

Job Name: Oxford Technology Park

Job No: 23588/5506

Note No: TN004 **Date:** 30/03/15

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Subject: HGV Traffic Impact from the Development

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1.	Introduction
	This note provides details of the likely impact of HGV traffic generated by the proposed Oxford Technology Park development, on Langford Lane, Kidlington.
	A Transport Assessment (TA) was submitted in support of an outline planning application for the proposed development (application reference number: 14/02067/OUT, Cherwell District Council). Oxfordshire County Council, as local highway authority, has been consulted and provided a review of the TA.
	OCC raised the following comments as part of their response dated 25 th February 2015:
	"The Transport Assessment gives no consideration to HGV traffic when this will clearly be an important factor in development."
	"no mention in the Transport Assessment is made of HGVs, which would clearly be important element of traffic to and from the proposed site, since it includes over 30 HGV loading bays it is not clear whether the capacity assessments of nearby junctions and the site access reflect the generated HGV traffic and proportion of HGV traffic."
	"The impact of HGVs at the site access and within the site could compound delays to car drivers. There is also a risk of vehicles being delayed going into the site because of HGV manoeuvring within the site."
	"A report on anticipated HGV movements will be required, together with tracking drawings to allow an assessment of this risk."
	"HGV swept path drawing for the access should be provided."
	"full HGV tracking will be required, covering full route through the site."
	This note provides a response to the points raised, including:
	 Clarifications in relation to HGV traffic generation assumptions made in the Transport Assessment
	 Confirmation that HGV traffic generation has been taken into account in the capacity assessments of nearby junctions
	Confirmation that the local road network can safely accommodate HGV traffic
	 Confirmation that the proposed site access junction can safely accommodate HGV movements without undue delay to other road users, as demonstrated in





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	vehicle tracking drawings submitted as part of the Transport Assessment
	 Suggested approach to guaranteeing the safe circulation of HGVs within the development, as phases of development come on line
	 Clarification as to the likely use of the development and the likely HGV traffic generation that can be expected.
2.	HGV Traffic Generation Assumptions made in the Transport Assessment
	The Transport Assessment is based on trip generation assumptions agreed with Oxfordshire County Council at the TA scoping stage (OCC's email dated 11 March 2014). Trip rates were derived from the TRICS database using multi-modal surveys. This allowed the derivation of vehicular trip rates as well as trip rates for HGVs and other modes of transport.
	Table 5.1 in the Transport Assessment details the <u>vehicular</u> trip rates used in the assessment. The relevant TRICS data used to derive these rates is provided in Appendix C of the TA. Table 5.1 is reproduced below for completeness.
	Table 2.1: Development Vehicular Trip Rates (Table 5.1 in the TA)

Land Use		AM Peak		PM Peak			
Lanu USE	ln	Out	Total	ln	Out	Total	
B1(a) Offices	1.533	0.141	1.674	0.111	1.602	1.713	
B1(b) Research & Development	1.191	0.078	1.269	0.086	0.914	1.0	
B8 Warehousing	0.214	0.090	0.304	0.051	0.165	0.216	

Table 5.2 in the TA provides the resulting vehicular traffic generation assumed in the assessment. Table 5.2 is reproduced below for completeness.

Table 2.2: Development Vehicular Trip Rates (Table 5.2 in the TA)

Land Use		AM Peak	(PM Peak			
Lanu USE	In	Out	Total	ln	Out	Total	
B1(a) Offices	183	17	199	13	191	204	
B1(b) Research & Development	53	3	57	4	41	45	
B8 Warehousing	47	20	67	11	36	48	
Total Vehicles	283	40	323	28	268	296	

(Note: This table takes account of rounding up/down)

It is accepted that, in the submitted TA, these trip rates were not presented disaggregated between heavy good vehicles and other vehicles. Using the data presented in Appendix C of the TA, the following tables provide the disaggregated trip





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	rates, assumed within the assessment.		

Table 2.3 : Development Vehicular Trip Rates – Disaggregated LV/PSV/HGV – based on TA assumptions

Land Use		AM Peak		PM Peak			
Land Use	ln	Out	Total	ln	Out	Total	
Light Vehicles							
B1(a) Offices	1.521	0.133	1.654	0.107	1.589	1.696	
B1(b) Research & Development	1.182	0.073	1.255	0.086	0.911	0.997	
B8 Warehousing	0.169	0.044	0.213	0.033	0.157	0.19	
PSV Vehicles							
B1(a) Offices	0.008	0.008	0.016	0.004	0.004	0.008	
B1(b) Research & Development	0	0	0	0	0	0	
B8 Warehousing	0	0	0	0	0	0	
Heavy Good Vehicles							
B1(a) Offices	0.004	0	0.004	0	0.009	0.009	
B1(b) Research & Development	0.009	0.005	0.014	0	0.003	0.003	
B8 Warehousing	0.044	0.046	0.09	0.018	0.008	0.026	

Based on these disaggregated trip rates, it is possible to derive the level of HGV traffic assumed to be generated by the proposed development, based on the trip generation assumptions made in the TA.

Table 2.4 : Development Vehicular Trip Generation – Disaggregated LV/PSV/HGV – based on TA assumptions

Land Use		AM Peak		PM Peak			
Lanu USE	In	Out	Total	In	Out	Total	
Light Vehicles							
B1(a) Offices	181	11	197	13	190	203	
B1(b) Research & Development	53	3	56	4	41	45	
B8 Warehousing	37	10	47	7	35	42	



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			AM Peak	:		PM Peak	:	
	Land Use	In	Out	Total	In	Out	Total	
	Total LV	271	29	300	24	265	289	
	PSV Vehicles							
	B1(a) Offices	1	1	2	0	0	0	
	B1(b) Research & Development	0	0	0	0	0	0	
	B8 Warehousing	0	0	0	0	0	0	
	Total LV	1	1	2	0	0	0	
	Heavy Good Vehicles							
	B1(a) Offices	0	0	0	0	1	1	
	B1(b) Research & Development	0	0	1	0	0	0	
	B8 Warehousing	10	10	20	4	2	6	
	Total HGV	11	10	21	4	3	7	
	% HGV			6.5%			2.4%	
	(Note: This table takes account of rounding up) In the AM peak hour, it is predicted that the proposed development would generate 21 HGV movements, two-way. This represents one HGV movement every 3 minutes, two-way. Furthermore, this analysis is based on an assessment of a typical B8 facility, whereas the nature and operation of the proposed Oxford Technology Park, although classified as B8, will be different and likely to result in a much lower HGV use on-site as detailed in Section 7 below. In conclusion, the TRICS analysis presented here indicates that the impact of the proposed development in terms of HGV traffic will be low and this analysis presents a robust assessment of the actual HGV traffic generation of the facilities proposed on the development.							
3.	Capacity Assessment an	d HGV	Traffic G	eneratio	n			
	PBA can confirm that the capacity assessments of nearby junctions as presented in the Transport Assessment take account of the assumed HGV traffic generation from the development, as presented in section 2 above. The capacity assessments presented in the TA have been carried out in pcus to reflect the impact that HGVs have on the operation and capacity of junctions. Using information in Table 2.4 above, it is possible to derive a traffic generation from the development in pcus, with one light vehicles accounting for one pcu and one heavy							
	good vehicle or PSV according assessments and reflects							ger size





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	when compared to light vehicles. Table 3.1 below details the derivation of development traffic generation numbers in pcus.

Table 3.1: Development Traffic Generation in pcus – based on TA assumptions

Land Use		AM Peal	(PM Peak			
Lanu USC	In	Out	Total	ln	Out	Total	
Light Vehicles	271	29	300	24	265	289	
PSV Vehicles	1	1	2	0	0	0	
Heavy Good Vehicles	11	10	21	4	3	7	
Total Vehicles	283	40	323	28	268	296	
Total pcus	295	51	346	32	271	303	

The capacity assessments are based on traffic flows presented in Figures 6.1 to 6.12 in the Transport Assessment. Figures 6.11 and 6.12 show the traffic assumed to be generated in and out of the development once fully built, in pcus. The following table summarises these trip generation assumptions in pcus and compares them to the total trip generation derived in pcus in Table 4 above.

Table 3.2: Development Traffic Generation in pcus – comparison

Land Use		AM Peal	(PM Peak			
Lanu USC	In	Out	Total	ln	Out	Total	
Total pcus – Table 4	295	51	346	32	271	303	
Total pcus – Figures 6.11 and 6.12	293	50		32	270		
Difference	2	1		0	1		

Accounting for rounding up, this demonstrates that the capacity assessments presented within the Transport Assessment have been carried out taking account of HGV traffic, as they have been carried out based on pcus, as is typical of transport assessments.

4. HGV Traffic and Local Road Network

The local road network is designed in a way that can accommodate the safe manoeuvring of heavy good vehicles:

- The proposed development is located next to existing employment development including the London Oxford Airport, the Oxford Office Village, and the Langford Locks industrial area, including a Parcel Force depot, Oxonian Park, and Moss Plastic Parts, which are all facilities likely to generate HGV traffic.
- More importantly, the development site is adjacent to the Oxford Motor Park, including together 8 car dealerships. These generate car transporter movements





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	on a regular basis.
	 These existing developments generate a large number of HGV movements and are therefore served by a road network that can accommodate these HGV movements.
	Furthermore, a review of Personal Injury Collision data presented in the Transport Assessment does not indicate any particular road safety issue related to HGV traffic in the Langford Lane area. None of the accidents recorded involve an HGV.
	Finally, as part of the transport assessment work, ATC counts were undertaken on Langford Lane. These suggest that currently the proportion of HGV traffic on Langford Lane is 19% in the AM peak, 17% in the PM peak and 18% over the day, on a weekday.
	The proportion of HGV traffic generated by the proposed development, based on the trip generation assumptions made in the Transport Assessment, would be 7% in the AM peak, 2% in the PM peak and 7% daily, two-way. As a result, the proposed development would not detrimentally affect the mix of traffic on Langford Lane, as the proportion of HGV within the total number of vehicles on Langford Lane would reduce.
	On that basis, it is considered that the level of HGV traffic generated by the proposed development, as assumed in the Transport Assessment, will not have a severe impact on the operation of the local road network, in terms of capacity or safety.
5.	HGV Traffic at the Site Access
	The proposed site access junction on Langford Lane is illustrated on Drawing 23588/001/001 Rev A, presented within the Transport Assessment.
	Drawing 23588/001/SK004, provided within the Transport Assessment, presents the vehicle swept path of an HGV manoeuvring in and out of the proposed site access junction.
	Drawing 23588/001/SK004 clearly demonstrates that the proposed site access junction can accommodate HGV traffic in and out. HGV traffic accessing and/or egressing the site will not lead to additional delay to other traffic.
6.	HGV Movements within the Proposed Development
	At the moment, planning permission for the proposed development is sought in outline form and the master plan presented in the application's supporting information is illustrative only. Undertaking a vehicle swept path analysis on the basis of the current development's master plan would not demonstrate much as a result.
	OCC, in their response, suggest that the following condition be attached to a planning permission for the development:
	"Prior to the commencement of the development [of each phase] thereby approved, full specification details (including construction, layout, surfacing, drainage) of the parking and manoeuvring areas shall be submitted to and approved in writing by the Local Planning Authority. Thereafter, and prior to first occupation of the development [of each phase], the parking and manoeuvring areas shall be provided on the site in accordance with the approved details and shall be retained unobstructed except for the parking and manoeuvring of vehicles at all times thereafter." [Our additions]
	Although the wording of this condition is likely to be modified to reflect the phased





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item	nature of the development, it points to the need to agree at reserved matters stage the details of the internal road layout and access/egress to/from phases of the development. It is suggested that vehicle swept path analysis will be done at this reserved matters stage within the context of a planning condition based on the principles set in OCC's suggested condition above (with our proposed additions).						
7.	HGV Traffic Generation and likely use of the Proposed Development for R&D The Transport Assessment treats the proposed B8 development on site as typical B8 warehousing use and considers the relevant trip rates derived by TRICS for this particular land use. As such, the level of HGV traffic expected from the development, as accounted for within the Transport Assessment and clarified within this Technical Note, is representative of a typical B8 warehousing use. However, the warehousing facilities proposed as part of the development are planned to accommodate a specific use related to the Research and Development activities of the potential users of the site. As such, the element of warehousing planned within the site will not necessarily be used as a typical B8 warehousing facility. It is more likely to be used for the storage of equipment and material necessary for the R&D activities of the site occupiers. We acknowledge that, for simplicity, it is expedient to make an assessment on a worst case (B8) basis, but the Oxford Technology Park is unlikely to generate repeated and frequent deliveries, leading to reduced HGV trip generation. In this respect, the analysis presented in the Transport Assessment and this Technical Note is likely to overestimate the HGV trip generation for the development and as a result to present a robust assessment of the impacts of the proposed development.						

DOCUMENT ISSUE RECORD

Technical Note No	Rev	Date	Prepared	Checked	Reviewed (Discipline Lead)	Approved (Project Director)
23588/1005/TN001	-	27.03.15	FC	FC	APR	APR
Job No/Brief/TN001	Α	07.08.12				

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