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HEATHROW GARDEN CENTRE

Transport Assessment

May 2015

Confidentiality: Public

Quality Management

Issue/revision	1st Draft	Final		
Remarks				
Date	January 2015	May 2015		
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Project number	70008113	70008113		
Report number				
File reference				

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Transport Assessment

May 2015

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Executive Summary

WSP has been appointed by Lewdown Holdings Limited to provide a Transport Assessment in support of an outline planning application for 53 dwellings on the former Heathrow Garden Centre site, Sipson Road.

This Transport Assessment has been prepared to address the feasibility of the proposed development in terms of transportation impact, access and sustainability credentials and has been prepared in accordance with national and local design guidance.

The Transport Assessment illustrates how the development proposal accords with both national and local policy guidance. For example, a full Residential Travel Plan will be developed for the site, the site has good connection into neighbouring pedestrian and cycle networks, is located within walking distance of local bus services and car and cycle parking will be provided in accordance with the London Borough of Hillingdon design standards.

A Framework Residential Travel Plan document has been prepared for the site, setting out what will be included within the full Residential Travel Plan. The document sets out the sustainable travel opportunities that will be offered by the development, along with the measures and incentives that will be offered to residents to encourage sustainable travel. The provision of the Residential Travel Plan and the associated measures demonstrate the commitment of the developer to encourage future residents to travel sustainably. The Framework Residential Travel Plan is appended to the Transport Assessment.

The impact of the development on the local highway network has been assessed and has found that the impact would be negligible. A review of the local accident records has also been completed that has demonstrated the good existing safety record of the local highway network.

It is conclusive that there are no highways or transportation reasons why this application should not be supported by the London Borough of Hillingdon.

1 Introduction

1.1 Background

1.1.1 WSP has been commissioned by Lewdown Holdings Limited to produce a Transport Assessment (TA) in support of the proposed redevelopment of Heathrow Garden Centre, Sipson Road.

1.1.2 An outline planning application is to be submitted for the development of 53 residential units.

1.1.3 It should be noted that a Framework Residential Travel Plan (TP) has also been developed in order to encourage and promote sustainable travel to and from the site. The TP, which is discussed within Chapter 6, should be read in conjunction with this report.

1.2 Site Location

1.2.1 The location of the site is illustrated in **Figure 1.1**, from which it can be seen that the site is bordered by A408 Sipson Road and existing residential units to the west, a hotel to the north, M4 Spur to the east and Sipson Lane and existing residential units to the south.

1.3 Planning History

1.3.1 The site was subject to a planning application in June 2013 (Reference: 67666/APP/2013/1579) for the following land-use mix:

- 53 Residential units;
- Light industrial units (3 x 150sqm);
- Community centre / Village Hall (450sqm);
- Retail (2 x 150sqm).

1.3.2 The planning application was refused for seven reasons, one of which was transport related:

> *The development as currently proposed would not ensure appropriate levels of vehicular and pedestrian safety and it has not been demonstrated that the unacceptable arrangements in relation to vehicle manoeuvring would not have adverse impacts on the operation of the highway network. The development is therefore contrary to Policy AM7 of the Hillingdon Local Plan: Part 2 - Saved UDP Policies (November 2012).*

1.3.3 However, a suitable site access arrangement was subsequently developed and accepted by LBH Highway Officers, with a ghost island priority arrangement proposed, which this application proposes to provide.

1.4 Scope of Assessment

1.4.1 It has been agreed with LBH that the scope of work completed for the previous application would be suitable for the assessment of the revised application**.** A copy of this correspondence is attached within **Appendix 1.1**.

1.4.2 A summary of the key matters being:

- Trip Generation & Assignment: The same methodology as used for the previous application has been followed and updated using the latest version of TRICS;
- Road Safety: The most recently available data has been purchased and reviewed for the previously agreed study area;
- Site Access Arrangement: The site access is proposed from Sipson Road in a similar position to the existing access, with this assessed using the Junctions8 software;
- Junction Assessment: The same link impact assessment approach has been used, with detailed assessment only required where flow increases exceed 5%.

1.4.3 In addition to the previous submission, a Framework Travel Plan has been developed for the site, demonstrating the developer's commitment to supporting sustainable travel.

1.5 Report Content

1.5.1 The structure of the report is as follows:

- **Chapter 2, Policy Review**: A summary of the relevant national and local transport policies;
- **Chapter 3, Baseline Conditions: Accessibility**: The existing characteristics of the local area are discussed, including pedestrian and cycle movement, local public transport services and facilities.
- **Chapter 4, Baseline Conditions: Highway Characteristics**: The characteristics and operation of the local highway network is discussed;
- **Chapter 5, Development Proposal**; The development proposal is discussed, covering measures that will provide accessibility for all modes;
- **Chapter 6, Travel Plan:** A summary of the key issues that are raised within the separate Travel Plan document is provided;
- **Chapter 7, Development Trip Generation**: The trip generation of the proposed development and assignment of these trips is discussed;
- **Chapter 8, Development Impact Assessment**: The forecast impact of the development is discussed;
- **Chapter 9, Summary & Conclusion**: The findings of the completed assessment work are summarised and conclusions drawn.

2 Policy Review

2.1 Overview

2.1.1 This chapter of the report considers the national and local policy that is relevant to this assessment.

2.2 National Policy

National Planning Policy Framework, DCLG, March 2012

2.2.1 Adopted on 27 March 2012, the National Planning Policy Framework (NPPF) seeks to reduce the complexity and improve the accessibility of the planning system, whilst protecting the environment and encouraging growth in a sustainable manner.

2.2.2 The NPPF replaces previous national planning policy guidance notes and statements, becoming the definitive national planning guidance from which local planning authorities can, in collaboration with their communities, produce local plans appropriate to the character and needs of their area.

2.2.3 Transport forms one of the 12 core land use planning principles set out by the NPPF. This principle directs that locations which are sustainable or which can be made sustainable should become the focus for significant development.

2.2.4 This Transport Assessment demonstrates how the proposed development fulfils the requirements set out in paragraph 32 of NPPF, to account for:

- the opportunities for sustainable transport modes to be used, reducing the need for major transport infrastructure;
- provision of safe and suitable access to the site for all people; and
- improvements which can be undertaken within the transport network to limit the significant impacts of the development.

2.2.5 The proposed development is located within an accessible distance of public transport, walk and cycle connections. The site is within a 15 minute cycle journey of West Drayton Railway Station, and also benefits from being less than 400m walk from bus stops.

National Planning Policy Guidance (NPPG) – March 2014

Travel Plans, Transport Assessments and statements in decision making.

2.2.6 The NPPG contains updated planning practice guidance in an online format to make it accessible. This updated approach allows for easy review of a number of topics, providing up to date guidance. The NPPG has a specific section on Travel Plans and Transport Assessments and states that;

Transport Assessments and Statements can be used to establish whether the residual transport impacts of a proposed development are likely to be "severe", which may be a reason for refusal, in accordance with the National Planning Policy Framework.

2.2.7 The NPPG continues and states that, *Travel Plans should where possible, be considered in parallel to development proposals and readily integrated into the design and occupation of the new site rather than retrofitted after occupation.*

2.2.8 The NPPG outlines that Travel Plans, Transport Assessments and Statements can positively contribute to:

- Encouraging sustainable travel;
- Lessening traffic generation and its detrimental impacts;
- Reducing carbon emissions and climate impacts;
- Creating accessible, connected, inclusive communities;
- Improving health outcomes and quality of life;
- Improving road safety; and
- Reducing the need for new development to increase existing road capacity or provide new roads.

2.2.9 A Framework Travel Plan has been developed for the site, with this document further setting out the sustainable credentials of the site and the measures and incentives that are to be put in place to encourage sustainable travel.

2.3 Regional Policy

2.3.1 The replacement London Plan was adopted in July 2011 and replaces the former London Plan that was adopted in 2004. The London Plan aims to ensure that London's transport system is easy, safe and convenient for everyone and encourages cycling, walking and use of electric vehicles. The document states that London should be a city where it is easy, safe and convenient for everyone to access jobs, opportunities and facilities with an efficient and effective transport system which actively encourages more walking and cycling.

2.3.2 The London Plan recognises that transport plays a fundamental role in addressing the whole range of spatial planning, environmental, economic and social policy priorities. It is critical to the efficient functioning and quality of life of London and its inhabitants, having major effects on places, especially around interchanges and in town centres and on the environment, both within the city itself and more widely.

2.3.3 **Policy 6.1** stresses the importance of closer integration of transport and development and hopes to encourage this by (inter alia)

- Encouraging patterns of development that reduce the need to travel, especially by car;
- Seeking to improve the capacity and accessibility of public transport, walking and cycling, particularly in areas of greatest demand;
- Supporting development that generates high levels of trips only at locations with high levels of public transport accessibility, either currently or via committed, funded improvements;
- Improving interchange between different forms of transport, particularly around major rail and Underground stations, especially where this will enhance connectivity in outer London;
- Supporting measures that encourage shifts to more sustainable modes and appropriate demand management;
- Promoting greater use of low carbon technology so that CO_2 and other contributors to global warming are reduced;
- Promoting walking by ensuring an improved urban realm; and
- Seeking to ensure that all parts of the public transport network can be used safely, easily and with dignity by all Londoners, including by securing step-free access where this is appropriate and practicable.

2.3.4 **Policy 6.3 Assessing Transport Capacity** stresses that new developments resulting in significant numbers of new trips should be located where there is existing good public transport accessibility with adequate capacity to support the additional demand.

2.3.5 **Policy 6.13 Parking** states that an appropriate balance must be struck between promoting new development and preventing excessive car parking provision that can undermine cycling, walking and public transport use. New developments should not only adhere to the maximum parking standards but also meet the minimum disabled and cycle parking standards and also ensure that 1 in 5 spaces (active and passive) provide an electrical charging point to encourage the uptake of electric vehicles.

London Plan Revised Early Minor Alterations (October 2013)

2.3.6 The Revised Early Minor Alterations, (REMA), published in October 2013 and subsequently adopted, sets out the proposed changes to London Plan Policy. This provides detail of the minimum cycle parking standards for new development (Table 6.3), a summary of the minimum requirement for residential use is provided below:

- Residential (1-2 bed): 1 space per unit plus 1 space per 40 units for visitors; and
- Residential (3+ bed): 2 spaces per unit plus 1 space per 40 units for visitors.

2.3.7 Additionally, Paragraph 6A.3A states that the Mayor is currently reviewing residential car parking standards in conjunction with Transport for London, in particular regarding the potential for greater flexibility in different parts of London depending on local car usage, public transport accessibility, land use and car parking management situations. Further amendments to the relevant sections of the London Plan may therefore be forthcoming.

Suggested changes to the London Plan (July 2014)

2.3.8 On 7 July 2014 the Mayor published a schedule of 'suggested changes' to the draft Further Alterations to the London Plan to help inform the EiP. These have been prepared following a review of consultation responses, and consist of minor clarifications, corrections and factual updates to the draft FALP.

The Mayor's Transport Strategy

2.3.9 The Mayor's Transport Strategy, adopted in May 2010, sets the framework for all modes of travel in London over the next 20 years. The Strategy is implemented by both Transport for London (TfL) and the London Boroughs through their Local Implementation Plans (LIPs).

2.3.10 The Transport Strategy aims to provide an enhanced and integrated transport system with sufficient capacity to facilitate sustainable population and employment growth, and support the predicted growth in population and residents. The Transport Strategy is linked to other Mayoral strategies, including the London Plan.

2.3.11 Key proposals of the strategy include:

- Transforming the Tube
- Enhancing rail, including Crossrail, Thameslink and London Overground
- Improving interchanges
- Smoothing traffic flow
- The cycling revolution
- Making walking count
- Improving London's buses
- Better travel information
- Better streets and environment, including additional phases to the Low Emission Zone (LEZ)

- Improved access to the transport system
- Making better use of the Thames
- Reducing CO_2 emissions, including through the promotion of electric vehicles

2.4 Local Policy

The Hillingdon Local Plan (November 2012)

2.4.1 The Hillingdon Local Plan '*sets out the key elements of the planning framework for the borough over the next 15 years. It comprises a spatial vision, strategic objectives, a spatial strategy, core policies and a monitoring and implementation framework with clear objectives for achieving delivery.'*

2.4.2 Chapter 9 of the Core Policies section deals with Transport and Infrastructure in the local area, with an overall aim of '*improving quality of life and reducing car dependency,'* with a particular focus on how public transport can increase growth and regeneration.

2.4.3 Chapter 9 also includes a number of local transport policies, including:

- Providing a sustainable transport network;
- Reducing car dependency;
- Supporting the economy;
- Encouraging active travel;
- Improving quality of life; and
- Reducing congestion and smoothing traffic flow.

2.4.4 The council aims to encourage walking and cycling through a number of initiatives including the integration of facilities in new developments. The central objective of the local plan is '*to meet an increasing proportion of travel demand by walking and cycling, both for short journeys and as part of longer journeys by public transport.'*

2.4.5 The primary challenge of the Local Plan is to accommodate 9,000 dwellings in the 'Heathrow Opportunity Area.' The Heathrow Garden Centre site is located within this area of potential housing growth and will accommodate some of the residential stock required to meet this objective.

2.5 Summary

2.5.1 This report will demonstrate how the Heathrow Garden Centre site is well placed to meet the objectives of national and local planning policy, for example:

- Sustainable travel at the development is to be encouraged through the provision of a Residential Travel Plan, with good connection provided into neighbouring pedestrian and cycle networks;
- Car and cycle parking will be provided in accordance with London Borough of Hillingdon design standards;
- The site is located within walking distance of local bus services;
- The site is within walking and cycling distance of a good range of education, retail, leisure and employment facilities;
- Internal access arrangement will be designed to reduce vehicle speeds and improve road safety.

3 Baseline Conditions: Accessibility

3.1 Introduction

3.1.1 This section provides information on the existing site conditions and local facilities and considers the accessibility of the site by all modes of transport, especially concentrating on sustainable travel modes.

3.2 Site Location

3.2.1 The location of the site in relation to the wider area is illustrated on **Figure 3.1**, with this showing how the site is located 2.0km to the south-east of West Drayton and 1.4km to the north of Heathrow Airport.

3.2.2 The site is currently accessed directly from Sipson Road via a simple priority controlled access.

3.2.3 The site was until recently operating as a garden centre but this is not currently in operation.

3.3 Pedestrian & Cycle Connection

3.3.1 Walking is an important means of travel at a local level and offers potential to substitute for short car trips, particularly those less than 2km. Cycling also provides the opportunity to substitutes for short car trips, less than 5km, and to also form part of a longer journey by public transport. Research has shown that approximately 25% of all journeys and 80% of journeys less than one mile are made on foot. This section will demonstrate how the site is within an acceptable walk and cycle distance of a number of local facilities.

3.3.2 In general, the local footways have a width of between 1.8 and 2.0m, with street lighting present throughout the local area.

3.3.3 As illustrated on **Figure 3.2**, there is a strategic on road cycle route running past the site on Sipson Road. To the south of Sipson Lane, this connects to a London Cycling Campaign (LCC) advisory route that provides access to the strategic off road routes that run alongside the A4 Bath Road.

3.3.4 To the north, the strategic on road cycle route provides connection into West Drayton and beyond.

3.3.5 Cycling speeds vary according to fitness and experience of the cyclist, type of bicycle, loads being carried, highway network and topography. A speed of 12 km/h is considered achievable for most cyclists.

3.3.6 The National Travel Survey highlights that the average cycle trip is currently 3.2 miles (5.1km, NTS 2012). Local Transport Note 1/04 highlights the average distance travelled by Non-Motorised Users (NMU's), at that time, and suggests inter alia that "…journey's up to three times [the average distance] are not uncommon for regular commuters" accepting that "fitness and physical ability, journey purpose…and conditions" are relevant factors. Therefore up to 9 miles is a cycle journey that would be considered by some cyclists.

3.3.7 An assessment has been completed on the walking and cycling catchment area from the site using walking and cycling speeds of 4.8km/hr and 12km/hr respectively. The resultant walk and cycle catchment area of the site are illustrated on **Figures 3.3** and **3.4** respectively, with Figure 3.3 also providing examples of local facilities available in the local area.

3.4 Public Transport: Buses

3.4.1 The site is served by bus route 222 that operates between Uxbridge and Hounslow. The route is illustrated on **Figure 3.5**.

3.4.2 The closest stops to the site are located on Sipson Road, less that 100m to the north of the site. Both the northbound and southbound stops have seats and a shelter. There are footways provided on both sides of Sipson Road from the site access to the bus stops, with a width of between 1.8 and 2.0m.

3.4.3 The traffic flow volumes on Sipson Road are relatively low, with two-way flows of 820 and 888 vehicles recorded passing the site during the AM and PM peak hours respectively during surveys completed in 2014 and therefore crossing the road between the site and the northbound bus stop should not be problematic. Access between the site and the northbound stop is aided by a dropped kerb to the north of the site access.

3.4.4 A summary of the service is provided in Table 3.1 below.

Table 3.1 Local Bus Service

Route Number	Route Description	Frequency	
		Monday – Saturday	Sunday
222	Uxbridge - Cowley - West Drayton - Heathrow Airport North - Cranford - Hounslow	8 min	12 min

3.4.5 Bus service 222 provides access to a number of destinations, including West Drayton railway station and Hounslow West underground station.

3.4.6 The service also provides direct connection to Heathrow Airport, a major employer in the local and sub-regional area.

3.5 Public Transport: Rail

3.5.1 The closest railway station to the site is West Drayton, located approximately 2.0km to the north-west of the site, with bus service 222 providing direct access.

3.5.2 West Drayton is on the Great Western Mainline, being served by Great Western Trains, providing local stopping services between London Paddington to the east and Reading to the west. West Drayton will also be served by Crossrail.

3.5.3 A summary of some of the destinations served directly from West Drayton is provided below along with the journey time.

- Iver 3min
- Hayes and Harlington 4min
- Langley 7min
- Southall 8min
- Slough 11min
- Ealing Broadway 15min
- Maidenhead 19min
- London Paddington 25min
- Reading 34min

3.5.4 Hounslow West underground station is located 5.0km to the south-east of the site and is also accessed directly via bus service 222. Hounslow West is on the Piccadilly line, providing access to central London, with Earls Court a 30 minute journey away.

3.6 Accessibility to Local Facilities

3.6.1 Guidance given by the Chartered Institute of Highways and Transportation (CIHT) in their publication 'Guidelines for Providing Journeys on Foot, 2000' suggests that in terms of commuting, walking to school and recreational journeys, walking distances of up to 2,000 metres can be considered, with the desirable and acceptable distances being 500 and 1,000 metres respectively.

3.6.2 For non-commuter trips the guidance suggests that walk distances of up to 1,200 metres can be considered, with the desirable and acceptable distances being 400 and 800 metres respectively.

Table 3.2 CIHT Suggested Acceptable Walking Distances (metres)

CIHT standard	Trip Purpose		
	Town Centres (m)	**Commuting / School Sight Seeing** (m)	Elsewhere (m)
Desirable	200	500	400
Acceptable	400	1,000	800
Preferred Maximum	800	2,000	1,200

Source: CIHT 'Guidelines for Providing Journeys on Foot'

3.6.4 Local and national planning policies place significant emphasis on the need to integrate land use, transport and planning decisions.

3.6.5 Table 3.3 provides a summary of the local facilities that are within 2km of the proposed development which is considered a reasonable walking distance, with their locations illustrated on **Figure 3.3**.

Table 3.3 Distance to Local Facilities

Destination	Walk Distance
The Plough Public House	100m
Heathrow Primary School	300m
King William Public House	300m
Indian Restaurant	400m
Hairdresser	400m
Cherry Lane Primary School	500m
Sipson Road Post Office	500m
Indian Restaurant	500m
Ansell Garden Centre	600m
Little Harlington Playing Fields	1km
Heathpark Golf Course	1.1km
Sipson Road Local Shops (Including: Tesco Express, hairdressers, restaurants, takeaways, convenience store)	1.3km
The Co-operative Childcare Heathrow Nursery	1.4km
Yiewsley and West Drayton Community Centre	1.4km
Harlington Sports Ground (rugby and football pitches, floodlit astro-turf pitches, fitness gym)	1.5km
Harlington Centre (Including: Co-op store, Pharmacy, Restaurants, Public Houses)	1.6km
West Drayton Library	1.6km
Heathrow Goals (Soccer centre)	1.8km
Glendale Medical Centre	2km
Harlington School	2km

3.6.7 It can be seen that there is a good selection of local facilities provided within walking and cycling distance of the site (as illustrated on Figures 3.3 and 3.4). There are footways provided from the site to all the local facilities, with zebra crossings provided across both Sipson Road and Harmondsworth Lane at the roundabout junction of these two roads, therefore facilitating access to the local facilities in the village centre. There is also a pedestrian refuge island provided across Sipson Lane at the roundabout junction with Sipson Road that further assists pedestrian movement.

3.6.8 For access to the facilities to the north, there is a pedestrian refuge island provided across Holloway Lane at the roundabout junction with Sipson Road. Access to the north, across the M4, is then available via Sipson Road that passes underneath the motorway. This route has been stopped up to vehicles either side of the M4 and is therefore lightly trafficked either side of the motorway.

3.6.9 The nearest secondary school is Harlington School located a 2.8km walking distance to the north-east of the site via Sipson Lane – St. Peter's Way and the M4 underpass. The school can also be accessed via bus service 222 that also provides access to two further secondary schools, St Marks Catholic School and Lampton School, which are located approximately 5.0km to the south-east of the site.

3.7 Local Highway Network

3.7.1 With the site being accessed directly from the A408 Sipson Road it is very well placed with regards to access to the strategic road network, therefore limiting the impact that the development has on local residential routes.

3.7.2 To the north, the A408 Sipson Road connects to the A408 Holloway Lane that in turn provides direct connection to the M4 motorway.

3.7.3 To the south, the A408 provides direct connection to the A4 Bath Road.

4 Baseline Conditions: Highway Characteristics

4.1 Introduction

4.1.1 This section details the existing level of traffic flow and road safety record within the study area.

4.2 Highway Characteristics

4.2.1 From Holloway Lane, Sipson Road is subject to a 30mph speed limit, with this reducing to 20mph just to the south of the site access. The 20mph speed limit continues through Sipson Village. The general width of Sipson Road is 6.0m. There are footways provided along the entire eastern side of the road. There is no footway present on the western side of the road for a length of approximately 140m to the south of the site access. However, as previously discussed, a footway is provided to the north of the site access that provides connection to the local bus stop.

4.2.2 Sipson Lane has a carriageway width of 7.3m and is subject to a 30mph speed limit. There is a footway provided along the northern side of Sipson Lane, with a general width of 1.6m. There is street lighting present along all the local roads.

4.3 Baseline Traffic Flows

4.3.1 Manual classified traffic count (MCC) surveys were undertaken by the independent survey company K&M at the following junctions on Thursday 18th September 2014:

- A3044 Holloway Lane / A408 Sipson Road Roundabout;
- A408 Sipson Road / Holiday Inn;
- A408 Sipson Road / Harmondsworth Lane Roundabout;
- A408 Sipson Road / Sipson Lane Roundabout.

4.3.2 The surveys were completed between 7.00 - 10.00am and 16.00 - 19.00pm and included queue length surveys that were completed at each of the junctions.

4.3.3 Analysis of the survey results has identified the AM and PM peak periods as 08:00-09:00 and 17:15-18:15 respectively, with the recorded traffic flows illustrated on **Figures 4.1** and **4.2** respectively. The survey results are attached within **Appendix 4.1**.

4.4 Personal Injury Accident (PIA) Data

4.4.1 WSP has obtained and reviewed the accident records for the roads within the study area for the five year period between 29 June 2009 and 30th June 2014, a copy of which is attached within **Appendix 4.2**. This information was obtained from Transport for London.

4.4.2 The accidents are classed into three categories: slight, serious and fatal, a definition of which is provided below:

- Slight Injury: Injuries of a minor nature, such as sprains, bruises, or cuts not judged to be severe, or slight shock requiring only roadside attention (medical treatment is not a prerequisite for an injury to be defined as slight);
- Serious Injury: Injuries for which a person is detained in hospital, as an in-patient, or any of the following injuries, whether or not a person is detained in hospital; fractures, concussion, internal injuries, severe cuts and lacerations, severe general shock requiring medical treatment and injuries which result in death 30 days after the accident. The serious category, therefore, covers a very broad range of injuries; and
- Fatal Injury: Injuries which cause death either immediately or any time up to 30 days after the accident.

4.4.3 Analysis of the PIA data indicates that a total of twelve PIAs were recorded in the study area during the five year period, eleven of which were slight, none serious and one fatality.

4.4.4 The locations of the accidents are illustrated on **Figure 4.3**.

Table 4.1 Personal Injury Accident Summary (29.06.09 – 30.06.14)

	Severity of Injury	Year					
		2009 / 2010	2010 / 2011	2011 / 2012	2012 / 2013	2013 / 2014	**Total**
Total Accidents	Slight		1	4	2	4	**11**
	Serious						**0**
	Fatal					1	**1**
	Total	**0**	**1**	**4**	**2**	**5**	**12**
Involving Pedestrians	Slight			1		1	**2**
	Serious						**0**
	Fatal						**0**
	Total			**1**		**1**	**2**
Involving Cyclists	Slight		1			1	**2**
	Serious						**0**
	Fatal						**0**
	Total		**1**			**1**	**2**
Involving Motorcyclists	Slight						**0**
	Serious						**0**
	Fatal						**0**
	Total						**0**

4.4.5 There was one fatal accident recorded during the five year period. This involved a driver who suffered a medical episode, resulting in loss of control of the vehicle which struck two oncoming vehicles and one stationary vehicle.

4.4.6 From Table 4.1 it can be seen that four of the accidents involved vulnerable road users: two pedestrians and two pedal cyclists.

4.4.7 The two accidents involving pedestrians involved a 9 year old and 16 year old entering the road without looking properly for oncoming vehicles.

4.4.8 The two accidents involving cyclists were caused by vehicles entering Sipson Road and failing to give way to the oncoming cyclist: the first occurring at the Holloway Lane junction and involved a northbound cyclist and the second at the Sipson Lane junction and involved a southbound cyclist.

4.4.9 The remaining accidents appear to have been caused by poor observation, with there being four shunt type accidents and two involving vehicles entering the main carriageway and failing to give way to oncoming vehicles.

4.4.10 The remaining accident involved a driver travelling west along Holloway Lane being distracted by a fox that had run into the road, causing the vehicle to enter the Sipson Road roundabout without stopping and striking a circulating vehicle.

Summary

4.4.11 A review of the accident records for the study area has not highlighted any concerns with regards to local safety and it is not considered that the design or condition of the highway has been a contributory factor in any of the recorded accidents.

4.4.12 As discussed further in section 5.3, the Sipson Road site access junction is to be upgraded. The proposed arrangement provides a pedestrian refuge island on Sipson Road that will assist in movement between the site and the northbound bus stop.

4.4.13 Furthermore, the junction is provided with the necessary visibility splays at the junction so that there will be good visibility provided between vehicles and any pedestrians and cyclists travelling in the local area. Also, a sufficient level of parking is to be provided within the site so there should be no on-street parking in the vicinity of the junction that may impede visibility between vehicles and vulnerable users.

4.4.14 It is not believed that the proposed development will have a detrimental impact on the current good safety record.

5 Development Proposal

5.1 Development Scheme

5.1.1 Two possible site layout options have been developed (Option A and B) with these contained within **Appendix 5.1**. The two options propose the same site access arrangement, with the main access provided via Sipson Road, with pedestrian, cycle and emergency access provided via Sipson Lane.

5.1.2 From the site layouts it can be seen that a total of 53 units are proposed, with these being split as follows:

- 22 Open Market (41%);
- 19 Affordable (36%);
- 12 Elderly Living (23%).

5.1.3 The two layouts also propose allotments, a village green and a bio-diversity ecological enhancement area.

5.2 Cycle Parking Provision

5.2.1 The level of cycle parking to be provided on the site will be provided in accordance with the LBH design guidance (London Borough of Hillingdon UDP Saved Policies September 2007).

Table 5.2 Minimum Cycle Parking Standard

Dwelling Size	Parking Requirement (per dwelling)
1 -2 bed	1.0
3+ bed	2.0

5.2.2 Also, and so as to accord with the London Plan standards, a minimum visitor parking provision of 1 space per 40 units is to be provided.

5.3 Site Access Arrangement

5.3.1 From the site layout options it can be seen that a single vehicular point of access is proposed into the site via Sipson Road to the north of the site.

5.3.2 The proposed arrangement of the access is illustrated on **Drawing Number 8113-SK-001**. The access is provided in a similar position to the existing access, with it being moved slightly north. The junction is to be upgraded to provide a right-turn ghost lane.

5.3.3 The site is adjacent to neighbouring residential units that are served from Sipson Road. The access has therefore been provided with a visibility splay of 43m which is in accordance with the Manual for Streets value for a 30mph road.

5.3.4 The site access has been designed in accordance with Design Manual for Roads and Bridges (DMRB) design guidance. The proposed access arrangement has been tracked and Drawing **Number 8113-ATR-001** shows that suitable access is provided for a large refuse vehicle. On leaving the site the refuse vehicle stays within the lane and on the inbound movement there is a

small level of overhang into the opposing lane. However, the refuse vehicle would be able to wait within the central refuge island should a car be waiting to exit the site and be parked across the required path. The vehicle does not overrun the footway.

5.3.5 The existing vehicular access from Sipson Lane / Vineries Close to the south of the site is to be closed to vehicles and will form a pedestrian and cycle access. This access will provide for emergency vehicle access.

5.4 Car Parking Provision

5.4.1 The level of car parking to be provided on site will be in accordance with the LBH design guidance (London Borough of Hillingdon UDP Saved Policies September 2007). Table 5.3 sets out the maximum permitted parking levels per dwelling.

Table 5.3 Maximum Car Parking Standard

Description	Standard
Flats and houses without individual curtilages with communal parking in garages or open car parking areas	1.5
Dwellings with curtilage parking	2.0

5.4.2 The LBH standard notes the following with regards to residential parking provision:

- Precise level of provision may be dependent on household and housing type and location. Provision above the maximum level will only be considered in exceptional circumstances and where the development is related to measures to improve public transport or manage the supply of on-street parking. Contributions towards the creation/extension of CPZs, traffic reduction initiatives and/or public transport may be sought in some locations where the assumed demand is greater than the level of parking being provided;
- Where a space within a curtilage is a garage, a condition will normally be applied, preventing the garage from being used as a habitable room to ensure it remains as a parking space. Garages will be required to maintain an internal width of 3000mm;
- Any variation of the above standard is at the discretion of the local planning authority. Material considerations could include noise, amenity, highway circumstances and accessibility.

6 Travel Plan

6.1 Overview

6.1.1 A Framework Travel Plan has been produced and included in **Appendix 6.1**. This chapter provides a summary of the key targets that the Travel Plan seeks to meet, and the measures it suggests to achieve this.

6.2 Aims and Objectives

6.2.1 The overarching aim of the Framework Travel Plan is to provide a tool for the provision of appropriate measures to encourage residents of the proposed development to use healthier and lower carbon transport options. As such, this will contribute to a more sustainable development that will benefit the wider community.

6.2.2 The objectives of the Travel Plan are therefore to:

- Support the proposed development as a sustainable community;
- Facilitate and encourage greater use of sustainable transport options, in preference to the use of the private car, and especially Single Occupancy Vehicle (SOV) trips;
- Protect and enhance the environment in and around the site;
- Provide the opportunity for residents to live a healthy and sustainable lifestyle; and
- Promote the financial, health and environmental benefits associated with sustainable travel.

6.3 Travel Plan Management

6.3.1 In order to manage the Travel Plan, Lewdown Holdings Ltd will appoint a Site Management Company (SMC), who in turn will identify and appoint a Travel Plan Coordinator (TPC) to undertake delivery of the full Travel Plan.

6.3.2 One of the key roles of the TPC will be to monitor travel patterns associated with the development. The potential methodology is outlined in detail in Chapter 6 of the Travel Plan, and will ascertain information on both travel behaviour and attitudes towards travel.

6.4 Travel Plan Promotion and Measures

6.4.1 A wide range of measures which are suitable for incorporation and implementation into the full Residential Travel Plan have been outlined in Chapter 7 of the Travel Plan. Measures could include:

- Ongoing promotion and marketing in the form of a Travel Plan Information Board within the sales office and a community notice board which could raise awareness of sustainable travel associated with the development location;
- Residential sales staff training, so that staff in the sales office are familiar with the objectives of the Travel Plan, and can communicate it to residents;
- A Sustainable Travel Information Website which can disseminate site wide sustainable travel information to residents;
- Promoting Car Sharing to residents, as this can help to reduce the overall number of car journeys being made and encourage a pattern of more efficient car use amongst residents;

- The TPC could actively promote walking and cycling events such as walk to work week, to further encourage sustainable travel;
- One Month Bus Service Trial Tickets could be offered to residents to highlight accessibility of local bus services; and
- Cycle Discounts may be offered at local stores, or each household could be provided with a £50 cycle voucher to redeem against cycle purchase or repair.

6.4.2 Upon occupation residents would receive a Sustainable Travel Information Pack that would summarise and contain detail on the measures detailed above as well as extra information, including contact details of the TPC, bus and rail timetables, and pedestrian and cycle route maps.

6.5 Modal Shift Target

Multi Modal Trip Generation

6.5.1 The site is located in the Heathrow Villages ward which is more rural in character as compared to the adjacent Pinkwell ward. Therefore the Census data from the Pinkwell ward has been used as it is considered to be more representative of the travel patterns expected from the proposed development.

6.5.2 The 2011 Travel to Work Census data for the Pinkwell ward has been examined and is summarised in Table 6.1.

Table 6.1 Travel to Work Census Data

Travel Mode	Percentage
Work Mainly at or From Home	2.6%
Underground, Metro, Light Rail, Tram	5.9%
Train	7.3%
Bus, Minibus or Coach	20.7%
Taxi	0.4%
Motorcycle, Scooter or Moped	0.8%
Driving a Car or Van	52.5%
Passenger in a Car or Van	3.5%
Bicycle	1.1%
On Foot	4.6%
Other Method of Travel to Work	0.6%
TOTAL	100%

Source: ONS (QS701EW) Pinkwell Ward and Consultant Calculated

6.5.3 From Table 6.1 it can be seen that the Pinkwell Ward has a high proportion of trips being made by sustainable modes, with the 'car driver' travel mode proportion being 52.5%. The TP's mode share target has therefore been set to maintain these current low levels of car travel.

6.6 Summary

6.6.1 The site for this development is located in an area where there is good opportunities to travel by more sustainable modes of travel. The Travel Plan in Appendix 6.1 promotes the opportunities for residents to travel more sustainably.

7 Development Trip Generation

7.1 Introduction

7.1.1 This section provides detail on the forecast level of trips that the development will generate and how these trips are then distributed and assigned onto the highway network.

7.2 Historic Trip Generation

7.2.1 Traffic surveys of the previous garden centre use were completed as part of the planning application that was submitted in 2013.

7.2.2 The level of trips that were generated by the site, as recorded by surveys completed in 2010, are summarised in Table 7.1.

Table 7.1 Historic Site Traffic Generation (Garden Centre Use)

Peak	Arrival	Departure	Total
AM Peak (08:00 – 09:00)	6	3	9
PM Peak (17:00 – 18:00)	6	10	16

7.2.3 It can be seen that the site generated 9 two-way trips during the AM peak period and 16 two-way trips during the PM peak period.

7.3 Future Trip Generation

7.3.1 The previous application completed searches of both the TRICS and TRAVL databases to derive multi-modal trip rates. This found the TRICS database provided the higher trip rates.

7.3.2 The TRICS and TRAVL databases merged in April 2014, with the TRAVL data now provided within the TRICS database. Therefore, a revised search of the TRICS database has been completed to derive the trip rates for the proposed development.

7.3.3 The site is to provide community facilities in the form of a community centre / village hall and allotments. It is believed that the traffic generated by these uses will be negligible and that they will not generate any new trips during the peak periods.

7.4 TRICS Trip Generation Assessment

7.4.1 The search of the TRICS database has been completed using the following criteria:

- Houses Privately Owned;
- Greater London and South East sites;
- Sites with up to 150 dwellings [the previous application limited the search to 100];
- Edge of Town centre and Suburban area locations.

7.4.2 The results of the search are summarised in the following tables, with the result files provided within **Appendix 7.1**.

Table 7.2 TRICS Multi-Modal Trip Rates: 12 Hour (07:00-19:00)

Travel Mode	Trip Rate (per Unit)			Trip Generation (53 Units)		
	Arrival	Depart	Total	Arrival	Depart	Total
Car Driver	2.602	2.724	5.326	138	144	282
Car Passengers	0.729	0.848	1.577	39	45	84
Cyclists	0.101	0.102	0.203	5	5	11
Pedestrians	0.871	0.842	1.713	46	45	91
Public Transport	0.111	0.138	0.249	6	7	13
Total People	**4.414**	**4.654**	**9.068**	**234**	**247**	**481**

7.4.3 It is forecast that the development will generate a total of 481 two-way trips throughout the day.

Table 7.3 TRICS Multi-Modal Trip Rates: AM Peak (08:00-09:00)

Travel Mode	Trip Rate (per Unit)			Trip Generation (53 Units)		
	Arrival	Depart	Total	Arrival	Depart	Total
Car Driver	0.170	0.428	0.598	9	23	32
Car Passengers	0.040	0.183	0.223	2	10	12
Cyclists	0.005	0.022	0.027	0	1	1
Pedestrians	0.052	0.182	0.234	3	10	12
Public Transport	0.009	0.039	0.048	0	2	3
Total People	**0.276**	**0.854**	**1.130**	**15**	**45**	**60**

7.4.4 The development is forecast to generate a total of 60 two-way trips during the AM peak hour, with there being 32 vehicle movements (9 arrivals and 23 departures).

7.4.5 From the TRICS assessment the public transport use is forecast at 2 trips, representing 4% of total trips. It is believed that the actual number will be higher and more similar to the public transport proportion of 34% recorded for the Pinkwell Ward from a review of Census data. Similarly, the two-way car driver trip rate of 0.598 is considered high, with the Census data showing a car driver proportion of 52.5%.

Table 7.4 TRICS Multi-Modal Trip Rates: PM Peak (17:00-18:00)

Travel Mode	Trip Rate (per Unit)			Trip Generation (53 Units)		
	Arrival	Depart	Total	Arrival	Depart	Total
Car Driver	0.396	0.222	0.618	21	12	33
Car Passengers	0.126	0.074	0.20	7	4	11
Cyclists	0.018	0.009	0.027	1	0	1
Pedestrians	0.096	0.055	0.151	5	3	8
Public Transport	0.020	0.006	0.026	1	0	1
Total People	**0.656**	**0.366**	**1.022**	**35**	**19**	**54**

7.4.6 The development is forecast to generate a total of 54 two-way trips during the PM peak hour, with there being 33 vehicle movements (21 arrivals and 12 departures).

7.4.7 Again, as with the AM peak hour, the public transport proportions are low and it is believed that a higher proportion of residents will travel by such mode. Also, the two-way car driver trip rate of 0.618 is considered high as compared to the Census data for the Pinkwell Ward that has a car driver proportion of 52.5%.

7.5 Development Traffic Distribution

7.5.1 It is proposed that the vehicle trips generated by the development be assigned to the local highway network based on the existing AM peak period traffic flow characteristics. This recorded the following distribution of trips:

- A3044 Holloway Lane (West) 12.5%
- A3044 Holloway Lane (East) 38.5%
- Harmondsworth Lane 5.4%
- A408 Sipson Road (South) 19.1%
- Sipson Lane 24.5%

7.5.2 The resultant AM and PM peak development generated vehicle trips are illustrated on **Figures 7.1** and **7.2** respectively.

8 Development Impact Appraisal

8.1 Introduction

8.1.1 This section assesses the forecast impact that the development generated trips will have on the local transport infrastructure.

8.2 Net Traffic Flow Increase

8.2.1 As discussed within the previous section, until recently the development site accommodated a garden centre. Traffic surveys were competed at the site access in 2010 as part of the previous application (see Table 7.1). Therefore, removing these flows from the flows that are forecast for the proposed development (Tables 7.3 & 7.4) it has been possible to identify the net increase in flow movements and these are summarised in Table 8.1.

Table 8.1 Net Increase in Vehicle Trips

Peak	Arrival	Departure	Total
AM Peak (08:00 – 09:00)	3	20	23
PM Peak (17:00 – 18:00)	15	2	17

8.2.2 It can be seen that the net increase in two-way movements is forecast to be low, with an increase of 23 vehicles in the AM peak hour and 17 in the PM peak hour.

8.2.3 The following section provides forecasts on the future year traffic flow volumes in 2020, representing a period 5 years post-application. From these forecasts it will be possible to identify the resultant impact that the development has on these flows.

8.3 Background Traffic Growth

8.3.1 To derive the baseline flows for the future year scenarios it has been necessary to apply growth rate factors to the observed year 2014 traffic flows.

8.3.2 The Tempro database (Version 6.2) has been used to derive AM and PM peak rates, with the NTM adjusted values for Hillingdon summarised in Table 8.2.

Table 8.2 Future Year Growth Rates (Tempro (v6.2) NTM Adjusted. Urban, All Roads)

Year	AM Peak	PM Peak
2014 to 2020	1.0963	1.1004

8.3.3 The resultant year 2020 baseline traffic flows for the AM and PM peak periods are illustrated on **Figures 8.1** and **8.2** respectively.

8.4 Link Impact Assessment

8.4.1 The impact that the net increase in development generated trips has on the year 2020 baseline flows has been assessed for the study area and summarised in the following table.

Table 8.3 Link Impact (Year 2020 Baseline Flows)

Link	AM Peak			PM Peak		
	Do-Minimum Flows	Development Flows	Impact	Do-Minimum Flows	Development Flows	Impact
Holloway Lane / Sipson Road						
Sipson Road (N)	15	0	0.0%	15	0	0.0%
Holloway Lane (E)	694	1	0.1%	621	6	0.9%
Sipson Road (S)	515	10	2.0%	668	1	0.2%
Holloway Lane (W)	664	1	0.1%	760	2	0.2%
Total	**1889**	**12**	**0.6%**	**2064**	**9**	**0.4%**
Sipson Road / Harmondsworth Lane						
Sipson Road (N)	400	10	2.5%	316	1	0.2%
Sipson Road (S)	452	1	0.3%	626	7	1.0%
Harmondsworth Lane	152	0	0.1%	61	1	1.3%
Total	**1004**	**11**	**1.1%**	**1002**	**8**	**0.8%**
Sipson Road / Sipson Lane						
Sipson Road (N)	433	9	2.0%	338	1	0.2%
Sipson Lane	243	1	0.2%	241	4	1.5%
Sipson Road (S)	333	1	0.2%	511	3	0.6%
Total	**1010**	**10**	**1.0%**	**1089**	**7**	**0.7%**

8.4.2 It can be seen that during both the AM and PM peak hours, the addition of the development generated trips results in total junction flow increases of less than 5% at all junctions, with the greatest increase being just 1.1%, which occurs at the Sipson Road / Harmondsworth Lane junction during the AM peak hour.

8.4.3 In terms of the link impact, it can be seen that the addition of the development generated trips again results in increases of below 5% with the greatest increase being just 2.5%, with this forecast on the Sipson Road (N) link at the Sipson Road / Harmondsworth Lane junction during the AM peak hour. Generally, the increases are less than 1%.

8.5 Site Access

8.5.1 The site access has been modelled for both the AM and PM peak periods with the forecast year 2020 traffic flows. The Junctions 8 software package has been used and the results are summarised in the following table, with the results file attached within **Appendix 8.1**.

Table 8.4 Site Access Operation, Year 2020 Traffic Flows

Arm	AM Peak Hour		PM Peak Hour	
	RFC	Queue	RFC	Queue
Sipson Road (S)	0.099	0	0.105	0
Site Access	0.015	0	0.017	0

8.5.2 It can be seen that the site access junction is forecast to operate well within capacity with no queuing forecast.

9 Summary and Conclusion

9.1 Summary

9.1.1 WSP has been commissioned by Lewdown Holdings Limited to provide transportation and highways advice in respect to the proposed redevelopment of the former Heathrow Garden Centre site, Sipson Road, Heathrow.

9.1.2 It is proposed that 53 residential units be developed along with associated community facilities comprising of allotments, village green and a bio-diversity ecological enhancement area.

9.1.3 The site was subject to a similar planning application in June 2013 and this was refused for seven reasons, including one that was transport related. This related to the proposed site access arrangement, with a ghost island arrangement being developed and agreed with London Borough of Hillingdon Highway Officers post application.

9.1.4 This Transport Assessment has followed the same approach and methodology as the previous application and this approach has been agreed with LBH Highways.

9.1.5 The site is accessible to a wide range of local facilities. There are a number of facilities immediately to the south of the site, including a post office / general store, restaurants, hairdressers and primary school. There is a range of further leisure, retail, employment and educational facilities provided within a 2km walking distance of the site.

9.1.6 There are bus stops located on Sipson Road immediately to the north of the site boundary. This provides a high frequency service to destinations including Uxbridge, West Drayton, Heathrow Airport and Hounslow.

9.1.7 West Drayton railway station is located approximately 2km to the north-west of the site and is accessible from the site via the local bus service. The station provides direct access to a number of destinations including Maidenhead (19 minute journey time), Reading (34 minutes) and London Paddington (25 minutes).

9.1.8 It is therefore considered that the site is sustainably located in order to reduce the reliance on car trips to access local services and amenities.

9.1.9 Vehicular access to the site is proposed via Sipson Road in a similar position to the existing junction. The access is to be realigned slightly to the north and will be upgraded to provide a right-turn ghost island lane into the site. The junction arrangement is illustrated on Drawing 8113-SK-001.

9.1.10 The highway safety record for the study area has been reviewed for the most recently available five year period and this has not highlighted any concerns. During the five year period a total of 12 accidents were recorded, resulting in 11 slight injuries and one fatality. The fatal accident involved a driver having a medical episode that resulting in loss of control of the vehicle, striking two oncoming vehicles and a stationary vehicle.

9.1.11 A vehicular trip generation exercise has forecast that the proposed development will result in a net increase of 23 two-way trips during the AM peak hour and 17 two-way trips during the PM peak hour. This level of flow increase has a negligible increase in flows across the study area, with them all being well below the 5% threshold increase that was agreed as the trigger point for full junction assessment. The proposed site access junction has been modelled and demonstrates that it will operate well within capacity during both weekday peak periods.

9.2 Conclusion

9.2.1 This Transport Assessment has demonstrated that the site is well placed in terms of sustainability, with it being accessible to a range of local facilities and to the public transport network.

9.2.2 It has also been demonstrated that the proposed development will have a minimal impact on the existing operation of the highway network. It is therefore considered that there are no highways or transportation reasons why LBH cannot support this planning application.

Appendices

Appendix 1.1 Scoping Correspondence

Coleman, Adam

From: Paul Harrison <pharrison@hillingdon.gov.uk>
Sent: 13 November 2014 08:18
To: Coleman, Adam
Subject: Re: Heathrow Garden Centre, Sipson Road: Revised Application

Adam

Your proposals seem reasonable. However, further comments will be made once a formal planning application has been submitted.

Regards
Paul

On 10 November 2014 16:39, Coleman, Adam <Adam.Coleman@wspgroup.com> wrote:

Dear Paul,

We have recently started working on the transport assessment work for a revised planning application for the Heathrow Garden Centre site on Sipson Road. The consultants Milestone completed the previous site application (Ref 67666/APP/2013/1579) for a mixed use development.

The revised scheme is for a predominantly residential scheme (circa 100 units), with possible community land uses (such as a community centre).

It is my understanding that although the previous application was refused, the single transport related matter (regarding site access arrangement) was subsequently agreed. A copy of the proposed arrangement is attached.

The new proposal is for the site to be accessed via a single access to the north, with a similar arrangement to the attached proposed. We do not envisage a requirement for a second site access via the south as proposed with the previous application as this was for access to the retail and employment land uses that are no longer proposed.

Would you please confirm that the level of assessment work completed for the previous application is acceptable for the revised application? We will obviously update where necessary, such as accident data and trip rates but will use the same approach as before.

I did try calling you earlier to discuss the application. Please contact me if you require any further information.

Regards

Adam

Adam Coleman

Associate

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Tel: 01895 277420

Please note that the comments made in this email represent officer opinion and cannot be seen to prejudice the Local Planning Authority's formal determination in relation to any application or planning matter.

Appendix 4.1 Traffic Survey Results

K&M TRAFFIC SURVEYS

DATE : 18th SEPTEMBER 2014

DAY : THURSDAY

LOCATION : A408 SIPSON RD, HEATHROW

HOLLOWAY LANE / SIPSON RD ROUNDABOUT

	MOVEMENT 1			MOVEMENT 2			MOVEMENT 3			MOVEMENT 4			MOVEMENT 5			MOVEMENT 6		
	HOLLOW LANE W LEFT TO COACH DEPOT			HOLLOW LANE W AHEAD EAST			HOLLOW LANE W RIGHT TO SIPSON RD S			SIPSON RD SOUTH LEFT TO HOLLOWAY L W			SIPSON RD SOUTH AHEAD TO COACH DEPOT			SIPSON RD SOUTH RIGHT TO EAST		
	LIGHT	HGV	TOT	LIGHT	HGV	TOT	LIGHT	HGV	TOT	LIGHT	HGV	TOT	LIGHT	HGV	TOT	LIGHT	HGV	TOT
0700-0715	1	1	**2**	55	7	**62**	22	2	**24**	8	1	**9**	1	0	**1**	43	3	**46**
0715-0730	1	1	**2**	68	7	**75**	29	1	**30**	13	0	**13**	3	0	**3**	50	8	**58**
0730-0745	1	1	**2**	116	11	**127**	23	4	**27**	27	3	**30**	0	0	**0**	56	3	**59**
0745-0800	1	0	**1**	108	8	**116**	36	2	**38**	26	2	**28**	1	0	**1**	65	4	**69**
0800-0815	1	0	**1**	102	6	**108**	34	1	**35**	26	3	**29**	1	0	**1**	88	6	**94**
0815-0830	0	1	**1**	114	7	**121**	38	1	**39**	25	0	**25**	1	0	**1**	60	3	**63**
0830-0845	0	1	**1**	86	8	**94**	45	1	**46**	29	1	**30**	2	0	**2**	97	9	**106**
0845-0900	0	0	**0**	79	5	**84**	39	3	**42**	25	0	**25**	0	0	**0**	63	2	**65**
0900-0915	0	1	**1**	44	11	**55**	19	0	**19**	10	1	**11**	0	0	**0**	59	5	**64**
0915-0930	0	0	**0**	39	8	**47**	20	0	**20**	27	0	**27**	2	0	**2**	52	6	**58**
0930-0945	0	1	**1**	42	7	**49**	14	0	**14**	17	1	**18**	0	0	**0**	38	7	**45**
0945-1000	0	0	**0**	51	7	**58**	16	1	**17**	20	1	**21**	0	0	**0**	36	3	**39**
0700-1000	**5**	**7**	**12**	**904**	**92**	**996**	**335**	**16**	**351**	**253**	**13**	**266**	**11**	**0**	**11**	**707**	**59**	**766**
0700-0800	4	3	**7**	347	33	**380**	110	9	**119**	74	6	**80**	5	0	**5**	214	18	**232**
0715-0815	4	2	**6**	394	32	**426**	122	8	**130**	92	8	**100**	5	0	**5**	259	21	**280**
0730-0830	3	2	**5**	440	32	**472**	131	8	**139**	104	8	**112**	3	0	**3**	269	16	**285**
0745-0845	2	2	**4**	410	29	**439**	153	5	**158**	106	6	**112**	5	0	**5**	310	22	**332**
0800-0900	1	2	**3**	381	26	**407**	156	6	**162**	105	4	**109**	4	0	**4**	308	20	**328**
0815-0915	0	3	**3**	323	31	**354**	141	5	**146**	89	2	**91**	3	0	**3**	279	19	**298**
0830-0930	0	2	**2**	248	32	**280**	123	4	**127**	91	2	**93**	4	0	**4**	271	22	**293**
0845-0945	0	2	**2**	204	31	**235**	92	3	**95**	79	2	**81**	2	0	**2**	212	20	**232**
0900-1000	0	2	**2**	176	33	**209**	69	1	**70**	74	3	**77**	2	0	**2**	185	21	**206**

K&M TRAFFIC SURVEYS

DATE : 18th SEPTEMBER 2014

DAY : THURSDAY

LOCATION : A408 SIPSON RD, HEATHROW

HOLLOWAY LANE / SIPSON RD ROUNDABOUT

	MOVEMENT 1			MOVEMENT 2			MOVEMENT 3			MOVEMENT 4			MOVEMENT 5			MOVEMENT 6		
	HOLLOW LANE W LEFT TO COACH DEPOT			HOLLOW LANE W AHEAD EAST			HOLLOW LANE W RIGHT TO SIPSON RD S			SIPSON RD SOUTH LEFT TO HOLLOWAY L W			SIPSON RD SOUTH AHEAD TO COACH DEPOT			SIPSON RD SOUTH RIGHT TO EAST		
	LIGHT	HGV	TOT	LIGHT	HGV	TOT	LIGHT	HGV	TOT	LIGHT	HGV	TOT	LIGHT	HGV	TOT	LIGHT	HGV	TOT
1600-1615	3	0	**3**	90	12	**102**	26	2	**28**	31	1	**32**	0	0	**0**	71	5	**76**
1615-1630	0	1	**1**	105	5	**110**	23	1	**24**	29	1	**30**	0	0	**0**	78	4	**82**
1630-1645	1	0	**1**	97	4	**101**	27	0	**27**	29	0	**29**	2	0	**2**	60	4	**64**
1645-1700	1	0	**1**	115	5	**120**	12	2	**14**	27	2	**29**	0	0	**0**	74	4	**78**
1700-1715	0	0	**0**	122	7	**129**	30	0	**30**	40	2	**42**	0	0	**0**	91	2	**93**
1715-1730	0	0	**0**	131	5	**136**	32	2	**34**	43	1	**44**	0	0	**0**	104	6	**110**
1730-1745	0	0	**0**	131	3	**134**	28	0	**28**	38	1	**39**	0	0	**0**	99	3	**102**
1745-1800	1	0	**1**	128	4	**132**	34	2	**36**	47	0	**47**	0	0	**0**	85	8	**93**
1800-1815	1	1	**2**	125	5	**130**	34	1	**35**	38	3	**41**	1	0	**1**	93	6	**99**
1815-1830	0	0	**0**	121	3	**124**	25	1	**26**	28	1	**29**	0	0	**0**	93	3	**96**
1830-1845	2	0	**2**	109	1	**110**	25	0	**25**	27	0	**27**	0	0	**0**	47	5	**52**
1845-1900	0	0	**0**	72	7	**79**	21	4	**25**	26	0	**26**	0	0	**0**	47	2	**49**
1600-1900	**9**	**2**	**11**	**1346**	**61**	**1407**	**317**	**15**	**332**	**403**	**12**	**415**	**3**	**0**	**3**	**942**	**52**	**994**
1600-1700	5	1	**6**	407	26	**433**	88	5	**93**	116	4	**120**	2	0	**2**	283	17	**300**
1615-1715	2	1	**3**	439	21	**460**	92	3	**95**	125	5	**130**	2	0	**2**	303	14	**317**
1630-1730	2	0	**2**	465	21	**486**	101	4	**105**	139	5	**144**	2	0	**2**	329	16	**345**
1645-1745	1	0	**1**	499	20	**519**	102	4	**106**	148	6	**154**	0	0	**0**	368	15	**383**
1700-1800	1	0	**1**	512	19	**531**	124	4	**128**	168	4	**172**	0	0	**0**	379	19	**398**
1715-1815	2	1	**3**	515	17	**532**	128	5	**133**	166	5	**171**	1	0	**1**	381	23	**404**
1730-1830	2	1	**3**	505	15	**520**	121	4	**125**	151	5	**156**	1	0	**1**	370	20	**390**
1745-1845	4	1	**5**	483	13	**496**	118	4	**122**	140	4	**144**	1	0	**1**	318	22	**340**
1800-1900	3	1	**4**	427	16	**443**	105	6	**111**	119	4	**123**	1	0	**1**	280	16	**296**

K&M TRAFFIC SURVEYS

DATE : 18th SEPTEMBER 2014

DAY : THURSDAY

LOCATION : A408 SIPSON RD, HEATHROW

HOLLOWAY LANE / SIPSON RD ROUNDABOUT

	MOVEMENT 7			MOVEMENT 8			MOVEMENT 9			MOVEMENT 10			MOVEMENT 11			MOVEMENT 12		
	SIPSON RD SOUTH U TURNS			HOLLOWAY LA EAST LEFT TO SIPSON RD S			HOLLOWAY LA EAST AHEAD WEST			HOLLOWAY LA EAST RIGHT TO COACH DEPOT			HOLLOWAY LA EAST U TURNS			COACH DEPOT NORTH LEFT TO EAST		
	LIGHT	HGV	TOT	LIGHT	HGV	TOT	LIGHT	HGV	TOT	LIGHT	HGV	TOT	LIGHT	HGV	TOT	LIGHT	HGV	TOT
0700-0715	2	1	**3**	39	4	**43**	69	3	**72**	1	3	**4**	0	0	**0**	0	2	**2**
0715-0730	2	0	**2**	44	4	**48**	81	8	**89**	0	1	**1**	0	0	**0**	1	0	**1**
0730-0745	0	0	**0**	43	6	**49**	81	3	**84**	0	2	**2**	0	0	**0**	2	1	**3**
0745-0800	0	0	**0**	35	3	**38**	75	6	**81**	1	2	**3**	0	0	**0**	0	1	**1**
0800-0815	2	0	**2**	55	3	**58**	80	5	**85**	1	0	**1**	2	0	**2**	0	2	**2**
0815-0830	1	1	**2**	57	4	**61**	76	8	**84**	1	2	**3**	1	0	**1**	1	1	**2**
0830-0845	0	0	**0**	50	7	**57**	81	7	**88**	3	0	**3**	4	0	**4**	2	0	**2**
0845-0900	0	0	**0**	54	5	**59**	71	6	**77**	1	1	**2**	0	0	**0**	0	0	**0**
0900-0915	0	0	**0**	44	6	**50**	52	5	**57**	0	0	**0**	2	0	**2**	2	3	**5**
0915-0930	1	0	**1**	42	2	**44**	66	11	**77**	0	1	**1**	3	0	**3**	0	2	**2**
0930-0945	0	0	**0**	25	6	**31**	44	6	**50**	2	0	**2**	0	0	**0**	0	1	**1**
0945-1000	0	0	**0**	33	3	**36**	54	9	**63**	2	1	**3**	1	0	**1**	1	0	**1**
0700-1000	**8**	**2**	**10**	**521**	**53**	**574**	**830**	**77**	**907**	**12**	**13**	**25**	**13**	**0**	**13**	**9**	**13**	**22**
0700-0800	4	1	**5**	161	17	**178**	306	20	**326**	2	8	**10**	0	0	**0**	3	4	**7**
0715-0815	4	0	**4**	177	16	**193**	317	22	**339**	2	5	**7**	2	0	**2**	3	4	**7**
0730-0830	3	1	**4**	190	16	**206**	312	22	**334**	3	6	**9**	3	0	**3**	3	5	**8**
0745-0845	3	1	**4**	197	17	**214**	312	26	**338**	6	4	**10**	7	0	**7**	3	4	**7**
0800-0900	3	1	**4**	216	19	**235**	308	26	**334**	6	3	**9**	7	0	**7**	3	3	**6**
0815-0915	1	1	**2**	205	22	**227**	280	26	**306**	5	3	**8**	7	0	**7**	5	4	**9**
0830-0930	1	0	**1**	190	20	**210**	270	29	**299**	4	2	**6**	9	0	**9**	4	5	**9**
0845-0945	1	0	**1**	165	19	**184**	233	28	**261**	3	2	**5**	5	0	**5**	2	6	**8**
0900-1000	1	0	**1**	144	17	**161**	216	31	**247**	4	2	**6**	6	0	**6**	3	6	**9**

K&M TRAFFIC SURVEYS

DATE : 18th SEPTEMBER 2014

DAY : THURSDAY

LOCATION : A408 SIPSON RD, HEATHROW

HOLLOWAY LANE / SIPSON RD ROUNDABOUT

	MOVEMENT 7			MOVEMENT 8			MOVEMENT 9			MOVEMENT 10			MOVEMENT 11			MOVEMENT 12		
	SIPSON RD SOUTH U TURNS			HOLLOWAY LA EAST LEFT TO SIPSON RD S			HOLLOWAY LA EAST AHEAD WEST			HOLLOWAY LA EAST RIGHT TO COACH DEPOT			HOLLOWAY LA EAST U TURNS			COACH DEPOT NORTH LEFT TO EAST		
	LIGHT	HGV	TOT	LIGHT	HGV	TOT	LIGHT	HGV	TOT	LIGHT	HGV	TOT	LIGHT	HGV	TOT	LIGHT	HGV	TOT
1600-1615	2	0	**2**	32	4	**36**	74	4	**78**	1	0	**1**	2	0	**2**	2	0	**2**
1615-1630	0	0	**0**	42	3	**45**	59	11	**70**	2	0	**2**	1	0	**1**	3	2	**5**
1630-1645	0	0	**0**	24	4	**28**	77	8	**85**	2	2	**4**	3	0	**3**	2	0	**2**
1645-1700	0	0	**0**	36	2	**38**	83	2	**85**	1	0	**1**	0	0	**0**	2	2	**4**
1700-1715	0	0	**0**	31	5	**36**	99	2	**101**	0	0	**0**	0	0	**0**	1	1	**2**
1715-1730	0	0	**0**	46	1	**47**	90	2	**92**	0	0	**0**	1	0	**1**	2	1	**3**
1730-1745	0	0	**0**	39	4	**43**	80	3	**83**	1	0	**1**	4	0	**4**	0	0	**0**
1745-1800	2	0	**2**	54	1	**55**	80	3	**83**	4	2	**6**	3	0	**3**	1	0	**1**
1800-1815	1	0	**1**	39	6	**45**	67	5	**72**	0	0	**0**	2	0	**2**	4	0	**4**
1815-1830	0	0	**0**	49	1	**50**	63	4	**67**	0	0	**0**	1	0	**1**	1	0	**1**
1830-1845	0	0	**0**	38	5	**43**	54	4	**58**	2	0	**2**	1	0	**1**	0	0	**0**
1845-1900	0	0	**0**	43	2	**45**	73	3	**76**	0	1	**1**	0	0	**0**	1	0	**1**
1600-1900	**5**	**0**	**5**	**473**	**38**	**511**	**899**	**51**	**950**	**13**	**5**	**18**	**18**	**0**	**18**	**19**	**6**	**25**
1600-1700	2	0	**2**	134	13	**147**	293	25	**318**	6	2	**8**	6	0	**6**	9	4	**13**
1615-1715	0	0	**0**	133	14	**147**	318	23	**341**	5	2	**7**	4	0	**4**	8	5	**13**
1630-1730	0	0	**0**	137	12	**149**	349	14	**363**	3	2	**5**	4	0	**4**	7	4	**11**
1645-1745	0	0	**0**	152	12	**164**	352	9	**361**	2	0	**2**	5	0	**5**	5	4	**9**
1700-1800	2	0	**2**	170	11	**181**	349	10	**359**	5	2	**7**	8	0	**8**	4	2	**6**
1715-1815	3	0	**3**	178	12	**190**	317	13	**330**	5	2	**7**	10	0	**10**	7	1	**8**
1730-1830	3	0	**3**	181	12	**193**	290	15	**305**	5	2	**7**	10	0	**10**	6	0	**6**
1745-1845	3	0	**3**	180	13	**193**	264	16	**280**	6	2	**8**	7	0	**7**	6	0	**6**
1800-1900	1	0	**1**	169	14	**183**	257	16	**273**	2	1	**3**	4	0	**4**	6	0	**6**

K&M TRAFFIC SURVEYS

DATE : 18th SEPTEMBER 2014

DAY : THURSDAY

LOCATION : A408 SIPSON RD, HEATHROW

HOLLOWAY LANE / SIPSON RD ROUNDABOUT

	MOVEMENT 13			MOVEMENT 14		
	COACH DEPOT NORTH AHEAD TO SIPSON RD S			COACH DEPOT NORTH RIGHT TO WEST		
	LIGHT	HGV	TOT	LIGHT	HGV	TOT
0700-0715	0	0	**0**	0	0	**0**
0715-0730	1	0	**1**	0	0	**0**
0730-0745	0	0	**0**	0	0	**0**
0745-0800	0	0	**0**	0	0	**0**
0800-0815	1	0	**1**	0	0	**0**
0815-0830	0	0	**0**	0	0	**0**
0830-0845	0	0	**0**	0	1	**1**
0845-0900	1	0	**1**	1	0	**1**
0900-0915	0	0	**0**	0	0	**0**
0915-0930	0	0	**0**	1	0	**1**
0930-0945	0	0	**0**	0	0	**0**
0945-1000	2	0	**2**	0	0	**0**
0700-1000	**5**	**0**	**5**	**2**	**1**	**3**
0700-0800	1	0	**1**	0	0	**0**
0715-0815	2	0	**2**	0	0	**0**
0730-0830	1	0	**1**	0	0	**0**
0745-0845	1	0	**1**	0	1	**1**
0800-0900	2	0	**2**	1	1	**2**
0815-0915	1	0	**1**	1	1	**2**
0830-0930	1	0	**1**	2	1	**3**
0845-0945	1	0	**1**	2	0	**2**
0900-1000	2	0	**2**	1	0	**1**

K&M TRAFFIC SURVEYS

DATE : 18th SEPTEMBER 2014

DAY : THURSDAY

LOCATION : A408 SIPSON RD, HEATHROW

HOLLOWAY LANE / SIPSON RD ROUNDABOUT

	MOVEMENT 13			MOVEMENT 14		
	COACH DEPOT NORTH AHEAD TO SIPSON RD S			COACH DEPOT NORTH RIGHT TO WEST		
	LIGHT	HGV	TOT	LIGHT	HGV	TOT
1600-1615	1	0	**1**	3	1	**4**
1615-1630	0	0	**0**	1	0	**1**
1630-1645	1	0	**1**	1	0	**1**
1645-1700	0	0	**0**	0	1	**1**
1700-1715	0	0	**0**	0	0	**0**
1715-1730	0	0	**0**	0	0	**0**
1730-1745	3	1	**4**	0	0	**0**
1745-1800	0	0	**0**	0	0	**0**
1800-1815	0	0	**0**	0	0	**0**
1815-1830	0	0	**0**	1	0	**1**
1830-1845	0	0	**0**	0	0	**0**
1845-1900	0	0	**0**	0	0	**0**
1600-1900	**5**	**1**	**6**	**6**	**2**	**8**
1600-1700	2	0	**2**	5	2	**7**
1615-1715	1	0	**1**	2	1	**3**
1630-1730	1	0	**1**	1	1	**2**
1645-1745	3	1	**4**	0	1	**1**
1700-1800	3	1	**4**	0	0	**0**
1715-1815	3	1	**4**	0	0	**0**
1730-1830	3	1	**4**	1	0	**1**
1745-1845	0	0	**0**	1	0	**1**
1800-1900	0	0	**0**	1	0	**1**

K&M TRAFFIC SURVEYS

DATE : 18th SEPTEMBER 2014

DAY : THURSDAY

LOCATION : A408 SIPSON RD, HEATHROW

HOIDAY INN HOTEL / SIPSON ROAD

	MOVEMENT 15			MOVEMENT 16			MOVEMENT 17			MOVEMENT 18		
	HOLIDAY INN HOTEL OUT LEFT TO SOUTH			HOLIDAY INN HOTEL OUT RIGHT TO NORTH			HOLIDAY INN HOTEL RIGHT TURN IN			HOLIDAY INN HOTEL LEFT TURN IN		
	LIGHT	HGV	TOT	LIGHT	HGV	TOT	LIGHT	HGV	TOT	LIGHT	HGV	TOT
0700-0715	1	1	**2**	5	2	**7**	1	0	**1**	7	2	**9**
0715-0730	1	1	**2**	14	2	**16**	4	0	**4**	3	1	**4**
0730-0745	4	1	**5**	16	1	**17**	4	0	**4**	3	2	**5**
0745-0800	3	1	**4**	20	2	**22**	1	1	**2**	12	3	**15**
0800-0815	2	0	**2**	12	2	**14**	4	0	**4**	7	1	**8**
0815-0830	1	0	**1**	7	1	**8**	0	0	**0**	11	1	**12**
0830-0845	2	0	**2**	6	3	**9**	2	0	**2**	3	1	**4**
0845-0900	3	0	**3**	8	1	**9**	2	0	**2**	15	3	**18**
0900-0915	3	1	**4**	2	2	**4**	2	2	**4**	7	5	**12**
0915-0930	4	0	**4**	11	3	**14**	4	0	**4**	8	0	**8**
0930-0945	4	1	**5**	4	4	**8**	5	0	**5**	7	2	**9**
0945-1000	3	1	**4**	4	0	**4**	4	1	**5**	3	0	**3**
0700-1000	**31**	**7**	**38**	**109**	**23**	**132**	**33**	**4**	**37**	**86**	**21**	**107**
0700-0800	9	4	**13**	55	7	**62**	10	1	**11**	25	8	**33**
0715-0815	10	3	**13**	62	7	**69**	13	1	**14**	25	7	**32**
0730-0830	10	2	**12**	55	6	**61**	9	1	**10**	33	7	**40**
0745-0845	8	1	**9**	45	8	**53**	7	1	**8**	33	6	**39**
0800-0900	8	0	**8**	33	7	**40**	8	0	**8**	36	6	**42**
0815-0915	9	1	**10**	23	7	**30**	6	2	**8**	36	10	**46**
0830-0930	12	1	**13**	27	9	**36**	10	2	**12**	33	9	**42**
0845-0945	14	2	**16**	25	10	**35**	13	2	**15**	37	10	**47**
0900-1000	14	3	**17**	21	9	**30**	15	3	**18**	25	7	**32**

K&M TRAFFIC SURVEYS

DATE : 18th SEPTEMBER 2014

DAY : THURSDAY

LOCATION : A408 SIPSON RD, HEATHROW

HOIDAY INN HOTEL / SIPSON ROAD

	MOVEMENT 15			MOVEMENT 16			MOVEMENT 17			MOVEMENT 18		
	HOLIDAY INN HOTEL OUT LEFT TO SOUTH			HOLIDAY INN HOTEL OUT RIGHT TO NORTH			HOLIDAY INN HOTEL RIGHT TURN IN			HOLIDAY INN HOTEL LEFT TURN IN		
	LIGHT	HGV	TOT	LIGHT	HGV	TOT	LIGHT	HGV	TOT	LIGHT	HGV	TOT
1600-1615	1	0	**1**	9	1	**10**	1	0	**1**	7	3	**10**
1615-1630	2	2	**4**	5	1	**6**	1	1	**2**	4	2	**6**
1630-1645	1	0	**1**	8	2	**10**	3	0	**3**	2	1	**3**
1645-1700	6	0	**6**	6	1	**7**	2	0	**2**	7	1	**8**
1700-1715	3	0	**3**	12	1	**13**	1	0	**1**	5	1	**6**
1715-1730	4	0	**4**	9	2	**11**	6	0	**6**	2	1	**3**
1730-1745	4	0	**4**	10	1	**11**	3	0	**3**	9	3	**12**
1745-1800	5	1	**6**	5	4	**9**	1	0	**1**	13	0	**13**
1800-1815	1	0	**1**	9	2	**11**	2	0	**2**	6	3	**9**
1815-1830	0	0	**0**	3	1	**4**	4	0	**4**	13	1	**14**
1830-1845	8	1	**9**	8	4	**12**	3	0	**3**	5	1	**6**
1845-1900	4	0	**4**	6	1	**7**	3	1	**4**	8	2	**10**
1600-1900	**39**	**4**	**43**	**90**	**21**	**111**	**30**	**2**	**32**	**81**	**19**	**100**
1600-1700	10	2	**12**	28	5	**33**	7	1	**8**	20	7	**27**
1615-1715	12	2	**14**	31	5	**36**	7	1	**8**	18	5	**23**
1630-1730	14	0	**14**	35	6	**41**	12	0	**12**	16	4	**20**
1645-1745	17	0	**17**	37	5	**42**	12	0	**12**	23	6	**29**
1700-1800	16	1	**17**	36	8	**44**	11	0	**11**	29	5	**34**
1715-1815	14	1	**15**	33	9	**42**	12	0	**12**	30	7	**37**
1730-1830	10	1	**11**	27	8	**35**	10	0	**10**	41	7	**48**
1745-1845	14	2	**16**	25	11	**36**	10	0	**10**	37	5	**42**
1800-1900	13	1	**14**	26	8	**34**	12	1	**13**	32	7	**39**

K&M TRAFFIC SURVEYS

DATE : 18th SEPTEMBER 2014

DAY : THURSDAY

LOCATION : A408 SIPSON RD, HEATHROW

HARMONDSWORTH LANE / SIPSON RD ROUNDABOUT

	MOVEMENT 19			MOVEMENT 20			MOVEMENT 21			MOVEMENT 22			MOVEMENT 23			MOVEMENT 24		
	SIPSON RD SOUTH LEFT TO HARMOND. LA			SIPSON RD SOUTH AHEAD NORTH			HARMONDSWORTH LA LEFT TO SIPSON RD N			HARMONDSWORTH LA RIGHT TO SIPSON RD S			SIPSON RD NORTH AHEAD SOUTH			SIPSON RD NORTH RIGHT TO HARMOND. LA		
	LIGHT	HGV	TOT	LIGHT	HGV	TOT	LIGHT	HGV	TOT	LIGHT	HGV	TOT	LIGHT	HGV	TOT	LIGHT	HGV	TOT
0700-0715	2	0	**2**	39	2	**41**	2	0	**2**	4	0	**4**	47	3	**50**	1	0	**1**
0715-0730	7	0	**7**	60	3	**63**	2	0	**2**	4	0	**4**	83	5	**88**	3	0	**3**
0730-0745	9	0	**9**	67	5	**72**	1	0	**1**	6	0	**6**	59	9	**68**	5	0	**5**
0745-0800	6	1	**7**	77	6	**83**	3	0	**3**	11	0	**11**	70	3	**73**	4	0	**4**
0800-0815	8	0	**8**	93	6	**99**	6	1	**7**	6	0	**6**	77	2	**79**	11	0	**11**
0815-0830	17	0	**17**	79	1	**80**	4	0	**4**	11	0	**11**	60	4	**64**	19	0	**19**
0830-0845	40	0	**40**	84	7	**91**	19	0	**19**	23	0	**23**	78	5	**83**	14	0	**14**
0845-0900	3	0	**3**	54	3	**57**	29	0	**29**	39	0	**39**	71	4	**75**	5	0	**5**
0900-0915	12	0	**12**	90	8	**98**	6	0	**6**	10	0	**10**	64	4	**68**	1	0	**1**
0915-0930	6	0	**6**	65	4	**69**	1	0	**1**	5	0	**5**	52	1	**53**	4	0	**4**
0930-0945	5	0	**5**	62	3	**65**	3	0	**3**	4	0	**4**	34	6	**40**	3	0	**3**
0945-1000	10	0	**10**	48	4	**52**	3	0	**3**	3	1	**4**	49	4	**53**	2	0	**2**
0700-1000	**125**	**1**	**126**	**818**	**52**	**870**	**79**	**1**	**80**	**126**	**1**	**127**	**744**	**50**	**794**	**72**	**0**	**72**
0700-0800	24	1	**25**	243	16	**259**	8	0	**8**	25	0	**25**	259	20	**279**	13	0	**13**
0715-0815	30	1	**31**	297	20	**317**	12	1	**13**	27	0	**27**	289	19	**308**	23	0	**23**
0730-0830	40	1	**41**	316	18	**334**	14	1	**15**	34	0	**34**	266	18	**284**	39	0	**39**
0745-0845	71	1	**72**	333	20	**353**	32	1	**33**	51	0	**51**	285	14	**299**	48	0	**48**
0800-0900	68	0	**68**	310	17	**327**	58	1	**59**	79	0	**79**	286	15	**301**	49	0	**49**
0815-0915	72	0	**72**	307	19	**326**	58	0	**58**	83	0	**83**	273	17	**290**	39	0	**39**
0830-0930	61	0	**61**	293	22	**315**	55	0	**55**	77	0	**77**	265	14	**279**	24	0	**24**
0845-0945	26	0	**26**	271	18	**289**	39	0	**39**	58	0	**58**	221	15	**236**	13	0	**13**
0900-1000	33	0	**33**	265	19	**284**	13	0	**13**	22	1	**23**	199	15	**214**	10	0	**10**

K&M TRAFFIC SURVEYS

DATE : 18th SEPTEMBER 2014

DAY : THURSDAY

LOCATION : A408 SIPSON RD, HEATHROW

HARMONDSWORTH LANE / SIPSON RD ROUNDABOUT

	MOVEMENT 19			MOVEMENT 20			MOVEMENT 21			MOVEMENT 22			MOVEMENT 23			MOVEMENT 24		
	SIPSON RD SOUTH LEFT TO HARMOND. LA			SIPSON RD SOUTH AHEAD NORTH			HARMONDSWORTH LA LEFT TO SIPSON RD N			HARMONDSWORTH LA RIGHT TO SIPSON RD S			SIPSON RD NORTH AHEAD SOUTH			SIPSON RD NORTH RIGHT TO HARMOND. LA		
	LIGHT	HGV	TOT	LIGHT	HGV	TOT	LIGHT	HGV	TOT	LIGHT	HGV	TOT	LIGHT	HGV	TOT	LIGHT	HGV	TOT
1600-1615	17	0	**17**	83	5	**88**	9	0	**9**	9	0	**9**	42	3	**45**	3	0	**3**
1615-1630	12	0	**12**	86	5	**91**	14	1	**15**	18	0	**18**	50	1	**51**	6	1	**7**
1630-1645	10	0	**10**	91	3	**94**	1	0	**1**	9	0	**9**	53	6	**59**	1	0	**1**
1645-1700	6	0	**6**	95	6	**101**	7	0	**7**	10	0	**10**	46	2	**48**	2	0	**2**
1700-1715	5	0	**5**	118	2	**120**	3	0	**3**	3	0	**3**	38	4	**42**	4	0	**4**
1715-1730	9	0	**9**	142	5	**147**	8	0	**8**	6	0	**6**	68	2	**70**	2	0	**2**
1730-1745	8	0	**8**	129	3	**132**	11	0	**11**	8	0	**8**	56	0	**56**	3	0	**3**
1745-1800	3	0	**3**	118	5	**123**	0	0	**0**	10	0	**10**	65	4	**69**	3	0	**3**
1800-1815	9	0	**9**	113	6	**119**	6	0	**6**	4	1	**5**	68	4	**72**	2	0	**2**
1815-1830	4	0	**4**	105	3	**108**	2	0	**2**	6	0	**6**	49	2	**51**	3	0	**3**
1830-1845	6	0	**6**	82	6	**88**	3	0	**3**	6	0	**6**	62	4	**66**	2	0	**2**
1845-1900	10	0	**10**	81	2	**83**	2	0	**2**	12	0	**12**	49	4	**53**	1	0	**1**
1600-1900	**99**	**0**	**99**	**1243**	**51**	**1294**	**66**	**1**	**67**	**101**	**1**	**102**	**646**	**36**	**682**	**32**	**1**	**33**
1600-1700	45	0	**45**	355	19	**374**	31	1	**32**	46	0	**46**	191	12	**203**	12	1	**13**
1615-1715	33	0	**33**	390	16	**406**	25	1	**26**	40	0	**40**	187	13	**200**	13	1	**14**
1630-1730	30	0	**30**	446	16	**462**	19	0	**19**	28	0	**28**	205	14	**219**	9	0	**9**
1645-1745	28	0	**28**	484	16	**500**	29	0	**29**	27	0	**27**	208	8	**216**	11	0	**11**
1700-1800	25	0	**25**	507	15	**522**	22	0	**22**	27	0	**27**	227	10	**237**	12	0	**12**
1715-1815	29	0	**29**	502	19	**521**	25	0	**25**	28	1	**29**	257	10	**267**	10	0	**10**
1730-1830	24	0	**24**	465	17	**482**	19	0	**19**	28	1	**29**	238	10	**248**	11	0	**11**
1745-1845	22	0	**22**	418	20	**438**	11	0	**11**	26	1	**27**	244	14	**258**	10	0	**10**
1800-1900	29	0	**29**	381	17	**398**	13	0	**13**	28	1	**29**	228	14	**242**	8	0	**8**

K&M TRAFFIC SURVEYS

DATE : 18th SEPTEMBER 2014

DAY : THURSDAY

LOCATION : A408 SIPSON RD, HEATHROW

SIPSON LANE / SIPSON RD ROUNDABOUT

	MOVEMENT 25			MOVEMENT 26			MOVEMENT 27			MOVEMENT 28			MOVEMENT 29			MOVEMENT 30		
	SIPSON RD NORTH LEFT TO SIPSON LA			SIPSON RD NORTH AHEAD SOUTH			SIPSON LANE EAST LEFT TO SOUTH			SIPSON LANE EAST RIGHT TO NORTH			SIPSON RD SOUTH AHEAD NORTH			SIPSON RD SOUTH RIGHT TO SIPSON LA E		
	LIGHT	HGV	TOT	LIGHT	HGV	TOT	LIGHT	HGV	TOT	LIGHT	HGV	TOT	LIGHT	HGV	TOT	LIGHT	HGV	TOT
0700-0715	28	0	**28**	23	3	**26**	10	1	**11**	17	0	**17**	24	2	**26**	20	1	**21**
0715-0730	36	3	**39**	51	2	**53**	3	0	**3**	30	0	**30**	37	3	**40**	6	0	**6**
0730-0745	23	3	**26**	42	6	**48**	13	0	**13**	32	1	**33**	44	4	**48**	11	0	**11**
0745-0800	40	1	**41**	41	2	**43**	11	0	**11**	32	1	**33**	51	6	**57**	26	1	**27**
0800-0815	53	0	**53**	30	2	**32**	13	0	**13**	49	1	**50**	52	5	**57**	15	0	**15**
0815-0830	38	1	**39**	33	3	**36**	10	0	**10**	46	0	**46**	50	1	**51**	17	0	**17**
0830-0845	59	2	**61**	42	3	**45**	7	0	**7**	44	2	**46**	80	5	**85**	11	0	**11**
0845-0900	62	2	**64**	48	2	**50**	26	0	**26**	21	0	**21**	36	3	**39**	15	0	**15**
0900-0915	38	0	**38**	36	4	**40**	14	1	**15**	38	2	**40**	64	6	**70**	17	0	**17**
0915-0930	29	0	**29**	28	1	**29**	10	0	**10**	31	0	**31**	40	4	**44**	10	0	**10**
0930-0945	16	2	**18**	22	4	**26**	12	0	**12**	27	0	**27**	40	3	**43**	11	0	**11**
0945-1000	24	3	**27**	28	2	**30**	8	1	**9**	31	0	**31**	27	4	**31**	14	1	**15**
0700-1000	**446**	**17**	**463**	**424**	**34**	**458**	**137**	**3**	**140**	**398**	**7**	**405**	**545**	**46**	**591**	**173**	**3**	**176**
0700-0800	127	7	**134**	157	13	**170**	37	1	**38**	111	2	**113**	156	15	**171**	63	2	**65**
0715-0815	152	7	**159**	164	12	**176**	40	0	**40**	143	3	**146**	184	18	**202**	58	1	**59**
0730-0830	154	5	**159**	146	13	**159**	47	0	**47**	159	3	**162**	197	16	**213**	69	1	**70**
0745-0845	190	4	**194**	146	10	**156**	41	0	**41**	171	4	**175**	233	17	**250**	69	1	**70**
0800-0900	212	5	**217**	153	10	**163**	56	0	**56**	160	3	**163**	218	14	**232**	58	0	**58**
0815-0915	197	5	**202**	159	12	**171**	57	1	**58**	149	4	**153**	230	15	**245**	60	0	**60**
0830-0930	188	4	**192**	154	10	**164**	57	1	**58**	134	4	**138**	220	18	**238**	53	0	**53**
0845-0945	145	4	**149**	134	11	**145**	62	1	**63**	117	2	**119**	180	16	**196**	53	0	**53**
0900-1000	107	5	**112**	114	11	**125**	44	2	**46**	127	2	**129**	171	17	**188**	52	1	**53**