# Banbury Phase 3, Junction 11, Banbury, Oxfordshire OCC Post Submission Highway Response 1 

Local Planning Authority Number: 19/00128/HYBRID

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Client Name: Monte Blackburn Ltd

Banbury Phase 3, Junction 11, Banbury, Oxfordshire OCC Post Submission Highway Response 1

## Control Sheet

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## Table of Contents

1.0 Introduction ..... 1
1.1 Background ..... 1
1.2 Purpose and Scope of This Note ..... 2
1.3 Structure of the Note ..... 3
2.0 Proposed Site Access ..... 4
2.1 Vehicular Access ..... 4
2.2 Swept Path Analysis ..... 5
3.0 Internal Site Layout ..... 6
3.1 Pedestrian/Cycle Access ..... 6
3.2 Accessibility ..... 7
3.3 Car Parking Provision ..... 10
3.4 Cycle Parking Provision ..... 16
4.0 Potential Traffic Impacts. ..... 18
4.1 Accident Data ..... 18
4.2 Trip Generation and Distribution ..... 19
4.3 NH and WNC Post Submission Comments ..... 32

## Drawings

Curtins Drawing 79074-CUR-00-XX-DR-TP-05001-P03_SPA12mRigidHGV
Curtins Drawing 79074-CUR-00-XX-DR-TP-05002-P03_SPA16.5mArticulatedHGV

## Appendices

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Appendix A - OCC/NH/WNC Highway Observations
Appendix B - Updated Site Layout
Appendix C - OCC Parking Standards
Appendix D - Accident Data Reports
Appendix E - TRICS Outputs
Appendix F - Network Diagrams
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## C-curtins

### 1.0 Introduction

### 1.1 Background

1.1.1 Curtins has been appointed on behalf of Monte Blackburn Ltd to provide traffic and transportation advice in relation to a proposed mixed-use development in Banbury, Oxfordshire, on land located to the northeast of Junction 11 of the M40 motorway.
1.1.2 Curtins were previously appointed on behalf of Monte Blackburn Ltd to support a hybrid planning application for an industrial development on the wider site (CDC Application Reference 19/00128/HYBRID). The wider site extends for approximately 13 hectares and the proposals involved the construction of industrial units providing up to $50,000 \mathrm{~m}^{2}$ floorspace to be used within Use Classes B2 and B8. Construction has already begun on Phases 1 and 2 of the development, however a revised planning application has been submitted for Phase 3, and instead looks to develop the following on site:

- 240 bed hotel;
- 4-storey office building (circa 5,200m²);
- Petrol filling station (PFS);
- Coffee and hot-food drive thrus; and,
- Associated car parking.
1.1.3 Figure 1.1 below shows the site location:


Figure 1.1 - Site Location

# Banbury Phase 3, Junction 11, Banbury, Oxfordshire OCC Post Submission Highway Response 1 

1.1.4 As part of the previous hybrid application (19/00128/HYBRID) extensive discussions were held with Oxfordshire County Council (OCC), Cherwell District Council (CDC) and National Highways (previously Highways England) with regards to the development proposals. The developer worked proactively with the Local Highway Authorities and implemented a range of different measures for minimising the likelihood of potential highway impacts from the site. The 19/00128/HYBRID application was ultimately approved (subject to conditions) in May 2019.
1.1.5 The revised development proposals for Phase 3 have been submitted to Cherwell District Council (CDC) in July 2021 in the form of a full planning application (CDC Application Reference 21/02467/F). The description of the development is to be read as follows:
"Erection of mixed-use development including a 240-bed hotel, 4-storey office building and roadside services including 2 no hot food restaurant drive-throughs, a coffee shop drive-through and a petrol filling station with ancillary retail store"

### 1.2 Purpose and Scope of This Note

1.2.1 This Highway Response Note has been prepared to address to a number of recent highway comments received from OCC. The comments, shown at Appendix A to the rear of this report, refer to the submitted development proposals and request further clarification on a number of highway related points.
1.2.2 The comments received covered the following aspects:

1) Vehicular site access.
2) Pedestrian and cycle access.
3) Parking and cycle parking.
4) Electric Vehicle (EV) charging points.
5) Development trip generation.
6) Highway Safety.
7) Perceived traffic impact of the proposals.
1.2.3 No comments were received from OCC regarding the Framework Travel Plan (FTP) document submitted alongside the development proposals (Curtins Document Reference 079074-CUR-00-XX-RP-TP-002-V01_FrameworkTraveIPlan). The FTP was based upon the previous Travel Plan produced in association with the hybrid application (19/001278/hybrid), which was subject to several revisions based upon feedback from OCC, and is therefore considered a suitably robust document for promoting sustainable travel at the site.

Banbury Phase 3, Junction 11, Banbury, Oxfordshire OCC Post Submission Highway Response 1

### 1.3 Structure of the Note

1.3.1 Following on from this introduction, Section 2 of this Response addresses the points raised with regards to the vehicular site access arrangements.
1.3.2 Section 3 comments on the proposed pedestrian and cycle access arrangements, as well as an update on a number of the changes made to the site plan, including the proposed car and cycle parking provision.
1.3.3 Section 4 revisits the proposed development trip generation and considered the perceived traffic impact of the revised Phase 3 development.

## Banbury Phase 3, Junction 11, Banbury, Oxfordshire

 OCC Post Submission Highway Response 1
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### 2.0 Proposed Site Access

### 2.1 Vehicular Access

2.1.1 The vehicular site access for the proposed development is to be provided directly from the A361, in the form a priority junction arrangement with a ghost island right turn lane. The TA submitted alongside the proposals demonstrated that the proposed arrangement would operate within sufficient residual capacity (as per the 19/00128/HYBRID application).
2.1.2 Notwithstanding the above, OCC have requested that a further junction capacity assessment is undertaken on the A361 site access once the trip generation figures have been agreed with OCC and NH (see Section 4 of this Response for greater detail).
2.1.3 OCC have also requested that the internal site access junction (shown at Figure 2.1 below), which Curtins understands is due to be adopted, is also included for junction capacity assessments once trip generation figures have been agreed.

2.1.4 Curtins will provide results for the above junction capacity assessments in an updated Post Submission Highway Response, following agreement on the trip generation methodology found within Section 4 of this Response.

Banbury Phase 3, Junction 11, Banbury, Oxfordshire OCC Post Submission Highway Response 1

### 2.2 Swept Path Analysis

2.2.1 The TA stated that swept path analysis of the internal site layout can be provided separately. OCC have requested this information which is presented in Curtins Drawings 79074-CUR-00-XX-DR-TP-05001P03 and 79074-CUR-00-XX-DR-TP-05002-P03 to the rear of this Response.
2.2.2 As shown on the drawings a 12 m Rigid HGV and 16.5m Articulated HGV can safely navigate the site layout in forward gear, accessing the necessary uses and not causing any obstructions to the flow of traffic internally. This also demonstrates that the site can be suitably accessed by emergency and servicing vehicles.

# Banbury Phase 3, Junction 11, Banbury, Oxfordshire OCC Post Submission Highway Response 1 

### 3.0 Internal Site Layout

### 3.1 Pedestrian/Cycle Access

3.1.1 As discussed within the submitted TA, pedestrian and cycle access to the site will be provided from the northwest corner of the wider development via the aforementioned underpass beneath the M40. The underpass provides a useful (and traffic free) connection to the Banbury Gateway Shopping Park and the adjacent residential areas.
3.1.2 As part the 19/00128/HYBRID application the developer committed to a 'best endeavours' clause within a Section 106 agreement towards the delivery of improvement works to the M40 underpass connection. The "best endeavours approach" was agreed on the basis that the applicant does not own nor do they have any rights to make alterations to the underpass. The Applicant is committed to upgrading the underpass and the owners (National Highways and Environment Agency respectively) have confirmed they will allow such works to take place.
3.1.3 This improvement is acknowledged by OCC in their Post Submission comments, who have requested that the proposed development must not be occupied before it is open - due to the safety risk associated with people attempting to walk and cycle across the M40 junction. Such a matter would apply to any developer proposing to bring this allocated site forward. The works outlined above would aim to improve (and maintain) the lighting, security, surfacing and general arrangement of this pedestrian/cycle link.
3.1.4 In addition to the above, OCC have requested that the site layout submitted alongside the TA is improved with a view to creating safe and continuous pedestrian/cycle routes, specifically from the M40 underpass and the new bus stops on the A361. The aim of these improvements would be to promote walking and cycling as a means of access for employees, and to provide safe access for these modes.
3.1.5 The layout has been updated to consider these comments and reference should be made to Appendix B for the updated site plans. As demonstrated on the plans, and as requested by OCC, crossing points have been added on the estate access road which facilitate journeys to and from the infrastructure associated with the 19/00128/HYBRID application - namely the pedestrian connections that link towards the M40 underpass and the A361 bus stops.
3.1.6 As part of 19/00128/HYBRID application the developer is funding an extensive scheme of pedestrian/cycle improvements along Wildmere Road (and short sections of Hennef Way and Daventry Road), which includes footway widening, signage (indicating the presence of a shared foot/cycleway), new tactile paving and dropped kerbs, and upgrades to the existing traffic signals to permit cycle crossing. The revised proposals for Phase 3 will be well placed to benefit from such works.

# Banbury Phase 3, Junction 11, Banbury, Oxfordshire OCC Post Submission Highway Response 1 

3.1.7 The above clearly demonstrates that the developer is committed to promoting walking and cycling as a means of access for employees, and the addition of new crossing points on the access estate road will help facilitate this. Once within Banbury Phase 3 there are several proposed internal crossing facilities, shown on the layout in Appendix B as zebra crossings, which will provide safe and convenient places for pedestrians to cross. This is considered of high importance given than there will likely be high element of linked/shared uses between each of the units.

### 3.2 Accessibility

3.2.1 Several comments were included in OCC's Post Submission Response which refer to the accessibility of the site. The TA confirms that the site benefits from existing walking, cycling and public transport opportunities and is located in close proximity to a variety of key services and facilities as well as a number of pre-existing residential areas.
3.2.2 Furthermore, the 19/00128/HYBRID application has been approved on the basis that it represents a sustainable development site and also included several sustainable transport improvements. The principle of the site being sustainable in accordance with the NPPF and Local Planning Policy has been established by virtue of the previous hybrid consent and therefore should not be a consideration within this application.
3.2.3 Notwithstanding the above, the following comments from OCC (set out below) have been considered for completeness:
"There is no residential within the 1000 km acceptable walking distance. Very unlikely people would choose to walk to use the facilities although a few might walk to work."
3.2.4 Research has indicated that acceptable walking distances depend on a number of factors, including the quality of the development, the type of amenity offered, the surrounding area, and other local facilities. The Chartered Institution of Highways and Transportation (CIHT) document entitled 'Providing for Journeys on Foot' suggests walking distances which are relevant to this planning application. These are reproduced in Table 3.1.

| CIHT Classification | Town Centres <br> $(\mathrm{m})$ | Commuting/School/ <br> Sightseeing $(\mathrm{m})$ | Elsewhere/Local <br> Services $(\mathrm{m})$ |
| :--- | :---: | :---: | :---: |
| Desirable | 200 | 500 | 400 |
| Acceptable | 400 | 1,000 | 800 |
| Preferred Maximum | 800 | 2,000 | 1,200 |

Table 3.1 - CIHT Recommended Walking Distances

Banbury Phase 3, Junction 11, Banbury, Oxfordshire OCC Post Submission Highway Response 1

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3.2.5 Figure 3.1 shows distances of $500 \mathrm{~m}, 1,000 \mathrm{~m}$ and $2,000 \mathrm{~m}$ which are termed 'Desirable', 'Acceptable' and the 'Preferred Maximum' by the CIHT for commuting trips.


Figure 3.1 - Indicative Pedestrian Catchment
3.2.6 As shown on Figure 3.1 a large residential area to the north-east of Banbury (Grimsbury) is included within the CIHT Maximum walking distance for commuting trips, which are likely to be the most significant categories of trips generated by the development. Therefore, it is considered that there is a high potential for future employees to walk to work - particularly when considering the proposed pedestrian improvement works along Wildmere Road and the M40 underpass.

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3.2.7 The CIHT guidance refers to preferred maximum of $1,200 \mathrm{~m}$ for local services e.g. the convenience store at the PFS (a walk time of approximately 15 minutes). That is not to say that some users will not be willing to walk more than this distance to access the associated uses on Banbury Phase 3. Furthermore the $1,200 \mathrm{~m}$ catchment does include some areas of Grimsbury along the northern and eastern extents of Daventry Road and Manor Road. It is also considered that given the proximity of Banbury Gateway there will be proportion of walking trips for the those who have parked at Banbury Gateway (via the improved M40 underpass connection).
"Diagram [Figure 4.4] is misleading as it does not take into account bus frequency."
3.2.8 As outlined in detail with the TA, the site is well situated to take advantage of existing public transport infrastructure within Oxfordshire. Figure 3.2 (Figure 4.4 in the TA) demonstrates the areas accessible via public transport within 20,40 and 60 minutes of the site.


Figure 3.2 - Indicative Public Transport Catchment

# Banbury Phase 3, Junction 11, Banbury, Oxfordshire OCC Post Submission Highway Response 1 

3.2.9 The comment from OCC suggests that the above Figure misleading as it does not consider bus frequency. Curtins can confirm that it does consider bus frequency. The Figure was produced using TRACC software. TRACC is the leading multi-modal transport accessibility analysis tool, developed by Basemap Ltd in conjunction with the Department for Transport, local authorities and transport planners.
3.2.10 It is designed to generate travel times using a multitude of public transport and road modes to give accurate origin/destination journey times in one calculation. As such it can create public transport catchments based on up-to-date timetable data. Furthermore, TRACC considers an internal artificial 'time penalty' for journeys that would involve a change of services, to ensure that any given journey does not involved using multiple different services, and therefore Figure 3.2 represents a robust interpretation of existing public transport opportunities from site.
3.2.11 In addition to the existing public transport opportunities, as part of the 19/00128/HYBRID application the developer is providing a new pair of bus stops on the A361, supported by a contribution towards a five-year local bus service enhancement. After five years, it can be assumed that the service will either become commercially viable or will be subsumed onto additional bus journeys between Banbury and Brackley/Daventry. The revised proposals for Banbury Phase 3 will be well placed to benefit from existing, and proposed, public transport facilities.

### 3.3 Car Parking Provision

## Proposed Car Parking

3.3.1 As detailed in the TA, car parking across the site is to be provided in broad accordance with the maximum standards set out by CDC and OCC. The relevant parking standards have been provided by OCC, which reflect Cherwell's Local Plan, and have been included at Appendix $\mathbf{C}$ to the rear of this report. The parking quantities proposed on site are shown on the layout in Appendix $\mathbf{B}$ and have been extracted in Table 3.2 below for ease of reference:

| Land Use | No. Parking Spaces |
| :--- | :--- |
| Petrol Filling Station | 36 Spaces. 20 additional electric vehicle (EV) <br> charging stations. |
| Coffee Drive-Thru | 23 Spaces |
| Hot Food Drive-Thru Facilities | 59 Spaces |
| Office | 111 spaces |
| Hotel | 167 spaces |

Table 3.2 - Proposed Car Parking Provision

## Application of OCC's Parking Standards

3.3.2 The maximum parking standards relevant to this application have been extracted and included in Table 3.3 below:

| Land Use | OcC's Maximum <br> Parking Standard | Maximum Permitted | Proposed Provision |
| :---: | :---: | :---: | :---: |
| Offices | 1 space per 30m² | 173 | 111 |
| Hotel | 1 space per 1 bed | 240 | 167 |
| Drive Thru | Considered suitable to base on operational needs/market requirements |  |  |
| Petrol Filling Station | Considered suitable to base on operational needs/market requirements |  |  |

Table 3.3 - OCC's Maximum Car Parking Standards
3.3.3 The car parking standards provided by OCC are set out as maximum levels, and therefore it can be said that the proposed development is in accordance with the relevant parking standards. The car parking associated with the drive thru and petrol filling station uses does not readily align with the maximum parking standards and therefore are best considered on their operational requirements. Commercial experience indicates that the proposed parking levels are adequate for staff and visitors to support the necessary functions on site.
3.3.4 In March 2015, Lord Pickles provided a Written Statement to Parliament which considered a range of planning updates. This Statement considered the role of maximum parking standards (implemented under the then previous administrations) and determined that the market is best placed to decide if additional parking spaces should be provided, adding:
"Local planning authorities should only impose local parking standards for residential and nonresidential development where there is clear and compelling justification that it is necessary to manage their local road network."
3.3.5 It is Curtins view that the imposition of the maximum parking standards as a target is not justified in this instance. A key vision of the scheme is to serve passing traffic on the local highway network and support those working at, and visiting, Frontier Park (Phases 1 and 2 of the Hybrid Application). Coupled with the revised uses associated with Banbury Phase 3 it is considered that there will be high number of shared/linked trips between the proposed uses thus reducing parking demand when considered holistically.

# Banbury Phase 3, Junction 11, Banbury, Oxfordshire OCC Post Submission Highway Response 1 

3.3.6 It is considered that whilst the office (and to some degree the PFS and Drive thru uses) will experience a car parking pattern that follows typical working hours, i.e. 9 am $-5 p m$ Monday - Friday, parking demand at the hotel will be at its highest overnight and during weekends. Whilst it is considered that the proposed level of parking for the hotel is sufficient to support the anticipated usage, it is considered that in particularly busy periods for the hotel, parking across the site will generally be lower. If required there is the potential for the hotel operator to utilise some of the other provisions on-site flexibly (for example at the adjacent office car park). The management of this could be captured as part of a wider car parking management strategy.
3.3.7 In summary it is considered that there is no transport planning policy justification requiring the development to meet the maximum parking standards. Notwithstanding this point has been considered further in the following subsections.

## COVID

3.3.8 Due to the ongoing effects of the COVID-19 pandemic there has been a noticeable increase in home working over the past 18 months. Many workplaces have been implementing home/hybrid working. It is considered highly likely that workplaces will maintain elements of this approach due to lessons learnt from COVID and increased efficiencies in their operations. This emerging trend should be considered, particularly when considering the parking requirement for the proposed offices uses.

## Car Ownership Trends

3.3.9 Understanding future demand for road travel is essential in assessing transport impacts of new developments and the potential investments that will need to be made. However, forecasting future demand is challenging and there remains uncertainty about the extent to which existing travel trends will carry on into the future. It is important therefore to ensure that the latest transport (and societal) trends are understood to minimise this uncertainty.
3.3.10 It is important that site masterplanning is mindful of changes in travel behaviour so that their assumptions concerning travel demand (and parking) are appropriate and relevant to the development that they are supporting.
3.3.11 In light of the above, recent documentation has been produced by several transport research bodies which suggests that private car use and ownership is declining and there is a more positive shift in the way of alternative, more sustainable, modes of travel. This documentation has been summarised in the below subsection.

## All Change?

3.3.12 The First Report of the Commission on Travel Demand entitled 'All Change? The future of travel demand and the implications for policy and planning ("All Change")' was published in May 2018. This report, developed through a long process of evidence gathering across the UK, offers a positive perspective on the future of travel demand.
3.3.13 The report demonstrates that the evidence of previous transport planning, based on growing car ownership and use, is now limited and sometimes wrong (this point is also recognised in the Department for Transport Road Traffic Forecast Report - RTF18).
3.3.14 Evidence in All Change shows that people in general make $16 \%$ fewer trips than in 1996, travel $10 \%$ fewer miles than in 2002 and spend 22 hours less time travelling than in 2008. This shift is associated with societal shifts in how we work and shop; changing demographics; shifts in income across the population; as well as increased urbanisation. All of these changes are underpinned by and connected to the rise in internet and communication technologies.
3.3.15 The report identifies a number of trends that should be considered in the development planning process:

- Need for travel (generally people are travelling less and shorter distances);
- Commuting patterns (employees working from home and not having fixed place of work/hours);
- Age/Gender (fewer young drivers)
- Socio-economic conditions (decline in home ownership and wage stagnation);
- Geographic differences (expansion of urban areas);
- Changing transport technologies (increase in shared mobility);
- Walking/cycling (uptake in cycling and walking activity); and,
- Rail travel (increase in rail patronage).


## National Travel Survey Report 2016

3.3.16 Additional evidence of changes in travel behaviour can be found in report of The National Travel Survey (NTS) 2016. The travel survey indicated that the total distance travelled per person per year has fallen by $9 \%$ between 2007 and 2016. Distance by all motorised private transport has fallen by $13 \%$ since 2003, and as a car driver by $10 \%$ since 2007 . Miles travelled by surface rail have almost doubled since 1985.

## TRICS Survey Data

3.3.17 TRICS has also undertaken research into changes in travel patterns/trends. TRICS is an industrystandard software tool which comprises a large database of traffic surveys of existing developments, across the UK and Ireland, sub categorised into particular land uses.

# Banbury Phase 3, Junction 11, Banbury, Oxfordshire OCC Post Submission Highway Response 1 

3.3.18 This process has demonstrated that there has been a decline in car trip rates recorded in TRICS across the time period from 1994-1998. When comparing with the NTS 2002-2017 the TRICS data shows residential trip rates to have declined at $12 \%$, with an overall trip rate decline of $9 \%$. Such differences reflect the changing nature of work and shopping but are significant for individual site assessments and determining parking requirements at other sites.
3.3.19 What is not clear is whether the total vehicle trip reduction is as a result of site-specific measures, reduction in car parking provision or site-specific design. However, the increase in pedestrian trips and public transport trips has positive implications for planning sustainable transport sites.

## Car Ownership Trends Conclusions

3.3.20 The evidence provided by All Change, DfT's RTF 18, NTS and TRICS demonstrates that there has been a sustained change in travel behaviour in recent years. This change is reflected in the trip rates for across a range of sites. Care needs to be taken to ensure that the design of new developments, in particular, take account of these changes in travel behaviour.
3.3.21 If no recognition is given to trends shown in the research, there runs the risk that transport planning will provide infrastructure that meets previous predicted needs rather than the transport needs of the future, and potentially results in stranded or underutilised assets.
3.3.22 It seems reasonable to assume that trip rates, in particular vehicle trip rates in urban areas could become lower or plateau at current rates, and this should be taken into consideration when determining parking provision in coming years.
3.3.23 It is Curtins view that it is appropriate to provide a reduced parking provision at the proposed development site. Such a provision would be in reflective of the principles of sustainable development, the site's proximity to the supporting land uses and the recent changes in travel behaviour and car ownership outlined above. The reduced parking provision will also assist in reducing the number of vehicle trips that can feasibly travel to and from the site, whilst encouraging the uptake in sustainable travel modes.

## Travel Planning

3.3.24 As stated above the developer is committed to the principles of sustainable development and seeks to influence the travel choices of employees on site with the implementation of a Framework Travel Plan (FTP), Curtins Document Reference 079074-CUR-00-XX-RP-TP-002-V01. The FTP document will seek to encourage sustainable development and travel patterns, to reduce single occupancy vehicular use and in turn reduce the demand for on-site parking.

# Banbury Phase 3, Junction 11, Banbury, Oxfordshire OCC Post Submission Highway Response 1 

3.3.25 As outlined in detail within the TA and referred to throughout this Response there are a series of significant sustainable transport improvements associated with the 19/00128/HYBRID application which are considered to have a positive impact upon future parking demand. Designated cycle parking areas are also to be provided as part of the proposed redevelopment (which are discussed in greater detail in Section 3.4 of this Response).

## Potential Car Park Management Measures

3.3.26 The developer is keen to reduce single occupancy vehicular use on site and avoid of an overprovision in car parking, however it is acknowledged that OCC have raised concerns regarding parking occurring on footways and the obstruction of traffic movement on site. Whilst it is considered that the above provides sufficient justification that the level car parking proposed is appropriate for the scale, nature and location of the proposed scheme, several car park management measures could also be introduced to alleviate any localised or short-term parking issues.
3.3.27 Curtins understand that OCC intends to adopt the internal access road, with that in mind Traffic Regulation Orders (TROs) in the form of no-waiting-at-any-time double yellow lines could be implemented along the access routes to ensure that parking does not occur in locations that may block footways or obstruct any traffic movements on site. Outside of the development site there are limited opportunities for parking to occur in the surrounding area. Parking is suitably managed at Banbury Gateway and Wildmere Road benefits from extensive TROs.
3.3.28 In addition to the above a series of on-site measures could be included as part of a wider Car Park Management Strategy, for example this could include automatic number plate recognition (ANPR), CCTV monitoring, signage, bus discounts for staff transport and community engagement (potentially captured through the FTP).
3.3.29 As part of the Car Park Management Strategies, future occupiers could also investigate and prevent illegal parking from their staff members across the sites. Extreme poor behaviours or consistent offenders could then be managed through appropriate internal Human Resource procedures, resulting in official warnings etc.

## Electric Vehicle Charging Points

3.3.30 OCC have stated that they welcomed the provision of Electric Vehicle (EV) charging points at the proposed development. The site layout plan submitted alongside the TA demonstrated that an electric charging station with 20 spaces is to be provided adjacent to the petrol filling station. In addition to this, EV charging points were shown next to the coffee drive through and hot food drive thru A. This is considered reflective of the anticipated demand on-site based upon market requirements and commercial experience.

# Banbury Phase 3, Junction 11, Banbury, Oxfordshire OCC Post Submission Highway Response 1 

3.3.31 OCC has referred the developer to Oxfordshire Electric Vehicle Charging Strategy which requires the provision of $25 \% \mathrm{EV}$ charging points for non-residential developments. The developer has confirmed that $25 \%$ of the spaces can be 'future proofed' with ducting and cabling so that EV infrastructure can readily be provided if future demand arises on site. This is shown indicatively on the updated site layout in Appendix B.

## Heavy Goods Vehicle (HGV) Parking

3.3.32 In their Post Submission Response OCC raised concerns regarding the lack of HGV parking provision on site, citing that HGV's stopping to use the facilities may park in inappropriate places causing obstruction.
3.3.33 The vision for the scheme is to serve passing traffic on the A361 and support those working at, and visiting, Frontier Park (Phases 1 and 2 of the 19/00128/HYBRID Application). No signage is proposed on the M40 Motorway or Strategic Road Network to alert drivers to the presence of the mixed-use development.
3.3.34 The scheme has not been designed as a Motorways Service Area (MSA) and as such, the internal layout does not include for formal HGV parking, nor parking for caravan or abnormal loads. Notwithstanding it has been demonstrated on Curtins Drawings 79074-CUR-00-XX-DR-TP-05001P03 and 79074-CUR-00-XX-DR-TP-05002-P03 that a 12 m Rigid HGV and 16.5m Articulated HGV can safely access the requisite fuel pumps.
3.3.35 It is considered that once an HGV has completed fuelling they will leave the site, either to travel to Frontier Park (where suitable HGV parking is provided adjacent to each unit) or continue on their journey along the A361. Therefore, in reality HGVs will have a very limited dwell time on site and therefore will not result in vehicles parking in inappropriate places or causing obstructions. This is particularly true given that the routing for the HGV/Hydrogen and Air facilities is segregated from the main PFS forecourt, as shown on the site layout in Appendix B.

### 3.4 Cycle Parking Provision

3.4.1 Reference should be made to the updated site layout in Appendix B, which demonstrates that cycle parking will be provided across the proposed development at safe and convenient locations. This will be provided across each use in accordance with OCC's Minimum Cycle Parking Guidance included in Appendix C.
3.4.2 The cycle parking quantities proposed on site are shown on the layout in Appendix $\mathbf{B}$ and have been extracted in Table 3.4 below for ease of reference:

Banbury Phase 3, Junction 11, Banbury, Oxfordshire OCC Post Submission Highway Response 1

| Land Use | No. Parking Spaces |
| :--- | :--- |
| Petrol Filling Station | 6 spaces (5 visitor / 1 staff) |
| Coffee Drive-Thru | 8 Spaces (6 visitor / 2 staff) |
| Hot Food Drive-Thru Facilities | 16 spaces (12 visitor / 2 staff) |
| Office | 35 spaces (based on employee ratio) |
| Hotel | 25 spaces (applying a 10\% bedroom provision, <br> which is considered appropriate as the <br> requirement of 1 space per $7 m^{2}$ of staff space <br> results in an overprovision in this instance). |

Table 3.4 - Proposed Car Parking Provision

# Banbury Phase 3, Junction 11, Banbury, Oxfordshire OCC Post Submission Highway Response 1 

### 4.0 Potential Traffic Impacts

### 4.1 Accident Data

4.1.1 In their Post Submission Response OCC stated that accident data has only been provided 2018 and suggested that the most recent five-year data from OCC should be included. Sections 2.5 and 2.6 of the TA considered the accident data history in detail, covering a period extending to 8 years in total (January 2013 to December 2020).
4.1.2 Section 2.5 included a review of OCC's accident data found within the TA associated with the 19/00128/HYBRID application. This demonstrated that the accidents were generally disbursed equally across the four key junctions within the study area and the TA considered the descriptions associated with the serious and fatal accidents only. A methodology previously accepted by OCC.
4.1.3 Section 2.6 represented a 2021 update to the accident data review by obtaining records from the Crashmap Website for the period from $31^{\text {st }}$ August 2018 up until December 2020. Crashmap is a professional service which only publishes official data that is provided by the Department for Transport. This in turn is based on records submitted to them by police forces and therefore there is no longer a requirement to obtain records direct from the Police.
4.1.4 During that the $19 / 00128 /$ HYBRID proposals OCC and NH did not raise any concerns regarding highway safety, and a significant Strategic Transport Contribution was made towards an improvement scheme for Hennef Way which will have benefits for highway safety along the local highway network. The principle of the development not resulting in a significant impact in accordance with the NPPF and Local Planning Policy has been established by virtue of the previous hybrid consent and therefore should not be a consideration within this application
4.1.5 Notwithstanding the above, in order to reflect the methodology found with the approved 19/00128/HYBRID TA, Curtins have extracted the descriptions associated with the three serious accidents captured in the 2021 accident data update (Section 2.6). These are detailed in the following paragraphs, with the full accident reports included in Appendix $\mathbf{D}$.
4.1.6 The first serious accident recorded during this time period occurred on Sunday $17^{\text {th }}$ May 2020 at the A4260 Concord Way/Hennef Way roundabout junction. The incident occurred during daylight in dry weather conditions, when a motorcycle (over 500 cc ) was proceeding normally along the carriageway before colliding with the offside kerb resulting in serious injuries.

# Banbury Phase 3, Junction 11, Banbury, Oxfordshire OCC Post Submission Highway Response 1 

4.1.7 The second serious accident recorded during this time period occurred on Saturday $18^{\text {th }}$ July 2020 at the A4260 Concord Way/Hennef Way roundabout junction. The incident occurred during daylight in dry weather conditions, when car collided with the central island of the roundabout resulting in serious injuries.
4.1.8 The third, and final, serious accident recorded during this time period occurred on Thursday $10^{\text {th }}$ December 2020 at the Ermont Way/Hennef Way roundabout junction. The incident occurred during daylight in wet/damp weather conditions, when a van/goods vehicle was in the act of turning left and collided with a motorcycle proceeding normally along the carriageway, resulting in serious injuries to the rider.
4.1.9 Following a review of OCC's and CrashMap's accident records no significant correlations have been identified in the 8 year study period to suggest that highway condition, layout or design were significant contributory factors in any of the collisions. It is not considered that there is an existing safety issue that is likely to be exacerbated by the proposed development. It can therefore be considered that the development would not have a significant effect on highway safety.

### 4.2 Trip Generation and Distribution

4.2.1 The key issues identified in OCC's Post Submission Response relate to the perceived traffic impact associated with the revised development proposals.
4.2.2 In the supporting TA Curtins utilised an existing base LinSig traffic model produced by OCC and provided as a part of the previous TA work associated with the 17/01044/F and 19/00128/HYBRID applications. This is still viewed as an appropriate way to provide a comparison between the previously consented scheme and the proposed scheme. However, Curtins understands that OCC and NH have requested the use of a more up to date traffic model.
4.2.3 At the time of writing, limited information has been provided with the precise nature of the strategic junction models under OCC's ownership. Curtins is currently liaising with OCC, NH and Stantec (who operate the model on behalf of OCC).
4.2.4 Notwithstanding, this Section of the Response seeks to establish an agreement on the proposed trip generation and distribution associated with the revised proposals, and duly considers the comments raised in OCC's Post Submission Correspondence. The key comments relating to traffic impact have been extracted below for ease of reference:

- "The trip generation is divided into either trips new to the network, or 'pass-by/diverted trips'. The impact of the latter category appears only to be considered at the site access on the A361. These are the genuine 'pass by' trips. 'Diverted' trips have been overlooked and need to be


# Banbury Phase 3, Junction 11, Banbury, Oxfordshire OCC Post Submission Highway Response 1 

considered separately, as they could significantly change the turning movements at the M40 junction. Examples of diverted trips would be drivers on the A422 between Banbury and Northampton/Brackley exiting the roundabout onto the A361 to visit the PFS or drive thrus and then re-joining their route - creating an additional burden on the A361 arm of the junction. Or drivers on the M40 exiting to visit the services and re-joining the M40. Or drivers on the M40 exiting for Banbury. Although the application says the development is not an MSA and won't be signed as such, it would be visible from the motorway and drivers would get to know about it pretty quickly. No allowance appears to be made in the assessment for these trips.

- No evidence is given for the proportion of trips that would be new to the network. New fast food takeaways would be attractive to the existing residential and workplace population of eastern Banbury, who would be likely to drive to the site.
- Reliance is placed on old transport models, which do not reflect current network conditions. Since the previous planning application, a VISSIMmicrosimulation model has been created for Hennef Way, including junction 11, and use of the model should be arranged with OCC. LinSIG shows mean maximum queues, whereas the VISSIM model would indicate the severity of impact in the peaks.
- There are queries with regard to the estimation of trip generation.
- No weekend assessment has been carried out. Due to the retail park nearby, weekend traffic is significant at the junction and this could coincide with peak time for the fast food drive thrus."


## Trip Generation

4.2.5 The Banbury Phase 3 site currently has outline planning consent as follows:
"Outline planning application for the development of up to 2 no. commercial buildings having a maximum floorspace of $16,890 \mathrm{~m} 2$ and having a flexible use [to enable changes in accordance with Part 6 Class $V$ of the Town and Country Planning (General Permitted Development) Order 2015 (as amended)] within Class B2 or B8 of the Town and Country Planning (Use Classes) Order 1987 as amended, and ancillary Class $B 1$ offices, with all other matters reserved for future approval."
4.2.6 As the trip generation figures associated with the outline application for the previous Phase 3 scheme have been approved by CDC and OCC, it is considered appropriate to net-off the consented traffic flows as part of any further trip generation considerations. OCC, as part of their Post Submission Response, requested clarity on this process which has been provided below.
4.2.7 The $16,890 \mathrm{~m}^{2}$ approved as part of the outline application represents a third of the total floor area approved as part of the wider 19/00128/HYBRID application ( $50,000 \mathrm{~m}^{2}$ ) , as such the development flows have been amended accordingly. This is set out in Tables 4.1 and 4.2.

# Banbury Phase 3, Junction 11, Banbury, Oxfordshire 

OCC Post Submission Highway Response 1

## Cocurtins

| Time Period | Arrivals |  |  | Departures |  |  | Total |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Lights | OGV | Total | Lights | OGVs | Total | Lights | OGVs | Total |
| AM Peak | 80 | 9 | 89 | 23 | 10 | 33 | 103 | 19 | 122 |
| PM Peak | 14 | 5 | 19 | 75 | 5 | 80 | 89 | 10 | 99 |

Table 4.1 - Development Trip Generation 19/00128/HYBRID application - 100\%

| Time Period | Arrivals |  |  | Departures |  |  | Total |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Lights | OGVs | Total | Lights | OGVs | Total | Lights | OGVs | Total |
| AM Peak | 27 | 3 | 30 | 8 | 3 | 11 | 35 | 6 | 41 |
| PM Peak | 5 | 2 | 6 | 25 | 2 | 27 | 30 | 3 | 34 |

Table 4.2 - Development Trip Generation Phase 3 Consented Trip Generation - 33\% (Previous Outline Application)
4.2.8 As agreed previously as part of the 19/00128/HYBRID application these traffic flows were distributed on the local highway network based upon the trip distribution for the Banbury 15 site (i.e. the proposed development), extracted historically from the Banbury SATURN model.
4.2.9 For the values shown in Tables 4.1 and 4.2 to be represented as PCUs, a factor of 2.3 can be applied to the OGV values to determine a suitable PCU figure. This would be considered appropriate in this instance given the B2/B8 uses associated with the previous 19/00128/HYBRID and Phase 3 proposals which will likely have a higher proportion of OGVs trips. This is presented in Table 4.3 below:

| Trip Generation | Weekday AM Peak Hour |  |  | Weekday PM Peak Hour |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\begin{aligned} & \stackrel{t}{\bar{\circ}} \\ & \stackrel{0}{0} \\ & \stackrel{\circ}{\circ} \end{aligned}$ |  | $\sum_{\frac{2}{4}}^{\infty}$ | $\begin{aligned} & \frac{t}{l} \\ & \frac{0}{0} \\ & \stackrel{0}{\circ} \end{aligned}$ | - |
| Banbury Phase 3 | 34 | 18 | 52 | 10 | 30 | 40 |

Table 4.3 - Banbury Phase 3 Trip Generation (PCU Format)
4.2.10 In order to calculate the trip generation associated with the development proposals, a TRICS based trip generation exercise was included in the TA for the weekday AM and PM peak hours. This process has been based upon the development proposals as follows:

- 240 bed hotel;
- 4-storey office building (circa $5,200 \mathrm{~m}^{2}$ );
- Petrol filling station (PFS);
- Coffee drive thru ( $215 \mathrm{~m}^{2}$ ); and,
- 2 x Hot food drive thrus (total $548 \mathrm{~m}^{2}$ ).
4.2.11 It is acknowledged that OCC had several comments on the TRICS Outputs (included within Appendix D of the TA) which have been duly considered in the below paragraphs.


# Banbury Phase 3, Junction 11, Banbury, Oxfordshire OCC Post Submission Highway Response 1 

4.2.12 The first TRICS output query relates to the drive thru coffee surveys, with OCC stating that three of the surveys have been undertaken on Fridays. If the surveys undertaken on a Friday were to be removed, it would leave a singular weekday survey (undertaken on a Tuesday), therefore in order to maintain a suitable sample size it is considered appropriate to continue to include the Friday surveys for these uses.
4.2.13 Furthermore, if the Friday surveys are removed entirely and the single Tuesday survey is used in lieu the resultant trip generation figures would in fact be significantly lower. Thus, confirming that current proposed trip rates for the coffee drive thru use are suitably robust.
4.2.14 The second TRICS output query relates to the PFS surveys, with OCC stating that one third of the surveys were carried out on a Friday and one of the surveys was carried out during Covid-19 restrictions. This has subsequently been updated and the resultant TRICS output (alongside those presented previously in the TA) have been included in Appendix E.
4.2.15 The third TRICS output query relates to the office surveys, with OCC stating that these are weighted to very large urban areas with low car ownership. Similarly to the coffee drive thru surveys, if the TRICS output were amended to included higher ownership values ( $1-1.5$ ) within a 5 -mile radius the resultant sample size would reduce from 7 surveys down to just 1 survey. As such it is considered appropriate to leave this unadjusted and ensure a larger sample size. The location selection of the office surveys (suburban area and edge of town) is considered appropriate in this instance.
4.2.16 Furthermore, due to the ongoing effects of the COVID-19 pandemic there has been a noticeable increase in home working over the past 18 months. Many workplaces have been implementing home/hybrid working. It is considered highly likely that workplaces will maintain elements of this approach due to lessons learnt from COVID and increased efficiencies in their operations. This emerging trend is not reflected in the TRICS outputs for the offices uses and there re-iterates that it is robust interpretation of the development proposals.
4.2.17 The fourth query related to the TRICS output relates to the HGV breakdown not being shown in the TRICS outputs to allow a conversion to PCU values. Within TRICS not every land use has multi-model traffic surveys available, or similarly there can be a much-reduced sample size if this criterion is applied. Given the nature of the proposed development it is considered that there will be a very low proportion of HGV movements, particularly when comparing the proposed uses (e.g. hotel and office), against the consented scheme which would involve B2/B8 industrial uses.

# Banbury Phase 3, Junction 11, Banbury, Oxfordshire OCC Post Submission Highway Response 1 

4.2.18 Therefore, the application of 'total vehicles' to present the trip generation potential of all the uses across the revised scheme is considered a consistent and appropriate methodology in this instance. It should also be noted that 'total vehicles' also include both bicycles and motorcycles which have PCU values of 0.2 and 0.4 respectively and therefore if multi-model PCU values were to be applied to the trip generation figures it would likely present a reduction or comparable value to if a PCU factor was to be applied to any nominal HGV values.
4.2.19 The updated weekday AM and PM trip generation rates have been summarised in the following Table 4.4. All trips rates for the office and drive thru uses are per $100 \mathrm{~m}^{2}$ GFA, whereas the hotels are per 1 bedroom and the PFS is per car filling bay.

| TRICS - Land Uses | Weekday AM Peak Hour(08:00-09:00 |  |  | Weekday PM Peak Hour$(17: 00-18: 00)$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\stackrel{\Delta}{\frac{2}{4}}$ | $\begin{aligned} & \frac{\mathrm{t}}{\mathrm{~N}} \\ & \stackrel{0}{0} \\ & \stackrel{\circ}{0} \end{aligned}$ | $\begin{gathered} \bar{\pi} \\ \stackrel{0}{0} \end{gathered}$ |  | $\begin{aligned} & \stackrel{t}{\overline{0}} \\ & \stackrel{0}{0} \\ & \stackrel{\circ}{0} \end{aligned}$ | $\stackrel{\overline{\Pi \pi}}{\stackrel{\circ}{\circ}}$ |
| Office | 1.097 | 0.154 | 1.251 | 0.157 | 1.015 | 1.172 |
| Hotel | 0.229 | 0.305 | 0.534 | 0.164 | 0.179 | 0.343 |
| PFS (with retail) | 8.713 | 8.489 | 17.202 | 9.255 | 9.043 | 18.298 |
| Drive Thru FF | 12.719 | 12.281 | 25.000 | 13.074 | 13.128 | 26.202 |
| Drive Thru Coffee | 14.985 | 13.558 | 28.543 | 8.869 | 10.194 | 19.063 |

Table 4.4 - Proposed Development Trip Rates (Weekday)
4.2.20 One final comment relating to the trip generation for the scheme referred to the consideration of a weekend traffic scenario, with OCC citing the presence of a nearby retail park located off Hennef Way on the opposite site of the M40 (Banbury Gateway). It is Curtins view that the presence of the adjacent retail park, and the contributions the developer is making towards the M40 underpass improvements, suggests there will be a high proportion of linked pedestrian trips between the two uses.
4.2.21 At the time of writing the TA there were challenges presented with undertaking traffic surveys due to the somewhat unknown impact associated with Covid. As such baseline traffic flows were taken from the previous 19/00128/HYBRID application to provide a comparison between the consented scheme and the revised proposals. The 19/00128/HYBRID application did not include a weekend scenario and Curtins is currently awaiting further information from OCC and Stantec with regards to whether there are weekend scenarios available within the updated junction model(s).

# Banbury Phase 3, Junction 11, Banbury, Oxfordshire OCC Post Submission Highway Response 1 

4.2.22 It is Curtins view that whilst there is a local retail park nearby, Hennef Way corridor currently provides the only connection in Banbury to/from the M40 motorway and therefore is likely to be more influenced by the presence of commuter traffic during the weekdays, rather than weekend retail trips to Banbury Gateway where traffic will be more localised in nature. As such the weekday AM and PM peak periods are considered the more robust basis for assessing development impacts arising from the scheme.
4.2.23 Notwithstanding the above, Curtins has considered that the weekend trip generation of the proposed uses as part of a sensitivity test.
4.2.24 It should be noted that the below exercise considers the busiest weekend peak. The hotel's busiest weekend peak is between 08:00 and 09:00, the coffee shop's weekend peak is between 10:00 and 11:00, the drive thrus weekend peak is between 12:00 and 13:00 and the PFS peak is between 11:00 and 12:00. The busiest combined peak has been established at 12:00-13:00.
4.2.25 Upon review of the available weekend TRICS data for the categories 'drive through coffee shop' and 'fast-food drive thru' there are only 1-2 days' worth of surveys available, with the location of these surveys as follows:

- Costa Coffee, Interchange Retail Park, Race Meadows Way, Kempston, Bedford MK42 7AZ;
- McDonald's Aberystwyth, Parc y Llyn Retail Park, Aberystwyth, SY23 3TL; and,
- McDonald's Torquay, Bridge Retail Park, Hele Rd, Torquay TQ2 7PY.
4.2.26 All of these surveys were undertaken at sites that are located within large retail parks with and as such are not considered representative of the proposed drive thrus at Banbury Phase 3 and should therefore be discounted.
4.2.27 Given the location and nature of the site it is anticipated that the drive thrus at Phase 3 will be heavily linked to the employment uses associated with Phases 1 and 2, the proposed office and hotel uses, as well as traffic passing along the local highway network. As such is considered more appropriate to apply the weekday TRICS surveys to the drive thru elements as part of this sensitivity test.
4.2.28 The potential weekend peak trip generation rates have been summarised in the following Table 4.5. All trips rates for the office and drive thru uses are per $100 \mathrm{~m}^{2}$ GFA, whereas the hotels are per 1 bedroom and the PFS is per car filling bay.

| TRICS - Land Uses | Weekend Peak Hour$(12: 00-13: 00)$ |  |  |
| :---: | :---: | :---: | :---: |
|  | $e^{0}$ | $\begin{aligned} & \stackrel{\rightharpoonup}{\bar{\circ}} \\ & \stackrel{\circ}{0} \\ & \hline 0 \end{aligned}$ | - |
| Office | 0.000 | 0.000 | 0.000 |
| Hotel | 0.202 | 0.182 | 0.384 |
| PFS (with retail) | 8.289 | 8.111 | 16.400 |
| Drive Thru FF | 17.720 | 17.288 | 35.008 |
| Drive Thru Coffee | 14.067 | 13.761 | 27.828 |

Table 4.5 - Potential Development Trip Rates (Weekend)
4.2.29 In order to complete this sensitivity test, the weekend trip generation potential of the scheme has been compared with the weekday AM and PM trip generation profiles (see Table 4.3 above). This is set out at Table 4.6 below and is based on the development quantum presented at Para 4.2.10. It should be noted that this comparison exercise does not include any adjustments made for the presence of linked, pass-by or diverted trips, which are considered likely to form a significant proportion of development trips. This is considered in greater detail later in this Response.

|  | Weekend Peak Hour$(12: 00-13: 00)$ |  |  | Weekday AM Peak Hour (08:00-09:00) |  |  | Weekday PM Peak Hour$(17: 00-18: 00)$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\sum_{2}^{\infty}$ | $\begin{aligned} & \frac{士}{0} \\ & \stackrel{\text { N}}{0} \end{aligned}$ | $\stackrel{\overline{\mathrm{N}}}{\stackrel{\circ}{\circ}}$ | $\stackrel{2}{2}_{\substack{4}}^{\infty}$ | $\begin{aligned} & \text { tive } \\ & \stackrel{\circ}{0} \\ & \hline 0 \end{aligned}$ | $\stackrel{\overline{(N 0}}{\stackrel{\circ}{\circ}}$ | $\frac{\sum}{\frac{2}{4}}$ | $\begin{aligned} & \stackrel{t}{\mathrm{o}} \\ & \stackrel{\circ}{0} \\ & \hline \stackrel{1}{2} \end{aligned}$ | $\stackrel{\bar{\pi}}{\stackrel{\pi}{\circ}}$ |
| Total Trips | 259 | 249 | 508 | 301 | 263 | 564 | 231 | 280 | 511 |

Table 4.6 - Unadjusted Development Trips
4.2.30 As shown in Table 4.6 the weekend development trip generation potential is lower than the AM peak hour trip generation profile and broadly comparable to the weekday PM profile. On this basis it is considered that a separate weekend scenario is not required, however further justification has been provided in the following paragraphs:

- It is Curtins view that the weekday is the more reasonable and robust basis for assessing development impacts, with background traffic flows likely to be higher along the entire Hennef Way corridor. Notwithstanding, Curtins are currently awaiting further information from OCC and Stantec with regards to the scenarios included within the updated junction model(s);
- The weekend peak hours are more varied, peaky in nature and do not necessarily coincide with one another;
- It is considered that primary trips associated with Banbury Phase 3 will be significantly reduced during the weekend, particularly with the office uses being closed; and,
- The 19/00128/HYBRID application did not include a weekend scenario and it is considered that trip generation from Phases 1 and 2 at Frontier Park will also be significantly reduced during weekends. This is turn will likely reduce the trip generation potential of the drive thru and PFS uses as it is anticipated that these will be heavily linked to the adjacent employment uses.


## Proportion of New, Pass-by, Diverted and Linked Trips

4.2.31 As set out within the TA, a key vision for the scheme is to serve passing traffic on the local highway network (A361), support those working at, and visiting, Frontier Park (Phases 1 and 2 of the 19/00128/HYBRID application) and future users of Banbury Phase 3. No signage is proposed on the M40 Motorway or Strategic Road Network to alert drivers to the presence of the mixed-use development.
4.2.32 On this basis, Curtins applied the percentage splits found within the TA and shown in Table 4.7 below (extracted for ease of reference). These were considered to be a reasonable assumption when considering the aim of the development proposals, its location and several of the surrounding existing and proposed land uses.

| Land Uses | Primary (\%) | Pass-by (\%) | Linked (\%) |
| :--- | :---: | :---: | :---: |
| Office | $100 \%$ | - | - |
| Hotel | $100 \%$ | - | - |
| PFS (with retail) | - | $80 \%$ | $20 \%$ |
| Drive Thru Elements | $10 \%$ | $70 \%$ | $20 \%$ |

Table 4.7 - Trip Types by Land Use Element (extracted from TA)
4.2.33 Within their Highway Response, OCC queried the fact that diverted trips were not included within the above assumptions (See Para 4.2.4 and Appendix A for further details). Whilst Curtins' assumptions were made with the key vision of the development in mind (Para 4.2.26 above), this has been revisited and considered further in following paragraphs at the request of OCC.
4.2.34 OCC queried whether hotel trips would be $100 \%$ 'new trips'. Whilst it is Curtins view that considering these trips as 'new' trips represents the most robust interpretation of the development proposals, this value has been subsequently amended to $80 \%$ new trips $20 \%$ diverted as per OCC's suggestion that an element will be diverted off the M40. It is Curtins view that the office uses should remain as $100 \%$ 'new trips' for robustness.
4.2.35 OCC queried whether $20 \%$ of linked trips to PFS in the peak hours are assumed to be from the other uses at the site, i.e. Phases 1, 2 and 3, stating that if it was Phases 1 and 2 it would be unrealistic as most employees would fill up with fuel at the supermarket. Curtins can confirm that the 'linked trip' consideration relates to Phase 1 and 2, as well as the 'primary' uses on the Phase 3 site.

# Banbury Phase 3, Junction 11, Banbury, Oxfordshire OCC Post Submission Highway Response 1 

4.2.36 Curtins respectfully disagree with the point regarding where the employees at Phase 1 and 2 may fill up with fuel, it is assumed that this comment refers to the potential costing at the PFS. The PFS is located conveniently for employees on site and also will offer affordable/competitive pricing (in line with market requirements) in order to be commercially viable. As stated, previously the site is not an MSA, has not been designed as such and does not include motorway signage. The PFS will primarily be there to support the operation of the surrounding employment uses and passing traffic. Notwithstanding, and in order to capture the comments made by OCC, the PFS assumption has been amended to capture an element of diverted trips (with a reduction in pass-by trips).
4.2.37 Perhaps where there is a greater potential for diverted trips relates to the drive thru elements proposed on site. Whilst Curtins maintain the view that the inclusion of $10 \%$ 'new' trips ( $90 \%$ pass-by) for the drive thrus represents a robust interpretation of these uses, given for the most part drive thru establishments are primarily reliant on passing trade, the pass-by element has been revisited in line with OCC's comments regarding diverted trips.
4.2.38 In order to correctly consider the locational factors for diverting trips to/from the proposed drive thru and PFS uses, Curtins has considered the existing provision in Banbury. This is on the principle that it is considered unlikely that a person would travel past existing drive thru and PFS offerings in order to access the proposed development. Reference should be made to Figure 4.1 which shows the existing provision diagrammatically.


Figure 4.1 - Existing Provisions in Banbury
4.2.39 As shown in Figure 4.1, Banbury currently benefits from a good provision of PFS, fast food/coffee units and EV charging points. Banbury town centre also offers typical town centre facilities, particularly along High Street and Market Place. These uses are all located to the south-west of the proposed development, either within an accessible walk/cycle distance, or along the key local highway connections from the residential areas of Banbury e.g. Hardwick, Neithrop and Grimsbury.
4.2.40 It was on the above basis that Curtins did not include any diverted trips for these uses as they are already readily available for residents in the surrounding areas. Residents who wish to travel past these offerings to access the proposed development would be relatively low in number, and subsequently captured in the previous assumption that $10 \%$ of trips would be new for the drive thru uses.

# Banbury Phase 3, Junction 11, Banbury, Oxfordshire 

OCC Post Submission Highway Response 1

## Courtins

4.2.41 Notwithstanding the above, Curtins have considered OCC's comment regarding diverted trips from the M40 and A442 (east) between Banbury and Northampton/Brackley, where existing provisions are less readily available, and have subsequently amended the proportions as shown in Table 4.8. Please note this Table also captures the comments made in the previous paragraphs referring to the other uses proposed on site.

| Land Uses | Primary (\%) | A361 Pass-by (\%) | Linked (\%) | Diverted (\%) |
| :--- | :---: | :---: | :---: | :---: |
| Office | $100 \%$ | - | - |  |
| Hotel | $80 \%$ | - | - | $20 \%$ |
| PFS (with retail) | - | $70 \%$ | $10 \%$ | $20 \%$ |
| Drive Thru Elements | $10 \%$ | $50 \%$ | $20 \%$ | $20 \%$ |

Table 4.8 - Trip Types by Land Use Element (revised from previous values)
4.2.42 The following Table 4.9 indicates the 'primary' trip generation of the proposed site. Based upon the trip rates in found Table 4.4 and the development quantum presented in para 4.2.10.

| $\begin{aligned} & \text { TRICS - Land } \\ & \text { Uses } \end{aligned}$ | Weekday AM Peak Hour(08:00-09:00) |  |  | Weekday PM Peak Hour$(17: 00-18: 00)$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\sum_{\frac{2}{4}}^{0}$ | $\begin{aligned} & \frac{\mathrm{t}}{0} \\ & \stackrel{0}{0} \\ & \stackrel{0}{0} \end{aligned}$ | $\stackrel{\overline{\mathrm{N}}}{\stackrel{1}{\circ}}$ | $\sum_{\frac{2}{2}}^{\infty}$ | $\begin{aligned} & \frac{t}{\overline{0}} \\ & \stackrel{0}{0} \end{aligned}$ | $\stackrel{\overline{0}}{\stackrel{0}{\circ}}$ |
| Office | 57 | 8 | 65 | 8 | 53 | 61 |
| Hotel | 44 | 58 | 102 | 31 | 34 | 66 |
| Drive Thrus | 10 | 10 | 20 | 9 | 9 | 18 |
| Total | 111 | 76 | 187 | 48 | 96 | 144 |

Table 4.9 - Proposed Development ‘Primary’ Trip Generation
4.2.43 The following Table 4.10 indicates the 'pass-by' trip generation of the proposed site. Based upon the trip rates in found Table 4.4 and the development quantum presented in para 4.2.10.

|  | Weekday AM Peak Hour$(08: 00-09: 00)$ |  |  | Weekday PM Peak Hour$(17: 00-18: 00)$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Uses | $\stackrel{\otimes}{\frac{2}{4}}$ | $\begin{aligned} & \stackrel{t}{\bar{\circ}} \\ & \stackrel{\text { O}}{0} \end{aligned}$ | $\stackrel{\overline{\Pi n}}{\stackrel{\circ}{\circ}}$ | $\stackrel{e}{2}_{\substack{4}}^{2}$ |  | $\stackrel{\bar{\pi}}{\stackrel{\pi}{0}}$ |
| PFS | 61 | 60 | 121 | 65 | 63 | 128 |
| Drive Thrus | 51 | 48 | 99 | 46 | 47 | 93 |
| Total | 112 | 108 | 220 | 111 | 110 | 221 |

Table 4.10 - Pass-by Trip Generation

# Banbury Phase 3, Junction 11, Banbury, Oxfordshire OCC Post Submission Highway Response 1 

4.2.44 The following Table 4.11 indicates the 'diverted' trip generation of the proposed site. Based upon the trip rates in found Table 4.4 and the development quantum presented in para 4.2.10.

| TRICS - Land Uses | Weekday AM Peak Hour$(08: 00-09: 00)$ |  |  | Weekday PM Peak Hour$(17: 00-18: 00)$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\sum_{\frac{2}{4}}^{\infty}$ | $\begin{aligned} & \frac{t}{\bar{\circ}} \\ & \stackrel{0}{0} \\ & \hline 0 \end{aligned}$ | $\stackrel{\overline{\mathrm{N}}}{\stackrel{0}{\mathrm{O}}}$ | $\sum_{\frac{2}{4}}^{\infty}$ | $\begin{aligned} & \stackrel{t}{\bar{O}} \\ & \stackrel{0}{0} \\ & \hline 0 \end{aligned}$ | $\stackrel{\overline{\mathrm{N}}}{\stackrel{\circ}{\mathrm{O}}}$ |
| Hotel | 11 | 15 | 26 | 8 | 9 | 16 |
| Drive Thrus | 10 | 10 | 20 | 9 | 9 | 18 |
| PFS | 17 | 17 | 34 | 19 | 18 | 37 |
| Total | 38 | 42 | 80 | 36 | 36 | 72 |

Table 4.11 - Diverted Trip Generation

## Trip Distribution

4.2.45 As detailed in the TA, and earlier within this Response, for the 'primary' (new) trips associated with the revised proposals for Banbury Phase 3 Curtins utilised the trip distribution for Banbury 15 (i.e. the proposed development site) found within the Banbury SATURN model as per the previous 19/00128/HYBRID application. Whilst Curtins is waiting for information regarding the strategic junction model(s) under OCC's ownership it is understood that OCC are broadly content with this approach, based upon an email received $25^{\text {th }}$ October 2021.
4.2.46 The pass-by distribution utilised within the TA was based upon the surveyed northbound/southbound traffic along the A361, which is considered an appropriate method and was not specifically queried in OCC's Post Submission Response.
4.2.47 With regards to the diverted trips, based upon the analysis presented at Figure 4.1 above, it is deemed appropriate to reserve this distribution for the trips currently travelling along the for the M40 and A422 (east). A separated diverted distribution has been proposed for the hotel uses (i.e. M40 only) and the PFS and drive thru elements (M40 and A442 East).

## Network Diagrams

4.2.48 OCC has requested clarity with regards to the traffic network diagrams found within TA. In order to assist with this process reference should be made to Table 4.12 which sets out the traffic figures alongside a brief description of what is demonstrated therein. Reference should be made to Appendix F for a copy of the updated traffic network diagrams.

| Traffic Figures | Title | Description |
| :---: | :---: | :---: |
| 1-2 | Development Trip Distribution (New Trips) | These figures represent the previously agreed trip distribution for 'new' trips associated with the 19/00128/HYBRID application. |
| 3-4 | Development Trips Associated with Previous Phase 3 Scheme | These figures represent the consented development trips associated with the previous Phase 3 proposals (see Table 4.2) in PCU values, based upon the assignment presented at Traffic Figures 1 and 2. To be netted off in final trip generation scenarios. |
| 5-6 | Primary Development Trips Associated with Revised Phase 3 | These figures represent the primary development trips associated with the revised Phase 3 proposals (see Table 4.7), based upon the assignment presented at Traffic Figures 1 and 2. |
| 7-8 | Development Trip Distribution (Pass-by) | These figures represent the pass-by distribution to be applied to revised Phase 3 proposals (see Table 4.8), based upon the north-south surveyed flows at the proposed site access on the A361. |
| 9-10 | Primary Development Trips Associated with Revised Phase 3 | These figures represent the resultant pass-by trips (see Table 4.8), based upon the distribution presented at Traffic Figure 7 and 8. |
| 11-12 | Development Trip Distribution (Diverted) - Hotel | These figures represent the proposed diverted trip distribution at the M40 Junction 11 to be applied to the hotel proposals (see Table 4.9), this is based upon the previous base traffic flows provided by OCC as part of the 19/00128/HYBRID application. The process has applied a principle of $10 \%$ diverted trips from the M40 N and $10 \%$ from M40 S. |
| 13-14 | Development Trip Distribution (Diverted) - PFS/Drive Thrus | These figures represent the proposed diverted trip distribution at the M40 Junction 11 to be applied to the PFS and Drivethru proposals (see Table 4.9), this is based upon the previous base traffic flows provided by OCC as part of the 19/00128/HYBRID application. The process has applied a principle of $7.5 \%$ diverted trips from the M40 N, $7.5 \%$ from M40 S and 5\% from the A422 East. |
| 15-16 | Total Development Generated Flows | These figures represent the total development trips associated with the revised Phase 3 proposals (i.e. the summation of primary, pass-by and diverted trips) with the netting off of the consent trips associated with the previous Phase 3 proposals (i.e. Figures 3 and 4). |

Table 4.12 - Network Diagram Descriptions.
4.2.49 Curtins welcomes the views of OCC and NH with regards to the above trip generation and distribution methodology and hope that the above represents a reasonable interpretation of OCC's comments, whilst providing the necessary clarity on several matters. Curtins is willing to attend a meeting to further discuss the principles found within this Response.
4.2.50 In the meantime, Curtins respectfully requests further information regarding the precise nature of the strategic junction models under OCC's ownership, with the mind to agreeing a suitable methodology for addressing potential highway impacts from the Banbury Phase 3 proposals.

### 4.3 NH and WNC Post Submission Comments

4.3.1 Curtins is aware that National Highways (NH), previously Highways England, and West Northamptonshire Council (WNC) as the neighbouring authority has a series of comments on the submitted development proposals. The comments, also shown at Appendix A to the rear of this report, seek further clarification on a number of highway related points. It is considered that these have largely been covered in the above Response and therefore have not been repeated below.
4.3.2 NH 's comments predominantly refer to the use of a more up to date traffic model. At the time of writing limited information has been provided with the precise nature of the strategic junction models under OCC's ownership. Curtins are currently liaising with OCC and Stantec (who operate the model on behalf of OCC), a hope to provide an update following the submission of this response.
4.3.3 Curtins is aware that KierWSP have undertaken a comprehensive review of the submitted TA, on behalf of WNC (dated $13^{\text {th }}$ September 2021). Whilst several of the points have been addressed in this Response, Curtins intend to provide a separate response that provides clarity the specific points raised as part of that review.

Banbury Phase 3, Junction 11, Banbury, Oxfordshire OCC Post Submission Highway Response 1

## Drawings




## Appendix A -OCC/NH/WNC Highway Observations

## Transport Schedule

## Recommendation:

## Objection for the following reasons:

- The Transport Assessment document does not accurately represent the traffic impact of the development.
- The development layout does not maximise opportunities for sustainable travel, contrary to NPPF.
- It is not possible to assess the suitability of the layout because no vehicle swept path analysis has been provided.

If despite OCC's objection permission is proposed to be granted then OCC will require conditions as set out below, and may require additional mitigation or conditions aimed at restricting the traffic impact on the network. A legal agreement may also be required to ensure that the development is bound by the obligations in the S106 legal agreement dated 20 July 2020.

## Key points

- The proposal is to substitute alternative uses on part of the consented B2/B8 employment site (reference 19/00128/HYBRID - these uses are petrol filling station (PFS) including EV charging station, coffee and hot food drive-thru restaurants, hotel and office, with associated parking.
- The uses are similar to those proposed on a previous planning application (refused) for a motorway service area (MSA) plus employment. However, the application states that the development would not be signed as an MSA from the M40. (I believe the development would not meet the HE requirements for an MSA in terms of lorry, caravan, and abnormal vehicle parking.)
- The employment site to the north, currently being built out, will make significant improvements to the sustainability of the site, but improvements to the layout would be needed in order to promote these.
- The Transport Assessment (TA) provided with the application underestimates the changes in traffic impact of this development compared with the consented development. This means the development's impact on a critical part of the network cannot be accurately assessed.


## Comments:

Vehicular access: Vehicular access is proposed off the consented site's access road onto the A361, via the new junction currently being built for the employment site to the north. It is a ghost island priority junction. Whilst this access has been deemed suitable for the consented uses, the capacity assessment cannot be verified until the issues with the TA have been resolved, as trips may have been underestimated.

The internal junction, from the site onto the employment site access road (which is due to be adopted) has not been assessed for capacity - an assessment should be provided.

The TA says that swept path analysis (SPA) can be provided - this is necessary to demonstrate that the layout allows vehicles to turn in and out of each of the uses without causing an obstruction to the flow of traffic. Flow of traffic within the site is critical, to avoid queues building up and backing up out of the site. SPA must be provided as part of the application.

Pedestrian and cycle access: The only safe access from Banbury, the main source of employees, is via the link under the motorway that the consented development is committed to improving prior to first occupation at the site. This is critical and the proposed development must not be occupied before it is open, due to the safety risk associated with people attempting to walk and cycle across the M40 junction.

The proposed layout requires improvement to create a continuous, safe, obvious and attractive pedestrian and cycle route from this link to the development and within the development, including suitable crossings of the access road, and junctions within the site. This is necessary to promote walking and cycling as a means of access for employees, and to provide safe access for these modes.

## Parking and cycle parking:

Cycle parking is either not shown, or inadequate. The number of spaces should be in accordance with OCC guidelines, and it should be covered, secure and convenient to use. Because the site is very compact and this is a full application, I recommend that this is not left to condition but detail required with the application.

Vehicle parking: No HGV parking is proposed. This means HGV's stopping to use the facilities may park in inappropriate places causing obstruction.

Car parking: A fuller explanation/justification of the number of car parking spaces should be provided. Under provision could result in parking on footways and obstruction of traffic movement.

## EV charging:

The EV charging points proposed are welcome, but the number of them does not meet with OCC's adopted Oxfordshire Electric Vehicle Charging Strategy - see link in the table below.

## Traffic impact

The TA appears to understate the potential impact of the development, compared with the consented use, particularly on the M40 junction 11. I attach below a schedule of comments on the TA, but the key points are:

- The trip generation is divided into either trips new to the network, or 'pass-by/diverted trips'. The impact of the latter category appears only to be considered at the site access on the A361. These are the genuine 'pass by' trips. 'Diverted' trips have been overlooked and need to be considered separately, as they could significantly change the turning movements at the M40 junction. Examples of diverted trips would be drivers on the A422 between Banbury and Northampton/Brackley exiting the roundabout onto the A361 to visit the PFS or drive thrus and then rejoining their route - creating an additional burden on the A361 arm of the junction. Or drivers on the M40 exiting to visit the services and rejoining the M40. Or drivers on the M40 exiting for Banbury. Although the application says the development is not an MSA and won't be signed as such, it would be visible from the motorway and drivers would get to know about it pretty quickly. No allowance appears to be made in the assessment for these trips.
- No evidence is given for the proportion of trips that would be new to the network. New fast food takeaways would be attractive to the existing residential and workplace population of eastern Banbury, who would be likely to drive to the site.
- Reliance is placed on old transport models, which do not reflect current network conditions. Since the previous planning application, a VISSIM microsimulation model has been created for Hennef Way, including junction 11, and use of the model should be arranged with OCC. LinSIG shows mean maximum queues, whereas the VISSIM model would indicate the severity of impact in the peaks.
- There are queries with regard to the estimation of trip generation.
- No weekend assessment has been carried out. Due to the retail park nearby, weekend traffic is significant at the junction and this could coincide with peak time for the fast food drive thrus

$\left.$| Para | Comment |
| :--- | :--- |
| $2.3 .7 \&$ | Do not recognise these street names - possibly cut and <br> pasted from another TA? |
| 2.3 .8 |  |$\quad$| Accident data - only provided to 2018. Most recent five |
| :--- |
| year data from OCC should be included. | \right\rvert\, | Swept path analysis must be supplied with the |
| :--- | :--- |
| application. |


|  | from the ped/cycle access to the north under the M40. The routes should be indicated, showing crossing points. |
| :---: | :---: |
| 3.4.2 | CA MAR1621R11 Annex 3 - DRAFT Oxfordshire Electric Vehicle Infrastructure Strategy 20210225.pdf More EV charging spaces required. Should be $25 \%$ of spaces. See Policy EVI8 |
| 3.4 .5 | Needs to be better ped/cycle linkage with the route under the motorway to the north. |
| 3.4.6 | No cycle parking is shown on the plans except for the hotel - the space indicated is too small. Secure, covered cycle parking is required in accordance with OCC Guidance. |
| 4.2.3 | There is no residential within the 1000 km acceptable walking distance. Very unlikely people would choose to walk to use the facilities although a few might walk to work. |
| 4.4.1 | Diagram is misleading as it does not take into account bus frequency. |
| 5.2 .5 | Projection to 2031 using Tempro - 2031 model scenario should be used, as this will be more accurate in taking account of local development. |
| 5.2.6 | What committed development is being added? Traffic added for phases 1 and 2 - to create the 'no development' scenario, and traffic netted off for consented phase 3, should be shown in a table for clarity, with calculations based on TRICS. The assessment is hard to follow. We need to be able to follow it through to see how net trips are arrived at in order to reconcile them with the relevant network traffic flow figures. |
| 5.3.4 and Appendix D | TRICS output: Drive thru coffee shop - three of the surveys are on Fridays. Most of the pass-by and diverted trips in peak hour will be people on their way to work. Friday is not a neutral day for travel to work. PFS - one third of the surveys was carried out on a Friday, which is not a neutral day. Also one of the surveys was carried out during Covid-19 restrictions. HGV breakdown not shown in TRICS output - calculation of conversion to PCUs should be shown. |
| 5.3.8 | $20 \%$ of linked trips to PFS in peak are assumed to be from other uses at the site - is this phases 1 and 2 or 3 ? If 1 and 2 , this is unrealistic - most employees at the site would likely fill up with fuel at a supermarket. Pass by and Diverted trips have been grouped together, with pass by appearing in the network diagram only to be those passing by directly on the A361. Diverted trips do |


|  | not appear to have been factored in. It is critical to understand diverted trips as they will lead to different movements at J11. Also, where is the evidence that only $10 \%$ of the drive thru trips are primary? On the other hand would $100 \%$ of the hotel trips really be primary? Many of these I would have thought to be diverted off the M40 |
| :---: | :---: |
| 5.3.9 | Office has 111 parking spaces - is it realistic that only 65 would arrive during peak hour? The TRICS surveys are weighted to very large urban areas with low car ownership. |
| 5.4 | Traffic distribution: clarity is needed on what development trips have been assigned to the network, but assuming it is new trips only, this is not appropriate for assessing the impact on the adjacent network. Diverted trips also need to be considered to assess the impact of the changing movements at the junction. |
| Figs 13 and 14 | Pass by trips are only shown to affect the access junction off the A361, yet $80 \%$ of trips are claimed to be pass by/diverted. No account is being taken of trips diverted off other routes including the M40 and A422, for fuel or refreshment. These extra movements at M40 J11 appear to be being lost in the assessment. |
| 5.5.2 | Traffic flows associated with this development are greater than those of the consented development. A fresh assessment of proportionate impact should be provided, to determine which junctions should be assessed. |
| 5.5.3 | This Linsig model is now considered too old to be relied upon, and the network has changed at J11. See above re alternative model. |
| 5.5.6 | MOVA technology has been introduced at the M40 junction as part of HS2 mitigation works, together with signalisation of the Hennef Way Arm of the junction. From September 2021, traffic levels are expected to be at or close to pre-Covid levels, particularly given the amount of non-office type employment in this part of Banbury, and further surveys could be carried out. |
| 5.6 | Junction modelling results cannot be relied upon due to the above issues resulting in underestimation of turning movements. |
| 5.6.1 | With and without development scenarios should be tabulated to show the impact of the development. |
| 5.6.3 | The Linsig results cannot be relied upon, due to understated traffic movements, but also because of the age of the model, and the fact that the junction has been |


|  | modified as part of HS2 mitigation works. Moreover, for <br> reasons stated in relation to the previous application, <br> DoS outputs greater than 90\% demonstrate a junction <br> that is over capacity. Even small increases in DoS <br> arising from the net traffic increase could lead to <br> exponential increases in delay, as stated in para 5.2.7, <br> therefore the congestion impact would be severe. |
| :---: | :--- |
| 5.7 .3 | The timing of the delivery of schemess) to relieve Hennef <br> Way is uncertain. It must be shown that the network can <br> cope with the additional traffic in the intervening years. |
| 5.7 .3 | Traffic is already close to pre-Covid levels. The network <br> in this area would be relatively less affected by a <br> reduction in office workers. |
| General | It is not possible to carry out a step by step audit of this <br> TA. There are insufficient tables showing how the <br> development trips in PCUs and their distribution have <br> been arrived at. |

## Conditions:

No development shall commence unless and until full specification details (including construction, layout, surfacing and drainage) of the turning area and XX parking spaces within the curtilage of the site, arranged so that motor vehicles may enter, turn round and leave in a forward direction and vehicles may park off the highway, have been submitted to and approved in writing by the Local Planning Authority. The turning area and car parking spaces shall be constructed in accordance with the approved details prior to the first occupation of the development shall be retained as such for the parking and manoeuvring of vehicles at all times thereafter.
Reason - In the interests of highway safety and to comply with Policy ESD15 of the Cherwell Local Plan 2011-2031 Part 1 and Government guidance contained within the National Planning Policy Framework.

Prior to the first occupation of the development hereby approved, a Travel Plan, prepared in accordance with the Department of Transport's Best Practice Guidance Note "Using the Planning Process to Secure Travel Plans", shall be submitted to and approved in writing by the Local Planning Authority. Thereafter, the development shall be implemented and operated in accordance with the approved details. Reason - In the interests of sustainability and to ensure a satisfactory form of development, in accordance with Government guidance contained within the National Planning Policy Framework.

Prior to the first use or occupation of the development hereby permitted, covered cycle parking facilities shall be provided on the site in accordance with details which shall be firstly submitted to and approved in writing by the Local Planning Authority. Thereafter, the covered cycle parking facilities shall be permanently retained and maintained for the parking of cycles in connection with the development.

Reason - In the interests of sustainability, to ensure a satisfactory form of development and to comply with Government guidance contained within the National Planning Policy Framework.

Prior to the first occupation of the development, a scheme for the provision of vehicular electric charging points to serve the development shall be submitted to and approved in writing by the Local Planning Authority. The vehicular electric charging points shall be provided in accordance with the approved details prior to the first occupation of the unit they serve, and retained as such thereafter.
Reason - To comply with Policies SLE 4, ESD 1, ESD 3 and ESD 5 of the adopted Cherwell Local Plan 2011-2031 Part 1 and to maximise opportunities for sustainable transport modes in accordance with paragraph 110(e) of the National Planning Policy Framework

## Joy White <br> Principal Transport Planner <br> 6 September 2021

# Town and Country Planning Act 1990 (As Amended) Local Highway Authority (LHA) Response 

| Application Reference | $21 / 02467 / F$ |  |
| :--- | :--- | :--- |
| Proposal | Erection of mixed-use development including a 240-bed hotel, 4-storey office <br> building and roadside services including 2 no hot food restaurant drive- <br> throughs, a coffee shop drive-through and a petrol filling station with ancillary <br> retail store |  |
| Location | OS Parcel 0005 And Part OS Parcel 1300 0878 And 7566, Banbury |  |
| Case Officer | Bernadette Owens |  |
| Date Consulted | $18 / 08 / 2021$ | Date Sent |

In respect of the above planning application, the local highway authority (LHA) has the following observations, comments and recommendations to make;

## Bus \& Rail

This site sits on the hourly 200 bus service, but there are no bus stops located within the vicinity.
Therefore, the LHA would wish to see a pair of bus stops installed on the A361 in the vicinity of the site pedestrian access. The LHA do not believe that there is any need for a layby but a section 278 safety audit might indicate that they are needed. The LHA would suggest that a wooden bus shelter, with no power supply, is provided southbound only.

The LHA would also seek to ensure that a bus service is maintained for whenever staff begin or finish work, particularly if these are outside of the traditional working day. Therefore, taking the site as a whole, if more than 50 staff begin or finish work in a period where there is no bus service with 30 minutes, we would seek to ensure that one is provided through a developer contribution.

## CTMP

Should this development proposal eventually be granted a planning Consent the LHA require that the applicant provide; by way of a suitably worded planning Condition, a CTMP, to detail the following for agreement with the LHA:

- Detailed work programme / timetable.
- Details of the days and hours of operation of the site
- Site HGV delivery / removal hours to be limited to between 10:00-16:00
- Detailed routeing for demolition, excavation, construction and abnormal loads.
- Supply of pre-journey information on routeing and site restrictions to contractors, deliveries and visitors.
- Detailed plan showing the location of on-site stores and facilities including the site compound, contractor \& visitor parking and turning as well as un/loading point, turning and queuing for HGVs.
- Breakdown of number, type, size and weight of vehicles over demolition \& construction period.
- Details of debris management including location of wheel wash, programme to control debris spill/ tracking onto the highway to also include sheeting/sealing of vehicles and dust management.


## Public Rights of Way

The application site is not affected by a Public Right of Way.

West
Northamptonshire Council

Hayley Usher
Development Management Engineer
For Assistant Director for Highways and Waste
One Angel Square
Angel Street
Northampton NN1 1ED
07514976410
Hayley.usher@westnorthants.gov.uk www.westnorthants.gov.uk

Planning Permission does not give or imply permission for adoption of new highway or to implement any works within the highway and / or a Public Right of Way

The views, observations, comments and recommendations contained in this response represent those of West Northamptonshire Council as Local Highway Authority and in no other function or authority.

## BANBURY PHASE 3, LAND TO THE NORTHEAST OF JUNCTION 11, M40 - BANBURY, OXFORDSHIRE:

## PROPOSED MIXED-USE DEVELOPMENT

## REVIEW OF TRANSPORT ASSESSMENT

DATED JULY 2021

## BY CURTINS

REVIEW DATE: $13^{\text {TH }}$ SEPTEMBER 2021

Note control

| Note type | Number | Comments |
| :--- | :--- | :--- |
| Technical Note | - | Document reviewed: Revision V02: 13 July 2021 <br> Report Reference: CUR-00-XX-RP-TP-001-V02 |
|  |  |  |

Version control

| Version | Date | By | Reviewed <br> by | Authorised <br> (TN only) | Notes |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 1 | $13 / 9 / 21$ | WP | VC | N/A | Final |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

## PURPOSE

This document forms KierWSP's comprehensive review on behalf of West Northamptonshire Council (WNC) of a Transport Assessment (TA) by Curtins on behalf of Monte Blackburn Ltd for:

Proposed mixed-use development at:

Land to the north-east of Junction 11 - M40, Banbury, Oxfordshire

## Chapter 1 - Introduction

The proposed development is part of a wider site including B2/B8 industrial units up to 50,000 sqm and construction is underway for Phases 1 and 2.

This TA supports a revised planning application for phase 3 including mixed-use including an hotel, office, drive thru restaurants and a Petrol Filling Station (PFS). It would cater for phase 1 and 2 occupiers as well as pass by trips.

Policy Banbury 15 of the Local Plan allocates the site for commercial development, and promotes sustainable travel including walking and cycling.


Pre-app discussion is stated to have occurred during the 2019 hybrid planning application led by Oxfordshire County Council to which WNC (then NCC) and Highways England (HE) contributed, leading to a revised hybrid application submitted in April 2019 addressing "all the concerns" related to transport and highways. It appears there has been no pre-app for Phase 3, however.

WNC Comment 1: Please supply copies of WNC's pre-app comments (emails etc.) and information on how these were addressed for Phase $1 / 2$ (The Hybrid 2019 Application) as well as for this Phase 3.

The TA states the developer's willingness to proactively work with the LHA to minimising potential highway impacts, which is welcome.

## CHAPTER 6: TRANSPORT PLANNING POLICY

The applicant has reviewed in detail all relevant national, regional and local policies and guidelines.

## CHAPTER 2: SITE LOCATION AND HIGHWAY LAYOUT



The site is around 2 km east of Banbury; to the north is Banbury Phase 1 and 2 (under construction), to the south and east the A361, and to the west the M40. The agreed priority junction access from the hybrid application currently under construction is shown above off the A361 ("the new estate access" for Phase 1/2); this serves this proposal site (Unit C). An assessment of the surrounding highway links is provided including the A361, A422, Ermont Way/ Tachbrook Road and the M40.

Personal Injury Accident (PIA) data for 2013 to 2019 from the 2019 hybrid planning application is complemented by 2018 to 2020 data, locations as below, and it is

concluded there are none relevant to the proposal.

## CHAPTER 3: DEVELOPMENT PROPOSALS

The mixed-use development includes a 240 -bed hotel, a 5200 sqm office building, PFS, coffee and hot-food drive thru. For information, the indicative Masterplan below and as per Appendix $B$ has a labelling error.

The internal estate road is 7.3 m with 2 m wide footpaths either side. No SWEPT path analysis to show large vehicles, including buses, can manoeuvre safely on site was provided. Please supply the swept path analysis exercises.

It is proposed to reduce the A 361 by the site from 50 to 40 mph .
It is unclear which section of the A361 is referred to, please ask the applicant to clarify. If it is a section is in Northamptonshire then it will need to be considered by the Northamptonshire Speed Review Panel.

A deceleration filter lane is proposed to assist access into the site.
To improve bus access, new bus stops on the A361 and pedestrian infrastructure will be provided.

As well as at least $2 m$ wide footways within the site, a combined use path from the northwest corner of the site to the existing
 underpass at the M40 is proposed, which itself will be improved.

Car parking is in accordance with Chewell District Council (CDC) standards as above.


A framework Travel Plan (FTP) will be provided.

## CHAPTER 4: ACCESSIBILITY BY SUSTAINABLE MODES

Pedestrian accessibility based on a 2 km isochrone is considered, including in and towards Banbury over the M40. For cycling an optimistic 8km rather than the usual 5km distance is considered.

There are no bus stops within 400m. Banbury Railway Station is nearer 3km away, not 2 km .

Contributions to improving walking and cycling infrastructure in Banbury (Wildmere Road, Hennef Way, Daventry Road) including signal upgrades are proposed.

The new bus stops on the A361 will be linked to the site with 2metre footway and crossing facilities to catch the 200 / 500 services to / from Brackley.

The applicant is asked to engage with the WNC public transport team needed in respect of improvements and contributions

| Bus Service | Journey | Frequency |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Monday to Friday | Saturday | Sunday |
| 200 | Brackley - Daventry <br> Via Wardington, Chipping Warden, Byfield, Woodford Halse, Byfield, Badby \& Daventry | 60 mins | 60 mins | No Service |
| 500 | Brackley - Banbury <br> Via Middleton Cheney | 30 mins | 30 mins | 60 mins |

Committed developments will be confirmed with the LPA.
WNC Comment 2: These should be included in trip generation assessment

## CHAPTER 5: HIGHWAY IMPACTS

## Baseline Traffic Data

Traffic surveys were undertaken pre-pandemic as part of the wider site for J11, other junctions used OCC Banbury Highway Model. Future year 2021, 2026 and 2029 scenarios were tested as part of the 2019 hybrid application, now supplemented by 2026 growthed to 2031 by TEMPro.

As this was accepted before so the data appears to be reasonable, however, if this Model is similar to the NSTM, its reliability on the borders is somewhat suspect. Also how the A422 was represented being within NCC would be interesting to see.

WNC Comment 3: The traffic survey data and Model extracts showing baseline and future years should be provided.

## Traffic Generation

TRICs has been used to provide trip rates as below.

| TRICS - LandUses | Weekday AM Peak Hour(08:00-09:00) |  |  | Weekday PM Peak Hour$(17: 00-18: 00)$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\frac{9}{\frac{2}{4}}$ | $\begin{aligned} & \frac{\mathrm{V}}{\overline{0}} \\ & \frac{\mathrm{O}}{0} \\ & \hline \end{aligned}$ | $\frac{\text { § }}{\stackrel{1}{\circ}}$ | $\sum_{\frac{2}{2}}^{\infty}$ |  | $\stackrel{\bar{\varrho}}{\stackrel{\circ}{\circ}}$ |
| Office | 1.097 | 0.154 | 1.251 | 0.157 | 1.015 | 1.172 |
| Hotel | 0.229 | 0.305 | 0.534 | 0.164 | 0.179 | 0.343 |
| PFS (with retail) | 7.900 | 7.676 | 15.575 | 8.488 | 8.419 | 16.907 |
| Drive Thru FF | 12.719 | 12.281 | 25.000 | 13.074 | 13.128 | 26.202 |
| Drive Thru Coffee | 14.985 | 13.558 | 28.543 | 8.869 | 10.194 | 19.063 |

Table 5.2 - Proposed Development Trip Rates

For this proposal not all trips will be new, given internalisation and pass-by as suggested below in Table 5.3, and actual trip movements as per Table 5.4.

WNC Comment 4: Justification for the low level of new "drive thru" trips is required.

## Trip Distribution

Assignment was taken from the Banbury SATURN Model as per previous applications (Appendix C).


WNC Comment 5: A distribution flow diagram with the percentage distribution is required.

## Junction Assessment

The 5 junctions assessed previously are tested with 2026 and 2031 "DS" scenarios, namely:

- Junction 1 A361/

Proposed Site Access

- Junction 2 M40

Junction 11 Grade Separated Roundabout

- Junction 3 Hennef Way/ Ermont Way Roundabout
- Junction 4 Hennef Way/ Concorde Avenue Roundabout
- Junction 5 Hennef Way/ Southam Round
 Roundabout

Junction 1 performs within the capacity in both the future scenarios.
Junctions 2, 3, 4 and 5 are signalised, but without the current signal information and junction drawings, no review to confirm findings, i.e. over capacity in 2026 and 2031 with and without development, is possible. It is claimed that given the marginal extra impact of the proposal, no mitigation is required.

WNC Comment 6: Final comment regards junction capacity assessment results and mitigation can only be made once the models can be reviewed in detail with provision of current signal information and junction drawings.

## Recommendation

The TA should address all 6 WNC Comments before the Local Highway Authority can assess whether the document is an acceptable representation of the potential impacts that this proposal may or may not have.

# Developments Affecting Trunk Roads and Special Roads <br> Highways England Planning Response (HEPR 16-01) Formal Recommendation to an Application for Planning Permission 

From: Martin Fellows<br>Operations (East)<br>planningee@highwaysengland.co.uk<br>To: Cherwell District Council<br>CC: growthandplanning@highwaysengland.co.uk

Council's Reference: 21/02467/F

Referring to the planning application referenced above, dated 6 August 2021, application for erection of mixed-use development including a 240-bed hotel, 4storey office building and roadside services including 2 no hot food restaurant drive-throughs, a coffee shop drive through and a petrol filling station with ancillary retail store, at OS Parcel 0005 And Part OS Parcel 13000878 And 7566, Banbury, notice is hereby given that Highways England's formal recommendation is that we:
a) offer no objection;
b) recommend that conditions should be attached to any planning permission that may be granted (see Annex A - Highways England recommended Planning Conditions);
c) recommend that planning permission not be granted for a specified period (see Annex A - further assessment required);
d) recommend that the application be refused (see Annex A - Reasons for recommending Refusal).

Highways Act Section 175B is / is not relevant to this application. ${ }^{1}$

[^0]```
Signature:
Llue
lug
2
Name: Eric Cooper
Highways England:
Woodlands, Manton Lane
Bedford MK41 7LW
Eric.cooper@highwaysengland.co.uk
```


## Annex A

HIGHWAYS ENGLAND has been appointed by the Secretary of State for Transport as strategic highway company under the provisions of the Infrastructure Act 2015 and is the highway authority, traffic authority and street authority for the Strategic Road Network (SRN). The SRN is a critical national asset and as such we work to ensure that it operates and is managed in the public interest, both in respect of current activities and needs as well as in providing effective stewardship of its longterm operation and integrity.

This response represents our formal recommendations with regard 21/02467/F and has been prepared by Eric Cooper.

The proposed development is located on a site adjacent to the M40 J11 on land between the motorway southbound offslip and the A361. The site currently has extant planning consent (planning application number 19/00128/HYBRID) for warehousing.

The existing consent includes a condition which requires MOVA (Microprocessor optimised vehicle actuation) to be provided within the traffic signal control of the motorway junction, incorporating measures specifically to reduce the risk of traffic queues reaching the main carriageway of the M40.

The existing junction is a gateway from the M40 via Hennef Way into Banbury and suffers significant congestion at peak times. The proposed development will provide an increase in traffic flows, both new and diverted trips to the M40 junction over and above to those predicted for the previous proposals. It is therefore essential that careful consideration is given to the impact of the proposals on the highway, ensuring that it can operate efficiently and safely.

Accompanying the application is a transport assessment which builds on the transport assessments undertaken for 19/00128/HYBRID, using the then available Linsig network model provided by Oxfordshire County Council (OCC). This is now some years old and it is questionable if it is still a suitable model to test the impacts of the current proposals.

I understand that OCC have now developed a more recent microsimulation model and it is suggested the applicant's transport consultants seek access to test the highway impacts using this model.

Since the previous modelling work, there has been some physical changes to the highway network at the junction including the installation of MOVA. The modelling should be updated to reflect these changes.

It is recommended that the developer's consultants engage with OCC and Highways England, to scope the required updates to the modelling work and the transport assessment, so that we can agree a due process to understand the impacts of the proposals and any mitigation that may be required.

Until the further update information is provided, Highways England is not in a position to respond to this consultation. It is therefore requested that this application is not determined until 30 November 2021. If we are in a position to respond earlier than this, we will withdraw this recommendation accordingly

Banbury Phase 3, Junction 11, Banbury, Oxfordshire OCC Post Submission Highway Response 1

## Appendix B - Updated Site Layout



| somer | phase 3 ste plan |  |  |
| :---: | :---: | :---: | :---: |
| bone | 16.145 .03 | ${ }^{\text {amome }} 301$ | $J$ |
| * | $1.500 @_{\text {@ Al }}$ |  |  |
| 0 | 27.01.21 |  |  |

Banbury Phase 3, Junction 11, Banbury, Oxfordshire OCC Post Submission Highway Response 1

## Appendix C - OCC Parking Standards

## Table 1

## Car Parking Standards - Maximum Levels

| Accessibility Characteristic | Residential | Food Retail ** | Non Food Retail ** | $\begin{aligned} & \text { B1 and A2 } \\ & \text { Offices } \end{aligned}$ | $\begin{array}{\|l\|} \hline \text { B2 - General } \\ \text { Industry } \end{array}$ | B8 <br> Warehousing | $\begin{array}{\|l\|} \hline \text { D2 Assembly } \\ \text { and Leisure } \\ \star * \end{array}$ | Cinema \& Conference ** | Hotel and Guest Hse ** | Hospital | Higher Education | A3 - <br> Restaurant/ pubs | Stadia |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Type 1 | 1space per dwelling upto 2 beds; 2+beds on merit | Operational Parking Only |  |  |  |  |  |  | on merits | on merits | operational need | operational need |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  | N/A |
| Type 2 | I bed - 1 space; 2/3 bed - 2 spaces; 4 bed+ 2+spaces on merit | $\begin{aligned} & 1 \text { space per } \\ & 14 \mathrm{sqm} \end{aligned}$ | $\begin{aligned} & 1 \text { space per } \\ & 20 \text { sqm } \\ & \hline \end{aligned}$ | $\begin{aligned} & 1 \text { space per } \\ & 30 \text { sqm } \\ & \hline \end{aligned}$ | $\begin{aligned} & 1 \text { space per } \\ & 50 \text { sqm } \end{aligned}$ | $\begin{aligned} & 1 \text { space per } 200 \\ & \text { sqm } \end{aligned}$ | $\begin{aligned} & 1 \text { space per } \\ & 22 \text { sqm } \end{aligned}$ | 1 space per 5 seats | $\begin{aligned} & 1 \text { space per } \\ & 1 \text { beds } \end{aligned}$ | on merits | 1 space per 2 staff 1 space per 15 students | 1 space per 5 sqm of public space | on merits ( guide 1 per 15 seats) * |
| Application Threshold GFA (sqm.) |  |  |  |  |  |  |  |  | 30 | N/A | 2500 | N/A | 1500 seats |
|  | N/A | 1000 | 1000 | 500 | 500 | 1000 | 1000 | 1000 |  |  |  |  |  |

** Coach parking treated seperately
** A PPG6 sequential test location policy will apply to these land uses

Type 1 - This standard may be applicable to Central Policy Areas of larger towns but this will be determined by the District Council
Type 2 - other areas

## Parking Standards for Developments below the Threshold Size

There will be a presumption that the above maximum standards apply to developments below the threshold size but each case will be on merit and the parking provision for each site will be considered in the light of its location and the need to reduce private vehicle mileage in line with PPG13

## Notes

Oxford City Council has localised parking standards which reflect the high public transport accessibility
Where developers are proposing levels of parking below the maximum levels they will be required to submit supporting information to show the likely impact on street and to public transport. This could include parking surveys to show the level of existing parking stress and an assessment of any road safety implications. It may also require a contribution to improving public transport

Operational parking is the level of parking to accommodate those vehicles required for the essential operation of the land use under consideration. and/or parking controls

The specific operational need of an applicant will not necessarily be the determinant of the parking provision
Travel Plans will be required to show how the use of private vehicle trips will be controlled or reduced
Cycle Parking will be required in line with the County Council's cycle parking standards

Parking provision for people with disabilies should be provided in line with BS 8300:2001

Cycle Parking Standards - Minimum Levels

|  | Residential | Food Retail | Non Food Retail | A2 - Banks and Professional | B1-Offices | B2 - General <br> Industry | $\begin{aligned} & \text { B8 } \\ & \text { Warehousing } \end{aligned}$ | D2 Assembly and Leisure | Cinema \& Conference | Hotel and Guest Hse | Hospital | Higher Education | A3 - <br> Restaurant/ pubs | Stadia |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Long stayl employee/ resident | I bed - 1 space; <br> $2+$ beds - 2 Spaces <br> $* * *$ | $\begin{aligned} & 1 \text { stand per } \\ & 12 \text { staff * } \end{aligned}$ | $\begin{array}{\|l\|} \hline 1 \text { stand per } 6 \\ \text { staff * } \end{array}$ | $\begin{aligned} & 1 \text { stand per } \\ & 12 \text { staff ** } \end{aligned}$ | $\begin{aligned} & 1 \text { stand per } \\ & 150 \text { sqm } \end{aligned}$ | $\begin{aligned} & 1 \text { stand per } \\ & 350 \mathrm{sqm} \end{aligned}$ | $\begin{aligned} & 1 \text { stand per } 500 \\ & \text { sqm } \end{aligned}$ | $\begin{aligned} & 1 \text { stand per } \\ & 12 \text { staff } * * \end{aligned}$ | $\begin{aligned} & 1 \text { stand per } \\ & 12 \text { staff ** } \end{aligned}$ | $\begin{aligned} & 1 \text { stand per } \\ & 12 \text { staff } * * \end{aligned}$ | $\begin{array}{\|l\|} \hline 1 \text { stand } \\ \text { per 12 } \\ \text { staff } \end{array}$ | Subject to individual assessment | $\begin{aligned} & 1 \text { stand per } \\ & 12 \text { staff ** } \end{aligned}$ | $\begin{aligned} & 1 \text { stand per } \\ & 12 \text { staff } \end{aligned}$ |
| Visitor | 1 stand per 2 units where more than 4 units | $\begin{array}{\|l} 1 \text { stand per } \\ \text { 200sqm } \\ \hline \end{array}$ | $\begin{aligned} & 1 \text { stand per } \\ & \text { 200sqm } \\ & \hline \end{aligned}$ | $\begin{aligned} & 1 \text { stand per } \\ & 100 \text { sqm } \end{aligned}$ | 1 stand per 500 sqm | $\begin{aligned} & 1 \text { stand per } \\ & 500 \mathrm{sqm} \end{aligned}$ | $\begin{aligned} & 1 \text { stand per } \\ & 1000 \mathrm{sqm} \end{aligned}$ | $\begin{aligned} & 1 \text { stand per } \\ & 20 \text { sqm } \end{aligned}$ | $\begin{aligned} & 1 \text { stand per } \\ & 20 \text { sqm } \end{aligned}$ | $\begin{aligned} & 1 \text { stand per } \\ & 10 \text { beds } \end{aligned}$ | on merits | Subject to individual assessment | 1 stand per 20 sqm of public space | on merits (guide 1 stand per 30 seats) |

## Notes

a) where number of staff is not known:-

* 1 staff per 50 sqm
** 1 staff per 7 sqm
*** b) Garages should be designed to allow space for car plus storage of cycles in line with the District Council's design guides where appropriate
c) 1 stand $=2$ spaces : The number of stands to be provided from the calculations to be rounded upwards. The preferred stand is of the 'Sheffield' type
d) All cycle parking facilities to be secure and located in convenient positions
e) The County Council encourages the use of covered facilities for longstay/staff cycle parking
f) Oxford City Council have a seperate standard to reflect high cycle usage in the city
g) Residential visitor parking should be provided as communal parking at convenient and appropriate locations throughout the development

Banbury Phase 3, Junction 11, Banbury, Oxfordshire OCC Post Submission Highway Response 1

## Appendix D - Accident Data Reports



For more information about the data please visit: www.crashmap.co.uk/home/Faq
To subscribe to unlimited reports using CrashMap Pro visit www.crashmap.co.uk/Home/Premium_Services

Vehicles involved

| Vehicle Ref | Vehicle Type | Vehicle Age | Driver Gender | Driver Age Band | Vehicle Maneouvre | First Point of Impact | Journey Purpose | Hit Object - On Carriageway | Hit Object - Off Carriageway |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | Motorcycle over 500cc | 20 | Male | 26-35 | Vehicle proceeding normally along the carriageway, not on a bend | Offside | Other | None | None |

## Casualties

| Vehicle Ref | Casualty Ref | Injury Severity | Casualty Class | Gender | Age Band | Pedestrian Location | Pedestrian Movement |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 1 | Serious | Driver or rider | Male | 26-35 | Unknown or other | Unknown or other |

For more information about the data please visit: www.crashmap.co.uk/home/Faq
To subscribe to unlimited reports using CrashMap Pro visit www.crashmap.co.uk/Home/Premium_Services


For more information about the data please visit: www.crashmap.co.uk/home/Faq
To subscribe to unlimited reports using CrashMap Pro visit www.crashmap.co.uk/Home/Premium_Services

Vehicles involved

| Vehicle Ref | Vehicle Type | Vehicle Age | Driver Gender | Driver Age Band | Vehicle Maneouvre | First Point of Impact | Journey Purpose | Hit Object - On Carriageway | Hit Object - Off Carriageway |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | Car (excluding private hire) | 0 | Female | 56-65 | Vehicle proceeding normally along the carriageway, not on a bend | Front | Other | Central island of roundabout | Other permanent object |

## Casualties

| Vehicle Ref | Casualty Ref | Injury Severity | Casualty Class | Gender | Age Band | Pedestrian Location | Pedestrian Movement |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 1 | Serious | Driver or rider | Female | 56-65 | Unknown or other | Unknown or other |

For more information about the data please visit: www.crashmap.co.uk/home/Faq
To subscribe to unlimited reports using CrashMap Pro visit www.crashmap.co.uk/Home/Premium_Services


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Page 1 of 2
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## Casualties

| Vehicle Ref | Casualty Ref | Injury Severity | Casualty Class | Gender | Age Band | Pedestrian Location | Pedestrian Movement |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2 | 1 | Serious | Driver or rider | Male | 26-35 | Unknown or other | Unknown or other |

For more information about the data please visit: www.crashmap.co.uk/home/Faq
To subscribe to unlimited reports using CrashMap Pro visit www.crashmap.co.uk/Home/Premium_Services

Banbury Phase 3, Junction 11, Banbury, Oxfordshire OCC Post Submission Highway Response 1

## Appendix E - TRICS Outputs

## TRIP RATE CALCULATI ON SELECTION PARAMETERS:

Land Use : 06 - HOTEL, FOOD \& DRINK
Category : J-DRIVE THROUGH COFFEE SHOP

## TOTAL VEHICLES

| Selected regions and areas: |  |  |
| :--- | :--- | :--- |
| $\mathbf{0 4}$ | EAST ANGLIA |  |
|  | SF SUFFOLK | 1 days |
| $\mathbf{0 5}$ | EAST MI DLANDS | 1 days |
|  | NR NORTHAMPTONSHIRE |  |
| $\mathbf{0 6}$ | WEST MI DLANDS | 1 days |
|  | HE HEREFORDSHIRE | 1 days |

This section displays the number of survey days per TRICS ${ }^{\circledR}$ 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: | Gross floor area |
| :--- | :--- |
| Actual Range: | 200 to 305 (units: sqm) |
| Range Selected by User: | 125 to 420 (units: sqm) |
| Parking Spaces Range: | All Surveys Included |

Public Transport Provision:
Selection by: Include all surveys
Date Range: $\quad 01 / 01 / 13$ to $24 / 11 / 20$
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:

| Tuesday | 1 days |
| :--- | :--- |
| Friday | 3 days |

This data displays the number of selected surveys by day of the week.
Selected survey types:

| Manual count | 4 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:
Suburban Area (PPS6 Out of Centre) 2
Edge of Town 2
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:
Industrial Zone 1
Residential Zone 1
Retail Zone 1
No Sub Category 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:
Not Known
4 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 ${ }^{\circledR}$.

## Secondary Filtering selection (Cont.):

Population within 1 mile:

| 1,000 or Less | 1 days |
| :--- | :--- |
| 1,001 to 5,000 | 2 days |
| 15,001 to 20,000 | 1 days |

This data displays the number of selected surveys within stated 1-mile radii of population.
Population within 5 miles:

| 5,001 to 25,000 | 2 days |
| :--- | :--- |
| 50,001 to 75,000 | 1 days |
| 100,001 to 125,000 | 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
3 days
1.1 to 1.5
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
4 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:
No PTAL Present 4 days
This data displays the number of selected surveys with PTAL Ratings.
Covid-19 Restrictions Yes At least one survey within the selected data set was undertaken at a time of Covid-19 restrictions

LIST OF SITES relevant to selection parameters


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.

# TRIP RATE for Land Use 06 - HOTEL, FOOD \& DRINK/J - DRIVE THROUGH COFFEE SHOP <br> TOTAL VEHI CLES <br> Calculation factor: 100 sqm <br> BOLD print indicates peak (busiest) period 

| Time Range | ARRIVALS |  |  | DEPARTURES |  |  | TOTALS |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | No. Days | Ave. GFA | Trip Rate | No. Days | Ave. GFA | Trip Rate | No. Days | Ave. GFA | 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 | 2 | 218 | 0.459 | 2 | 218 | 0.000 | 2 | 218 | 0.459 |
| 06:00-07:00 | 3 | 247 | 2.969 | 3 | 247 | 2.159 | 3 | 247 | 5.128 |
| 07:00-08:00 | 4 | 245 | 11.825 | 4 | 245 | 10.601 | 4 | 245 | 22.426 |
| 08:00-09:00 | 4 | 245 | 14.985 | 4 | 245 | 13.558 | 4 | 245 | 28.543 |
| 09:00-10:00 | 4 | 245 | 16.718 | 4 | 245 | 15.189 | 4 | 245 | 31.907 |
| 10:00-11:00 | 4 | 245 | 13.965 | 4 | 245 | 14.271 | 4 | 245 | 28.236 |
| 11:00-12:00 | 4 | 245 | 12.946 | 4 | 245 | 12.844 | 4 | 245 | 25.790 |
| 12:00-13:00 | 4 | 245 | 14.067 | 4 | 245 | 13.761 | 4 | 245 | 27.828 |
| 13:00-14:00 | 4 | 245 | 15.494 | 4 | 245 | 16.106 | 4 | 245 | 31.600 |
| 14:00-15:00 | 4 | 245 | 11.213 | 4 | 245 | 12.538 | 4 | 245 | 23.751 |
| 15:00-16:00 | 4 | 245 | 12.029 | 4 | 245 | 10.601 | 4 | 245 | 22.630 |
| 16:00-17:00 | 4 | 245 | 11.519 | 4 | 245 | 12.946 | 4 | 245 | 24.465 |
| 17:00-18:00 | 4 | 245 | 8.869 | 4 | 245 | 10.194 | 4 | 245 | 19.063 |
| 18:00-19:00 | 4 | 245 | 5.199 | 4 | 245 | 6.422 | 4 | 245 | 11.621 |
| 19:00-20:00 | 3 | 247 | 3.644 | 3 | 247 | 3.509 | 3 | 247 | 7.153 |
| 20:00-21:00 | 3 | 247 | 0.945 | 3 | 247 | 1.889 | 3 | 247 | 2.834 |
| 21:00-22:00 |  |  |  |  |  |  |  |  |  |
| 22:00-23:00 |  |  |  |  |  |  |  |  |  |
| 23:00-24:00 |  |  |  |  |  |  |  |  |  |
| Total Rates: |  |  | 156.846 |  |  | 156.588 |  |  | 313.434 |

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.

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## Parameter summary

Trip rate parameter range selected: Survey date date range:
Number of weekdays (Monday-Friday):
Number of Saturdays:
Number of Sundays:
Surveys automatically removed from selection:
Surveys manually removed from selection:

200-305 (units: sqm)
01/01/13-24/11/20
4
0
0
0
0
0

This section displays a quick summary of some of the data filtering selections made by the TRICS ${ }^{\circledR}$ 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 CALCULATI ON SELECTI ON PARAMETERS:

Land Use : 13-PETROL FILLING STATIONS

Category : B - PFS - WITH RETAIL

## TOTAL VEHI CLES

Selected regions and areas:
03 SOUTH WEST
DC DORSET 1 days

DV DEVON 1 days
05 EAST MIDLANDS
LE LEICESTERSHIRE 1 days
LN LINCOLNSHIRE 1 days
06 WEST MI DLANDS
WM WEST MIDLANDS 1 days
07 YORKSHIRE \& NORTH LI NCOLNSHIRE
NY NORTH YORKSHIRE
1 days
08 NORTH WEST

| GM | GREATER MANCHESTER | 1 days |
| :--- | :--- | :--- |
| LC | LANCASHIRE | 1 days |
| MS | MERSEYSIDE | 1 days |
| SCOTLAND |  |  |
| EB | CITY OF EDINBURGH | 1 days |
| FI | FIFE | 1 days |

This section displays the number of survey days per TRICS $\circledR^{\circledR}$ 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: | Filling bays |
| :--- | :--- |
| Actual Range: | 6 to 15 (units: ) |
| Range Selected by User: | 4 to 16 (units: ) |
| Parking Spaces Range: | All Surveys Included |

Public Transport Provision:
Selection by: Include all surveys
Date Range: $\quad 01 / 01 / 13$ to $23 / 10 / 20$
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:

| Monday | 2 days |
| :--- | :--- |
| Tuesday | 5 days |
| Wednesday | 3 days |
| Thursday | 1 days |

This data displays the number of selected surveys by day of the week.
Selected survey types:

| Manual count | 11 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:
Suburban Area (PPS6 Out of Centre) 6
Edge of Town
5
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
9
High Street 1
No Sub Category 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:
Sui Generis 11 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 ${ }^{\circledR}$.

Population within 500 m Range:
All Surveys Included
Population within 1 mile:

| 5,001 to 10,000 | 2 days |
| :--- | :--- |
| 10,001 to 15,000 | 3 days |
| 15,001 to 20,000 | 1 days |
| 20,001 to 25,000 | 3 days |
| 25,001 to 50,000 | 1 days |
| 50,001 to 100,000 |  |

This data displays the number of selected surveys within stated 1-mile radii of population.
Population within 5 miles:

| 50,001 to 75,000 | 1 days |
| :--- | :--- |
| 75,001 to 100,000 | 2 days |
| 100,001 to 125,000 |  |
| 125,001 to 250,000 | 4 days |
| 250,001 to 500,000 | 2 days |
| 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:

| O.5 or Less | 1 days |
| :--- | :--- |
| 0.6 to 1.0 | 3 days |
| 1.1 to 1.5 | 6 days |
| 1.6 to 2.0 | 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
11 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:
No PTAL Present 11 days
This data displays the number of selected surveys with PTAL Ratings.

## 1 DC-13-B-01 <br> 271 BARRACK ROAD <br> CHRISTCHURCH

ESSO \& TESCO EXPRESS

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Filling bays: Survey date: MONDAY
2 DV-13-B-01
TORBAY ROAD
PAIGNTON
Edge of Town
Residential Zone
Total Filling bays: Survey date: TUESDAY 18/07/17
3 EB-13-B-02 BP CONNECT \& M\&S SI MPLY FOOD
BULLYEON ROAD
QUEENSFERRY
Edge of Town
Residential Zone
Total Filling bays:
Survey date: THURSDAY 26/06/14
4 FI-13-B-01 BP \& M\&S SI MPLY FOOD
HARBOUR DRIVE
DALGETY BAY
Edge of Town
No Sub Category
Total Filling bays: Surveys: 13

5 GM-13-B-01 BP \& SPAR
NEW STREET
ROCHDALE
MILNROW
Edge of Town
Residential Zone
Total Filling bays:

## Survey date: WEDNESDAY 21/10/15

6 LC-13-B-03
GARSTANG ROAD
PRESTON
FULWOOD
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Filling bays:
Survey date: TUESDAY
8
06/11/18
7 LE-13-B-02 TESCO EXPRESS \& ESSO
FOSSE ROAD NORTH
LEICESTER
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Filling bays:
Survey date: TUESDAY
8
28/10/14
8 LN-13-B-01
CARHOLME ROAD
LINCOLN
Edge of Town
Residential Zone
Total Filling bays: Survey date: WEDNESDAY

## DORSET <br> DORSET

VON

Survey Type: MANUAL CITY OF EDINBURGH

Survey Type: MANUAL

Survey Type: MANUAL GREATER MANCHESTER

Survey Type: MANUAL

## LANCASHIRE

Survey Type: MANUAL

## LEI CESTERSHIRE

Survey Type: MANUAL
LI NCOLNSHIRE

LIST OF SITES relevant to selection parameters (Cont.)
9 MS-13-B-01 ESSO \& SPAR MERSEYSIDE
ULLET ROAD

    LIVERPOOL
    SEFTON PARK
    Suburban Area (PPS6 Out of Centre)
    Residential Zone
    Total Filling bays:
Survey date: TUESDAY
BP \& SPAR
NORTH STREET
RIPON
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Filling bays:
Survey date: MONDAY 23/09/13
11 WM-13-B-05 TEXACO \& CO-OPERATIVE
HIGH STREET
BIRMINGHAM
HARBORNE
Suburban Area (PPS6 Out of Centre)
High Street
Total Filling bays:
Survey date: TUESDAY 22/10/13 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 SURVEYS

| Site Ref | Survey Date |  | Reason for Deselection |
| :---: | :---: | :--- | :---: |
| WO-13-B-02 | $05 / 10 / 20$ | Covid |  |

TRIP RATE for Land Use 13 - PETROL FILLING STATIONS/B - PFS - WITH RETAIL
TOTAL VEHI CLES

## Calculation factor: 1 BAYS

BOLD print indicates peak (busiest) period

| Time Range | ARRIVALS |  |  | DEPARTURES |  |  | TOTALS |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | No. Days | Ave. BAYS | Trip Rate | No. Days | Ave. BAYS | Trip Rate | No. Days | Ave. BAYS | 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 | 11 | 9 | 5.394 | 11 | 9 | 5.128 | 11 | 9 | 10.522 |
| 07:00-08:00 | 11 | 9 | 8.638 | 11 | 9 | 8.330 | 11 | 9 | 16.968 |
| 08:00-09:00 | 11 | 9 | 8.713 | 11 | 9 | 8.489 | 11 | 9 | 17.202 |
| 09:00-10:00 | 11 | 9 | 8.436 | 11 | 9 | 8.479 | 11 | 9 | 16.915 |
| 10:00-11:00 | 11 | 9 | 7.309 | 11 | 9 | 7.340 | 11 | 9 | 14.649 |
| 11:00-12:00 | 11 | 9 | 6.809 | 11 | 9 | 6.851 | 11 | 9 | 13.660 |
| 12:00-13:00 | 11 | 9 | 8.511 | 11 | 9 | 8.489 | 11 | 9 | 17.000 |
| 13:00-14:00 | 11 | 9 | 8.000 | 11 | 9 | 7.894 | 11 | 9 | 15.894 |
| 14:00-15:00 | 11 | 9 | 7.787 | 11 | 9 | 7.564 | 11 | 9 | 15.351 |
| 15:00-16:00 | 11 | 9 | 7.840 | 11 | 9 | 8.085 | 11 | 9 | 15.925 |
| 16:00-17:00 | 11 | 9 | 8.287 | 11 | 9 | 8.553 | 11 | 9 | 16.840 |
| 17:00-18:00 | 11 | 9 | 9.255 | 11 | 9 | 9.043 | 11 | 9 | 18.298 |
| 18:00-19:00 | 11 | 9 | 8.351 | 11 | 9 | 8.553 | 11 | 9 | 16.904 |
| 19:00-20:00 | 11 | 9 | 7.468 | 11 | 9 | 7.596 | 11 | 9 | 15.064 |
| 20:00-21:00 | 11 | 9 | 5.691 | 11 | 9 | 5.638 | 11 | 9 | 11.329 |
| 21:00-22:00 | 11 | 9 | 4.415 | 11 | 9 | 4.585 | 11 | 9 | 9.000 |
| 22:00-23:00 | 1 | 8 | 2.125 | 1 | 8 | 2.750 | 1 | 8 | 4.875 |
| 23:00-24:00 | 1 | 8 | 0.000 | 1 | 8 | 0.250 | 1 | 8 | 0.250 |
| Total Rates: |  |  | 123.029 |  |  | 123.617 |  |  | 246.646 |

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.

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## Parameter summary

Trip rate parameter range selected:
Survey date date range:
Number of weekdays (Monday-Friday):
Number of Saturdays:
Number of Sundays:
Surveys automatically removed from selection:
Surveys manually removed from selection:

6-15 (units:)
01/01/13-23/10/20
12
0
0
1

This section displays a quick summary of some of the data filtering selections made by the TRICS ${ }^{\circledR}$ 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 CALCULATI ON SELECTI ON PARAMETERS:

Land Use : 02-EMPLOYMENT

Category : A - OFFICE
MULTI-MODAL TOTAL VEHI CLES

| Selected regions and areas: |  |  |
| :---: | :---: | :---: |
| 02 | SOUTH EAST |  |
|  | ES EAST SUSSEX | 1 days |
| 04 | EAST ANGLIA |  |
|  | NF NORFOLK | 1 days |
| 07 | YORKSHIRE \& NORTH LI NCOLNSHIRE |  |
|  | WY WEST YORKSHIRE | 1 days |
| 08 | NORTH WEST |  |
|  | LC LANCASHIRE | 1 days |
|  | MS MERSEYSIDE | 1 days |
| 09 | NORTH |  |
|  | TW TYNE \& WEAR | 1 days |
| 10 | WALES |  |
|  | CO CONWY | 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: | Gross floor area |
| :--- | :--- |
| Actual Range: | 186 to 11250 (units: sqm) |
| Range Selected by User: | 178 to 70291 (units: sqm) |
| Parking Spaces Range: | All Surveys Included |

Public Transport Provision:
Selection by: Include all surveys
Date Range: $\quad 01 / 01 / 13$ to $13 / 11 / 19$
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:

| Tuesday | 4 days |
| :--- | :--- |
| Wednesday | 2 days |
| Friday | 1 days |

This data displays the number of selected surveys by day of the week.
Selected survey types:

| Manual count | 7 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:
Suburban Area (PPS6 Out of Centre) 3
Edge of Town 4
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:
Commercial Zone 2
Residential Zone 2
Built-Up Zone 2
No Sub Category 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:
Not Known
7 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 $®$.

Filter by Site Operations Breakdown:
All Surveys Included
Population within 500 m Range:
All Surveys Included
Population within 1 mile:
1,001 to $5,000 \quad 1$ days
5,001 to $10,000 \quad 2$ days
15,001 to $20,000 \quad 1$ days
25,001 to 50,0003 days
This data displays the number of selected surveys within stated 1-mile radii of population.
Population within 5 miles:
50,001 to $75,000 \quad 1$ days
75,001 to $100,000 \quad 1$ days
125,001 to 250,000 3 days
500,001 or More 2 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 | 6 days |
| :--- | :--- |
| 1.1 to 1.5 | 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: |  |
| :--- | :--- |
| Yes | 1 days |
| No | 6 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:
No PTAL Present
7 days
This data displays the number of selected surveys with PTAL Ratings.

NARROW LANE
LLANDUDNO JUNCTION
Edge of Town
Commercial Zone
Total Gross floor area: Survey date: WEDNESDAY
2 ES-02-A-11
HOUSI NG COMPANY
THE SIDINGS
HASTINGS
ORE VALLEY
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Gross floor area: 186 sqm
Survey date: TUESDAY 17/11/15
3 LC-02-A-09
OFFI CES
FURTHERGATE
BLACKBURN
Suburban Area (PPS6 Out of Centre)
Built-Up Zone
Total Gross floor area: 2600 sqm
Survey date: TUESDAY 04/06/13
4 MS-02-A-02 SCI ENCE PARK OFFICES
MOUNT PLEASANT
LIVERPOOL
Edge of Town
Built-Up Zone
Total Gross floor area: 11250 sqm
Survey date: TUESDAY 13/11/18
5 NF-02-A-04 BUI LDI NG CONSULTANT WHITING ROAD NORWICH

Edge of Town
Commercial Zone
Total Gross floor area
Survey date: WEDNESDAY
6 TW-02-A-08 HOUSING ASSOCI ATION OFFICE
BENTON PARK ROAD
NEWCASTLE UPON TYNE
LONGBENTON
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Gross floor area:
Survey date: FRIDAY 19/10/18
7 WY-02-A-05
OFFICES
PIONEER WAY
CASTLEFORD
WHITWOOD
Edge of Town
No Sub Category
Total Gross floor area: 1230 sqm Survey date: TUESDAY 23/05/17

500 sqm

4800 sqm

## CONWY

 28/03/18Survey Type: MANUAL

## LANCASHIRE

Survey Type: MANUAL MERSEYSI DE

Survey Type: MANUAL NORFOLK

Survey Type: MANUAL TYNE \& WEAR

Survey Type: MANUAL WEST YORKSHIRE

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.

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OfFICE
MULTI-MODAL TOTAL VEHICLES

## Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

|  | ARRIVALS |  |  | DEPARTURES |  |  | TOTALS |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Time Range | No. Days | Ave. GFA | Trip Rate | No. Days | Ave. GFA | Trip Rate | No. Days | Ave. GFA | 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 | 7 | 3815 | 0.247 | 7 | 3815 | 0.049 | 7 | 3815 | 0.296 |
| 08:00-09:00 | 7 | 3815 | 1.097 | 7 | 3815 | 0.154 | 7 | 3815 | 1.251 |
| 09:00-10:00 | 7 | 3815 | 0.678 | 7 | 3815 | 0.217 | 7 | 3815 | 0.895 |
| 10:00-11:00 | 7 | 3815 | 0.311 | 7 | 3815 | 0.168 | 7 | 3815 | 0.479 |
| 11:00-12:00 | 7 | 3815 | 0.210 | 7 | 3815 | 0.202 | 7 | 3815 | 0.412 |
| 12:00-13:00 | 7 | 3815 | 0.367 | 7 | 3815 | 0.397 | 7 | 3815 | 0.764 |
| 13:00-14:00 | 7 | 3815 | 0.416 | 7 | 3815 | 0.322 | 7 | 3815 | 0.738 |
| 14:00-15:00 | 7 | 3815 | 0.187 | 7 | 3815 | 0.221 | 7 | 3815 | 0.408 |
| 15:00-16:00 | 7 | 3815 | 0.172 | 7 | 3815 | 0.281 | 7 | 3815 | 0.453 |
| 16:00-17:00 | 7 | 3815 | 0.217 | 7 | 3815 | 0.599 | 7 | 3815 | 0.816 |
| 17:00-18:00 | 7 | 3815 | 0.157 | 7 | 3815 | 1.015 | 7 | 3815 | 1.172 |
| 18:00-19:00 | 6 | 4246 | 0.051 | 6 | 4246 | 0.436 | 6 | 4246 | 0.487 |
| 19:00-20:00 |  |  |  |  |  |  |  |  |  |
| 20:00-21:00 |  |  |  |  |  |  |  |  |  |
| 21:00-22:00 |  |  |  |  |  |  |  |  |  |
| 22:00-23:00 |  |  |  |  |  |  |  |  |  |
| 23:00-24:00 |  |  |  |  |  |  |  |  |  |
| Total Rates: |  |  | 4.110 |  |  | 4.061 |  |  | 8.171 |

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.

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## Parameter summary

Trip rate parameter range selected:
Survey date date range:
186-11250 (units: sqm)
Number of weekdays (Monday-Friday): 01/01/13-13/11/19

Number of Saturdays:
Number of Sundays:
Surveys automatically removed from selection:
Surveys manually removed from selection:
0

This section displays a quick summary of some of the data filtering selections made by the TRICS ${ }^{\circledR}$ 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 CALCULATI ON SELECTI ON PARAMETERS:

```
Land Use : 06-HOTEL, FOOD & DRINK
Category : A - HOTELS
MULTI-MODAL TOTAL VEHICLES
```


## Selected regions and areas:

```
02 SOUTH EAST
    BU BUCKINGHAMSHIRE 1 days
03 SOUTH WEST
    GS GLOUCESTERSHIRE 1 days
05 EAST MI DLANDS
    LE LEICESTERSHIRE 1 days
    WALES
    SW SWANSEA 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: | Number of bedrooms |
| :--- | :--- |
| Actual Range: | 67 to 227 (units: ) |
| Range Selected by User: | 4 to 227 (units: ) |
| Parking Spaces Range: | All Surveys Included |

Public Transport Provision:
Selection by: Include all surveys
Date Range: $\quad 01 / 01 / 13$ to $25 / 11 / 19$
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:

| Monday | 1 days |
| :--- | :--- |
| Wednesday | 1 days |
| Thursday | 2 days |

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

| Selected survey types: | 4 days |
| :--- | :--- |
| Manual 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:
Suburban Area (PPS6 Out of Centre) 1
Edge of Town 3
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:

Commercial Zone 1
Development Zone 1
Residential Zone 1
Out of Town 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:
C1 4 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 500 m Range:
All Surveys Included
Population within 1 mile:
5,001 to 10,0004 days
This data displays the number of selected surveys within stated 1-mile radii of population.
Population within 5 miles:

| 25,001 to 50,000 <br> 100,001 to 125,000 | 1 days |
| :--- | :--- |
| 125,001 to 250,000 | 1 days |

125,001 to 250,000
day
250,001 to 500,000
1 days

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

| Car ownership within 5 miles: | 2 days |
| :--- | :--- |
| 0.6 to 1.0 | 2 days |
| 1.1 to 1.5 |  |

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 4 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:
No PTAL Present 4 days
This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

NEW ROAD
AYLESBURY
WESTON TURVILLE
Edge of Town
Out of Town
Total Number of bedrooms:

139
01/10/14

## BUCKI NGHAMSHI RE

Survey Type: MANUAL GLOUCESTERSHIRE
GLOUCESTER ROAD
CHELTENHAM SPA
SAINT MARKS
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of bedrooms:
67
Survey date: THURSDAY
3 LE-06-A-01 MARRIOTT
SMITH WAY
LEICESTER
ENDERBY
Edge of Town
Commercial Zone
Total Number of bedrooms:
Survey date: THURSDAY
4 SW-06-A-01 IBIS
FABIAN WAY
SWANSEA
PORT TENNANT
Edge of Town
Development Zone
Total Number of bedrooms:
Survey date: MONDAY
99
07/10/19 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.

TRIP RATE for Land Use 06 - HOTEL, FOOD \& DRINK/A - HOTELS
MULTI-MODAL TOTAL VEHICLES

## Calculation factor: 1 BEDRMS

## BOLD print indicates peak (busiest) period

|  |  | ARRIVALS |  |  | EPARTURE |  |  | TOTALS |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Time Range | No. Days | Ave. BEDRMS | Trip Rate | No. Days | Ave. BEDRMS | Trip Rate | No. Days | Ave. BEDRMS | 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 | 4 | 133 | 0.122 | 4 | 133 | 0.241 | 4 | 133 | 0.363 |
| 08:00-09:00 | 4 | 133 | 0.229 | 4 | 133 | 0.305 | 4 | 133 | 0.534 |
| 09:00-10:00 | 4 | 133 | 0.288 | 4 | 133 | 0.192 | 4 | 133 | 0.480 |
| 10:00-11:00 | 4 | 133 | 0.197 | 4 | 133 | 0.130 | 4 | 133 | 0.327 |
| 11:00-12:00 | 4 | 133 | 0.085 | 4 | 133 | 0.152 | 4 | 133 | 0.237 |
| 12:00-13:00 | 4 | 133 | 0.165 | 4 | 133 | 0.117 | 4 | 133 | 0.282 |
| 13:00-14:00 | 4 | 133 | 0.177 | 4 | 133 | 0.135 | 4 | 133 | 0.312 |
| 14:00-15:00 | 4 | 133 | 0.130 | 4 | 133 | 0.147 | 4 | 133 | 0.277 |
| 15:00-16:00 | 4 | 133 | 0.167 | 4 | 133 | 0.173 | 4 | 133 | 0.340 |
| 16:00-17:00 | 4 | 133 | 0.160 | 4 | 133 | 0.205 | 4 | 133 | 0.365 |
| 17:00-18:00 | 4 | 133 | 0.164 | 4 | 133 | 0.179 | 4 | 133 | 0.343 |
| 18:00-19:00 | 4 | 133 | 0.214 | 4 | 133 | 0.188 | 4 | 133 | 0.402 |
| 19:00-20:00 | 4 | 133 | 0.145 | 4 | 133 | 0.154 | 4 | 133 | 0.299 |
| 20:00-21:00 | 4 | 133 | 0.133 | 4 | 133 | 0.090 | 4 | 133 | 0.223 |
| 21:00-22:00 | 4 | 133 | 0.083 | 4 | 133 | 0.100 | 4 | 133 | 0.183 |
| 22:00-23:00 |  |  |  |  |  |  |  |  |  |
| 23:00-24:00 |  |  |  |  |  |  |  |  |  |
| Total Rates: |  |  | 2.459 | 2.508 |  |  | 4.967 |  |  |

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.

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## Parameter summary

Trip rate parameter range selected: Survey date date range:
Number of weekdays (Monday-Friday):
Number of Saturdays:
Number of Sundays:
Surveys automatically removed from selection:
Surveys manually removed from selection:

67-227 (units:)
01/01/13-25/11/19
4
0
0
0
0
0

This section displays a quick summary of some of the data filtering selections made by the TRICS ${ }^{\circledR}$ 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 CALCULATI ON SELECTI ON PARAMETERS:



This section displays the number of survey days per TRICS ${ }^{\circledR}$ 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: | Gross floor area |
| :--- | :--- |
| Actual Range: | 275 to 436 (units: sqm) |
| Range Selected by User: | 182 to 800 (units: sqm) |
|  |  |
| Parking Spaces Range: | All Surveys Included |
| Public Transport Provision: |  |
| Selection by: |  |

Include all surveys
Date Range: 01/01/13 to 02/10/20
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:

| Tuesday | 2 days |
| :--- | :--- |
| Thursday | 1 days |
| Friday | 2 days |

This data displays the number of selected surveys by day of the week.
Selected survey types:
$\begin{array}{ll}\text { Manual count } & 5 \text { days } \\ \text { Directional ATC Count } & 0 \text { days }\end{array}$
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:
Suburban Area (PPS6 Out of Centre) 2
Edge of Town 3
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:
Industrial Zone 1
Development Zone 1
Residential Zone 1
No Sub Category 2
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:
Not Known
5 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 500 m Range:
All Surveys Included
Population within 1 mile:

| 1,001 to 5,000 | 1 days |
| :--- | :--- |
| 5,001 to 10,000 | 1 days |
| 10,001 to 15,000 | 1 days |
| 15,001 to 20,000 | 2 days |

This data displays the number of selected surveys within stated 1-mile radii of population.
Population within 5 miles:

| 75,001 to 100,000 | 1 days |
| :--- | :--- |
| 100,001 to 125,000 | 1 days |
| 125,001 to 250,000 | 3 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 | 3 days |
| :--- | :--- |
| 1.1 to 1.5 | 2 days |

1.1 to 1.5

2 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
5 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:
No PTAL Present
5 days
This data displays the number of selected surveys with PTAL Ratings.
Covid-19 Restrictions Yes At least one survey within the selected data set was undertaken at a time of Covid-19 restrictions

LIST OF SITES relevant to selection parameters

WELLINGTON ROAD
ABERDEEN
ALTENS
Edge of Town
No Sub Category
Total Gross floor area:
300 sqm
22/11/19 Survey Type: MANUAL
NEWMARKET ROAD
CAMBRIDGE
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Gross floor area: Survey date: TUESDAY
3 FI-06-D-02 KFC

435 sqm
19/09/17
WHI MBREL PLACE
DUNFERMLINE
HALBEATH
Edge of Town
Development Zone
Total Gross floor area: Survey date:
4 VG-06-D-01 MCDONALD'S
CARDIFF ROAD
BARRY
Edge of Town
Industrial Zone
Total Gross floor area:
Survey date: THURSDAY 24/09/20
5 WO-06-D-01 KFC
CLEWS ROAD
REDDITCH
Suburban Area (PPS6 Out of Centre)
No Sub Category
Total Gross floor area: Survey date: FRIDAY 02/10/20

CAMBRI DGESHI RE

## ABERDEEN CITY

Survey Type: MANUAL

## FIFE

Survey Type: MANUAL

## VALE OF GLAMORGAN

Survey Type: MANUAL WORCESTERSHIRE

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.

# TRIP RATE for Land Use 06 - HOTEL, FOOD \& DRINK/D - FAST FOOD - DRIVE THROUGH <br> TOTAL VEHI CLES <br> Calculation factor: 100 sqm <br> BOLD print indicates peak (busiest) period 

| Time Range | ARRIVALS |  |  | DEPARTURES |  |  | TOTALS |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | No. Days | Ave. GFA | Trip Rate | No. Days | Ave. GFA | Trip Rate | No. Days | Ave. GFA | 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 | 1 | 405 | 7.654 | 1 | 405 | 4.938 | 1 | 405 | 12.592 |
| 07:00-08:00 | 3 | 380 | 9.912 | 3 | 380 | 8.596 | 3 | 380 | 18.508 |
| 08:00-09:00 | 3 | 380 | 12.719 | 3 | 380 | 12.281 | 3 | 380 | 25.000 |
| 09:00-10:00 | 3 | 380 | 13.684 | 3 | 380 | 13.421 | 3 | 380 | 27.105 |
| 10:00-11:00 | 5 | 370 | 7.563 | 5 | 370 | 6.861 | 5 | 370 | 14.424 |
| 11:00-12:00 | 5 | 370 | 11.885 | 5 | 370 | 10.373 | 5 | 370 | 22.258 |
| 12:00-13:00 | 5 | 370 | 17.720 | 5 | 370 | 17.288 | 5 | 370 | 35.008 |
| 13:00-14:00 | 5 | 370 | 16.153 | 5 | 370 | 17.774 | 5 | 370 | 33.927 |
| 14:00-15:00 | 5 | 370 | 10.859 | 5 | 370 | 11.831 | 5 | 370 | 22.690 |
| 15:00-16:00 | 5 | 370 | 11.507 | 5 | 370 | 11.291 | 5 | 370 | 22.798 |
| 16:00-17:00 | 5 | 370 | 11.723 | 5 | 370 | 11.777 | 5 | 370 | 23.500 |
| 17:00-18:00 | 5 | 370 | 13.074 | 5 | 370 | 13.128 | 5 | 370 | 26.202 |
| 18:00-19:00 | 5 | 370 | 15.019 | 5 | 370 | 14.263 | 5 | 370 | 29.282 |
| 19:00-20:00 | 5 | 370 | 11.723 | 5 | 370 | 13.830 | 5 | 370 | 25.553 |
| 20:00-21:00 | 5 | 370 | 10.049 | 5 | 370 | 10.373 | 5 | 370 | 20.422 |
| 21:00-22:00 | 5 | 370 | 8.212 | 5 | 370 | 7.726 | 5 | 370 | 15.938 |
| 22:00-23:00 | 4 | 354 | 5.720 | 4 | 354 | 7.345 | 4 | 354 | 13.065 |
| 23:00-24:00 | 2 | 421 | 3.567 | 2 | 421 | 3.805 | 2 | 421 | 7.372 |
| Total Rates: |  |  | 198.743 |  |  | 196.901 |  |  | 395.644 |

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.

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## Parameter summary

Trip rate parameter range selected: Survey date date range:
Number of weekdays (Monday-Friday):
Number of Saturdays:
Number of Sundays:
Surveys automatically removed from selection:
Surveys manually removed from selection:

275-436 (units: sqm)
01/01/13-02/10/20
5
0
0
0
0

This section displays a quick summary of some of the data filtering selections made by the TRICS ${ }^{\circledR}$ 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 CALCULATI ON SELECTI ON PARAMETERS:

Land Use : 13-PETROL FILLING STATIONS
Category : B - PFS - WITH RETAIL

## TOTAL VEHI CLES

| Selected regions and areas: |  |  |
| :--- | :--- | :--- |
| $\mathbf{0 2}$ | SOUTH EAST |  |
|  | BD BEDFORDSHIRE | 1 days |
| $\mathbf{0 3}$ | SOUTH WEST | 1 days |
|  | DC DORSET | 1 days |
| $\mathbf{0 9}$ | NORTH | 2 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: | Filling bays |  |
| :--- | :--- | :--- |
| Actual Range: | 8 to 12 (units:) |  |
| Range Selected by User: | 4 to 16 (units:) |  |
| Parking Spaces Range: | All Surveys Included |  |
| Public Transport Provision:  |  |  |
| Selection by: |  | Include all surveys |

Date Range: $\quad 01 / 01 / 13$ to $23 / 10 / 20$
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:
Saturday 5 days
This data displays the number of selected surveys by day of the week.

| Selected survey types: |  |
| :--- | :--- |
| Manual count | 5 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:

Suburban Area (PPS6 Out of Centre) 4
Edge of Town 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:
Industrial Zone 1

Development Zone 1
Residential Zone 3
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:
Sui Generis 5 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 500 m Range:
All Surveys Included
Population within 1 mile:
10,001 to $15,000 \quad 2$ days
25,001 to 50,000 3 days
This data displays the number of selected surveys within stated 1-mile radii of population.
Population within 5 miles:
25,001 to $50,000 \quad 1$ days
75,001 to $100,000 \quad 1$ days
125,001 to 250,000 2 days
250,001 to 500,000 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 | 3 days |
| :--- | :--- |
| 1.1 to 1.5 | 2 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

## 5 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:
No PTAL Present 5 days
This data displays the number of selected surveys with PTAL Ratings.
Covid-19 Restrictions Yes At least one survey within the selected data set was undertaken at a time of Covid-19 restrictions

LIST OF SITES relevant to selection parameters


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.

TRIP RATE for Land Use 13 - PETROL FILLING STATIONS/B - PFS - WITH RETAIL
TOTAL VEHI CLES
Calculation factor: 1 BAYS
BOLD print indicates peak (busiest) period

| Time Range | ARRIVALS |  |  | DEPARTURES |  |  | TOTALS |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | No. Days | Ave. BAYS | Trip Rate | No. Days | Ave. BAYS | Trip Rate | No. Days | Ave. BAYS | 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 | 5 | 9 | 1.244 | 5 | 9 | 1.133 | 5 | 9 | 2.377 |
| 07:00-08:00 | 5 | 9 | 3.733 | 5 | 9 | 3.356 | 5 | 9 | 7.089 |
| 08:00-09:00 | 5 | 9 | 5.000 | 5 | 9 | 5.200 | 5 | 9 | 10.200 |
| 09:00-10:00 | 5 | 9 | 7.444 | 5 | 9 | 7.089 | 5 | 9 | 14.533 |
| 10:00-11:00 | 5 | 9 | 8.178 | 5 | 9 | 7.778 | 5 | 9 | 15.956 |
| 11:00-12:00 | 5 | 9 | 8.978 | 5 | 9 | 9.244 | 5 | 9 | 18.222 |
| 12:00-13:00 | 5 | 9 | 8.289 | 5 | 9 | 8.111 | 5 | 9 | 16.400 |
| 13:00-14:00 | 5 | 9 | 7.822 | 5 | 9 | 7.667 | 5 | 9 | 15.489 |
| 14:00-15:00 | 5 | 9 | 7.244 | 5 | 9 | 7.622 | 5 | 9 | 14.866 |
| 15:00-16:00 | 5 | 9 | 6.778 | 5 | 9 | 6.822 | 5 | 9 | 13.600 |
| 16:00-17:00 | 5 | 9 | 6.556 | 5 | 9 | 6.756 | 5 | 9 | 13.312 |
| 17:00-18:00 | 5 | 9 | 6.733 | 5 | 9 | 6.844 | 5 | 9 | 13.577 |
| 18:00-19:00 | 5 | 9 | 5.867 | 5 | 9 | 5.711 | 5 | 9 | 11.578 |
| 19:00-20:00 | 5 | 9 | 4.400 | 5 | 9 | 4.711 | 5 | 9 | 9.111 |
| 20:00-21:00 | 5 | 9 | 3.556 | 5 | 9 | 3.578 | 5 | 9 | 7.134 |
| 21:00-22:00 | 5 | 9 | 3.067 | 5 | 9 | 3.000 | 5 | 9 | 6.067 |
| 22:00-23:00 | 2 | 10 | 1.500 | 2 | 10 | 1.800 | 2 | 10 | 3.300 |
| 23:00-24:00 |  |  |  |  |  |  |  |  |  |
| Total Rates: |  |  | 96.389 |  |  | 96.422 |  |  | 192.811 |

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.

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## Parameter summary

Trip rate parameter range selected:
8-12 (units: )
Survey date date range:
Number of weekdays (Monday-Friday):
Number of Saturdays:
Number of Sundays: 01/01/13-23/10/20
0
0
Surveys automatically removed from selection:
Surveys manually removed from selection:
0

This section displays a quick summary of some of the data filtering selections made by the TRICS ${ }^{\circledR}$ 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 CALCULATI ON SELECTI ON PARAMETERS:

```
Land Use : 06-HOTEL, FOOD \& DRINK
Category : A - HOTELS
```


## TOTAL VEHI CLES

Selected regions and areas:
05 EAST MIDLANDS
DS DERBYSHIRE
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: | Number of bedrooms |
| :--- | :--- |
| Actual Range: | 99 to 99 (units: ) |
| Range Selected by User: | 4 to 380 (units:) |
|  |  |
| Parking Spaces Range: | All Surveys Included |

Public Transport Provision:
Selection by: Include all surveys
Date Range: $\quad 01 / 01 / 13$ to $25 / 11 / 19$
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:
Saturday 1 days
This data displays the number of selected surveys by day of the week.
Selected survey types:
Manual count $\quad 1$ 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
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:
C1 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 ${ }^{8}$.

Population within 500m Range:
All Surveys Included

## Secondary Filtering selection (Cont.):

Population within 1 mile:
1,001 to $5,000 \quad 1$ days
This data displays the number of selected surveys within stated 1-mile radii of population.
Population within 5 miles:
125,001 to 250,000 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 $1.0 \quad 1$ 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:
No PTAL Present 1 days
This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters
1 DS-06-A-03
ETWALL ROAD
DERBY
MICKLEOVER
Edge of Town
Residential Zone
Total Number of bedrooms: 99
Survey date: SATURDAY 25/07/15

## DERBYSHIRE

MENZI ES HOTEL

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.

TRIP RATE for Land Use 06 - HOTEL, FOOD \& DRINK/A - HOTELS
TOTAL VEHI CLES

## Calculation factor: 1 BEDRMS

BOLD print indicates peak (busiest) period

| Time Range | ARRIVALS |  |  | DEPARTURES |  |  | TOTALS |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | No. Days | Ave. BEDRMS | Trip Rate | No. Days | Ave. BEDRMS | Trip Rate | No. Days | Ave. BEDRMS | 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 | 99 | 0.283 | 1 | 99 | 0.263 | 1 | 99 | 0.546 |
| 08:00-09:00 | 1 | 99 | 0.283 | 1 | 99 | 0.475 | 1 | 99 | 0.758 |
| 09:00-10:00 | 1 | 99 | 0.273 | 1 | 99 | 0.303 | 1 | 99 | 0.576 |
| 10:00-11:00 | 1 | 99 | 0.222 | 1 | 99 | 0.182 | 1 | 99 | 0.404 |
| 11:00-12:00 | 1 | 99 | 0.212 | 1 | 99 | 0.333 | 1 | 99 | 0.545 |
| 12:00-13:00 | 1 | 99 | 0.202 | 1 | 99 | 0.182 | 1 | 99 | 0.384 |
| 13:00-14:00 | 1 | 99 | 0.232 | 1 | 99 | 0.121 | 1 | 99 | 0.353 |
| 14:00-15:00 | 1 | 99 | 0.162 | 1 | 99 | 0.273 | 1 | 99 | 0.435 |
| 15:00-16:00 | 1 | 99 | 0.222 | 1 | 99 | 0.253 | 1 | 99 | 0.475 |
| 16:00-17:00 | 1 | 99 | 0.263 | 1 | 99 | 0.354 | 1 | 99 | 0.617 |
| 17:00-18:00 | 1 | 99 | 0.253 | 1 | 99 | 0.152 | 1 | 99 | 0.405 |
| 18:00-19:00 | 1 | 99 | 0.354 | 1 | 99 | 0.253 | 1 | 99 | 0.607 |
| 19:00-20:00 | 1 | 99 | 0.343 | 1 | 99 | 0.222 | 1 | 99 | 0.565 |
| 20:00-21:00 | 1 | 99 | 0.152 | 1 | 99 | 0.283 | 1 | 99 | 0.435 |
| 21:00-22:00 | 1 | 99 | 0.091 | 1 | 99 | 0.152 | 1 | 99 | 0.243 |
| 22:00-23:00 |  |  |  |  |  |  |  |  |  |
| 23:00-24:00 |  |  |  |  |  |  |  |  |  |
| Total Rates: |  |  | 3.547 |  |  | 3.801 |  |  | 7.348 |

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.

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## Parameter summary

Trip rate parameter range selected:
99-99 (units: )
Survey date date range:
Number of weekdays (Monday-Friday):
Number of Saturdays:
0
Number of Sundays:
1
0
Surveys automatically removed from selection:
Surveys manually removed from selection:
This section displays a quick summary of some of the data filtering selections made by the TRICS ${ }^{\circledR}$ 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.

Banbury Phase 3, Junction 11, Banbury, Oxfordshire OCC Post Submission Highway Response 1

## Appendix F - Network Diagrams






















## Our Locations

## Birmingham

2 The Wharf
Bridge Street
Birmingham
B1 2JS
T. 01216434694
birmingham@curtins.com

## Bristol

Quayside
40-58 Hotwell Road
Bristol
BS8 4UQ
T. 01173027560
bristol@curtins.com

## Cardiff

3 Cwrt-y-Parc
Earlswood Road
Cardiff
CF14 5GH
T. 02920680900
cardiff@curtins.com

## Douglas

Varley House
29-31 Duke Street
Douglas
Isle of Man
IM1 2AZ
T. 01624624585
douglas@curtins.com

## Dublin

39 Fitzwilliam Square
Dublin 2
Ireland
T. 0035315079447
dublin@curtins.com

## Edinburgh

1a Belford Road
Edinburgh
EH4 3BL
T. 01312252175
edinburgh@curtins.com

## Kendal

28 Lowther Street
Kendal
Cumbria
LA9 4DH
T. 01539724823
kendal@curtins.com

## Leeds

Rose Wharf
Ground Floor
Leeds
L29 8EE
T. 01132748509
leeds@curtins.com

## Liverpool

Curtins
51-55 Tithebarn Street
Liverpool
L2 2SB
T. 01517262000
liverpool@curtins.com

## London

40 Compton Street
London
EC1V 0BD
T. 02073242240
london@curtins.com

## Manchester

Merchant Exchange
17-19 Whitworth Street West
Manchester
M1 5WG
T. 01612362394
manchester@curtins.com

Nottingham
56 The Ropewalk
Nottingham
NG1 5DW
T. 01159415551
nottingham@curtins.com


[^0]:    ${ }^{1}$ Where relevant, further information will be provided within Annex $A$.

