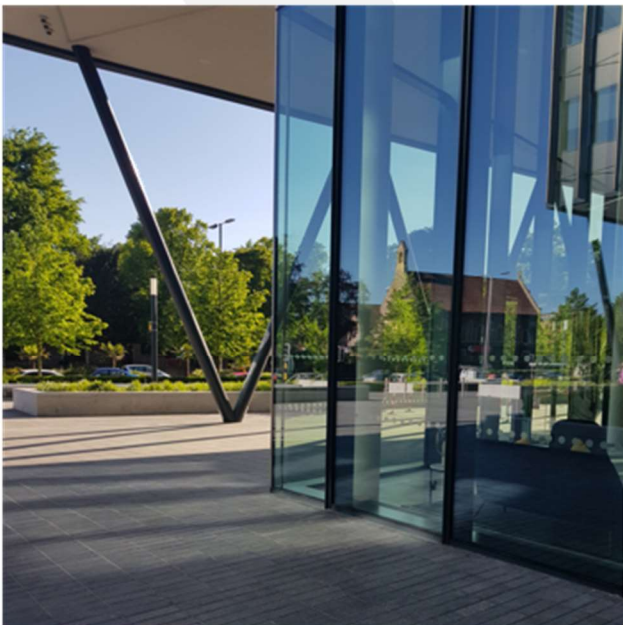




44-46 THE GROVE, GRAVESEND

TRANSPORT NOTE

15 October 2024



44-46 THE GROVE, GRAVESEND

TRANSPORT NOTE

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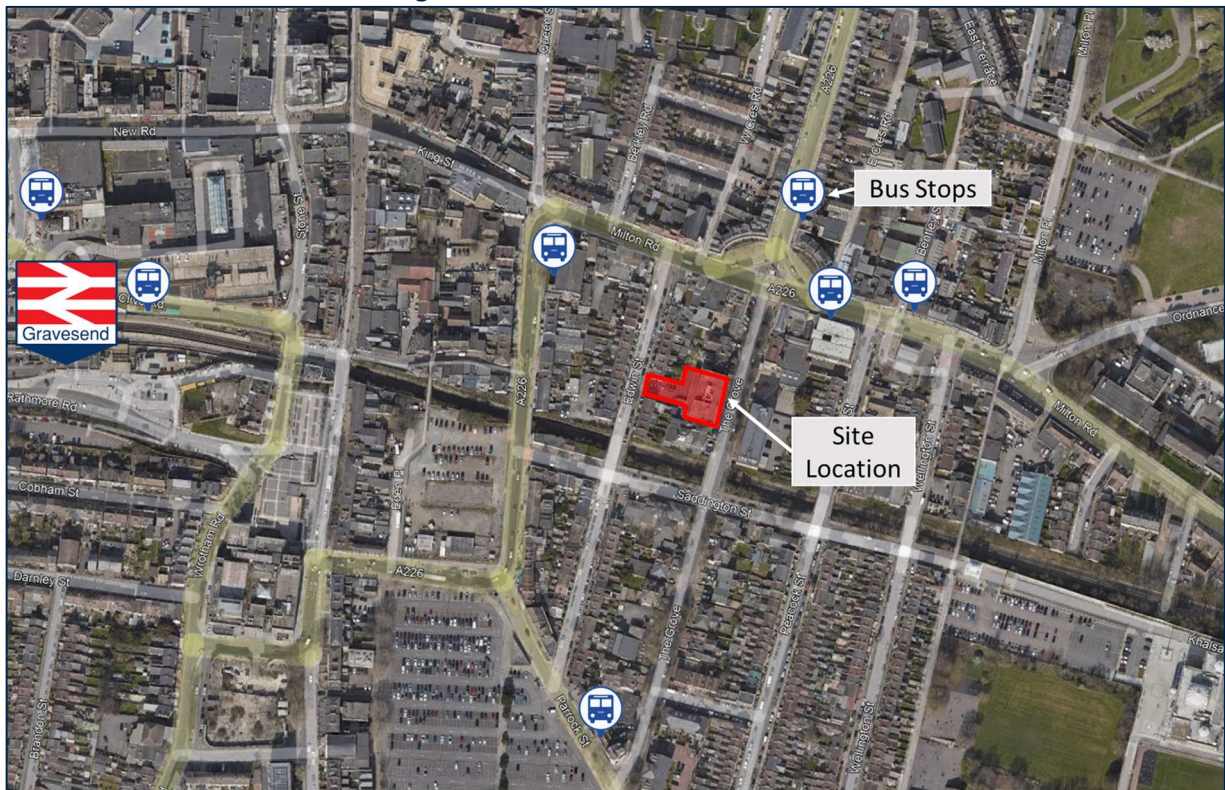
Appendices

Appendix A – Proposed Plans
Appendix B – Existing Site TRICS Outputs
Appendix C – Proposed Development TRICS Outputs

1. Introduction

- 1.1.1. Evoke Transport Planning Consultants Ltd (Evoke) has been appointed by Substantia Capital to produce a Transport Note (TN) to support a change of use application for the change of use of an existing Use Class E office building to provide 37 residential units in central Gravesend. The local planning authority (LPA) is Gravesend Borough Council (GBC) and the local highway authority (LHA) is Kent County Council (KCC).
- 1.1.2. The site is located in central Gravesend, approximately 500m east of Gravesend Railway Station, and is the site of the former Job Centre. Pedestrian access to the site is taken from The Grove, which itself connects to the A226 Milton Road to the north and to Parrock Street to the south. Vehicular access is taken to the rear off Edwin Street. The location of the site is shown in Figure 1.

Figure 1 – Site Location Plan



Source: Google Maps

- 1.1.3. The site previously had consent for the change of use of the first, second and third floors to provide a total of 14 residential units consented under two separate prior approval applications (App Ref: 20210291 and 20210256). The 14 units were supported by 10 car parking spaces resulting in a parking ratio of 0.71 spaces per unit, highways officers confirmed that the parking levels are. *“considered to be an acceptable level of car ownership for flats in this area, and does not exceed maximum car parking standards”*
- ## 1.2. Proposed Development
- 1.2.1. The proposed development seeks the conversion of the existing block into 37 residential units made up of 31 x studio apartments and 6 x one bedroom apartments. The proposed plans are attached at **Appendix A**.

1.3. Report Structure

1.3.1. The remainder of this TN is split into the following sections:

- **Section 2:** Policy and Existing Site Conditions;
- **Section 3:** Proposed Development;
- **Section 4:** Trip Generation and Development Impact; and
- **Section 5:** Summary and Conclusions.

2. Policy and Existing Site Conditions

2.1. Policy Context

2.1.1. The key transport policy documents at a national and local level have been considered when assessing the development proposals, these include the key policy and guidance documents outlined below;

- National Planning Policy Framework (December 2023);
- Planning Practice Guidance (March 2014);
- National Design Guide (October 2019);
- Manual for Streets (2007) and Manual for Streets 2 (2010);
- Kent Local Transport Plan 4 (2017);
- Gravesham Local Plan Core Strategy (2014);
- Gravesham Planning Guidance on Waste Collection Requirements (2019); and
- SPG 4 Kent Vehicle Parking Standards (2006).

2.2. Existing Site and Access

2.2.1. The site is located between The Grove and Edwin Street in central Gravesend, approximately 500m (a 6-minute walk or a 4-minute cycle) from Gravesend Railway Station. The site comprises a four-storey office building with a part basement part surface level car park to the west. A vehicular access to the site is achieved from Edwin Street, with two pedestrian accesses on The Grove as shown in Figure 2.

Figure 2 – Existing Site Access Points



Source: Google Maps

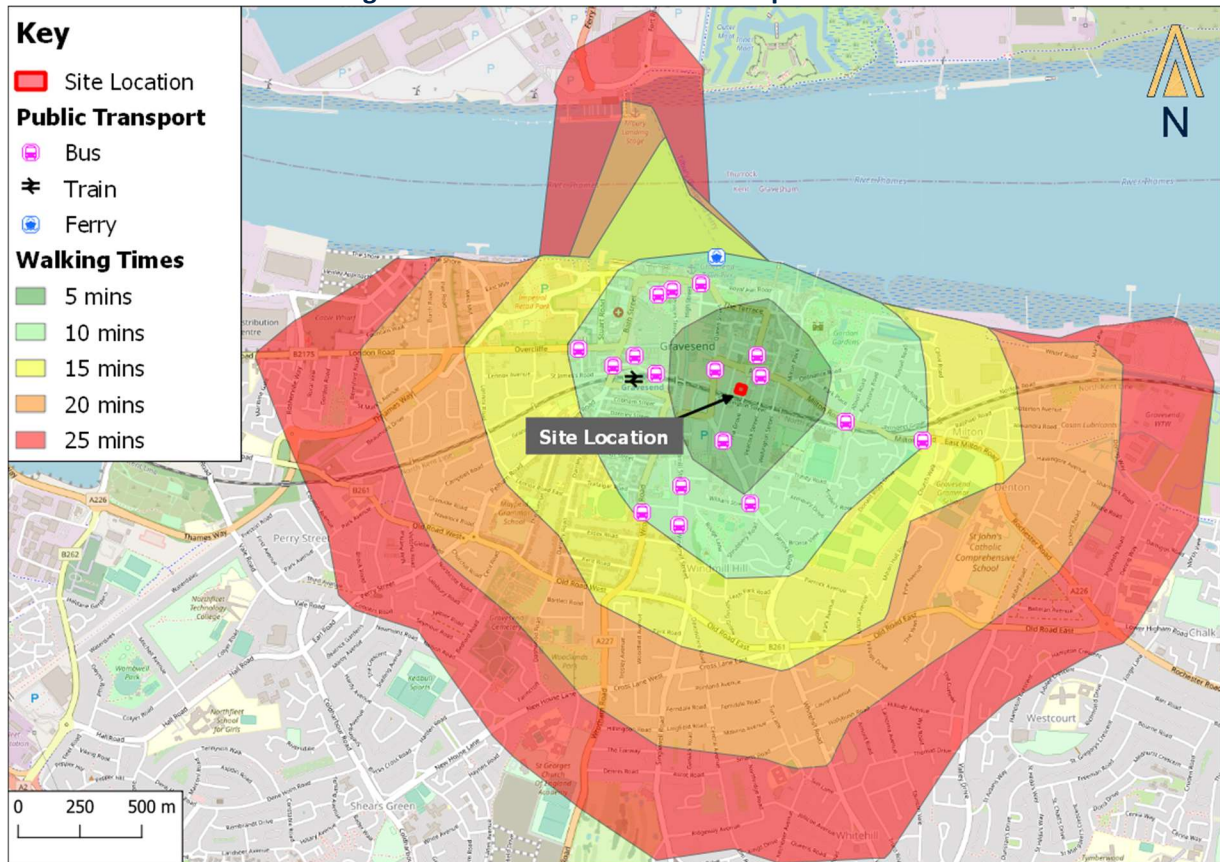
- 2.2.2. The vehicular access, shown in Viewpoint 1, leads to the part underground and part surface level car park providing a total of 33 car parking spaces (seven at surface level). A pedestrian access is also available from the rear entrance via a footbridge. The two pedestrian access points from The Grove are currently in use by the Job Centre, with the northern access shown in Viewpoint 3 being open to staff only, and the southern access shown in Viewpoint 2 being open to the public and having a ramped access.

2.3. Pedestrian and Cycle Accessibility

Pedestrian Accessibility

- 2.3.1. To enable an assessment of the viability of walking and cycling between the site and key destinations in the local area it is appropriate to establish the maximum distance that people are generally prepared to walk and/or cycle and the destinations that exist within these distances.
- 2.3.2. The Chartered Institute for Highways and Transport (CIHT) guidance, 'Planning for Walking' (2015) states that 'walkable neighbourhoods are typically characterised as having a range of facilities within 10 minutes' walking distance (around 800m) with the Guidelines for Providing for Journeys on Foot (2000), stating in paragraph 3.32 that the preferred maximum walking distance to facilities and local services is two kilometres (around 25 minutes). The CIHT guidance also notes that 'the propensity to walk or cycle is not only influenced by distance but also the quality of the experience; people may be willing to walk or cycle further where their surroundings are more attractive, safe and stimulating.'
- 2.3.3. The site is situated within a very well connected urban centre, and as a result has access to a wide range of services and amenities within walking distance. Within a ten-minute walk from the site, Gravesend Railway Station, eight high frequency bus routes, and the ferry service to Tilbury can be accessed. Furthermore, the High Street, hospital, post office, parks, gyms, public houses, and restaurants are also within this range.
- 2.3.4. Footways along The Grove are approximately 3.8m in width on both sides of the carriageway, and the majority of crossings are equipped with dropped kerbs and tactile paving to facilitate easy and safe crossing of the road. To the north, a signalised crossing allows access to the clock tower and the High Street beyond.
- 2.3.5. Figure 3 shows a walking isochrone which demonstrates the areas that can be reached within a 25-minute walk of the site (at 5-minute intervals). The routes are centred from the main pedestrian site access on to The Grove, and all public transport access points within a 10-minute walk have been marked.

Figure 3 – Pedestrian Isochrone Map



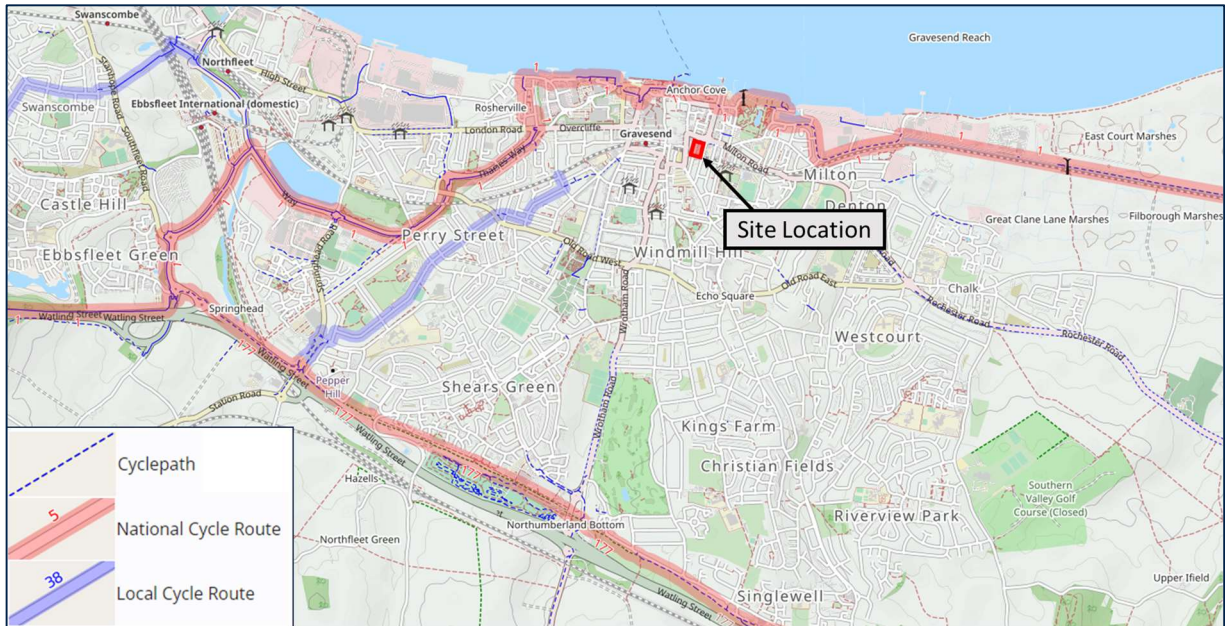
Source: QGIS, OpenStreetMap, and OpenRouteService (assuming 4.7 kph walking speed)

- 2.3.6. A wide variety of amenities are available within walking distance with the majority of the town centre including the train station, ferry terminal, and the Gravesend Promenade all within a ten minute walk. Within a 25-minute walk of the site are the neighbourhood areas of Northfleet, Denton, and Whitehill.

Cycle Accessibility

- 2.3.7. Cycling is also considered an important mode of sustainable travel and is generally considered suitable for distances of up to 3 miles (4.8km) for regular journeys, and 5 miles (8.0km) for commuting journeys (source: LTN 1\20, Cycle Infrastructure design).
- 2.3.8. In terms of cycling routes, National Cycle Route (NCR) 1 is located approximately 400m (a 4-minute cycle) north of the site, which in turn connects to Dover in the east via Gillingham, Sittingbourne, and Canterbury, and to the west to central London, passing through Canary Wharf.
- 2.3.9. Furthermore, NCR 117 is also accessible approximately 3.4km to the south of the site (a 12-minute cycle). Route 117 primarily links to Strood and Rochester to the east, where it joins with Routes 1, 17, and 178. These routes, other local routes, and their relation to the site, are shown in Figure 4.

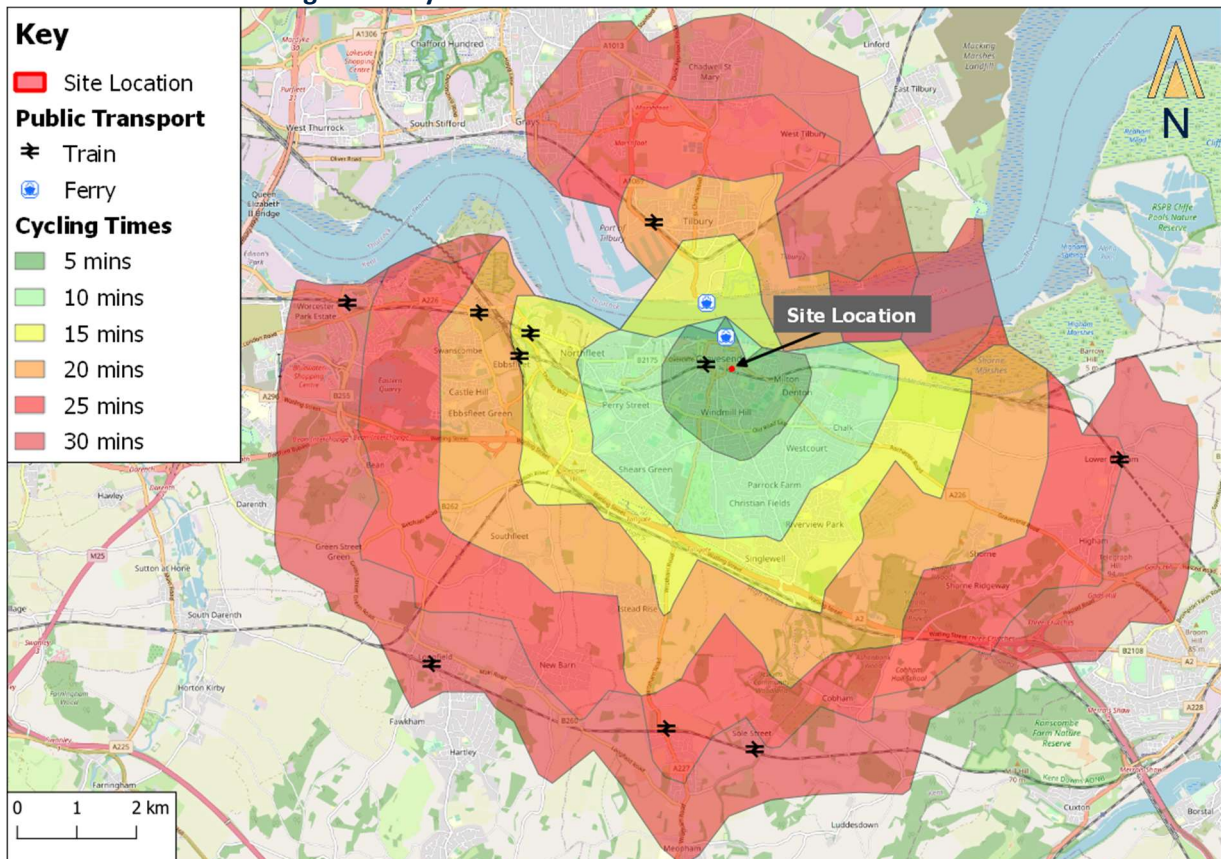
Figure 4 – Local Cycle Routes



Source: Open Cycle Map

- 2.3.10. Figure 5 shows a cycle isochrone, demonstrating the areas that can be reached within a 30-minute cycle (at 5 minute intervals). The isochrones are generated based on speeds dependent on the surface and highway type, and a five minute isochrone would therefore cover a distance of c. 1.5km, with a 30 minute isochrone covering a distance of c. 9km.

Figure 5 – Cycle Isochrones from Site Location



Source: QGIS, OpenStreetMap, and OpenRouteService (assuming 18 kph cycle speed)

- 2.3.11. The isochrone demonstrates that almost the entirety of Gravesend is accessible within a 15-minute cycle from the site, primarily limited by the A2 to the south and the High Speed 1 Rail line to the west. In addition, Greenhithe, Meopham, the outskirts of Strood, and Bluewater Shopping Centre are all accessible within a 30-minute cycle.
- 2.3.12. Through the use of the ferry service, access is also possible to Tilbury and the surrounding area, and via the trainline to London St Pancras, residents can access central London within a 30-minute combined cycle and train journey.
- 2.3.13. In summary, the footway infrastructure in the immediate surroundings of the site of a very high quality, with a large number of every-day amenities accessible within walking distance.
- 2.3.14. In addition, as described above, cycling to and from the site is a viable mode of transport with various National Cycle Routes accessible from the site, providing favourable cycle connections to surrounding towns and villages and to London via Gravesend Railway Station. The emergence of e-bikes also offers the potential for people to travel further and for longer than they would have previously due to the energy-assisting features present in e-bikes.

2.4. Public Transport Accessibility

Local Bus Network

- 2.4.1. The nearest bus stops to the site are the 'Clock Tower' stops located on the A226 Milton Road approximately 120m north of the site (a 2-minute walk), which is served by the regular bus services. Located approximately 600m west of the site (an 8-minute walk or a 4-minute cycle), Gravesend Bus Station provides further access to a number of services including frequent connections to Dartford and Bluewater.
- 2.4.2. Whilst there are more routes including school connections originating from these stops, they have a weekday frequency of fewer than one bus per hour, so have been excluded from this analysis.
- 2.4.3. The destinations, frequencies, and approximate timing of these routes is shown in Table 1.

Table 1 – Summary of Bus Routes Accessible Within 640m

Number	Destination	Weekday			Weekend Frequency	
		Approx. Frequency	First Bus	Last Bus	Saturday	Sunday
Clock Tower (120m)						
491	Riverview Park	20 minutes	05:53	18:49	30 minutes	30 minutes
490	Singlewell	20 minutes	04:04	00:38	30 minutes	30 minutes
416	Meopham	4 per day	10:23	15:48	2 per day	No Service
190	Chatham	20 minutes	05:56	19:24	20 minutes	60 minutes
Barracks Row / Garrick Street (600m)						
481	Riverview Park	60 minutes	07:53	19:53	No Service	No Service
489	New Ash Green	6 per day	06:42	17:20	4 services	No Service
C2	Castle Hill	30 minutes	06:00	00:00	30 minutes	60 minutes
480	Dartford	10 minutes	04:42	00:10	12 minutes	15 minutes
483	Bluewater	30 minutes	06:00	21:45	30 minutes	30 minutes

Local Railway Network

- 2.4.4. From the main pedestrian access on The Grove, Gravesend Railway Station is an approximately 500m walk (a 6-minute walk or a 4-minute cycle). Gravesend Station provides regular access to a number of London and Kent based stations which are summarised in .

Table 2 – Railway Routes from Gravesend Station

Destination	Approximate Frequency	Time to Destination
London St Pancras	30 minutes	23 minutes
London Charing Cross	30 minutes	63 minutes
London Cannon Street	30 minutes	68 minutes
Luton via St Pancras	30 minutes	123 minutes
Faversham	30 minutes	44 minutes
Rainham	30 minutes	28 minutes

- 2.4.5. Gravesend Station is equipped with cycle storage in the form of both lockers and racks, providing cycle parking for up to 280 cycles, making multimodal travel to or from the station convenient.

Summary

- 2.4.6. It is evident that the site benefits from excellent public transport accessibility with key destination such as London, Dartford, Ebbsfleet and Chatham all accessible by public transport.

2.5. Local Highway Network

- 2.5.1. Both The Grove and Edwin Street, the two roads which border the sites eastern and western edges respectively, are 20 mph single carriageway roads. The general form of each of the roads is shown in Figure 6.

Figure 6 – Profile of The Grove (Left) and Edwin Street (Right)



Source: Google Maps

The Grove

- 2.5.2. Whilst The Grove is not technically a one-way street, access to the street is only permitted at the southern end with vehicles prohibited from entering off the A226 Milton Road to the north. The street is characterised by single-yellow lines on the western side with parking restrictions between 08.00 – 18.30 Monday – Saturday, and pay-and-display / residents permit parking bays on the eastern side. The parking restrictions are covered in more detail in **Section 2.9**.

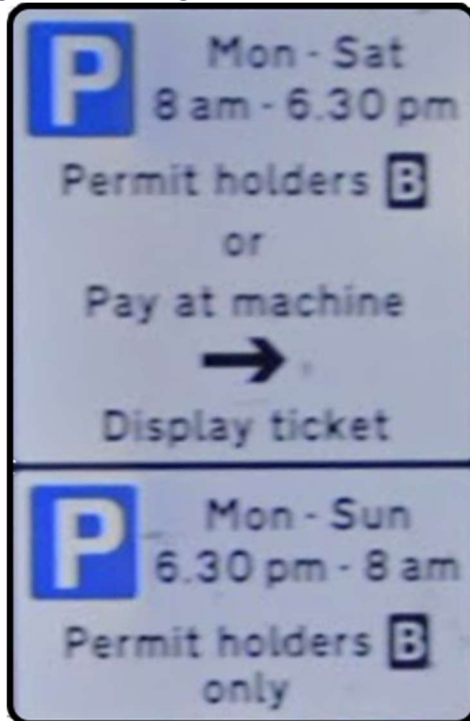
Edwin Street

- 2.5.3. Edwin Street is a one-way (northbound only) road running from south to north, pay-and-display / residents permit parking bays on both sides of the street. The road is approximately 7.2m in width, narrowing to approximately 3.2m in width for most of the road's length due to the presence of parking bays on both sides.

2.6. On Steet Parking Restrictions

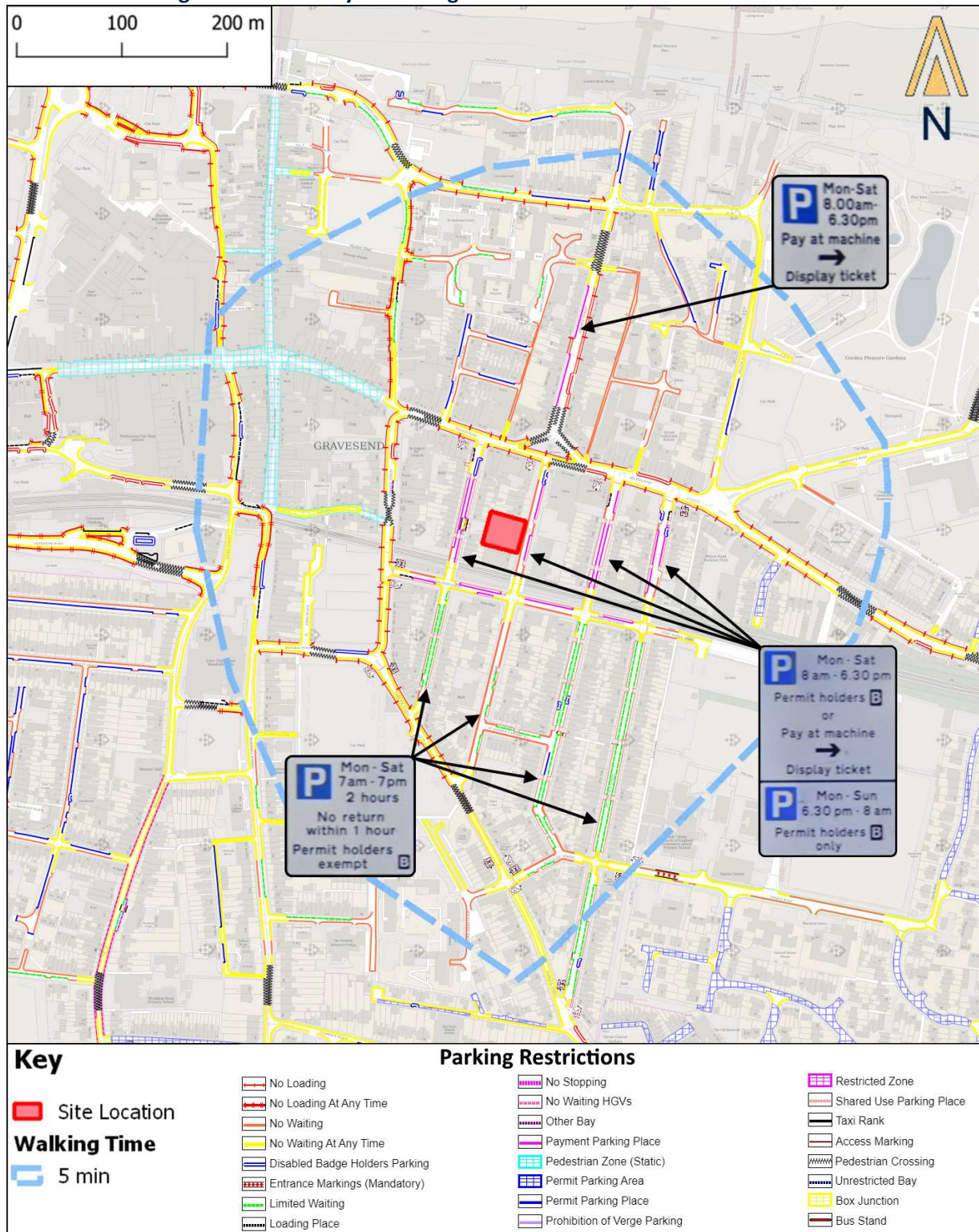
- 2.6.1. The site is located within a Controlled Parking Zone (CPZ) 'B'. The restrictions on The Grove and the neighbouring roads are laid out as shown in Figure 7.

Figure 7 – Parking Restrictions on The Grove



- 2.6.2. Evidently it is clear that the extensive parking controls limit non-permit holders from parking on-street the vast majority of the time. Visitors are able to park for up to two hours at a cost of £2.50 (RingGo) with no return within the hour. The remainder of the restrictions within a 5-minute walk of the site are annotated on the map in Figure 8.

Figure 8 – Summary of Parking Restrictions Near to the Site



Source: Kent County Council Traffic Orders

- 2.6.3. As can be seen from the above, nowhere within a 5-minute walk of the site has unrestricted parking bays, and The Grove and parallel roads are restricted in the day and night to permit holders only.

- 2.6.4. To the north of the site, there are approximately 19 car parking spaces which are pay-and-display controlled between 08.00 and 18.30 Monday – Saturday. To the south of the site, some restricted areas are present which allow two hours of free parking from 07.00 – 19.00 Monday – Saturday.
- 2.6.5. In conclusion, it is considered that the parking restrictions on the surrounding roads prohibit any non-permit holders from parking for more than two hours.

2.7. Highway Safety

- 2.7.1. A review of the online vehicle collision database at www.crashmap.com indicates that there have been no vehicle collisions in the immediate vicinity of the site in the latest five year period (2017-2021) with no incidents on Edwin Street or The Grove between the A226 Milton Road and Saddington Street. The Crashmap output is demonstrated in Figure 9.

Figure 9 – The Grove Crash Map



Source: crashmap.com

- 2.7.2. A serious incident took place on Berkely Crescent when a pedestrian was struck by a car whilst crossing the road. A second incident took place at The Grove junction with Saddington Street which involved two cars colliding and resulted in slight injuries.

- 2.7.3. There are not considered to be any accident trends in the study area and no incidents took place at the site access or in the immediate vicinity of the site. It is therefore considered that there are no existing road safety issues identified within the immediate vicinity of the site which may be exacerbated as a result of the proposed application.

2.8. Census

- 2.8.1. Analysis of Census 2011 and 2021 data has been undertaken for the Gravesham 002 Mid-level Super Output Area (MSOA) to help inform the modal splits of potential residents. The modal split is outlined in Table 3 below.

Table 3 – Census 2011 and 2021 Journey to Work Data (Gravesham 002 MSOA)

Mode	2011 Workplace Population	2011 Resident Population	2021 Resident Population
Train	4.5%	19.1%	13.6%
Bus	9.2%	9.1%	7.2%
Taxi	0.4%	0.5%	0.7%
Motorcycle	0.5%	0.8%	1.0%
Car Driver	60.1%	43.4%	46.3%
Car Passenger	7.4%	10.0%	10.1%
Bicycle	1.3%	1.0%	1.5%
On Foot	16.1%	15.4%	17.3%
Other	0.4%	0.9%	2.3%
TOTAL	100%	100%	100%

Note: 2021 Workplace Population is not currently available

- 2.8.2. The 2011 data shows that in 2011 43% of commuting journeys made from the residents of the Gravesham 002 MSOA were undertaken by private car, with an additional 10% as car passengers. A total of 45% of journeys were undertaken through sustainable modes of transport, of which 28% were by public transport, 15% on foot, and 1% by bike.
- 2.8.3. The 2021 census revealed a slight increase in journeys undertaken by private car (to 46%), with the proportion of car passengers staying relatively consistent at around 10%. The number of journeys undertaken by sustainable modes of transport decreased to 40%, of which 21% were by public transport (a 7% drop), 17% on foot, and 2% by bike.
- 2.8.4. It is worth noting that the 2021 data was undertaken during the COVID-19 pandemic, in the midst of a national lockdown. As such, the data may not represent a residents 'usual' mode of travel. Nonetheless the 2021 Census data is considered to be the most robust dataset which is likely to represent the commuting habits of residents in the region.
- 2.8.5. In addition, car ownership data from the 2021 Census for the Gravesham 002A lower layer output area (LSOA) has been acquired and cross referenced against the accommodation type (apartments / flats). This information is summarised in Table 4.

Table 4 – Census Car Ownership Data for Flats (Gravesham 002A LSOA)

Cars	2021 Census		
	Number of households	Percentage of Households	Potential Parking Demand
No cars or vans in household	308	55.5%	-
1 car or van in household	217	39.1%	217
2 or more cars or vans in household	30	5.4%	75
TOTAL	555	100%	292
Average Car Ownership per Dwelling	0.53		
Car Parking Demand (37 Units)	20		

** Data for two or more assumed to be 2.5 per household*

- 2.8.6. The 2021 data shows that 55.5% of flats in the area did not own a car at all, with 39.1% owning one car, and 5.4% owning two or more cars. Therefore, the average flat in the region would be expected to have owned 0.53 cars in 2021.

2.9. Summary

- 2.9.1. The site is located in central Gravesend, approximately 500m east of Gravesend Railway Station, and is the site of a former Job Centre. Access to the site is taken from The Grove, which itself connects to the A226 Milton Road to the north and to Parrock Street to the south. The area is characterised by high public transport provision and Controlled Parking Zones.
- 2.9.2. The site is situated within a very well connected urban centre, and as a result has access to a wide range of services and amenities within walking distance. This is reflected in the relatively low car-ownership of 0.53 cars per household for flats.
- 2.9.3. Within a ten-minute walk from the site, Gravesend Station, eight high frequency bus routes, and the ferry service to Tilbury can be accessed. Furthermore, the high street, hospital, post office, parks, gyms, public houses, and restaurants are also within this range.
- 2.9.4. Footways along The Grove are approximately 3.8m in width on both sides of the carriageway, and all crossings are equipped with dropped kerbs and tactile paving to facilitate easy and safe crossing of the road. To the north, a signalised crossing allows access to the clock tower and the high street beyond.
- 2.9.5. Additionally, the active accessibility of the site is enhanced by the presence of National Cycle Route (NCR) 1 approximately 400m (a 4-minute cycle) north of the site connecting Gravesend to Dover in the east via Gillingham, Sittingbourne, and Canterbury, and to the west to central London, passing through Canary Wharf. NCR 117 is also accessible approximately 3.4km to the south of the site (a 12-minute cycle), providing an alternate route to Strood and Rochester.
- 2.9.6. An assessment of the highway safety within the vicinity of the site indicates that there are no existing safety issues within the immediate vicinity of the site which may be exacerbated as a result on any future development.

3. Proposed Development

3.1. Proposed Development

- 3.1.1. The proposed development seeks the conversion of the existing block into 37 residential units made up of 31 x studio apartments and 6 x one bedroom apartments. The proposed plans are attached at **Appendix A**.

3.2. Access

- 3.2.1. The existing pedestrian access points on to The Grove will be maintained for residents, with secondary access points on to Edwin Street remaining.
- 3.2.2. Vehicular access will be maintained from Edwin Street. This takes the form of a gated entrance forming a priority junction. This Edwin Street access will continue to serve as vehicular access point to the surfaced courtyard which contains vehicle parking spaces with lifts provided for vertical circulation from the lower ground floor. Edwin Street is a one-way street with traffic travelling in a northbound direction. There is a break in the on-street parking bays either side and across the access to maintain visibility for vehicles egressing the site. It is considered that vehicle speeds and traffic flows are low on the carriageway, with traffic calming measures in place.

3.3. Proposed Parking and Minibuses

- 3.3.1. The maximum vehicle and minimum cycle parking standards for residential developments within Gravesham are outlined in the Kent County Council SPG4 Parking Standards Guidance (2006).
- 3.3.2. The standards state that one bedroom dwellings should provide one car parking space per unit. Notably the guidance states “More stringent standards may be acceptable to developments in town centres.”
- 3.3.3. Given the town centre location of the site, coupled with the change of use nature of the proposals it is proposed to retain the existing car parking, with the exception of car parking spaces lost to cycle parking and bin stores.
- 3.3.4. As such the proposed development will be supported by 22 car parking spaces, equating to a parking ratio of 0.59 spaces per unit. Notably this parking ratio is marginally in excess of the Census car ownership data which shows an average of 0.53 cars per household for flats in the area, equating to a parking demand of 20 vehicles. The proposed provision of 22 car parking spaces is therefore broadly in accordance with the average car ownership of existing residents living within the vicinity of the site. As such, this provision is suitable to accommodate the anticipated vehicles to be generated by the proposed development whilst providing two additional spaces to accommodate visitors and any additional demand. This reduced provision compared with the adopted parking standards and the previously approved ratio of 0.71 spaces per unit is in accordance with national and local policy to reduce the reliance on private car and encourage use of sustainable modes of transport.
- 3.3.5. To ensure that no overspill parking takes place, prospective residents would not be able to obtain a permit for parking on The Grove or Edwin Street. The proposed parking provision is therefore considered suitable for the proposed development quantum, in accordance with Census car ownership data. The under-provision compared to adopted standards and previously approved parking ratio is reflective of the sustainable location of the site in accordance with key objectives of national and local policy and guidance.
- 3.3.6. The parking standards state “Any new development which includes off-street parking, should have at least one parking space that is either designated for the mobility impaired or, if not specifically

designated, is of sufficient size to be used by the mobility impaired.” As shown on the proposed layout plans, one disabled parking bay is provided within the basement.

3.4. Proposed Cycle Parking

- 3.4.1. The Kent County Council SPG4 Parking Standards Guidance (2006) state that one cycle parking space per unit should be provided for flats. As such it is considered that a total of 37 cycle parking spaces should be provided at the site.
- 3.4.2. A total of 44 cycle parking spaces are currently proposed at basement level with 22 Sheffield Stands (44 spaces) provided. The cycle parking is accessible via the ramp to the rear off Edwin Street or via the lifts. All cycle parking is secure, sheltered and safely accessible.

3.5. Refuse Storage and Collection

- 3.5.1. The Gravesham Planning Guidance on Waste Collection Requirements (2019) sets out the refuse storage requirements for residential properties with the following requirements;
 - Refuse - 1 x 1,100 litre Eurobin per 6 flats;
 - Recycling – 1 x 1,100 litre Eurobin per 6 flats with special recycling lid; and
 - Food Waste – 1 x 140 litre bin per 10 flats with an individual 5ltr caddy per flat
- 3.5.2. As such the development of 37 apartments would require the following waste storage;
 - 7 x 1100 litre Eurobins for general refuse;
 - 7 x 1100 litre Eurobins for recycling;
 - 4 x 140 litre wheely bins for food waste.
- 3.5.3. The basement level refuse store provides storage for the above quantum. The store ensures that no resident has to carry their refuse more than 30m in accordance with BS5906-2005 Waste Management.
- 3.5.4. On collection days the building management team will take the bins from the store and take them up the ramp to the bin presentation point. Due to the haul distances an electric tug vehicle / machine (Figure 10) will be used to move the bins.

Figure 10 – Example Refuse Tug



- 3.5.5. Refuse and recycling on Edwin Street is currently collected on alternative weeks on a Tuesday.

3.6. Summary

- 3.6.1. It is considered that safe and suitable access is provided at the site in accordance with NPPF. In accordance with Paragraph 109 of the NPPF the site offers a genuine choice of transport modes including more sustainable modes of transport such as cycling though the provision of secure and sheltered cycle parking. All site residents will be restricted from applying for an on-street parking permits.

4. Highway Impact Assessment

4.1. Context

- 4.1.1. This section of the TA considers the trip generation and potential travel patterns that are anticipated to occur as a result of the proposed development relative to the existing site.
- 4.1.2. The TRICS (Version 7.11.3) database has been utilised to determine the existing trip generation and likely trip generation of the proposed development, and therefore the net change in trip levels arising from the scheme.

4.2. Existing Site Trip Generation

- 4.2.1. The extant use of the site is as a Job Centre office, and therefore had a combination of permanent staff as well as regular visitors to the site. Therefore the following parameters have been used to interrogate the TRICS database for similar site:
- Employment – Offices;
 - Multi-modal Trip Rates;
 - Sites in England only, excluding Greater London;
 - 1,500 – 5,000 sqm GFA;
 - Sites located in ‘Town Centre’ or ‘Edge of Town Centre’ locations only; and
 - Surveys undertaken between 01/01/2016-27/09/2024, not during COVID.
- 4.2.2. A summary of the results of the key trip rates and anticipated trip generation is provided in Table 5, and Full details of the trip rates and TRICS site is presented at **Appendix D**.

Table 5 – Existing Site Trip Generation Summary

Trip Rates	AM Peak (0800-0900)			PM Peak (1700-1800)			Daily		
	In	Out	Two-Way	In	Out	Two-Way	In	Out	Two-Way
Person Trip Rate (per 100 sqm)	2.236	0.084	2.32	0.103	2.281	2.384	9.596	9.581	19.177
Person Trips (1,972 sqm)	44	2	46	2	45	47	189	189	378

- 4.2.3. As can be seen, the existing site can be expected to produce approximately 46 two-way person trips in the AM peak, 47 in the PM peak, and a total of 378 two-way person trips per day.
- 4.2.4. Combining the above trip rates for the offices with the 2011 Census workplace journey to work data shown previously in Table 3, a multimodal anticipated trip generation profile for the site is shown below in Table 6.

Table 6 – Multimodal Trip Generation for Existing Site

Trip Rates	Mode Share	AM Peak (0800-0900)			PM Peak (1700-1800)			Daily (0700-1900)		
		In	Out	Two-Way	In	Out	Two-Way	In	Out	Two-Way
Train	4.5%	2	0	2	0	2	2	9	9	18
Bus	9.2%	4	0	4	0	4	4	17	17	34
Taxi	0.4%	0	0	0	0	0	0	1	1	2
Motorcycle	0.5%	0	0	0	0	0	0	1	1	2
Car Driver	60.1%	26	1	27	1	27	28	114	114	228
Car Passenger	7.4%	3	0	3	0	3	3	14	14	28
Bicycle	1.3%	1	0	1	0	1	1	2	2	4
On foot	16.1%	8	1	9	1	8	9	30	30	60
Other	0.4%	0	0	0	0	0	0	1	1	2
Total	100.0%	44	2	46	2	45	47	189	189	378

- 4.2.5. An estimated 27 two-way car trips are anticipated to be produced per day by the existing office during the AM peak, with a further 28 two way vehicle trips in the PM peak. It is expected that, over the course of a day, approximately 228 two-way vehicle trips are currently generated by the site, in addition to 60 pedestrian trips, 52 public transport trips, and 28 trips by car passengers.

4.3. Proposed Site Trip Generation

- 4.3.1. In order to estimate the proposed use of the site is as 37 residential apartment the TRICS database has been interrogated for sites of a similar nature, with the below parameters used:

- Residential – Flats Privately Owned;
- Multi-modal Trip Rates;
- Sites in England only, excluding Greater London;
- 0-100 units;
- Sites located in 'Town Centre' or 'Edge of Town Centre' locations only; and
- Surveys undertaken between 01/01/2016-27/09/2024, not during COVID.

- 4.3.2. A summary of the results of the key trip rates and anticipated trip generation is provided in Table 7, and Full details of the trip rates and TRICS site is presented at **Appendix E**.

Table 7 – Proposed Site Trip Generation Summary

Trip Rates	AM Peak (0800-0900)			PM Peak (1700-1800)			Daily		
	In	Out	Two-Way	In	Out	Two-Way	In	Out	Two-Way
Person Trip Rate (per Resident)	0.107	0.479	0.586	0.356	0.191	0.547	2.333	2.482	4.815
Person Trips (37 Units)	4	18	22	13	7	20	86	92	178

- 4.3.3. As can be seen, the site is anticipated to produce 22 two-way person trips in the AM peak, 20 in the PM peak, and a total of 178 two-way person trips per day.
- 4.3.4. The 2021 Census data shown previously in Table 3 has been used to distribute the person trips over the various modes in Table 8.

Table 8 – Multimodal Trip Generation for Proposed Site

Trip Rates	Mode Share	AM Peak (0800-0900)			PM Peak (1700-1800)			Daily (0700-1900)		
		In	Out	Two-Way	In	Out	Two-Way	In	Out	Two-Way
Train	13.7%	1	2	3	2	1	3	12	13	25
Bus	7.2%	0	2	2	1	1	2	6	7	13
Taxi	0.7%	0	0	0	0	0	0	1	1	2
Motorcycle	1.0%	0	0	0	0	0	0	1	1	2
Car Driver	46.3%	2	9	11	7	3	10	40	43	83
Car Passenger	10.1%	0	2	2	1	1	2	9	9	18
Bicycle	1.5%	0	0	0	0	0	0	1	1	2
On foot	17.3%	1	3	4	2	1	3	14	15	29
Other	2.3%	0	0	0	0	0	0	2	2	4
Total	100.0%	4	18	22	13	7	20	86	92	178

- 4.3.5. An estimated 11 two-way car trips are anticipated to be produced per day by the proposed residential development during the AM peak, with a further 10 two way vehicle trips in the PM peak. It is expected that, over the course of a day, approximately 83 two-way vehicle trips are proposed to be generated by the residential site, in addition to 29 pedestrian trips, 38 public transport trips, and 18 trips by car passengers.

4.4. Impact Assessment

- 4.4.1. A comparison has been made between the trip generation of the proposed development and that of the existing office development, with the results presented in Table 9. Cells highlighted in red indicate increases in the number of trips, whilst those in green indicate decreases compared to the site's existing use.

Table 9 – Net Impact of Proposed Development

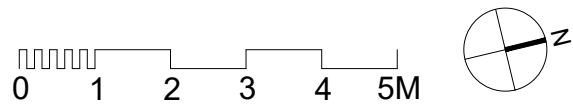
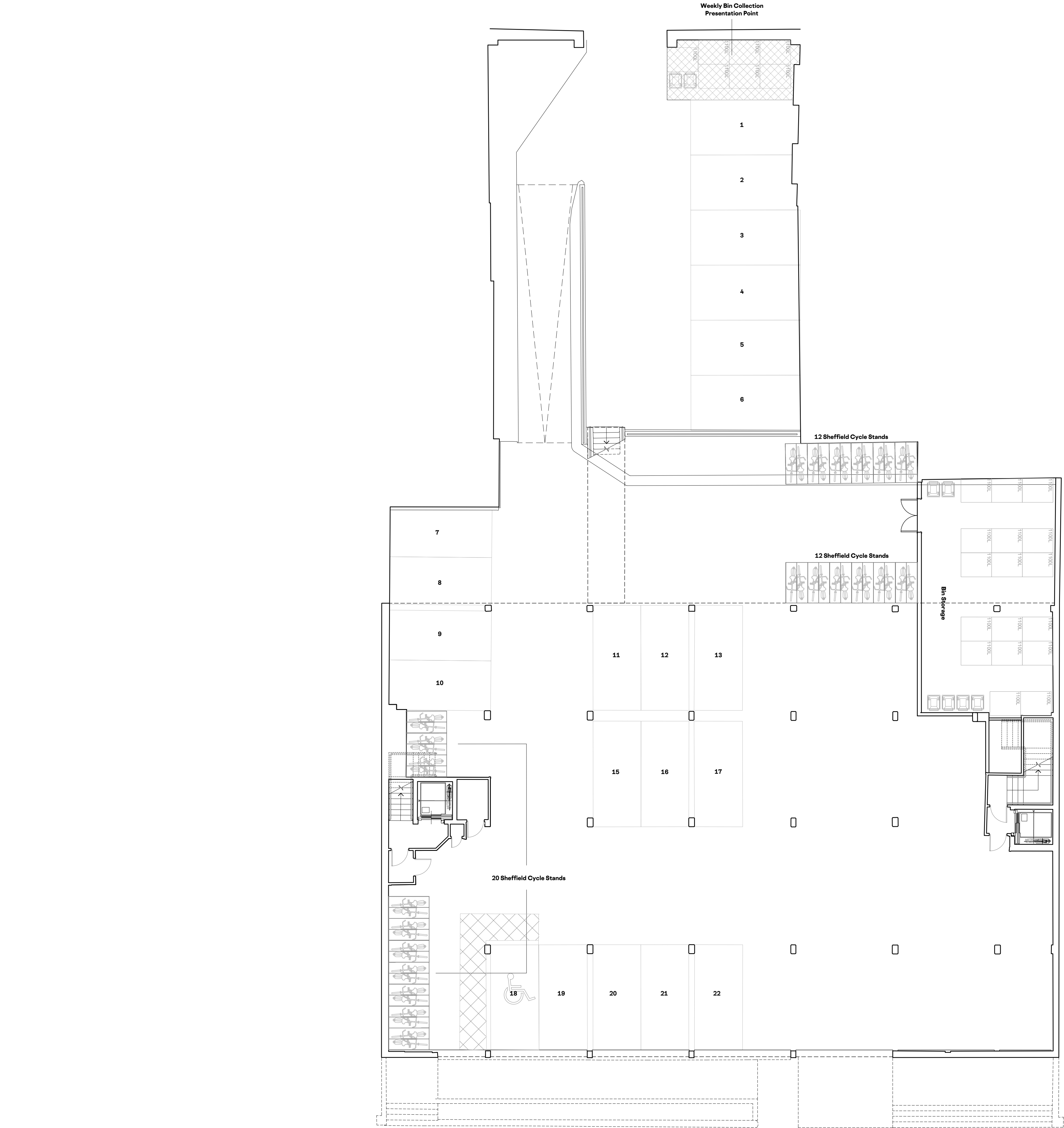
Trip Rates	AM Peak (0800-0900)			PM Peak (1700-1800)			Daily (0700-1900)		
	In	Out	Two-Way	In	Out	Two-Way	In	Out	Two-Way
Train	-1	2	1	2	-1	1	3	4	7
Bus	-4	2	-2	1	-3	-2	-11	-10	-21
Taxi	0	0	0	0	0	0	0	0	0
Motorcycle	0	0	0	0	0	0	0	0	0
Car Driver	-24	8	-16	6	-24	-18	-74	-71	-145
Car Passenger	-3	2	-1	1	-2	-1	-5	-5	-10
Bicycle	-1	0	-1	0	-1	-1	-1	-1	-2
On foot	-7	2	-5	1	-7	-6	-16	-15	-31
Other	0	0	0	0	0	0	1	1	2
Total	-40	16	-24	11	-38	-27	-103	-97	-200

- 4.4.2. In the AM peak, approximately 16 fewer two way vehicle trips are expected to be generated by the proposed development when compared to the existing office use. Similarly in the PM peak, 18 fewer two way vehicle trips will be generated. Over the day, it is expected that 145 fewer two way vehicle trips will be generated. As such the change of use of the site indicates that the site will not cause an undue or unsafe stress on the surrounding highway network, and therefore the site is in line with the policy goals at a local and regional level.

5. Summary

- 5.1.1. This Transport Note has been prepared by Evoke to support a change of use application for the change of use of an existing Use Class E office building to provide 37 residential units in central Gravesend. The site is situated within a very well connected urban centre, and as a result has access to a wide range of services and amenities within walking distance. Within a ten-minute walk from the site there is Gravesend Railway Station, high frequency bus routes, and a ferry service.
- 5.1.2. Both The Grove and Edwin Street, the two roads which border the site's eastern and western edges respectively, are 20 mph single carriageway roads with one-way access out on to the A226 Milton Road to the north. Footways along The Grove are approximately 3.8m in width on both sides of the carriageway, and all crossings are equipped with dropped kerbs and tactile paving to facilitate easy and safe crossing of the road. To the north, a signalised crossing allows access to the clock tower and the high street beyond.
- 5.1.3. Additionally, the active accessibility of the site is enhanced by the presence of National Cycle Route (NCR) 1 approximately 400m (a 4-minute cycle) north of the site connecting Gravesend to Dover in the east via Gillingham, Sittingbourne, and Canterbury, and to the west to central London, passing through Canary Wharf. NCR 117 is also accessible approximately 3.4km to the south of the site (a 12-minute cycle), providing an alternate route to Strood and Rochester.
- 5.1.4. An assessment of the highway safety within the vicinity of the site indicates that there are no existing safety issues within the immediate vicinity of the site which may be exacerbated as a result on any future development.
- 5.1.5. The proposals involve utilising the existing pedestrian access of The Grove and the vehicular access from Edwin Street. In accordance with NPPF the site ensures that a safe, suitable and satisfactory access for the quantum of the development can be achieved. As such the development would not result in an unacceptable impact on highway safety or a severe impact on the surrounding highway network.
- 5.1.6. Given the town centre location of the site, coupled with the change of use nature of the proposals it is proposed to retain the existing car parking, with the exception of car parking spaces lost to cycle parking and bin stores.
- 5.1.7. As such the proposed development will be supported by 22 car parking spaces, equating to a parking ratio of 0.59 spaces per unit. The proposed provision is in accordance with the average car ownership of existing residents living within the vicinity of the site. The reduced provision compared with the adopted standards and the previously approved parking ratio at the site is in accordance with national and local policy to reduce the reliance on private car. To ensure that no overspill parking takes place, prospective residents would not be able to obtain a permit for parking on The Grove or Edwin Street.
- 5.1.8. The site will provide sheltered, secure and accessible cycle parking at basement level ensuring that access via a choice of sustainable modes is achievable in accordance with National and Local policy.
- 5.1.9. In the AM peak, approximately 16 fewer two way vehicle trips are expected to be generated by the proposed development when compared to the existing office use. Similarly in the PM peak, 18 fewer two way vehicle trips will be generated. Over the day, it is expected that 145 fewer two way vehicle trips will be generated.
- 5.1.10. The proposed development is therefore not considered to result in an adverse impact upon the local highway network, pedestrian and cycle infrastructure or public transport networks. It is therefore concluded that the development would not result in a severe residual impact on the local highway network, nor would it create an unacceptable impact on highway safety in accordance with the NPPF.

Appendix A – Proposed Plans



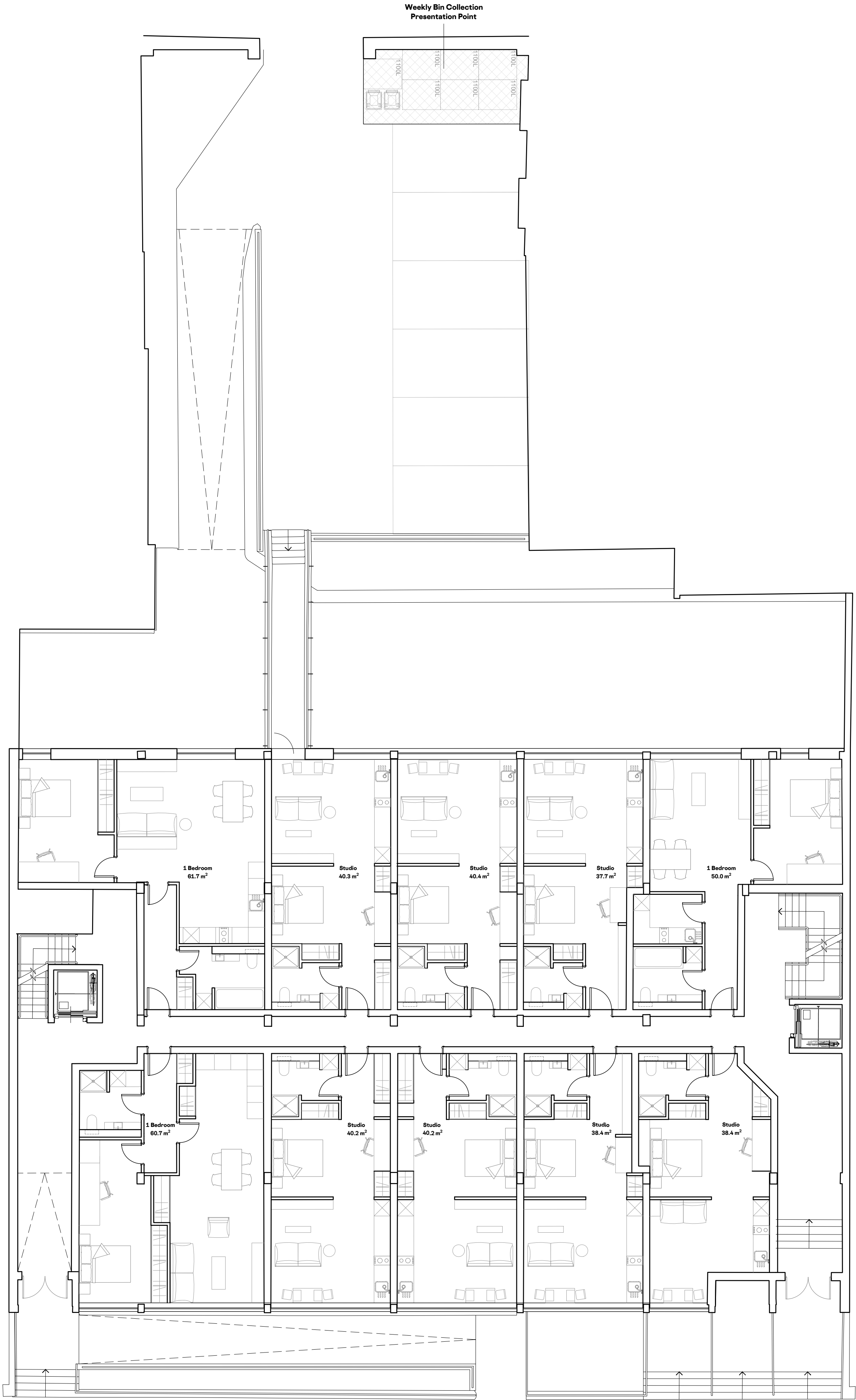
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Project | 44-46 THE GROVE
GRAVESEND,....
Client | THE SUBSTANTIA GROUP
Title | PROPOSED LOWER GROUND FLOOR PLAN
Status | PLANNING

Scale@A1 | 1:100 Date | SEP.24 Drawn | AD Chk'd | MWJ

Project Number Drawing Number Revision
22.0101 200.010
Bim Number 22.0101-GHA-XX-XX-DR-A-200.010-S0-....



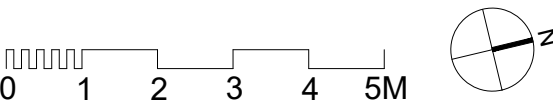
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Project | 44-46 THE GROVE
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Scale@A1 | 1:100 Date | SEP.24 Drawn | AD Chk'd | MWJ

Project Number Drawing Number Revision
22.0101 200.011
Bim Number 22.0101-GHA-XX-XX-DR-A-200.011-SO-....



Appendix B – Existing Site TRICS Outputs

Calculation Reference: AUDIT-708001-230911-0914

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT

Category : A - OFFICE

MULTI-MODAL TOTAL VEHICLES

Selected regions and areas:

02	SOUTH EAST	
	WS WEST SUSSEX	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	NY NORTH YORKSHIRE	1 days
08	NORTH WEST	
	GM GREATER MANCHESTER	1 days
09	NORTH	
	TW TYNE & WEAR	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: Gross floor area
 Actual Range: 1590 to 3960 (units: sqm)
 Range Selected by User: 1500 to 5000 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/15 to 11/11/22

*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:

Monday	2 days
Friday	2 days

*This data displays the number of selected surveys by day of the week.*Selected survey types:

Manual count	4 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 undertaken using machines.*Selected Locations:

Town Centre	1
Edge of Town Centre	3

*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:

Built-Up Zone	2
No Sub Category	2

*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.*Inclusion of Servicing Vehicles Counts:

Servicing vehicles Included	3 days - Selected
Servicing vehicles Excluded	5 days - Selected

Secondary Filtering selection:

Use Class:

Not Known

4 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order (England) 2020 has been used for this purpose, which can be found within the Library module of TRICS®.

Filter by Site Operations Breakdown:

All Surveys Included

Population within 500m Range:

All Surveys Included

Population within 1 mile:

5,001 to 10,000

1 days

20,001 to 25,000

2 days

25,001 to 50,000

1 days

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

Population within 5 miles:

25,001 to 50,000

1 days

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

4 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:

Yes

1 days

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:

No PTAL Present

4 days

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

LIST OF SITES relevant to selection parameters

1	GM-02-A-09	LEASED OFFICES	GREATER MANCHESTER
	NEW MOUNT STREET MANCHESTER		
	Edge of Town Centre Built-Up Zone		
	Total Gross floor area:	2500 sqm	
	Survey date: MONDAY	26/09/16	Survey Type: MANUAL
2	NY-02-A-03	DISTRICT COUNCIL OFFICES	NORTH YORKSHIRE
	STATION ROAD RICHMOND		
	Edge of Town Centre No Sub Category		
	Total Gross floor area:	1590 sqm	
	Survey date: FRIDAY	06/05/22	Survey Type: MANUAL
3	TW-02-A-07	OFFICES	TYNE & WEAR
	MULGRAVE TERRACE GATESHEAD		
	Town Centre Built-Up Zone		
	Total Gross floor area:	2090 sqm	
	Survey date: MONDAY	13/06/16	Survey Type: MANUAL
4	WS-02-A-07	BUSINESS TECHNOLOGY	WEST SUSSEX
	HAM ROAD SHOREHAM-BY-SEA		
	Edge of Town Centre No Sub Category		
	Total Gross floor area:	2780 sqm	
	Survey date: FRIDAY	11/11/22	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 SURVEYS

Site Ref	Survey Date	Reason for Deselection
GM-02-A-08	26/09/16	Industry Type

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE

MULTI-MODAL TOTAL VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Total People to Total Vehicles ratio (all time periods and directions): 2.25

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	4	2240	0.190	4	2240	0.000	4	2240	0.190
07:30 - 08:00	4	2240	0.313	4	2240	0.033	4	2240	0.345
08:00 - 08:30	4	2240	0.502	4	2240	0.045	4	2240	0.547
08:30 - 09:00	4	2240	0.826	4	2240	0.078	4	2240	0.904
09:00 - 09:30	4	2240	0.424	4	2240	0.056	4	2240	0.480
09:30 - 10:00	4	2240	0.346	4	2240	0.145	4	2240	0.491
10:00 - 10:30	4	2240	0.201	4	2240	0.067	4	2240	0.268
10:30 - 11:00	4	2240	0.223	4	2240	0.123	4	2240	0.346
11:00 - 11:30	4	2240	0.067	4	2240	0.067	4	2240	0.134
11:30 - 12:00	4	2240	0.056	4	2240	0.089	4	2240	0.145
12:00 - 12:30	4	2240	0.145	4	2240	0.179	4	2240	0.324
12:30 - 13:00	4	2240	0.123	4	2240	0.123	4	2240	0.246
13:00 - 13:30	4	2240	0.190	4	2240	0.145	4	2240	0.335
13:30 - 14:00	4	2240	0.268	4	2240	0.257	4	2240	0.525
14:00 - 14:30	4	2240	0.145	4	2240	0.156	4	2240	0.301
14:30 - 15:00	4	2240	0.134	4	2240	0.246	4	2240	0.380
15:00 - 15:30	4	2240	0.112	4	2240	0.179	4	2240	0.291
15:30 - 16:00	4	2240	0.134	4	2240	0.234	4	2240	0.368
16:00 - 16:30	4	2240	0.179	4	2240	0.335	4	2240	0.514
16:30 - 17:00	4	2240	0.100	4	2240	0.346	4	2240	0.446
17:00 - 17:30	4	2240	0.045	4	2240	0.480	4	2240	0.525
17:30 - 18:00	4	2240	0.056	4	2240	0.759	4	2240	0.815
18:00 - 18:30	4	2240	0.022	4	2240	0.458	4	2240	0.480
18:30 - 19:00	4	2240	0.000	4	2240	0.123	4	2240	0.123
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			4.800			4.723			9.523

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.

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Parameter summary

Trip rate parameter range selected:	1590 - 3960 (units: sqm)
Survey date range:	01/01/15 - 11/11/22
Number of weekdays (Monday-Friday):	5
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	2
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE
MULTI-MODAL TOTAL PEOPLE
 Calculation factor: 100 sqm
 BOLD print indicates peak (busiest) period
 Total People to Total Vehicles ratio (all time periods and directions): 2.25

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30									
00:30 - 01:00									
01:00 - 01:30									
01:30 - 02:00									
02:00 - 02:30									
02:30 - 03:00									
03:00 - 03:30									
03:30 - 04:00									
04:00 - 04:30									
04:30 - 05:00									
05:00 - 05:30									
05:30 - 06:00									
06:00 - 06:30									
06:30 - 07:00									
07:00 - 07:30	4	2240	0.212	4	2240	0.000	4	2240	0.212
07:30 - 08:00	4	2240	0.424	4	2240	0.045	4	2240	0.469
08:00 - 08:30	4	2240	0.826	4	2240	0.045	4	2240	0.871
08:30 - 09:00	4	2240	1.685	4	2240	0.089	4	2240	1.774
09:00 - 09:30	4	2240	1.205	4	2240	0.134	4	2240	1.339
09:30 - 10:00	4	2240	0.882	4	2240	0.190	4	2240	1.072
10:00 - 10:30	4	2240	0.391	4	2240	0.100	4	2240	0.491
10:30 - 11:00	4	2240	0.402	4	2240	0.156	4	2240	0.558
11:00 - 11:30	4	2240	0.134	4	2240	0.112	4	2240	0.246
11:30 - 12:00	4	2240	0.100	4	2240	0.246	4	2240	0.346
12:00 - 12:30	4	2240	0.279	4	2240	0.603	4	2240	0.882
12:30 - 13:00	4	2240	0.357	4	2240	0.859	4	2240	1.216
13:00 - 13:30	4	2240	0.346	4	2240	0.893	4	2240	1.239
13:30 - 14:00	4	2240	0.859	4	2240	0.614	4	2240	1.473
14:00 - 14:30	4	2240	0.379	4	2240	0.357	4	2240	0.736
14:30 - 15:00	4	2240	0.670	4	2240	0.491	4	2240	1.161
15:00 - 15:30	4	2240	0.234	4	2240	0.391	4	2240	0.625
15:30 - 16:00	4	2240	0.469	4	2240	0.458	4	2240	0.927
16:00 - 16:30	4	2240	0.413	4	2240	0.614	4	2240	1.027
16:30 - 17:00	4	2240	0.234	4	2240	0.547	4	2240	0.781
17:00 - 17:30	4	2240	0.100	4	2240	1.083	4	2240	1.183
17:30 - 18:00	4	2240	0.045	4	2240	1.362	4	2240	1.407
18:00 - 18:30	4	2240	0.056	4	2240	1.027	4	2240	1.083
18:30 - 19:00	4	2240	0.000	4	2240	0.335	4	2240	0.335
19:00 - 19:30									
19:30 - 20:00									
20:00 - 20:30									
20:30 - 21:00									
21:00 - 21:30									
21:30 - 22:00									
22:00 - 22:30									
22:30 - 23:00									
23:00 - 23:30									
23:30 - 24:00									
Total Rates:			10.702			10.751			21.453

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.

Appendix C – Proposed Development TRICS Outputs

Calculation Reference: AUDIT-708001-230911-0916

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
 Category : G - STUDENT ACCOMMODATION
 MULTI-MODAL TOTAL VEHICLES

Selected regions and areas:

03	SOUTH WEST	
	BA BATH & NORTH EAST SOMERSET	1 days
05	EAST MIDLANDS	
	DY DERBY	1 days
09	NORTH	
	DH DURHAM	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: Number of residents
 Actual Range: 168 to 350 (units:)
 Range Selected by User: 15 to 700 (units:)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/15 to 25/09/19

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:

Wednesday	1 days
Thursday	2 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 undertaken using machines.

Selected Locations:

Town Centre	1
Suburban Area (PPS6 Out of 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	1
Built-Up Zone	1
No Sub Category	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.

Inclusion of Servicing Vehicles Counts:

Servicing vehicles Included	3 days - Selected
Servicing vehicles Excluded	X days - Selected

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 (England) 2020 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:

15,001 to 20,000

1 days

25,001 to 50,000

2 days

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

Population within 5 miles:

100,001 to 125,000

2 days

250,001 to 500,000

1 days

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

Car ownership within 5 miles:

1.1 to 1.5

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:

No PTAL Present

3 days

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

LIST OF SITES relevant to selection parameters

1	BA-03-G-01	STUDENT FLATS	BATH & NORTH EAST SOMERSET
	LOWER BRISTOL ROAD		
	BATH		
	Suburban Area (PPS6 Out of Centre)		
	No Sub Category		
	Total Number of residents:	291	
	Survey date: THURSDAY	04/10/18	Survey Type: MANUAL
2	DH-03-G-01	STUDENT FLATS	DURHAM
	ASHWOOD		
	DURHAM		
	GILESGATE		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of residents:	168	
	Survey date: THURSDAY	18/10/18	Survey Type: MANUAL
3	DY-03-G-02	STUDENT ACCOMMODATION	DERBY
	CATHEDRAL ROAD		
	DERBY		
	Town Centre		
	Built-Up Zone		
	Total Number of residents:	350	
	Survey date: WEDNESDAY	25/09/19	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.

TRIP RATE for Land Use 03 - RESIDENTIAL/G - STUDENT ACCOMMODATION
MULTI-MODAL TOTAL VEHICLES
 Calculation factor: 1 RESIDE
 BOLD print indicates peak (busiest) period
 Total People to Total Vehicles ratio (all time periods and directions): 17.21

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	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	270	0.002	3	270	0.004	3	270	0.006
08:00 - 09:00	3	270	0.004	3	270	0.001	3	270	0.005
09:00 - 10:00	3	270	0.007	3	270	0.002	3	270	0.009
10:00 - 11:00	3	270	0.009	3	270	0.009	3	270	0.018
11:00 - 12:00	3	270	0.010	3	270	0.012	3	270	0.022
12:00 - 13:00	3	270	0.005	3	270	0.006	3	270	0.011
13:00 - 14:00	3	270	0.006	3	270	0.005	3	270	0.011
14:00 - 15:00	3	270	0.002	3	270	0.005	3	270	0.007
15:00 - 16:00	3	270	0.006	3	270	0.010	3	270	0.016
16:00 - 17:00	3	270	0.006	3	270	0.006	3	270	0.012
17:00 - 18:00	3	270	0.001	3	270	0.004	3	270	0.005
18:00 - 19:00	3	270	0.002	3	270	0.004	3	270	0.006
19:00 - 20:00	3	270	0.006	3	270	0.005	3	270	0.011
20:00 - 21:00	3	270	0.011	3	270	0.010	3	270	0.021
21:00 - 22:00	1	168	0.012	1	168	0.012	1	168	0.024
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.089			0.095			0.184

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.

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Parameter summary

Trip rate parameter range selected:	168 - 350 (units:)
Survey date range:	01/01/15 - 25/09/19
Number of weekdays (Monday-Friday):	3
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE for Land Use 03 - RESIDENTIAL/G - STUDENT ACCOMMODATION

MULTI-MODAL TOTAL PEOPLE

Calculation factor: 1 RESIDE

BOLD print indicates peak (busiest) period

Total People to Total Vehicles ratio (all time periods and directions): 17.21

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	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	270	0.005	3	270	0.016	3	270	0.021
08:00 - 09:00	3	270	0.016	3	270	0.148	3	270	0.164
09:00 - 10:00	3	270	0.032	3	270	0.121	3	270	0.153
10:00 - 11:00	3	270	0.023	3	270	0.083	3	270	0.106
11:00 - 12:00	3	270	0.080	3	270	0.105	3	270	0.185
12:00 - 13:00	3	270	0.109	3	270	0.109	3	270	0.218
13:00 - 14:00	3	270	0.122	3	270	0.131	3	270	0.253
14:00 - 15:00	3	270	0.122	3	270	0.115	3	270	0.237
15:00 - 16:00	3	270	0.156	3	270	0.136	3	270	0.292
16:00 - 17:00	3	270	0.189	3	270	0.066	3	270	0.255
17:00 - 18:00	3	270	0.158	3	270	0.126	3	270	0.284
18:00 - 19:00	3	270	0.159	3	270	0.125	3	270	0.284
19:00 - 20:00	3	270	0.112	3	270	0.080	3	270	0.192
20:00 - 21:00	3	270	0.112	3	270	0.090	3	270	0.202
21:00 - 22:00	1	168	0.089	1	168	0.024	1	168	0.113
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.484			1.475			2.959

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.

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