WYTHENSHAWE PARK SPORTS HUB
WYTHENSHAWE ROAD, MANCHESTER
TRAFFIC PROJECTIONS 08/12/2025

1.1 Introduction

1.1.1 This brief note has been prepared in order to outline the methodology and results of traffic distribution forecasting that has been undertaken to inform the Wythenshawe Park Sports Hub project.

1.2 Proposed Traffic Generation

1.2.1 The traffic generation of the proposed development is forecast in the Transport Statement (TS) (LTP, 2025), covering both the existing and proposed future uses for the site. The proposals are expected to result in a net increase of +20 two-way vehicle trips during the typical weekday network AM peak hour (08:00-09:00), with +66 expected during the typical weekday network PM peak hour (17:00-18:00).

1.2.2 As the PM peak hour impact exceeds 30 two-way trips, the distribution of this traffic has been considered in Section 1.3 below.

1.2.3 It is acknowledged that there will be seasonal differences in the peak days throughout the year. The peak times for the different facilities will be spread throughout the year, with the AGPs expected to be at their busiest during the winter months and the athletics, cycling and baseball facilities expected to be busier in the summer. Therefore, it is considered that the peak trips for the different facilities will be offset throughout the year and will not occur at the same time.

1.3 Projected Traffic Distribution & Assignment

1.3.1 In the absence of more site-specific data for Wythenshawe Park from the Applicant's team, the distribution of traffic associated with the application site has been predicted utilising a gravity model based upon commuting patterns of the existing workplace population within the '*Manchester 048*' MSOA (Middle-layer Super Output Area), within which the site is situated. '*Location of usual residence and place of work by method of travel to work'* data from the 2011 National Census (ONS, 2014) shows the proportion of local residents travelling to each workplace destination (MSOAs and local authority districts) by mode of travel. This dataset allows for a sufficiently detailed gravity model, and even though the dataset is based on a journey purpose that does not fully represent the majority of site trips (commuting rather than leisure/sports/health), it is considered to be a reasonable proxy for movements to/from the site, in the absence more site-specific data for Wythenshawe Park.

1.3.2 This trip distribution data has been combined with an assessment of route choice (traffic assignment) to determine the likely distribution of development traffic across the highway network. The predicted traffic assignment has been undertaken utilising journey planning tools to help determine the relative attractiveness of alternative routes with consideration of influences such as the location and size of settlements and known existing traffic conditions on the relevant routes. The defines zones utilised within the gravity model calculation are illustrated in Figure 1 below.

Figure 1: Gravity Model Diagram

Map Data: Google, Airbus © 2025

1.3.3 It is noted that there are other potential traffic routes to/from the site between the junctions with Princess Parkway (M56) and Moor Road junctions, particularly on the northern side of Wythenshawe Road. However, these are generally residential roads and not more major routes. Development turning traffic levels at each of these smaller junctions is expected to be low, so therefore the gravity model has focused on the more major traffic routes, with routes to/from the residential areas on the northern side of Wythenshawe reflected in the Orton Road zone (Zone C).

1.3.4 The detailed calculations of the gravity model are attached as Appendix 1, with the results summarised in Table 1 below, with the predicted distribution of additional peak hour trips generated by the development.

Table 1: Gravity Model Results

Zone	Route	%	Existing	Proposed	Net Change
A	Moor Road	5.7%	4	8	+4
B	Wythenshawe Road (W)	10.4%	7	14	+7
C	Orton Road	7.0%	5	9	+5
D	Princess Parkway (N)	20.5%	14	28	+14
E	Palatine Road	5.5%	4	7	+4
F	Princess Parkway (S)	51.0%	36	69	+34
	TOTAL	**100.00%**	**70**	**136**	**+66**

*The total may not represent the sum of its parts due to rounding.

1.3.5 Based on these estimated, the proposals may increase network PM peak hour flows by over 30 at the following junctions, which are all expected to be coordinated together in terms of the traffic signal timings:

- Wythenshawe Road/Sale Road;
- Wythenshawe Road/Princess Parkway Northbound Slips; and
- Wythenshawe Road/Princess Parkway Southbound Slips/Palatine Road.

2. REFERENCES

LTP (Local Transport Projects Ltd), 2025. Wythenshawe Park Sports Hub, Wythenshawe Road, Manchester – Transport Statement (Final Issue 1A, 02/10/2025).

Appendix 1 – Gravity Model

Proposed Trip Distribution & Assignment - Gravity Model

Destination MSOA: Manchester 048

Stage 1: Trip Distribution

Area of Workplace	Type	All people	Works mainly at or from home	Underground, metro, light rail, tram	Train	Bus, minibus or coach	Taxi or minicab	Motorcycle, scooter or moped	Driving a car or van	Passenger in a car or van	Bicycle	On foot	Other
Stockport	Local Authority	140	0	0	2	16	0	0	113	7	2	0	0
Wigan	Local Authority	48	0	0	0	1	0	0	42	4	0	1	0
E02001091 : Manchester 047	MSOA	81	0	0	0	2	0	0	34	4	5	36	0
E02001088 : Manchester 044	MSOA	67	0	0	0	15	1	0	29	7	0	15	0
E02001093 : Manchester 049	MSOA	47	0	0	0	13	1	3	26	1	0	3	0
Salford	Local Authority	36	0	2	0	2	0	0	30	0	0	2	0
E02001095 : Manchester 051	MSOA	84	0	0	0	17	1	0	27	6	4	29	0
Tameside	Local Authority	31	0	0	0	2	0	0	28	1	0	0	0
E02001094 : Manchester 050	MSOA	50	0	0	0	7	0	2	23	4	0	14	0
E02001096 : Manchester 052	MSOA	35	0	0	0	5	1	0	22	5	1	1	0
Cheshire East	Local Authority	29	0	0	1	0	0	0	23	3	0	1	1
Oldham	Local Authority	21	0	0	0	0	0	0	21	0	0	0	0
E02001279 : Trafford 021	MSOA	29	0	0	0	1	0	0	20	4	0	4	0
Bury	Local Authority	20	0	0	0	0	0	0	19	1	0	0	0
Warrington	Local Authority	23	0	0	1	1	0	0	19	2	0	0	0
E02001090 : Manchester 046	MSOA	37	0	0	0	9	0	1	17	3	2	5	0
E02001097 : Manchester 053	MSOA	36	0	0	0	14	2	0	15	2	1	2	0
E02001280 : Trafford 022	MSOA	29	0	1	0	1	0	0	17	0	5	5	0
Bolton	Local Authority	23	0	1	0	0	0	0	17	4	0	1	0
Cheshire West and Chester	Local Authority	16	0	0	1	0	0	0	15	0	0	0	0
E02001276 : Trafford 018	MSOA	22	0	0	0	5	0	0	12	0	4	1	0
E02001281 : Trafford 023	MSOA	16	0	0	0	0	0	0	12	1	1	2	0
Rochdale	Local Authority	21	0	0	0	0	0	0	11	10	0	0	0

Vehicle Trip Generation by Mode	%
113	18.71%
42	6.95%
34	5.63%
30	4.97%
30	4.97%
30	4.97%
28	4.64%
28	4.64%
25	4.14%
23	3.81%
23	3.81%
21	3.48%
20	3.31%
19	3.15%
19	3.15%
18	2.98%
17	2.81%
17	2.81%
17	2.81%
15	2.48%
12	1.99%
12	1.99%
11	1.82%
604	100.00%

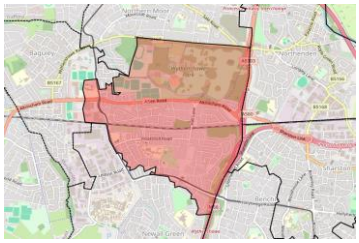
Stage 2: Traffic assignment for each O-D pair

Area of Workplace	Type	Route Assignment A	B	C	D	E	F	TOTAL
Stockport	Local Authority				20.0%		80%	100%
Wigan	Local Authority				50.0%		50%	100%
E02001091 : Manchester 047	MSOA	60.0%	40.0%					100%
E02001088 : Manchester 044	MSOA			100.0%				100%
E02001093 : Manchester 049	MSOA					50%	50%	100%
Salford	Local Authority				100.0%			100%
E02001095 : Manchester 051	MSOA	50.0%					50%	100%
Tameside	Local Authority						100%	100%
E02001094 : Manchester 050	MSOA						100%	100%
E02001096 : Manchester 052	MSOA						100%	100%
Cheshire East	Local Authority						100%	100%
Oldham	Local Authority						100%	100%
E02001279 : Trafford 021	MSOA			100.0%				100%
Bury	Local Authority				100.0%			100%
Warrington	Local Authority				40.0%		60%	100%
E02001090 : Manchester 046	MSOA					100%		100%
E02001097 : Manchester 053	MSOA						100%	100%
E02001280 : Trafford 022	MSOA			100.0%				100%
Bolton	Local Authority				100.0%			100%
Cheshire West and Chester	Local Authority						100%	100%
E02001276 : Trafford 018	MSOA			100.0%				100%
E02001281 : Trafford 023	MSOA			100.0%				100%
Rochdale	Local Authority				60.0%		40%	100%

Stage 3: Total zonal distribution of traffic

Area of Workplace	Type	Route Assignment A	B	C	D	E	F	TOTAL
Stockport	Local Authority	0.00%	0.00%	0.00%	3.74%	0.00%	14.97%	18.71%
Wigan	Local Authority	0.00%	0.00%	0.00%	3.48%	0.00%	3.48%	6.95%
E02001091 : Manchester 047	MSOA	3.38%	2.25%	0.00%	0.00%	0.00%	0.00%	5.63%
E02001088 : Manchester 044	MSOA	0.00%	0.00%	4.97%	0.00%	0.00%	0.00%	4.97%
E02001093 : Manchester 049	MSOA	0.00%	0.00%	0.00%	0.00%	2.48%	2.48%	4.97%
Salford	Local Authority	0.00%	0.00%	0.00%	4.97%	0.00%	0.00%	4.97%
E02001095 : Manchester 051	MSOA	2.32%	0.00%	0.00%	0.00%	0.00%	2.32%	4.64%
Tameside	Local Authority	0.00%	0.00%	0.00%	0.00%	0.00%	4.64%	4.64%
E02001094 : Manchester 050	MSOA	0.00%	0.00%	0.00%	0.00%	0.00%	4.14%	4.14%
E02001096 : Manchester 052	MSOA	0.00%	0.00%	0.00%	0.00%	0.00%	3.81%	3.81%
Cheshire East	Local Authority	0.00%	0.00%	0.00%	0.00%	0.00%	3.81%	3.81%
Oldham	Local Authority	0.00%	0.00%	0.00%	0.00%	0.00%	3.48%	3.48%
E02001279 : Trafford 021	MSOA	0.00%	3.31%	0.00%	0.00%	0.00%	0.00%	3.31%
Bury	Local Authority	0.00%	0.00%	0.00%	3.15%	0.00%	0.00%	3.15%
Warrington	Local Authority	0.00%	0.00%	0.00%	1.26%	0.00%	1.89%	3.15%
E02001090 : Manchester 046	MSOA	0.00%	0.00%	0.00%	0.00%	2.98%	0.00%	2.98%
E02001097 : Manchester 053	MSOA	0.00%	0.00%	0.00%	0.00%	0.00%	2.81%	2.81%
E02001280 : Trafford 022	MSOA	0.00%	2.81%	0.00%	0.00%	0.00%	0.00%	2.81%
Bolton	Local Authority	0.00%	0.00%	0.00%	2.81%	0.00%	0.00%	2.81%
Cheshire West and Chester	Local Authority	0.00%	0.00%	0.00%	0.00%	0.00%	2.48%	2.48%
E02001276 : Trafford 018	MSOA	0.00%	0.00%	1.99%	0.00%	0.00%	0.00%	1.99%
E02001281 : Trafford 023	MSOA	0.00%	1.99%	0.00%	0.00%	0.00%	0.00%	1.99%
Rochdale	Local Authority	0.00%	0.00%	0.00%	1.09%	0.00%	0.73%	1.82%
Sub-total		5.70%	10.36%	6.95%	20.59%	5.46%	51.03%	100.00%

Zone	Route	Distribution Split	Existing	Proposed	Net Change
A	Moor Road	5.7%	4	8	4
B	Wythenshawe Road (W)	10.4%	7	14	7
C	Orton Road	7.0%	5	9	5
D	Princess Parkway (N)	20.5%	14	28	14
E	Palatine Road	5.5%	4	7	4
F	Princess Parkway (S)	51.0%	36	69	34
TOTAL		100.00%	70	136	66



Notes

Source: 2011 National Census - Travel to work flows

Table WU03EW - Location of usual residence and place of work by method of travel to work (MSOA level)

Based on 2011 Middle-Layer Super Output Areas (MSOA)

Neighbouring local authorities only, others regions

MSOA/LA with fewer than 10 people travelling by a vehicle trip generating modes have been excluded

Area of Workplace	Type	All people	Works mainly at or from home	Underground, metro, light rail or tram	Train	Bus, minibus or coach	Taxi or minicab	Motorcycle, scooter or moped	Driving a car or van	Passenger in a car or van	Bicycle	On foot	Other
E02001268 : Trafford 010	MSOA	9	0	0	0	0	0	0	9	0	0	0	0
E02001274 : Trafford 016	MSOA	9	0	0	0	0	0	0	9	0	0	0	0
E02001282 : Trafford 024	MSOA	12	0	0	0	3	0	0	8	0	0	1	0
East Midlands	Region	19	0	0	0	8	0	0	8	0	0	1	0
E02001270 : Trafford 012	MSOA	11	0	0	0	2	0	0	8	0	0	1	0
E02001278 : Trafford 020	MSOA	11	0	0	0	3	0	0	8	0	0	0	0
E02001083 : Manchester 039	MSOA	14	0	0	0	3	0	0	7	2	2	0	0
E02001269 : Trafford 011	MSOA	7	0	0	0	0	0	0	7	0	0	0	0
E02001277 : Trafford 019	MSOA	9	0	0	0	1	0	0	7	0	1	0	0
E02001284 : Trafford 026	MSOA	7	0	0	0	0	0	0	7	0	0	0	0
E02001072 : Manchester 028	MSOA	9	0	0	0	1	0	0	6	0	2	0	0
E02001077 : Manchester 033	MSOA	10	0	0	0	2	0	0	6	2	0	0	0
E02001081 : Manchester 037	MSOA	8	0	0	0	2	0	0	6	0	0	0	0
E02001085 : Manchester 041	MSOA	9	0	0	0	1	0	0	6	0	0	1	0
E02001261 : Trafford 003	MSOA	7	0	0	0	1	0	0	6	0	0	0	0
E02001273 : Trafford 015	MSOA	7	0	0	0	1	0	0	6	0	0	0	0
E02001283 : Trafford 025	MSOA	9	0	0	0	2	0	0	6	0	0	1	0
Liverpool	Local Authority	11	0	2	1	0	0	0	6	1	0	1	0
St. Helens	Local Authority	6	0	0	0	0	0	0	6	0	0	0	0
E02001074 : Manchester 030	MSOA	9	0	0	0	4	0	0	5	0	0	0	0
E02001089 : Manchester 045	MSOA	5	0	0	0	0	0	0	5	0	0	0	0
E02000912 : Manchester 055	MSOA	6	0	0	0	0	0	0	5	0	0	1	0
E02001259 : Trafford 001	MSOA	7	0	0	0	2	0	0	5	0	0	0	0
E02001264 : Trafford 006	MSOA	5	0	0	0	0	0	0	5	0	0	0	0
E02001271 : Trafford 013	MSOA	6	0	0	0	1	0	0	5	0	0	0	0
E02001272 : Trafford 014	MSOA	6	0	0	0	0	0	0	5	0	1	0	0
Sefton	Local Authority	8	0	0	1	0	0	0	5	0	0	0	0
E02001056 : Manchester 012	MSOA	7	0	0	0	0	0	0	4	0	0	3	0
E02001057 : Manchester 013	MSOA	7	0	0	0	1	0	0	4	0	0	2	0
E02001065 : Manchester 021	MSOA	6	0	0	0	0	0	0	4	0	0	2	0
E02001075 : Manchester 031	MSOA	7	0	0	0	2	0	0	4	0	0	1	0
E02001078 : Manchester 035	MSOA	7	0	0	0	2	0	0	4	1	0	1	0
E02001087 : Manchester 043	MSOA	4	0	0	0	0	0	0	4	0	0	0	0
E02001286 : Trafford 028	MSOA	4	0	0	0	0	0	0	4	0	0	0	0
Wales	Country	4	0	0	0	0	0	0	4	0	0	0	0
E02001055 : Manchester 011	MSOA	7	0	0	0	1	0	0	3	0	0	3	0
E02001062 : Manchester 018	MSOA	3	0	0	0	0	0	0	3	0	0	0	0
E02001076 : Manchester 034	MSOA	5	0	0	0	1	0	0	3	0	0	1	0
E02001082 : Manchester 038	MSOA	6	0	0	0	3	0	0	3	0	0	0	0
E02001084 : Manchester 040	MSOA	10	0	0	0	3	0	0	3	1	2	1	0
E02001263 : Trafford 005	MSOA	3	0	0	0	0	0	0	3	0	0	0	0
E02001267 : Trafford 009	MSOA	7	0	0	0	0	0	0	3	0	1	3	0
E02001275 : Trafford 017	MSOA	4	0	0	0	0	0	0	3	0	0	1	0
Halton	Local Authority	3	0	0	0	0	0	0	3	0	0	0	0
E02001046 : Manchester 002	MSOA	3	0	0	0	1	0	0	2	0	0	0	0
E02001048 : Manchester 004	MSOA	4	0	1	0	1	0	0	2	0	0	0	0
E02001052 : Manchester 008	MSOA	2	0	0	0	0	0	0	2	0	0	0	0
E02001063 : Manchester 019	MSOA	4	0	0	0	0	2	0	2	0	0	0	0
E02001064 : Manchester 020	MSOA	5	0	0	0	2	0	0	2	1	0	0	0
E02001080 : Manchester 036	MSOA	3	0	0	0	0	0	0	2	0	1	0	0
E02001086 : Manchester 042	MSOA	5	0	0	0	1	0	0	2	0	0	2	0
E02000916 : Manchester 059	MSOA	3	0	0	0	1	0	0	2	0	0	0	0
E02001260 : Trafford 002	MSOA	3	0	0	0	1	0	0	2	0	0	0	0
E02001285 : Trafford 027	MSOA	2	0	0	0	0	0	0	2	0	0	0	0
Fylde	Local Authority	2	0	0	0	0	0	0	2	0	0	0	0
Knowsley	Local Authority	2	0	0	0	0	0	0	2	0	0	0	0
Lancaster	Local Authority	2	0	0	0	0	0	0	2	0	0	0	0
Wirral	Local Authority	2	0	0	0	0	0	0	2	0	0	0	0
West Midlands	Region	2	0	0	0	0	0	0	2	0	0	0	0
Yorkshire and The Humber	Region	3	0	0	0	0	0	0	2	1	0	0	0
E02001045 : Manchester 001	MSOA	3	0	0	0	0	0	0	1	0	0	2	0
E02001047 : Manchester 003	MSOA	1	0	0	0	0	0	0	1	0	0	0	0
E02001049 : Manchester 005	MSOA	1	0	0	0	0	0	0	1	0	0	0	0
E02001067 : Manchester 023	MSOA	1	0	0	0	0	0	0	1	0	0	0	0
E02001070 : Manchester 026	MSOA	2	0	0	0	0	0	0	1	1	0	0	0
E02001071 : Manchester 027	MSOA	1	0	0	0	0	0	0	1	0	0	0	0
E02001073 : Manchester 029	MSOA	2	0	0	0	1	0	0	1	0	0	0	0
E02001076 : Manchester 032	MSOA	2	0	0	0	1	0	0	1	0	0	0	0
E02000914 : Manchester 057	MSOA	1	0	0	0	0	0	0	1	0	0	0	0
E02000915 : Manchester 058	MSOA	1	0	0	0	0	0	0	1	0	0	0	0
E02000917 : Manchester 060	MSOA	1	0	0	0	0	0	0	1	0	0	0	0
E02001262 : Trafford 004	MSOA	2	0	0	0	0	0	0	1	1	0	0	0
E02001265 : Trafford 007	MSOA	1	0	0	0	0	0	0	1	0	0	0	0
Blackburn with Darwen	Local Authority	1	0	0	0	0	0	0	1	0	0	0	0
Blackpool	Local Authority	1	0	0	0	0	0	0	1	0	0	0	0
Chorley	Local Authority	2	0	0	0	0	0	0	1	1	0	0	0
Preston	Local Authority	2	0	0	0	1	0	0	1	0	0	0	0
Rossendale	Local Authority	1	0	0	0	0	0	0	1	0	0	0	0
South Ribble	Local Authority	1	0	0	0	0	0	0	1	0	0	0	0
West Lancashire	Local Authority	1	0	0	0	0	0	0	1	0	0	0	0
East	Region	1	0	0	0	0	0	0	1	0	0	0	0
London	Region	1	0	0	0	0	0	0	1	0	0	0	0
E02001050 : Manchester 006	MSOA	0	0	0	0	0	0	0	0	0	0	0	0
E02001051 : Manchester 007	MSOA	1	0	0	0	1	0	0	0	0	0	0	0
E02001053 : Manchester 009	MSOA	0	0	0	0	0	0	0	0	0	0	0	0
E02001059 : Manchester 015	MSOA	4	0	0	0	1	0	0	0	2	0	1	0
E02001061 : Manchester 017	MSOA	3	0	0	0	1	0	0	0	1	0	1	0
E02001066 : Manchester 022	MSOA	2	0	0	0	2	0	0	0	0	0	0	0
E02001068 : Manchester 024	MSOA	2	0	0	0	1	0	0	0	1	0	0	0
E02001069 : Manchester 025	MSOA	4	0	0	0	1	0	0	0	1	0	2	0
E02000902 : Manchester 054	MSOA	1	0	0	0	1	0	0	0	0	0	0	0
E02000913 : Manchester 056	MSOA	0	0	0	0	0	0	0	0	0	0	0	0
E02001266 : Trafford 008	MSOA	2	0	0	0	1	0	0	0	1	0	0	0
Allerdale	Local Authority	0	0	0	0	0	0	0	0	0	0	0	0
Barrow-in-Furness	Local Authority	0	0	0	0	0	0	0	0	0	0	0	0
Burnley	Local Authority	0	0	0	0	0	0	0	0	0	0	0	0
Carlisle	Local Authority	0	0	0	0	0	0	0	0	0	0	0	0
Copeland	Local Authority	0	0	0	0	0	0	0	0	0	0	0	0
Eden	Local Authority	0	0	0	0	0	0	0	0	0	0	0	0
Hyndburn	Local Authority	0	0	0	0	0	0	0	0	0	0	0	0
Pendle	Local Authority	0	0	0	0	0	0	0	0	0	0	0	0
Ribble Valley	Local Authority	0	0	0	0	0	0	0	0	0	0	0	0
South Lakeland	Local Authority	0	0	0	0	0	0	0	0	0	0	0	0
Wyre	Local Authority	0	0	0	0	0	0	0	0	0	0	0	0
North East	Region	0	0	0	0	0	0	0	0	0	0	0	0
South East	Region	1	0	0	0	1	0	0	0	0	0	0	0
South West	Region	0	0	0	0	0	0	0	0	0	0	0	0

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