	9	0	0	0	0	0	1	0	0	2	1.9	0	0	0	0	44.5	50.6
1545	116	0	106	0	9	0	0	0	0	1	0	0	0	3	2.6	1	0.9	0	0	46.3	51.7
1600	115	1	99	1	12	0	0	0	1	0	1	0	0	2	1.7	0	0	0	0	46.5	53.5
1615	136	1	118	4	11	0	1	0	0	1	0	0	0	2	1.5	0	0	0	0	47.3	53
1630	146	3	129	2	11	0	0	0	0	0	1	0	0	3	2.1	0	0	0	0	46.9	51
1645	146	0	131	2	13	0	0	0	0	0	0	0	0	4	2.7	0	0	0	0	47.1	53.9
1700	137	1	122	2	11	1	0	0	0	0	0	0	0	3	2.2	1	0.7	1	0.7	47.8	54.4
1715	**166**	**4**	**153**	**1**	**8**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**7**	**4.2**	**0**	**0**	**0**	**0**	**49.2**	**53.7**
1730	125	0	115	1	7	0	0	0	0	2	0	0	0	5	4	0	0	0	0	48.4	55
1745	141	0	130	1	8	0	1	0	0	0	1	0	0	0	0	0	0	0	0	45.4	53
1800	118	0	111	1	6	0	0	0	0	0	0	0	0	10	8.5	5	4.2	2	1.7	48.6	54.1
1815	94	0	91	0	3	0	0	0	0	0	0	0	0	5	5.3	2	2.1	1	1.1	48.8	56.6
1830	92	0	89	0	2	0	0	0	0	0	1	0	0	7	7.6	0	0	0	0	49.3	57.7
1845	68	1	62	1	3	0	1	0	0	0	0	0	0	9	13.2	0	0	0	0	47.5	55.9
1900	55	0	53	0	2	0	0	0	0	0	0	0	0	7	12.7	2	3.6	0	0	51.2	59.1
1915	62	2	58	0	2	0	0	0	0	0	0	0	0	7	11.3	1	1.6	1	1.6	47.2	56.6
1930	35	1	34	0	0	0	0	0	0	0	0	0	0	3	8.6	0	0	0	0	50.8	57.7
1945	35	0	31	1	3	0	0	0	0	0	0	0	0	4	11.4	0	0	0	0	52.2	57.7
2000	25	0	21	0	3	0	0	0	1	0	0	0	0	4	16	1	4	0	0	53	58.6
2015	36	1	34	0	1	0	0	0	0	0	0	0	0	4	11.1	2	5.6	0	0	48.1	55.5
2030	25	0	24	0	1	0	0	0	0	0	0	0	0	1	4	1	4	1	4	50.9	55.9
2045	29	1	26	0	2	0	0	0	0	0	0	0	0	4	13.8	0	0	0	0	50.9	59.7
2100	23	0	22	1	0	0	0	0	0	0	0	0	0	2	8.7	0	0	0	0	48.6	55.9
2115	20	0	19	0	1	0	0	0	0	0	0	0	0	5	25	0	0	0	0	52.3	62.4
2130	31	0	29	1	1	0	0	0	0	0	0	0	0	7	22.6	2	6.5	2	6.5	50.6	60.2
2145	19	0	17	0	2	0	0	0	0	0	0	0	0	3	15.8	0	0	0	0	49.3	58.4
2200	26	0	25	0	1	0	0	0	0	0	0	0	0	2	7.7	2	7.7	1	3.8	48.2	52.3
2215	32	1	30	0	1	0	0	0	0	0	0	0	0	3	9.4	0	0	0	0	49.7	53.9
2230	30	0	27	0	3	0	0	0	0	0	0	0	0	1	3.3	0	0	0	0	48.3	54.1
2245	14	1	12	0	1	0	0	0	0	0	0	0	0	2	14.3	0	0	0	0	50.6	59.1
2300	11	0	11	0	0	0	0	0	0	0	0	0	0	2	18.2	1	9.1	0	0	53.3	57
2315	6	0	5	0	1	0	0	0	0	0	0	0	0	1	16.7	1	16.7	1	16.7	51.4	-
2330	10	1	8	0	0	0	0	0	0	1	0	0	0	1	10	1	10	1	10	51.5	-
2345	4	0	3	1	0	0	0	0	0	0	0	0	0	2	50	0	0	0	0	54.5	-
07-19	**4981**	**43**	**4321**	**72**	**391**	**20**	**26**	**2**	**30**	**22**	**52**	**1**	**1**	**171**	**3.4**	**22**	**0.4**	**7**	**0.1**	**46.5**	**53.5**
06-22	**5566**	**49**	**4848**	**79**	**424**	**20**	**30**	**2**	**34**	**24**	**54**	**1**	**1**	**244**	**4.4**	**33**	**0.6**	**11**	**0.2**	**46.9**	**54.4**
06-00	**5699**	**52**	**4969**	**80**	**431**	**20**	**30**	**2**	**34**	**25**	**54**	**1**	**1**	**258**	**4.5**	**38**	**0.7**	**14**	**0.2**	**47**	**54.4**
00-00	**5811**	**54**	**5057**	**80**	**438**	**20**	**30**	**2**	**37**	**31**	**59**	**2**	**1**	**272**	**4.7**	**42**	**0.7**	**17**	**0.3**	**47.1**	**54.4**

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Time	Total	Classification												>PSL	>PSL%	>SL1	>SL1%	>SL2	>SL2%	Mean	Vpp
		1	2	3	4	5	6	7	8	9	10	11	12	60	60	68	68	75	75		85
		MCL	SV	SVT	TB2	TB3	T4	ART3	ART4	ART5	ART6	BD	DRT			ACPO	ACPO	Dft	Dft		
0000	4	0	3	0	0	0	0	0	0	1	0	0	0	1	25	1	25	0	0	50.3	-
0015	3	0	3	0	0	0	0	0	0	0	0	0	0	2	66.7	2	66.7	2	66.7	69.5	-
0030	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	49.1	-
0045	2	0	2	0	0	0	0	0	0	0	0	0	0	1	50	0	0	0	0	56.7	-
0100	5	0	4	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	57.1	-
0115	4	0	3	0	0	0	0	0	0	1	0	0	0	2	50	0	0	0	0	50.2	-
0130	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
0145	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	28.5	-
0200	3	0	3	0	0	0	0	0	0	0	0	0	0	1	33.3	0	0	0	0	54.6	-
0215	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	55.7	-
0230	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	28.2	-
0245	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
0300	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	48.8	-
0315	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
0330	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43.1	-
0345	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	47.6	-
0400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
0415	2	0	2	0	0	0	0	0	0	0	0	0	0	1	50	0	0	0	0	61.6	-
0430	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43.2	-
0445	6	1	4	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	46.3	-
0500	8	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	47.3	-
0515	18	0	15	0	1	0	0	0	0	1	1	0	0	4	22.2	0	0	0	0	51.6	63.1
0530	16	0	12	0	3	0	0	0	1	0	0	0	0	5	31.3	2	12.5	0	0	56	65.5
0545	16	0	16	0	0	0	0	0	0	0	0	0	0	5	31.3	1	6.3	1	6.3	56.7	62
0600	26	0	20	0	2	0	2	0	0	0	2	0	0	4	15.4	1	3.8	1	3.8	44	58.6
0615	43	0	36	0	6	0	0	0	1	0	0	0	0	8	18.6	2	4.7	0	0	53.8	62.4
0630	61	0	46	1	7	0	1	0	1	2	3	0	0	7	11.5	0	0	0	0	49.7	56.8
0645	75	2	64	4	3	1	1	0	0	0	0	0	0	7	9.3	2	2.7	1	1.3	49.7	57.3
0700	106	1	90	2	9	1	1	0	0	0	2	0	0	5	4.7	1	0.9	1	0.9	49.6	55.3
0715	135	1	112	3	17	0	0	0	0	2	0	0	0	6	4.4	3	2.2	0	0	47	54.1
0730	150	0	133	1	13	1	2	0	0	0	0	0	0	6	4	1	0.7	0	0	45.6	54.6
0745	120	0	100	4	9	0	1	0	1	0	5	0	0	9	7.5	2	1.7	1	0.8	48.1	55.7
0800	124	3	103	0	11	1	1	0	2	1	2	0	0	5	4	0	0	0	0	44.7	53
0815	**153**	**0**	**134**	**0**	**13**	**2**	**0**	**0**	**2**	**1**	**1**	**0**	**0**	**3**	**2**	**0**	**0**	**0**	**0**	**45.3**	**52.6**
0830	111	0	93	3	9	1	0	0	1	2	2	0	0	4	3.6	1	0.9	0	0	45.6	54.6
0845	104	0	83	2	14	0	1	1	1	0	2	0	0	1	1	0	0	0	0	44.5	50.6
0900	96	0	84	1	6	1	1	0	1	1	1	0	0	1	1	1	1	0	0	46.6	53
0915	96	0	85	1	6	0	0	0	0	1	3	0	0	0	0	0	0	0	0	46.7	52.3
0930	87	1	74	2	6	1	2	0	1	0	0	0	0	7	8	0	0	0	0	47.5	56.4
0945	95	0	82	0	8	0	1	0	0	1	3	0	0	1	1.1	1	1.1	0	0	44.8	52.8
1000	84	0	74	0	4	1	1	0	0	4	0	0	0	2	2.4	0	0	0	0	44.4	51.2
1015	84	1	69	0	10	0	1	0	1	1	1	0	0	3	3.6	0	0	0	0	45.6	51.9
1030	104	1	88	1	11	1	0	0	1	1	0	0	0	0	0	0	0	0	0	46.1	51
1045	89	0	75	0	9	2	0	0	1	0	2	0	0	1	1.1	0	0	0	0	43.6	50.3
1100	90	0	68	3	13	0	2	0	1	0	3	0	0	0	0	0	0	0	0	42	48.5
1115	90	0	76	0	11	2	0	0	0	1	0	0	0	3	3.3	0	0	0	0	44.7	51.4
1130	76	1	70	0	1	1	2	0	1	0	0	0	0	2	2.6	0	0	0	0	46.3	54.1
1145	82	0	74	1	5	0	0	0	0	0	2	0	0	1	1.2	0	0	0	0	43.8	51
1200	93	1	77	1	8	0	0	0	0	1	5	0	0	1	1.1	0	0	0	0	43.6	48.5
1215	87	0	79	1	4	1	0	0	0	0	2	0	0	4	4.6	1	1.1	1	1.1	43.6	49.4
1230	72	0	58	3	7	1	1	0	1	0	1	0	0	2	2.8	1	1.4	0	0	46.1	55.3
1245	66	0	54	3	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	46.3	54.1
1300	90	0	80	1	5	2	1	0	0	0	1	0	0	3	3.3	1	1.1	0	0	46.4	53
1315	85	1	67	3	9	1	1	0	2	0	1	0	0	0	0	0	0	0	0	44	49.7
1330	81	1	67	0	8	3	0	0	1	1	0	0	0	1	1.2	0	0	0	0	44.7	51.9
1345	90	0	74	0	12	0	1	0	1	0	2	0	0	2	2.2	0	0	0	0	45.6	49.9
1400	84	1	64	0	11	2	2	0	1	0	3	0	0	4	4.8	1	1.2	0	0	45.2	52.8
1415	93	0	85	2	2	0	2	0	0	0	2	0	0	2	2.2	0	0	0	0	45.7	52.1
1430	75	1	65	2	7	0	0	0	0	0	0	0	0	5	6.7	2	2.7	0	0	46.3	51.4
1445	85	1	70	2	6	2	1	0	0	0	3	0	0	4	4.7	1	1.2	1	1.2	45	51
1500	97	1	85	0	9	0	1	0	1	0	0	0	0	1	1	0	0	0	0	46.4	51.2
1515	113	1	100	0	9	1	0	1	0	0	1	0	0	4	3.5	1	0.9	1	0.9	48.2	54.8
1530	94	0	88	0	3	1	0	0	1	0	1	0	0	4	4.3	1	1.1	0	0	47.4	54.8
1545	93	0	81	2	7	1	1	0	0	1	0	0	0	4	4.3	1	1.1	0	0	46.4	53
1600	115	0	101	2	12	0	0	0	0	0	0	0	0	2	1.7	1	0.9	1	0.9	43.2	53.9
1615	125	0	106	2	11	0	3	0	0	2	1	0	0	4	3.2	0	0	0	0	46.3	53.5
1630	130	1	114	2	12	0	0	0	0	0	1	0	0	1	0.8	0	0	0	0	44.8	53.2
1645	147	0	128	4	14	0	0	0	0	0	1	0	0	2	1.4	0	0	0	0	45.7	52.6
1700	134	1	123	0	7	0	1	0	1	0	1	0	0	3	2.2	0	0	0	0	43.2	50.1
1715	**168**	**2**	**152**	**0**	**10**	**1**	**1**	**0**	**0**	**1**	**0**	**0**	**1**	**5**	**3**	**3**	**1.8**	**0**	**0**	**48.1**	**54.4**
1730	131	0	127	1	3	0	0	0	0	0	0	0	0	10	7.6	3	2.3	2	1.5	47.5	56.1
1745	90	1	83	2	4	0	0	0	0	0	0	0	0	6	6.7	1	1.1	0	0	49	56.8
1800	94	1	89	0	4	0	0	0	0	0	0	0	0	3	3.2	1	1.1	0	0	48.7	54.6
1815	97	1	87	0	8	1	0	0	0	0	0	0	0	8	8.2	0	0	0	0	48.8	56.8
1830	87	0	85	0	2	0	0	0	0	0	0	0	0	5	5.7	0	0	0	0	46.8	55.3
1845	73	0	66	4	3	0	0	0	0	0	0	0	0	2	2.7	1	1.4	0	0	44.9	52.3
1900	69	0	63	3	2	0	0	0	0	0	1	0	0	3	4.3	1	1.4	1	1.4	48.1	54.1
1915	59	1	57	0	1	0	0	0	0	0	0	0	0	6	10.2	0	0	0	0	52.2	57
1930	40	0	37	0	3	0	0	0	0	0	0	0	0	8	20	2	5	0	0	51.7	61.5
1945	25	0	25	0	0	0	0	0	0	0	0	0	0	4	16	0	0	0	0	48.2	57.3
2000	37	1	36	0	0	0	0	0	0	0	0	0	0	6	16.2	1	2.7	1	2.7	51.6	59.7
2015	33	0	31	1	1	0	0	0	0	0	0	0	0	10	30.3	2	6.1	0	0	52.8	62.6
2030	28	0	25	2	1	0	0	0	0	0	0	0	0	5	17.9	1	3.6	1	3.6	49.9	59.9
2045	23	0	22	0	1	0	0	0	0	0	0	0	0	3	13	0	0	0	0	47.5	59.7
2100	26	0	26	0	0	0	0	0	0	0	0	0	0	2	7.7	1	3.8	0	0	52.5	55.7
2115	25	0	25	0	0	0	0	0	0	0	0	0	0	5	20	1	4	1	4	52.9	60.2
2130	27	0	26	0	1	0	0	0	0	0	0	0	0	4	14.8	2	7.4	1	3.7	50.1	57
2145	34	0	34	0	0	0	0	0	0	0	0	0	0	2	5.9	1	2.9	0	0	48.1	55.3
2200	27	0	27	0	0	0	0	0	0	0	0	0	0	4	14.8	1	3.7	0	0	49.5	58.8
2215	21	0	17	0	4	0	0	0	0	0	0	0	0	3	14.3	2	9.5	1	4.8	52.1	58.2
2230	16	0	16	0	0	0	0	0	0	0	0	0	0	2	12.5	1	6.3	0	0	48.9	59.5
2245	14	0	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	47.6	52.6
2300	12	0	9	0	3	0	0	0	0	0	0	0	0	2	16.7	2	16.7	1	8.3	48.5	50.8
2315	6	0	6	0	0	0	0	0	0	0	0	0	0	1	16.7	0	0	0	0	48.4	-
2330	8	0	7	0	1	0	0	0	0	0	0	0	0	2	25	1	12.5	0	0	53.9	-
2345	5	0	5	0	0	0	0	0	0	0	0	0	0	1	20	0	0	0	0	52.2	-
07-19	**4865**	**24**	**4222**	**61**	**391**	**32**	**32**	**2**	**23**	**22**	**55**	**0**	**1**	**152**	**3.1**	**30**	**0.6**	**8**	**0.2**	**45.9**	**53.2**
06-22	**5496**	**28**	**4795**	**72**	**419**	**33**	**36**	**2**	**25**	**24**	**61**	**0**	**1**	**236**	**4.3**	**47**	**0.9**	**15**	**0.3**	**46.4**	**54.1**
06-00	**5605**	**28**	**4896**	**72**	**427**	**33**	**36**	**2**	**25**	**24**	**61**	**0**	**1**	**251**	**4.5**	**54**	**1**	**17**	**0.3**	**46.5**	**54.1**
00-00	**5702**	**30**	**4978**	**72**	**432**	**33**	**36**	**2**	**26**	**29**	**63**	**0**	**1**	**273**	**4.8**	**60**	**1.1**	**20**	**0.4**	**46.6**	**54.4**

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Time	Total	Classification												>PSL	>PSL%	>SL1	>SL1%	>SL2	>SL2%	Mean	Vpp
		1	2	3	4	5	6	7	8	9	10	11	12	60	60	68	68	75	75		85
		MCL	SV	SVT	TB2	TB3	T4	ART3	ART4	ART5	ART6	BD	DRT			ACPO	ACPO	Dft	Dft		
0000	7	0	7	0	0	0	0	0	0	0	0	0	0	3	42.9	2	28.6	0	0	55.1	-
0015	3	0	3	0	0	0	0	0	0	0	0	0	0	2	66.7	2	66.7	1	33.3	62.3	-
0030	4	0	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	45.7	-
0045	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	35.2	-
0100	2	0	2	0	0	0	0	0	0	0	0	0	0	1	50	1	50	1	50	73.5	-
0115	4	0	4	0	0	0	0	0	0	0	0	0	0	2	50	1	25	1	25	60.6	-
0130	4	0	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43.3	-
0145	2	0	2	0	0	0	0	0	0	0	0	0	0	1	50	1	50	1	50	59.1	-
0200	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43.9	-
0215	1	0	1	0	0	0	0	0	0	0	0	0	0	1	100	0	0	0	0	67	-
0230	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	42.6	-
0245	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	59.9	-
0300	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	55.1	-
0315	3	0	2	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	47.3	-
0330	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
0345	4	0	4	0	0	0	0	0	0	0	0	0	0	1	25	0	0	0	0	55.9	-
0400	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50.5	-
0415	3	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43.4	-
0430	4	0	4	0	0	0	0	0	0	0	0	0	0	1	25	0	0	0	0	51.5	-
0445	7	0	5	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	47.1	-
0500	7	1	6	0	0	0	0	0	0	0	0	0	0	3	42.9	1	14.3	0	0	49.5	-
0515	23	1	17	0	2	0	0	0	1	1	1	0	0	5	21.7	1	4.3	1	4.3	51	62.9
0530	18	0	15	0	2	0	0	0	0	1	0	0	0	3	16.7	1	5.6	0	0	52.3	59.1
0545	17	0	13	0	2	0	0	0	0	1	1	0	0	7	41.2	0	0	0	0	56.3	62.2
0600	27	0	19	0	1	0	3	0	1	0	3	0	0	2	7.4	0	0	0	0	48.3	56.8
0615	37	0	32	0	4	0	0	0	0	1	0	0	0	10	27	0	0	0	0	51.3	62.9
0630	48	0	43	0	4	0	0	0	0	0	1	0	0	11	22.9	4	8.3	0	0	53.8	63.1
0645	59	1	52	1	2	1	0	0	0	0	2	0	0	13	22	6	10.2	2	3.4	53.7	63.5
0700	88	0	72	1	11	0	0	1	0	0	3	0	0	7	8	1	1.1	1	1.1	49.8	57.5
0715	117	1	98	4	12	0	0	0	1	0	1	0	0	8	6.8	3	2.6	0	0	48.1	55.7
0730	124	0	107	4	8	0	0	0	2	1	2	0	0	2	1.6	0	0	0	0	45.7	52.8
0745	121	1	102	3	8	2	1	1	1	0	1	1	0	2	1.7	0	0	0	0	45.5	53.2
0800	112	2	85	5	13	2	3	0	1	0	1	0	0	3	2.7	1	0.9	0	0	45.4	52.3
0815	**140**	**2**	**118**	**5**	**13**	**0**	**0**	**0**	**1**	**0**	**1**	**0**	**0**	**2**	**1.4**	**2**	**1.4**	**0**	**0**	**45.3**	**52.1**
0830	115	0	101	0	12	0	0	0	0	0	1	0	1	4	3.5	0	0	0	0	45.5	52.1
0845	98	1	84	0	12	0	0	0	1	0	0	0	0	4	4.1	1	1	0	0	46.7	53.7
0900	87	0	72	2	8	1	1	0	0	1	2	0	0	1	1.1	0	0	0	0	45.8	51.9
0915	107	0	86	1	15	0	2	0	0	0	3	0	0	0	0	0	0	0	0	45.2	50.8
0930	93	0	79	1	6	2	2	0	2	0	1	0	0	1	1.1	0	0	0	0	45	52.1
0945	119	0	101	2	7	3	3	0	0	1	1	1	0	0	0	0	0	0	0	43	48.8
1000	93	0	73	2	13	0	1	0	0	2	2	0	0	0	0	0	0	0	0	45.6	50.8
1015	94	0	78	2	9	1	0	0	2	0	2	0	0	0	0	0	0	0	0	41.8	48.5
1030	113	2	88	1	13	2	2	1	1	2	1	0	0	1	0.9	0	0	0	0	43.3	49.4
1045	97	0	80	2	9	0	1	0	1	0	4	0	0	0	0	0	0	0	0	42.9	49
1100	94	0	76	1	13	1	0	0	2	1	0	0	0	2	2.1	1	1.1	0	0	45.9	49.9
1115	114	0	95	2	10	1	4	0	0	0	2	0	0	0	0	0	0	0	0	41.1	48.5
1130	93	0	81	1	8	2	0	0	0	0	1	0	0	2	2.2	0	0	0	0	38.7	48.8
1145	96	1	74	1	14	1	2	0	1	2	0	0	0	1	1	0	0	0	0	44.6	49.7
1200	84	1	71	4	7	0	1	0	0	0	0	0	0	0	0	0	0	0	0	46.6	52.6
1215	89	0	75	0	7	2	1	0	0	1	2	0	1	3	3.4	1	1.1	0	0	46.3	52.3
1230	103	0	90	1	10	0	0	1	1	0	0	0	0	0	0	0	0	0	0	44.4	49.2
1245	88	0	79	1	7	0	1	0	0	0	0	0	0	1	1.1	0	0	0	0	45.7	53.2
1300	79	0	66	1	8	0	1	0	2	0	1	0	0	0	0	0	0	0	0	46.1	51.9
1315	105	1	90	2	10	1	0	0	0	0	1	0	0	1	1	0	0	0	0	44.3	50.3
1330	82	1	71	1	7	0	0	0	2	0	0	0	0	2	2.4	0	0	0	0	45.1	50.3
1345	83	0	70	1	8	0	1	1	0	0	1	0	1	1	1.2	0	0	0	0	45.8	51.2
1400	106	0	85	3	15	1	1	0	0	1	0	0	0	0	0	0	0	0	0	44.2	50.1
1415	93	1	81	0	6	3	0	0	0	1	1	0	0	2	2.2	0	0	0	0	44.4	51.7
1430	110	0	95	1	6	0	0	0	2	1	4	0	1	6	5.5	1	0.9	0	0	45.9	53.5
1445	109	0	89	3	12	0	2	0	0	1	2	0	0	1	0.9	0	0	0	0	43.5	48.5
1500	86	1	80	0	2	2	1	0	0	0	0	0	0	2	2.3	0	0	0	0	49.5	56.4
1515	102	1	93	1	6	0	0	0	0	1	0	0	0	4	3.9	1	1	0	0	47.6	51.9
1530	103	1	79	6	15	0	2	0	0	0	0	0	0	2	1.9	0	0	0	0	46.9	53.5
1545	110	1	98	3	8	0	0	0	0	0	0	0	0	2	1.8	1	0.9	1	0.9	46.5	51.9
1600	101	1	92	0	8	0	0	0	0	0	0	0	0	2	2	1	1	1	1	47.2	53.2
1615	139	1	122	2	12	0	1	0	0	1	0	0	0	2	1.4	0	0	0	0	46	51
1630	**149**	**1**	**133**	**2**	**11**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**3**	**2**	**1**	**0.7**	**0**	**0**	**47.9**	**54.4**
1645	121	0	109	0	11	0	0	0	0	1	0	0	0	3	2.5	0	0	0	0	46.6	52.6
1700	141	2	129	1	9	0	0	0	0	0	0	0	0	5	3.5	2	1.4	0	0	48.2	54.8
1715	142	2	131	1	8	0	0	0	0	0	0	0	0	6	4.2	3	2.1	1	0.7	48.6	53
1730	148	1	141	1	5	0	0	0	0	0	0	0	0	10	6.8	4	2.7	0	0	47.9	53.2
1745	111	1	108	0	1	0	0	0	1	0	0	0	0	2	1.8	0	0	0	0	48.5	54.8
1800	117	0	112	2	2	0	0	0	0	0	1	0	0	3	2.6	1	0.9	1	0.9	45	53.2
1815	116	2	108	1	4	1	0	0	0	0	0	0	0	3	2.6	0	0	0	0	49	53.7
1830	92	1	90	0	1	0	0	0	0	0	0	0	0	3	3.3	0	0	0	0	43.1	51.9
1845	83	0	79	1	3	0	0	0	0	0	0	0	0	6	7.2	1	1.2	0	0	47.1	53
1900	51	0	48	1	1	0	0	0	0	1	0	0	0	7	13.7	1	2	0	0	49.6	59.3
1915	54	0	51	1	2	0	0	0	0	0	0	0	0	4	7.4	1	1.9	1	1.9	48	56.4
1930	36	0	36	0	0	0	0	0	0	0	0	0	0	3	8.3	0	0	0	0	51.2	57.3
1945	46	1	45	0	0	0	0	0	0	0	0	0	0	3	6.5	1	2.2	1	2.2	49	55.7
2000	32	0	31	0	1	0	0	0	0	0	0	0	0	4	12.5	0	0	0	0	49.7	57
2015	34	0	34	0	0	0	0	0	0	0	0	0	0	5	14.7	3	8.8	1	2.9	51.6	59.9
2030	29	1	27	0	1	0	0	0	0	0	0	0	0	4	13.8	1	3.4	0	0	51.7	59.5
2045	26	0	25	0	1	0	0	0	0	0	0	0	0	1	3.8	1	3.8	0	0	49.1	52.3
2100	26	0	26	0	0	0	0	0	0	0	0	0	0	4	15.4	0	0	0	0	51.2	58.2
2115	20	0	19	0	1	0	0	0	0	0	0	0	0	3	15	1	5	0	0	51.4	59.1
2130	19	0	18	1	0	0	0	0	0	0	0	0	0	1	5.3	0	0	0	0	47.7	51
2145	20	0	19	0	1	0	0	0	0	0	0	0	0	3	15	1	5	0	0	51	59.5
2200	34	0	34	0	0	0	0	0	0	0	0	0	0	4	11.8	0	0	0	0	47.4	54.1
2215	48	0	47	0	1	0	0	0	0	0	0	0	0	5	10.4	0	0	0	0	48.9	58.2
2230	42	0	42	0	0	0	0	0	0	0	0	0	0	1	2.4	0	0	0	0	47.1	54.1
2245	40	0	40	0	0	0	0	0	0	0	0	0	0	4	10	0	0	0	0	47	54.4
2300	19	0	18	0	0	0	0	0	1	0	0	0	0	2	10.5	0	0	0	0	49.6	56.4
2315	12	0	12	0	0	0	0	0	0	0	0	0	0	1	8.3	0	0	0	0	52.9	57.9
2330	12	0	12	0	0	0	0	0	0	0	0	0	0	2	16.7	0	0	0	0	48.3	56.1
2345	6	0	6	0	0	0	0	0	0	0	0	0	0	2	33.3	0	0	0	0	58.7	-
07-19	**5107**	**30**	**4416**	**79**	**423**	**29**	**34**	**5**	**24**	**19**	**42**	**2**	**4**	**115**	**2.3**	**26**	**0.5**	**5**	**0.1**	**45.7**	**52.6**
06-22	**5671**	**33**	**4941**	**83**	**442**	**30**	**37**	**5**	**25**	**21**	**48**	**2**	**4**	**193**	**3.4**	**46**	**0.8**	**10**	**0.2**	**46.2**	**53.2**
06-00	**5884**	**33**	**5152**	**83**	**443**	**30**	**37**	**5**	**26**	**21**	**48**	**2**	**4**	**214**	**3.6**	**46**	**0.8**	**10**	**0.2**	**46.3**	**53.2**
00-00	**6005**	**35**	**5253**	**83**	**452**	**30**	**38**	**5**	**28**	**24**	**51**	**2**	**4**	**244**	**4.1**	**56**	**0.9**	**15**	**0.2**	**46.4**	**53.5**

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Time	Total	Classification												>PSL	>PSL%	>SL1	>SL1%	>SL2	>SL2%	Mean	Vpp
		1	2	3	4	5	6	7	8	9	10	11	12	60	60	68	68	75	75		85
		MCL	SV	SVT	TB2	TB3	T4	ART3	ART4	ART5	ART6	BD	DRT			ACPO	ACPO	Dft	Dft		
0000	12	0	12	0	0	0	0	0	0	0	0	0	0	3	25	0	0	0	0	50	59.9
0015	4	0	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50.8	-
0030	8	0	7	0	0	0	0	0	0	0	1	0	0	1	12.5	1	12.5	0	0	49.7	-
0045	6	0	6	0	0	0	0	0	0	0	0	0	0	2	33.3	0	0	0	0	50.6	-
0100	7	0	5	0	2	0	0	0	0	0	0	0	0	1	14.3	0	0	0	0	53.8	-
0115	3	0	3	0	0	0	0	0	0	0	0	0	0	2	66.7	0	0	0	0	58.3	-
0130	2	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	51.7	-
0145	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
0200	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	47.8	-
0215	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
0230	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50.1	-
0245	4	0	4	0	0	0	0	0	0	0	0	0	0	1	25	0	0	0	0	57.2	-
0300	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27.4	-
0315	3	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	54	-
0330	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	54.1	-
0345	3	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	48.3	-
0400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
0415	7	0	7	0	0	0	0	0	0	0	0	0	0	1	14.3	0	0	0	0	46	-
0430	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	52.6	-
0445	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	48.1	-
0500	3	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	58.2	-
0515	4	0	2	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	41.8	-
0530	10	0	6	0	3	0	0	1	0	0	0	0	0	0	0	0	0	0	0	49	-
0545	9	0	6	0	3	0	0	0	0	0	0	0	0	5	55.6	2	22.2	2	22.2	59.5	-
0600	9	0	8	0	0	0	1	0	0	0	0	0	0	2	22.2	0	0	0	0	47.3	-
0615	23	0	14	0	4	0	2	0	3	0	0	0	0	2	8.7	1	4.3	0	0	53.4	58.4
0630	25	0	24	0	1	0	0	0	0	0	0	0	0	7	28	1	4	0	0	54.4	61.5
0645	16	0	12	1	1	0	0	1	0	0	1	0	0	2	12.5	0	0	0	0	51.3	57.9
0700	28	0	21	1	5	0	0	0	0	0	1	0	0	0	0	0	0	0	0	46.1	55
0715	35	1	26	1	3	0	1	0	0	2	1	0	0	5	14.3	0	0	0	0	48.8	59.5
0730	55	0	51	2	1	0	0	0	0	0	1	0	0	4	7.3	0	0	0	0	48.7	56.1
0745	48	1	39	1	3	0	1	0	0	1	2	0	0	7	14.6	1	2.1	0	0	51.6	59.9
0800	60	0	51	2	6	0	0	0	0	0	1	0	0	3	5	0	0	0	0	49.3	57.9
0815	57	0	51	0	4	0	1	0	0	0	1	0	0	2	3.5	0	0	0	0	47.7	54.6
0830	60	1	51	3	2	0	0	0	1	1	1	0	0	4	6.7	0	0	0	0	45.5	54.6
0845	54	1	49	0	1	0	1	0	1	1	0	0	0	1	1.9	0	0	0	0	48	54.8
0900	72	1	65	1	5	0	0	0	0	0	0	0	0	3	4.2	1	1.4	0	0	47.5	53.2
0915	71	0	60	1	8	0	0	0	2	0	0	0	0	1	1.4	0	0	0	0	45.8	52.1
0930	90	1	86	0	3	0	0	0	0	0	0	0	0	3	3.3	0	0	0	0	49.1	55
0945	79	0	71	1	6	0	0	0	0	0	1	0	0	5	6.3	1	1.3	0	0	47	53.2
1000	109	1	96	7	4	0	1	0	0	0	0	0	0	5	4.6	1	0.9	0	0	43.4	51.2
1015	101	1	89	1	6	2	0	0	0	1	1	0	0	4	4	1	1	0	0	44.4	53.7
1030	**118**	**2**	**108**	**3**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**42.4**	**48.8**
1045	102	2	92	1	5	0	0	0	0	0	2	0	0	1	1	0	0	0	0	44.8	51
1100	112	0	103	1	6	0	2	0	0	0	0	0	0	4	3.6	0	0	0	0	46.5	51.9
1115	100	2	85	1	9	1	1	0	1	0	0	0	0	2	2	1	1	0	0	45.4	52.8
1130	92	0	85	0	7	0	0	0	0	0	0	0	0	6	6.5	2	2.2	0	0	47.3	54.8
1145	105	0	94	3	5	0	2	0	1	0	0	0	0	1	1	0	0	0	0	45	52.8
1200	109	0	104	1	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43.8	51.7
1215	89	1	82	1	3	0	0	0	1	0	1	0	0	4	4.5	2	2.2	0	0	45.7	53.5
1230	85	0	78	1	5	0	1	0	0	0	0	0	0	5	5.9	0	0	0	0	46.5	52.6
1245	105	0	99	0	3	0	1	0	1	1	0	0	0	2	1.9	0	0	0	0	45.2	51.7
1300	91	3	85	1	0	0	2	0	0	0	0	0	0	2	2.2	1	1.1	0	0	46.5	53.9
1315	111	1	104	1	4	0	0	0	0	0	1	0	0	4	3.6	2	1.8	0	0	45.9	54.6
1330	107	1	100	1	4	0	1	0	0	0	0	0	0	2	1.9	0	0	0	0	45.8	51.4
1345	82	1	77	0	2	0	0	0	0	0	1	0	1	8	9.8	1	1.2	0	0	47.1	52.8
1400	72	2	67	0	1	1	0	1	0	0	0	0	0	7	9.7	0	0	0	0	47.9	56.1
1415	92	1	83	1	6	0	0	0	0	0	1	0	0	2	2.2	0	0	0	0	44.4	50.8
1430	91	1	86	1	2	0	0	0	1	0	0	0	0	2	2.2	0	0	0	0	45.8	53.7
1445	108	3	98	3	3	0	0	0	0	1	0	0	0	2	1.9	0	0	0	0	44.6	51.7
1500	79	0	76	2	1	0	0	0	0	0	0	0	0	2	2.5	1	1.3	0	0	46.1	51.9
1515	91	5	83	1	2	0	0	0	0	0	0	0	0	7	7.7	3	3.3	0	0	48.8	55.5
1530	80	0	78	0	2	0	0	0	0	0	0	0	0	1	1.3	0	0	0	0	48.3	53.7
1545	**118**	**0**	**117**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**1.7**	**0**	**0**	**0**	**0**	**46.2**	**51.7**
1600	88	0	85	1	2	0	0	0	0	0	0	0	0	2	2.3	0	0	0	0	46.5	52.8
1615	100	3	94	2	1	0	0	0	0	0	0	0	0	5	5	1	1	0	0	47.3	53
1630	87	4	76	3	2	0	1	0	0	0	1	0	0	1	1.1	1	1.1	0	0	44.3	52.3
1645	101	0	98	0	3	0	0	0	0	0	0	0	0	5	5	1	1	0	0	45.5	53.7
1700	79	1	76	1	0	0	0	0	0	1	0	0	0	5	6.3	0	0	0	0	48.8	56.6
1715	99	2	92	0	5	0	0	0	0	0	0	0	0	5	5.1	0	0	0	0	46.6	53.5
1730	79	0	76	0	3	0	0	0	0	0	0	0	0	4	5.1	0	0	0	0	47.3	53.9
1745	78	1	74	2	1	0	0	0	0	0	0	0	0	4	5.1	1	1.3	1	1.3	47.7	53.5
1800	68	1	64	0	3	0	0	0	0	0	0	0	0	5	7.4	4	5.9	0	0	49.7	55.9
1815	63	0	59	0	3	0	0	0	0	0	1	0	0	6	9.5	0	0	0	0	50.3	58.4
1830	60	2	56	0	2	0	0	0	0	0	0	0	0	5	8.3	2	3.3	0	0	50.4	58.6
1845	39	0	37	0	2	0	0	0	0	0	0	0	0	3	7.7	0	0	0	0	49.4	57.7
1900	45	1	43	0	1	0	0	0	0	0	0	0	0	1	2.2	0	0	0	0	48.9	54.6
1915	46	1	45	0	0	0	0	0	0	0	0	0	0	5	10.9	0	0	0	0	51.6	55.9
1930	39	1	34	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50.3	57
1945	30	0	30	0	0	0	0	0	0	0	0	0	0	4	13.3	1	3.3	0	0	51.1	59.5
2000	25	0	25	0	0	0	0	0	0	0	0	0	0	3	12	0	0	0	0	48.4	54.4
2015	27	0	26	0	1	0	0	0	0	0	0	0	0	4	14.8	2	7.4	1	3.7	51.3	59.3
2030	23	0	23	0	0	0	0	0	0	0	0	0	0	2	8.7	0	0	0	0	50.3	57.9
2045	31	0	31	0	0	0	0	0	0	0	0	0	0	1	3.2	1	3.2	0	0	46.9	51.9
2100	20	0	20	0	0	0	0	0	0	0	0	0	0	2	10	1	5	0	0	49.4	53
2115	18	0	16	0	2	0	0	0	0	0	0	0	0	2	11.1	0	0	0	0	47.5	57
2130	21	0	20	0	1	0	0	0	0	0	0	0	0	3	14.3	0	0	0	0	48.7	59.5
2145	18	0	18	0	0	0	0	0	0	0	0	0	0	3	16.7	1	5.6	0	0	54.8	58.6
2200	26	0	26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	47.8	55.7
2215	29	0	28	0	1	0	0	0	0	0	0	0	0	2	6.9	0	0	0	0	48.5	55.9
2230	14	0	14	0	0	0	0	0	0	0	0	0	0	2	14.3	0	0	0	0	53.3	59.7
2245	17	0	17	0	0	0	0	0	0	0	0	0	0	2	11.8	1	5.9	0	0	52	55.5
2300	9	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	44.6	-
2315	9	0	9	0	0	0	0	0	0	0	0	0	0	1	11.1	0	0	0	0	46.6	-
2330	17	0	16	0	1	0	0	0	0	0	0	0	0	3	17.6	0	0	0	0	51.6	56.4
2345	15	0	14	0	1	0	0	0	0	0	0	0	0	2	13.3	0	0	0	0	52.3	57
07-19	**3999**	**47**	**3677**	**53**	**164**	**4**	**16**	**1**	**9**	**9**	**18**	**0**	**1**	**163**	**4.1**	**28**	**0.7**	**1**	**0**	**46.5**	**53.9**
06-22	**4415**	**50**	**4066**	**54**	**179**	**4**	**19**	**2**	**12**	**9**	**19**	**0**	**1**	**206**	**4.7**	**36**	**0.8**	**2**	**0**	**46.8**	**54.4**
06-00	**4551**	**50**	**4199**	**54**	**182**	**4**	**19**	**2**	**12**	**9**	**19**	**0**	**1**	**218**	**4.8**	**37**	**0.8**	**2**	**0**	**46.9**	**54.6**
00-00	**4649**	**52**	**4277**	**54**	**195**	**5**	**19**	**3**	**12**	**10**	**20**	**1**	**1**	**234**	**5**	**40**	**0.9**	**4**	**0.1**	**47**	**54.6**

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Time	Total	Classification												>PSL	>PSL%	>SL1	>SL1%	>SL2	>SL2%	Mean	Vpp
		1	2	3	4	5	6	7	8	9	10	11	12	60	60	68	68	75	75		85
		MCL	SV	SVT	TB2	TB3	T4	ART3	ART4	ART5	ART6	BD	DRT			ACPO	ACPO	Dft	Dft		
0000	15	0	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50.1	56.4
0015	11	0	11	0	0	0	0	0	0	0	0	0	0	1	9.1	0	0	0	0	52.6	53.2
0030	13	0	12	0	1	0	0	0	0	0	0	0	0	5	38.5	3	23.1	3	23.1	57.1	76.1
0045	6	0	5	0	1	0	0	0	0	0	0	0	0	1	16.7	0	0	0	0	48.3	-
0100	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	49.1	-
0115	5	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	48.7	-
0130	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	44.3	-
0145	3	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	47.4	-
0200	2	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50.8	-
0215	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	54	-
0230	7	0	6	0	1	0	0	0	0	0	0	0	0	1	14.3	1	14.3	0	0	51.6	-
0245	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	57.8	-
0300	1	0	1	0	0	0	0	0	0	0	0	0	0	1	100	1	100	0	0	70.3	-
0315	3	0	3	0	0	0	0	0	0	0	0	0	0	1	33.3	1	33.3	0	0	60.5	-
0330	2	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	45.5	-
0345	3	0	2	0	1	0	0	0	0	0	0	0	0	2	66.7	1	33.3	1	33.3	63.1	-
0400	3	0	3	0	0	0	0	0	0	0	0	0	0	1	33.3	0	0	0	0	48.8	-
0415	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	54.1	-
0430	3	0	3	0	0	0	0	0	0	0	0	0	0	1	33.3	1	33.3	0	0	53.9	-
0445	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	55.7	-
0500	6	0	3	0	2	0	0	0	0	1	0	0	0	2	33.3	0	0	0	0	50.9	-
0515	1	0	1	0	0	0	0	0	0	0	0	0	0	1	100	1	100	0	0	68.5	-
0530	7	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	53	-
0545	5	0	5	0	0	0	0	0	0	0	0	0	0	3	60	0	0	0	0	59.4	-
0600	7	1	4	0	2	0	0	0	0	0	0	0	0	2	28.6	0	0	0	0	53	-
0615	6	0	6	0	0	0	0	0	0	0	0	0	0	2	33.3	2	33.3	1	16.7	61.2	-
0630	19	0	17	0	2	0	0	0	0	0	0	0	0	4	21.1	1	5.3	0	0	52.1	62.6
0645	21	0	19	1	1	0	0	0	0	0	0	0	0	3	14.3	2	9.5	1	4.8	54.2	59.5
0700	21	1	20	0	0	0	0	0	0	0	0	0	0	4	19	1	4.8	0	0	49.3	60.4
0715	20	0	19	0	1	0	0	0	0	0	0	0	0	3	15	0	0	0	0	53.2	58.4
0730	12	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	48.2	54.1
0745	21	2	18	0	0	0	0	0	1	0	0	0	0	2	9.5	1	4.8	1	4.8	48.9	56.4
0800	24	1	21	0	1	0	0	0	1	0	0	0	0	1	4.2	0	0	0	0	47.8	55.7
0815	44	2	41	0	1	0	0	0	0	0	0	0	0	5	11.4	1	2.3	0	0	51.6	59.5
0830	54	0	53	0	1	0	0	0	0	0	0	0	0	7	13	1	1.9	0	0	49.7	55.5
0845	37	2	31	1	2	0	1	0	0	0	0	0	0	4	10.8	0	0	0	0	49.4	57.3
0900	55	0	52	0	3	0	0	0	0	0	0	0	0	6	10.9	1	1.8	0	0	49.7	57.5
0915	84	2	75	3	4	0	0	0	0	0	0	0	0	1	1.2	0	0	0	0	47.6	53.9
0930	74	3	70	1	0	0	0	0	0	0	0	0	0	4	5.4	0	0	0	0	47.2	53.9
0945	71	2	69	0	0	0	0	0	0	0	0	0	0	2	2.8	0	0	0	0	48.4	55
1000	76	3	69	1	2	1	0	0	0	0	0	0	0	5	6.6	1	1.3	0	0	40.9	54.6
1015	84	1	80	0	3	0	0	0	0	0	0	0	0	5	6	1	1.2	0	0	46.3	52.3
1030	77	0	70	1	5	0	1	0	0	0	0	0	0	2	2.6	0	0	0	0	46.2	53
1045	93	1	90	0	2	0	0	0	0	0	0	0	0	7	7.5	1	1.1	0	0	45.3	53.9
1100	76	0	73	1	1	0	1	0	0	0	0	0	0	2	2.6	1	1.3	0	0	46.5	52.8
1115	**105**	**4**	**96**	**3**	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**0**	**45.8**	**51.7**
1130	101	2	96	2	1	0	0	0	0	0	0	0	0	1	1	1	1	0	0	44	51
1145	80	1	77	1	1	0	0	0	0	0	0	0	0	1	1.3	1	1.3	0	0	45.9	49.9
1200	96	0	96	0	0	0	0	0	0	0	0	0	0	2	2.1	0	0	0	0	44.6	52.1
1215	**108**	**2**	**102**	**2**	**1**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0.9**	**0**	**0**	**0**	**0**	**44.1**	**50.1**
1230	94	0	93	1	0	0	0	0	0	0	0	0	0	2	2.1	1	1.1	1	1.1	44.6	51
1245	93	2	89	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	44.5	50.3
1300	86	1	78	2	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	46	54.1
1315	87	5	78	1	3	0	0	0	0	0	0	0	0	5	5.7	0	0	0	0	47.5	55.9
1330	94	4	87	0	3	0	0	0	0	0	0	0	0	5	5.3	0	0	0	0	43.5	51.2
1345	102	2	94	4	1	0	1	0	0	0	0	0	0	3	2.9	2	2	1	1	46.8	54.1
1400	90	4	84	1	1	0	0	0	0	0	0	0	0	5	5.6	1	1.1	0	0	48.8	55.5
1415	90	0	90	0	0	0	0	0	0	0	0	0	0	8	8.9	0	0	0	0	47.7	55.3
1430	75	2	71	0	2	0	0	0	0	0	0	0	0	2	2.7	2	2.7	1	1.3	46.4	52.1
1445	79	2	76	0	1	0	0	0	0	0	0	0	0	1	1.3	0	0	0	0	46.7	52.1
1500	78	1	75	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	44.8	50.8
1515	78	1	76	1	0	0	0	0	0	0	0	0	0	3	3.8	0	0	0	0	46.2	53.7
1530	91	3	82	1	5	0	0	0	0	0	0	0	0	4	4.4	0	0	0	0	45.7	51.7
1545	94	0	91	1	2	0	0	0	0	0	0	0	0	2	2.1	0	0	0	0	44.8	52.1
1600	101	3	96	1	1	0	0	0	0	0	0	0	0	5	5	0	0	0	0	46	51.4
1615	78	0	73	1	4	0	0	0	0	0	0	0	0	2	2.6	1	1.3	0	0	46.7	51.4
1630	100	3	94	0	3	0	0	0	0	0	0	0	0	5	5	3	3	1	1	46.5	53
1645	104	1	95	2	6	0	0	0	0	0	0	0	0	3	2.9	0	0	0	0	47	52.6
1700	100	2	96	0	2	0	0	0	0	0	0	0	0	7	7	3	3	0	0	47.7	53
1715	74	1	70	0	3	0	0	0	0	0	0	0	0	7	9.5	1	1.4	0	0	48.7	56.4
1730	65	3	61	0	1	0	0	0	0	0	0	0	0	11	16.9	3	4.6	1	1.5	51.6	60.6
1745	67	3	64	0	0	0	0	0	0	0	0	0	0	4	6	2	3	0	0	50.3	56.6
1800	53	1	50	0	1	0	1	0	0	0	0	0	0	8	15.1	3	5.7	0	0	53	58.2
1815	46	0	43	1	2	0	0	0	0	0	0	0	0	5	10.9	3	6.5	1	2.2	50.7	55.5
1830	52	0	49	0	3	0	0	0	0	0	0	0	0	5	9.6	1	1.9	1	1.9	49.9	57.7
1845	42	0	40	2	0	0	0	0	0	0	0	0	0	2	4.8	0	0	0	0	47.6	54.6
1900	42	1	38	1	2	0	0	0	0	0	0	0	0	7	16.7	0	0	0	0	52.9	59.9
1915	36	1	34	0	1	0	0	0	0	0	0	0	0	1	2.8	1	2.8	0	0	50.2	55.5
1930	37	0	36	0	1	0	0	0	0	0	0	0	0	5	13.5	1	2.7	1	2.7	51.4	56.6
1945	33	1	31	0	1	0	0	0	0	0	0	0	0	5	15.2	1	3	0	0	52.6	58.4
2000	26	0	26	0	0	0	0	0	0	0	0	0	0	3	11.5	1	3.8	0	0	51.4	56.8
2015	21	0	21	0	0	0	0	0	0	0	0	0	0	1	4.8	0	0	0	0	51.1	57
2030	21	0	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	47.2	54.6
2045	23	1	20	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	48	53.5
2100	14	0	14	0	0	0	0	0	0	0	0	0	0	2	14.3	0	0	0	0	50.9	56.4
2115	18	0	17	0	1	0	0	0	0	0	0	0	0	4	22.2	1	5.6	0	0	51.8	60.6
2130	12	0	12	0	0	0	0	0	0	0	0	0	0	2	16.7	1	8.3	0	0	49	55
2145	19	0	19	0	0	0	0	0	0	0	0	0	0	2	10.5	1	5.3	0	0	54.2	58.2
2200	8	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50.3	-
2215	17	0	17	0	0	0	0	0	0	0	0	0	0	2	11.8	1	5.9	0	0	52.3	57.7
2230	6	0	6	0	0	0	0	0	0	0	0	0	0	3	50	1	16.7	0	0	59	-
2245	9	0	9	0	0	0	0	0	0	0	0	0	0	3	33.3	1	11.1	0	0	57.5	-
2300	7	0	7	0	0	0	0	0	0	0	0	0	0	1	14.3	0	0	0	0	52.3	-
2315	5	0	3	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	42.3	-
2330	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	52.1	-
2345	4	0	3	0	1	0	0	0	0	0	0	0	0	1	25	0	0	0	0	50.3	-
07-19	**3526**	**73**	**3325**	**37**	**81**	**2**	**5**	**0**	**2**	**1**	**0**	**0**	**0**	**170**	**4.8**	**37**	**1**	**8**	**0.2**	**46.7**	**53.9**
06-22	**3881**	**78**	**3660**	**39**	**94**	**2**	**5**	**0**	**2**	**1**	**0**	**0**	**0**	**213**	**5.5**	**49**	**1.3**	**11**	**0.3**	**47.2**	**54.6**
06-00	**3940**	**78**	**3716**	**40**	**95**	**2**	**5**	**0**	**2**	**2**	**0**	**0**	**0**	**223**	**5.7**	**52**	**1.3**	**11**	**0.3**	**47.3**	**54.8**
00-00	**4045**	**78**	**3811**	**41**	**103**	**2**	**5**	**0**	**2**	**3**	**0**	**0**	**0**	**243**	**6**	**61**	**1.5**	**15**	**0.4**	**47.4**	**55**

24 April 2017

Time	Total	Classification												>PSL	>PSL%	>SL1	>SL1%	>SL2	>SL2%	Mean	Vpp
		1	2	3	4	5	6	7	8	9	10	11	12	60	60	68	68	75	75		85
		MCL	SV	SVT	TB2	TB3	T4	ART3	ART4	ART5	ART6	BD	DRT			ACPO	ACPO	Dft	Dft		
0000	2	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50.5	-
0015	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	45.3	-
0030	5	1	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	45.6	-
0045	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	47.3	-
0100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
0115	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
0130	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
0145	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
0200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
0215	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
0230	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
0245	3	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	54	-
0300	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	48.5	-
0315	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43.2	-
0330	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
0345	8	0	6	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	48.2	-
0400	4	0	2	0	1	0	0	0	0	0	1	0	0	1	25	1	25	0	0	53.1	-
0415	3	0	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	44.8	-
0430	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
0445	6	0	5	0	1	0	0	0	0	0	0	0	0	1	16.7	0	0	0	0	52.2	-
0500	10	0	8	0	1	0	0	0	0	1	0	0	0	1	10	0	0	0	0	50.8	-
0515	24	0	23	0	1	0	0	0	0	0	0	0	0	4	16.7	0	0	0	0	52.4	58.6
0530	15	0	14	0	1	0	0	0	0	0	0	0	0	2	13.3	0	0	0	0	52.1	57.7
0545	25	0	18	0	3	0	0	0	2	0	2	0	0	4	16	0	0	0	0	51.3	59.3
0600	25	0	16	0	3	0	3	0	1	1	1	0	0	2	8	0	0	0	0	50.4	57.7
0615	36	0	31	0	3	1	0	0	0	0	1	0	0	4	11.1	1	2.8	0	0	52	59.7
0630	66	0	55	0	7	0	3	0	0	0	1	0	0	5	7.6	1	1.5	1	1.5	51.6	58.6
0645	62	0	52	2	5	0	0	0	0	0	3	0	0	6	9.7	1	1.6	1	1.6	50.1	58.6
0700	100	1	86	1	8	0	0	0	0	0	4	0	0	5	5	0	0	0	0	49	55.9
0715	131	0	113	2	12	0	1	0	0	0	2	0	1	4	3.1	0	0	0	0	46.2	54.4
0730	**147**	**0**	**123**	**6**	**15**	**0**	**0**	**0**	**2**	**0**	**1**	**0**	**0**	**5**	**3.4**	**3**	**2**	**0**	**0**	**47.2**	**52.8**
0745	108	1	90	1	11	2	1	0	1	0	1	0	0	1	0.9	0	0	0	0	41.5	52.3
0800	107	0	88	0	11	1	0	0	3	3	1	0	0	1	0.9	1	0.9	0	0	45.3	51.4
0815	127	0	108	1	13	1	1	1	1	0	1	0	0	1	0.8	0	0	0	0	42.5	49.4
0830	132	2	112	1	9	1	1	0	3	2	1	0	0	1	0.8	1	0.8	0	0	45.5	49.7
0845	97	0	82	0	12	1	1	0	0	0	1	0	0	3	3.1	0	0	0	0	46.4	53
0900	101	0	83	2	9	0	0	1	1	3	2	0	0	4	4	2	2	0	0	44.8	53
0915	79	0	63	1	8	1	2	0	0	1	3	0	0	0	0	0	0	0	0	43.1	50.6
0930	81	0	65	0	13	1	1	0	0	0	1	0	0	0	0	0	0	0	0	45	51.7
0945	93	0	76	4	11	0	0	0	0	1	1	0	0	0	0	0	0	0	0	44.9	50.1
1000	75	0	68	1	4	0	1	0	0	1	0	0	0	1	1.3	0	0	0	0	43	50.3
1015	67	0	53	0	7	0	3	0	1	1	2	0	0	0	0	0	0	0	0	44.9	53.5
1030	79	2	60	3	10	0	3	0	0	1	0	0	0	2	2.5	0	0	0	0	44.5	51
1045	81	1	67	2	5	0	1	0	1	3	1	0	0	0	0	0	0	0	0	40.9	48.5
1100	89	0	77	3	5	0	1	1	0	1	1	0	0	1	1.1	0	0	0	0	42.4	49
1115	87	0	69	0	12	1	2	1	1	0	1	0	0	1	1.1	0	0	0	0	46	52.6
1130	77	2	61	1	8	2	0	0	2	0	1	0	0	3	3.9	1	1.3	0	0	44.6	50.8
1145	72	0	58	2	9	1	1	0	1	0	0	0	0	1	1.4	0	0	0	0	44.2	50.8
1200	69	0	59	3	4	0	2	0	0	0	1	0	0	1	1.4	0	0	0	0	44.9	50.6
1215	75	0	61	1	6	1	3	0	0	1	2	0	0	2	2.7	1	1.3	0	0	45.8	52.1
1230	67	0	50	2	10	0	0	0	2	2	1	0	0	0	0	0	0	0	0	43.2	47.9
1245	66	0	54	0	6	1	3	1	0	1	0	0	0	3	4.5	1	1.5	0	0	46.1	53.7
1300	90	2	66	5	13	1	0	0	1	0	2	0	0	3	3.3	0	0	0	0	44.7	50.3
1315	93	0	79	3	6	2	0	0	0	0	3	0	0	2	2.2	1	1.1	0	0	45.8	52.1
1330	68	0	55	0	9	0	0	0	0	1	1	1	1	2	2.9	0	0	0	0	45.6	53
1345	79	0	70	1	4	1	3	0	0	0	0	0	0	1	1.3	1	1.3	0	0	46.3	52.3
1400	88	0	75	3	7	1	2	0	0	0	0	0	0	3	3.4	1	1.1	0	0	44.5	52.3
1415	82	0	75	2	3	0	0	0	0	0	2	0	0	2	2.4	1	1.2	0	0	47.7	53.5
1430	83	0	69	3	8	0	1	1	0	1	0	0	0	0	0	0	0	0	0	44.5	51.9
1445	80	0	64	2	9	1	2	0	1	1	0	0	0	1	1.3	0	0	0	0	46.2	51.9
1500	85	0	72	1	9	1	0	0	1	0	1	0	0	3	3.5	0	0	0	0	46.3	50.1
1515	81	0	64	4	10	0	0	0	0	2	1	0	0	2	2.5	0	0	0	0	45.3	51.7
1530	113	1	96	1	9	1	1	0	1	2	1	0	0	3	2.7	1	0.9	0	0	43.2	48.5
1545	83	1	73	0	8	0	0	1	0	0	0	0	0	1	1.2	1	1.2	0	0	47.5	53.9
1600	113	0	100	1	9	1	0	0	0	1	1	0	0	3	2.7	1	0.9	1	0.9	45.5	50.3
1615	122	0	112	1	9	0	0	0	0	0	0	0	0	3	2.5	2	1.6	0	0	44.1	49.9
1630	124	1	103	2	15	0	0	0	3	0	0	0	0	2	1.6	0	0	0	0	47.2	52.3
1645	**142**	**1**	**127**	**4**	**8**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**2.1**	**0**	**0**	**0**	**0**	**46.6**	**52.6**
1700	112	2	103	1	6	0	0	0	0	0	0	0	0	3	2.7	0	0	0	0	47.2	55.3
1715	130	0	119	2	9	0	0	0	0	0	0	0	0	2	1.5	0	0	0	0	46.8	50.8
1730	122	0	115	1	6	0	0	0	0	0	0	0	0	3	2.5	1	0.8	0	0	46.7	53.2
1745	104	2	98	2	2	0	0	0	0	0	0	0	0	5	4.8	3	2.9	1	1	47	54.4
1800	94	3	88	0	3	0	0	0	0	0	0	0	0	4	4.3	0	0	0	0	48	53.9
1815	78	1	74	0	3	0	0	0	0	0	0	0	0	3	3.8	0	0	0	0	48.5	55.5
1830	81	0	76	1	2	0	0	0	0	0	2	0	0	7	8.6	1	1.2	1	1.2	49.2	56.1
1845	72	1	68	0	3	0	0	0	0	0	0	0	0	7	9.7	1	1.4	0	0	49.4	57
1900	48	1	44	1	2	0	0	0	0	0	0	0	0	5	10.4	0	0	0	0	48.5	58.6
1915	41	0	40	0	0	0	0	0	0	0	1	0	0	4	9.8	1	2.4	1	2.4	50.9	57.5
1930	40	0	38	0	1	0	0	0	0	0	1	0	0	4	10	0	0	0	0	51.6	57.7
1945	33	0	32	0	1	0	0	0	0	0	0	0	0	6	18.2	1	3	0	0	52	61.3
2000	30	0	27	0	2	0	0	0	0	1	0	0	0	6	20	2	6.7	0	0	50.9	62.2
2015	30	0	30	0	0	0	0	0	0	0	0	0	0	6	20	3	10	1	3.3	53.4	65.1
2030	25	0	24	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	46.9	51.2
2045	24	0	24	0	0	0	0	0	0	0	0	0	0	2	8.3	0	0	0	0	49.7	57.7
2100	22	0	22	0	0	0	0	0	0	0	0	0	0	3	13.6	0	0	0	0	50.8	55.7
2115	19	0	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	48	56.4
2130	11	0	11	0	0	0	0	0	0	0	0	0	0	1	9.1	0	0	0	0	48.8	53
2145	21	0	20	0	1	0	0	0	0	0	0	0	0	5	23.8	1	4.8	0	0	49.8	60.8
2200	22	0	22	0	0	0	0	0	0	0	0	0	0	3	13.6	1	4.5	0	0	51.3	58.8
2215	25	1	22	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	44.2	49.2
2230	12	0	11	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	46.4	55.9
2245	10	0	10	0	0	0	0	0	0	0	0	0	0	1	10	0	0	0	0	49.6	-
2300	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	52.7	-
2315	5	0	5	0	0	0	0	0	0	0	0	0	0	1	20	0	0	0	0	52.3	-
2330	8	0	6	0	2	0	0	0	0	0	0	0	0	3	37.5	1	12.5	0	0	56.5	-
2345	4	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	45.1	-
07-19	**4526**	**24**	**3867**	**77**	**388**	**23**	**39**	**7**	**26**	**29**	**43**	**1**	**2**	**108**	**2.4**	**25**	**0.6**	**3**	**0.1**	**45.6**	**52.6**
06-22	**5059**	**25**	**4352**	**80**	**414**	**24**	**45**	**7**	**27**	**31**	**51**	**1**	**2**	**167**	**3.3**	**36**	**0.7**	**7**	**0.1**	**46.1**	**53.2**
06-00	**5148**	**26**	**4433**	**81**	**418**	**24**	**45**	**9**	**27**	**31**	**51**	**1**	**2**	**175**	**3.4**	**38**	**0.7**	**7**	**0.1**	**46.1**	**53.5**
00-00	**5258**	**27**	**4518**	**82**	**430**	**24**	**45**	**9**	**29**	**35**	**56**	**1**	**2**	**188**	**3.6**	**39**	**0.7**	**7**	**0.1**	**46.2**	**53.5**

25 April 2017

Time	Total	Classification												>PSL	>PSL%	>SL1	>SL1%	>SL2	>SL2%	Mean	Vpp
		1	2	3	4	5	6	7	8	9	10	11	12	60	60	68	68	75	75		85
		MCL	SV	SVT	TB2	TB3	T4	ART3	ART4	ART5	ART6	BD	DRT			ACPO	ACPO	DfT	DfT		
0000	2	0	2	0	0	0	0	0	0	0	0	0	0	1	50	0	0	0	0	53.3	-
0015	6	0	6	0	0	0	0	0	0	0	0	0	0	2	33.3	0	0	0	0	50.4	-
0030	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	49.9	-
0045	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	56	-
0100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
0115	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
0130	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
0145	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
0200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
0215	2	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	53.5	-
0230	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	58.7	-
0245	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
0300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
0315	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
0330	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	52.8	-
0345	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
0400	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	56.8	-
0415	3	0	3	0	0	0	0	0	0	0	0	0	0	1	33.3	0	0	0	0	57.7	-
0430	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50.6	-
0445	3	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	48.7	-
0500	7	0	6	0	1	0	0	0	0	0	0	0	0	1	14.3	0	0	0	0	50.2	-
0515	30	0	25	0	2	0	0	0	1	1	1	0	0	3	10	0	0	0	0	48.6	52.8
0530	11	0	9	0	2	0	0	0	0	0	0	0	0	1	9.1	1	9.1	0	0	49.3	52.8
0545	24	0	21	0	0	1	0	0	1	1	0	0	0	3	12.5	1	4.2	0	0	50.6	54.8
0600	33	0	25	0	4	0	0	0	0	0	4	0	0	6	18.2	1	3	0	0	49.8	60.2
0615	42	0	33	0	1	5	2	0	0	1	0	0	0	2	4.8	1	2.4	0	0	49.6	55.7
0630	67	0	55	0	5	4	1	0	0	1	1	0	0	5	7.5	0	0	0	0	49.1	55.5
0645	56	1	44	0	3	4	3	0	0	1	0	0	0	4	7.1	1	1.8	0	0	51.2	55.9
0700	113	0	95	1	9	5	1	0	0	0	2	0	0	3	2.7	0	0	0	0	49.4	54.1
0715	137	1	117	3	9	7	0	0	0	0	0	0	0	3	2.2	0	0	0	0	49.7	54.1
0730	144	1	114	1	15	8	1	0	1	0	3	0	0	6	4.2	0	0	0	0	45.9	54.8
0745	**149**	**1**	**122**	**3**	**10**	**8**	**0**	**0**	**3**	**0**	**1**	**1**	**0**	**2**	**1.3**	**0**	**0**	**0**	**0**	**46.8**	**52.8**
0800	127	0	104	3	12	2	0	2	1	2	1	0	0	4	3.1	0	0	0	0	44.3	53.2
0815	124	2	109	2	5	2	3	0	1	0	0	0	0	0	0	0	0	0	0	43.6	50.8
0830	106	0	89	1	12	3	0	1	0	0	0	0	0	4	3.8	0	0	0	0	48	53.7
0845	95	0	82	0	8	0	1	0	2	0	1	0	1	3	3.2	0	0	0	0	47.2	56.6
0900	84	0	64	0	13	3	1	0	1	0	2	0	0	1	1.2	0	0	0	0	45.4	54.1
0915	96	1	82	0	8	3	0	0	1	1	0	0	0	4	4.2	2	2.1	1	1	48	52.6
0930	81	1	71	0	6	2	0	0	0	0	1	0	0	5	6.2	1	1.2	0	0	48.4	54.8
0945	93	0	75	0	12	1	3	1	0	0	1	0	0	0	0	0	0	0	0	44.9	51.4
1000	93	1	67	0	18	3	0	1	1	0	2	0	0	3	3.2	0	0	0	0	44.7	50.1
1015	83	0	65	2	9	1	0	0	1	0	5	0	0	3	3.6	1	1.2	0	0	43.6	51.9
1030	85	0	69	2	10	0	0	0	2	0	2	0	0	7	8.2	0	0	0	0	47.2	57.7
1045	92	0	83	2	3	1	0	0	1	1	1	0	0	2	2.2	0	0	0	0	46.3	52.3
1100	85	1	70	0	8	3	2	0	0	0	1	0	0	2	2.4	0	0	0	0	44.2	51.9
1115	78	1	60	2	9	2	0	1	2	0	1	0	0	0	0	0	0	0	0	42.2	49.4
1130	76	0	68	2	2	0	1	0	1	0	2	0	0	4	5.3	2	2.6	0	0	44.6	51.4
1145	64	0	52	0	8	2	1	0	0	1	0	0	0	1	1.6	0	0	0	0	45.3	53.2
1200	76	0	67	0	6	2	0	1	0	0	0	0	0	4	5.3	0	0	0	0	43.7	53.5
1215	65	0	51	0	6	1	2	0	2	2	1	0	0	0	0	0	0	0	0	43.5	51.2
1230	91	1	75	0	14	0	1	0	0	0	0	0	0	2	2.2	1	1.1	0	0	46.1	50.8
1245	74	1	63	0	6	2	1	0	0	0	1	0	0	2	2.7	0	0	0	0	46.8	53.5
1300	64	0	52	0	9	0	0	0	1	0	2	0	0	3	4.7	0	0	0	0	46.8	52.6
1315	70	2	59	0	7	0	0	0	0	1	1	0	0	2	2.9	0	0	0	0	45.3	53
1330	89	0	75	0	11	0	0	1	1	1	0	0	0	2	2.2	0	0	0	0	43.2	51.2
1345	69	0	57	3	9	0	0	0	0	0	0	0	0	1	1.4	1	1.4	1	1.4	46.4	53
1400	75	1	59	2	7	0	0	0	1	2	3	0	0	3	4	2	2.7	0	0	44.8	52.6
1415	122	1	105	5	6	3	0	0	1	0	1	0	0	1	0.8	0	0	0	0	44.1	49.2
1430	67	0	57	2	4	1	1	1	0	0	1	0	0	5	7.5	2	3	0	0	48.8	54.6
1445	80	0	68	0	8	1	0	0	0	1	2	0	0	1	1.3	1	1.3	0	0	45.2	51
1500	74	0	61	2	8	0	1	0	2	0	0	0	0	1	1.4	0	0	0	0	43.8	48.3
1515	96	0	84	2	9	0	0	0	0	0	1	0	0	3	3.1	0	0	0	0	47.8	52.8
1530	81	1	66	2	10	0	1	0	0	0	1	0	0	3	3.7	0	0	0	0	44.3	51.7
1545	114	0	102	0	9	1	0	0	1	0	1	0	0	0	0	0	0	0	0	41.7	51.9
1600	104	1	83	3	9	4	0	0	1	0	2	0	1	3	2.9	1	1	0	0	47.1	53.2
1615	113	1	94	7	9	0	0	0	0	1	1	0	0	4	3.5	2	1.8	0	0	44.6	53
1630	140	0	132	1	5	2	0	0	0	0	0	0	0	2	1.4	0	0	0	0	47.8	52.8
1645	129	0	111	2	9	4	1	0	1	1	0	0	0	1	0.8	0	0	0	0	43.2	50.1
1700	144	2	127	0	8	5	1	0	0	0	1	0	0	6	4.2	2	1.4	1	0.7	45	52.6
1715	**156**	**2**	**133**	**2**	**5**	**13**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**2**	**1.3**	**0**	**0**	**0**	**0**	**45.3**	**50.3**
1730	150	0	132	0	7	11	0	0	0	0	0	0	0	2	1.3	0	0	0	0	46.5	49.9
1745	96	0	86	2	4	4	0	0	0	0	0	0	0	4	4.2	0	0	0	0	47.5	55
1800	93	0	90	0	2	0	0	0	1	0	0	0	0	8	8.6	2	2.2	0	0	49.9	55
1815	105	1	96	0	4	3	0	0	0	0	1	0	0	4	3.8	1	1	0	0	47.2	54.8
1830	87	0	82	0	2	1	0	0	1	0	1	0	0	3	3.4	0	0	0	0	48.5	53.5
1845	66	0	62	0	2	1	0	0	0	0	1	0	0	7	10.6	0	0	0	0	48.5	59.1
1900	50	0	48	1	0	0	0	0	1	0	0	0	0	5	10	1	2	0	0	49.7	57.5
1915	41	0	39	0	2	0	0	0	0	0	0	0	0	2	4.9	0	0	0	0	49.8	53.9
1930	29	0	28	1	0	0	0	0	0	0	0	0	0	8	27.6	1	3.4	0	0	50.8	62.4
1945	36	0	34	0	2	0	0	0	0	0	0	0	0	3	8.3	1	2.8	0	0	50.9	57
2000	35	0	33	0	1	0	0	0	0	1	0	0	0	1	2.9	0	0	0	0	45.8	55
2015	31	0	29	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	44.1	49
2030	27	0	26	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	46.3	52.3
2045	22	0	18	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	45.2	51.4
2100	20	0	19	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	44.2	48.8
2115	28	0	28	0	0	0	0	0	0	0	0	0	0	2	7.1	0	0	0	0	46.3	50.8
2130	25	0	23	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	43.7	48.5
2145	28	0	27	0	1	0	0	0	0	0	0	0	0	1	3.6	0	0	0	0	49.7	56.6
2200	24	0	24	0	0	0	0	0	0	0	0	0	0	1	4.2	0	0	0	0	45.4	47.9
2215	18	0	18	0	0	0	0	0	0	0	0	0	0	1	5.6	0	0	0	0	45.8	50.1
2230	13	0	12	0	1	0	0	0	0	0	0	0	0	1	7.7	1	7.7	0	0	49.5	51.4
2245	14	0	14	0	0	0	0	0	0	0	0	0	0	3	21.4	0	0	0	0	49.6	60.8
2300	6	0	6	0	0	0	0	0	0	0	0	0	0	2	33.3	0	0	0	0	53.5	-
2315	7	0	7	0	0	0	0	0	0	0	0	0	0	1	14.3	0	0	0	0	53.4	-
2330	4	0	4	0	0	0	0	0	0	0	0	0	0	2	50	0	0	0	0	56.3	-
2345	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	52	-
07-19	**4695**	**24**	**3987**	**59**	**381**	**115**	**23**	**9**	**31**	**15**	**48**	**1**	**2**	**136**	**2.9**	**21**	**0.4**	**3**	**0.1**	**45.9**	**53**
06-22	**5265**	**25**	**4496**	**62**	**402**	**135**	**29**	**9**	**32**	**19**	**53**	**1**	**2**	**175**	**3.3**	**27**	**0.5**	**3**	**0.1**	**46.2**	**53.5**
06-00	**5354**	**25**	**4584**	**62**	**403**	**135**	**29**	**9**	**32**	**19**	**53**	**1**	**2**	**186**	**3.5**	**28**	**0.5**	**3**	**0.1**	**46.2**	**53.5**
00-00	**5451**	**26**	**4666**	**62**	**409**	**136**	**29**	**11**	**34**	**21**	**54**	**1**	**2**	**198**	**3.6**	**30**	**0.6**	**3**	**0.1**	**46.3**	**53.5**

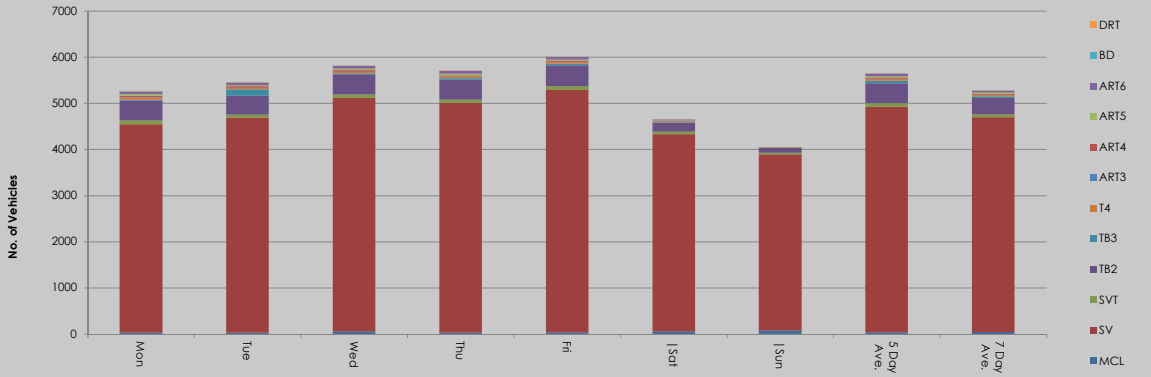
Virtual Day (7)

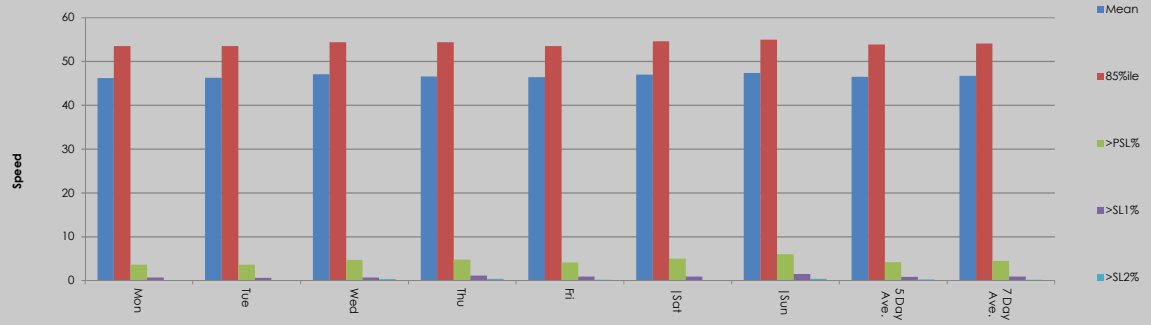
Time	Total	Classification												>PSL 60	>PSL% 60	>SL1 68 ACPO	>SL1% 68 ACPO	>SL2 75 DfT	>SL2% 75 DfT	Mean	Vpp 85
		1 MCL	2 SV	3 SVT	4 TB2	5 TB3	6 T4	7 ART3	8 ART4	9 ART5	10 ART6	11 BD	12 DRT								
0000	19	0	17	0	1	0	0	0	0	0	0	0	0	4	20.3	2	8.3	1	4.5	51.9	62.2
0100	8	0	6	0	1	0	0	0	0	0	0	0	0	2	19.3	1	8.8	1	8.8	52.2	-
0200	6	0	5	0	0	0	0	0	0	0	0	0	0	1	10	0	2.5	0	0	52.4	-
0300	7	0	5	0	1	0	0	0	0	0	0	0	0	1	10	0	6	0	2	49.7	-
0400	11	0	9	0	1	0	0	0	0	1	1	0	0	1	11.4	0	3.8	0	1.3	49.3	57.7
0500	54	0	45	0	5	0	0	0	1	2	1	0	0	10	18.6	2	3.1	1	1	51.8	61.3
0600	154	1	127	2	12	2	4	0	1	1	4	0	0	20	13.2	4	2.8	1	0.7	51.2	59.1
0700	385	2	326	7	33	5	2	0	2	1	6	0	0	18	4.7	3	0.7	1	0.1	47.6	55
0800	**391**	**3**	**333**	**5**	**33**	**3**	**3**	**1**	**4**	**2**	**3**	**0**	**0**	**13**	**3.3**	**2**	**0.4**	**0**	**0**	**46.1**	**53.7**
0900	347	2	297	5	27	3	3	0	2	2	5	0	0	8	2.4	2	0.5	0	0.1	46.1	53
1000	368	3	313	6	31	2	3	0	2	3	4	0	0	9	2.4	1	0.3	0	0.1	44.2	51.4
1100	355	3	306	5	28	3	4	0	3	1	3	0	0	7	2.1	2	0.4	0	0	44.4	51.4
1200	342	2	299	5	24	2	3	0	2	2	4	0	0	7	2	1	0.4	0	0.1	45.1	51.7
1300	345	4	298	6	27	2	2	0	2	1	3	0	0	9	2.6	2	0.5	0	0.1	45.6	52.6
1400	357	4	311	6	23	3	2	0	1	2	4	0	0	12	3.3	2	0.6	0	0.1	45.5	52.1
1500	376	3	335	5	26	1	1	0	1	1	2	0	0	10	2.8	2	0.5	0	0.1	46.2	52.8
1600	**474**	**4**	**422**	**8**	**33**	**2**	**1**	**0**	**1**	**1**	**1**	**0**	**0**	**11**	**2.4**	**2**	**0.5**	**1**	**0.1**	**46.2**	**52.8**
1700	470	5	434	3	20	5	1	0	0	1	0	0	0	19	4.1	5	1	1	0.2	47.4	53.9
1800	319	2	300	2	11	1	0	0	0	0	1	0	0	21	6.5	4	1.3	1	0.3	48.3	55.5
1900	170	2	162	1	5	0	0	0	0	0	0	0	0	18	10.4	3	1.5	1	0.5	50.3	57.5
2000	111	1	106	1	3	1	0	0	0	0	0	0	0	11	10.3	3	2.8	1	0.8	49.5	57.7
2100	86	0	84	0	2	0	0	0	0	0	0	0	0	10	12.1	2	2.5	1	0.7	49.7	58.2
2200	87	0	84	0	2	0	0	0	0	0	0	0	0	8	9	2	2	0	0.3	48.8	56.6
2300	31	0	29	0	1	0	0	0	0	0	0	0	0	5	16.4	1	3.2	0	1.4	51.1	60.4
1200	**4528**	**38**	**3974**	**63**	**317**	**32**	**25**	**4**	**21**	**17**	**37**	**1**	**2**	**145**	**3.2**	**27**	**0.6**	**5**	**0.1**	**46.1**	**53.2**
1215	**5050**	**41**	**4451**	**67**	**339**	**35**	**29**	**4**	**22**	**18**	**41**	**1**	**2**	**205**	**4.1**	**39**	**0.8**	**8**	**0.2**	**46.5**	**53.9**
1230	**5169**	**42**	**4564**	**67**	**343**	**35**	**29**	**4**	**23**	**19**	**41**	**1**	**2**	**218**	**4.2**	**42**	**0.8**	**9**	**0.2**	**46.6**	**53.9**
1245	**5274**	**43**	**4651**	**68**	**351**	**36**	**29**	**5**	**24**	**22**	**43**	**1**	**2**	**236**	**4.5**	**47**	**0.9**	**12**	**0.2**	**46.7**	**54.1**

Virtual Week (1)

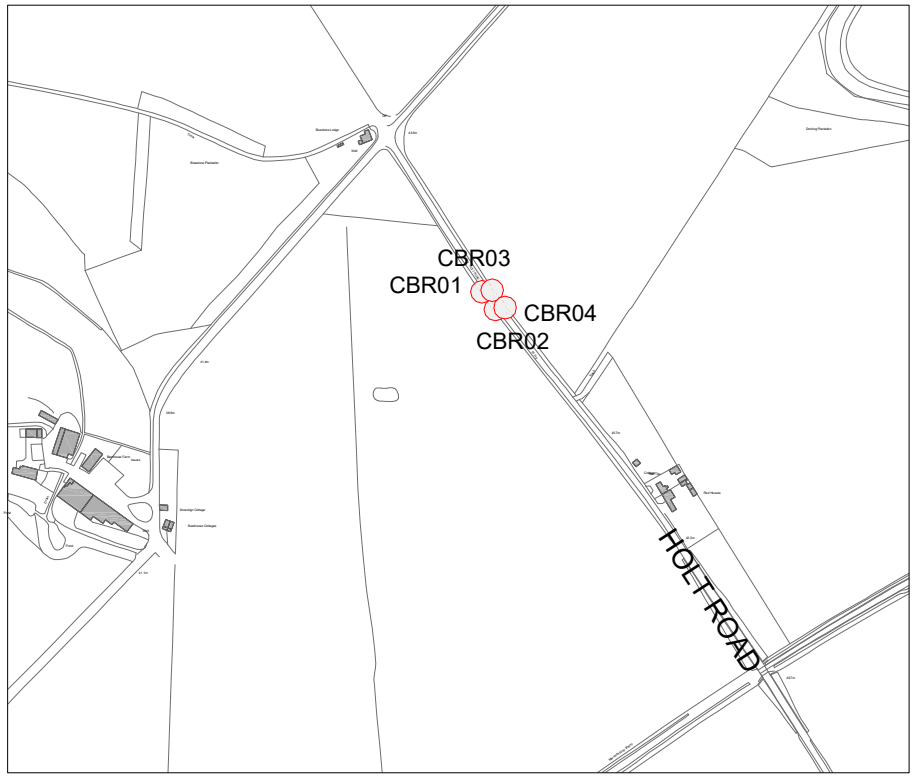
Time	Total	Classification												>PSL 60	>PSL% 60	>SL1 68 ACPO	>SL1% 68 ACPO	>SL2 75 DfT	>SL2% 75 DfT	Mean	Vpp 85
		1 MCL	2 SV	3 SVT	4 TB2	5 TB3	6 T4	7 ART3	8 ART4	9 ART5	10 ART6	11 BD	12 DRT								
Mon	5258	27	4518	82	430	24	45	9	29	35	56	1	2	188	3.6	39	0.7	7	0.1	46.2	53.5
Tue	5451	26	4666	62	409	136	29	11	34	21	54	1	2	198	3.6	30	0.6	3	0.1	46.3	53.5
Wed	5811	54	5057	80	438	20	30	2	37	31	59	2	1	272	4.7	42	0.7	17	0.3	47.1	54.4
Thu	5702	30	4978	72	432	33	36	2	26	29	63	0	1	273	4.8	60	1.1	20	0.4	46.6	54.4
Fri	6005	35	5253	83	452	30	38	5	28	24	51	2	4	244	4.1	56	0.9	15	0.2	46.4	53.5
|Sat	4649	52	4277	54	195	5	19	3	12	10	20	1	1	234	5	40	0.9	4	0.1	47	54.6
|Sun	4045	78	3811	41	103	2	5	0	2	3	0	0	0	243	6	61	1.5	15	0.4	47.4	55
5 Day Ave.	**5645**	**34**	**4894**	**76**	**432**	**49**	**36**	**6**	**31**	**28**	**57**	**1**	**2**	**235**	**4.2**	**45**	**0.8**	**12**	**0.2**	**46.5**	**53.9**
7 Day Ave.	**5274**	**43**	**4651**	**68**	**351**	**36**	**29**	**5**	**24**	**22**	**43**	**1**	**2**	**236**	**4.5**	**47**	**0.9**	**12**	**0.2**	**46.7**	**54.1**
--	**36921**	**302**	**32560**	**474**	**2459**	**250**	**202**	**32**	**168**	**153**	**303**	**7**	**11**	**1652**	**4.5**	**328**	**0.9**	**81**	**0.2**	**46.7**	**54.1**

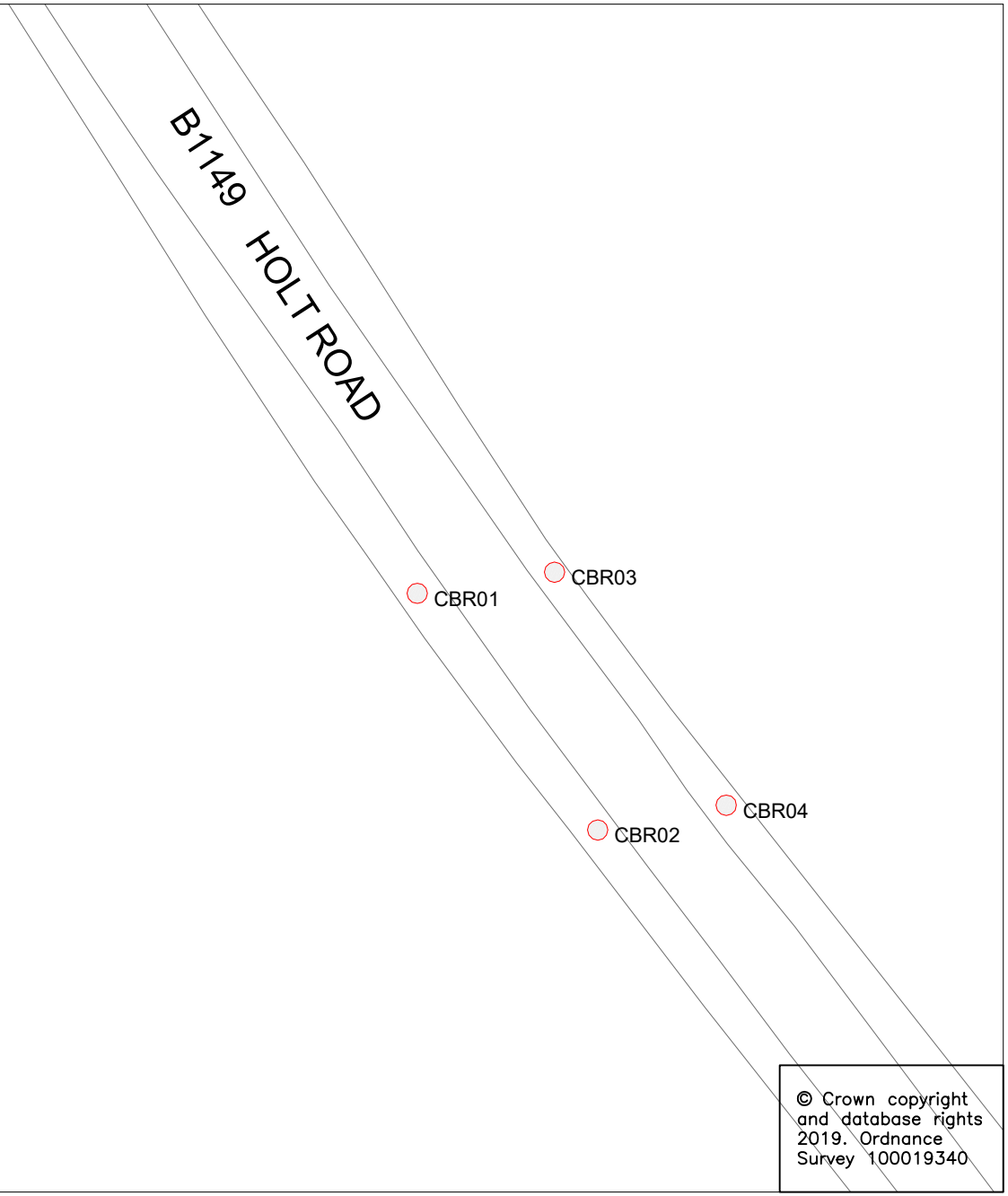
Summary Graphs





APPENDIX E B1149 Pavement Testing Results





Norfolk County Council

Tom McCabe
Executive Director of
Community and Environmental Services
Norfolk County Council
County Hall, Martineau Lane
Norwich NR1 2SG

DRAWING TITLE

CBR Location Plan
Norfolk Vanguard

REV.	DESCRIPTION	DRAWN BY	CHECKED	DATE

	INITIALS	DATE	
SURVEYED BY			DRAWING No. ROHA0001/1
DESIGNED BY			PROJECT TITLE Norfolk Vanguard
DRAWN BY	GS	18/04/19	
CHECKED BY	MLB	18/04/19	SCALE 1: 500 @ A4 / FILE No. ROHA0001

ORIGINAL SIZE: A4

IG 12/10/16

NORFOLK PARTNERSHIP LABORATORY

TRIAL PIT LOG

Sheet 1 of 1

Scheme	Norfolk Vanguard and Boreas	Job No.	ROHA0001	Borehole No.	01
Carried out for	Royal Haskoning	Date Started	27/03/2019	Date Finished	27/03/2019
Dimensions:	0.50m x 0.50m	Type of Rig	Hand Tools	Logged by	GS
Remarks:	Dry	Depth (m)	1.00	Ground Level (m AOD)	Drawn by GS
		Co-ords	614530 - 325680		Checked by MLB

Backfill	Water	Casing	Description	Legend	Depth (m)	Scale	Sample Type	Sample No.	Field Tests	Laboratory Tests MC%	LL	PL	MPI	Org.	CBR
			Dark brown silty TOPSOIL. TOPSOIL		0.20										
			Dark yellowish brown slightly gravelly medium SAND, gravel is fine to medium sub angular flint. BRITON'S LANE SAND AND GRAVEL		1.00	1.00 2.00 3.00 4.00		01							

NORFOLK PARTNERSHIP LABORATORY

TRIAL PIT LOG

Sheet 1 of 1

Scheme	Norfolk Vanguard and Boreas	Job No.	ROHA0001	Borehole No.	02
Carried out for	Royal Haskoning	Date Started	27/03/2019	Date Finished	27/03/2019
Dimensions:	0.50m x 0.50m	Type of Rig	Hand Tools	Logged by	GS
Remarks:	Dry	Depth (m)	0.60	Ground Level (m AOD)	Drawn by GS
		Co-ords	614540 - 325667		Checked by MLB

Backfill	Water	Casing	Description	Legend	Depth (m)	Scale	Sample Type	Sample No.	Field Tests	Laboratory Tests MC%	LL	PL	MPI	Org.	CBR
			Dark brown slightly gravelly silty TOPSOIL, gravel is fine to medium sub rounded flint. TOPSOIL												
			Light brown & orangey brown very gravelly medium to coarse SAND, gravel is fine to course sub angular flint. BRITON'S LANE SAND AND GRAVEL		0.20										
					0.60			01							
						1.00									
						2.00									
						3.00									
						4.00									

NORFOLK PARTNERSHIP LABORATORY

TRIAL PIT LOG

Sheet 1 of 1

Scheme	Norfolk Vanguard and Boreas	Job No.	ROHA0001	Borehole No.	03
Carried out for	Royal Haskoning	Date Started	27/03/2019	Date Finished	27/03/2019
Dimensions:	0.50m x 0.50m	Type of Rig	Hand Tools	Logged by	GS
Remarks:	Dry	Depth (m)	0.60	Ground Level (m AOD)	Drawn by GS
		Co-ords	614534 - 325689		Checked by MLB

Backfill	Water	Casing	Description	Legend	Depth (m)	Scale	Sample Type	Sample No.	Field Tests	Laboratory Tests MC%	LL	PL	MPI	Org.	CBR
			Dark brown silty TOPSOIL. TOPSOIL												
			Light brown & orangey brown silty, slightly gravelly fine to medium SAND, gravel is fine to medium sub angular flint. BRITON'S LANE SAND AND GRAVEL		0.20										
					0.60	1.00		01							
						2.00									
						3.00									
						4.00									

NORFOLK PARTNERSHIP LABORATORY

TRIAL PIT LOG

Sheet 1 of 1

Scheme	Norfolk Vanguard and Boreas	Job No.	ROHA0001	Borehole No.	04
Carried out for	Royal Haskoning	Date Started	27/03/2019	Date Finished	27/03/2019
Dimensions:	0.50m x 0.50m	Type of Rig	Hand Tools	Logged by	GS
Remarks:	Dry	Depth (m)	0.60	Ground Level (m AOD)	Drawn by GS
		Co-ords	614546 - 325670		Checked by MLB

Backfill	Water	Casing	Description	Legend	Depth (m)	Scale	Sample Type	Sample No.	Field Tests	Laboratory Tests MC%	LL	PL	MPI	Org.	CBR
			Dark brown silty TOPSOIL. TOPSOIL												
			Orangey brown & yellowish brown slightly gravelly medium to coarse SAND, gravel is fine sub angular flint. BRITON'S LANE SAND AND GRAVEL		0.20			01							
					0.60										
						1.00									
						2.00									
						3.00									
						4.00									

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FAO Ryan Eldon

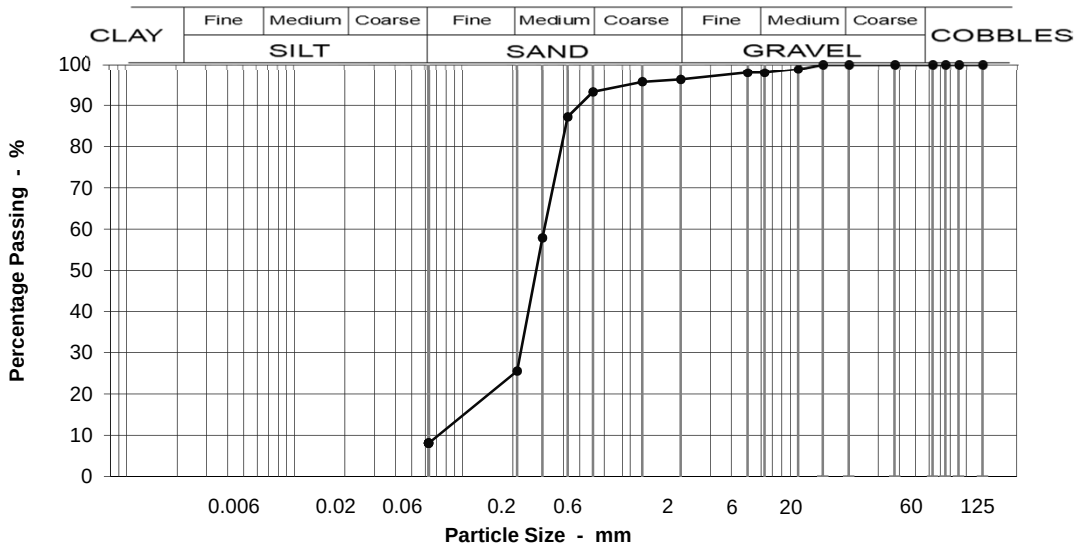
Royal Haskoning
Rightwell House
Bretton
Peterborough
PE3 8DW

Our reference No. NCCL201904029-610
Our Project No ROHA0001
Your Sample Ref 4029
Your Project or Order No.
Date Tested 09/04/2019
Date Report Issued 23-Apr-19

Particle Size Distribution to BS 1377 : Part 2 :1990 Section 9

Scheme: Norfolk Vanguard and Boreas
Location and orientation within sample not applicable

Location: CBR 1 @ 0.7m
Bulk disturbed sample



Sieving

Particle Size mm	% Passing
125	100
90	100
75	100
63	100
37.5	100
20	100
14	100
10	99
6.3	98
5	98
2	96
1.18	96
0.600	93
0.425	87
0.300	58
0.212	26
0.063	8

Specification for Highway Works Classification

Table 6/2

This material complies with the following material classes 1B, 6E/6R, 6M.

Moisture content % 6

Sample Proportions	
BOULDERS	0
COBBLES	0
Coarse GRAVEL	0
Medium GRAVEL	2
Fine GRAVEL	2
Coarse SAND	3
Medium SAND	68
Fine SAND	17
Silt & Clay	8

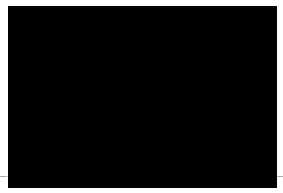
Grading Analysis	
D100	10
D60	0.31
D10	0.08
Uniformity Coefficient	4

Description
Dark yellowish brown, slightly gravelly, medium SAND. Gravel is fine and medium, sub-angular flint.

Test Code = 610

UKAS TESTING 0920

Peter Hardiment (Operations Manager)



AGS

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Email: civil.laboratory@norfolk.gov.uk

FAO Ryan Eldon

Royal Haskoning
Rightwell House
Bretton
Peterborough
PE3 8DW

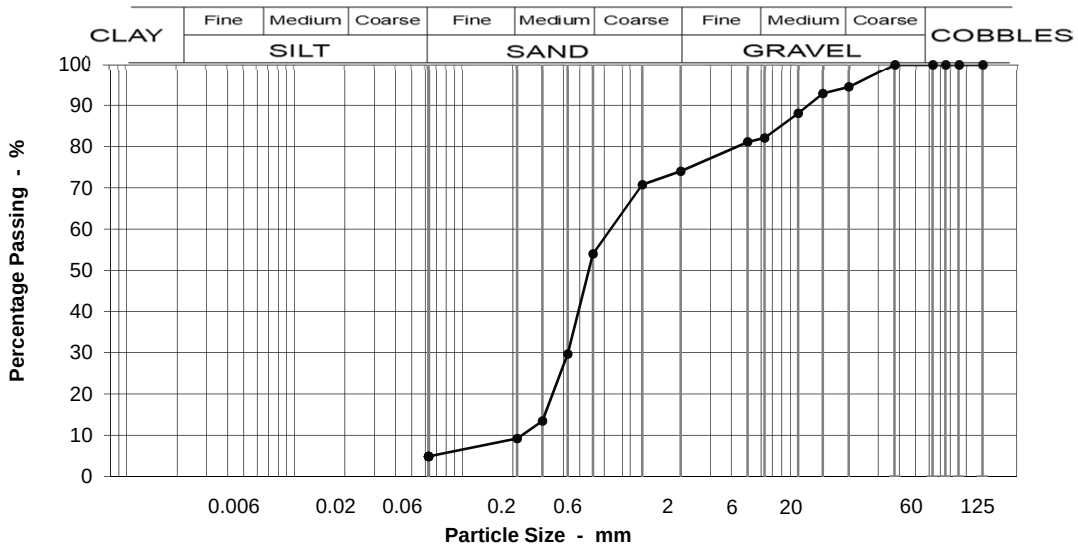
Our reference No. NCCL2019040210-610

Our Project No	ROHA0001
Your Sample Ref	40210
Your Project or Order No.	
Date Tested	03/04/2019
Date Report Issued	23-Apr-19

Particle Size Distribution to BS 1377 : Part 2 :1990 Section 9

Scheme: Norfolk Vanguard and Boreas
Location and orientation within sample not applicable

Location: CBR 2 @ 0.2m
Bulk disturbed sample



Sieving

Particle Size mm	% Passing
125	100
90	100
75	100
63	100
37.5	100
20	94
14	93
10	88
6.3	82
5	81
2	74
1.18	71
0.600	54
0.425	30
0.300	13
0.212	9
0.063	5

Specification for Highway Works Classification

Table 6/2

This material complies with the following material classes 1B, 6E/6R, 6M.

Moisture content % 5

Sample Proportions	
BOULDERS	0
COBBLES	0
Coarse GRAVEL	6
Medium GRAVEL	12
Fine GRAVEL	8
Coarse SAND	20
Medium SAND	45
Fine SAND	4
Silt & Clay	5

Grading Analysis	
D100	20
D60	0.81
D10	0.23
Uniformity Coefficient	4

Description
Light brown and orangey brown, very gravelly, medium and coarse SAND. Gravel is fine, medium and coarse, sub-angular flint.

Test Code = 610

UKAS TESTING 0920

Peter Hardiment (Operations Manager) [redacted]

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Peterborough
PE3 8DW

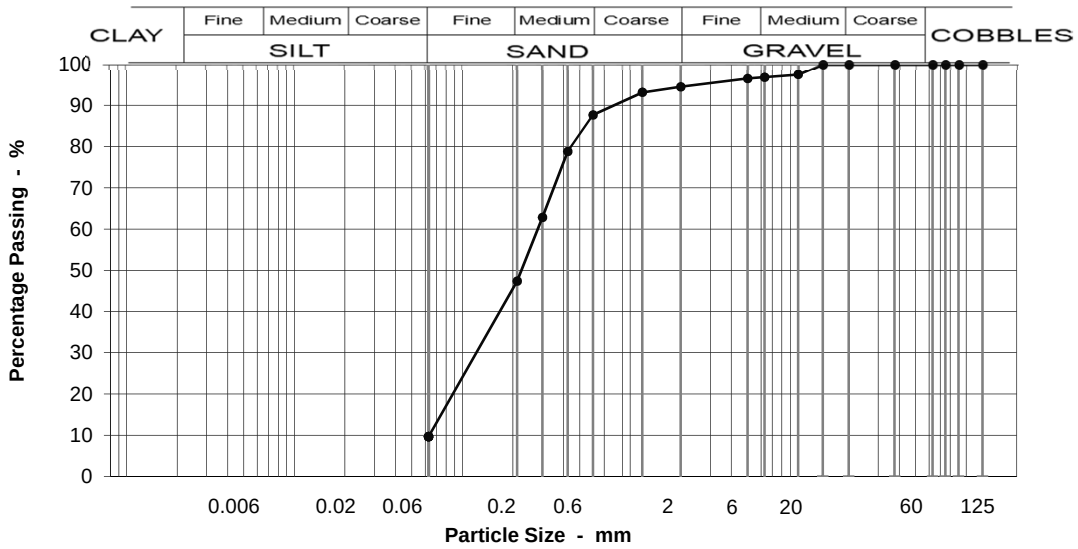
Our reference No. NCCL2019040211-610

Our Project No	ROHA0001
Your Sample Ref	40211
Your Project or Order No.	
Date Tested	05/04/2019
Date Report Issued	23-Apr-19

Particle Size Distribution to BS 1377 : Part 2 :1990 Section 9

Scheme: Norfolk Vanguard and Boreas
Location and orientation within sample not applicable

Location: CBR 3 @ 0.2m
Bulk disturbed sample



Sieving

Particle Size mm	% Passing
125	100
90	100
75	100
63	100
37.5	100
20	100
14	100
10	97
6.3	97
5	97
2	94
1.18	93
0.600	88
0.425	79
0.300	63
0.212	47
0.063	10

Specification for Highway Works Classification

Table 6/2

This material complies with the following material classes 1B, 6E/6R, 6M.

Moisture content % 10

Sample Proportions	
BOULDERS	0
COBBLES	0
Coarse GRAVEL	0
Medium GRAVEL	3
Fine GRAVEL	2
Coarse SAND	7
Medium SAND	40
Fine SAND	38
Silt & Clay	10

Grading Analysis	
D100	10
D60	0.28
D10	0.06
Uniformity Coefficient	4

Description
Light brown and orangey brown, slightly gravelly, fine and medium SAND. Gravel is fine and medium, sub-angular flint.

Test Code = 610

UKAS TESTING 0920

Peter Hardiment (Operations Manager) [redacted]

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FAO Ryan Eldon

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Peterborough
PE3 8DW

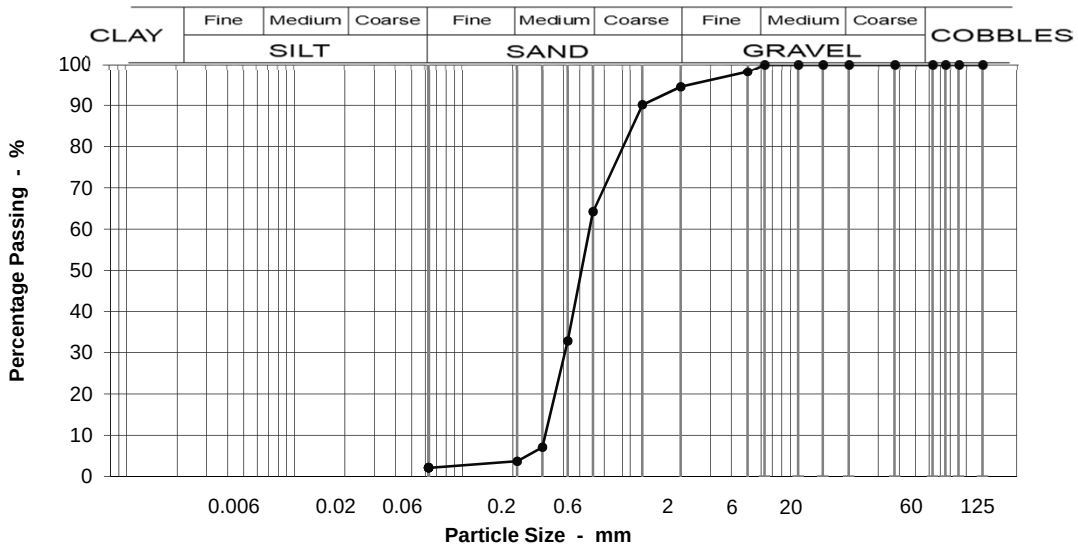
Our reference No. NCCL2019040212-610

Our Project No	ROHA0001
Your Sample Ref	40212
Your Project or Order No.	
Date Tested	05/04/2019
Date Report Issued	23-Apr-19

Particle Size Distribution to BS 1377 : Part 2 :1990 Section 9

Scheme: Norfolk Vanguard and Boreas
Location and orientation within sample not applicable

Location: CBR 4 @ 0.2m
Bulk disturbed sample



Sieving

Particle Size mm	% Passing
125	100
90	100
75	100
63	100
37.5	100
20	100
14	100
10	100
6.3	100
5	98
2	94
1.18	90
0.600	64
0.425	33
0.300	7
0.212	4
0.063	2

Specification for Highway Works Classification

Table 6/2

This material complies with the following material classes 1B, 6E/6R, 6M.

Sample Proportions	
BOULDERS	0
COBBLES	0
Coarse GRAVEL	0
Medium GRAVEL	0
Fine GRAVEL	6
Coarse SAND	30
Medium SAND	61
Fine SAND	2
Silt & Clay	2

Grading Analysis	
D100	5
D60	0.58
D10	0.31
Uniformity Coefficient	2

Description
Orangey brown and yellowish brown, slightly gravelly, medium to coarse SAND. Gravel is fine, sub-angular flint.

Moisture content % 5

Test Code = 610

UKAS TESTING 0920

Peter Hardiment (Operations Manager) [redacted]

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Royal Haskoning
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Bretton
Peterborough
PE3 8DW

Our Project No	ROHA0001
Our Report and sample No	NCCL201904029-642
Your Sample Ref	B4029
Your Project or Order No	
Date Report Issued	23-Apr-19
Date Tested	08-Apr-19

Determination of the California Bearing Ratio to BS 1377 : PART 4 : 1990

Scheme	Norfolk Vanguard and Boreas		
Location	CBR 1 @ 0.7m		
Date sampled	27-Mar-19	**Date received**	29-Mar-19
Sample type	Bulk Disturbed	**Sample Mass**	18.955kg

If a sample certificate was provided it is available for inspection.
The accuracy of information provided by third parties cannot be guaranteed.

Material	Soil
Description	Dark yellowish brown, slightly gravelly, medium SAND. Gravel is fine and medium, sub-angular flint.

Supplier	Not applicable	**Source**	Ex site

Test Specimen

Location	Not applicable
Orientation	Not applicable

Preparation Details

Method of Division	Quartering
Preparation Method	Sieving, Natural Moisture Content
Condition	Unsoaked

Retained 37.5mm	%	1			
Retained 20mm	%	2.1			
Number of layers		3	**CBR Value Top**	%	**43.0**
Blows per layer		N/A	**CBR Value Bottom**	%	**104.0**
BS Method		3.7, Vib.Hammer			
Bulk Density	Mg/m³	2.07	**Moisture Content Top**	%	**7.0**
Dry Density	Mg/m³	1.94	**Moisture Cont. Bottom**	%	**7.0**
Initial Moisture Content	%	6.6	**Moisture Content Method**		Oven dried @ 105-110°C

Remarks

Test Code = 642

UKAS TESTING
0920

Peter Hardiment (Operations Manager) [redacted]

AGS

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FAO Ryan Eldon
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Peterborough
PE3 8DW

Our Project No	ROHA0001
Our Report and sample No	NCCL2019040210-642
Your Sample Ref	B40210
Your Project or Order No	
Date Report Issued	23-Apr-19
Date Tested	08-Apr-19

Determination of the California Bearing Ratio to BS 1377 : PART 4 : 1990

Scheme	Norfolk Vanguard and Boreas		
Location	CBR 2 @ 0.2m		
Date sampled	27-Mar-19	**Date received**	29-Mar-19
Sample type	Bulk Disturbed	**Sample Mass**	22.35kg

If a sample certificate was provided it is available for inspection.
The accuracy of information provided by third parties cannot be guaranteed.

Material	Soil
Description	Light brown and orangey brown, very gravelly, medium and coarse SAND. Gravel is fine, medium and coarse, sub-angular flint.

Supplier	Not applicable	**Source**	Ex site

Test Specimen

Location	Not applicable
Orientation	Not applicable

Preparation Details

Method of Division	Quartering
Preparation Method	Sieving, Natural Moisture Content
Condition	Unsoaked

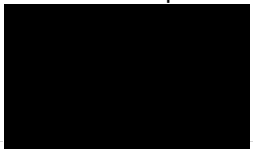
Retained 37.5mm	%	3			
Retained 20mm	%	7.2			
Number of layers		3	**CBR Value Top**	%	**46.0**
Blows per layer		N/A	**CBR Value Bottom**	%	**133.0**
BS Method		3.7, Vib.Hammer			
Bulk Density	Mg/m³	2.10	**Moisture Content Top**	%	**5.3**
Dry Density	Mg/m³	2.00	**Moisture Cont. Bottom**	%	**5.5**
Initial Moisture Content	%	5.4	**Moisture Content Method**		Oven dried @ 105-110°C

Remarks

Test Code = 642

UKAS TESTING
0920

Peter Hardiment (Operations Manager)



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Email: civil.laboratory@norfolk.gov.uk

Royal Haskoning
FAO Ryan Eldon
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Peterborough
PE3 8DW

Our Project No	ROHA0001
Our Report and sample No	NCCL2019040211-642
Your Sample Ref	B40211
Your Project or Order No	
Date Report Issued	23-Apr-19
Date Tested	08-Apr-19

Determination of the California Bearing Ratio to BS 1377 : PART 4 : 1990

Scheme	Norfolk Vanguard and Boreas		
Location	CBR 3 @ 0.2m		
Date sampled	27-Mar-19	**Date received**	29-Mar-19
Sample type	Bulk Disturbed	**Sample Mass**	20.95kg

If a sample certificate was provided it is available for inspection.
The accuracy of information provided by third parties cannot be guaranteed.

Material	Soil
Description	Light brown and orangey brown, slightly gravelly, fine and medium SAND. Gravel is fine and medium, sub-angular flint.
Supplier	Not applicable
Source	Ex site

Test Specimen

Location	Not applicable
Orientation	Not applicable

Preparation Details

Method of Division	Quartering
Preparation Method	Sieving, Natural Moisture Content
Condition	Unsoaked

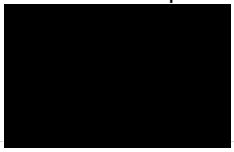
Retained 37.5mm	%	0			
Retained 20mm	%	0.6			
Number of layers		3	**CBR Value Top**	%	**15.0**
Blows per layer		N/A	**CBR Value Bottom**	%	**12.0**
BS Method		3.7, Vib.Hammer			
Bulk Density	Mg/m³	2.22	**Moisture Content Top**	%	**11.0**
Dry Density	Mg/m³	2.01	**Moisture Cont. Bottom**	%	**9.7**
Initial Moisture Content	%	11.0	**Moisture Content Method**		Oven dried @ 105-110°C

Remarks

Test Code = 642

UKAS TESTING
0920

Peter Hardiment (Operations Manager)



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Norfolk County Council

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Royal Haskoning
FAO Ryan Eldon
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Bretton
Peterborough
PE3 8DW

Our Project No	ROHA0001
Our Report and sample No	NCCL2019040212-642
Your Sample Ref	B40212
Your Project or Order No	
Date Report Issued	23-Apr-19
Date Tested	08-Apr-19

Determination of the California Bearing Ratio to BS 1377 : PART 4 : 1990

Scheme	Norfolk Vanguard and Boreas		
Location	CBR 4 @ 0.2m		
Date sampled	27-Mar-19	**Date received**	29-Mar-19
Sample type	Bulk Disturbed	**Sample Mass**	19.9kg

If a sample certificate was provided it is available for inspection.
The accuracy of information provided by third parties cannot be guaranteed.

Material	Soil
Description	Orangey brown and yellowish brown, slightly gravelly, medium to coarse SAND. Gravel is fine, sub-angular flint.
Supplier	Not applicable
Source	Ex site

Test Specimen

Location	Not applicable
Orientation	Not applicable

Preparation Details

Method of Division	Quartering
Preparation Method	Sieving, Natural Moisture Content
Condition	Unsoaked

Retained 37.5mm	%	0			
Retained 20mm	%	1.1			
Number of layers		3	**CBR Value Top**	%	**32.0**
Blows per layer		N/A	**CBR Value Bottom**	%	**64.0**
BS Method		3.7, Vib.Hammer			
Bulk Density	Mg/m³	1.90	**Moisture Content Top**	%	**5.4**
Dry Density	Mg/m³	1.80	**Moisture Cont. Bottom**	%	**5.5**
Initial Moisture Content	%	5.5	**Moisture Content Method**		Oven dried @ 105-110°C

Remarks

Test Code = 642

UKAS TESTING
0920

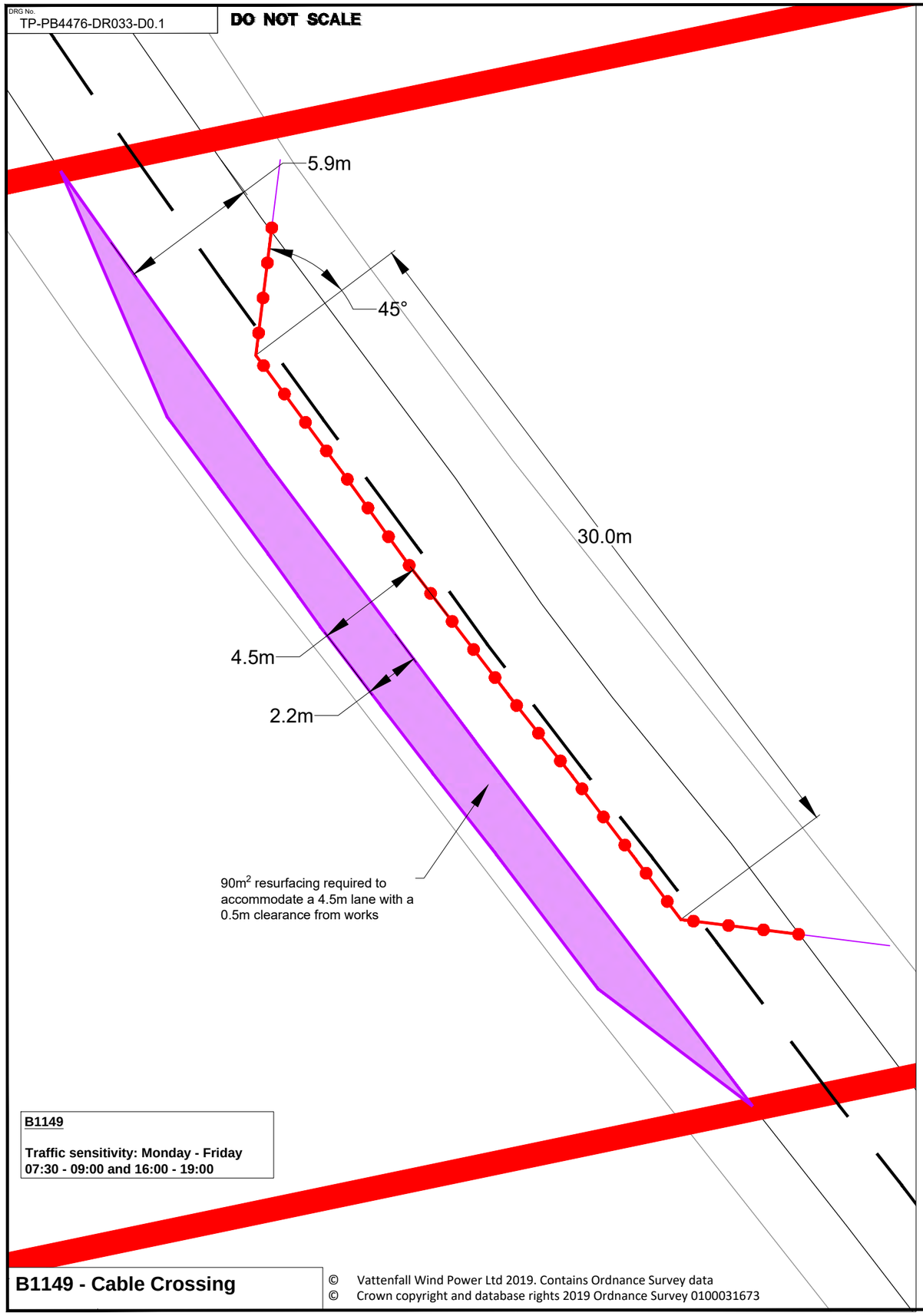
Peter Hardiment (Operations Manager) [redacted]

AGS

APPENDIX F B1149 Traffic Management

DRG No.
TP-PB4476-DR033-D0.1

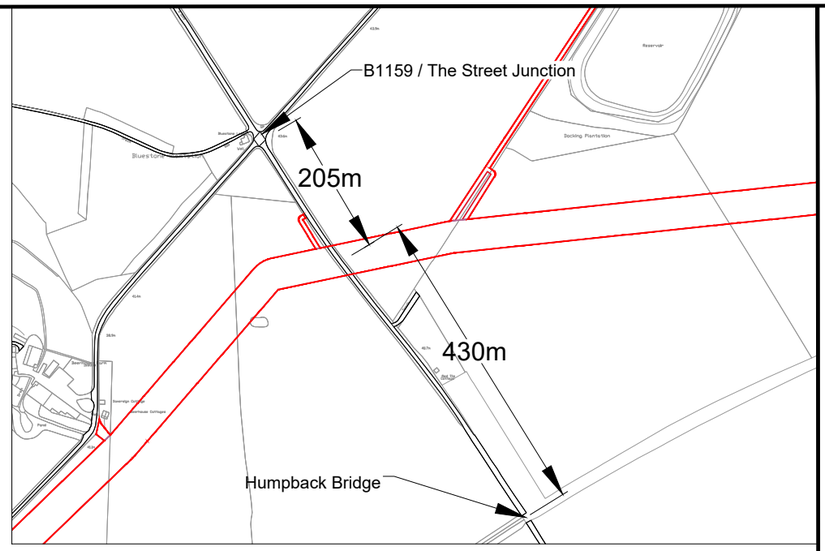
DO NOT SCALE



B1149

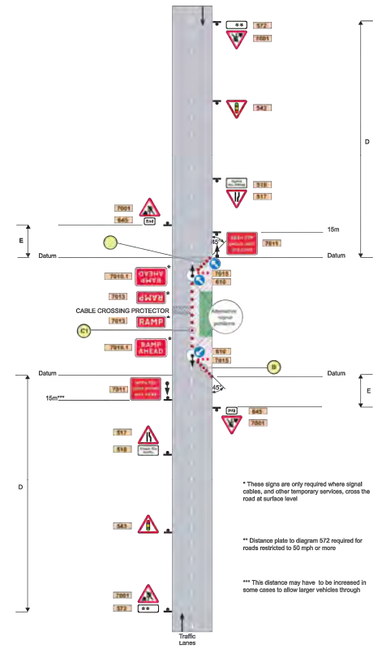
Traffic sensitivity: Monday - Friday 07:30 - 09:00 and 16:00 - 19:00

B1149 - Cable Crossing



SINGLE CARRIAGEWAY ROADS

Plan SC7: Portable traffic signals on a two-lane single carriageway road



NOTE: Refer to Table 5.3 in Section D5.4 for recommended range of distances for dimensions D and E.

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Based on Plan SC7 of Traffic Signs Manual (2009) Chapter 8 Part 1

KEY

- DCO ORDER LIMITS
- REQUIRED RESURFACING
- INDICATIVE CONES

Royal HaskoningDHV
Enhancing Society Together

NORFOLK VANGUARD

B1149
TRAFFIC MANAGEMENT CONCEPT

TP-PB4476-DR033-D0.1

APPENDIX G Construction Noise Assessment

1 CONSTRUCTION NOISE ASSESSMENT

1. This construction noise impact assessment considers the potential for noise impacts at receptor CRR20 associated with changes in the proposed method of crossing the A1067 to a trenchless crossing solution and specifically works at Mobilisation Areas MA5a and MA5b, shown on **Plate A.1**. MA5a and MA5b are being proposed as drill and reception sites for a trenchless crossing of the A1067, replacing the originally assessed open-cut trenching method of crossing.

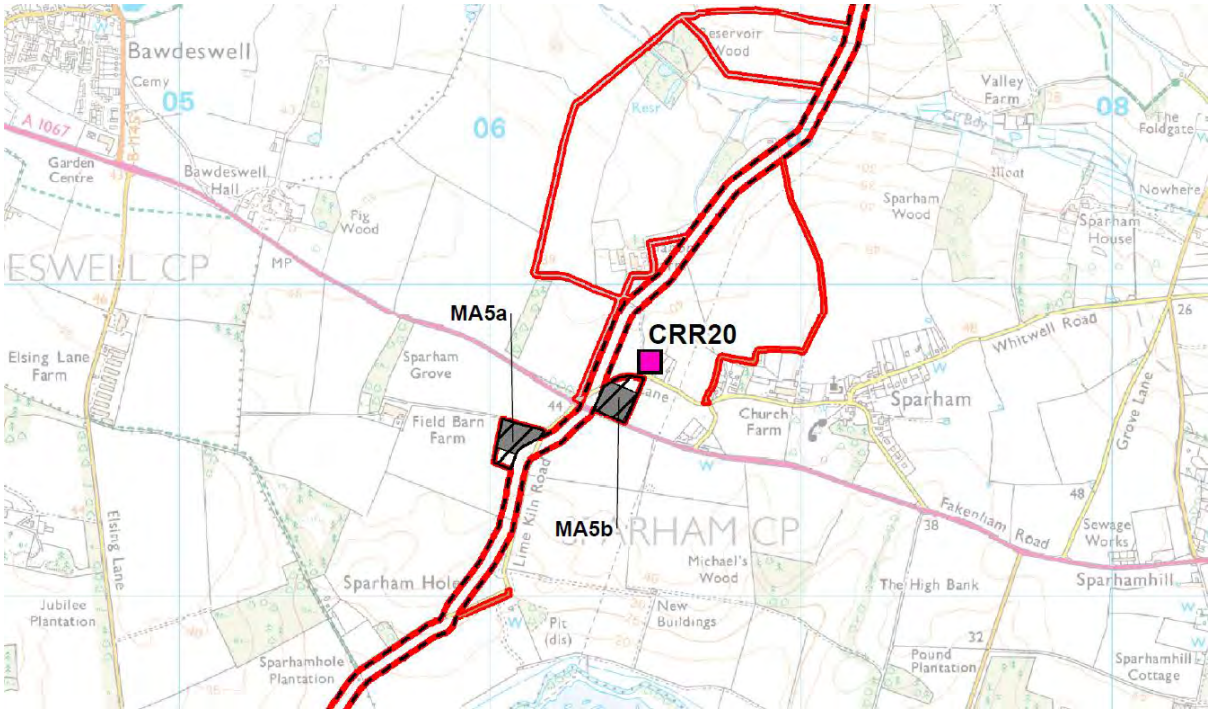

Plate A.1: Proposed works area

2. Potential effects from proposed construction works at MA5a and MA5b have been assessed in accordance with the BS5228:2009+A1:2014 Daytime (07:00 to 19:00), Evening and weekends (19:00 to 23:00 Monday to Friday, 13:00 to 23:00 Saturday and 07:00 to 23:00 Sunday), and Night time (23:00 to 07:00) reference periods. Any associated impacts of the proposed Norfolk Vanguard scheme are highlighted, and mitigation is considered where appropriate.

3. This document supports Environmental Statement (ES) Chapter 25 Onshore Noise and Vibration.

1.1 Construction Noise Assessment Methodology

4. This noise impact assessment adheres with the methodology set out in Section 25.4 of Chapter 25 Noise and Vibration. SoundPLAN noise modelling was utilised in the construction phase assessment.

1.1.1 Construction Phase Noise Assessment

5. BS 5228:2009+A1:2014[3] specifies a construction noise limit based on the existing ambient noise level for different periods of the day. The predicted construction noise levels were assessed against noise limits derived from advice within Annex E of BS 5228. Table A.1, reproduced from BS 5228, presents the criteria for selection of a noise limit for a specific receptor location.

Table A.1 Construction noise threshold levels based on the ABC method (BS 5228)

Assessment category and threshold value period (L_{Aeq})	Threshold value, in decibels (dB)		
	Category A[A)]	Category B[B)]	Category C[C)]
Night time (23.00 – 07.00)	45	50	55
Evenings and weekends [D)]	55	60	65
Daytime (07.00 – 19.00) and Saturdays (07.00 – 13.00)	65	70	75
A) Category A: threshold values to use when ambient noise levels (when rounded to the nearest 5 dB) are less than these values.			
B) Category B: threshold values to use when ambient noise levels (when rounded to the nearest 5 dB) are the same as category A values.			
C) Category C: threshold values to use when ambient noise levels (when rounded to the nearest 5 dB) are higher than category A values.			
D) 19.00–23.00 weekdays, 13.00–23.00 Saturdays and 07.00–23.00 Sundays.			

6. The model used in this assessment incorporated noise sources located in the study area, nearby residential dwellings and other buildings, intervening ground cover and topographical information.

7. Noise levels for the construction phase were calculated using the methods and guidance in BS 5228. This Standard provides methods for predicting receptor noise

[3] British Standards Institution (2014) [BS] 5228-1:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites – Part 1: Noise

levels from construction works based on the number and type of construction plant and activities operating on site, with corrections to account for:

- The 'on-time' of the plant, as a percentage of the assessment period;
- Distance from source to receptor;
- Acoustic screening by existing barriers, buildings or topography; and
- Ground type.

8. Construction noise impacts were assessed using the impact magnitude presented in Table A.2 for the daytime period, Table A.3 for the evening and weekend periods, and Table A.4 for the night time period.

Table A.2 Day time construction noise significance criteria

Impact magnitude	Construction noise level (dB)		
	A 65dB threshold	B 70dB threshold	C 75dB threshold
No Impact	≤65	≤70	≤75
Negligible Adverse	≥65.1 - ≤65.9	≥70.1 - ≤70.9	≥75.1 - ≤75.9
Minor Adverse	≥66.0 - ≤67.9	≥71.0 - ≤72.9	≥76.0 - ≤77.9
Moderate Adverse	≥68.0 - ≤69.9	≥73.0 - ≤74.9	≥78.0 - ≤79.9
Major Adverse	≥70	≥75	≥80

Table A.3 Evening and weekends construction noise significance criteria

Impact magnitude	Construction noise level (dB)		
	A 55dB threshold	B 60dB threshold	C 65dB threshold
No Impact	≤55	≤60	≤65
Negligible Adverse	≥55.1 - ≤55.9	≥60.1 - ≤60.9	≥65.1 - ≤65.9
Minor Adverse	≥56.0 - <57.9	≥61.0 - ≤62.9	≥66.0 - ≤67.9
Moderate Adverse	≥58.0 - <59.9	≥63.0 - ≤64.9	≥68.0 - ≤69.9
Major Adverse	≥60	≥65	≥70

Table A.4 Night time construction noise significance criteria

Impact magnitude	Construction noise level (dB)		
	A 45dB threshold	B 50dB threshold	C 55dB threshold
No Impact	≤45	≤50	≤55
Negligible Adverse	≥45.1 - ≤45.9	≥50.1 - ≤50.9	≥55.1 - ≤55.9
Minor Adverse	≥46.0 - ≤47.9	≥51.0 - ≤52.9	≥56.0 - ≤57.9
Moderate Adverse	≥48.0 - ≤49.9	≥53.0 - ≤54.9	≥58.0 - ≤59.9
Major Adverse	≥50	≥55	≥60

1.1.1.1 Assumptions and indicative plant list

9. Based on ES Chapter 5 Project Description, an indicative list of construction equipment was developed for the construction programme detailed in Table A.5.

Table A.5 Construction noise – trenchless crossing (per location)

Name	No.	Source Type	LwA dB(A)	On time Correction
Tracked Excavator	1	Point	107	50%
Backhoe Loader	1	Point	96	50%
Bulldozer	1	Point	108	50%
Dumper	1	Point	101	50%
Mobile Crane	1	Point	106	25%
Cement Mixer Truck (Discharging)	1	Point	103	25%
Truck Mounted Concrete Pump and Boom Arm	1	Point	108	25%
Piling*	1	Point	118	10%
Drilling Rig	1	Point	105	75%
Water Pump	1	Point	93	75%
Generator	1	Point	105	100%
*Modelled as 1 source with 75% on time as equivalent to 3 sources with 25% on time.				
	All plant operational during daytime. Highlighted cell indicates reduced plant operational during the evening, weekend and night time periods only.			

1.1.2 Construction Phase Vibration Assessment

10. Piling may be required, as a worst case, depending on ground conditions to temporarily anchor the drilling rigs associated with trenchless crossings.

11. Ground-borne vibration may lead to perceptible levels of vibration at nearby receptors, which at higher levels, can cause annoyance to residents. In extreme cases, cosmetic or structural building damage can occur, however vibration levels have to be of a significant magnitude for this effect to be manifested and such cases are rare.

12. High vibration levels generally arise from 'heavy' construction works such as piling, deep excavation, or dynamic ground compaction.

13. Annex E of BS 5228-2:2009+A1:2014 contains empirical formulae derived by Hiller and Crabb (2000) from field measurements relating to resultant peak particle velocity (PPV) which include parameters for percussive piling. These prediction equations are based on the energy approach.

14. The consequences of predicted levels in terms of human perception and disturbance can be established through direct comparison with the BS 5228-2:2009+1A:2014 guidance vibration levels.

15. Humans are very sensitive to vibration, which can result in concern being expressed at energy levels well below the threshold of damage. Guidance on the human response to vibration in buildings is found in BS 6472-1:2008 Guide to evaluation of human exposure to vibration in buildings, Part 1, Vibration sources other than blasting.

16. BS 6472 describes how to determine the vibration dose value (VDV) from frequency-weighted vibration measurements. VDV is defined by the following equation:

$$VDV_{b/d,\ day/night} = (\int_0^T a^4(t)dt)^{0.25}$$

17. The VDV is used to estimate the probability of adverse comment which might be expected from human beings experiencing vibration in buildings. Consideration is given to the time of day and use made of occupied space in buildings, whether residential, office or workshop.

18. BS 6472 states that in homes, adverse comment about building vibrations is likely when the vibration levels to which occupants are exposed are only slightly above thresholds of perception.

19. BS 6472 contains a methodology for assessing the human response to vibration in terms of either the VDV, or in terms of the acceleration or the peak velocity of the vibration, which is also referred to as PPV. The VDV is determined over a 16-hour daytime period or 8-hour night-time period.

20. The response of a building to ground-borne vibration is affected by the type of foundation, ground conditions, the building construction and the condition of the building. The vibration level and effects detailed in Table A.6 were adopted based on BS 5228. Limits for transient vibration, above which cosmetic damage could occur, are given numerically in terms of PPV.

Table A.6 Transient vibration guide values for cosmetic damage

Line	Type of building	Peak component particle velocity in frequency range of predominant pulse	
		4Hz to 15Hz	15Hz and above
1	Reinforced or framed structures Industrial and heavy commercial buildings	50mms^{-1} at 4Hz and above	
2	Un-reinforced or light framed structures Residential or light commercial type buildings	15mms^{-1} at 4Hz increasing to 20mms^{-1} at 15Hz	20mms^{-1} at 15Hz increasing to 50mms^{-1} at 40Hz and above

21. Table A.7 lists the minimum set-back distances at which vibration levels of reportable significance for percussive piling may occur. BS 5228 calculation methods were used to derive the set-back distances outlined in Table A.7.

Table A.7 Predicted distances at which vibration levels may occur

Activity	Set-back distance at which vibration level (PPV) occurs			
	0.3 mm/s	1.0 mm/s	10 mm/s	15 mm/s
Percussive Piling	48m	19m	3m	2m

22. Table A.8 reproduced from research (Rockhill *et al,* 2014) details minimum safe separation distances for piling activities from sensitive receptors to reduce the likelihood of cosmetic damage occurrence.

Table A.8 Receptor proximity for indicated piling methods

Building type (limits on vibrations from Eurocode 3)	Piling Method		
	Press-in	25kJ drop hammer	170 kW 27Hz vibrohammer
Architectural merit	2.6m	29.6m	27.7m
Residential	0.5m	11.8m	13.8m
Light commercial	0.14m	5.9m	5.5m
Heavy industrial	0.06m	3.9m	3.7m
Buried services	0.03m	2.9m	2.2m

23. For construction vibration, the vibration level and effects presented in Table A.9 were adopted based on Table B-1 of BS 5228-2. These levels and effects are based on human perception of vibration in residential environments.

Table A.9 Construction vibration - impact magnitude

Vibration limit PPV (mm/s)	Interpreted significance to humans	Impact magnitude
≤0.14	Vibration unlikely to be perceptible	No Impact
0.14 to 0.3	Vibration might just be perceptible in the most sensitive situations for most vibration frequencies associated with construction	Negligible - Adverse
0.3 to 1.0	Vibration might just be perceptible in residential environments	Minor – Adverse
1.0 to ≤10.0	It is likely that vibration at this level in residential environments will cause complaint, but can be tolerated if prior warning and explanation has been given to residents	Moderate – Adverse
≥10.0	Vibration is likely to be intolerable for any more than a brief exposure to this level	Major – Adverse

1.1.3 Sensitivity

24. For the construction phase assessment, the closest sensitive receptor CRR20 is detailed in Table A.10.

Table A.10 Receptor identification, sensitivity and classification

Receptor Identifier	Receptor Classification	Receptor Sensitivity	British National Grid Co-ordinates	
			Eastings	Northings
CRR20	Residential	Medium	606512	319754

1.1.4 Impact Significance

25. Following the identification of receptor sensitivity and magnitude of the effect, it is possible to determine the significance of the impact. A matrix is presented in Table A.11 as a guide.

Table A.11 Impact significance matrix

		Negative magnitude				
		High/ Major	Medium/ Moderate	Low/ Minor	Negligible	No Impact
Sensitivity	High	*Major*	*Major*	*Moderate*	*Minor*	*Minor*
	Medium	*Major*	*Moderate*	*Minor*	*Minor*	*Negligible*
	Low	*Moderate*	*Minor*	*Minor*	*Negligible*	*Negligible*
	Negligible	*Minor*	*Negligible*	*Negligible*	*Negligible*	*Negligible*

1.1.5 Baseline Sound Levels CRR20

26. Baseline sound levels were measured at CRR20 in 2017. A summary of the baseline sound data is provided in Table A.12. These measured noise levels are applicable for CRR20.

Table A.12 Baseline Sound Survey CRR20

Reference Period	Date and Time of Survey	Ambient Noise Level (dB) LAeq,T	Maximum Daily (dB) LAFmax,T	Level exceeded 10% of the time (dB) LA10,T	Level exceeded 90% of the time (dB) LA90,T	Derived BS5228 Threshold Category and Limit
Daytime (07:00 – 23:00)	03/05/2017 14:55:47 to 15:25:47	51.0	78.7	47.8	43.7	65 (A)
Night time (23:00 – 07:00	04/05/2017 00:58:33 to 01:13:33	29.4	49.9	28.6	25.4	45 (A)

1.2 Potential Noise Impacts from Trenchless Crossing Works at CRR20

1.2.1 Assumptions

27. The following assumptions for the construction programme have been made:

- Construction activities would normally take place between 0700hrs and 1900hrs Monday to Friday and between 0700hrs and 1300hrs on Saturday;
- Construction activities may require evening and night time working due to the trenchless crossing in accordance with DCO Requirement 26;

- All ground was assumed to have an absorption factor of 0.6 to represent the mixed ground conditions in the area;
- All noise sources were modelled as point sources at a height of 1.5m;
- Residential properties were modelled as two-storey buildings at a height of 8.5m;
- For daytime, receiver levels were predicted at ground floor level (+1.5m) considered representative of daytime resting and amenity space;
- For night time, receiver levels were predicted at first floor level (+4.0m) considered representative of night time resting; and
- Acoustic propagation effects were calculated using the BS 5228 methodology which takes into account distance attenuation, barriers and ground absorption.

28. The results of the calculation are presented as the dB $L_{Aeq,T}$ noise level covering the activity period highlighted in the assumptions section above, representing a conservative prediction of the noise level that might affect adjacent receptors during construction activity.

1.2.1.1 Best practice mitigation

29. Best practice construction noise mitigation techniques, which are set out within the Outline Code of Construction Practice (OCoCP) (DCO document 8.1) and within section 25.8.5.6 of ES Chapter 25 represent embedded mitigation to reduce noise impacts, such as using modern equipment, ensuring equipment is properly maintained, ensuring machinery is turned off when not in use, and apply enclosures to particularly noisy equipment. Although the effect of adopting such methods cannot be precisely quantified, it is typically expected that these methods would reduce noise levels by between 5 - 10dB(A). In order to provide a conservative approach, the construction phase assessment has assumed a 5dB(A) reduction for incorporating these mitigation measures.

1.2.2 Construction noise assessment

30. Table A.13 details the predicted worst-case construction phase noise levels at receptor CRR20 for the most exposed façade (including a conservative 5dB(A) allowance for the incorporation of standard mitigation measures).

Table A.13 Construction noise impacts CRR20

Phase	BS5228 Threshold dB(A)	Predicted noise level $L_{Aeq,T}$ dB (Standard mitigation applied)	Impact Magnitude (Standard mitigation only)	Required Enhanced Mitigation (Yes/No) and range dB(A)	Residual Impact
Receptor CRR20					
Daytime	**65**	**58.2**	No Impact	No	No Impact with standard mitigation
Evening and Weekends	**55**	**53.1**	No Impact	No	No Impact with standard mitigation
Night time	**45**	**53.1**	Major adverse Impact	Yes (Noise reduction of 8.1dBA required)	No Impact with enhanced mitigation
Required Mitigation Key					
No additional mitigation required beyond best practice measures (set out in the OCoCP).					
Construction mitigation techniques will be required to avoid significant adverse impact such as those detailed in ES Chapter 25. Specific construction mitigation measures will be agreed during the detailed design stage.					

31. During the daytime, evening and weekend reference periods, trenchless crossing works at MA5a and MA5b represent an impact magnitude of "no impact" at a medium sensitivity receptor, which represents an impact of **negligible** significance. No requirement for further mitigation has been identified.

32. During the night time reference period, the proposed trenchless crossing works at MA5a and MA5b, with the inclusion of best practice mitigation only, result in a major magnitude of effect at a medium sensitivity receptor, which represents an impact of **major adverse** significance. Should night time working be required for this trenchless crossing then enhanced mitigation measures will be required during the night time reference period.

1.2.2.1 Enhanced Mitigation (if night time working required)

33. During the night time period, the predicted noise impact at CRR20 (after the inclusion of standard mitigation) was **major adverse**.

34. In order to ensure this impacts are mitigated as far as reasonably possible, the aforementioned standard mitigation (also detailed in the OCoCP (DCO document 8.1)), coupled with more site specific solutions including the use of screening such as temporary noise barriers and/or temporary spoil bunds, would be applied.

35. As an example of the relative effectiveness of applying a temporary localised noise barrier BS 5228 states:

- *"as a working approximation, if there is a barrier or other topographic feature between the source and the receiving position, assume an approximate attenuation of 5 dB when the top of the plant is just visible to the receiver over the noise barrier, and of 10 dB when the noise screen completely hides the sources from the receiver. High topographical features and specifically designed and positioned noise barriers could provide greater attenuation."*

36. Standard noise absorptive barriers applied to three sides of the operating plant (3.5m height) were included in the noise model as mitigation. The predicted noise levels, with the application of enhanced mitigation, are detailed in Table A.14.

Table A.14 Construction noise impacts CRR20

Phase	BS5228 Threshold dB(A)	Predicted noise level $L_{Aeq,T}$ dB (Standard mitigation applied + barrier)	Impact Magnitude (Standard mitigation applied + barrier)	Further Enhanced Mitigation Required (Yes/No) and range dB(A)	Residual Impact
Receptor CRR20					
Night time – Combined HDD, temporary works areas 3.5m barrier	**45**	**39.3**	No Impact	No	No Impact with enhanced mitigation
Required Mitigation Key					
No additional mitigation required beyond standard CoCP measures to avoid significant adverse impacts.					
Construction mitigation techniques will be required to avoid significant adverse impact such as those detailed in Chapter 25. Specific construction mitigation measures will be agreed during the detailed design stage.					

1.2.2.2 Residual Impacts

37. With the incorporation of enhanced mitigation measures, it is predicted that the magnitude of effect will reduce to "no impact", which represents a residual impact of **negligible** significance.

38. A Construction Noise (and vibration) Management Plan (CNMP) will be included in the final CoCP, as required under Requirement 20 (2)(e) of the DCO.

39. The CNMP will apply throughout that stage of construction and will detail standard mitigation (best practical means) and where applicable, enhanced mitigation measures.

40. The exact specification of any noise barriers that may be required to mitigate significant residual construction noise will be determined during detailed design. Noise barriers will be introduced with the appropriate specification for the location and noise reduction required.

41. Enhanced mitigation at CRR20 will be captured within an update to the Outline CoCP submitted at Deadline 8 of the examination.

1.3 Potential Vibration Impacts from Trenchless Crossing Works at CRR20

42. Piling may be required, as a worst case, depending on ground conditions to temporarily anchor the drilling rigs associated with trenchless crossings.

43. CCR20 is approximately 105m away from MA5b. In accordance with Table A.7, at a setback distance of 105m any vibration levels attributed to piling would not be perceptible at CCR20.

44. Table A.8 details indicative vibration levels from various piling methods with regards to buildings of differing architectural merit[4]. Table A.9 sets out the vibration level effects. Piling, if required, at a distance of least 105m represents a vibration impact magnitude of "no impact", on a medium sensitivity receptor, which represents an impact of **negligible** significance.

1.4 Conclusions

45. Construction phasing, plant numbers, type and on-time data were provided for proposed equipment to be used at cable corridor locations MA5a and MA5b during trenchless crossing works.

[4] CRR20 is not a listed building or located within a Conservation Area.

46. Predicted noise levels for CRR20 were calculated based on proposed trenchless crossing works during the daytime, evening, weekends, and night time periods.

47. The predicted noise levels resulted in impacts of **negligible** significance during the daytime, evening and weekend reference periods, with the inclusion of standard best practice embedded mitigation measures. No requirement for further mitigation has been identified.

48. The predicted noise levels resulted in an impact of **major adverse** significance during the night-time at receptor CRR20, with the inclusion of standard best practice embedded mitigation measures. A requirement for further 'enhanced mitigation' has been identified.

49. Within the inclusion of enhanced mitigation in the form of standard noise absorptive barriers at 3.5m height, the residual impact reduced to **negligible** significance. Enhanced mitigation at CRR20 will be captured within an update to the Outline CoCP submitted at Deadline 8 of the examination.

50. A CNMP will be included in the final CoCP, as required under Requirement 20 (2)(e) of the DCO. The CNMP will apply throughout that stage of construction and will detail standard mitigation (best practical means) and where applicable, enhanced mitigation measures. The exact specification of any noise barriers that may be required to mitigate significant residual construction noise will be determined during detailed design. Noise barriers will be introduced with the appropriate specification for the location and noise reduction required.

51. Piling, if required, at a distance of least 105m represents a vibration impact of **negligible** significance. No requirement for mitigation has been identified.

References

BSI (2014). British Standards Institution [BS] 5228-1:2009+A1:2014 “Code of practice for noise and vibration control on construction and open sites – Part 1: Noise”.
BSI (2014). British Standards Institution [BS] 5228-2: 2009+A1:2014 “Code of practice for noise and vibration control on construction and open sites – Part 2: Vibration”.
Norfolk Vanguard. (2018) Norfolk Vanguard Offshore Wind Farm Chapter 25 Onshore Noise and Vibration Environmental Statement, Volume 1 (Reference: PB4476-005-025).