

planning
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Transport Statement for Grays Thurrock Properties Limited
Warren Hastings Court, The Shore, Gravesend

October 2021
PL/HA/15652



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1 Introduction

- 1.1.1 DHA has been commissioned by Grays Thurrock Properties Limited to provide transport planning advice in relation to the proposed residential re-development of the ground floor industrial units at Warren Hastings Court, The Shore, in Gravesend, Kent.
- 1.1.2 The existing three-storey building has residential accommodation on the upper two floors consisting of eight flats, along with two units of B1c (now Class E) light industrial uses on the ground floor.
- 1.1.3 This Transport Statement (TS) has been produced in accordance with the Planning Practice Guidance (March 2014). Following this introduction, the TS is structured as follows:-
- Section 2 summarises the existing transport conditions local to the site;
 - Section 3 sets out the development proposals;
 - Section 4 provides an assessment of compliance with transport planning policy;
 - Section 5 looks at forecast vehicular trip generation; and
 - Section 6 provides a summary and conclusion.
- 1.1.4 Pre-application advice has been received from Kent County Council Highways and Transportation (KCC H&T)'s Senior Transport Planner for Gravesham and Gravesham Borough Council (GBC)'s Parking Manager. The associated correspondence is included at **Appendix A**.

2 Existing Transport Conditions

2.1 The Existing Site

- 2.1.1 The site is located approximately 1.0km to the west of Gravesend Town Centre on the south bank of the River Thames. The ground floor light industrial element of the building comprises an area of approximately 590m². Figure 2-1, below, highlights the site in a local context.



Figure 2-1: Site Location (courtesy of Google Maps)

- 2.1.2 The Shore bounds the site to the north, with Pier Road and the Cable Wharf regeneration site lying to the west. To the east is the Imperial Commercial and Retail Park on Clifton Marine Parade. Residential dwellings bound the site to the south.

2.2 Local Highway Network

- 2.2.1 The Shore routes east to west along the northern site boundary and has a carriageway width of approximately 8.9m in the vicinity of the building, narrowing to 6.2m at the western end of the site. To the east, The Shore curves southward and joins with Clifton Marine Parade, which provides access to Thames Way. The Shore is subject to a 30mph speed limit, street lighting and double yellow line restrictions across the site frontage, which continue to the west. A small layby is provided on the site frontage, as shown in Figure 2-2 overleaf.



Figure 2-2: Layby on Site Frontage (courtesy of Google Maps)

- 2.2.2 Pier Road routes from north to south along the western site boundary and has a carriageway width of approximately 9.7m at the existing car park access, where a height restriction is provided. Pier Road is subject to a 30mph speed limit and street lighting and provides on-street parking bays for residents.
- 2.2.3 Pier Road connects with the A226 London Road to the south at a priority junction, which offers northbound access from London Road only and restricts any exit from Pier Road. At this junction, a central right-turn lane is provided for vehicles accessing Pier Road from the east.
- 2.2.4 Exit to the B2175 / A226 London Road from Pier Road can be achieved using Lansdowne Square and then Burch Road.
- 2.2.5 Existing access to the site takes the form of a 5.5m wide dropped kerb crossover, as shown in Figure 2-3 overleaf.



Figure 2-3: Existing Access Bellmouth Junction

- 2.2.6 Access to the wider highway network is achievable via either Thames Way or the B2175 London Road. Thames Way provides connections to Gravesend Town Centre to the east and Northfleet, Ebbsfleet and the A2 Watling Street to the west.

2.3 Walking and Cycling Infrastructure

- 2.3.1 Both The Shore and Pier Road are provided with 1.8m wide footways on both sides of the carriageway. A pedestrianised area is provided on the northern section of Pier Road, running west from the site towards Lansdowne Square.
- 2.3.2 Given the industrial and edge of town centre nature of the site location, Public Rights of Way (PRoW) in the area are limited, as shown in Figure 2-4 overleaf. Footpath NU5 is currently closed to the west of the site whilst construction of the Cable Wharf development takes place, which will, in turn, provide improved footway connections along the River Thames towards Northfleet.

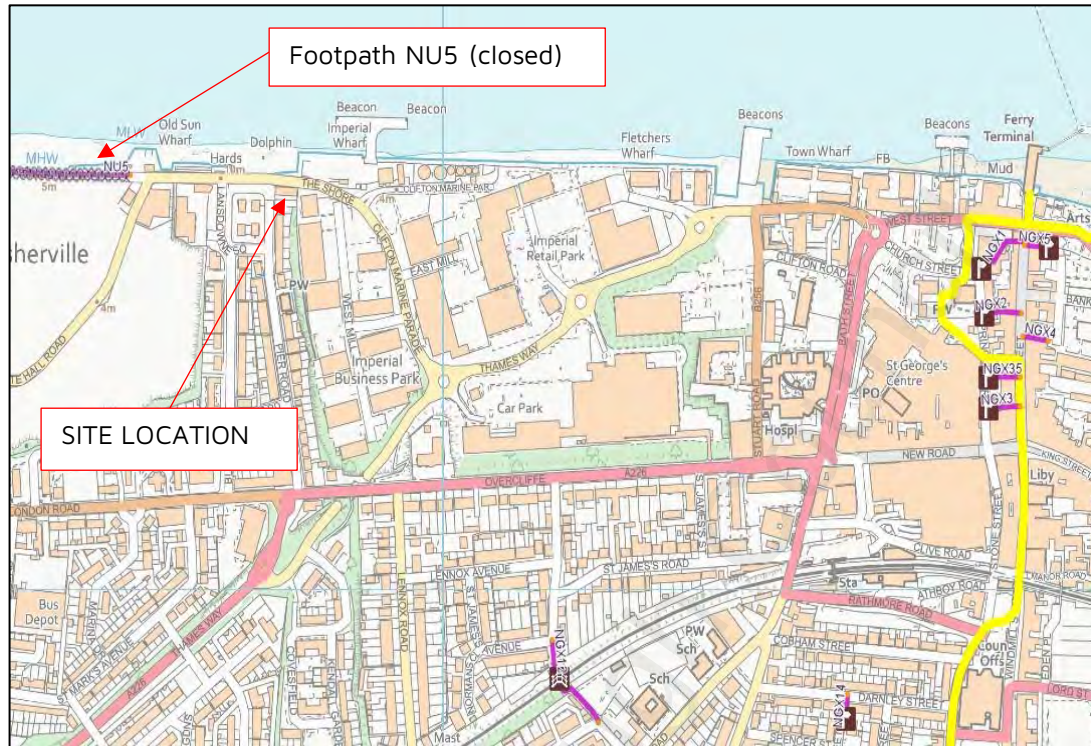


Figure 2-4: Local ProW Network (courtesy of KCC)

2.3.3 National Cycle Route 1 runs along The Shore to the north of the site and provides a long-distance route between Dover and the north of Scotland, much of which is traffic-free locally. The route provides good connections between Gravesend, Ebbsfleet and Bluewater and is shown locally in Figure 2-5 below.

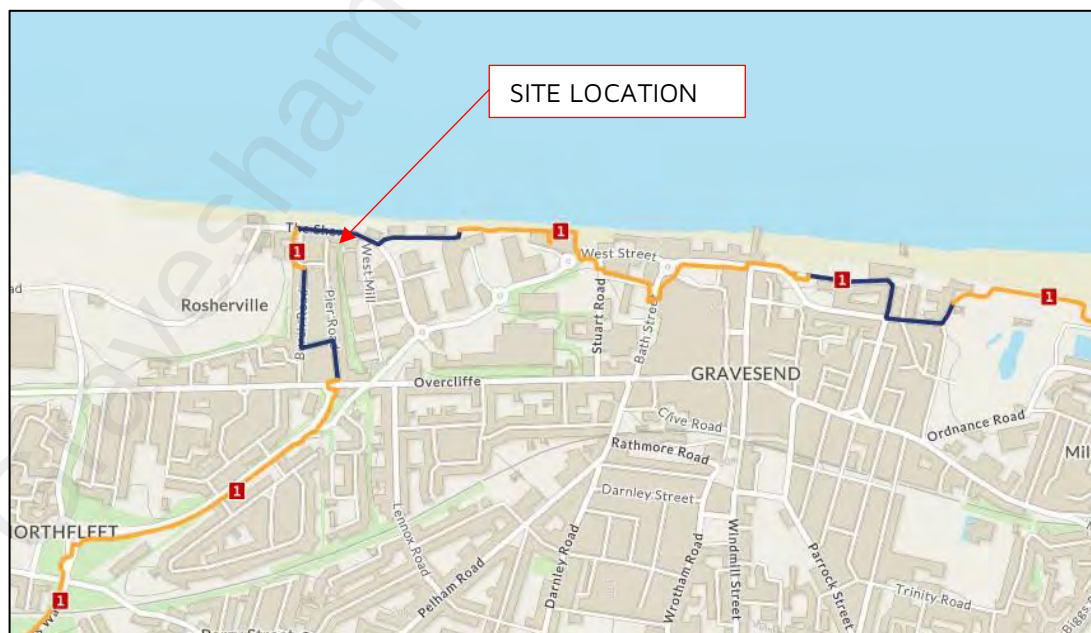


Figure 2-5: National Cycle Network (courtesy of Sustrans)

2.4 Public Transport Infrastructure

- 2.4.1 The nearest bus stops are located on the B2175 London Road to the south of the site and are accessible within approximately six minutes on foot. Additional bus stops are provided on the A226 Thames Way approximately 500m from the site, taking seven minutes on foot. These bus stops are served by several services, which have been summarised in Table 2-1 below. The Fastrack service, accessed from Thames Way, provides a high-quality, frequent service linking key transport nodes in the area and uses dedicated bus-only routes.

Service No.	Route	Weekday Frequency
1	Meopham – Harvel – Gravesend	One journey*
306	Swanscombe – Gravesend – Meopham – Sevenoaks	Hourly
308	Gravesend – Meopham – Sevenoaks	Up to nine journeys a day
480 Sapphire	Prospect Place (Dartford) – Cascades Leisure Centre (Gravesend)	Every 20 minutes
490 Sapphire	Prospect Place (Dartford) – Mackenzie Way Shops (Singlewell)	Every 20 minutes
B Fastrack	Gravesend Garrick Street – Dartford Temple Hill	Every 10 minutes
S1	Swanscombe – Greenhithe – Longfield Academy	School

Table 2-1: Local Bus Routes and Frequencies

*Tuesdays and Fridays only

- 2.4.2 The nearest railway station to the site is Gravesend, approximately 1.4km to the south-east, which is accessible within 18 minutes on foot. Gravesend Railway Station is served by direct trains to London (Charing Cross, Waterloo East, Victoria, London Bridge, Blackfriars and St Pancras International) and Luton, with Kent-bound services continuing to the Medway Towns, Sittingbourne, Faversham, Canterbury East and Ramsgate and Dover Priory.
- 2.4.3 In addition, Ebbsfleet International is a short cycling or driving distance from the site and provides access to High Speed services to London St Pancras International, Ashford International and Kent coast destinations, as well as Eurostar services to France, Belgium and the Netherlands.

2.5 Accessibility

- 2.5.1 There are several local services and facilities located within a reasonable walking distance of the site. These include – but are not limited to – a range of supermarkets, fast-food outlets, a Post Office and a hospital. A summary of the walk distances to these facilities, as measured along walking routes from the site and not taken ‘as the crow flies’, is provided in Table 2-2 overleaf. It is noted that many of the services above are available within Gravesend Town Centre.

Facility	Walk Distance (m)	Walk Time (minutes)
Supermarket (Aldi)	450m	6 minutes
Supermarket (Lidl)	450m	6 minutes
Public House (Elephants Head)	500m	6 minutes
Bus Stop	500m	6 minutes
Place of Worship (St Mark's)	550m	7 minutes
Supermarket (Asda)	650m	8 minutes
Post Office (Asda)	650m	8 minutes
Fast-Food (McDonald's Asda)	650m	8 minutes
Hospital (Gravesend Community Non-A+E)	1,000m	13 minutes
Primary School (Rosherville C of E)	1,100m	14 minutes

Table 2-2: Site Accessibility to Local Services

- 2.5.2 The walk times provided above are based on a walking speed of 80m per minute, a figure which is widely used to estimate walk times and is used within the London based Public Transport Accessibility Level (PTAL) analysis. It aims to provide a typical average value that estimates it takes 5 minutes to walk 400m, 10 minutes to walk 800m and so on.
- 2.5.3 In addition to the services within Gravesend itself, a wider range of facilities is available in the nearby Bluewater Shopping Centre, which is accessible using the Route 306, 480, 490 and Fastrack B bus services.
- 2.5.4 The adjacent Cable Wharf development also includes provision for a new primary school which, when developed, would provide a further facility for future residents within a short walking distance.
- 2.5.5 The proximity of these facilities is such that the majority of everyday journeys from the site can be undertaken by non-car modes.

2.6 Highway Safety

- 2.6.1 Personal Injury Collision (PIC) data has been sourced from KCC for the area surrounding the proposal site for the most recent three-year study period up to 31st December 2020. The D-print report is included at **Appendix B** which confirms that no PICs were recorded during this period. As such, it is not considered that the proposed development would materially exacerbate the local highway safety record.

3 Proposed Development

3.1 Overview

- 3.1.1 The development proposals comprise the conversion of the two existing ground floor light industrial/garage units to provide a single two-bed and three one-bed private apartments.
- 3.1.2 The proposed site layout plan is included at **Appendix C**.

3.2 Access

- 3.2.1 No alterations are proposed to the existing site access, which is seen to operate safely and provides suitable visibility on to Pier Road.

3.3 Parking

- 3.3.1 At present, the site is provided with nine unallocated parking spaces within the parking forecourt, located to the south of the site. On completion of the proposed development, the car park will be revised and relined to provide 12 unallocated spaces, equating to one space per unit. The parking spaces will measure 2.5m by 5.0m.
- 3.3.2 Across the site frontage on The Shore, a further four on-street parking bays are proposed. GBC's Parking Manager has advised that the existing Traffic Regulation Order (TRO) in place in this location would need to be amended to remove the double yellow line restrictions and allow for restricted parking to be provided. This amendment would be progressed following the grant of planning consent.
- 3.3.3 Two cycle parking spaces per unit will be provided within a shared, secure, undercroft facility for the four proposed apartments.

3.4 Site Servicing

- 3.4.1 Swept path analysis has been undertaken for an estate car to demonstrate that the proposed parking layout is accessible. The associated drawing is included at **Appendix D**.
- 3.4.2 The drawing demonstrates that the site layout can comfortably accommodate the expected vehicle movements, ensuring that accessibility is maintained and that they can exit the site in a forward gear.
- 3.4.3 Refuse bins for the four apartments will be stored within the aforementioned undercroft facility, with residents wheeling their bins to the kerbside on The Shore on collection days.

3.5 Construction Traffic

- 3.5.1 Construction works are expected to be minimal given the nature of the development; however welfare facilities will be located on the construction site and access to it will be secured and operated in accordance with current health

and safety legislation. Daily movements of goods vehicles will be timed to avoid peak traffic times.

- 3.5.2 Third-party suppliers and contractors visiting the site will be made aware of the construction access and routing arrangements at the start of the project. Site management will ensure compliance with the construction access arrangements.

Gravesend Borough Council

4 Transport Policy

4.1 National Planning Policy Framework (NPPF)

4.1.1 The NPPF, which was recently updated in July 2021, sets out the Government's planning policies for England and how these should be applied. It provides a framework within which locally-prepared plans for housing and other developments can be produced. The NPPF is a material consideration in planning decisions.

4.1.2 At the heart of the NPPF is a presumption in favour of sustainable development. This is reflected in Section 9 of the document where it is noted that significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes. The NPPF advises that in assessing sites, it should be ensured that:-

- a) *"Appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location;*
- b) *Safe and suitable access to the site can be achieved for all users;*
- c) *The design of streets, parking areas, other transport elements and the content of associated standards reflects current national guidance, including the National Design Guide and the National Model Design Code 46; and*
- d) *Any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree."*

4.1.3 Paragraph 111 states that: *"development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe."*

4.1.4 Paragraph 112 then goes on to note that applications for development should:-

- a) *"Give priority first to pedestrian and cycle movements, both within the scheme and with neighbouring areas; and second – so far as possible – to facilitating access to high quality public transport, with layouts that maximise the catchment area for bus or other public transport services, and appropriate facilities that encourage public transport use;*
- b) *Address the needs of people with disabilities and reduced mobility in relation to all modes of transport;*
- c) *Create places that are safe, secure and attractive – which minimise the scope for conflicts between pedestrians, cyclists and vehicles, avoid unnecessary street clutter, and respond to local character and design standards;*

- d) *Allow for the efficient delivery of goods, and access by service and emergency vehicles; and*
- e) *Be designed to enable charging of plug-in and other ultra-low emission vehicles in safe, accessible and convenient locations."*

4.1.5 Paragraph 113 further states that *"all developments that will generate significant amounts of movement should be required to provide a Travel Plan, and the application should be supported by a Transport Statement or Transport Assessment so that the likely impacts of the proposal can be assessed."*

4.2 Planning Practice Guidance (PPG)

4.2.1 The PPG was established in March 2014 as a supporting resource in conjunction with the NPPF, which is also a material consideration in determining planning applications. With respect to transport, the PPG includes a section titled 'Travel Plans, Transport Assessments and Statements in Decision-Taking'. This provides general guidance on the process of producing these documents, from which the following key points are expressed.

4.2.2 With regard to the purpose of a Transport Assessment or Statement, it is noted that:-

"The Transport Assessment or Transport Statement may propose mitigation measures where these are necessary to avoid unacceptable or "severe" impacts. Travel Plans can play an effective role in taking forward those mitigation measures which relate to on-going occupation and operation of the development."

4.3 Local Transport Plan 4 (LTP4): Delivering Growth without Gridlock 2016-2031

4.3.1 The Local Transport Plan 4 (LTP4) was prepared by KCC and runs from 2016 to 2031. The Plan includes details on how the County Council will meet its transport ambition for Kent which is:-

"To deliver safe and effective transport, ensuring that all Kent's communities and businesses benefit, the environment is enhanced and economic growth is supported."

4.3.2 This ambition will be realised through five targeted, overarching policies which will aim to deliver specific outcomes for the county:-

"Outcome 1: Economic growth and minimised congestion

Policy: *Deliver resilient transport infrastructure and schemes that reduce congestion and improve journey time reliability to enable economic growth and appropriate development, meeting demand from a growing population.*

Outcome 2: Affordable and accessible door-to-door journeys

Policy: *Promote affordable, accessible and connected transport to enable access for all to jobs, education, health and other services.*

Outcome 3: Safer travel

Policy: Provide a safer road, footway and cycleway network to reduce the likelihood of casualties and encourage other transport providers to improve safety on their networks.

Outcome 4: Enhanced environment

Policy: Deliver schemes to reduce the environmental footprint of transport and enhance the historic and natural environment.

Outcome 5: Better health and wellbeing

Policy: Provide and promote active travel choices for all members of the community to encourage good health and wellbeing and implement measures to improve local air quality."

- 4.3.3 Within LTP4, KCC outlines Strategic, Countywide and Local strategies for achieving the above outcomes, whilst continuing to promote and deliver '**Growth without Gridlock**'.

4.4 Gravesham Local Plan Core Strategy (2014)

- 4.4.1 The Core Strategy was adopted by GBC in September 2014 and forms the principal document within the Council's Local Plan, setting out the main planning policy objectives for the Borough up to 2028.

- 4.4.2 With regard to transport, Strategic Objective 7 is to:-

"Enhance the Borough's public transport network to serve existing and new neighbourhoods and communities in Gravesend, Northfleet and Ebbsfleet."

- 4.4.3 Policy CS11 states the following:-

"New developments should mitigate their impact on the highway and public transport networks as required. As appropriate, transport assessments and travel plans should be provided and implemented to ensure the delivery of travel choice and sustainable opportunities for travel..."

Sufficient parking in new development will be provided in accordance with adopted standards which will reflect the availability of alternative means of transport and accessibility to services and facilities..."

The Council will seek improvements to walking and cycling facilities and networks in the Borough including provision in new development as appropriate..."

4.5 Gravesham Local Plan First Review (Saved Policies) (2014)

- 4.5.1 Although the adopted Core Strategy replaced a number of the policies contained within the Local Plan (First Review), some were 'saved' by the Secretary of State and remain applicable in the determination of planning applications.

4.5.2 Policies T1 to T4 relate to the use of the highway network and are as follows:-

"Policy T1: The Local Planning and Highway Authorities will consider the impact on the transport system and on the environment of traffic generated by new development and will wish to ensure that all proposed developments are adequately served by the highway network identified on the Proposals Map.

Policy T2: The Local Planning and Highway Authorities will seek to channel all traffic travelling through Gravesham onto the primary road network and to channel traffic between and within residential, industrial and principal business districts of the Borough onto the district distributors.

Policy T3: The Local Planning and Highway Authorities will not normally permit any proposed development that generates significant volumes of commercial vehicle traffic, if it is not well related to the primary and district distributor network.

Policy T4: The Local Planning and Highway Authorities will not normally permit any proposed development outside the confines of the built-up area that generates significant vehicular or pedestrian traffic."

4.5.3 Policy P3 relates to parking and notes that provision should be made in accordance with the KCC Vehicle Parking Standards, as interpreted by GBC, unless justified as an exception (see below).

4.6 **Parking Policy**

Car Parking

4.6.1 Parking policy guidance for residential developments in Gravesham is set out in the Kent and Medway Structure Plan: Supplementary Planning Guidance 4 (SPG4) – Kent Vehicle Parking Standards 2006.

Land Use Class C3: Dwellings

4.6.1 For C3 land uses, SPG4 prescribes the maximum standards shown in the extract in Table 4-1 overleaf.

Car Parking	
1 bedroom	1 space per dwelling
2 and 3 bedrooms	2 spaces per dwelling
4 or more bedrooms	3 spaces per dwelling
Sheltered Accommodation	1 space per resident warden + 1 space per 2 units
Notes:	1. For 1-bedroom dwellings the parking will usually be provided as communal spaces. For other dwelling sizes part or all of the parking can be provided on a communal basis. 2. The level of car parking provision includes any garages, provided as an integral part of the dwelling or within its curtilage, and/or driveways provided within the curtilage, subject to the preferred sizes set out in Appendix B.

Table 4-1: SPG4 Parking Standards for C3 Use Class (Dwellings)

- 4.6.2 Under this designation, SPG4 permits a maximum of one car parking space per one-bedroom dwelling and a maximum of two parking spaces per two-bedroom dwelling. The proposals include the provision of a single two-bed flat and three one-bed flats, this equates to a maximum additional parking provision of up to 5 additional parking spaces over the nine already provided on-site.
- 4.6.3 KCC H&T advised at the pre-application stage that the provision of 12 unallocated parking spaces was likely to be acceptable, in light of the site's accessible location and local car ownership data which indicates that a substantial proportion of flat owners do not own a vehicle.
- 4.6.4 Furthermore, the on-street parking proposed across the site frontage has been discussed with GBC's Parking Manager and was deemed acceptable, subject to the revision of the existing TRO. This will provide further provision for occasional visitor needs.

Cycle Parking

- 4.6.5 With regard to cycle parking, the SPG4 standards require a minimum of one space per flatted dwelling, which would be exceeded by the proposed provision of two spaces per unit.

4.7 Policy Compliance

- 4.7.1 The proposals are not considered to conflict with any local or national policies in regard to accessibility or highway safety. The site is readily accessible by public transport, with bus stops located within walking distance. Moreover, Gravesend and Ebbsfleet Railway Stations are served by frequent train services to London, the Medway Towns and East Kent.
- 4.7.2 The PIC data for the latest three-year study period has shown that there are no existing safety concerns that could be exacerbated by the proposals.
- 4.7.3 The additional parking provision for the proposed residential use meets with KCC's maximum parking standards.
- 4.7.4 Safe and suitable access to the site is available and there would be no material highway capacity impacts.
- 4.7.5 In light of the above, it is not considered that the proposed development will result in a 'severe' highways impacts with respect to NPPF Paragraph 111.

5 Trip Generation

5.1 Overview

- 5.1.1 This section outlines the methodology employed to calculate the vehicle trip generation of the proposed development.
- 5.1.2 The ground floor of the site currently comprises of a twin industrial unit (Use Class B1c (new Class E)) of approximately 590m² which has historically been used as a vehicle servicing area. Consideration has been given to this use and its trip attraction potential in relation to the proposed development, to provide a residual trip impact.

5.2 Existing Use Trip Attraction

- 5.2.1 To provide the most representative assessment of the existing industrial units, the national TRICS trip rate database has been consulted. The TRICS selection '02-EMPLOYMENT, C-INDUSTRIAL UNIT' has been made. Survey sites outside of London, in England, Scotland and Wales, have been considered with unit sizes between 150 and 1000m² in Suburban and Edge of Town locations to provide a sufficiently large and robust dataset. Surveys undertaken during national Covid-19 lockdown restrictions have been removed. The resulting average trip rates are summarised below in Table 5-1 and the full TRICS output reports are included at **Appendix E**.

Period	Arrivals	Departures	Total
0800-0900	1.091	0.727	1.818
1700-1800	0.091	0.091	0.182
0700-1900	4.640	4.729	9.369

Table 5-1: TRICS Trip Rates – Industrial Unit (Trips/100m² gross floor area)

- 5.2.2 These trip rates have been factored by the existing gross floor area to provide the total vehicle trip attraction which is summarised in Table 5-2 below.

Period	Arrivals	Departures	Total
0800-0900	6	4	11
1700-1800	1	1	1
0700-1900	27	28	55

Table 5-2: Existing Use Vehicle Trip Attraction (Ground Floor Industrial Units – 590m²)

5.3 Proposed Development Trip Generation

- 5.3.1 To provide the most representative assessment of the proposed development, the TRICS selection '03-RESIDENTIAL, C-FLATS PRIVATELY OWNED' has been made. Survey sites outside of London, in England, Scotland and Wales, have been considered with dwelling numbers between 6 and 30 in Suburban and Edge of Town locations to provide a sufficiently large and robust dataset. The resulting

average trip rates are summarised in Table 5-3 below and the full TRICS output reports are included at **Appendix E**.

Period	Arrivals	Departures	Total
0800-0900	0.068	0.184	0.252
1700-1800	0.223	0.107	0.330
0700-1900	1.214	1.291	2.505

Table 5-3: TRICS Trip Rates – Flats Privately Owned (Trips/Unit)

- 5.3.2 These trip rates have been factored by the four private residential apartments proposed to provide the total vehicle trip generation which is provided in Table 5-4 below.

Period	Arrivals	Departures	Total
0800-0900	0	1	1
1700-1800	1	0	1
0700-1900	5	5	10

Table 5-4: Proposed Development Vehicle Trip Generation (4no. Private Apartments)

5.4 Residual Trip Generation

- 5.4.1 Utilising the outcome of the above assessments, the residual vehicular trip generation of the site can be calculated by subtracting the existing industrial unit trip attraction from the sum of the proposed residential trip generation, as shown in Table 5-5 below. A positive figure indicates that the proposed development would generate a higher number of vehicle trips than the previous use and vice versa.

Period	Arrivals	Departures	Total
0800-0900	-6	-4	-10
1700-1800	0	0	0
0700-1900	-23	-23	-45

Table 5-5: Proposed Development Residual Vehicle Trip Generation

- 5.4.2 It is noted that the proposed development is forecast to generate up to 10 fewer vehicle movements during the weekday AM peak hour, a similar level of vehicle movements during the PM peak hour and a total of 45 fewer vehicle movements over the 12-hour weekday period. This represents a reduction of just under four vehicle movements per hour on average.

6 Summary and Conclusion

- 6.1.1 DHA has been commissioned by Grays Thurrock Properties Limited to provide transport planning advice in relation to the proposed residential redevelopment of the ground floor industrial units at Warren Hastings Court, The Shore, in Gravesend, Kent.
- 6.1.2 The proposed development comprises the redevelopment of the two existing ground floor light industrial/garage units to provide a single two-bed and three one-bed private residential apartments. The existing on-site car parking arrangement would be revised to provide 12 unallocated parking spaces, with four unrestricted bays proposed across the site frontage on The Shore.
- 6.1.3 Following a review of national and local transport planning policy, no conflicts are envisaged. The site is within an acceptable walking distance of public transport nodes and a range of local services and facilities. Future residents will therefore have the opportunity to undertake many everyday journeys by non-car means.
- 6.1.4 A review of the latest three-year Personal Injury Collision (PIC) data for the local highway network confirms that there were no incidents recorded within the study area and that the proposed development will not exacerbate the local highway safety record.
- 6.1.5 Swept path analysis confirms that the proposed site access arrangement and internal layout are sufficient to meet the needs of the vehicles requiring access to the site.
- 6.1.6 A residual vehicle trip generation assessment has been completed, which has shown that the proposals would result in a net reduction of 45 vehicle trips over the 12-hour weekday period. This represents a reduction of just under four vehicle movements per hour on average.
- 6.1.7 Given the above, it is concluded that the proposed development should not have any adverse transport impacts and therefore there should be no sound transport-based objections to the planning application.

APPENDIX A



Pre-Application Scoping
Correspondence

Gravesham Borough Council

Warren Hastings Court, The Shore, Gravesend
11 June 2021

Transport Scoping Note

Overview

This Transport Scoping Note has been prepared by DHA on behalf of our client, F.C. Stark Ltd, in relation to a proposed residential re-development of the ground floor industrial units at Warren Hastings Court, The Shore, Gravesend. It sets out the work and study elements which will be included within the Transport Statement (TS) that will accompany a forthcoming planning application to Gravesham Borough Council. This document has been prepared with reference to the *Planning Practice Guidance* (2014). An indicative site layout plan is included at **Appendix A**.

Development Proposals

In terms of the scope of the proposals, the application will comprise the following:-

- Redevelopment of the two existing ground floor industrial/garage units at Warren Hastings Court to provide four no. private one and two-bed residential apartment units;
- Retention of the eight existing residential flats located above the industrial units;
- Amendments to the layout of the existing rear car parking provided on-site (ten allocated parking bays) to provide up to 12 allocated parking bays; and
- If required consideration of possible parking provision within the informal loading area on the southern side of The Shore, adjacent to the existing building. Up to four parking spaces could be provided for this area.

Figure 1 overleaf highlights the site location in a local context.



Figure 1 – Site Location (Courtesy of Google Maps)

Proposed Transport Statement Scope

Existing Conditions

A detailed review of the existing local highway, public transport, walking and cycling infrastructure will be undertaken and summarised in the TS.

Personal Injury Collision (PIC) data for the immediate area surrounding the site will be obtained from Kent County Council, providing the latest three-year period of data. This will be reviewed and analysed to pick up any trends or clusters of incidents which could be exacerbated by the proposed development.

Access

Vehicular access to the existing parking area at the south of the site will remain as per the existing situation with access from Pier Road.

The site layout will be considered with respect to servicing arrangements and vehicle swept path analysis will be completed for the necessary service / delivery vehicles.

Parking

On-site residential parking will be assessed with reference to the Kent and Medway Structure Plan 2006 Supplementary Guidance SPG4, as adopted by Gravesham Borough Council, for both vehicles and bicycles. The existing parking area layout is intended to be re-modelled to increase the available parking from ten allocated spaces to 12 allocated spaces. Based on the maximum standards detailed within the SPG4 standard, up to seven additional resident parking spaces can be provided for the site on implementation of the proposed development. The views of Kent County Council Highways and Transportation (KCC H&T) are sought as to whether the increased level of parking being provided in the existing car park area is considered suitable for the proposals, in light of its accessibility and sustainability, lying on the edge of Gravesend Town Centre.

In addition, up to four additional on-street bays, could be provided at the existing de-marked carriageway area to the south of The Shore, adjacent to the existing building, where parking is currently restricted by double yellow lines. The thoughts of KCC H&T are welcomed as to the practicality of these proposals.

Development Trip Generation Assessment

The ground floor of the site comprises a twin industrial unit (use class B1c (new class E)) of approximately 590m² which is currently vacant but has been used historically as a vehicle servicing area. Therefore, consideration has been given to this use and its trip generation potential in relation to the proposed development which provides four new private dwellings. The vehicular trip generation of the existing and proposed development has been ascertained with reference to the national TRICS trip rate database. No consideration is provided to the upper floor apartments which remain unaltered.

Existing Industrial Units

To provide the most representative assessment of the existing industrial units, the selection '02-EMPLOYMENT, C-INDUSTRIAL UNIT' has been made. Survey sites outside of London, in England, Scotland and Wales, have been considered with unit sizes between 150 and 1000m² in Suburban Area and Edge of Town locations to provide a sufficiently large dataset. Weekday periods were assessed to provide a robust consideration of peak traffic conditions. Surveys undertaken during national Covid-19 lockdown restrictions have been removed to remove irregular trip rate patterns. The full TRICS output reports are included at **Appendix B**. The resulting trip rates have been factored by the existing gross floor area, to provide the total vehicle trip generation which is provided in summary in Table 1 below.

Time	Arrivals	Departures	Total
08:00-09:00	6	4	11
17:00-18:00	1	1	1
07:00-19:00	27	28	55

Table 1: Existing Development Vehicle Trip Generation (Ground Floor Industrial Units – 590m²)

Proposed Residential Apartments

To provide the most representative assessment of this element of the development, the selection '03-RESIDENTIAL, C-FLATS PRIVATELY OWNED' has been made. Survey sites outside of London, in England, Scotland and Wales, have been considered with dwelling numbers between 6 and 30 in Suburban Area and Edge of Town locations to provide a sufficiently large dataset. Weekday periods were assessed to provide a robust consideration of peak traffic conditions. The full TRICS output reports are included at **Appendix B**. The resulting trip rates per unit have been factored by the four private residential apartments proposed, to provide the total vehicle trip generation which is provided in Table 2 below.

Time	Arrivals	Departures	Total
08:00-09:00	0	1	1
17:00-18:00	1	0	1
07:00-19:00	5	5	10

Table 2: Proposed Development Vehicle Trip Generation (Ground Floor Private Apartments – 4 units)

Residual Development Trips

Utilising the outcome of the above assessments, the residual trip generation of the site can be calculated by subtracting the existing industrial unit trip generation from the sum of the proposed apartments trip generation, as shown in Table 3 below. A positive figure indicates that the proposed development would generate a higher number of vehicle trips than the previous use and vice versa.

Time	Arrivals	Departures	Total
08:00-09:00	-6	-4	-10
17:00-18:00	0	0	0
07:00-19:00	-23	-23	-45

Table 3: Proposed Development Residual Vehicle Trip Generation (Ground Floor Private Apartments – 4 units)

It is noted that the proposed development is forecast to generate up to 10 fewer vehicle movements during the weekday AM peak hour, a similar level of vehicle movements during the PM peak hour and a total of 45 fewer vehicle trips over the 12-hour weekday period. This represents a reduction of just under four vehicle movements per hour on average onto the local highway network.

Transport Planning Policy

National and local transport planning policy will be analysed in relation to the proposed development, and compliance will be assessed. This will include:-

- The National Planning Policy Framework (2019);
- The Planning Practice Guidance (2014);
- Local Transport Plan 4 (LTP4) Delivering Growth without Gridlock 2016-2031;
- Gravesham Local Plan Core Strategy;
- Gravesham Local Plan First Review (Saved Policies) (2014); and

- Kent and Medway Structure Plan: Supplementary Planning Guidance 4 (SPG4) – Kent Vehicle Parking Standards 2006.

Accessibility

The site will be assessed with respect to access by sustainable modes of travel, including walking, cycling and public transport. It is not expected that a Travel Plan will be required as part of the planning application, in light of the scale of proposals, though confirmation of this is sought.

Gravesham Borough Council

Hannah Atkins

From: Hannah Atkins
Sent: 22 October 2021 12:01
To: Hannah Atkins
Subject: FW: Highways pre-application request - The Shore Gravesend

From: David.Barton
Sent: 14 June 2021 15:06
To: Ian Hutcheon
Subject: RE: Highways pre-application request - The Shore Gravesend

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Hi Ian

Thank you for your email and the attached copy of your Scoping Note as a result of your request for highways pre-application advice.

I have now had the opportunity to look at your Scoping Note and find that it generally covers all of the issues that need to be covered within a Transport Statement supporting a planning application.

I would make the following comments in respect of the Scoping Note dated 9th June 2021:

Access

Access via Pier Road would be acceptable although I assume the existing commercial units were generally accessed from The Shore in addition.

Parking

You will be aware that whilst KCC has adopted IGN3 for residential parking standards, Gravesham BC have only adopted the previous version of KCC Parking Standards – SPG4. The parking levels for both are similar although SPG4 is a maximum standard of 1 space per one-bed flat and 2 spaces for a two-bed flat. IGN3 recommends a minimum of 1 parking space per one-bed or two-bed flat for a suburban location although I am happy to accept one space per unit since car ownership data in Gravesend indicates that a substantial proportion of flat owners do not own a car.

I would therefore consider the proposed 12 parking spaces for the overall total of 12 flats is acceptable provided the spaces are not allocated to specific units in order to maintain a degree of flexibility.

I note that the existing parking area is being rearranged to accommodate 12 rather than 12 cars. This should not be to the detriment of parking space sizes which should be a minimum of 5.0m x 2.5m.

Whilst KCC or GBC do not yet have a formal policy on EV charging, I would suggest that at least one of the spaces is provided with full EV charging facilities and at least one other has passive provision i.e. ducting and / or cabling.

The spaces in front of the building is a difficult issue since it is on the public highway and therefore cannot be allocated solely to the flats. However, they would be a convenient place for visitors to park. I would suggest that you discuss this matter with the GBC Parking Manager (Nick May) as to current restrictions and the opportunities for revising them.

Development Trip Generation Assessment

I accept that you have demonstrated that the trip generation from the proposed units is likely to be a lot lower than the existing commercial uses. I also consider that the overall trip generation from the 4 new units is not likely to be significant and unlikely to create any congestion issues on the local highway network.

Transport Planning Policy

All relevant documents are included with the exception of Kent Residential Parking Standards (IGN3) which, as previously noted, are not adopted by Gravesham BC but in KCC terms are still applicable to this application.

Accessibility

It is agreed that a Travel Plan would not be required given the scale of development but full details of sustainable travel availability should be provided.

Indicative Site Layout

Appears to be acceptable although should be fully dimensioned, including parking bay sizes. As you have indicated, tracking movements for cars and delivery vehicles should be provided.

If you have any further questions on the above, or require further information, please contact me.

Many thanks
Dave

David Barton

Senior Development Planner
Kent County Council Highways & Transportation

From: Ian Hutcheon
Sent: 09 June 2021 08:36
To: David Barton - GT HTW
Cc: Amy O'Leary - GT HTW ; Hannah Atkins; Claire Batty - GT HTW
Subject: RE: Highways pre-application request - The Shore Gravesend

Hi Dave,

As requested please find attached our Transport Statement Scoping Note for the proposed development at Warren Hastings Court Gravesend. I trust this is acceptable and will await your guidance on whether you feel a meeting is considered necessary. If one is then please confirm suitable dates for this to be undertaken.

Any issues please let me know.

Regards

Ian Hutcheon
Transport Engineer



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Gravesham Borough Council

Hannah Atkins

From: Hannah Atkins
Sent: 22 October 2021 12:19
To: Hannah Atkins
Subject: FW: Warren Hastings Court, Gravesend - Parking Proposals

From: May, Nicholas
Sent: 14 September 2021 09:08
To: Hannah Atkins; David.Barton
Cc: Paul Lulham; Ian Hutcheon
Subject: RE: Warren Hastings Court, Gravesend - Parking Proposals

[External email - This message originated from outside DHA – prior to opening any attachments or opening links, please ensure their authenticity with the sender]

Hi Hannah

Thank you for your email and site plan.

The proposal all looks fine to me. With regards to the on street bays – there are currently double yellow lines at this location which are included in our Traffic Regulation Order, so we will have to conduct a formal consultation with residents to amend our TRO to remove the yellow lines. As the replacement bays will be unrestricted we not have to include the unrestricted bays in the TRO. Just to let you know for your time scales, to amend our TRO can take up to 6 months.

Kind regards
Nick

Nick May
Parking & Environmental Enforcement Services Manager
Gravesham Borough Council

Gravesham Borough Council - Delivering a Gravesham to be proud of

**INVESTORS
IN PEOPLE**

From: Hannah Atkins
Sent: 31 August 2021 10:02
To: [David.Barton](#); May, Nicholas
Cc: Paul Lulham; Ian Hutcheon
Subject: Warren Hastings Court, Gravesend - Parking Proposals

Good morning Dave / Nicholas,

I hope you are both well.

I believe you have been in discussions with my colleague Ian regarding the proposals at Warren Hastings Court in Gravesend.

With regard to the site, we have produced the attached proposed parking plan to support a forthcoming application. The attached indicates 13 spaces within the rear parking court, to accommodate the additional four units (bringing the total number of units to 12). Speaking with the client, we understand that at the current time, residents are able to utilise one parking space per dwelling but that the spaces are not allocated to a particular unit. The proposed 13 spaces would, therefore, be retained as an unallocated provision to allow for flexibility. The spaces measure 2.5m by 5.0m and the bay labelled 13 has the necessary 6.0m distance both in front of and behind it to allow for ease of access. The existing bin store, provided to the north of the vehicle access, would be relocated to within the vicinity of the bay labelled 7, to allow for access into the parking court.

A further four, on street bays would be provided across the site frontage on The Shore. I understand from Ian's discussions with yourself Nicholas that as these bays fall within the public highway, they cannot be allocated. Moreover, it is understood that there is no existing permit parking area that these could be incorporated into. As such, these spaces would simply be left as unallocated bays for use by visitors. The necessary Traffic Regulation Orders (TROs) would be required to provide these bays.

Prior to submission, I just wanted to check with yourselves that the attached parking proposals were considered suitable in terms of the development proposals. If you have any questions, please feel free to contact me.

Kind regards,

Hannah Atkins

Associate



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Personal Injury Collision (PIC) Data

Gravesham Borough Council



Site Layout Drawing

Gravesham Borough Council

River Thames

CLIFTON MARINE PARADE

Ellandaye House

PIER ROAD

Warren Hastings Court

AMENITY COURTYARD
(for existing flats)

PARKING COURTYARD
(reconfigured to provide for
12 No parking spaces)

Fire escape door
at ground floor

Means of escape from fire
exit door and fire corridor
connecting flats A-D

pavement

Retaining wall to upper elevated
level overlooking Clifton Marine Parade

Existing Traffic Regulation Order (TRO)
to be amended to provide for 4 No
unallocated on-street parking bays

4 No parking spaces

Entrance
flats C-D

Entrance
flats A-B

4

52

G3

Proposed Site Layout Plan
1:250 @ A3

0 2 4 6 8 10
Metres (1:250)



Rev: Reason: Date:

Client:

BILLINGS GROUP

Project:

WARREN HASTINGS COURT, CLIFTON MARINE
PARADE, GRAVESEND, KENT, DA11 9NB

Title:

PROPOSED SITE LAYOUT PLAN

Drawing No:

DHA/14980/10

Rev:

Scale:

1:250

Date:

OCT 2021



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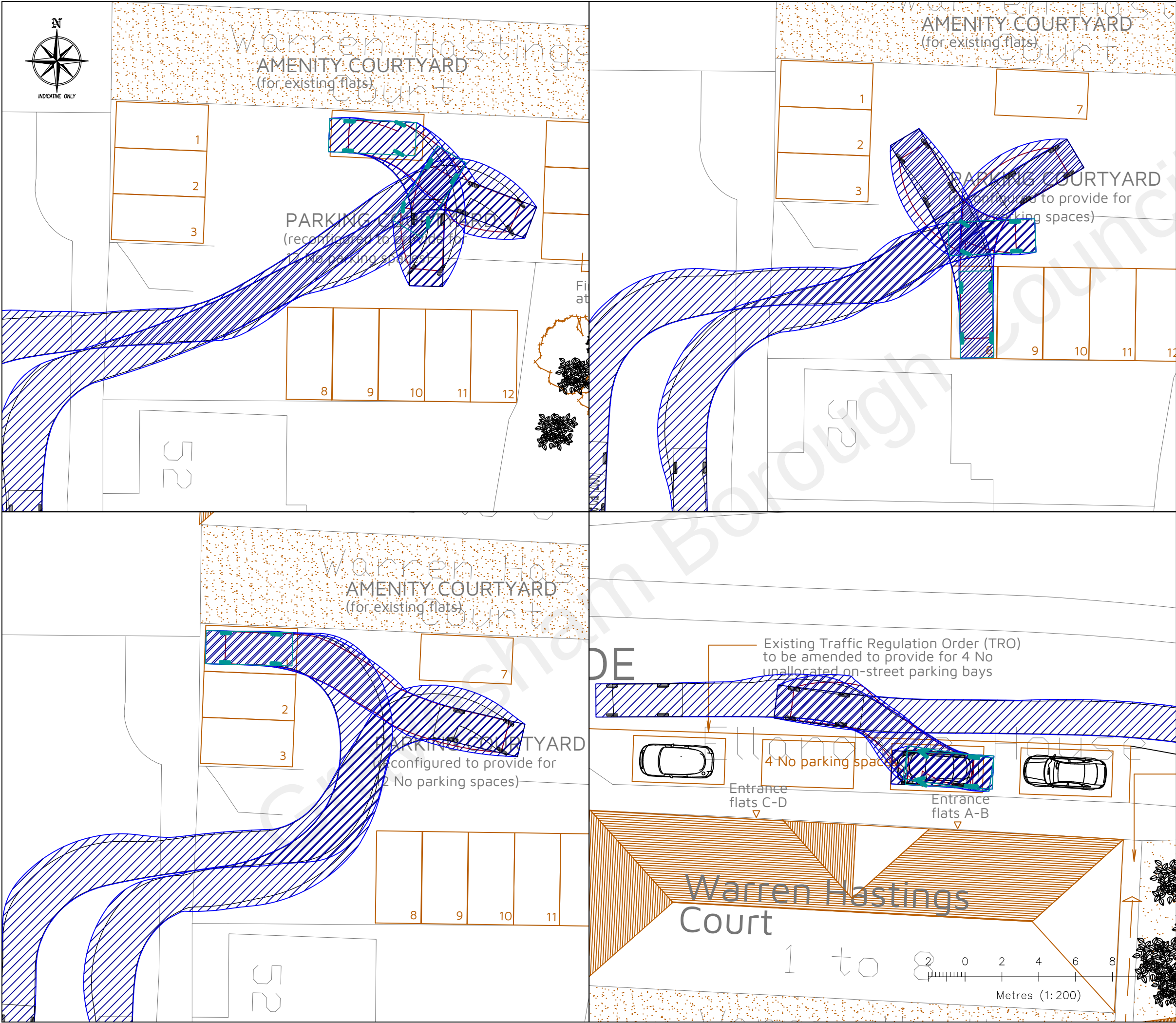
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CAD Reference: DHA_14980_WARREN HASTINGS COURT_PFS10A3



Vehicle Swept Path Analysis

Gravesham Borough Council



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4.71

0.885 2.755

4.710m

1.804m

1.442m

0.207m

1.756m

4.00s

5.950m

Estate Car (2006)

Overall Length

Overall Width

Overall Body Height

Min Body Ground Clearance

Max Track Width

Lock to lock time

Kerb to Kerb Turning Radius

Notes:

Drawing is based on OS and a site layout plan produced by DHA.

P3	25.10.21	JM	Updated Layout	CS	CS
P2	28.09.21	JM	Parking Space Removed	CS	CS
P1	07.09.21	JM	First Issue	CS	CS

REV	DATE	BY	DESCRIPTION	CHK	APD

client

BILLINGS GROUP

project

WARREN HASTINGS COURT, GRAVESEND

title

VEHICLE SWEPT PATH ANALYSIS
PROPOSED PARKING ARRANGEMENT

project	15652	drwg	T-01	rev	P3	
Drawn	JM	Checked	CS	Approved	CS	
scale @ A3				1:200	date	25.10.21

status	FOR INFORMATION	P
--------	-----------------	---

dho

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CAD Reference:

A3



TRICS Reports

Gravesham Borough Council

Calculation Reference: AUDIT-704001-210607-0626

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT
 Category : C - INDUSTRIAL UNIT
TOTAL VEHICLES

Selected regions and areas:

04	EAST ANGLIA	
	NF NORFOLK	2 days
08	NORTH WEST	
	LC LANCASHIRE	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: 150 to 702 (units: sqm)
 Range Selected by User: 150 to 1000 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/13 to 22/10/20

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

Selected survey days:

Tuesday	1 days
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:

Suburban Area (PPS6 Out of Centre)	2
Edge of Town	1

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:

Industrial Zone	3
-----------------	---

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

Secondary Filtering selection:

Use Class:

Not Known	3 days
-----------	--------

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

Filter by Site Operations Breakdown:

All Surveys Included

Population within 500m Range:

All Surveys Included

Secondary Filtering selection (Cont.):

Population within 1 mile:

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:

125,001 to 250,000	3 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	2 days
1.1 to 1.5	1 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 | LC-02-C-03
GOLDEN HILL LANE
LEYLAND | TIMBER SUPPLIES | LANCASHIRE |
| | Suburban Area (PPS6 Out of Centre)
Industrial Zone
Total Gross floor area: 150 sqm
Survey date: TUESDAY 06/11/18 | | |
| 2 | NF-02-C-03
ELVIN WAY
NORWICH
HELLESDON
Edge of Town
Industrial Zone | SHEET METAL CONTRACTOR | NORFOLK |
| | Total Gross floor area: 260 sqm
Survey date: THURSDAY 07/11/19 | | |
| 3 | NF-02-C-04
FLETCHER WAY
NORWICH
UPPER HELLESDON
Suburban Area (PPS6 Out of Centre)
Industrial Zone | EXHIBITION DESIGN & MANUF. | NORFOLK |
| | Total Gross floor area: 690 sqm
Survey date: THURSDAY 14/11/19 | | |

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
NR-02-C-02	22/10/20	Undertaken during covid restrictions

TRIP RATE for Land Use 02 - EMPLOYMENT/C - INDUSTRIAL UNIT

TOTAL VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

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	3	367	0.091	3	367	0.000	3	367	0.091
07:30 - 08:00	3	367	0.455	3	367	0.182	3	367	0.637
08:00 - 08:30	3	367	0.636	3	367	0.000	3	367	0.636
08:30 - 09:00	3	367	0.455	3	367	0.727	3	367	1.182
09:00 - 09:30	3	367	0.182	3	367	0.000	3	367	0.182
09:30 - 10:00	3	367	0.182	3	367	0.091	3	367	0.273
10:00 - 10:30	3	367	0.182	3	367	0.182	3	367	0.364
10:30 - 11:00	3	367	0.091	3	367	0.182	3	367	0.273
11:00 - 11:30	3	367	0.364	3	367	0.273	3	367	0.637
11:30 - 12:00	3	367	0.273	3	367	0.273	3	367	0.546
12:00 - 12:30	3	367	0.182	3	367	0.091	3	367	0.273
12:30 - 13:00	3	367	0.273	3	367	0.455	3	367	0.728
13:00 - 13:30	3	367	0.273	3	367	0.364	3	367	0.637
13:30 - 14:00	3	367	0.182	3	367	0.000	3	367	0.182
14:00 - 14:30	3	367	0.091	3	367	0.091	3	367	0.182
14:30 - 15:00	3	367	0.000	3	367	0.091	3	367	0.091
15:00 - 15:30	3	367	0.364	3	367	0.182	3	367	0.546
15:30 - 16:00	3	367	0.000	3	367	0.000	3	367	0.000
16:00 - 16:30	3	367	0.091	3	367	0.636	3	367	0.727
16:30 - 17:00	3	367	0.091	3	367	0.636	3	367	0.727
17:00 - 17:30	3	367	0.000	3	367	0.000	3	367	0.000
17:30 - 18:00	3	367	0.091	3	367	0.091	3	367	0.182
18:00 - 18:30	3	367	0.091	3	367	0.000	3	367	0.091
18:30 - 19:00	3	367	0.000	3	367	0.182	3	367	0.182
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:			4.640			4.729			9.369

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:	150 - 702 (units: sqm)
Survey date date range:	01/01/13 - 22/10/20
Number of weekdays (Monday-Friday):	4
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	1
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.

Calculation Reference: AUDIT-704001-210607-0617

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
 Category : C - FLATS PRIVATELY OWNED
 TOTAL VEHICLES

Selected regions and areas:

03	SOUTH WEST	
	DC DORSET	1 days
04	EAST ANGLIA	
	SF SUFFOLK	1 days
05	EAST MIDLANDS	
	DS DERBYSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	RI EAST RIDING OF YORKSHIRE	1 days
08	NORTH WEST	
	MS MERSEYSIDE	1 days

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

Primary Filtering selection:

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

Parameter: No of Dwellings
 Actual Range: 9 to 30 (units:)
 Range Selected by User: 6 to 30 (units:)

Parking Spaces Range: All Surveys Included

Parking Spaces per Dwelling Range: All Surveys Included

Bedrooms per Dwelling Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/13 to 16/10/20

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

Selected survey days:

Tuesday	2 days
Wednesday	2 days
Friday	1 days

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

Selected survey types:

Manual count	5 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:

Suburban Area (PPS6 Out of Centre)	4
Edge of Town	1

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:

Development Zone	1
Residential Zone	4

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

Secondary Filtering selection:

Use Class:

C3 5 days

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

Population within 500m Range:

All Surveys Included

Population within 1 mile:

10,001 to 15,000 3 days

20,001 to 25,000 2 days

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

Population within 5 miles:

50,001 to 75,000 3 days

250,001 to 500,000 1 days

500,001 or More 1 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 2 days

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 5 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 5 days

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

LIST OF SITES relevant to selection parameters

1	DC-03-C-02	FLATS IN BLOCKS		DORSET
	PALM COURT			
	WEYMOUTH			
	SPA ROAD			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total No of Dwellings:	14		
	Survey date: FRIDAY	28/03/14	Survey Type: MANUAL	
2	DS-03-C-03	BLOCKS OF FLATS		DERBYSHIRE
	CAESAR STREET			
	DERBY			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total No of Dwellings:	30		
	Survey date: WEDNESDAY	25/09/19	Survey Type: MANUAL	
3	MS-03-C-03	BLOCK OF FLATS		MERSEYSIDE
	MARINERS WHARF			
	LIVERPOOL			
	QUEENS DOCK			
	Suburban Area (PPS6 Out of Centre)			
	Development Zone			
	Total No of Dwellings:	9		
	Survey date: TUESDAY	13/11/18	Survey Type: MANUAL	
4	RI-03-C-01	FLATS		EAST RIDING OF YORKSHIRE
	465 PRIORY ROAD			
	HULL			
	Edge of Town			
	Residential Zone			
	Total No of Dwellings:	20		
	Survey date: TUESDAY	13/05/14	Survey Type: MANUAL	
5	SF-03-C-03	BLOCKS OF FLATS		SUFFOLK
	TOLLGATE LANE			
	BURY ST EDMUNDS			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total No of Dwellings:	30		
	Survey date: WEDNESDAY	03/12/14	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/C - FLATS PRIVATELY OWNED

TOTAL VEHICLES

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	21	0.087	5	21	0.136	5	21	0.223
08:00 - 09:00	5	21	0.068	5	21	0.184	5	21	0.252
09:00 - 10:00	5	21	0.126	5	21	0.165	5	21	0.291
10:00 - 11:00	5	21	0.039	5	21	0.078	5	21	0.117
11:00 - 12:00	5	21	0.068	5	21	0.078	5	21	0.146
12:00 - 13:00	5	21	0.058	5	21	0.049	5	21	0.107
13:00 - 14:00	5	21	0.097	5	21	0.087	5	21	0.184
14:00 - 15:00	5	21	0.097	5	21	0.097	5	21	0.194
15:00 - 16:00	5	21	0.117	5	21	0.097	5	21	0.214
16:00 - 17:00	5	21	0.117	5	21	0.126	5	21	0.243
17:00 - 18:00	5	21	0.223	5	21	0.107	5	21	0.330
18:00 - 19:00	5	21	0.117	5	21	0.087	5	21	0.204
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.214			1.291			2.505

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: 9 - 30 (units:)
 Survey date range: 01/01/13 - 16/10/20
 Number of weekdays (Monday-Friday): 5
 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.