Habitat Regulations Assessment

Site Specific Process Note Regarding Air Pollution

8 Stanmore Way, Loughton

Clear Architects Limited

17th May 2021

Report Details:

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1. INTRODUCTION

1.1. Overview

Hawkins Environmental Limited has been instructed by Clear Architects to undertake a Habitats Regulation Assessment site specific process note in relation to the effects of development on atmospheric pollution for the proposed redevelopment of 8 Stanmore Way, situated in the town of Loughton within the Epping Forest District of Essex.

During the planning process, it has been identified that the site may require a Habitats Regulation Assessment in relation to air quality to determine whether the proposed development would have an adverse impact on the surrounding environment. Consequently, this assessment has been completed in order to determine whether the proposed development achieves compliance with national, regional and local planning policy.

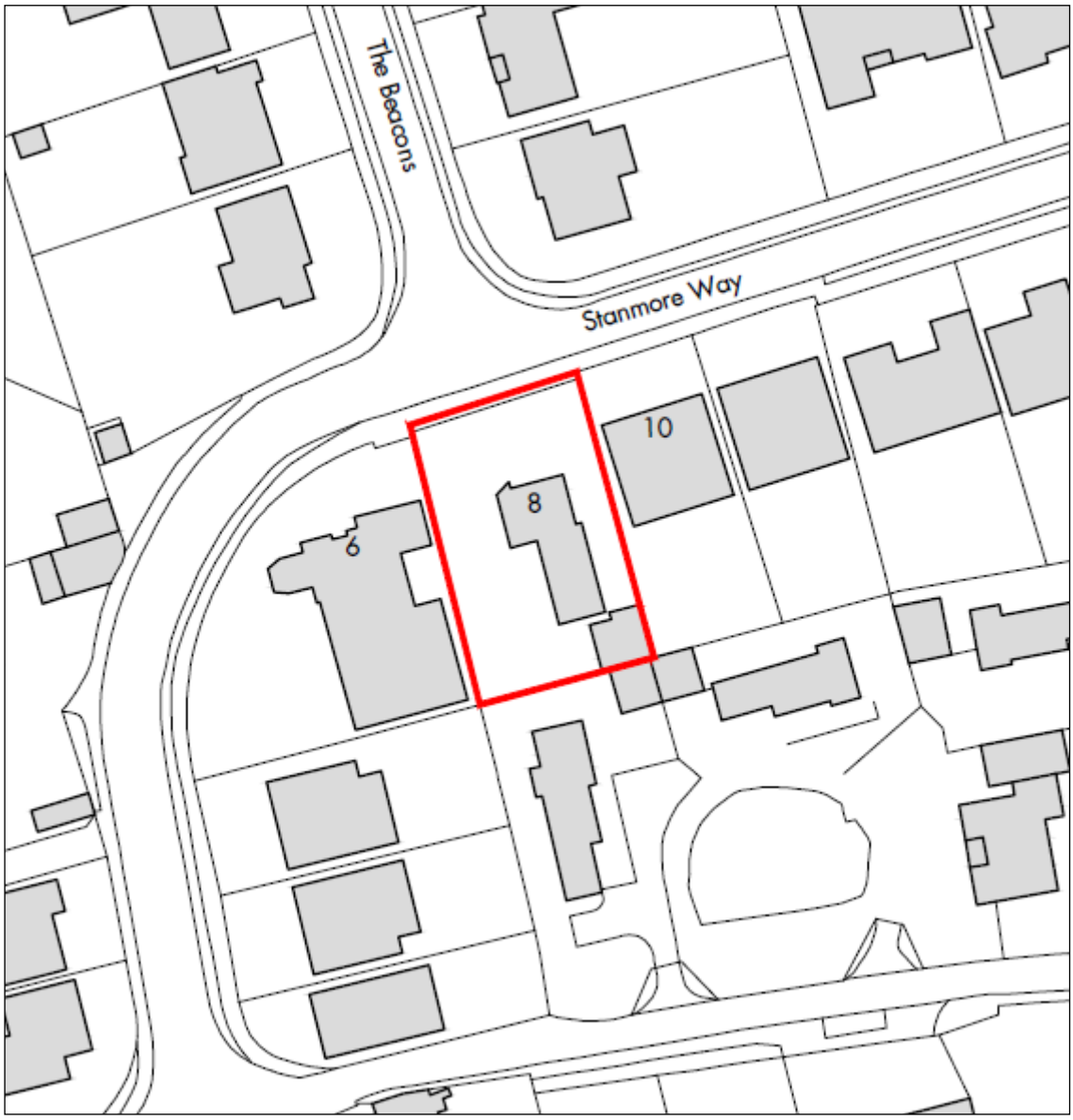
This assessment has been undertaken in accordance with Natural England's "*Approach to advising competent authorities on the assessment of road traffic emissions under the Habitats Regulations*" (2018) and The Institute of Air Quality Management's (IAQM) "*Guide to the Assessment of Air Quality Impacts on Designated Nature Conservation Sites*" (2019).

The assessment addresses the effects of air pollutant emissions from traffic using the adjacent roads and emissions associated with the development of the site. This report assesses the overall levels of nitrogen dioxide (NO_2) and particulates (PM_{10} and $PM_{2.5}$) in the vicinity of the site.

1.2. Site Description

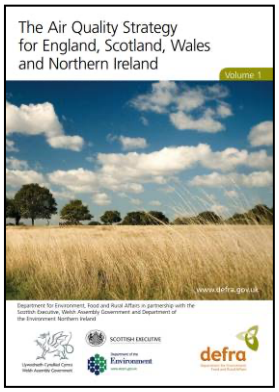
The proposed development site is situated on Stanmore Way, which forms part of a circular cul-de-sac in the north of Loughton. The site is currently occupied by a single bungalow. The proposed development is to demolish the existing property to be replaced by two chalet bungalows. A location plan of the proposed site can be seen in **Figure 1.1**.

Figure 1.1: Site Location Plan



2. LEGISLATION, PLANNING POLICY & GUIDANCE

2.1. National Legislation



Part IV of the Environment Act (1995), requires the UK government to produce a national Air Quality Strategy which contains standards, objectives and measures for improving ambient air quality. The National Air Quality Strategy sets out National Air Quality Objectives (NAQOs) that are maximum ambient pollutant concentrations that are not to be exceeded either without exception or with a permitted number of exceedances over a specified timescale.

The Clean Air for Europe (CA FE) programme revisited the management of Air Quality within the EU and replaced the EU Framework Directive 96/62/EC, its associated Daughter Directives 1999/30/EC, 2000/69/EC, 2002/3/EC, and the Council Decision 97/101/EC, with a single legal act, the Ambient Air Quality and Cleaner Air for Europe Directive 2008/50/EC.

Directive 2008/50/EC is currently transcribed into UK legislation by the Air Quality Standards Regulations 2010, which came into force on 11th June 2010. These limit values are binding on the UK and have been set with the aim of avoiding, preventing or reducing harmful effects on human health and on the environment as a whole. These limit values are the basis of the NAQOs.

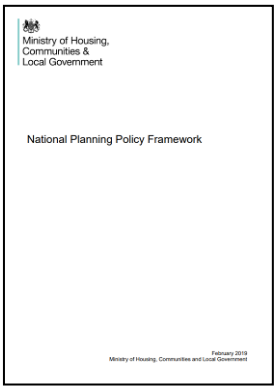
The National Air Quality Objectives (NAQOs) and their Limit Values will form the basis of this air quality assessment of the proposed development. The NAQOs are based on an assessment of the effects of each pollutant on public health. Therefore, they are a good indicator in assessing whether, under normal circumstances, the air quality in the vicinity of a development is likely to be detrimental to human health. In determining whether air pollutant levels may constrain development, the results of studies are compared against the acceptability criteria. The Air Quality Standards are displayed in **Table 2.1**.

Table 2.1: Air Quality Standards

Pollutant	Average Period	NAQO Limit Value
Sulphur Dioxide	One Hour	350 µg/m^3 Not to be exceeded more than 24 times per calendar year
	One Day	150 µg/m^3 Not to be exceeded more than 3 times per calendar year
Nitrogen Dioxide	One Hour	200 µg/m^3 Not to be exceeded more than 18 times per calendar year
	Calendar Year	40 µg/m^3
Benzene	Calendar Year	5 µg/m^3

Pollutant	Average Period	NAQO Limit Value
Lead	Calendar Year	0.5 µg/m^3
PM_{10}	One Day	50 µg/m^3 Not to be exceeded more than 35 times per calendar year
	Calendar Year	40 µg/m^3
$PM_{2.5}$	Calendar Year	25 µg/m^3
Carbon Monoxide	Maximum daily running 8-hour mean	10 mg/m^3

2.2. National Planning Policy Framework (2019)


Ministry of Housing, Communities & Local Government

National Planning Policy Framework

February 2019
Ministry of Housing, Communities and Local Government

The National Planning Policy Framework (NPPF) was first published on the 27th of March 2012 and revised July 2018 and again on the 20th of February 2019. The NPPF outlines the Government's environmental, economic and social policies for England. The NPPF sets out a presumption in favour of sustainable development which should be delivered with three main dimensions: economic; social and environmental (Paragraphs 7, 8 10 and 11). The NPPF aims to enable local people and their councils to produce their own distinctive local and neighbourhood plans, which should be interpreted and applied in order to meet the needs and priorities of their communities.

The NPPF states that in the planning system *"Planning policies and decisions should contribute to and enhance the natural and local environment by… e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans"* (Paragraph 170).

The NPPF also states that *"Planning policies and decisions should sustain and contribute towards compliance with relevant limit values or national objectives for pollutants, taking into account the presence of Air Quality Management Areas and Clean Air Zones, and the cumulative impacts from individual sites in local areas. Opportunities to improve air quality or mitigate impacts should be identified, such as through traffic and travel management, and green infrastructure provision and enhancement. So far as possible these opportunities should be considered at the plan-making stage, to ensure a strategic approach and limit the need for issues to be reconsidered when determining individual applications. Planning decisions should ensure that any new development in Air Quality Management Areas and Clean Air Zones is consistent with the local air quality action plan"* (Paragraph 181).

2.3. Approach to Advising Competent Authorities on the Assessment of Road Traffic Emissions under the Habitats Regulations (2018)

Published in 2018, *Natural England's approach to advising competent authorities on the assessment of road traffic emissions under the Habitats Regulations* provides guidance on preparing air quality assessments with regards to the *Conservation of Habitats and Species Regulations 2017* (the Habitats Regulations). The document covers primarily the screening stage which determines the need for a more detailed *"appropriate assessment"* that forms the second stage of the process, based on road traffic emissions that may affect European sites (Special Areas of Conservation (SACs), candidate SACs, Special Protection Areas (SPAs), Sites of Community Importance (SCIs), potential SPAs, possible SACs, listed or proposed Ramsar sites and sites identified, or required, as compensatory measures for adverse effects on these European sites.

2.4. A Guide to the Assessment of Air Quality Impacts on Designated Nature Conservation Sites (2019)

The Institute of Air Quality Management's (IAQM) *Guide to the Assessment of Air Quality Impacts on Designated Nature Conservation Sites*, published in June 2019, provides more detailed guidance on the assessment of the ecological impacts of air pollution.

The guide compliments Natural England's guidance, which mainly covers the screening stage of the process and provides more details on how to conduct a more detailed assessment of the impacts, if the effects cannot be screened out.

2.5. Epping Forest District Local Plan (2017)

Epping Forest's Local Plan (submission version 2017) states:

"Policy DM 2 Epping Forest SAC and the Lee Valley SPA

A. The Council will expect all relevant development proposals to assist in the conservation and enhancement of the biodiversity, character, appearance and landscape setting of the Epping Forest Special Area of Conservation (SAC) and the Lee Valley Special Protection Area (SPA).

B. New residential development likely to have a significant effect, either alone or in combination with other development in these areas, will be required to demonstrate that adequate measures are put in place to avoid or mitigate any potential adverse effects.

…

E. Planning applications on sites within 400m of the Epping Forest SAC will be required to submit a site level Habitats Regulations Assessment setting out how any urbanisation effects (including from fly tipping, the introduction of non-native plant species and incidental arson) will be mitigated against".

In addition, in specific relation to air quality, it notes:

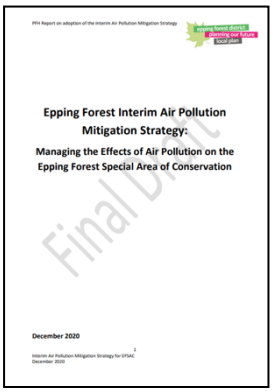
"DM 22 Air Quality

A. The Council will seek to ensure that the District is protected from the impacts of air pollution. Potential air pollution risks will need to be properly considered and adequate mitigation included in the design of new development to ensure neither future, nor existing residents, workers, visitors, or environmental receptors including the Epping Forest SAC are adversely impacted as a result of the development.

B. Mitigation measures required will be determined by the scale of development, its location, the potential to cause air pollution, and the presence of sensitive receptors in the locality.

C. Larger proposals or those that have potential to produce air pollution, will be required to undertake an air quality assessment that identifies the potential impact of the development, together with, where appropriate, contributions towards air quality monitoring. Assessments shall identify mitigation that will address any deterioration in air quality as a result of the development, having taken into account other permitted developments, and these measures shall be incorporated into the development proposals. This will include an assessment of emissions (including from traffic generation) and calculation of the cost of the development to the environment. All assessments for air quality shall be undertaken by competent persons".

2.6. Epping Forest Interim Air Pollution Mitigation Strategy (2020)


Epping Forest Interim Air Pollution Mitigation Strategy:
Managing the Effects of Air Pollution on the Epping Forest Special Area of Conservation
Final Draft
December 2020

Epping Forest District Council commissioned a Habitat Regulations Assessment of the Epping Forest Local Plan and determined that the Local Plan would not have an adverse impact on the Epping Forest Special Area of Conservation (SAC).

However, Natural England maintained an objection to the Local Plan, citing concerns over the Habitat Regulations Assessment. The Local Plan Inspector therefore advised that it was not possible to conclude that the Local Plan would not adversely impact the Epping Forest SAC.

Consequently, in light of the Local Plan Inspector's advice, Epping Forest District Council was not lawfully able to grant planning permission for any development within the District likely to have an air pollution impact on the Epping Forest SAC, however small. Therefore, it is necessary for any development that could affect the Epping Forest SAC to have either a neutral impact, or a betterment, of air quality.

Consequently, in December 2020, Epping Forest District Council developed a strategy to provide a strategic approach to mitigating the effects of development on the integrity of the Epping Forest SAC in relation to atmospheric pollution. It has been developed to support the implementation of policies contained within the emerging Local Plan and specifically policies DM2 and DM22.

In doing so it reflects the evidence base developed to support the HRA process undertaken regarding the Local Plan. The Strategy will therefore support the conclusion of the Local Plan HRA process and facilitate the

determination of individual planning applications which have the potential to have an adverse effect on the integrity of the Epping Forest SAC in relation to atmospheric pollution without mitigation.

This Strategy has been developed in response to the findings of the evidence base by setting out a suite of mitigation measures that are needed to address the effects of atmospheric pollution arising primarily from new development proposed to be brought forward within the District.

The Strategy therefore effectively acts as a mitigation strategy to allow the progression of Local Plan development by drawing a conclusion of no adverse effect on the SAC if The Strategy is followed. The Strategy therefore requires a site specific HRA for individual developments that do not form part of the Emerging Local Plan, which is a validation requirement for all cases submitted after March 29th, 2021.

2.7. Interim Approach to Managing Recreational Pressures on the Epping Forest Special Area of Conservation (2018)

Appendix 1 – Interim Mitigation Strategy for Epping Forest Special Area of Conservation

Interim Approach to Managing Recreational Pressures on the Epping Forest Special Area of Conservation

Epping Forest

1. Epping Forest (the Forest) was a former royal forest and whilst it is London's largest open space, it also provides significant open space opportunities for residents from within and beyond Epping Forest District. It covers some 2400 hectares framed by Walthamstow to the south, the Lee Valley to the west, the M11 to the east and the M25 to the north. The Forest is run by a charity owned and managed by the Corporation of London Corporation under the Epping Forest Act of 1878, which established the City of London Corporation as the Conservators of Epping Forest. A history of the Forest can be viewed at:

   https://www.cityoflondon.gov.uk/things-to-do/green-spaces/epping-forest/heritage/Pages/history-of-Epping-Forest.aspx

2. The Forest is managed by a team of Forest Keepers, grounds and other staff led by a Superintendent. It is patrolled 365 days a year by Forest Keepers whose role is to assist the public to enjoy the Forest safely and to protect the Forest from inappropriate damage or abuse. The Forest Keepers are also attested constables and enforce the Epping Forest byelaws. If necessary, this includes prosecuting byelaw infringement cases in the Magistrates Court.

3. Two thirds (1720ha) of the Forest is designated as a Site of Special Scientific Interest (SSSI) with 1,605ha of that area also designated as a Special Area of Conservation (SAC). The site hosts three Annex I habitats, together with the Stag Beetle, a species listed on Annex II.

4. The Forest comprises wood-pasture with habitats of high nature conservation value including ancient semi-natural woodland, old grassland plains, wet and dry heathland and scattered wetland. The woodland represents one of the largest continuous semi-natural blocks in the country, characterised by grows of over-mature pollards. The plains contain a variety of unimproved acid grasslands uncommon elsewhere in Essex and the London area. The Forest supports a nationally outstanding assemblage of invertebrates, major amphibian interest and an exceptional breeding bird community. The Forest lies on a ridge of London clay overlain in places by Claygate Beds, and in the highest areas by Bagshot Sand and Pebble Gravel. The varied geology gives rise to a mosaic of soil types from neutral soils to acidic loams and from impervious clays to well-drained gravels. To a large extent the soil patterns have dictated the pattern of vegetation. Historically Epping Forest was managed as wood-pasture through pollarding, which declined during the 19th century and eventually ceased in 1878 under the Epping Forest Act. Recently pollarding has been reinstated in some places.

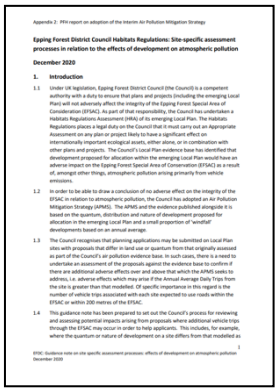
This guidance, published as an Appendix to the Epping Forest Interim Air Pollution Mitigation Strategy (see **Section 2.6**) by Epping Forest District Council, addresses the "*considerable challenge to balance the needs of the high (and growing) numbers of visitors with the natural aspect of the Forest and the nature conservation interest*". It acknowledges "*Growing numbers of visitors can result in conflict for space among users and demand for more facilities, such as parking, refreshments and toilets. There are also a number of potential ways recreation could have an impact on the nature conservation interest of the site. These include:*

- *Eutrophication from dog fouling;*
- *Trampling/wear, leading to soil compaction, vegetation wear, erosion and damage to veteran tree roots;*
- *Increased fire risk (and potentially difficulties in access for emergency vehicles if gates etc. are blocked);*
- *Difficulties in establishing the best grazing management due to interactions between visitors and livestock;*
- *Direct damage to veteran trees, for example from climbing on them;*
- *Harvesting, for example fungi, deadwood;*
- *Disturbance to invertebrates and other wildlife;*
- *Spread of disease;*
- *Spread of alien plants;*
- *Staff time taken away from necessary management due to the need to deal with vandalism, breaches of byelaws etc.; and*
- *Direct damage and vandalism of infrastructure.*"

As such, a fully costed mitigation strategy has been provided in regard to these issues, with the financial obligations of the three authorities deemed most impactful in term of recreational pressure provided. The guidance determines that it is the responsibility of these local authorities to secure the mitigation costs from developers, typically through Section 106 agreements.

2.8. Epping Forest District Council Habitats Regulations: Site-specific assessment processes in relation to the effects of development on atmospheric pollution (2020)

This guidance, published as an Appendix to the Epping Forest Interim Air Pollution Mitigation Strategy (see **Section 2.6**) by Epping Forest District Council, lays out the methodology to be used when assessing the effects of a development on atmospheric pollution.



Appendix 2: PFH report on adoption of the Interim Air Pollution Mitigation Strategy

Epping Forest District Council Habitats Regulations: Site-specific assessment processes in relation to the effects of development on atmospheric pollution

December 2020

1. Introduction

1.1 Under UK legislation, Epping Forest District Council (the Council) is a competent authority with a duty to ensure that plans and projects (including the emerging Local Plan) will not adversely affect the integrity of the Epping Forest Special Area of Consideration (EFSAC). As part of that responsibility, the Council has undertaken a Habitats Regulations Assessment (HRA) of its emerging Local Plan. The Habitats Regulations places a legal duty on the Council that it must carry out an Appropriate Assessment on any plan or project likely to have a significant effect on internationally important ecological assets, either alone, or in combination with other plans and projects. The Council's Local Plan evidence base has identified that development proposed for allocation within the emerging Local Plan would have an adverse impact on the Epping Forest Special Area of Conservation (EFSAC) as a result of, amongst other things, atmospheric pollution arising primarily from vehicle emissions.

1.2 In order to be able to draw a conclusion of no adverse effect on the integrity of the EFSAC in relation to atmospheric pollution, the Council has adopted an Air Pollution Mitigation Strategy (APMS). The APMS and the evidence published alongside it is based on the quantum, distribution and nature of development proposed for allocation in the emerging Local Plan and a small proportion of 'windfall' developments based on an annual average.

1.3 The Council recognises that planning applications may be submitted on Local Plan sites with proposals that differ in land use or quantum from that originally assessed as part of the Council's air pollution evidence base. In such cases, there is a need to undertake an assessment of the proposals against the evidence base to confirm if there are additional adverse effects over and above that which the APMS seeks to address, i.e. adverse effects which may arise if the Annual Average Daily Trips from the site is greater than that modelled. Of specific importance in this regard is the number of vehicle trips associated with each site expected to use roads within the EFSAC or within 200 metres of the EFSAC.

1.4 This guidance note has been prepared to set out the Council's process for reviewing and assessing potential impacts arising from proposals where additional vehicle trips through the EFSAC may occur in order to help applicants. This includes, for example, where the quantum or nature of development on a site differs from that modelled as

1

EFDC: Guidance note on site specific assessment processes: effects of development on atmospheric pollution
December 2020

3. ASSESSMENT METHODOLOGY

3.1. Methodology Overview

Epping Forest District Council provide a list of Planning Application Validation Requirements which includes an HRA Site Specific Assessment Process Note, which lays out the methodology to be used when assessing the effects of a development on atmospheric pollution.

The Epping Forest District Council Habitats Regulations guidance (see **Section 2.**7) provides two triggers for whether a development proposal needs to be assessed in relation to its effects on the Epping Forest SAC, which are:

- If the development is not specifically proposed for allocation within the emerging Local Plan.
- If the development proposal represents a variation (which results to an increase in the quantum of development or changes the proposed use) from the site's land use allocation as set out in the emerging Local Plan.

In these instances, applicants will be required to provide evidence to support an assessment against the traffic and air quality modelling used to support the development of the adopted APMS. This assessment will be undertaken by the Council and, if necessary, its consultant team.

3.2. HRA Assessment Process

For development sites that meet either of the triggers set out above, there will be a need to review the traffic generating characteristics of the site in further detail and assess any potential adverse effects on the EFSAC over and above that accounted for in the Council's adopted APMS. This will enable the Council and Natural England to be satisfied that any adverse effects in connection with each site application will either not arise, or if they do, will be either appropriately mitigated through the APMS or identify where further mitigation measures are required.

The assessment process follows four steps, set out as follows:

"***Step 1***:

As part of pre-application and transport scoping discussions with the Council, applicants will be required to provide the following information relating to each development site:

> *(a) The land use and quantum of the authorised existing use of the subject land as was correct at February 20171, or confirmation that the site was vacant or not generating traffic at that time (in which case proceed to [c]);*
>
> *(b) Calculation of the number of vehicle trips in Annual Average Daily Traffic (AADT) generated by the site under its existing use, including:*
>
> > *i. Total AADT generated by the site, including heavy duty vehicles as a proportion of total AADT (HDV%).*

ii. Proportion of site generated AADT on roads within 200 metres of the EFSAC, including HDV%.

These calculations must be supported by evidence such as traffic surveys or other appropriate data source, e.g. TRICS, journey to work data, etc2. If it can be clearly demonstrated that a site which was vacant prior to February 2017 could be brought back into use for the purposes for which it was authorised (without the need for any planning permission) the Council may be in a position to consider taking this into account in calculating (b) above.

(c) A schedule of the land use and quantum proposed at the site (as is best known at the time).

(d) Calculation of the forecast number of vehicle trips (AADT) generated by the site under its proposed use to the end of the plan period in 2033:

i. Total AADT forecast to be generated by the site, including HDV%.

ii. Proportion of site generated AADT on roads within 200 metres of the EFSAC, including HDV%.

These calculations must be supported by evidence such as traffic surveys or other appropriate data source, e.g. TRICS, journey to work data3, etc

(e) A calculation of the net AADT figure (proposed (d) minus existing (b)) both in total and for roads within the EFSAC or within 200 metres of the EFSAC.

(f) Details of any mitigation measures proposed to be secured through recognised planning mechanisms in support of the application, and if the proposed mitigation is expected to impact on trip generation and/or distribution. Forecasts under (d) and (e) should be provided for both 'with' and 'without' the proposed mitigation.

***Step 2**:*

Council officers will undertake an initial appraisal of the existing (if applicable) and proposed AADT forecasts and liaise with the applicant to ensure the required information has been supplied and is fit for purpose. Where applicable, the proposed methodology will also be reviewed against any pre-application scoping discussions and advice from ECC/HE.

***Step 3**:*

The relevant site information and AADT will be provided to the Council's appointed transport consultant to check against the site-specific land use and trip data previously forecast in the Council's evidence base.

A short technical note will be prepared setting out any difference in AADT between the site allocation assumptions used in the Council's evidence base and the applicant's forecasts, including any reasoning for this (e.g. difference in land use assumptions, application of a different trip rate and/or trip distribution, mitigation impacts, etc).

The assessment will indicate either:

(a) There is no forecast increase in AADT at any location that would alter the outputs of the evidence base; or

(b) There is likely to be an increase in AADT of any number at any location that may alter the outputs of the evidence base.

(b1) Whether there is an overall increase in the distance travelled by vehicles or HDVs associated with the development on roads within the EFSAC or within 200 metres of the EFSAC as this would result in an increase in pollution within the EFSAC.

Where outcome (a) is reached, no further site-specific assessment of HRA impacts will be required. Where outcome (b) is reached and/or (b1) is also true, the assessment will move to Step 4.

***Step 4**:*

The relevant transport data will be provided to the Council's appointed air pollution modelling consultant, who will undertake a revised assessment to determine the effects against those presented within the Council's evidence base and subsequently addressed through the adopted APMS.

Specifically, the revised assessment outcomes will be reviewed to determine if the mitigation measures identified within the APMS will be capable of satisfactorily addressing any further impact, or if additional measures need to be secured. Such measures will need to be considered on a site-by-site basis and may require additional assessment(s)."

If a proposed development does not involve any of the above triggers, no additional assessment by EFDC's consultant team will be required. **In either case a project-level HRA will still be required**, and a TS or TA may be necessary for highway/transport assessment purposes to support a development proposal, the need for which should be determined and agreed at the pre-application phase.

3.3. Scoping of the Proposed Development

The Epping Forest District Council Habitats Regulations: Site-specific assessment processes in relation to the effects of development on atmospheric pollution (2020) guidance (See **Section 2.8**) notes that if the development is not specifically proposed for allocation within the emerging Local Plan then the HRA Assessment Process above would typically be followed; however it goes on to state that "*in relation to residential developments this will apply to proposals for six or more dwellings*", which is in recognition of the fact that a small windfall allowance has been made for such small sites in the evidence work supporting the HRA for the emerging Local Plan.

As the proposed development consists only of an increase of one additional dwelling, it is therefore considered that no additional assessment by EFDC's consultant team will be required, and that only a project-level HRA will be required, as presented in **Section 4** below.

4. HABITAT REGULATIONS ASSESSMENT

4.1. Overview

Natural England provides guidelines that advise on the assessment of the impacts of road traffic emissions of proposed developments (referred to as "plans and projects") on protected European habitat sites in its guidance *Natural England's approach to advising competent authorities on the assessment of road traffic emissions under the Habitats Regulations*.

The guidance covers primarily the screening stage that initially identifies the risk of the possibility of significant adverse effects on a European site which could undermine the achievement of its conservation objectives and which therefore would require further detailed examination through an "appropriate assessment". If risks which might undermine a site's conservation objectives can clearly be ruled out (based on the consideration of objective information), a proposal will have no likely significant effect and no appropriate assessment will be needed.

The amount of traffic generated by the proposed development has been taken from the AADT Assessment prepared by Capital Transport Planning, which can be seen in **Appendix 1**.

4.2. Advice on Screening

The advice on screening the need for an appropriate assessment is set out in 4 steps, as described below. If the proposal does not meet the criteria of one of the steps, there is no need to progress to the next step:

- Step 1: Does the proposal give rise to emissions which are likely to reach a European Site?
    - Any emissions from road traffic associated with a specific proposal and the proximity to European sites should be considered.
- Step 2: Are the qualifying features of the sites within 200m of a road sensitive to air pollution?
    - Distance-based criteria have been established for several sectors to identify consultations requiring consideration for potential effects from air pollution.
    - With regard to potential risks from road traffic emissions, Natural England and Highways England are in agreement that protected sites falling within 200 meters of the edge of a road affected by a plan or project need to be considered further.
- Step 3: Could the sensitive qualifying features of the site be exposed to emissions?
    - "Qualifying features" of a site can be identified by reference to Natural England's formal advice on their conservation objectives, which include a definitive list of legally-qualifying features.
    - There are several ways to establish whether qualifying feature is sensitive to the type of air emissions expected from a proposal, ranging from broad, internationally agreed pollution benchmarks (critical loads and levels) to site specific information such as survey data.

- Step 4: Application of screening thresholds: (a) alone; (b) in-combination with emissions from other road traffic plans and projects; and (c) in-combination with emissions from other non-road plans and projects.
    - Established guideline thresholds that determine whether a change is likely to be significant are used and applied to the development.
    - The parameters used as thresholds are a change in AADT of 1,000 or more (or 200 of more AADT HGV) or 1% of the critical load or critical level for emissions.
    - These thresholds do not themselves imply any intrinsic environmental effects and are used solely as a trigger for further investigation.

4.3. Site Specific Screening (Steps 1-4a)

As noted above, for all new residential developments within Epping Forest District, an assessment of the potential impact of road traffic emissions associated with the proposed development on Epping Forest SAC is required. To facilitate this, a site-specific screening assessment has been carried out to determine whether an Appropriate Assessment is required. **Table 4.1** summarizes this screening assessment.

Table 4.1: Site Specific Screening Steps for a Road Traffic Assessment under the Habitats Regulations

Step	Outcome	Justification
Step 1: Does the proposal give rise to emissions which are likely to reach a European Site?	**Yes**	*AADT Assessment (by Capital Transport Planning) indicates a net trip generation of 1 AADT over extant site use (See **Appendix 1**).* *Site is located 140 m from SAC.*
Step 2: Are the qualifying features of the sites within 200m of a road sensitive to air pollution?	**Yes**	*It is known that qualifying sensitive features of the Epping Forest SAC can be found within 200 m of roads through the SAC.*
Step 3: Could the sensitive qualifying features of the site be exposed to emissions?	**Yes**	*Assuming that traffic generated by the proposed development could potentially travel down any of the roads within the SAC, it can be said that they could be exposed to emissions resulting from the proposed development.*
Step 4a: Do the emissions from this proposal alone exceed screening thresholds?	**No**	*Does not meet 1000 AADT threshold (net increase of 1 AADT) – effects can be deemed insignificant, no further analysis required.*

Traffic generated by this development will be very small and falls considerably below the screening threshold for a detailed assessment (1 AADT c.f. 1000 AADT). Not only has a windfall allowance for developments of this

size been made in the Epping Forest Interim Air Pollution Mitigation Strategy; but this project-level HRA has shown that any increase in emissions resulting from the proposed development will be "*insignificant*" under current guidance.

4.4. In-Combination Effects (Steps 4b and 4c)

Steps 4b and 4c of the guidance are to apply the threshold value not only to the traffic flows generated by the site alone (as in step 4a) but also to those of the site in combination with those from other projects and proposals that have the potential to affect the site of interest. Step 4b guides for the application of the threshold to emissions in combination with those from other road traffic plans and projects; while Step 4c guides for the application of the thresholds to emissions in combination with those from other non-road plans and projects, for example ammonia emissions from a farm source.

These steps have been explicitly included in the updated guidance since June 2018 to reflect the requirements of the Habitats Regulations in response to recent clarification provided by the Wealden Judgement (February 2017). This ruled in favour of Wealden District Council that a neighbouring Local Authority had failed to take into account in-combination effects from developments in the protection of the Ashdown Forest Special Area of Conservation in the development of its Local Plan.

It can be noted that in-combination in effects in this scenario can be scoped out as any developments accounted for in the emerging Local Plan are deemed to have any effects mitigated by nature of the Epping Forest Interim Air Pollution Mitigation Strategy. Additionally, developments not accounted for in the emerging Local Plan will have to go through the HRA Assessment Process outlined above in order to show that any adverse effects in connection with each application will either not arise, or if they do, will be either appropriately mitigated through the APMS or identify where further mitigation measures are required.

5. MITIGATION

5.1. Habitats Regulation Assessment

In accordance with the Epping Forest Interim Air Pollution Mitigation Strategy (2020) and the subsequent site-specific Habitats Regulation Assessment, as a consequence of the proposed development, there will not be a significant increase in pollutant concentrations and therefore mitigation is not seen to be necessary. Not only has a windfall allowance for developments of this size been made in the Epping Forest Interim Air Pollution Mitigation Strategy; but this project-level HRA has shown that the proposal will not give rise to emissions which are likely to reach the Epping Forest SAC.

5.2. Other Mitigation Costs & Requirements

The above notwithstanding, all new residential developments within Epping Forest District are subject to certain mitigation costs and measures. It should be noted that the following are general requirements of all such developments and do not pertain specifically to the outcomes of this report, for which it has been determined that no additional mitigation in addition the below is necessary.

- £335 financial contribution (for smaller sites including windfall sites) under the Epping Forest Interim Air Pollution Mitigation Strategy (2020) (See **Section 2.6**).
- £352 financial contribution under the Interim Approach to Managing Recreational Pressures on the Epping Forest Special Area of Conservation (2020) (see **Section 2.7**).
- Provision of cycle storage and electric vehicle charging capacity.

6. CONCLUSIONS

An air quality assessment has been undertaken in accordance with *Natural England's approach to advising competent authorities on the assessment of road traffic emissions under the Habitats Regulations,* The Institute of Air Quality Management's *Guide to the Assessment of Air Quality Impacts on Designated Nature Conservation Sites* and Epping Forest's *Interim Air Pollution Mitigation Strategy*.

Traffic generated by this development will be very small and falls considerably below the screening threshold for a detailed assessment (1 AADT c.f. 1000 AADT). Not only has a windfall allowance for developments of this size been made in the Epping Forest Interim Air Pollution Mitigation Strategy; but this project-level HRA has shown that any increase in emissions resulting from the proposed development will be "*insignificant*" under current guidance.

Since it has been shown that in terms of air quality, the proposals adhere to local and national planning policy, it is considered that the air pollution should not be a constraint on the proposed residential development.

Appendix 1
AADT Assessment (Capital Transport Planning)

CAPITAL TRANSPORT PLANNING

Annual Average Daily Traffic Assessment

8 Stanmore Way, Loughton
May, 2021

Capital Transport Planning is a Transport Planning and Highways consultancy, specialised in assisting clients through the planning process. Our transport consultant has vast transport planning experience acting on behalf of clients to overturn refused planning applications, providing documents to support planning applications, working on the behalf of Highway Authorities within a County Council and London Borough Council.

Prepared for:

Clear Architects

Prepared by:

Capital Transport Planning LTD

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Transport Consultant

Revision History

Project and Document Details

Project Name	**8 Stanmore Way**
Project No	00114
Document Title	Annual Average Daily Traffic

Document History

Rev	Amendments	Approved By	Date
First Issue	N/A	MO	10/05/2021

Table of Contents

List of Figures and Tables

1. Introduction

1.1. This Technical Note has been prepared by Capital Transport Planning on behalf of Clear Architects (the agent). Capital Transport Planning has been commissioned to assess the highway and transportation implications associated with proposals for the development at 8 Stanmore Way, Loughton.

1.2. It is proposed that the existing bungalow on the site is demolished and replaced with two chalet bungalows.

1.3. This document aims to present the acceptability of the proposed development in regard to vehicle trip generation and provide annual average daily traffic figures.

2. Existing Transport Conditions

2.1. Site Location

2.1.1. The application site is located on Stanmore Road, which is to the north of Loughton and to the south-west of Epping Forest district.

2.2. Site Description

2.2.1. The application site is currently occupied by an existing Bungalow, which gains access from an existing crossover with Stanmore Way.

2.3. Existing Public Transport Facilities

2.3.1. Rail/Underground

2.3.2. The closest rail station is Debden underground station, which is located approximately 1.6 miles away and approximately 35-minute walk from the site. The site is also located approximately 1.8 miles north of Loughton underground station and approximately 38-minute walk from the site.

2.3.3. Bus

2.3.4. The site benefits from bus services within walking distance. The closest being the Baldwin's Hill bus stops located on Golding's Hill. The bus stop is approximately 0.2 miles to the east from the site access. The bus stop is within 5-minutes walking distance and provides access to the bus 66, 66A, 575 and D87.

2.3.5. Surrounding Highway Network

2.3.6. The application site is located on the northern side of Stanmore Way. The application site is accessed from an existing vehicular access from Stanmore Road. Stanmore Road is an unclassified road which forms a part of the public highway. The site is located approximately 1.9 miles north-east of the strategic road network (M11).

2.3.7. Essex County Council act as the County Highway Authority responsible for the maintenance and management of roads.

3. Policy Context

3.1. This following section takes into consideration national planning policy and reviews the development proposals against relevant transport planning policy.

National Planning Policy Framework (NPPF) (2019)

3.2. The national planning policy framework is the national policy guidance document which forms the basis of local plans and neighbourhood plans around the country. The proposed development will be reviewed against this document to ensure that the development is in accordance.

3.3. The NPPF sets out guidance relating to parking standards within the chapter relating to sustainable transport. It is noted that the NPPF considers the location of a development in regard to parking standards. It also notes that proposals should only be refused on transport grounds if they compromise highway safety or result in a severe impact.

3.4. The NPPF aims to bring about sustainable development and create positive growth, to create economic, environmental and social progress for this and future generations. This revised document supersedes the previous NPPF, published in 2012 and 2018.

3.5. NPPF Paragraph 109 states that development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe.

4. Vehicle Trip Assessment

4.1. This chapter of the report reviews the proposed trip generation and annual average daily traffic.

4.2. Traffic Generation

4.2.1. This section of the report sets out the existing and proposed level of trips that are generated at the application site, during the AM and PM peak periods and on a daily basis.

4.2.2. To assess the vehicular impact of the proposed development, the TRICS database has been interrogated. TRICs is the industry standard trip generation database. The TRICS database is comprised of surveys of various sites nationwide, which are utilised for comparison purposes. The TRICS database has been investigated to gain trip rates for the proposed development.

4.2.3. It has been determined that cars would have the most significant impact in regard to trip generation. The TRICS generation information presented in this chapter relates to cars.

4.2.4. Six sites were initially identified, however only one site was selected that matched the requirements of 'residential' and 'edge of town.' The full TRICS output is presented in Appendix B and the resultant trip rates and trip generation are presented in Table 1.

4.2.5. The existing site is comprised of an existing bungalow with a vehicular access with Stanmore Road. The application site generates existing trips and this has been estimated utilising the trip rates presented in Table 1.

Table 1. Proposed Trip Rate

TIME RANGE	ARRIVALS	DEPARTURES	TOTALS
07:00-08:00	0	0	0
08:00-09:00	0	0.111	0.111
09:00-10:00	0	0.111	0.111
10:00-11:00	0	0	0
11:00-12:00	0.111	0	0.111
12:00-13:00	0.111	0	0.111
13:00-14:00	0	0	0
14:00-15:00	0.111	0.111	0.222
15:00-16:00	0	0	0
16:00-17:00	0	0	0
17:00-18:00	0	0	0
18:00-19:00	0	0.111	0.111
19:00-20:00	0	0	
20:00-21:00	0.111	0	0.111
TOTAL	0.444	0.444	0.888

4.2.6. The trip rates presented in Table 1 indicate that the existing bungalow is likely to generate less than 1 across the course of a typical day. This trip rate indicates that a car is not expected to be driven every day from this site. This trip rate accords with the good levels of public transportation in the vicinity of the site, including access to bus and two London underground stations.

4.2.7. The trip rates were utilised and the trip generation for the two chalet bungalows is presented below in Table 2.

Table 2. Trip Generation (2 Dwellings)

TIME RANGE	ARRIVALS	DEPARTURES	TOTALS
07:00-08:00	0	0	0
08:00-09:00	0	1	1
09:00-10:00	0	0	0
10:00-11:00	0	0	0
11:00-12:00	0	0	0
12:00-13:00	0	0	0
13:00-14:00	0	0	0
14:00-15:00	0	0	0
15:00-16:00	1	0	1
16:00-17:00	0	0	0
17:00-18:00	0	0	0
18:00-19:00	0	0	0
19:00-20:00	0	0	0
20:00-21:00	0	0	0
TOTAL	1	1	2

4.2.8. In order to calculate the proposed trip generation, depending on the parameter selected, the trip rate would be multiplied by the number of residential units in this instance.

4.2.9. Utilising the TRICS assessment, a summary of the peak hour and daily impacts are presented in Table 3.

Table 3. TRICS Summary

TRICS TIME PERIOD	ARRIVALS	DEPARTURES	TWO-WAY
AM PEAK 09:00-10:00	0	1	1
PM PEAK 15:00-16:00	1	0	1
DAILY 07:00-19:00	1	1	2

4.2.10. Table 3 indicates that the proposed development is likely to generate a maximum of 2 two-way trips across the course of a typical day (07:00-19:00). The 2 daily trips are comprised of 1 departure in the AM peak period and 1 arrivals in the PM peak period.

4.2.11. It is considered that the proposed trip generation will have a negligible impact to the operations of Stanmore Way.

4.2.12. In order to calculate the daily traffic flow associated with residential development, the TRICS database was interrogated and a summary of daily trips are presented in Table 2.

4.2.13. For robustness, it has been assumed that the same level of traffic associated with the residential development occurs at the weekend as weekdays. This is unlikely but is considered robust.

4.2.14. Average Annual Daily Traffic (AADT) is the average level of traffic travelling on a road or created by a development on a typical day (i.e. total annual traffic / 365). Table 3, presents a breakdown of vehicular trips generated by the proposed development on a daily, weekly, monthly and annual basis.

Table 4. Car Trips AADT

NO OF TRIPS	AVERAGE DAILY	AVERAGE WEEKLY	AVERAGE MONTHLY	AVERAGE ANNUALLY
CARS	2	14	61	728

4.2.15. Table 4 presents the average daily, weekly, monthly and annual estimates of car trips to be generated by the proposed development. Table 4 indicates that the site will generate an average of 2 daily trips, 14 weekly trips, 61 monthly trips and 728 across the course of the year.

Table 5. Net Difference in Trips

NO OF TRIPS	AVERAGE DAILY	AVERAGE WEEKLY	AVERAGE MONTHLY	AVERAGE ANNUALLY
EXISTING TRIPS	0.8	6	26	312
PROPOSED TRIPS	2	14	61	728
NET TRIPS	+1.2	+8	+35	+416

5. Summary and Conclusions

5.1. This Annual Average Daily Traffic Assessment has been prepared by Capital Transport Planning on behalf of Clear Architects (the agent). Capital Transport Planning has been commissioned to assess the highway and transportation implications associated with proposals for the development at 8 Stanmore Way in Loughton, Essex.

5.2. It is proposed that the existing bungalow is demolished and replaced with two chalet bungalows.

5.3. This report has assessed the highways and transportation aspects of the development proposal and it is concluded that:

- Highway officers from Essex County Council have raised no objection to the development proposal in regard to trip generation;
- The proposed trip generation is likely to have a negligible impact on the operations and highway safety of Stanmore Way;
- The TRICS assessment undertaken using a similar site with comparable characteristics indicates that the proposed development is likely to generate a maximum of up to 2 two-way movements across the course of a typical day;
- Further analysis of the average daily traffic movements indicated that the proposed development is likely to generate 14 weekly trips, 61 monthly trips and 728 annual trips;
- The provision of electric vehicle charge points and recent government policy banning the sale of petrol/diesel vehicles from 2030, is likely to eventually lead to an improvement in local air quality in comparison to the existing daily trips undertaken;
- The transport impacts associated with the proposed development have been assessed and it is concluded that the development can be delivered without prejudicing safety and the free flow of traffic on the public highway;

5.4. For the reasons stated above and on the basis of the assessment carried out, it is considered that the development proposals can be delivered without detriment to the public highway. Therefore, there are no reasons why planning permission should not be granted relating to highways and transportation.

6. Appendices

APPENDIX A – TRICS OUTPUT

Calculation Reference: AUDIT-404201-210511-0555

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
Category : A - HOUSES PRIVATELY OWNED
TOTAL VEHICLES

Selected regions and areas:
01 GREATER LONDON
WF WALTHAM FOREST 1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Primary Filtering selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: No of Dwellings
Actual Range: 9 to 9 (units:)
Range Selected by User: 4 to 20 (units:)

Parking Spaces Range: All Surveys Included

Parking Spaces per Dwelling Range: All Surveys Included

Bedrooms per Dwelling Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/13 to 09/09/20

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:
Thursday 1 days

This data displays the number of selected surveys by day of the week.

Selected survey types:
Manual count 1 days
Directional ATC Count 0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaking using machines.

Selected Locations:
Edge of Town Centre 1

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:
Residential Zone 1

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Secondary Filtering selection:

Use Class:
C3 1 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 500m Range:
All Surveys Included

Secondary Filtering selection (Cont.):

Population within 1 mile:
50,001 to 100,000 1 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:
500,001 or More 1 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:
0.6 to 1.0 1 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:
No 1 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:
5 Very Good 1 days

This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1 **WF-03-A-02** **SEMI DETACHED & TERRACED** **WALTHAM FOREST**
PALMERSTON ROAD
WALTHAMSTOW

Edge of Town Centre
Residential Zone
Total No of Dwellings: 9
Survey date: THURSDAY *06/06/19* *Survey Type: MANUAL*

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

MANUALLY DESELECTED SITES

Site Ref	Reason for Deselection
DN-03-A-07	Location
LT-03-A-02	Location
PS-03-A-01	Location
ST-03-A-06	Location

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
TOTAL VEHICLES
Calculation factor: 1 DWELLS
Estimated TRIP rate value per 2 DWELLS shown in shaded columns
BOLD print indicates peak (busiest) period

	ARRIVALS				DEPARTURES				TOTALS			
Time Range	No. Days	Ave. DWELLS	Trip Rate	Estimated Trip Rate	No. Days	Ave. DWELLS	Trip Rate	Estimated Trip Rate	No. Days	Ave. DWELLS	Trip Rate	Estimated Trip Rate
00:00 - 01:00												
01:00 - 02:00												
02:00 - 03:00												
03:00 - 04:00												
04:00 - 05:00												
05:00 - 06:00												
06:00 - 07:00												
07:00 - 08:00	1	9	0.000	0.000	1	9	0.000	0.000	1	9	0.000	0.000
08:00 - 09:00	**1**	**9**	**0.111**	**0.222**	1	9	0.111	0.222	**1**	**9**	**0.222**	**0.444**
09:00 - 10:00	1	9	0.000	0.000	**1**	**9**	**0.222**	**0.444**	1	9	0.222	0.444
10:00 - 11:00	1	9	0.111	0.222	1	9	0.111	0.222	1	9	0.222	0.444
11:00 - 12:00	1	9	0.111	0.222	1	9	0.000	0.000	1	9	0.111	0.222
12:00 - 13:00	1	9	0.111	0.222	1	9	0.000	0.000	1	9	0.111	0.222
13:00 - 14:00	1	9	0.111	0.222	1	9	0.111	0.222	1	9	0.222	0.444
14:00 - 15:00	1	9	0.111	0.222	1	9	0.111	0.222	1	9	0.222	0.444
15:00 - 16:00	1	9	0.111	0.222	1	9	0.111	0.222	1	9	0.222	0.444
16:00 - 17:00	1	9	0.111	0.222	1	9	0.111	0.222	1	9	0.222	0.444
17:00 - 18:00	1	9	0.000	0.000	1	9	0.000	0.000	1	9	0.000	0.000
18:00 - 19:00	1	9	0.000	0.000	1	9	0.111	0.222	1	9	0.111	0.222
19:00 - 20:00	1	9	0.000	0.000	1	9	0.000	0.000	1	9	0.000	0.000
20:00 - 21:00	1	9	0.111	0.222	1	9	0.000	0.000	1	9	0.111	0.222
21:00 - 22:00												
22:00 - 23:00												
23:00 - 24:00												
Total Rates:			0.999	1.998			0.999	1.998			1.998	3.996

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*

Parameter summary

Trip rate parameter range selected:	9 - 9 (units:)
Survey date date range:	01/01/13 - 09/09/20
Number of weekdays (Monday-Friday):	1
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	4

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
CARS
Calculation factor: 1 DWELLS
Estimated TRIP rate value per 2 DWELLS shown in shaded columns
BOLD print indicates peak (busiest) period

	ARRIVALS				DEPARTURES				TOTALS			
Time Range	No. Days	Ave. DWELLS	Trip Rate	Estimated Trip Rate	No. Days	Ave. DWELLS	Trip Rate	Estimated Trip Rate	No. Days	Ave. DWELLS	Trip Rate	Estimated Trip Rate
00:00 - 01:00												
01:00 - 02:00												
02:00 - 03:00												
03:00 - 04:00												
04:00 - 05:00												
05:00 - 06:00												
06:00 - 07:00												
07:00 - 08:00	1	9	0.000	0.000	1	9	0.000	0.000	1	9	0.000	0.000
08:00 - 09:00	1	9	0.000	0.000	**1**	**9**	**0.111**	**0.222**	1	9	0.111	0.222
09:00 - 10:00	1	9	0.000	0.000	1	9	0.111	0.222	1	9	0.111	0.222
10:00 - 11:00	1	9	0.000	0.000	1	9	0.000	0.000	1	9	0.000	0.000
11:00 - 12:00	**1**	**9**	**0.111**	**0.222**	1	9	0.000	0.000	1	9	0.111	0.222
12:00 - 13:00	1	9	0.111	0.222	1	9	0.000	0.000	1	9	0.111	0.222
13:00 - 14:00	1	9	0.000	0.000	1	9	0.000	0.000	1	9	0.000	0.000
14:00 - 15:00	1	9	0.111	0.222	1	9	0.111	0.222	**1**	**9**	**0.222**	**0.444**
15:00 - 16:00	1	9	0.000	0.000	1	9	0.000	0.000	1	9	0.000	0.000
16:00 - 17:00	1	9	0.000	0.000	1	9	0.000	0.000	1	9	0.000	0.000
17:00 - 18:00	1	9	0.000	0.000	1	9	0.000	0.000	1	9	0.000	0.000
18:00 - 19:00	1	9	0.000	0.000	1	9	0.111	0.222	1	9	0.111	0.222
19:00 - 20:00	1	9	0.000	0.000	1	9	0.000	0.000	1	9	0.000	0.000
20:00 - 21:00	1	9	0.111	0.222	1	9	0.000	0.000	1	9	0.111	0.222
21:00 - 22:00												
22:00 - 23:00												
23:00 - 24:00												
Total Rates:			0.444	0.888			0.444	0.888			0.888	1.776

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*