
Transport Statement

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St Columba's Close, Gravesend

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02	14.10.22	Full PDF Draft Version	BK	14.10.22	TM	14.10.22	TM	14.10.22
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04	27.10.22	Updated dev't mix	BK	27.10.22	TM	27.10.22	TM	27.10.22

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1 Introduction

1.1 Background

This Transport Statement (TS) has been prepared on behalf of Gravesham Borough Council (GBC) for a proposed redevelopment off St. Columba's Close in Gravesend, Kent. The proposed development involves regenerating the existing housing stock, resulting in a net increase of 20 dwellings across the site. A site location plan is provided in Figure 1.1.

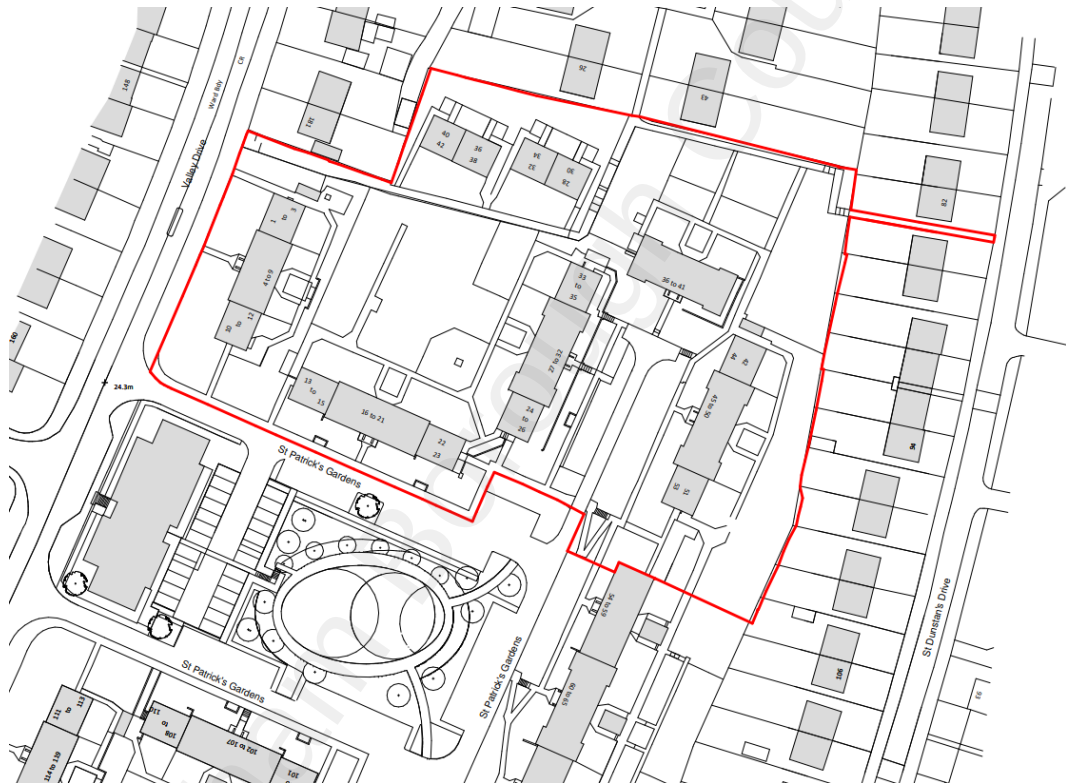


Figure 1.1 – Site Location Plan

1.2 Transport Scoping Stage

Pre-application transport feedback has been received from both Kent County Council (KCC) and Gravesham Borough Council (GBC) during which it was agreed that a Transport Statement would be required to support the planning application and that a Residential Travel Plan would not be required. Other technical details relating to multi-modal access, parking, Public Rights of Way, and refuse collection have also been agreed during the pre-application process.

1.3 Report Structure

This Transport Statement is structured as follows:

- Section 1 provides an introduction.
- Section 2 describes existing transport conditions at the site of the proposed development and in the surrounding local area.
- Section 3 provides a detailed description of the proposed development.
- Section 4 provides an estimate of trip generation for the proposed development and the associated traffic impact.
- Section 5 draws conclusions.

2 Baseline Conditions

2.1 Site and Surrounding Area

The site is located within the residential area at the south of St Columba's Close in Gravesend. To the north and east, the site borders the residential dwellings of St Columba's Close and St Dunstan's Drive. To the south, the site borders St Patrick's Gardens and to the immediate west of the site is Valley Drive. The Site Location & Accessibility Plan located in Appendix A shows the site location in context of the surrounding area.

2.2 Committed Development

Immediately south of the site at St Patrick's Gardens there is the completed and now occupied Bishop's Court development (planning application reference: 20190503) which comprises 23 dwellings (1 and 2 bedroom flats) including car parking, landscaping and improvements to the existing children's play park on the green space of St Patrick's Gardens. A photograph of Bishop's Court is shown in Figure 2.1.



Figure 2.1 – The Adjacent Bishop's Court Development

2.3 Walking and Cycling Network

The site connects with the existing footways of St Patrick's Gardens and Valley Drive, which connect to the footway infrastructure of Gravesend including footways, crossing points and street lighting, enabling journeys on foot to and from the site.

The locations of existing local destinations and amenities within an 800m catchment of the site are shown in the Site Location & Accessibility Plan in Appendix A. Appendix A demonstrates that the site is within walking and cycling distance to a variety of local amenities. Distances, together with walking and cycling times to these amenities from the site, are summarised in Table 2.1.

TABLE 2.1 – LOCAL AMENITIES

Amenity	Distance	Walking Time	Cycling Time
Supermarket	1.2km	13 minutes	5 minutes
Surgery	600m	7 minutes	2 minutes
Restaurant	600m	8 minutes	3 minutes
Tymberwood Academy Primary School	800m	9 minutes	4 minutes
Westcourt Primary School	1.0km	13 minutes	5 minutes
Thamesview Secondary School	1.5km	18 minutes	5 minutes
Recreational Area	900m	10 minutes	3 minutes
Place of Worship	250m	3 minutes	1 minute
Place of Worship	500m	6 minutes	3 minutes
Place of Worship	650m	9 minutes	4 minutes
Bishop's Court Play Area	Adjacent	1 minute	1 minute
Nearest Bus Stops on Valley Drive	100m	1 minute	1 minute

Walking access to such amenities can be made via the footway along Valley Drive and the connected footway network of Gravesend town. Cycling to these amenities can be performed using the local road network towards the amenities. The local roads en-route from the site to the mentioned amenities feature 30mph speed limits and 20mph zones such as St Aidan's Way, which supports lower driving speeds and cyclist safety.

An existing public footpath NGX-30 connects Valley Drive and St Dunstan's Drive through the residential area within the site boundary – see Figure 2.2 for the alignment of existing public footpath NGX-30 shown with a dashed black line.



Figure 2.2 – Existing Alignment of Public Footpath NGX-30

2.4 Public Transport Accessibility

St Patrick's Gardens bus stops are located immediately adjacent to the site on Valley Drive (within 1-2 minutes' walk). The northern of the two bus stops is flagged, whilst the southern stop is flagged and provides a dedicated bus layby. See Figures 2.3 and 2.4.



Figure 2.3 – Northbound Bus Stop on Valley Drive



Figure 2.4 – Southbound Bus Stop on Valley Drive

A summary of the services provided, destinations served, and approximate service frequencies from the St Patrick's Gardens bus stops is provided in Table 2.2.

TABLE 2.2 – LOCAL BUS SERVICES

Bus Service	Route	Approximate Service Frequency		
		Monday-Friday	Saturday	Sunday
480	Prospect Place – Cascades Leisure Centre	2-3 per hour	1-3 per hour	1-2 per hour
490	Prospect Place – Mackenzie Way Shops	1-3 per hour	1-3 per hour	1-2 per hour
G1	Singlewell – Longfield Academy	2 daily services (school only)	n/a	n/a

The nearest railway station to the site is Gravesend station, located approximately 2.4km north-east in the centre of the town. This station is within a 40 minute walk or 12 minute cycle from the site. Additionally, the 480 and 490 bus services from St Patrick's Gardens provide a direct connection to Gravesend station with a journey time under 15 minutes.

Gravesend station features regular services to St Albans, London St Pancras, Faversham, London Charing Cross, Rainham (Kent) and Ramsgate. The station is operated by Southeastern and provides car parking and 280 sheltered cycle storage lockers.

2.5 Local Highway Network

St Patrick's Gardens is located immediately south of the site off Valley Drive, providing a small residential loop road with a turning head. Along St Patrick's Gardens there are 6 refuse bin collection points and parking bays providing around 60 car parking bays. Locations of existing rows of parking bays and their car parking capacity are highlighted with a light orange fill in Figure 2.5.

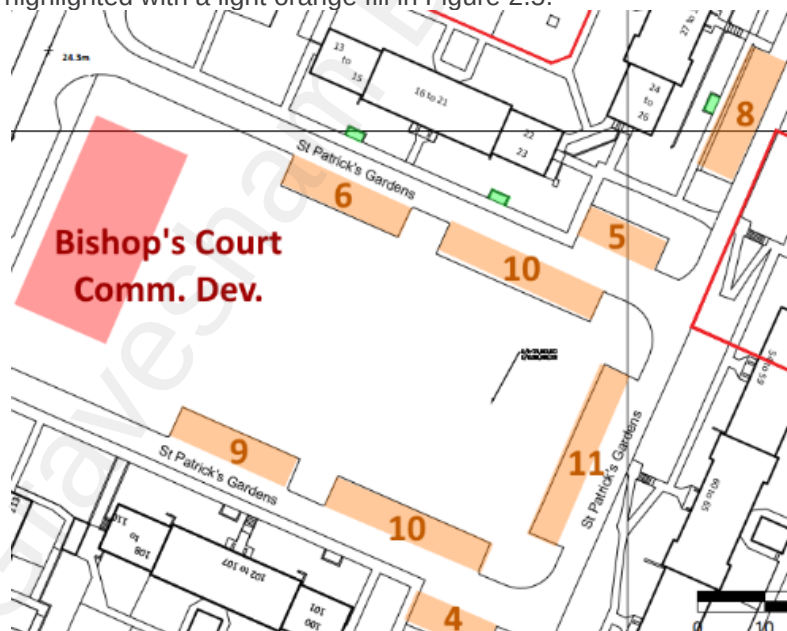


Figure 2.5 – Locations of Existing Car Parking Bays off St Patrick's Gardens

There is also footway and street lighting along the extent of St Patrick's Gardens.

Valley Drive leads north until forming a T-junction with the B261 Old Road East, which connects to the road network that leads northwest towards the centre of Gravesend. To the south, Valley Drive provides a connection to the A2 Watling Street which leads south-east towards Strood and Maidstone, and north-west towards Dartford and London.

There are no on-street parking controls along the stretch of Valley Drive close to the site (excluding double-yellow line protection at junctions).

Valley Drive is subject to a 30mph speed limit. There are speed cameras on Valley Drive in the vicinity of the site.

3 Proposed Development

This proposal features the development of 46 new residential dwellings comprising 6 houses, 6 maisonettes and 34 flats, with the following breakdown:

- 15 x one-bedroom dwellings
- 19 x two-bedroom dwellings
- 10 x three-bedroom dwellings
- 2 x four-bedroom dwellings

A total of 26 flats (comprising of 20 x 1 bedroom flats and 6 x 3 bedroom flats) would be demolished as part of the proposed development). The proposed development would therefore result in a 20 dwelling increase on the site compared to the existing situation.

A plan showing the layout of the proposed development is provided in Appendix B.

3.1 Proposed Access

Vehicle access would be provided by a new access road that would be delivered as part of the proposed development. The access road would form a new priority controlled junction on Valley Drive. A preliminary design of the proposed site access junction and access road is provided in Appendix C. The proposed access road would provide a footway measuring 2.5m on the northern side. The proposed carriageway would measure 4.8m wide. Visibility splays of 2.4m by 43m would be provided at the proposed new site access junction looking left and right on to Valley Drive in accordance with Manual for Streets. A drawing showing proposed visibility splays at the junction is provided in Appendix C.

The existing public footpath that passes through the site would be retained and improved as part of the proposed development. The proposed alignment of the public footpath through the site is shown with a green line with double-ended arrow in Figure 3.1. The proposed improvements would include re-surfacing and lighting.



Figure 3.1 – Proposed Alignment of Public Footpath NGX30 Through the Site

3.2 Parking Proposals

3.2.1 Car Parking

The existing car parking spaces within the site red line boundary will not be modified or removed as part of the proposed development. A total of 26 car parking spaces are

proposed to support the proposed net increase of 20 dwellings on the site, at a ratio of 1.3 spaces per dwelling.

The proposed level of car parking is supported by car ownership data from the 2011 Census for the local census zone in which the site is located, which shows that the average level of car ownership in the area is 1.1 cars owned per household. The data extracted from the 2011 Census is presented in Appendix D.

In addition, the proposed level of car parking is supported by local context. For example, a car parking ratio of 1.1 spaces per dwelling was agreed for the adjacent Bishop's Court development (based on 23 dwellings and 25 car parking spaces).

For the proposed houses, 1 electric vehicle charging space would be provided per dwelling.

For the proposed flats, 20% of car parking spaces would have active electric vehicle charging infrastructure at the outset and 80% would have passive provision to enable conversion to active provision at a later date.

3.2.2 Cycle Parking

Cycle parking spaces would exceed the minimum standards set out in the Kent Vehicle Parking Standards SPG 4 (July 2006). A summary of the proposed cycle parking provision is presented in Table 3.1.

TABLE 3.1 – PROPOSED CYCLE PARKING – MINIMUM STANDARDS

Type	No. of Dwellings	Bedrooms	Minimum No. of Spaces Required
Houses	6	20	20
Flats & Maisonettes	40	N/A	40
Total	46		60

Charging infrastructure for electric cycles would be provided at 5% of the total number of cycle parking spaces.

3.3 Servicing Strategy

A Large Refuse Vehicle would be able to access the site, turn around on site and egress in forward gear on to Valley Drive. Supporting vehicle swept path analysis of a Large Refuse Vehicle is provided in Appendix E.

3.4 Emergency Vehicle Access

A Fire Tender would be able to access the site, turn around on site and egress in forward gear on to Valley Drive. Supporting vehicle swept path analysis is provided in Appendix E.

A collapsible bollard would be provided across the two access roads to prevent through traffic movements, except for emergency vehicles. Emergency vehicles would be able to travel between the existing access road and proposed access road. The approximate location of the collapsible bollard is shown with a red dot in Figure 3.2.



Figure 3.2 – Approximate Location of Collapsible Bollard

3.5 Proposed Stopping Up of Redundant Highway Land

There are two existing fingers of public highway off Valley Drive that would need to be stopped up as part of the re-development as they would no longer be required. The areas of public highway to be stopped up are shown in Figure 3.3, where the extent of the existing public highway is shaded light blue and the two fingers of public highway to be stopped up are highlighted with red rectangles.

An application to Kent County Council as Highway Authority would be made to deliver the stopping up. This would be a separate process from the planning application submission.

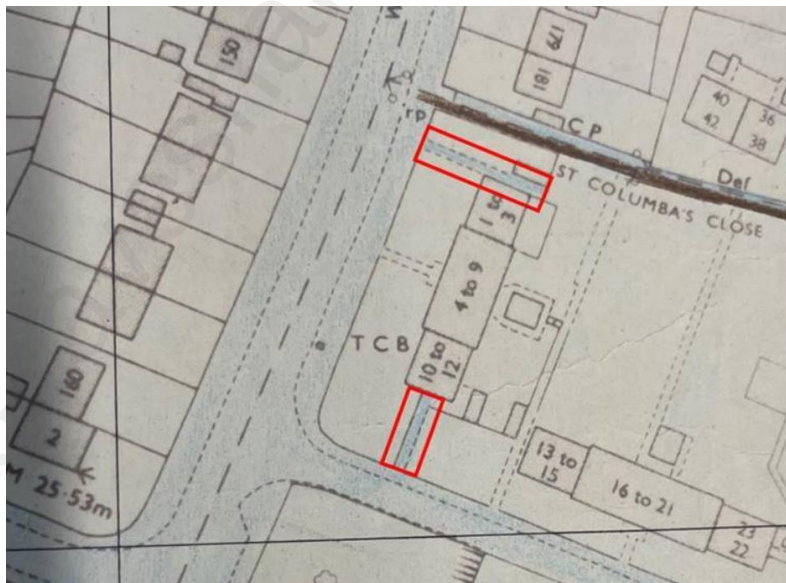


Figure 3.3 – Areas of Public Highway to be Stopped Up

4 Trip Generation

This section provides an estimate of weekday peak hour trip generation for the proposed development.

Trip rates have been sourced from the TRICS database with the following filtering criteria:

- A mix of privately owned houses and flats.
- Sites across England, excluding Greater London.
- Sites included from 'Suburban' and 'Edge of Town' locations.

This search returned a total sample of 14 similar sites. Table 4.1 shows the associated peak hour multi-modal trip rates and Table 4.2 shows the associated trip generation for net increase in 20 residential dwellings. Trip rates in Table 4.1 are expressed in terms of trips per dwelling.

TABLE 4.1 – C3 RESIDENTIAL TRIP RATES

Transport Mode	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	Arrive	Depart	Total	Arrive	Depart	Total
Total Vehicles	0.099	0.307	0.406	0.275	0.135	0.410
Cyclists	0.008	0.025	0.033	0.015	0.006	0.021
Pedestrians	0.032	0.034	0.066	0.094	0.041	0.135
Bus	0.005	0.016	0.021	0.011	0.003	0.014
Train	0.000	0.003	0.003	0.001	0.000	0.001

An estimate of multi-modal trip generation for the net increase in 20 residential dwellings is presented in Table 4.2.

TABLE 4.2 – RESIDENTIAL TRIP GENERATION (20 DWELLINGS)

Transport Mode	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	Arrive	Depart	Total	Arrive	Depart	Total
Total Vehicles	2	6	8	6	3	8
Cyclists	0	1	1	0	0	0
Pedestrians	1	1	1	2	1	3
Bus	0	0	0	0	0	0
Train	0	0	0	0	0	0

Table 4.2 shows that the proposed development is estimated to generate a total of 8 two-way vehicle trips in the AM peak hour (08:00 - 09:00) and 8 two-way vehicle trips in the PM peak hour (17:00 – 18:00).

Based on the predicted level of peak hour trip generation presented in Table 4.2 it is not considered that the proposed development would have a material impact on the transport networks surrounding the site.

5 Conclusions

This Transport Statement has considered the proposed redevelopment of a residential area off St Columba's Close in Gravesend, Kent. The proposal involves regenerating the existing housing stock with the associated demolition of 26 existing dwellings and their replacement with 46 dwellings. The 46 new dwellings would comprise 6 houses, 6 maisonettes and 34 flats.

In terms of sustainable transport, the site is integrated with the existing network of footways on St Patrick's Gardens and Valley Drive. An existing public footpath (NGX-30) passes through the site connecting Valley Drive and St Dunstan's Drive. The nearest bus stops are adjacent to the site on Valley Drive. Bus services operating from the stops provide a connection to Gravesend train station in under 15 minutes. Gravesend station provides regular services to London St Pancras, London Charing Cross and other destinations in Kent.

The proposed development would be accessed from Valley Drive via a new access road that would feature a 4.8m wide carriageway and a 2.5 footway on the northern side.

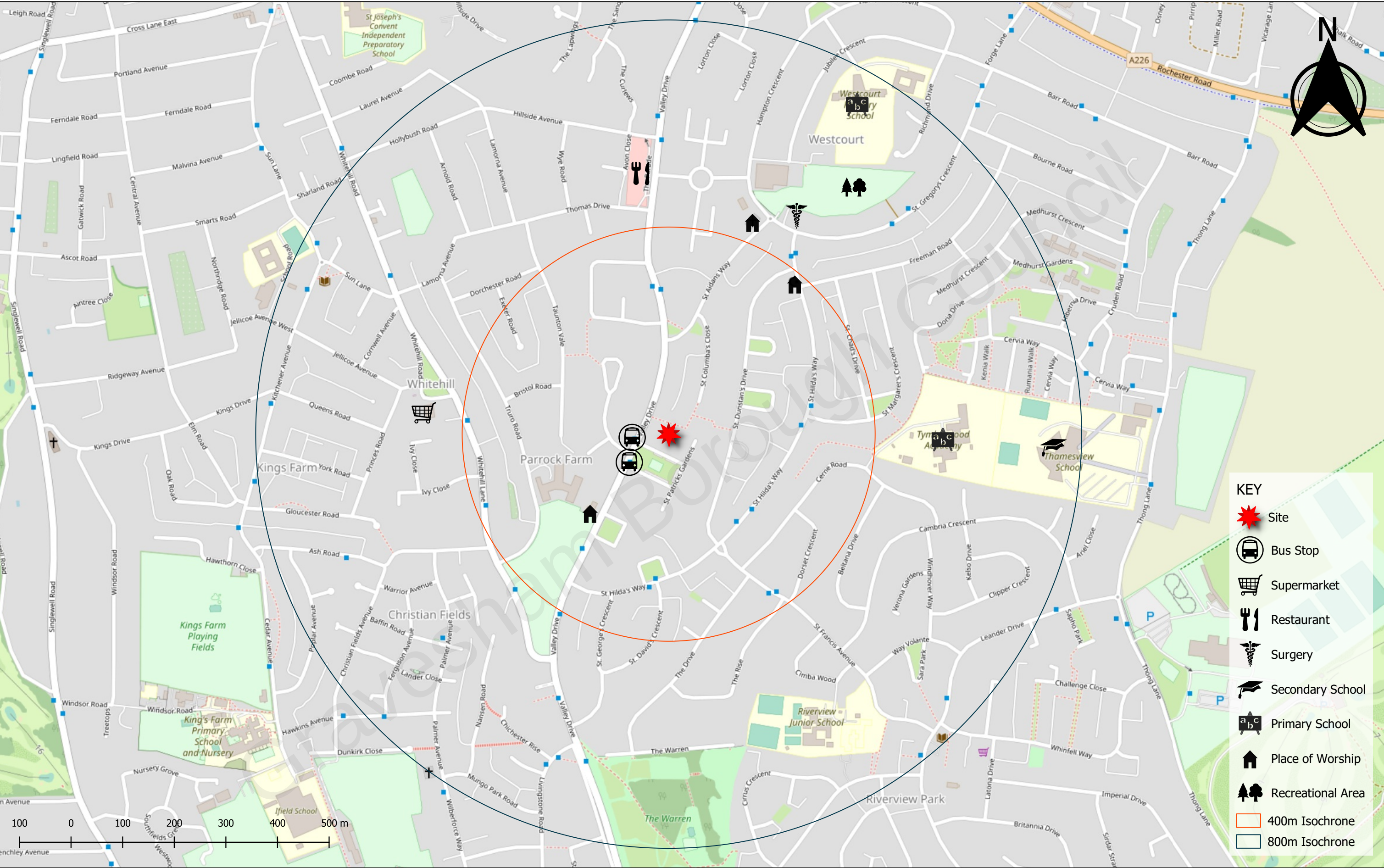
A total of 26 car parking spaces are proposed to support the proposed net increase of 20 dwellings on the site, at a ratio of 1.3 spaces per dwelling, a level of provision that is supported by local car ownership data from the Census and which exceeds the car parking ratio agreed for the adjacent Bishop's Court residential development. Cycle parking would be provided in accordance with the Kent Vehicle Parking Standards. Vehicle swept path analysis has been undertaken to demonstrate that a refuse vehicle and fire engine could access, manoeuvre around, and egress the site in forward gear.

As part of the proposed development, two small areas of redundant public highway land would need to be stopped up. The stopping up would be progressed through a formal application to Kent County Council and would be a separate process to the planning application submission.

It is concluded that the proposed development is in accordance with transport policies at a national and local level and that there are no highway reasons why planning permission should be withheld.

Appendix A – Site Location and Accessibility Plan

Gravesham Borough Council



Appendix B – Proposed Site Layout



- Key:**
- Site Boundary
 - 1B2P
 - 2B3P
 - 2B4P
 - 3B5P
 - 4B6P
 - Ancillary
 - Existing Trees to be Removed

Notes:
Do not scale. All dimensions are in millimetres unless otherwise stated. This drawing should be read in conjunction with all relevant project information and contract documentation. All dimensions to be checked prior to fabrication and/or commencement of works. All works to comply with all relevant legal standards, building regulations and warranty provider requirements. Report any discrepancies, if in doubt ask.

Revisions:		Rev	Status	Date	Description	Drn	Chkd
C01	A2	24.10.22	Planning Issue			ES	AA

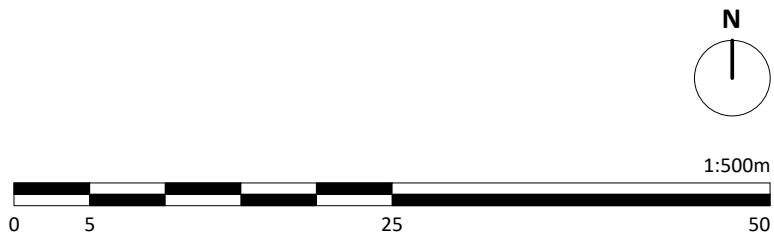
Client Name: Gravesham Borough Council			
Project Name: St Columba's Close			
Drawing Name: Proposed Ground Floor Site Plan			
Drawing Number: SCC-BPTW-04-00-DR-A-0210		Rev: C01	Status: A2
Project No: 20-169	RIBA Stage: -	Drawn By: HM	Scale: 1:500 @ A2

PLANNING ISSUE

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Indicative landscape shown for context
Please refer to Landscape Architect's drawings for detailed landscape proposal



Appendix C – Preliminary Design of Proposed Site Access Junction



VISIBILITY TO NORTH

VISIBILITY TO SOUTH

NOTES

- 1. DO NOT SCALE FROM THIS DRAWING MANUALLY OR ELECTRONICALLY.
- 2. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT PROJECT INFORMATION.
- 3. ALL DATUM LEVELS ARE IN METRES AND DIMENSIONS ARE IN METRES UNLESS OTHERWISE STATED.

KEY:

- = 2.4m x 43m VISIBILITY SPLAYS BASED ON MANUAL FOR STREETS GUIDANCE FOR 30mph ROAD SPEED
- = SITE RED LINE BOUNDARY
- = PUBLIC HIGHWAY BOUNDARY

P02	27.10.2022	UPDATED LAYOUT	BK	TM	TM
P01	14.10.2022	FIRST ISSUE	BK	TM	TM
Rev	Date	Amendment Details	Dr'n	Chk'	App'

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Client

GRAVESHAM BOROUGH COUNCIL

Project Title

ST COLUMBA'S CLOSE, GRAVESEND

Drawing Title

SITE ACCESS VISIBILITY SPLAYS

Purpose Of Issue
PRELIMINARY

Status	Status Description			
S0	INITIAL STATUS OR WIP			
Drawn	Designed	Checked	Approved	
BK	BK	TM	TM	
Sheet Size	Scale	Sweco Ref	Revision	
A3	1:250	65203358	P02	

Drawing Number
65203358-SWE-XX-XX-DR-TP-0002

Appendix D – Census Car Ownership Data

Gravesham Borough Council

KS404EW - Car or van availability

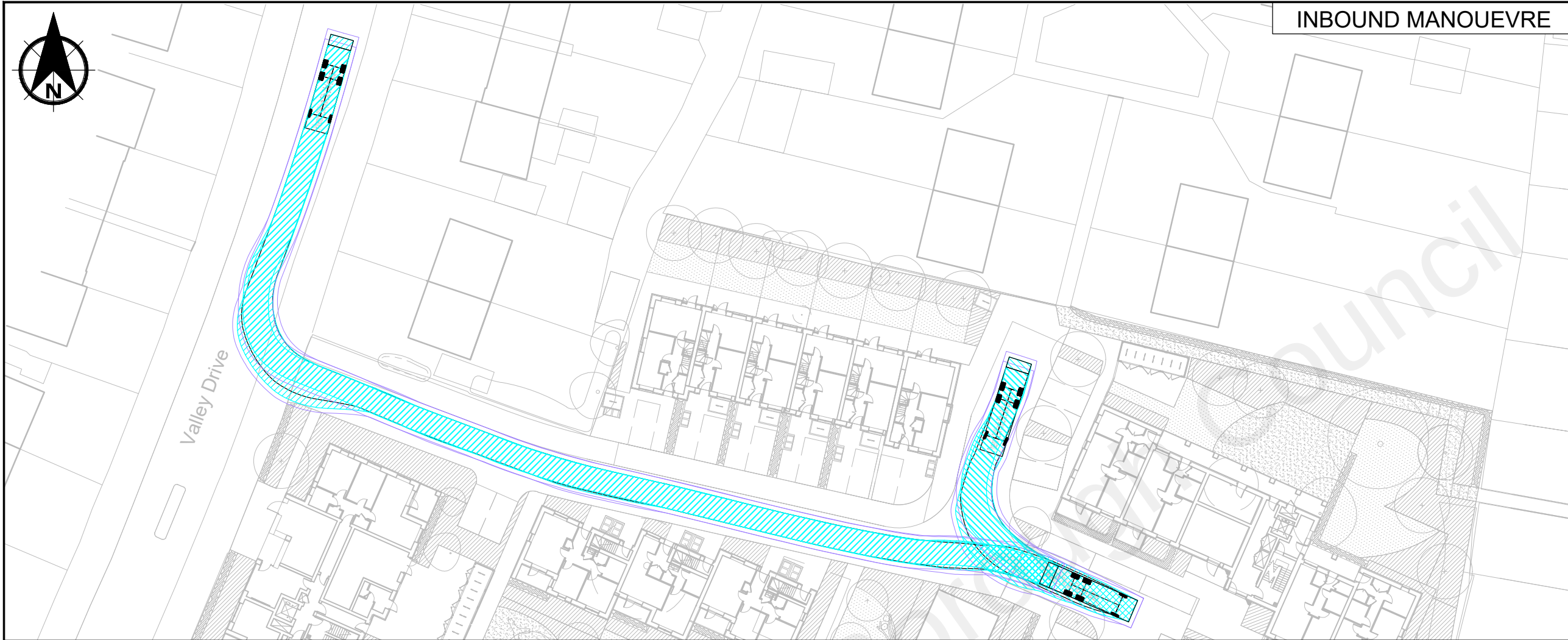
ONS Crown Copyright Reserved [from Nomis on 24 February 2022]

population All households; All cars or vans
units Households
area type 2011 super output areas - middle layer
area name E02005061 : Gravesham 007
rural urban Total

Cars	Households	Number of Cars	Cars Per Household	Average Car Ownership per Household
Total Households	2,777			
No cars or vans in household	815	0	0	1.1
1 car or van in household	1,103	1	1103	
2 cars or vans in household	675	2	1350	
3 cars or vans in household	135	3	405	
4 or more cars or vans in household	49	4	196	
Total:			3054	

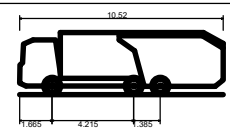
In order to protect against disclosure of personal information, records have been swapped between different geographic areas. Some counts will be affected, particularly small counts at the lowest geographies.

Appendix E – Vehicle Swept Path Analysis



INBOUND MANOUEVRE

- NOTES
- DO NOT SCALE FROM THIS DRAWING MANUALLY OR ELECTRONICALLY.
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 - ALL DATUM LEVELS ARE IN METRES AND DIMENSIONS ARE IN METRES UNLESS OTHERWISE STATED.
 - REFUSE VEHICLE SELECTED TO ACCOMMODATE GRAVESHAM BOROUGH COUNCIL VEHICLE DIMENSIONS

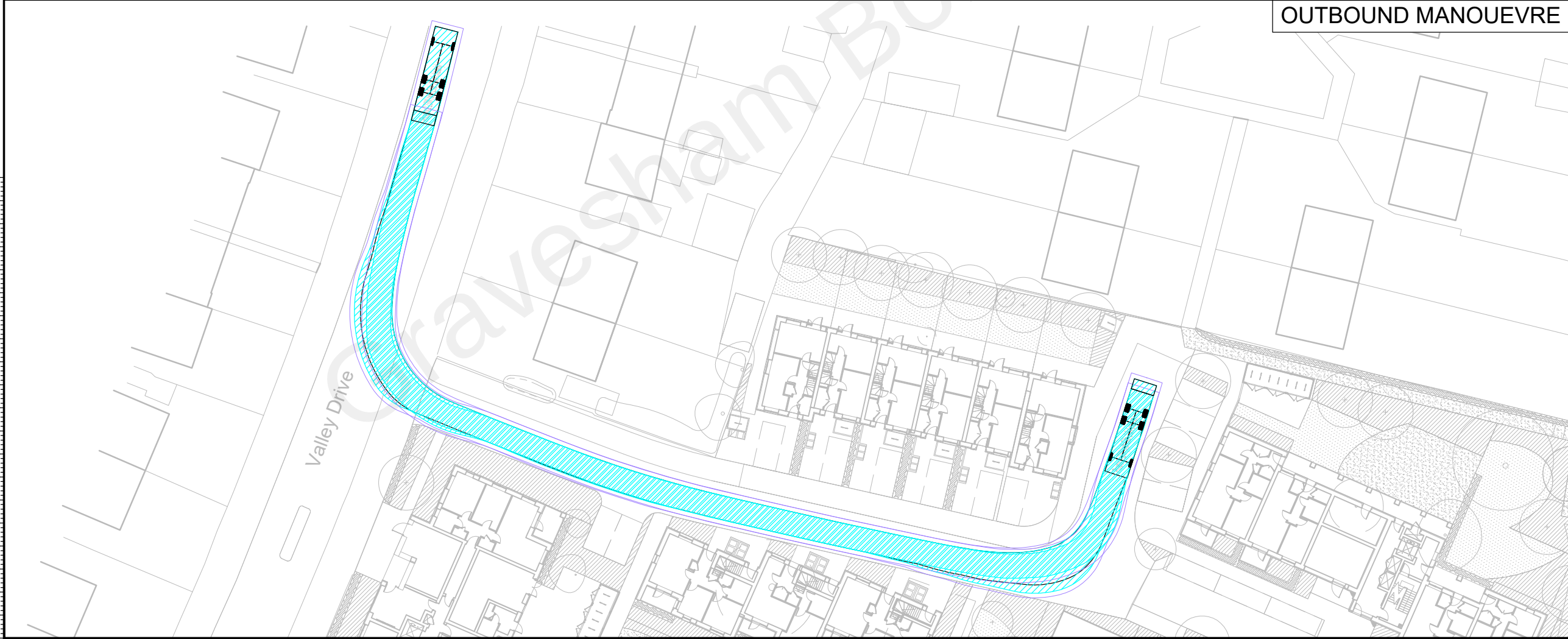


Phoenix 2-23W (with Elite 2 6x4 chassis)
Overall Length 10.520m
Overall Width 2.530m
Overall Body Height 3.211m
Min Body Ground Clearance 0.416m
Track Width 2.530m
Lock to lock time 4.00s
Kerb to Kerb Turning Radius 9.950m

KEY:

- = VEHICLE WHEEL PATH
- = VEHICLE BODY PATH
- = 0.5m BUFFER

OUTBOUND MANOUEVRE



P04	27.10.2022	UPDATED SITE LAYOUT	BK	TM	TM
P03	14.10.2022	UPDATED SITE LAYOUT	BK	TM	TM
P02	03.03.2022	UPDATED SWEEP PATH	BK	TM	TM
P01	22.02.2022	FIRST ISSUE	BK	TM	TM
Rev	Date	Amendment Details	Dr'n	Chk'	App'

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Client
GRAVESHAM BOROUGH COUNCIL

Project Title
ST COLUMBA'S CLOSE, GRAVESEND

Drawing Title
GRAVESHAM BOROUGH COUNCIL REFUSE VEHICLE SWEEP PATH ANALYSIS

Purpose Of Issue PRELIMINARY			
Status S0	Status Description INITIAL STATUS OR WIP		
Drawn BK	Designed BK	Checked TM	Approved TM
Sheet Size A3	Scale 1:500	Sweco Ref 65203358	Revision P04
Drawing Number 65203358-SWE-ZZ-XX-DR-TP-0001			