Moreland Residential (UK)

Sion Court, Twickenham

Transport Statement

May 2024

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Contents

Appendices

1 INTRODUCTION

1.1 Caneparo Associates has been appointed by Moreland Residential (UK) ('the Applicant') to provide traffic and transport advice in relation to the proposed development at Sion Court, Twickenham, TW1 3DD ('the Site'), located within the London Borough of Richmond upon Thames (LBRuT).

1.2 The Site is located within Twickenham, approximately 650m (8-minute walk) southeast of Twickenham Station and approximately 200m north of the River Thames.

1.3 The proposed development comprises the demolition of 19 lock-up garages and 1 vacant residential flat located to the rear of Sion Court, to provide 5 residential units (3 x 2b3p and 2 x 1b2p). No additional car parking will be provided for the proposed residential units. The Architect's proposed layout plans are included at **Appendix A**.

1.4 This Transport Statement examines the effects of the development on the local transport network. It also considers practical issues such as accessibility, cycle parking, trip generation, servicing and refuse storage and collection.

1.5 The remainder of this report is structured as follows:

- Section 2 summarises the existing situation;
- Section 3 sets out the Site's accessibility;
- Section 4 describes the development proposals;
- Section 5 reviews the relevant transport planning policy;
- Section 6 considers the trip generation of the proposed development; and
- Section 7 presents a summary and conclusion.

2 EXISTING SITUATION

2.1 The Site is located in Twickenham, within 650m (8-minute walk) of Twickenham Station and is situated approximately 200m north of the River Thames. The surrounding area is largely residential in nature, with a mix of low-mid rise 'court' style blocks of flats and large semi-detached dwellings. The Site Location is shown at **Figure 1** below.

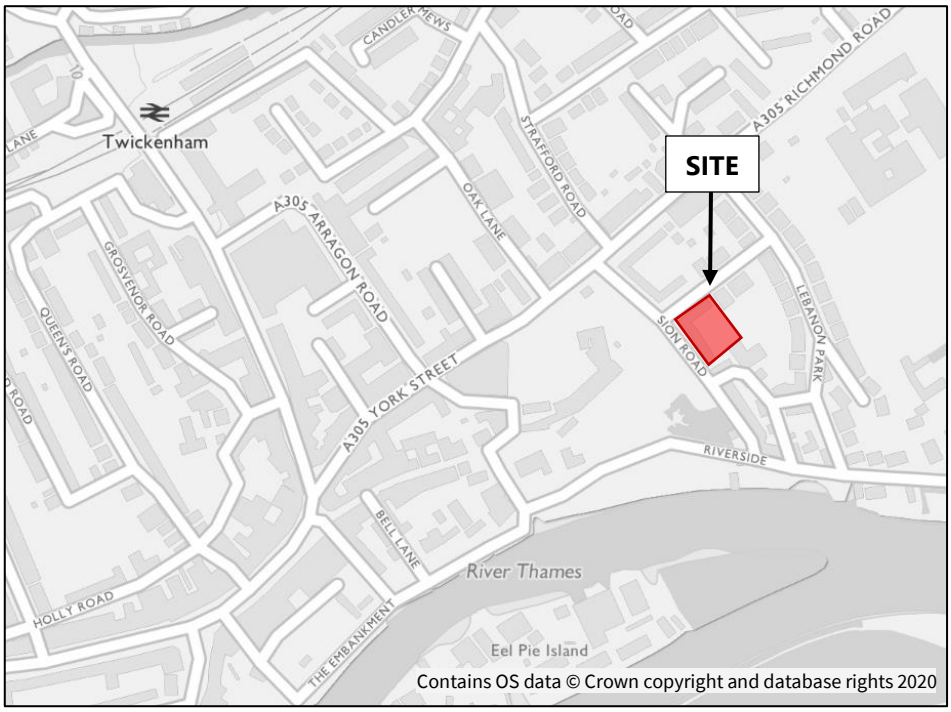


Figure 1: Site Location Plan

2.2 A vehicular access road is provided adjacent to the western façade of the building (the 'Western Access Route') between the southern corner of the Site from Sion Road and the northeastern corner of the Site onto Lebanon Park.

2.3 A further vehicle access road (the 'Rear Access Road') route is provided between these accesses to the garages located within the rear of the Site (as shown at **Figure 2** below); this space also historically allowed vehicles to park informally, as shown within the photo at **Figure 3**.

2.4 The management team of the building has addressed the previous informal, unsafe and unauthorised parking on the communal amenity area at the rear courtyard of Sion Court by preventing access to the garages and informal parking via the Rear Access Road, which was closed off using bollards from 1st July 2020, therefore preventing any parking within the rear of the Site. Currently, only emergency vehicles are allowed to enter the rear courtyard, which will remain fully pedestrian.

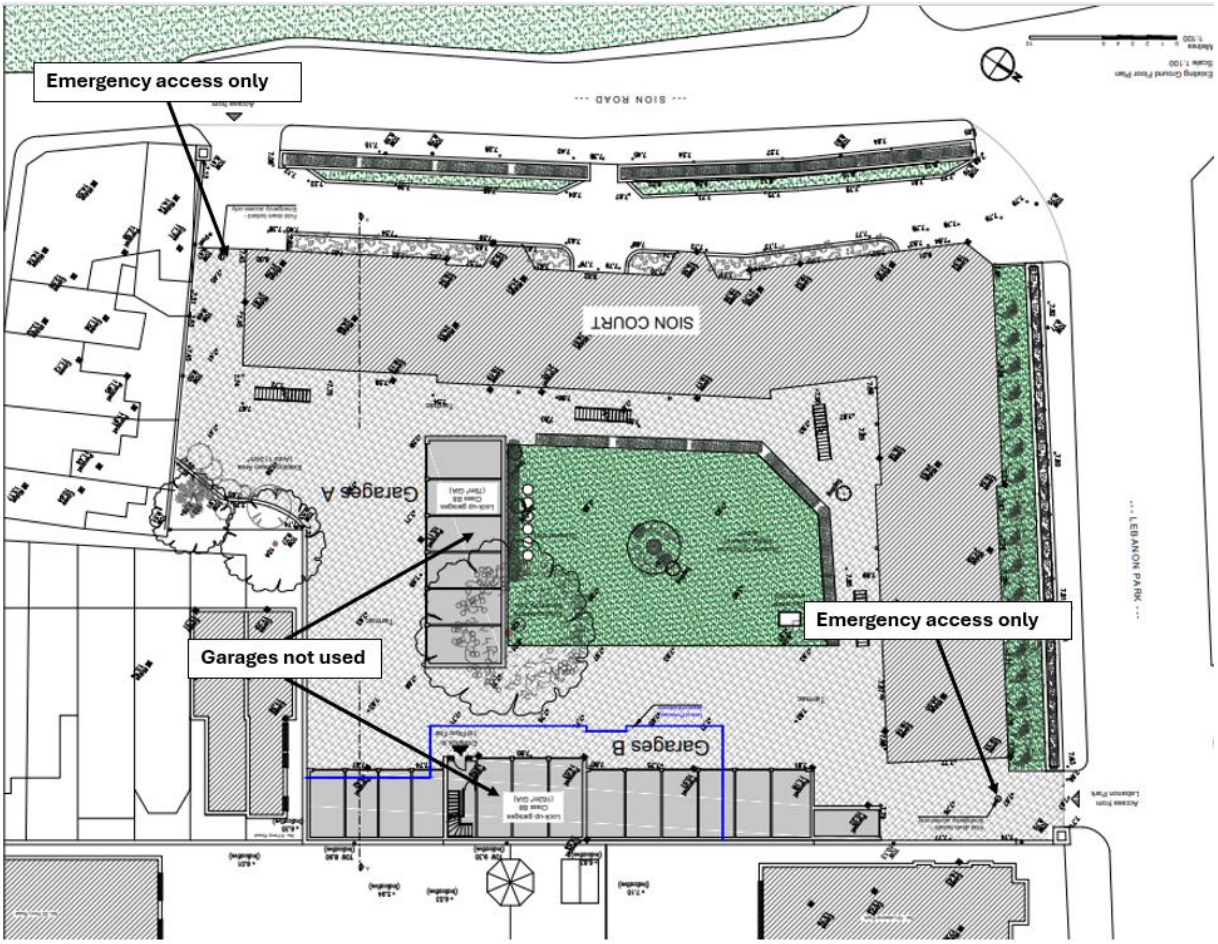


Figure 2: Existing Site Layout

Figure 3: Rear Access Road to Existing Garages and Informal On-site Parking

Local Highway Network

Sion Road

2.5 The Site takes frontage onto Sion Road, which is a local route providing access between Riverside to the southeast and Richmond Road to the northwest. The road provides a narrow carriageway for vehicles, with resident permit holder parking bays provided on the eastern side of the road adjacent to the Site and along the western side of the road to the north. A mixture of single and double yellow lines are present on Sion Road.

Lebanon Park

2.6 Lebanon Park borders the Site to the north and provides access from Sion Park to the southwest, and splitting to the east turning to the north and south. Along the Site boundary, Lebanon Park facilitates two-way movement for vehicles and provides residents parking bays / pay and display bays located on northern and southern sides of the route.

Controlled Parking Zone

2.7 The surrounding roads are located within Richmond Controlled Parking Zone (CPZ) 'D' which is operational Monday to Saturday 08:30-18:30.

3 SITE ACCESSIBILITY

3.1 The Site is highly accessible by all modes with a good network of footpaths, cycle facilities and public transport services in the immediate vicinity.

Healthy Streets

3.2 The Healthy Streets approach is set out as part of the Mayor's Transport Strategy (2018) which puts human health and experience at the centre of planning. The aims of the strategy are to encourage all Londoners to do at least 20 minutes of active travel each day by 2041. To this end TfL has defined 20-minute walking and cycling distances as suitable for making trips by these modes.

Access by Walking

3.3 Footway provision in the vicinity of the Site is good with footways provided on all desire lines. To the south of the Site, a footway is provided on the eastern side of Sion Road only, with a western footway also provided adjacent to the Site and further to the north. Dropped kerbs are also provided on all surrounding footways at vehicle crossovers.

3.4 **Table 3.1** sets out details of approximate distances between the Site and local amenities and public transport services which are all located within a 20-minute walk.

Table 3.1: Approximate Distances to Local Amenities & Public Transport Opportunities

Amenity	Location	Distance (metres)	Approx. Walk Time (mins)
Local Amenities			
York House Gardens	Sion Road	50	1
Supermarket	Richmond Road	250	3
GP Surgery	Oak Lane	350	4
Bank	London Road	500	6
Post Office	London Road	650	8
Gym	London Road	750	9
Public Transport Opportunities			
Lebanon Court (Stop 'F')	Richmond Road	150	2
Lebanon Court (Stop 'S')	Richmond Road	200	2
Twickenham Station	London Road	650	8

3.5 The table above demonstrates that several amenities and facilities are available to users of the Site within a reasonable walking distance.

Access by Cycling

3.6 On-street short-stay cycle parking spaces are available on King Street within Twickenham town centre, where 14 Sheffield stands (28 spaces) are provided. A further 2 Sheffield stands (4 spaces) are also located adjacent to the Co-op supermarket located on Richmond Road, 250m from the Site.

3.7 **Figure 2** below indicates a 20-minute cycle distance from the Site, which also indicates the area for which cycling has the potential to replace driving for distances up to 5 kilometres. This includes areas such as Teddington, Fulwell, Lampton, Ham, North Sheen, Kew and Ham.

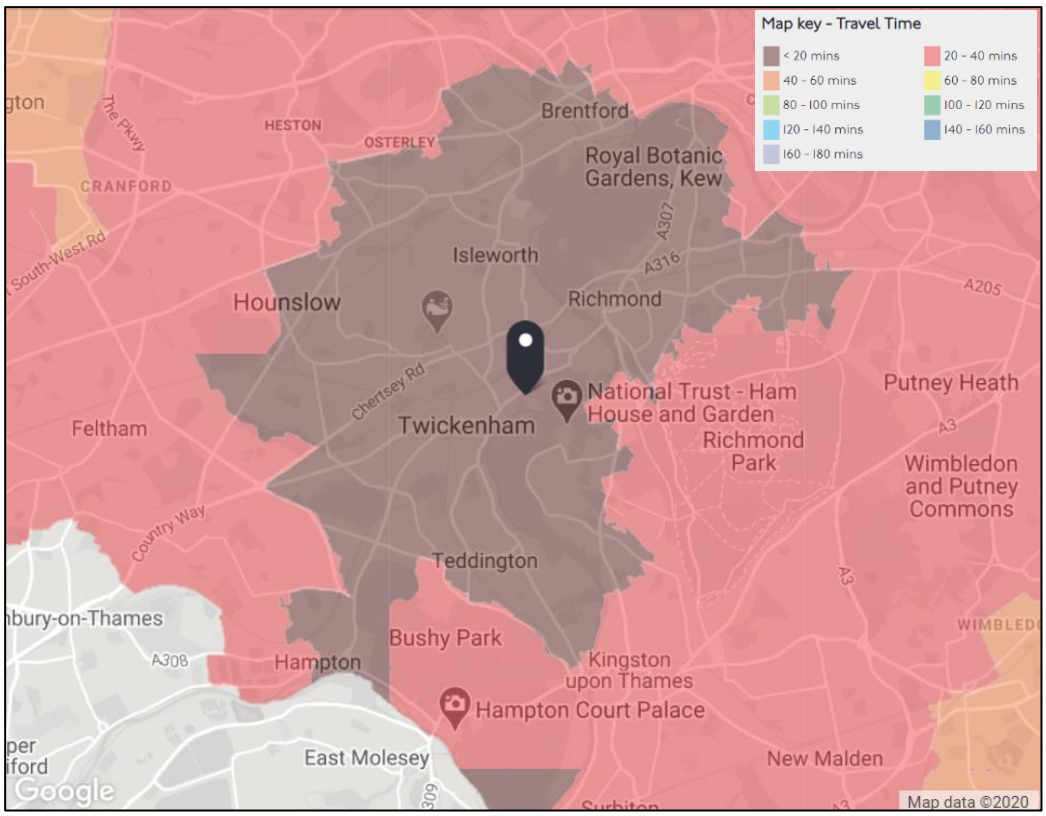


Figure 2: 20-minute cycle distance from the Site. (Source: TfL)

Public Transport

Bus Services

3.8 The nearest bus stop (Lebanon Court 'Stop F') is located 150m to the northeast of the Site on Richmond Road, providing access to southbound services. A further bus stop for northbound services (Lebanon Court 'Stop S') is located 200m to the northeast also on Richmond Road.

3.9 Bus services 33, 281, 267, 110, 290, 490, H22, R68 and R70 are available within walking distance of the Site. A copy of the local TfL Bus Spider Map is included at **Appendix B**, which shows the local bus service connectivity.

Rail Services

3.10 Twickenham Railway Station is located approximately 650m northwest of the Site. The station provides access to National Rail services operated by South Western Railway and is located on the Waterloo – Reading / Kingston line, as well as the Kingston Loop and Hounslow loop. Approximately 16 trains arrive / depart the station during typical off-peak hours.

Public Transport Accessibility Level (PTAL)

3.11 Public Transport Accessibility Levels (PTALs) are a theoretical measure of the accessibility of a given point to the public transport network, taking into account walk access time and service availability.

3.12 The PTAL is categorised in six levels, 1 to 6 where 6 represents an excellent level of accessibility and 1 a poor level of accessibility. It is then further sub-sectioned into 'a' and 'b', with 'a' being at the lower end of the spectrum and 'b' at the higher.

3.13 The PTAL rating of the Site is 5, meaning the Site has a 'very good' level of accessibility to public transport. **Appendix C** contains the TfL PTAL summary.

Car Clubs

3.14 Car clubs offer a viable alternative to owning a car for people living / working in the vicinity, particularly for those that require the use of a car infrequently. There are several car club bays operated by Zipcar in the vicinity of the Site, as follows:

- Sion Road – 110m north of the Site (1-minute walk)
- Richmond Road – 500m northeast of the Site (6-minute walk)
- Grosvenor Road – 850m northwest of the Site (11-minute walk)
- Queens Road – 850m northwest of the Site (11-minute walk)

4 DEVELOPMENT PROPOSAL

4.1 The proposed development comprises the demolition of 19 vacant lock-up garages and 1 existing flat located to the rear of Sion Court, to provide 5 residential units (2 x 1b2p and 3 x 2b3p), one of which will be allocated for disabled resident(s). A copy of the Architect's ground floor layout plan has been included at **Appendix A**.

Access

4.2 The Rear Access Road into the Site is currently blocked to cars with bollards which will remain in place to prevent access by vehicles, with the exception of emergency vehicles and disabled parking. The bollard onto Lebanon Court will be electronic and a suitable remote key fob will be provided to the disabled resident to enable them to access their parking space conveniently.

4.3 No vehicular access will be provided into the Site via the Sion Road access, which will also continue to be secured through the provision of a bollard.

4.4 Pedestrian access to the residential units will be provided via both Sion Road and the former Rear Access Road from and Lebanon Park with new footway paving in place.

Parking

Car Parking

4.1 A single parking space for the blue badge holder will be provided at the Site to take access from the Rear Access Road via Lebanon Park. The parking space will be allocated to Unit 1, which will be for disabled resident(s) use and an electronic bollard will continue to be in place at the rear access which will only permit access to the disabled parking space or any emergency vehicles.

4.2 No additional car parking will be provided at the Site for the 4 remaining proposed units. This is in line with policy at all levels, considering the accessible nature of the Site and opportunities for travel by bus and rail. A permit free agreement will be in place for the new residential units to prevent any future residents obtaining a parking permit to park their vehicle on-street.

4.3 With the exception of Unit 1 which will be provided with disabled parking, residents of the new units will be made aware that their units are car-free prior to taking occupation, and that no parking is available on-site or on the surrounding streets to accommodate vehicles.

Cycle Parking

4.4 The proposal includes the provision of a communal cycle store comprising 14 two-tier racks (28 spaces) for the proposed dwellings, equivalent to more than 5 spaces per dwelling which is line with London Plan policy. The cycle parking will be available for residents and visitors to the Site. The cycle parking will be provided within an enclosed, secure and weatherproof cycle storage area within the Site and will be easily accessible to all units via the internal pedestrian path.

Servicing & Waste Collection

4.5 The existing Site makes use of on-street servicing opportunities for all delivery and servicing activity and refuse collections. The proposals will retain the same strategy for the proposed residential units.

4.6 Each of the residential units will be provided with internal refuse storage. Refuse collection at the Site will be administered by on-site management personnel, who will extend the current waste management arrangement for the existing 36 units at Sion Court to the proposed units. As part of the management regime, refuse and recycling will be collected daily from the front garden of each proposed unit to an allocated refuse storage point in the neighbouring building.

5 RELEVANT TRANSPORT PLANNING POLICY

National Policy

National Planning Policy Framework (December 2023)

5.1 The latest version of the National Planning Policy Framework (NPPF) was published in December 2023 and sets out the Government's planning policies for England and how these are expected to be applied.

5.2 Chapter 9 – 'Promoting Sustainable Transport' sets out central Government national transport policy.

5.3 The chapter notes at paragraph 108 that:

'Transport issues should be considered from the earliest stages of plan-making and development proposals, so that:

a) The potential impacts of development on transport networks can be addressed;

b) Opportunities from existing or proposed transport infrastructure, and changing technology and usage, are realised – for example in relation to the scale, location or density of development that can be accommodated;

c) Opportunities to promote walking, cycling and public transport use are identified and pursued;

d) The environmental impacts of traffic and transport infrastructure can be identified, assessed, and taken into account – including appropriate opportunities for avoiding and mitigating any adverse effects, and for new environmental gains; and,

e) Patterns of movement, streets, parking, and other transport considerations are integral to the design of schemes and contribute to making high quality places.'

5.4 The chapter continues at paragraph 109 by stating:

'The planning system should actively manage patterns of growth in support of these objectives. Significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes. This can help to reduce congestion and emissions and improve air quality and public health. However, opportunities to maximise sustainable transport solutions will vary between urban and rural areas, and this should be taken into account in both plan-making and decision-making.'

5.5 When considering development proposals paragraph 114 notes that:

'In assessing sites that may be allocated for development in plans, or specific applications for development, it should be ensured that:

"In assessing sites that may be allocated for development in plans, or specific applications for development, it should be ensured that:

Appropriate opportunities to promote sustainable transport modes can be – or have been- taken up, given the type of development and its location;

a) Safe and suitable access to the site can be achieved for all users;

b) the design of streets, parking areas, other transport elements and the content of associated standards reflects current national guidance, including the National Design Guide and the National Model Design Code; and

c) Any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree."

5.6 With regards to assessing the impact of development, paragraph 115 and 116 states:

'Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe.'

'Within this context, applications for development should:

a) Give priority first to pedestrian and cycle movements, both within the scheme and with neighbouring areas; and second -so far as possible – to facilitating access to high quality public transport, with layouts that maximise the catchment area for bus or other public transport services, and appropriate facilities that encourage public transport use;

b) Address the needs of people with disabilities and reduced mobility in relation to all modes of transport;

c) Create places that are safe, secure, and attractive – which minimise the scope for conflicts between pedestrians, cyclists, and vehicles, avoid unnecessary street clutter, and respond to local character and design standards;

d) Allow for the efficient delivery of goods, and access by service and emergency service vehicles; and

e) Be designed to enable charging of plug-in and other ultra-low emission vehicles in safe, accessible and convenient locations.'

5.7 The chapter concludes at paragraph 117 that:

'All developments that will generate significant amounts of movement should be required to provide a travel plan, and the application should be supported by a transport statement or transport assessment so that the likely impacts of the proposal can be assessed.'

Regional Guidance

The London Plan (March 2021)

5.8 The London Plan adopted in March 2021 sets out all planning policy for London. Six core 'good growth' policies are identified and state the following with regards to transport:

"Policy GG2 Making the best use of land – Point G: Plan for good local walking, cycling and public transport connections to support a strategic target of 80 per cent of all journeys using sustainable travel, enabling car-free lifestyles that allow an efficient use of land, as well as using new and enhanced public transport links to unlock growth.

Policy GG3 Creating a healthy city – Point B: Promote more active and healthy lives for all Londoners and enable them to make healthy choices.

Policy GG3 Creating a healthy city – Point C: Use the Healthy Streets Approach to prioritise health in all planning decisions."

5.9 Policy T6 Car Parking states the following:

"B. Car-free development should be the starting point for all development proposals in places that are (or are planned to be) well-connected by public transport.

L. Where sites are redeveloped, parking provision should reflect the current approach and not be re-provided at previous levels where this exceeds the standards set out in this policy."

5.10 Table 10.2 of the London Plan sets out the cycle parking minimum standards, as summarised in **Table 5.1** below.

Table 5.1: Cycle Parking Minimum Standards	
Use Class	**Minimum Cycle Parking**
C3 Dwellings	Long-stay: 1 space per studio or 1 person 1-bedroom dwelling 1.5 spaces per 2-person 1 bedroom dwelling 2 spaces per all other dwellings Short-stay: 5 to 40 dwellings: 2 spaces, thereafter: 2 spaces per 40 dwellings

The Mayor's Transport Strategy (MTS) (March 2018)

5.11 The Mayor published the Transport Strategy (MTS) in March 2018. One of the MTS's aims is for 80 per cent of journeys to be made by sustainable modes. The MTS vision states:

"The central aim of this strategy – the Mayor's Vision – is to create a future London that is not only home to more people, but is a better place for all those people to live in.

The success of London's future transport system relies upon reducing London's dependency on cars in favour of increased walking, cycling and public transport use."

Local Policy

London Borough of Richmond upon Thames Local Plan (2018)

5.12 The Richmond Local Plan, adopted in July 2018, sets out LBRuT's policies and guidance for the development of Richmond over the next 15 years to 2033. This document supersedes the previously adopted Core Strategy and Development Management Plan documents.

5.13 Policy LP 44 sets out how the Council will work in partnership to promote safe, sustainable and accessible transport solutions, which minimise the impacts of development. The Council will:

A. *"Location of development – Encourage high trip generating development to be located in areas with good public transport with sufficient capacity, or which are capable of supporting improvements to provide good public transport accessibility and capacity, taking account of local character and context.*

B. *Walking and Cycling – Ensure that new development is designed to maximise permeability within and to the immediate vicinity of the development site through the provision of safe and convenient walking and cycling routes, and to provide opportunities for walking and cycling, including through the provision of links and enhancements to existing networks.*

C. *Public Transport – Ensure that major new developments maximise opportunities to provide safe and convenient access to public transport services. Proposals will be expected to support improvements to existing services and infrastructure where no capacity currently exists or is planned to be provided. Protect existing public transport interchange facilities unless suitable alternative facilities can be provided which ensure the maintenance of the existing public transport operations. Applications will need to include details setting out how such re-provision will be secured and provided in a timely manner.*

D. *The Road Network – Ensure that new development does not have a severe impact on the operation, safety or accessibility to the local or strategic highway networks. Any impacts on the local or strategic highway networks, arising from the development itself or the cumulative effects of development, including in relation to on-street parking, should be mitigated through the provision of, or contributions towards, necessary and relevant transport improvements. In assessing planning applications the cumulative impacts of development on the transport network will be taken into account. Planning applications will need to be supported by the provision of a Transport Assessment if it is a major development, and a Transport Statement if it is a minor development."*

5.14 Policy LP 45 sets out he Council's policy to *"make provision for the accommodation of vehicles in order to provide for the needs of the development while minimising the impact of car based travel including on the operation of the road network and local environment, and ensuring making the best use of land. It will achieve this by:*

- *Requiring new development to provide for car, cycle, 2 wheel and, where applicable, lorry parking and electric vehicle charging points, in accordance with the standards set out in Appendix 3. Opportunities to minimise car parking through its shared use will be encouraged.*
- *Car free housing developments may be appropriate in locations with high public transport accessibility, such as areas with a PTAL of 5 or 6, subject to:*

    c. *demonstrating that proper controls can be put in place to ensure that the proposal will not contribute to on-street parking stress in the locality."*

5.15 The LBRuT Car and Cycle Parking standards are presented in **Table 5.2** below.

Table 5.2: Richmond Local Plan Car and Cycle Parking Standards		
Land Use	**Car Parking Standard**	**Cycle Parking Standard**
Residential	PTALs 4-6: As per London Plan although local circumstances, CPZ times and on-street parking conditions will need to be assessed	As per London Plan

Policy Summary

5.16 The location of the Site benefits from good accessibility to public transport facilities and realistic opportunities for the use of active modes of transport, meaning the newly provided units are highly suited for the proposed use. The proposal is for car-free development, therefore all users will be able to make use of sustainable modes of travel to travel to/from the Site. The proposed development is therefore considered to be in accordance with local, national and regional policy.

6 TRIP GENERATION

6.1 This section considers the potential traffic and transport effects of the proposed development.

6.2 Given the scale and nature of the planning application, the number of trips likely to be generated by the proposed development will be very low. The proposal seeks to remove 19 disused garages and 1 residential unit, and to provide 5 residential units.

6.3 A multi-modal trip generation assessment has been undertaken to determine the trip generation and subsequent impact of the proposed residential units. The trip rates presented within this assessment have been obtained from the TRICS database for sites of similar uses located within London, demonstrating the resultant trip generation for the AM Peak (08:00-09:00), PM (17:00-18:00) and daily (07:00-21:00), as shown in **Table 6.1** below. The TRICS output has been provided at **Appendix D**.

Table 6.1: Total Person Residential Trip Generation (5 units)

Period	Person Trip Rates			Person Trip Generation		
	In	Out	Total	In	Out	Total
AM Peak (08:00-09:00)	0.091	0.738	0.829	0	4	4
PM Peak (17:00-18:00)	0.433	0.230	0.07	2	1	3
Daily (07:00-21:00)	3.480	3.323	6.803	17	17	34

6.4 **Table 6.1** above demonstrates that the Site will generate up to approximately 4 two-way person trips during the worst-case peak hour, with 34 two-way person trips generated throughout the day. The vast majority of trips made to and from the proposed units are forecast to be made by public transport modes, with a smaller proportion of trips also undertaken by walking and cycling.

6.5 As the net uplift of units is 4 as compared to the existing situation, it is considered that the impact of the proposals on the public transport network will be minimal, also given the very good accessibility of the Site and the number of public transport services available.

7 SUMMARY AND CONCLUSION

Summary

7.1 Caneparo Associates has been appointed by Moreland Residential (UK) ('the Applicant') to provide traffic and transport advice in relation to the proposed development at Sion Court, Twickenham, TW1 3DD, which is located within the London Borough of Richmond upon Thames (LBRuT).

7.2 The existing Site comprises land to the rear of Sion Court, including 19 lock-up garages and 1 existing vacant flat. The rear of the site was previously used for informal car parking, however the Rear Access Road to the garages has been closed since 1st July 2020, therefore none of the garages or surrounding space are currently used for storing or parking vehicles, although some garages are still in use for storage.

7.3 The proposed development comprises the demolition of the existing garage and flat buildings to provide 5 residential units (2 x 2p1b and 3 x 2b3p). A single disabled parking space will be provided and allocated to Unit 1, for which access will be provided from the Rear Access Road. An electronic bollard will be in place to control access to the rear access, to permit access to the disabled parking space and for emergency vehicles only. Pedestrian and cycle access will be provided from both Lebanon Park and Sion Court via paved footways.

7.4 Car parking will not be provided for the 4 remaining residential units and the Applicant is willing to accept a permit-free agreement for these dwellings to prevent new residents from parking their vehicles on-street.

7.5 A total of 14 two tier racks (28 spaces) will be provided for the new residential units and visitors to the Site, which is in accordance with London Plan minimum cycle parking standards. These will be located within a secure, enclosed and weatherproof storage area located external to the residential units.

7.6 It has been calculated that during the worst-case scenario peak hour, up to 4 trips will be made to and from the proposed units. It is anticipated that the majority of trips will be made by public transport modes, with a small proportion also undertaken by walking and cycling. It is therefore considered that the impact of the proposals on the public transport network will be minimal.

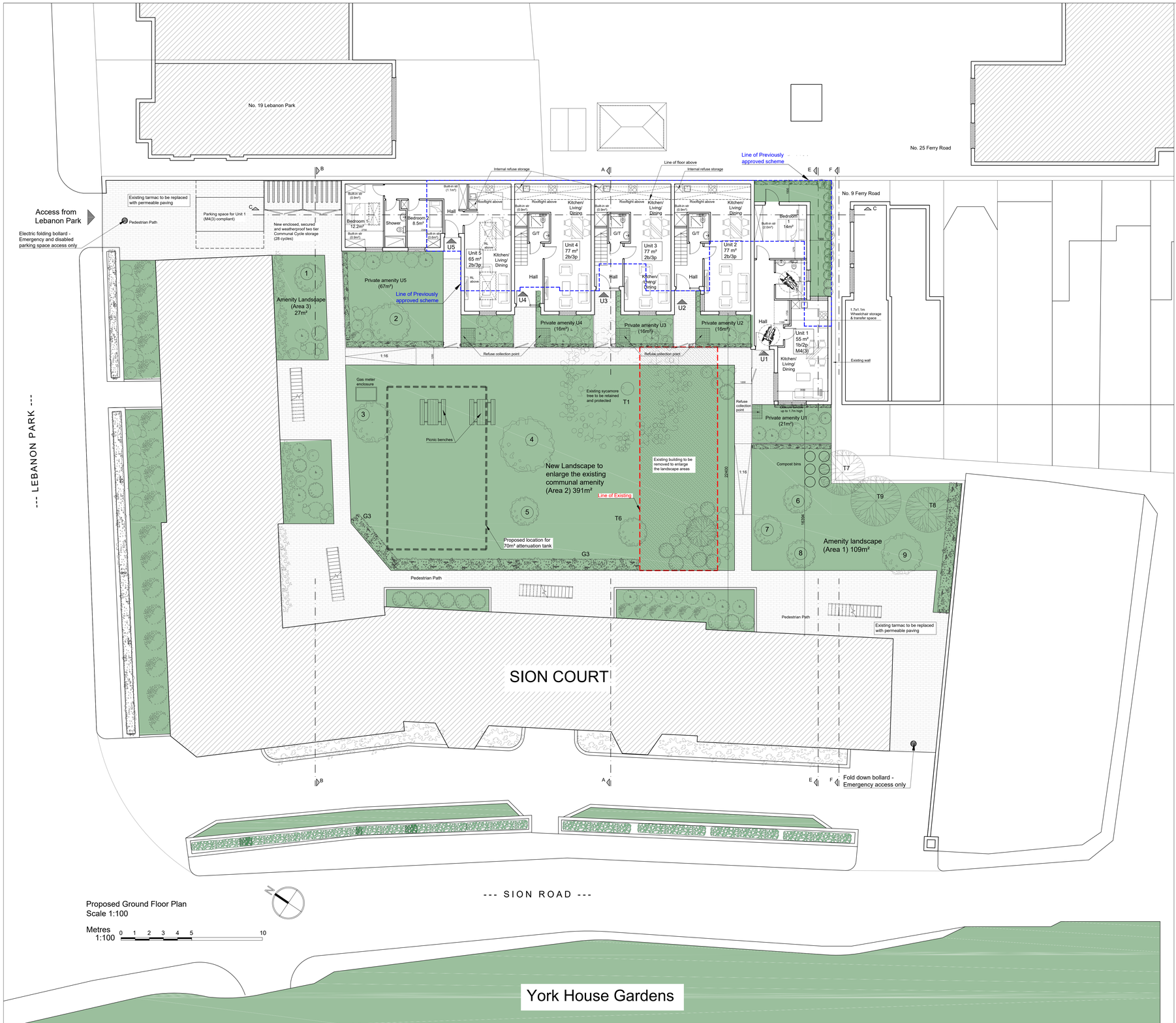
7.7 All servicing and refuse collection for the proposed units will continue to be undertaken on-street as per the existing situation. Each of the residential units will be provided with internal

refuse storage and site management personnel will transport waste from the residential units to the allocated refuse store as part of the waste management regime.

Conclusion

7.8 In conclusion, it is considered that the development proposals are reasonable and appropriate, meeting the key test of the NPPF and paragraph 109, which states that: *"Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe."*

Appendix A



Proposed Ground Floor Plan
Scale 1:100

Metres
1:100 0 1 2 3 4 5 10

Minimum Gross Internal Areas (GIA) and Storage					
	No. of bedrooms / persons	Min. London Plan flat area (m²)	Proposed flat area (m²)	Proposed private amenity (m²)	Proposed built-in storage (m²)
Unit 1	1b2p	50m² (1 storey)	55.6m²	39m²	2.1m²
Unit 2	2b3p (2storey)	70m² (2 storey)	77m²	21.5m²	3.62m²
Unit 3	2b3p (2storey)	70m² (2 storey)	77m²	21.5m²	3.62m²
Unit 4	1b2p (2storey)	58m² (2 storey)	71.8m²	21.5m²	2.22m²
Unit 5	2b3p	61m² (1 storey)	65m²	67m²	2.69m²

Amenity Landscape Areas			
	Existing	Proposed	Added
	COMMUNAL FOR ALL RESIDENTS		
Amenity Landscape 1 (m²)	34	109	75
Amenity Landscape 2 (m²)	300	391	91
Amenity Landscape 3 (m²)	-	27	27
TOTAL (m²)	334	527	**193**
	PRIVATE		
Private Amenity Landscape (m²)	-	100	100
	GREEN ROOFS		
Green Roofs (m²)	-	191	191

The existing Amenity Landscape is 334m².
The proposal adds Communal amenity landscape of **193m²**
New Communal Amenity Lansdcape area is a **Total of 527m²**.
Total Landscape area (including Private amenity landscape and Green roofs) is **818m²**.

WASTE MANAGEMENT PLAN

The existing Site makes use of on-street servicing opportunities for all delivery and servicing activity and refuse collections. The proposals will retain the same strategy for the proposed residential units.

Each of the residential units will be provided with internal refuse storage.

Refuse collection at the Site will be administered by on-site management personnel, who will extend the current waste management arrangement for the existing 36 units at Sion Court to the proposed units.

As part of the management regime, refuse and recycling will be collected daily from the front garden of each proposed unit to an allocated refuse storage point in the neighbouring building at Lebanon Court. Both buildings have the same managing agents and the same arrangement.

NEW TREE PLANTING

1. Thorn, Crataegus prunifolia Splendens, 12-14cm, 65litre
2. Crab apple, Malus hupehensis, 12-14cm, 45litre
3. Tibetan cherry, Prunus serrula Tibetica, 12-14cm, 45litre
4. Golden rain tree, Koelruteria paniculata 20-25cm, 250litre.
5. Flowering cherry, Prunus pandora 12-14cm, 45litre
6. 7. 8. Birch, Betula albosinensis Fascination,14-16cm, 65 litre
9. Amelanchier Ballerina, 10-12cm, 45litre

Additional Notes

REV	DATE	MODIFICATION

PROJECT
New Residential Units at
Sion Court
Twickenham, TW1 3DD

CLIENT
Moreland Residential (UK)

ZONE	DISCIPLINE	STATUS
A	ARCHITECTURE	PLANNING
LEVEL	DRAWING NUMBER	REVISION
A	SC-PP4-05	
PAPER SIZE	A0 SHEET	
DRAWING TITLE	Proposed Ground Floor Plan	
SCALE	DATE	DRAWN	CHECKED
1:100	08/04/2024	YS	YS

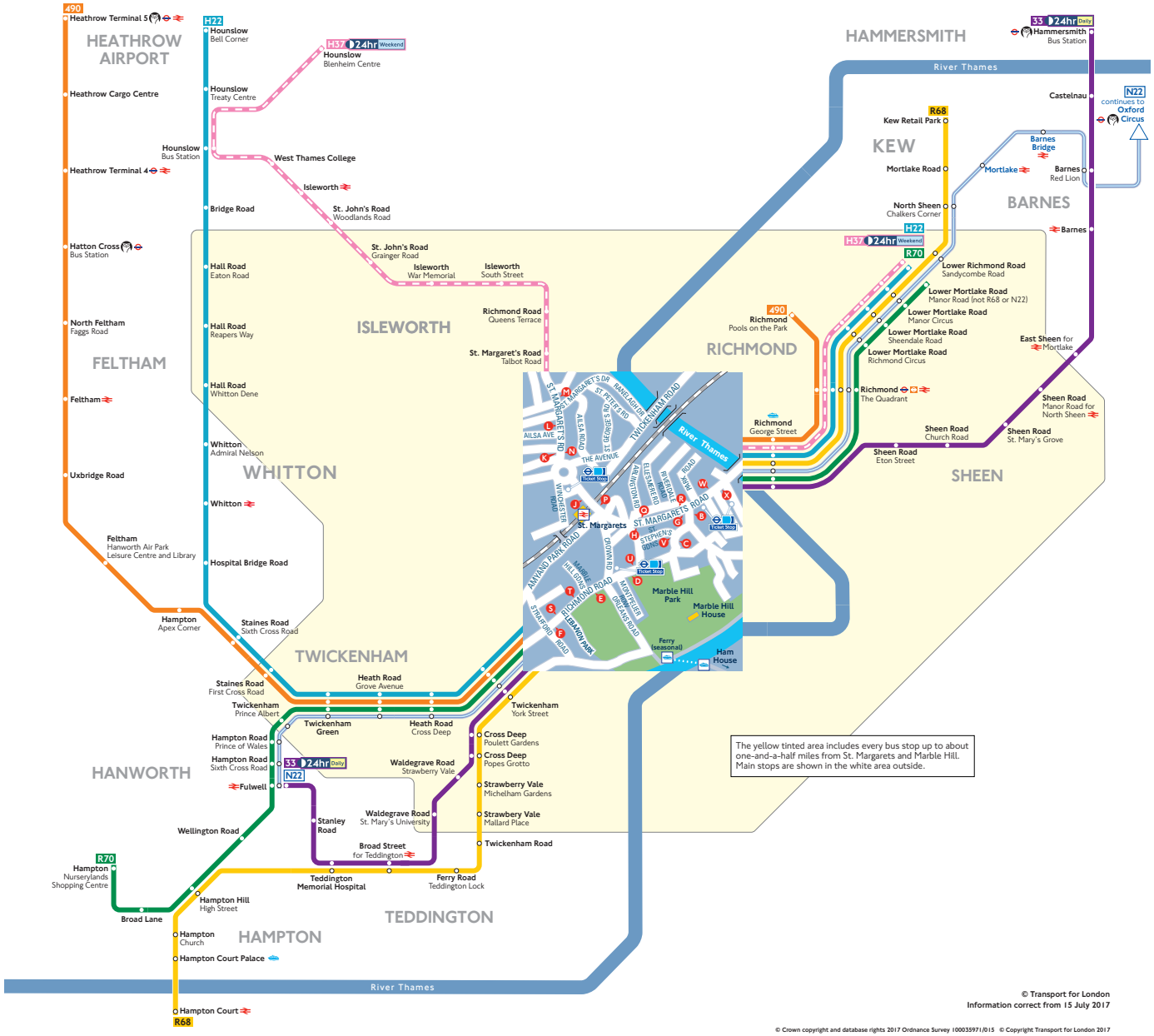
TAL ARC LTD.
ARCHITECTURE | DESIGN
2a CRESCENT ROAD
LONDON N3 1HP, U.K.
T. 020 3719 0793
E. INFO@TALARC.CO.UK
W. WWW.TALARC.CO.UK

A0 SHEET

PROJECT TITLE: New Residential Units at Sion Court

Appendix B

Buses from St. Margarets and Marble Hill



Route finder

Bus route	Towards	Bus stops
33 24hr Daily	Fulwell	B C D E F X
	Hammersmith	S T U V W
490	Heathrow Terminal 5	B C D E F X
	Richmond	S T U V W
H22	Hounslow	B C D E F X
	North Sheen	S T U V W
H37 24hr Weekend	Hounslow	G H J K L X
	Richmond	M N P Q R W
R68	Hampton Court	B C D E F X
	Kew	S T U V W
R70	Hampton	B C D E F X
	North Sheen	S T U V W

Night buses

Bus route	Towards	Bus stops
N22	Fulwell	B C D E F X
	Oxford Circus	S T U V W

Other buses

Bus route	Towards	Bus stops
969	Roehampton Vale ▼	P Q R
	Whitton ▼	G H J

Key

	Connections with London Underground
	Connections with London Overground
	Connections with National Rail
	Connections with river boats
	Operates daily with 24-hour service Friday and Saturday nights
	Tube station with 24-hour service Friday and Saturday nights
▼	Tuesdays and Fridays only

Ways to pay

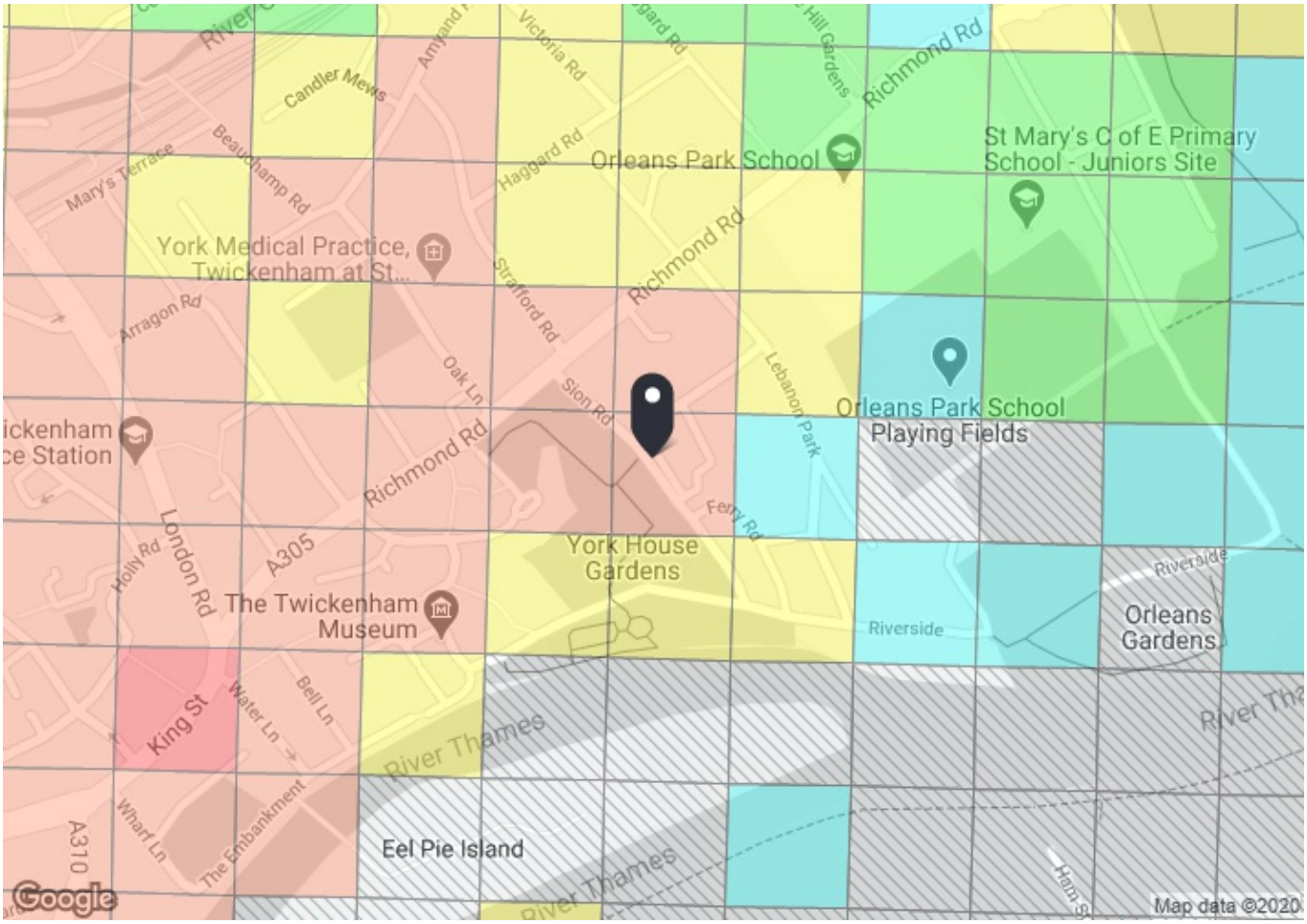
Ticket Stop

Top up your Oyster pay as you go credit or buy Travelcards and bus & tram passes at around 4,000 shops across London.

TFL33247.07.17 (P)

Appendix C

TRANSPORT FOR LONDON



PTAL output for Base Year
5

TW1 3DD
Twickenham TW1 3DD, UK
Easting: 516630, Northing: 173454

Grid Cell: 46285

Report generated: 11/11/2020

Map key - PTAL

0 (Worst)	1a
1b	2
3	4
5	6a
6b (Best)	

Map layers

PTAL (cell size: 100m)

Calculation Parameters

Day of Week	M-F
Time Period	AM Peak
Walk Speed	4.8 kph
Bus Node Max. Walk Access Time (mins)	8
Bus Reliability Factor	2.0
LU Station Max. Walk Access Time (mins)	12
LU Reliability Factor	0.75
National Rail Station Max. Walk Access Time (mins)	12
National Rail Reliability Factor	0.75

Calculation data

Mode	Stop	Route	Distance (metres)	Frequency (vph)	Walk Time (mins)	SWT (mins)	TAT (mins)	EDF	Weight	AI
Bus	TWICKENHAM KING STREET	281	588.73	7.5	7.36	6	13.36	2.25	0.5	1.12
Bus	TWICKENHAM KING STREET	267	588.73	6	7.36	7	14.36	2.09	0.5	1.04
Bus	TWICKENHAM YORK STREET	110	364.73	3	4.56	12	16.56	1.81	0.5	0.91
Bus	TWICKENHAM YORK STREET	290	364.73	3	4.56	12	16.56	1.81	0.5	0.91
Bus	RICHMOND RD STRAFFORD RD	33	178.53	7.5	2.23	6	8.23	3.64	1	3.64
Bus	RICHMOND RD STRAFFORD RD	490	178.53	5	2.23	8	10.23	2.93	0.5	1.47
Bus	RICHMOND RD STRAFFORD RD	R68	178.53	4	2.23	9.5	11.73	2.56	0.5	1.28
Bus	RICHMOND RD STRAFFORD RD	R70	178.53	6	2.23	7	9.23	3.25	0.5	1.62
Bus	RICHMOND RD STRAFFORD RD	H22	178.53	5	2.23	8	10.23	2.93	0.5	1.47
Rail	Twickenham	'RICHMND-GUILDFD 2N13'	782.82	0.33	9.79	91.66	101.44	0.3	0.5	0.15
Rail	Twickenham	'ALDRSHT-WATRLMN 1N90'	782.82	1	9.79	30.75	40.54	0.74	0.5	0.37
Rail	Twickenham	'RDNG4AB-WATRLMN 2C10'	782.82	0.67	9.79	45.53	55.31	0.54	0.5	0.27
Rail	Twickenham	'WATRLMN-RDNG4AB 2C13'	782.82	0.67	9.79	45.53	55.31	0.54	0.5	0.27
Rail	Twickenham	'RDNG4AB-WATRLMN 2C14'	782.82	0.33	9.79	91.66	101.44	0.3	0.5	0.15
Rail	Twickenham	'RDNG4AB-WATRLMN 2C16'	782.82	0.33	9.79	91.66	101.44	0.3	0.5	0.15
Rail	Twickenham	'WATRLMN-RDNG4AB 2C17'	782.82	1.33	9.79	23.31	33.09	0.91	0.5	0.45
Rail	Twickenham	'RDNG4AB-WATRLMN 2C18'	782.82	0.67	9.79	45.53	55.31	0.54	0.5	0.27
Rail	Twickenham	'WATRLMN-RDNG4AB 2C85'	782.82	0.33	9.79	91.66	101.44	0.3	0.5	0.15
Rail	Twickenham	'WATRLMN-RDNG4AB 2C87'	782.82	0.33	9.79	91.66	101.44	0.3	0.5	0.15
Rail	Twickenham	'RDNG4AB-WATRLMN 2C90'	782.82	0.33	9.79	91.66	101.44	0.3	0.5	0.15
Rail	Twickenham	'SHEPRTN-WATRLMN 2H92'	782.82	1	9.79	30.75	40.54	0.74	0.5	0.37
Rail	Twickenham	'WDON-WATRLMN 2K03 '	782.82	0.33	9.79	91.66	101.44	0.3	0.5	0.15
Rail	Twickenham	'WATRLMN-WATRLMN 2K09'	782.82	2	9.79	15.75	25.54	1.17	1	1.17
Rail	Twickenham	'WATRLMN-WATRLMN 2O09'	782.82	2	9.79	15.75	25.54	1.17	0.5	0.59
Rail	Twickenham	'TWCKNHM-WATRLMN 2O92'	782.82	0.67	9.79	45.53	55.31	0.54	0.5	0.27
Rail	Twickenham	'TWCKNHM-WATRLMN 2R03'	782.82	0.33	9.79	91.66	101.44	0.3	0.5	0.15
Rail	Twickenham	'WATRLMN-WATRLMN 2R09'	782.82	2	9.79	15.75	25.54	1.17	0.5	0.59
Rail	Twickenham	'WSORAER-WATRLMN 2U10'	782.82	2	9.79	15.75	25.54	1.17	0.5	0.59
Rail	Twickenham	'WATRLMN-WSORAER 2U13'	782.82	2	9.79	15.75	25.54	1.17	0.5	0.59
Rail	Twickenham	'HOUNSLW-WATRLMN 2V05'	782.82	0.33	9.79	91.66	101.44	0.3	0.5	0.15
									Total Grid Cell AI:	**20.61**

Appendix D

Calculation Reference: AUDIT-358901-201113-1145

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
Category : C - FLATS PRIVATELY OWNED
MULTI-MODAL TOTAL PEOPLE

Selected regions and areas:

01	GREATER LONDON		
	HM	HAMMERSMITH AND FULHAM	1 days
	KN	KENSINGTON AND CHELSEA	1 days
	WF	WALTHAM FOREST	1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Primary Filtering selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: No of Dwellings
Actual Range: 42 to 73 (units:)
Range Selected by User: 9 to 493 (units:)

Parking Spaces Range: All Surveys Included

Parking Spaces per Dwelling Range: All Surveys Included

Bedrooms per Dwelling Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/12 to 06/03/20

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Tuesday	1 days
Wednesday	1 days
Friday	1 days

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

Selected survey types:

Manual count	3 days
Directional ATC Count	0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaking using machines.

Selected Locations:

Town Centre	1
Edge of Town Centre	2

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Residential Zone	2
High Street	1

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Secondary Filtering selection:

Use Class:

C3	3 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 500m Range:

All Surveys Included

Population within 1 mile:

5,001 to 10,000	1 days
50,001 to 100,000	1 days
100,001 or More	1 days

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

Population within 5 miles:

125,001 to 250,000	1 days
500,001 or More	2 days

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

Car ownership within 5 miles:

0.6 to 1.0	3 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:

No	3 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

5 Very Good	3 days

This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1 HM-03-C-01 BLOCK OF FLATS HAMMERSMITH AND FULHAM
VANSTON PLACE
FULHAM

Town Centre
High Street
Total No of Dwellings: 42
Survey date: WEDNESDAY *16/07/14* *Survey Type: MANUAL*

2 KN-03-C-03 BLOCK OF FLATS KENSINGTON AND CHELSEA
ALLEN STREET
KENSINGTON

Edge of Town Centre
Residential Zone
Total No of Dwellings: 72
Survey date: FRIDAY *11/05/12* *Survey Type: MANUAL*

3 WF-03-C-01 BLOCKS OF FLATS WALTHAM FOREST
ERSKINE ROAD
WALTHAMSTOW

Edge of Town Centre
Residential Zone
Total No of Dwellings: 73
Survey date: TUESDAY *05/11/19* *Survey Type: MANUAL*

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

MANUALLY DESELECTED SITES

Site Ref	Reason for Deselection
BT-03-C-02	,
HG-03-C-01	,
IS-03-C-07	,

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
MULTI-MODAL TOTAL PEOPLE
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	3	62	0.053	3	62	0.257	3	62	0.310
08:00 - 09:00	3	62	0.091	3	62	0.738	3	62	0.829
09:00 - 10:00	3	62	0.080	3	62	0.332	3	62	0.412
10:00 - 11:00	3	62	0.139	3	62	0.193	3	62	0.332
11:00 - 12:00	3	62	0.155	3	62	0.171	3	62	0.326
12:00 - 13:00	3	62	0.171	3	62	0.102	3	62	0.273
13:00 - 14:00	3	62	0.134	3	62	0.155	3	62	0.289
14:00 - 15:00	3	62	0.112	3	62	0.139	3	62	0.251
15:00 - 16:00	3	62	0.497	3	62	0.160	3	62	0.657
16:00 - 17:00	3	62	0.337	3	62	0.219	3	62	0.556
17:00 - 18:00	3	62	0.433	3	62	0.230	3	62	0.663
18:00 - 19:00	3	62	0.401	3	62	0.257	3	62	0.658
19:00 - 20:00	1	73	0.603	1	73	0.247	1	73	0.850
20:00 - 21:00	1	73	0.274	1	73	0.123	1	73	0.397
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			3.480			3.323			6.803

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.*