

Turing House Free School**Bus Impact Analysis**

1. Following the submission of the planning application for the Turing House School (THS), Transport for London (TfL) has requested a financial contribution towards bus enhancement. This was followed with a meeting on 25 April 2019 when it was agreed that the bus trips estimate provided would be reviewed with the most recent students' home postcode data. The revised analysis will also take into consideration student trips that are currently taking place to and from the two temporary school sites (Teddington site and Hampton site) and that the bus contributions will be estimated based on the net new trips.
2. The bus trips estimate, that was produced for the planning application submission (as of September 2018), consisted of four academic years including: three academic years at the Teddington Site and one academic year of prospective students at the Hampton Site.
3. The THS currently has three academic years at Teddington site, one academic year at Hampton site with the following occupancy:
 - i. Teddington site will operate Years 8, 9 and 10 with 328 students; and
 - ii. Hampton site will operate Year 7 with 125 students.
4. The mode share data survey collected by the school (as per Table 5.4 in the Transport Assessment 4185/002/02C) indicates that:
 - i. 60.5% of students at Teddington site travel by bus (328 students * 60.5%) amounting to 198 bus trips
 - ii. 42.4% of students at Hampton site travel by bus (125 students * 42.4%) amounting to 53 bus trips
 - iii. As of September 2019, 123 students are expected to join the school at Hampton site. It is expected that these students will follow the same mode of travel (ie 42.4%) and generate further 52 bus trips. Although these trips were not considered to align with the current TfL' bus loading data.
5. As such, currently, a total of 251 students generate trips on the existing bus routes.
6. Further analysis was undertaken to understand demand for the current bus routes in the vicinity of the temporary sites and to have a better understanding how this demand will change when the school is

relocated to the new permanent site.

Teddington school site

7. The mode share data collected by the school indicates that 60.1% of students currently travel by bus amounting to 198 bus trips as presented in Table 1.

Bus Routes	Direction	Demand per bus route [%]	Demand per bus route [students trips]
33	East of site	2.6%	5
	West of site	3.5%	7
281	South of site	0.7%	1
	North of site	21.9%	43
285	North-west of site	27.6%	55
	South-east of site	0.7%	1
481	North of site	23.9%	47
	South of site	0.3%	1
R68	South-west of site	9.6%	19
	North-east of site	1.3%	3
X26	North-west of site	7.8%	15
	South-east of site	0.3%	1
Total		100%*	198

Table 1: Student demand on buses at Teddington Site

8. Table 1 showed that the majority of students travel by routes 285, 481 and 281. A total of 48 students currently use bus route 481.

Hampton school site

9. The mode share data collected by the school indicates that 42.4% of students travel by bus amounting to 53 bus trips. Table 2 presents the results of the analysis with the percentage split per route applied

to the bus users (ie from September 2019).

Bus Routes	Direction	Demand per bus route [%]	Demand per bus route [students trips]
285	North-west of site	5.1%	3
	South-east of site	25.1%	13
R68	North of site	16.2%	9
	South of site	1.0%	1
R70	North of site	19.6%	10
	South of site	33.0%	17
Total		100%	53

Table 2: Student demand on buses at Hampton site

10. Table 2 showed that the majority of students would use route R70.

The permanent site

- The postcode data were analysed to understand future demand for buses once the school is relocated to the permanent site.
- The school undertook a pilot survey amongst students to understand how they would travel once the school is relocated to the permanent site. The survey has shown that 48.8% would travel by buses in the future years. This would amount to 512 bus trips.

Bus Routes	Direction	Demand per bus route [%]	Demand per bus route [students trips]
481	East of site	4.8%	25
	South of site	33.6%	172
H22	North of site	1.8%	9
	East of site	12.3%	63
110	East of site	6.9%	35

	West of site	0.0%	0
111	North of site	0.0%	0
	South of site	40.2%	206
H28	North-east of site	0.0%	0
	North-west of site	0.3%	2
Total		100%	512

Table 3: Predicted demand on buses at the permanent site

13. Table 3 shows that the majority of students would use routes 481 and 111 at the full occupation of the school at the permanent site.

Reduction in demand for buses at temporary sites

14. The analysis showed that the school currently generates 251 bus trips at both of the temporary sites. Once the school is relocated to the permanent site and would operate at full occupancy, this will be increased to 512 trips. As such, the net increase in demand for public buses will be 261 trips.
15. It is understood that due to the relocation of the school, students will seek to use different bus routes and the current demand, occurring on routes 285, 281, R68 and R70, will be relocated to different bus routes such as 481 and 111. The predicted reduction in the current demand is presented in Table 4.

Bus Routes	Demand per bus route [student trips]
281	44
285	72
R68	32
Other buses (33, X26, R70)	55
481	48
Total	251

Table 4: Predicted reduction in demand on buses following re-location of the school

Increase in demand for buses at the permanent site

16. The predicted impacts on buses for the morning and afternoon school peak hour are presented in Table 5.
17. The revised analysis considers students that already use bus route 481 as well as after-school clubs that are expected to be attended by circa 20% of students. As such demand for buses in the school afternoon peak hour will be lower than in the morning peak and is expected to amount to 390 bus trips.

Bus routes	Direction	Total Impact on Buses in the Morning Peak Hour (07:30-08:30)	Total Impact on Buses in the Afternoon Hours (15:00-16:00)
481	Towards Cromwell Road Bus Station	0	138
	Towards West London Mental Health Trust	172	0
H22	Towards Manor Road	9	50
	Towards Bell Road / Bell Corner	63	7
110	Towards Hounslow Bus Station	35	0
	Towards West Middlesex Hospital	0	28
111	Towards Heathrow Central Bus Station	0	165
	Towards Cromwell Road Bus Station	206	0
H28	Towards Bulls Bridge Tesco	0	1
	Towards Tesco Osterley	2	0
Total		488	390

Table 4: Predicted reduction in demand on buses following the school relocation

Conclusions

18. The relocation of the school to the permanent site would result in an increased demand on routes 481 and 111 which would amount to the following:

- Route 111 - 206 passengers in northbound direction in the morning peak (07:30-08:30) and 165 passengers in southbound direction in the afternoon peak (15:00-16:00).
- Route 481 - 172 passengers in northbound direction in the morning peak (07:30-08:30) and 138 passengers in southbound direction in the afternoon peak (15:00-16:00).

19. It should be recognised that the re-location of the school will result in a reduction in demand on route 285 (circa 72 passengers). This demand is equivalent to one bus journey. To address the future changes in demand for local buses, consideration should be given to re-locating funding from Route 285 to Route 111 or 481 to provide a continuous service to existing students.

Funding proposal

20. Based on the above findings, it is proposed that the following funding will be put in place to address the local increase in demand for buses.
- Route 481 – To replace the single deck bus to double deck bus for the existing two return journeys. TfL has confirmed that this is a cost of £20k per annum per journey. The funding will be sought for 5 years, equating to a total of **£200k**.
 - Route 481 – An additional return journey £75k per annum. The funding will be sought for 5 years, equating to a total of **£375k**.
 - Route 111 – An additional return journey £75k per annum. The funding will be sought for 5 years, equating to a total of **£375k**.
 - Route 111 – A second additional return journey should be provided as part of TfL's on-going changes to address the future changes in demand for local buses. Consideration should be given to re-locating funding from Route 285 to Route 111 to provide continuous a service to existing students.
21. The total bus contribution is therefore proposed to be **£950k**.