

75-81 George Street, Richmond



Pedestrian Environmental Review System Audit

WYG

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Canadian & Arcadia Ltd

75-81 George Street, Richmond

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1 Introduction

General

- 1.1 WYG is commissioned by Canadian & Arcadia Ltd (the 'Applicant') on request of the London Borough of Richmond upon Thames (LBRuT) to prepare a Pedestrian Environment Review System (PERS) Audit report in support of the mixed-use development at 75-81 George Street, Richmond, TW9 1HA within the LBRuT (the 'site').
- 1.2 The audit was undertaken using the PERS methodology, guidance and recommendations. PERS are software tools developed by Transport Research Laboratory (TRL) in partnership with Transport for London (TfL) in order to standardise the process of assessing the quality of pedestrian and cycling facilities in a given area. The system applies a Red-Amber-Green (RAG) scoring system to all elements of the audited network, to provide an overall score of the facilities, highlighting elements which are of a good standard as well as those where improvements are necessary.

Background and Site Location

- 1.3 The site is located on the northern side of George Street (A307), in Richmond town centre. The site is located in a town centre location, hence an area of predominately retail and commercial land uses. The site is bound by Golden Court to the east, George Street to the southeast, King Street to the southwest and commercial/residential properties to the north off Paved Court. The existing site is currently occupied by a House of Fraser department store and measures a total Gross Floor Area (GFA) of 7,312m² over five floors (including basement).
- 1.4 The site frontage is on George Street which provides all pedestrian and cycle access. Vehicular access can be gained via a servicing entrance on King Street. A loading bay is located on King Street, adjacent to the servicing entrance.
- 1.5 A strategic location plan, showing the situation of the site in the context of the wider surrounding area, is provided in **Figure 1.1**.



Figure 1.1 Strategic Location Plan

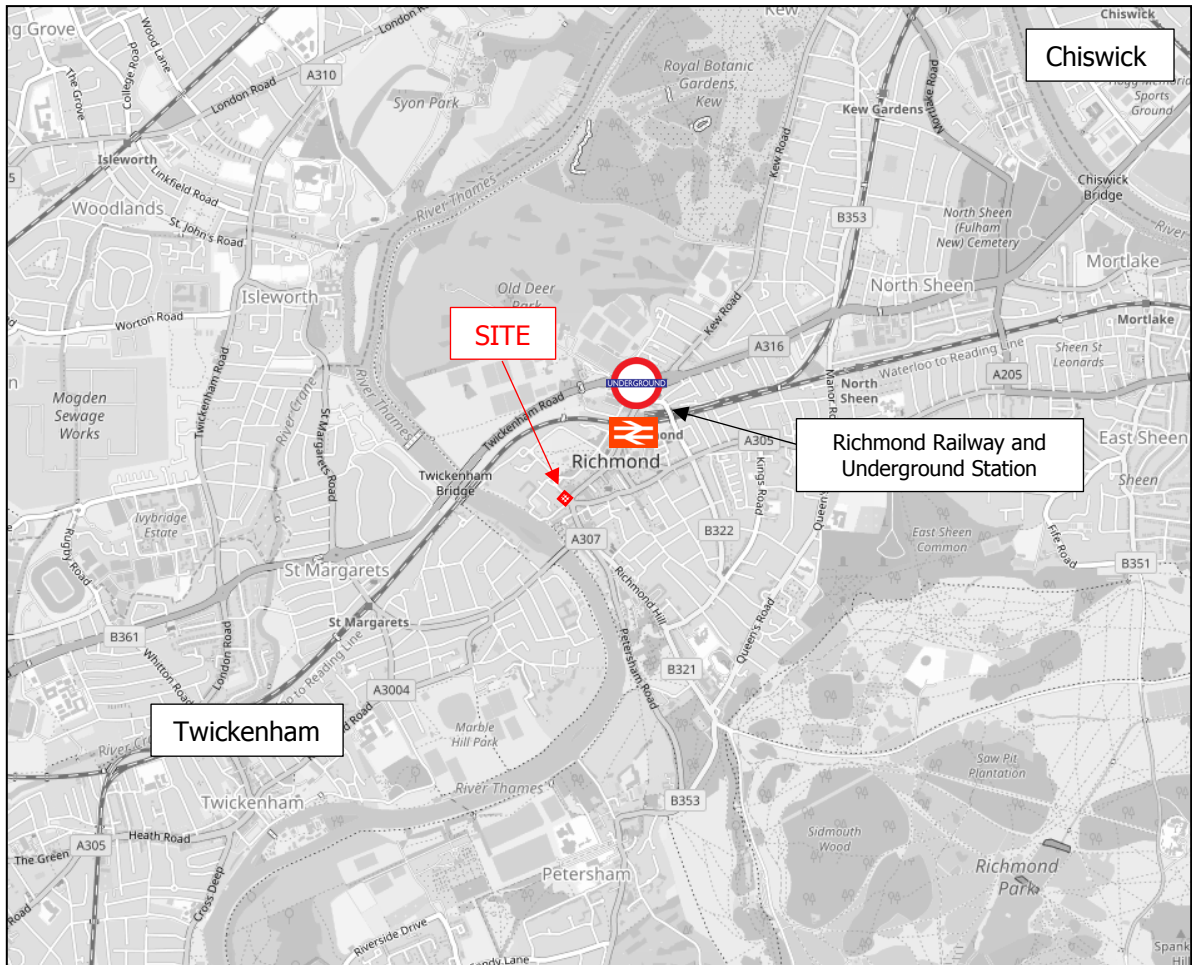


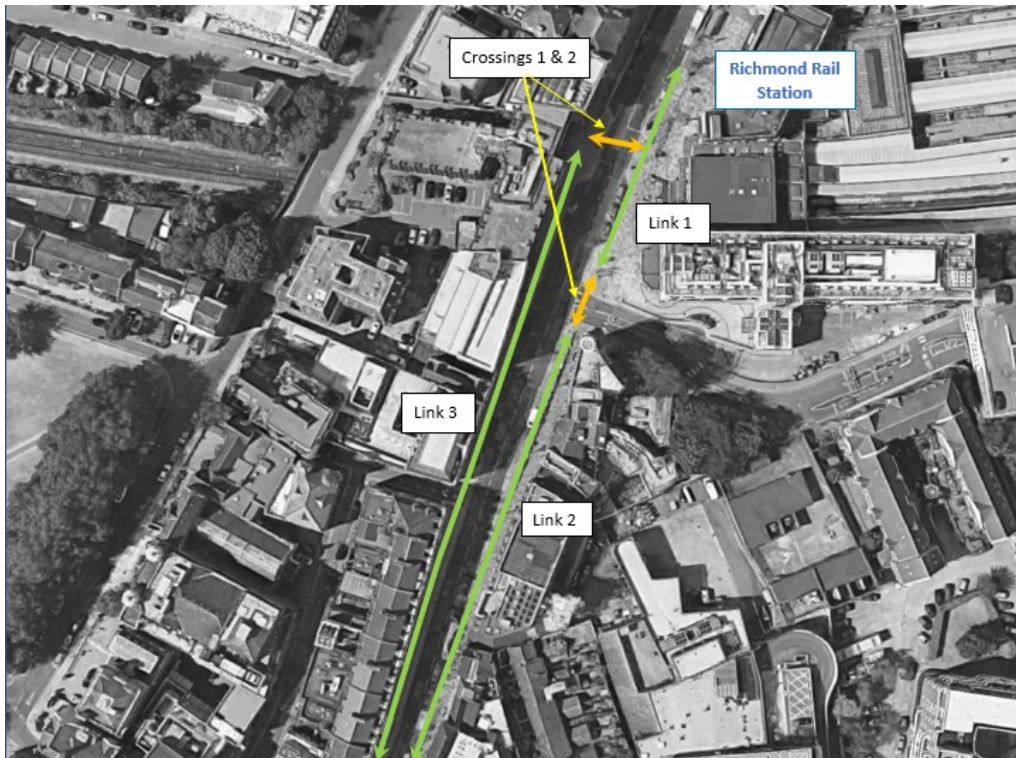
Image Source: OpenStreetMap with WYG Annotations, March 2019

Study Area

- 1.6 As part of scoping discussions with LBRuT Highways, the study area for the PERS audit was agreed with LBRuT via email on 14th October 2019 and is included in **Appendix A**. It is comprised of pedestrian links, crossings, public transport waiting areas and public transport interchange spaces. The study area is shown in **Figures 1.2-1.5**.



Figure 1.2 Study Area – Northern Section



Source: Google Satellite Image with WYG Annotations, November 2019

Figure 1.3 Study Area – Central Section



Source: Google Satellite Image with WYG Annotations, November 2019

Figure 1.4 Study Area – Western Section



Source: Google Satellite Image with WYG Annotations, November 2019

Figure 1.5 Study Area – Southern Section



Source: Google Satellite Image with WYG Annotations, November 2019



2 PERS Audit Methodology

- 2.1 The PERS assessment considers the pedestrian environment as a sequence of individual links and crossings which together form a route that a pedestrian would use to travel between points of origin and destination. Public transport interchange points and waiting areas as well as public spaces along the route are also considered. Each element of the route is assessed in terms of surface quality, lighting quality, signage, maintenance and other parameters which define the standard of provision. The elements are assessed from the perspective of the less able-bodied users, such as the elderly or wheelchair users, who rely on a high-standard provision in order to access and make use of the facilities.
- 2.2 Each characteristic of a link, crossing, public transport waiting point, public transport interchange, open space and overall route is allocated a score ranging from +3 (excellent provision) to -3 (poor or no provision). A total score is then calculated and assigned a RAG value and colour. Elements of the pedestrian environment which achieve a 'Green' score indicate that the provision is of a high standard, appropriately positioned and is well maintained encouraging its use by all pedestrians. In contrast, a 'Red' score indicates no or inadequate provision, which could be poorly maintained or not addressing the needs of pedestrians. An 'Amber' score rating is given in instances where there is scope for improvements to the pedestrian environment, but the overall provision is generally satisfactory.
- 2.3 The PERS audit carried out in the vicinity of the proposed George Street development considered parameters of the pedestrian environments in line with the above criteria. A site visit was undertaken on 23rd October 2019 with a photographic record taken of the pedestrian environment. The extent of the PERS audit was agreed in advance with LBRuT and focused on routes between the proposed site and the nearest transport connections.



3 PERS Audit Findings

General

3.1 This section summarises the findings of the PERS-style audit of pedestrian facilities within the study area. In line with the methodology set out in Chapter 2, the audit considered each element of the pedestrian environment in turn, which was split into pedestrian links, crossings (both formal and informal), public transport waiting areas, public transport interchange areas and routes.

Pedestrian Links

3.2 A total of nine pedestrian links were audited for pedestrian provision, all of which were scored against 14 different parameters. These are summarised in **Table 3.1**.

Table 3.1 PERS Link Parameters

Parameters		
Effective width	Legibility	Surface quality
Dropped kerbs	Lighting	User conflict
Gradient	Tactile information	Quality of the environment
Obstructions	Colour contrast	Maintenance
Permeability	Personal security	

Link 1 – Rail Station

3.3 Link 1 which is located adjacent to Richmond Rail and London Underground Station was characterised by good surface quality and scored highly on permeability, legibility and the overall quality of the environment was aesthetically pleasing, with plenty of space for pedestrians entering and exiting the main station entrance. The footway provision was very wide allowing separation away from traffic, as well as this, maintenance levels were shown to be good, with very few instances of litter or graffiti observed and a good provision of litter bins. Overall there was a high level of safety as there were CCTV cameras observed along this link, active frontages and a high footfall. A lower score was given for colour contrast, as it was observed that there was little variation in the surface colour between the Yorkstone paving and tactile paving.

3.4 Images of the pedestrian provision along Link 1 are shown in **Figure 3.1**.

Figure 3.1 Link 1



Very wide footway provision on this pedestrian link particularly outside Richmond Rail and Underground Station, good separation from traffic and bus stops.

Links 2 and 3 – Drummonds Place / The Quadrant

3.5 Links 2 and 3 are located between Drummonds Place and The Quadrant to the south of Richmond Rail and Underground Station, with Link 2 comprising the eastern footway and Link 3 comprising the western footway. Links 2 and 3 are not dissimilar to Link 1 in terms of surface quality and footway materials. Link 2 was observed to be narrower adjacent to The Quadrant bus stops, increasing the likelihood of user conflict between bus passengers and pedestrians for which this link scored lower for user conflict. Links 2 and 3 scored highly in terms of tactile information, dropped kerbs, maintenance, cleanliness and overall quality of environment. High levels of personal security were observed along these links, with lots of passing activity along the footway as well as CCTV cameras present.

3.6 Images of the pedestrian provision along Link 2 and 3 are shown in **Figure 3.2**.

Figure 3.2 Links 2 and 3



User conflict observed adjacent to bus stops, with narrower footway. Overall good quality of pedestrian environment observed.

Links 4 and 5 – George Street

- 3.7 Links 4 and 5 are located along George Street, with Link 4 comprising the western footway and Link 5 comprising the eastern footway. Links 4 and 5 generally scored highly in terms of dropped kerbs, tactile paving, maintenance, cleanliness, overall quality of environment and personal security. These links scored lower for user conflict due to the footway width being narrower in places, particularly adjacent to bus stops. The links also scored lower for colour contrast with little variation in colour between the Yorkstone paving and tactile paving provision.
- 3.8 Images of the pedestrian provision along Links 4 and 5 are shown in **Figure 3.3**.

Figure 3.3 Links 4 and 5

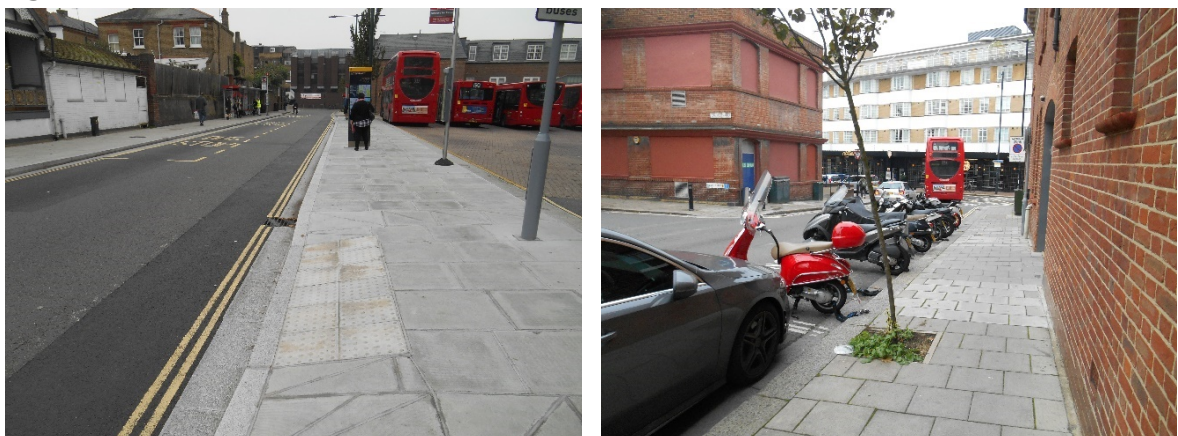


Overall good quality of pedestrian environment, with provision of dropped kerbs and tactile information and high levels of cleanliness. Some user conflict adjacent to bus stops.

Link 6 – George Street to Richmond Bus Station

- 3.9 Link 6 is located along Hill Street, Lewis Road and Wakefield Road between George Street and Richmond bus station. Link 6 scored higher in terms of effective width and dropped kerbs, however this link scored lower in most of the other parameters such as colour contrast, personal security, surface quality, user conflict and general maintenance. Footway provision is generally of better quality in the vicinity of the bus station, with evidence of tactile paving observed throughout.
- 3.10 Images of the pedestrian provision along Link 6 are presented in **Figure 3.4**.

Figure 3.4 Link 6



Good quality footway provision within the vicinity of the bus station.

Along Lewis Road (shown above) the quality of the footway could be improved.

Link 7 – George Street to Friar’s Lane Car Park

- 3.11 Link 7 is located between George Street and Friar’s Lane car park, and is comprised of King Street, Old Palace Place and Friar’s Lane. Link 7 scored higher in terms of low evidence of obstructions, good legibility, good provision of street lighting, quality of environment and general maintenance. The link scored lower in parameters such as personal security, surface quality, tactile information, effective width, dropped kerbs and user conflict. For instance, these parameters were characterised by undulations in the footway, narrow footway width along King Street and Friar’s Lane, lack of CCTV, no provision of tactile paving. In the vicinity of the car park, the surface quality is inconsistent and uneven which presents a potential hazard for wheelchair users and partially sighted people. This link could be improved by widening the footways, providing tactile paving at crossing points and levelling out the uneven surface within the Friar’s Lane car park.
- 3.12 Images of the pedestrian provision along Link 7 are shown in **Figure 3.5**.

Figure 3.5 Link 7



Road sign reads: "CAUTION: Uneven surface in car park".



Narrow width of footways along King Street and Friar’s Lane.

Links 8 and 9 – Hill Street to Bridge Street

- 3.13 Links 8 and 9 are located along Hill Street, between the junction of Red Lion Street / Hill Street to the north and the junction of Bridge Street / Hill Rise to the south. Links 8 and 9 scored highly in the majority of parameters, however Link 8 scores particularly low for tactile information. The high scores were characterised by wide footways, provision of dropped kerbs, high levels of cleanliness, good permeability with little or no obstructions, wayfinding information such as a local street map posts as well as good provision of street lighting. Link 8 could be improved with greater provision of tactile paving.
- 3.14 Images of the pedestrian provision along Links 8 and 9 are shown in **Figure 3.6**.

Figure 3.6 Links 8 and 9



Wayfinding information (street map post).



Wide footways with safety bollards.

- 3.15 A summary of PERS scores for all pedestrian links are included in **Table 3.2**. In accordance with PERS guidance, each parameter has an individual weighting score which is provided in **Appendix B** for reference.
- 3.16 **Table 3.2** shows that all pedestrian links except for Link 7 were given a 'Green' score which indicates that pedestrian provision is of a high standard. Link 7 was given an 'Amber' score which indicates that there is scope for improvements to the pedestrian environment, but overall pedestrian provision is generally satisfactory. As shown, the parameters which scored lowest for Link 7 were tactile information and colour contrast.

Table 3.2 Pedestrian Link Scores*

Link/Road	Effective Width	Dropped Kerbs	Gradient	Obstructions	Permeability	Legibility	Lighting	Tactile Information	Colour Contrast	Personal Security	Surface Quality	User Conflict	Quality Of Environment	Maintenance	Total Score
1	3	3	2	3	3	3	3	2	1	3	3	2	3	3	105
2	2	2	2	1	2	1	2	2	1	2	2	0	2	3	64
3	2	2	2	1	2	1	2	2	1	2	2	0	2	3	64
4	1	2	2	3	2	2	3	3	0	2	3	1	2	3	77
5	1	2	2	3	2	2	3	3	0	2	3	1	2	3	77
6	2	2	1	2	1	1	2	1	0	1	1	2	2	2	58
7	1	1	2	2	1	2	2	-1	0	1	1	1	2	2	41
8	2	3	2	3	3	2	3	-1	0	2	3	3	2	2	85
9	2	3	2	3	3	3	3	1	2	2	2	3	2	2	95
Average	2	2	2	2	2	2	3	1	0	2	2	1	2	2	70

*Note: Each parameter has an individual weighting score in accordance with standard PERS guidance and therefore the total scoring reflects this.

Pedestrian Crossings

3.17 Twelve parameters are used within the PERS audit in order to assess crossing quality within the study area. These are listed in **Table 3.3**.

Table 3.3 PERS Crossings Parameters

Parameters		
Crossing Provision	Delay	Gradient
Deviation from desire line	Legibility	Obstructions
Performance	Legibility for visually impaired	Surface quality
Crossing capacity	Dropped kerbs	Maintenance

3.18 Crossings audited as part of the PERS audit are shown in **Figures 3.7-3.14**. In total, nine pedestrian crossings were identified within the study area, these included pelican, zebra and toucan crossings.

Crossing 1 – Pelican Crossing – Richmond Rail and London Underground Station

3.19 Crossing 1 is located adjacent to Richmond Rail and Underground Station, on The Quadrant, allowing pedestrians to cross to the western side of The Quadrant. Crossing 1 scored highly in all parameters as it comprises tactile paving, dropped kerbs, a good width for pedestrians to wait before using the crossing and good visibility/sightlines in both directions. Overall, the crossing was in a very good condition with litter bins provided nearby and high levels of cleanliness observed. The crossing also provides a direct route for pedestrians travelling to and from the station.

3.20 Images of Crossing 1 are shown in **Figure 3.7**.

Figure 3.7 Crossing 1 (Pelican Crossing) – Richmond Railway Station



Litter bins adjacent to the crossing and wide width of crossing waiting area.

Crossing 2 – Informal Crossing – Drummonds Place

3.21 Crossing 2 is located across Drummonds Place, approximately 70 metres to the south of Richmond Rail Station. It is an informal crossing comprising tactile paving and the footway surface is flush throughout. The crossing also comprises a raised table which reduces the speed of vehicles turning in and out of Drummonds Place. Crossing 2 scored highly in all parameters and is deemed suitable in the context of its location.

3.22 Images of Crossing 2 are shown in **Figure 3.8**.

Figure 3.8 Crossing 2 (Informal Crossing) – Drummonds Place



Tactile paving, flush footway surface and raised table provided.

Crossings 3, 4 and 5 – Pelican Crossings – The Quadrant, The Square, Duke Street, George Street

3.23 Crossings 3, 4 and 5 are located at the junction between The Quadrant, The Square, Duke Street and George Street. Crossing 3 is a three-way pelican crossing, with a central pedestrian refuge island connecting all three crossings. Crossing 4 is a pelican crossing located across Duke Street, whilst Crossing 5 is a pelican crossing located across George Street, immediately to the south of the junction. The crossings scored highly in all parameters because they comprise tactile paving, a flush footway surface throughout, sufficient waiting space for pedestrians, good visibility/sightlines and the crossings are positioned in line with pedestrian desire lines, enabling pedestrians to cross easily in all directions (north, south, east and west). The crossings were in very good condition with high levels of cleanliness and maintenance observed.

3.24 Images of Crossings 3, 4 and 5 are shown in **Figures 3.9** and **3.10**.

Figure 3.9 Crossing 3



Large pedestrian refuge island, tactile paving, flush footway surface and good visibility and sightlines.

Figure 3.10 Crossings 4 and 5



Tactile paving, flush footway surface, sufficient pedestrian waiting space.

Crossing 6 – Pelican Crossing - The Quadrant/The Square/George Street

- 3.25 Crossing 6 is located adjacent to the site frontage of the proposed development (currently a House of Fraser department store), on George Street. Crossing 6 is in the form of a pelican crossing and scored highly in all parameters. The main characteristics which informed the high scoring were a raised table, flush footway surface throughout, wide pedestrian waiting space, tactile paving, a countdown timer signal (indicates the amount of time pedestrians have left to cross before the traffic signal changes) and high levels of cleanliness and maintenance observed. The crossing is positioned in line with the pedestrian desire line for accessing the proposed development, situated adjacent to one of the main entrances to the building.
- 3.26 In terms of negative characteristics, there were some minor observations whereby the tactile paving consisted of the entire footway width which was due to the narrowing of the footway adjacent to the crossing. It is therefore noted that pedestrians waiting at the crossing have the potential to block passing pedestrians on the footway, however due to the nature of the street and proximity of building frontages in this area, there is unlikely to be scope to widen the footway and thus this should be considered as a minor observation.
- 3.27 Images of Crossing 6 are shown in **Figure 3.11**.

Figure 3.11 Crossing 6



Tactile paving, flush footway surface, raised table, sufficient pedestrian waiting space.

Crossing 7 – Zebra Crossing – King Street

- 3.28 Crossing 7 is located on King Street, adjacent to the proposed development. Crossing 7 is comprised of a raised table zebra crossing across King Street. The crossing scored highly in all parameters which included a raised table, flush footway surface, tactile paving and good pedestrian desire lines. The crossing is positioned adjacent to the southern entrance of the House of Fraser store, and thus provides an easy route for accessing the store from the south. In terms of improvements, it is recommended that the crossing could be repainted due to the fading of road markings.
- 3.29 An image of Crossing 7 is shown in **Figure 3.12**.

Figure 3.12 Crossing 7



Tactile paving, flush footway surface and raised table.

Crossing 8 – Pelican Crossings – Red Lion Street / Hill Street

- 3.30 Crossing 8 is located at the junction between Red Lion Street and Hill Street. Crossing 8 is a three-way pelican crossing with a central pedestrian refuge island, similar to the pedestrian provision at Crossing 3. This crossing scored highly in almost all parameters, except for crossing capacity and delay. It was observed that the width of the crossing was narrow in comparison to other crossings, which leaves a smaller waiting area for pedestrians and thus reduces crossing capacity. It was also noted that there was a relatively long wait time for pedestrians, however there is generally a short crossing distance for all three crossings. In general, there is good pedestrian provision including a flush footway surface, tactile paving, high levels of cleanliness and the crossing is well maintained.
- 3.31 Images of Crossing 8 are shown in **Figure 3.13**.

Figure 3.13 Crossing 8



Tactile paving, flush footway surface and raised table.

Crossing 9 – Puffin Crossing – Hill Street

3.32 Crossing 9 is located on Hill Street, approximately 30 metres to the north of Bridge Street and is in the form of a puffin crossing. The crossing scored highly in all parameters because it provides a raised table, flush footway surface throughout, tactile paving, sufficient pedestrian waiting space and good visibility/sightlines. The crossing is deemed suitable in the context of its location due to high levels of traffic along Hill Street.

3.33 Images of Crossing 9 are shown in **Figure 3.14**.

Figure 3.14 Crossing 9



Tactile paving, flush footway surface and a raised table.



- 3.34 A summary of PERS scores for all pedestrian crossings is included in **Table 3.4**. In accordance with PERS guidance, each parameter has an individual weighting score which is provided in **Appendix B** for reference.
- 3.35 **Table 3.4** shows that all crossings were given a 'Green' score overall which indicates that pedestrian provision is of a high standard. Crossing 8 was given an 'Amber' score for crossing capacity, however it was given a 'Green' score in all other parameters.

Table 3.4 Crossing PERS Scores*

Crossing	Crossing Provision	Deviation From Desire Line	Performance	Crossing Capacity	Delay	Legibility	Legibility For Visually Impaired	Dropped Kerbs	Gradient	Obstructions	Surface Quality	Maintenance	Total Score
1	3	3	3	3	3	3	2	3	3	2	3	3	86
2	2	2	2	2	2	2	2	2	2	2	3	2	63
3	3	3	3	3	3	3	3	3	3	3	3	3	90
4	3	3	3	3	3	3	3	3	3	3	3	3	90
5	3	3	3	3	3	3	3	3	3	3	3	3	90
6	3	3	3	2	3	2	2	3	3	2	3	3	84
7	3	3	2	3	2	3	2	3	3	2	3	3	78
8	2	2	2	0	1	2	2	3	3	2	3	2	62
9	2	3	2	3	3	2	2	3	3	3	3	3	76
Average	3	3	3	2	3	3	2	3	3	2	3	3	80

*Note: Each parameter has an individual weighting score in accordance with standard PERS guidance and therefore the total scoring reflects this.

Public Transport Waiting Areas (PTWA)

- 3.36 The parameters used in order to audit PTWA points within the study area are shown in **Table 3.5**. PTWA points can refer to any public transport waiting areas, such as tram halts, rail stations or bus stops. In the case of the Richmond study area, these included Richmond Rail and London Underground Station, Richmond Bus Station and bus stops on George Street.

Table 3.5 PERS PTWA Parameters

Parameter		
Information to the waiting area	Infrastructure to the waiting area	Information at the waiting area
Boarding public transport	Security measures	Quality of the environment
Safety perceptions	Maintenance and cleanliness	
Waiting area comfort	Lighting	

Richmond Rail and London Underground Station

- 3.37 Richmond Rail and London Underground Station is located on the western side of The Quadrant and provides National Rail Services as part of South Western Railway. The station also provides London

Overground services as well as London Underground services on the District Line. As a PTWA, the railway station scored highly in all parameters, for instance, within the main entrance hall at the station there was good provision of signage to all platforms, real-time information boards, ticket machines, a ticket office, coffee shops, retail units and step-free access to all platforms. High levels of security were also observed, with good CCTV coverage and lots of retail activity. In terms of cleanliness and maintenance, there were no signs of litter or neglect with litter bins provided outside the main station entrance. Overall, the station presented a good quality and safe environment. It was noted that no seating was provided within the main entrance hall, although seating is provided outside of the station on the adjacent footway.

3.38 Images of Richmond Railway Station are shown in **Figure 3.15**.

Figure 3.15 Richmond Railway Station



Ticket machines, retail units, real-time information boards and wayfinding signage.

Richmond Bus Station

3.39 Richmond Bus Station is located on Wakefield Road and is served by the following bus routes; 33, 65, 371, 490, 493, 969, H22, H37, N22, N33, N65 and R68. The bus station generally scored highly in most PTWA parameters, but it scored lower in formal security measures. Good characteristics included wayfinding signage and information, real-time information boards, dropped kerbs where appropriate, high levels of cleanliness and a large passenger boarding/waiting area with seating and shelters provided. The lower scores in security measures were characterised by no instant response facility for emergencies and no clear evidence of CCTV coverage.

3.40 Images of Richmond Bus Station are shown in **Figure 3.16**.

Figure 3.16 Richmond Bus Station



Real-time information boards, wayfinding signage, dropped kerbs, seating and shelter.

George Street Bus Stops – A and B

- 3.41 The bus stops on George Street are located approximately 70 metres to the north of the proposed development. These bus stops serve the following bus routes; 33, 337 and N33 for northbound services. Bus Stop A is comprised of a bus flag with timetable information, whilst Bus Stop B is comprised of a bus flag, timetable information, seating and a shelter. Both bus stops scored highly in terms of lighting, quality of environment and maintenance and cleanliness. Bus Stop B also scored highly in terms of information and infrastructure in the waiting area whereas Bus Stop A scored low in this area and also scored low on waiting area comfort. This was due to the narrow width of the waiting area, whereby waiting passengers conflict with passing pedestrians, and no seating or shelter is provided for passengers. It was also observed that the information at the waiting area did not include real-time information which warranted the lower score.
- 3.42 Images of the George Street bus stops are shown in **Figure 3.17**.

Figure 3.17 George Street Bus Stops



Bus Stop A



Bus Stop B

- 3.43 A summary of PERS scores for all PTWAs is included in **Table 3.6**. In accordance with PERS guidance, each parameter has an individual weighting score which is provided in **Appendix B** for reference.
- 3.44 **Table 3.6** shows that all PTWAs were given a 'Green' score overall which indicates that pedestrian provision is of a high standard. 'Amber' scores were given to the George Street Bus Stops A & B in the parameters, boarding public transport and waiting area comfort.



Table 3.6 PTWA Scoring Table*

PTWA	Information To The Waiting Area	Infrastructure To The Waiting Area	Boarding Public Transport	Information At The Waiting Area	Safety Perceptions	Security Measures	Lighting	Quality Of The Environment	Maintenance And Cleanliness	Waiting Area Comfort	Total Score
Richmond Rail and UG Station	3	3	3	3	3	3	2	3	3	2	90
Richmond Bus Station	3	3	2	3	2	1	2	2	2	2	68
George Street Bus Stop A	3	3	0	1	2	2	3	3	3	0	56
George Street Bus Stop B	3	3	0	2	2	2	3	3	3	3	68
Average	3	3	1	2	2	2	3	3	3	2	71

*Note: Each parameter has an individual weighting score in accordance with standard PERS guidance and therefore the total scoring reflects this.

Public Transport Interchange (PTI)

- 3.45 The parameters used in order to audit PTI spaces within the study area are shown in **Table 3.7**. PTI points can refer to any public transport spaces where there is an interchange between two or more modes of public transport. In the case of the Richmond study area, these included Richmond Rail and London Underground Station and Richmond Bus Station.

Table 3.7 PERS PTI Parameters

Parameter	
Moving between modes	Quality of the environment
Identifying where to go	Maintenance
Personal safety	Feeling comfortable

Richmond Rail and London Underground Station

- 3.46 Richmond Rail and London Underground Station can be considered a PTI space as passengers are able to interchange between buses, National Rail, London Overground and Underground services. Richmond Rail and London Underground Station scored highly in all PTI parameters, with the main characteristics identified as good provision of wayfinding signage between modes, step-free access between modes, good levels of CCTV coverage, high levels of cleanliness with litter bins provided, seating and shelters provided at bus stops and a high quality footway approximately 10 metres in width. The wide footway outside of Richmond Rail and London Underground Station allows pedestrians to interchange comfortably between modes and allows space for passing pedestrians.
- 3.47 Images of the PTI spaces at Richmond Rail and London Underground Station is shown in **Figure 3.18**.

Figure 3.18 PTI Space – Richmond Rail and London Underground Station Forecourt



Seating, bus shelters, benches and a wide footway.

Richmond Bus Station

- 3.48 Richmond Bus Station can be considered a PTI space as passengers are able to interchange between different bus routes as well as active modes such as walking and cycling. Richmond Bus Station was generally given an average score for most parameters. The parameters which scored the lowest were identifying where to go and personal safety. It was noted that the bus station is not obviously located and is considered a fair distance away from the town centre. There were no obvious signs of formal surveillance such as CCTV. Furthermore, it was noted that more seating could be provided for passengers.
- 3.49 A summary of PERS scores for all PTIs is included in **Table 3.8**. In accordance with PERS guidance, each parameter has an individual weighting score which is provided in **Appendix B** for reference.
- 3.50 **Table 3.8** shows that Richmond Rail/Underground Station was given a 'Green' score which indicates that pedestrian provision is of a high standard. Richmond Bus Station was given an 'Amber' score which indicates that there is scope for improvements to the pedestrian environment, but overall pedestrian provision is generally satisfactory. Improvements to the bus station could include enhancing the quality of the environment and providing more seating for passengers in the waiting area.



Table 3.8 PTI Scoring Table*

PTI	Moving between modes	Identifying where to go	Personals Safety transport	Feeling comfortable waiting area	Quality of the environment	Maintenance	Total Score (weighted)
Richmond Bus Station	2	2	2	2	1	2	35
Richmond Rail and UG Station	3	3	3	3	2	3	53
Average	3	3	3	3	2	3	44

*Note: Each parameter has an individual weighting score in accordance with standard PERS guidance and therefore the total scoring reflects this.

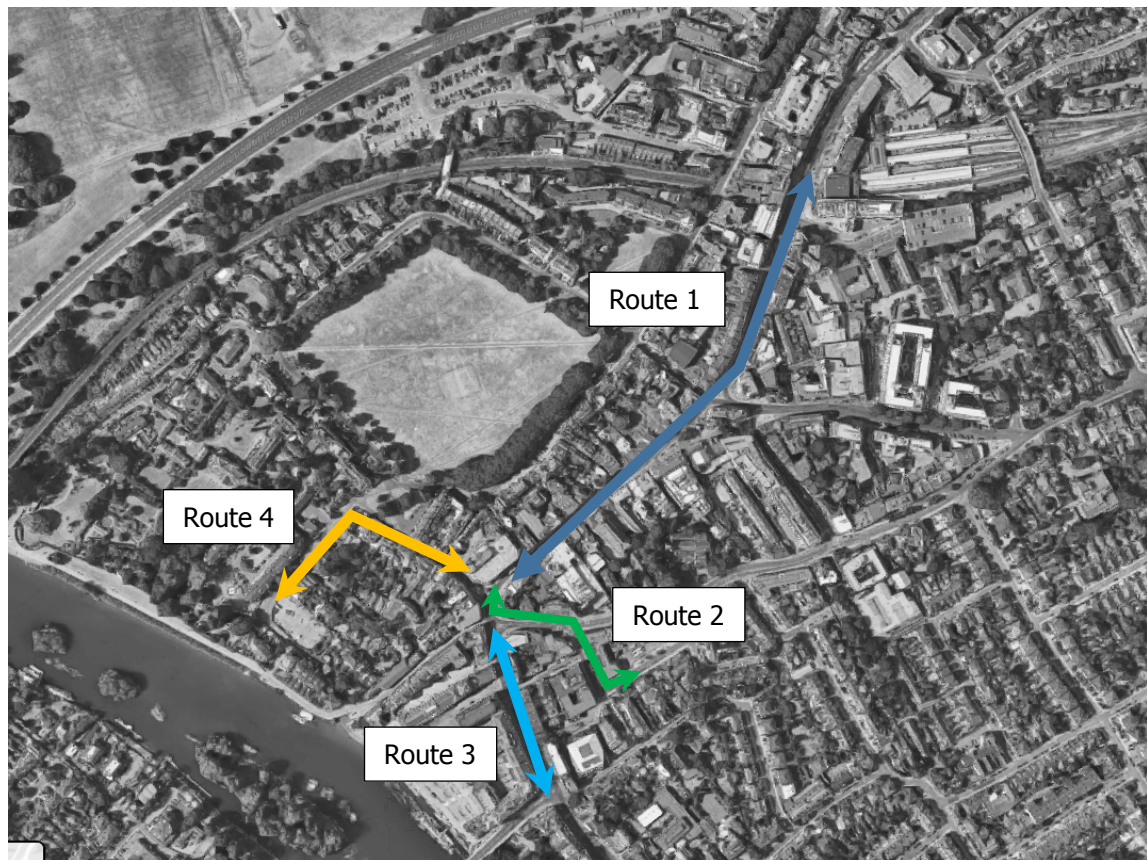
Routes

3.51 The PERS study area can be split into four main routes, which are as followed:

- 1 Richmond Railway Station to Site
- 2 Richmond Bus Station to Site
- 3 Bridge Street to Site
- 4 Friar’s Lane Car Park to Site

3.52 Routes 1-4 are shown in **Figure 3.19**.

Figure 3.19 Route Location Plan



Source: Google Satellite Image with WYG Annotations, November 2019

Route 1 – Richmond Rail and London Underground Station to Site

- 3.53 Route 1 is located between Richmond Rail and London Underground Station and the site. The route scored highly in all parameters as it was characterised by good quality footway materials, high frequency of crossings, dropped kerbs in appropriate locations, little or no obstructions and high levels of cleanliness. Overall, the route is very direct with wayfinding signage provided throughout.

Route 2 – Richmond Bus Station to Site

- 3.54 Route 2 is located between Richmond Bus Station and the site. The route generally scored lower in all parameters, however the parameters with the lowest scores were directness, personal security and permeability. The observations which warranted the lower scores were an indirect route between the site and the bus station, a lack of formal surveillance such as CCTV, narrow footways, a lack of dropped kerbs and tactile paving in some areas.

Route 3 – Bridge Street to Site

- 3.55 Route 3 is located between Bridge Street and the site, mostly comprised of Hill Street. The route scored highly in all parameters as there was evidence of good quality footway materials, wayfinding signage, a local street map, dropped kerbs, high levels of cleanliness and maintenance. Overall, the route is very direct within a good quality environment.



Route 4 – Friar’s Lane Car Park to Site

- 3.56 Route 4 is located between Friar’s Lane Car Park and the site, comprised of King Street, Old Palace Place and Friar’s Lane. This route scored lowest in comparison with the other routes due to the narrow footway width along Friar’s Lane, lack of tactile paving and the uneven surface observed within the Friar’s Lane car park. Overall, this route could be improved with the widening of footways and levelling out the uneven surface within the car park.
- 3.57 A summary of PERS scores for all pedestrian routes is included in **Table 3.9**. **Table 3.9** shows that Routes 1 and 3 were given a ‘Green’ score, whilst Routes 2 and 4 were given an ‘Amber’ score overall. Improvements for Routes 2 and 4 could be in the form of increased formal surveillance such as CCTV and widening of footways.

Table 3.9 Route Scoring Table*

Route	Directness	Permeability	Road Safety	Personal Security	Legibility	Rest Points	Quality of the Environment	Total Score (weighted)
1	3	3	2	3	3	3	3	64
2	1	1	2	1	2	1	2	32
3	3	3	2	2	3	2	3	58
4	0	1	1	0	2	0	1	15
Average	2	2	2	2	3	2	2	42

*Note: Each parameter has an individual weighting score in accordance with standard PERS guidance and therefore the total scoring reflects this.



4 PERS Audit Conclusions

- 4.1 The PERS Audit demonstrates that overall pedestrian links within the study area are good, with few obstructions or signs of neglect. The area as a whole can be considered a safe area, with good provision of lighting in most places and CCTV present in well-used areas. All pedestrian crossings were in a good condition with a flush footway surface throughout, providing step-free access for wheelchair users. The crossings were also deemed suitable in the context of the town centre location which is characterised by retail activity and high footfall. Public transport waiting areas were generally of good quality, with real-time information, timetables and wayfinding signage observed throughout. Seating and shelter at bus stops was fairly commonplace.
- 4.2 Recommendations for improvements were identified, particularly along Link 7 which forms the majority of Route 4, between Friar's Lane car park and the site. These included the widening of footways and levelling out the uneven surface within the Friar's Lane car park. An improvement was also identified along Link 8 which could include greater provision of tactile paving. At Richmond Bus Station, it was noted that more seating could be provided for bus passengers.



Appendix A

EMAIL CORRESPONDENCE

From: Shub, Simon
Sent: 14 October 2019 15:12
To: Sarah Considine
Subject: RE: 75-81 George Street - Scope for additional transport documents

Official

Hi Sarah,

I've received some feedback regarding the study areas. Subject to Richmond Hill up to Bridge Street being added, the area should be ok.

I trust this assists.

Kind Regards,

Simon Shub
Planning Officer Major Projects and Strategic Applications
Serving Richmond and Wandsworth Councils

From: Shub, Simon
Sent: 10 October 2019 10:25
To: Sarah Considine
Subject: RE: 75-81 George Street - Scope for additional transport documents

Official

Hi Sarah,

Thank you for sending this through. I've received notification that the Transport Officer assisting me with this scheme is currently on leave until 16 October 2019, which means, unfortunately, that we may need to wait until his return for confirmation of the study areas.

Kind Regards,

Simon Shub
Planning Officer Major Projects and Strategic Applications
Serving Richmond and Wandsworth Councils

From: Sarah Considine
Sent: 06 October 2019 17:00
To: Shub, Simon
Subject: FW: 75-81 George Street - Scope for additional transport documents

Hi Simon – please see below the response from my transport consultant on the additional information requested by your transport colleagues.

Please can you as your team to confirm the proposed study areas, so we can begin our assessments.

Thanks
Sarah

From: lucy.mascarenhas
Sent: 04 October 2019 11:27
To: Sarah Considine
Cc: doug.mcdougall; jack.smith; alvaro.guzman; Collard, Matthew
Subject: 75-81 George Street - Scope for additional transport documents

Hi Sarah,

I understand you are liaising with the Council on our behalf. Therefore, please could you send the attached proposed study areas for the requested CLoS, PERS and Healthy Streets audits and Collision Analysis to the LBRuT Highways Officer for approval? Once we have confirmation that they are happy with the study areas we can commence with the audits and analysis.

The areas for the audits are based on the location of key public transport links in the site vicinity and the locations of disabled parking, as mentioned within our Transport Assessment. These audits will be undertaken in accordance with TfL guidance.

The area for the collision analysis covers the key walking routes to/from the site and has been informed by the location of collisions within the site vicinity using the crashmap server. The scope of the collision analysis is detailed below.

A technical note will be produced as an Addendum to the Transport Assessment and will cover the following:

- A map showing personal injury collisions occurring over the latest 5 years within the agreed study area, supplied by TfL;
- Summarise collisions by year and severity;
- Identify collision hotspots and trends in collisions at these locations eg. at junctions;
- Assess frequency of collisions by mode to see if there are any trends in collision factors;
- Suggest improvements to reduce collisions within the study area based on the analysis; and,
- Summarise findings.

Kind regards,

Lucy Mascarenhas
Principal Transport Planner



Appendix B

PERS SCORING WEIGHTING

Link review			Crossing review			Route review		
Factor	Weight Band	Default weighting	Factor	Weight Band	Default weighting	Factor	Weight Band	Default weighting
Effective width	C	5	Crossing provision	C	5	Directness	C	5
Dropped kerbs	H	3	Deviation from desire line	H	3	Permeability	H	3
Gradient	B	1	Performance	C	5	Road safety	C	5
Obstructions	H	3	Capacity	B	1	Personal security	C	5
Permeability	H	3	Delay	H	3	Legibility	H	3
Legibility	B	1	Legibility	B	1	Rest points	B	1
Lighting	H	3	Legibility for sensory impaired people	H	3	Quality of the environment	B	1
Tactile Information	H	3	Dropped kerbs	H	3	Link Audits and Crossing Audits	C	5
Colour contrast	H	3	Gradient	B	1			
Personal security	C	5	Obstructions	B	1			
Surface quality	H	3	Surface quality	H	3			
User conflict	C	5	Maintenance	B	1			
Quality of the environment	B	1						
Maintenance	B	1						
Public transport waiting areas review			Interchange space review			Public space review		
Factor	Weight Band	Default weighting	Factor	Weight Band	Default weighting	Factor	Weight Band	Default weighting
Information to the waiting area	H	3	Moving between modes	C	5	Moving in the space	C	5
Infrastructure to the waiting area	H	3	Identifying where to go	H	3	Interpreting the space	H	3
Boarding public transport	C	5	Personal safety	C	5	Personal safety	C	5
Information at the waiting area	H	3	Feeling comfortable	H	3	Feeling comfortable	H	3
Safety perceptions	C	5	Quality of the environment	B	1	Sense of place	H	3
Security measures	C	5	Maintenance	B	1	Opportunity for activity	B	1
Lighting	H	3	Link Audits and Crossing Audits	C	5	Link Audits and Crossing Audits	C	5
Quality of the environment	B	1	Route Audits	C	5	Route Audits	C	5
Maintenance and Cleanliness	B	1	PT Waiting Area Audits	C	5	PT Waiting Area Audits	C	5
Waiting area comfort	H	3						

Table 11.1: Weight bands and default weightings for each review parameter