



Whitehall Works, Grays

Transport Statement

Client: Spire Contracts

i-Transport Ref: LC/BH/ITB19089-001 R

Date: 12 September 2023

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## Quality Management

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## Drawings

<b>ITB19089-GA-002</b>	<b>Proposed Site Access Arrangement</b>
<b>ITB19089-GA-004</b>	<b>Fire Tender Swept Path</b>
<b>ITB19089-GA-005</b>	<b>Proposed Refuse Collection Arrangements</b>
<b>ITB19089-GA-006</b>	<b>Delivery Vehicle Swept Path</b>
<b>ITB19089-GA-007</b>	<b>Car Swept Path</b>

## Appendices

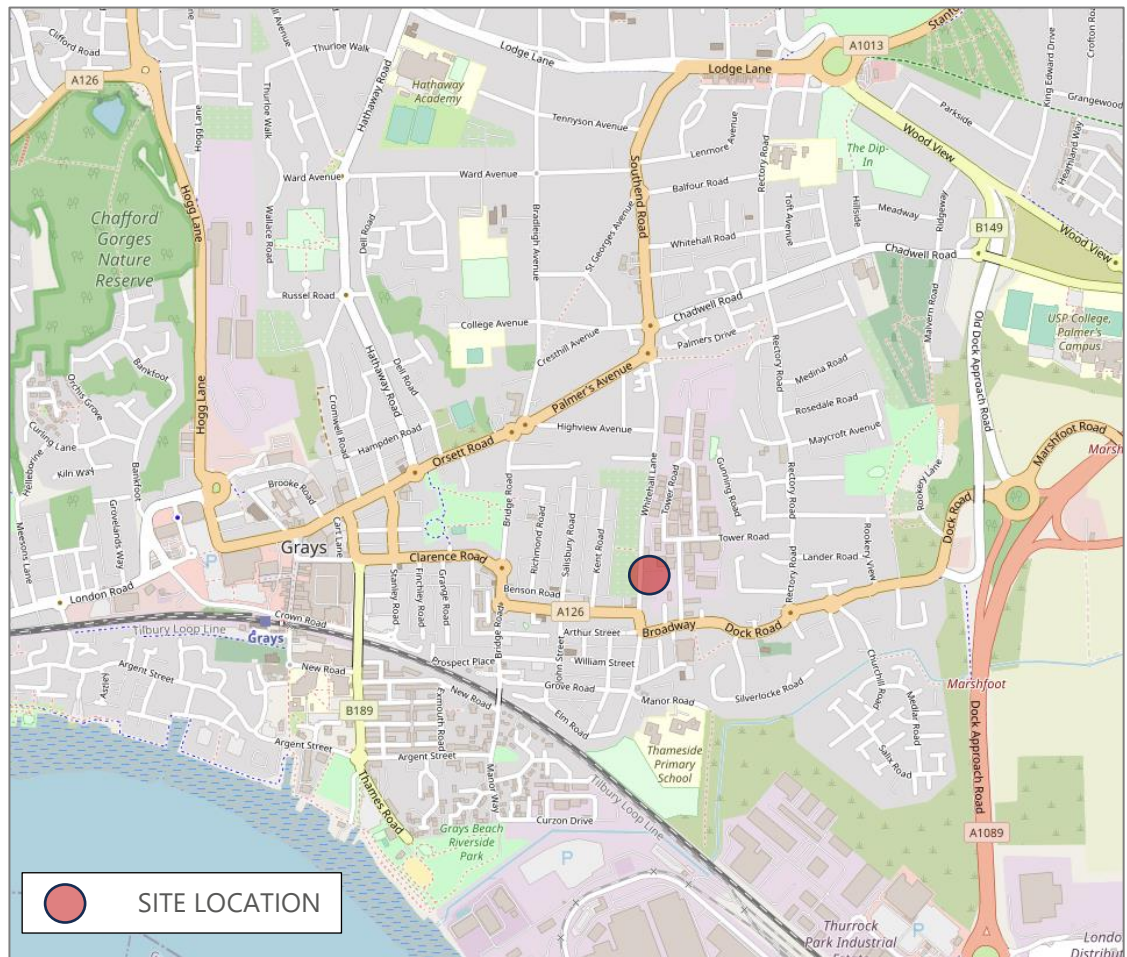
<b>APPENDIX A.</b>	<b>Site Layout</b>
<b>APPENDIX B.</b>	<b>Speed Data</b>
<b>APPENDIX C.</b>	<b>TRICS Data</b>

## SECTION 1 Introduction

### 1.1 Background

1.1.1 i-Transport LLP has been appointed by Spire Contracts to provide highways and transport advice to support a full planning application for the proposed redevelopment of Whitehall Works, Grays. The site is currently used as a builders yard (with office and storage space) and the proposal is to redevelop the existing site to provide six three-bedroom houses. A site location plan is provided as **Image 1.1**. Thurrock Council (TC) are the Local Highway Authority.

**Image 1.1: Site Location Plan**



1.1.2 A planning application (application reference 20/00108/FUL) was previously submitted for the redevelopment of the site to provide seven dwellings which was refused for four reasons. One of the reasons for refusal (reason 4) related to highway matters including the access, servicing and parking (car and cycle) arrangements. This reason for refusal appeared in part to be a 'holding' objection until further information was provided, with the highway authority providing

suggested conditions if the planning authority were minded to approve the application. The additional information sought has been provided as part of the revised application.

## 1.2 **Scope and Structure**

1.2.1 The remainder of this Transport Statement is structured as follows:

- **Section 2** – reviews the existing transport conditions and the accessibility of the site;
- **Section 3** – summarises the development proposal, the access, parking and servicing arrangements;
- **Section 4** – details the likely trip generation and traffic impact of the proposed development; and
- **Section 5** – provides a summary and conclusion.

## SECTION 2 Existing Conditions

### 2.1 Site Location

2.2 The site is located to the east of Whitehall Lane and some 100 metres north of the Whitehall Lane / A216 Dock Road junction. Grays town centre is located approximately 1.2km to the west of the site. A site location plan is provided in **Image 1.1**.

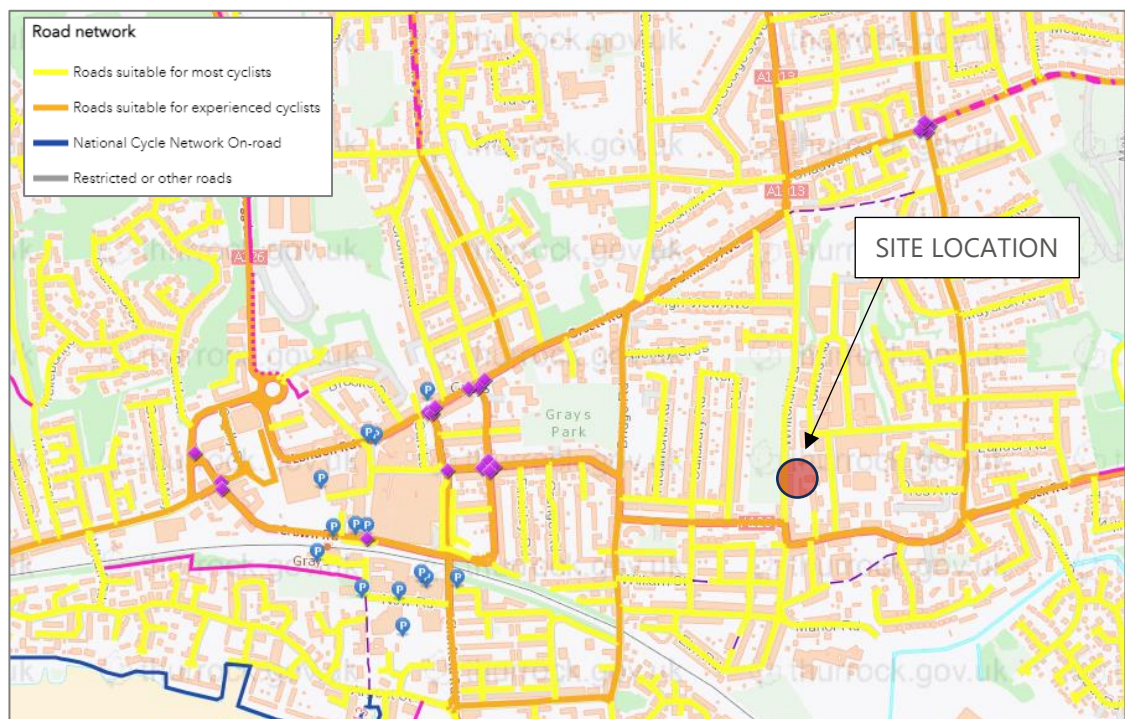
### 2.3 Walking

2.3.1 There is an existing footway on both sides of Whitehall Lane and across the site access there are dropped kerbs and tactile paving. To the north of the access there is a raised table across Whitehall Lane with dropped kerbs and tactile paving. To the north of Whitehall Lane, Palmers Avenue and Southend Road both have footways on both sides of the carriageway and there are pedestrian islands on all arms of the mini-roundabout with dropped kerbs and tactile paving providing facilities for pedestrians to cross. To the south of the site, East Thurrock Road has footways on both sides of the carriageway.

### 2.4 Cycling

Thurrock Council have a cycling map which identifies cycle routes as well as roads which are suitable for cycling. An extract of the map is provided as **Image 2.1**.

**Image 2.1: Cycle Map**



Source: Thurrock Council

2.4.1 As illustrated in **Image 2.1**, there are numerous roads surrounding the site (including Whitehall Lane) which are suitable for most cyclists.

## 2.5 Public Transport

### Bus Services

2.5.1 The closest bus stops to the application site are located circa 200 metres to the south of the site along the A126 Dock Road. These stops provide services primarily on route 66. Route 66 operates between Grays Town centre, Little Thurrock, Tilbury Town and Chadwell St Mary on a 30-minute frequency Monday to Saturday, and with an hourly service on a Sunday. There are also further bus services which can be accessed from within Grays Town Centre.

### Rail Services

2.5.2 Grays railway station is located circa 1.1km to the west of the site along Station Approach. The station provides services operated by c2c between Pitsea and London Fenchurch Street. In total, during a weekday peak period there are circa three trains per hour to Pitsea and six trains per hour to London Fenchurch Street. The trains to / from Fenchurch Street have a journey duration in the region of 38-40 minutes.

## 2.6 Local Services and Facilities

2.6.1 There are a number of everyday local services and facilities within a convenient walking and cycling distance of the site. This includes:

- Salisbury Grocery & Off Licence (300m), Grays Food Centre (650m) and a Post Office (900m) providing retail facilities;
- Little Roo's Pre-school (480m), Thameside Primary School (480m), Quarry Hill Academy (800m) and Grays Convent High School (950m) providing education facilities; and
- East Thurrock Road Medical Centre (400m) and Oddfellows Hall Health Centre (960m) providing health facilities.

2.6.2 Additional facilities can be accessed in Grays town centre which is circa 1.2km to the west of the site. The site is therefore ideally located to encourage travel to everyday services and facilities on site, by bike and by public transport.

## 2.7 Highway Conditions

2.7.1 Whitehall Lane has a 30mph speed limit, street lighting and is traffic calmed. Along Whitehall Lane in the vicinity of the site there are formal parking bays on the western side of the



carriageway and a single yellow line on the eastern side of the carriageway. To the south of the site Whitehall Lane leads to the A126 E Thurrock Road and to the north it leads to the A1013 Palmers Avenue.

2.7.2 Personal Injury Accident data has been obtained for the local highway network in the vicinity of the site and this confirms there have been no accidents along Whitehall Lane in the vicinity of the access and at the Whitehall Lane / A126 East Thurrock Road junction.

## 2.8 **Summary**

2.8.1 There is a good standard of provision for walking and cycling in the vicinity of the site and there are a number of services and facilities within a comfortable walking and cycling distance. This includes Gray's Town Centre which is circa 1.2km to the west of the site. There are half hourly buses operating during the week within a short walk of the site which provide access to Grays Town centre, Little Thurrock, Tilbury Town and Chadwell St Mary. The railway station is located circa 1.1km to the west of the site providing access to destinations further afield by public transport. The site is therefore ideally located to encourage travel by means other than the private car. There have been no accidents on Whitehall Lane in the vicinity of the site.

## SECTION 3 Proposed Development

### 3.1 Introduction

3.1.1 This section of the Transport Statement provides information in relation to the proposed development, access, parking and servicing arrangements. This information seeks to address the previous reason for refusal which related to these matters.

### 3.2 Proposed Development

3.2.1 The proposal is to re-develop the existing builders yard to provide six three-bedroom houses. A site layout plan which is submitted for determination is included in **Appendix A**. The houses are provided in two terraces with parking to the east and north.

### 3.3 Access

3.3.1 It is proposed to re-use Whitehall Works to provide access to the site. Drawing **ITB19089-GA-002** illustrates the existing access arrangement and geometry and shows how this would connect with the proposed street within the development.

3.3.2 As shown on drawing **ITB19089-GA-002**, the existing access road initially has a width of circa 4.6m with a margin either side of the carriageway (circa 0.4m – 0.5m). This then increases to circa 5.4m within the site. Within the adopted highway, visibility splays of 2.4m x 25m can be achieved to the north and south. This is consistent with the guidance in Manual for Streets for 20mph vehicle speeds which should be expected given the residential nature of Whitehall Lane and that there is traffic calming at regular intervals. Speed surveys undertaken in 2017 (included in **Appendix B**) demonstrate 85<sup>th</sup> percentile speeds are slightly below 20mph. These have been shown to a small offset (0.5m) from the kerb which is encouraged by Manual for Streets 2 which sets out that *“For simplicity it has previously been measured along the nearside kerb line of the main arm, although vehicles will normally be travelling at a distance from the kerb line. Therefore a more accurate assessment of visibility splay is made by measuring to the nearside edge of the vehicle track”* (Manual for Streets 2, paragraph 10.5.3). Adequate visibility can therefore be achieved.

3.3.3 Whilst it is not proposed to formally set out priority for vehicles within the site, drawing **ITB19089-GA-002** demonstrates that a vehicle exiting from the site has adequate visibility to vehicles travelling along Whitehall Works to enter and exit from the existing parking area. Visibility splays of 2.4m x 11m have been shown which are appropriate for 10mph vehicle speeds.

Vehicle speeds in this area will be low due to the geometry of Whitehall Works and the presence of gates on the exit from the existing parking area.

3.3.4 The access will be in the form of a shared surface (with pedestrians, cyclists and vehicles sharing the same space). As set out in Manual for Streets in paragraph 7.2.14, "**shared surface streets are likely to work well:**

- **in short lengths, or where they form cul-de-sacs;**
- **where the volume of motor traffic is below 100 vehicles per hour (vph) (peak); and**
- **where parking is controlled or it takes place in designated areas."**

3.3.5 This is the case in this instance with the street being a short cul-de-sac serving only a small number of properties. Traffic speeds and vehicle volumes will be low (circa five movements in the peak hours – see section 4) and parking is provided in designated areas.

3.3.6 Swept path analysis has been provided to demonstrate that cars can pass as required along the access road. This is shown on drawing **ITB19089-GA-007**.

## 3.4 Servicing

3.4.1 Drawing **ITB19089-GA-004** and **ITB19089-GA-006** demonstrate that a fire tender and delivery van can enter the site, turn and exit in a forward gear. This takes into account the on-street parking on the western side of Whitehall Lane. Appropriate provision has therefore been provided for delivery vehicles which will visit the site on a regular basis and for a fire appliance which may need to access the site in the event of an emergency.

3.4.2 At the moment, refuse vehicles reverse from Whitehall Lane onto Whitehall Works to collect bins from the adjacent flatted development. Image 3.1 shows the bin lorry having reversed to collect the bins. It is proposed that this arrangement will continue for the proposed development.

**Image 3.1: Refuse Vehicle Collecting Bins on Whitehall Works**



3.4.3 A bin collection point has been provided to the south of Whitehall Works as shown on the site layout plans submitted for determination. This is within a short walk (less than 25m) of the rear of the refuse collection vehicle as shown on drawing **ITB19089-GA-005**. It is proposed that residents will take their bins from their individual bin stores (which are incorporated on the frontage of the properties) to the bin collection point on collection day. Three of the properties are within 30m and the remaining properties will need to move bins slightly further. This is a short additional distance and bin carry distances of this length are very common. Moreover, this additional carry distance will not impact on the Council's refuse collection team, as it will be residents who need to move bins slightly further than 30m.

### 3.5 **Parking**

#### **Cycle Parking**

3.5.1 Thurrock Council's cycle parking standards require the provision of one long stay cycle space and one visitor cycle parking space per dwelling. A secure cycle store has been provided for 12 bikes and this is conveniently located to the north of the proposed dwellings (for anyone arriving and departing the site). This is shown on the site layout plans submitted for determination. Cycle parking has therefore been provided in accordance with standards.

#### **Car Parking**

3.5.2 Thurrock Council's car parking standards vary depending on the type of dwelling provided (i.e. flat or house) and the accessibility of the site to a town centre or public transport. Separate standards are also provided for visitor and unallocated parking. The site is located in the 'medium accessibility' zone and on the basis of the parking standards, 15 car parking spaces should be provided (i.e. 2 spaces per dwelling plus 3 spaces for visitors). Three spaces out of the overall provision should also be designed for blue badge holders. This level of parking (i.e. 15 spaces including three blue badge spaces) is shown on the site layout plan.

3.5.3 Standard parking spaces should be 2.5m x 5.5m and a blue badge space needs to be 5.5m x 2.9m with a 1m access aisle. The design of the spaces shown on the site layout plan submitted for determination comply with these requirements.

3.5.4 The Building Regulations require one electric vehicle charging point to be provided per dwelling. A total of six spaces on the site will therefore be provided with an electric vehicle charging point. This level of provision exceeds the level set out in Thurrock Council's parking standards.

3.5.5 An appropriate level of car parking has therefore been provided and the car parking has been designed in accordance with the appropriate standards.

### 3.6 **Summary**

3.6.1 It is proposed to re-use Whitehall Works to provide access to the site. The access has an established level of use and there have been no accidents in the vicinity of the access in the most recent five-year period. Appropriate visibility can be achieved at the junction with Whitehall Lane and along the length of the proposed street providing access to the site. The access is proposed in the form of a shared surface and complies with the recommendations in Manual for Streets for when a shared surface arrangement is acceptable. An appropriate level of cycle parking and car parking has been provided and adequate provision has been made for servicing.

## SECTION 4 Traffic Impact

### 4.1 Introduction

4.1.1 This section of the Transport Statement provides an assessment of the likely traffic impacts of the proposed development.

### 4.2 Existing Use

4.2.1 A traffic survey of the existing use on the site was undertaken on 3 August 2023 between 07:00-10:00 and 16:00-19:00 and the results are summarised in **Table 4.1**.

**Table 4.1: Existing Site Traffic Generation**

	Morning Peak Hour (0700-1000)			Evening Peak Hour (1600-1900)		
	Arrive	Depart	Two-way	Arrive	Depart	Two-way
Light Goods Vehicle Movements	8	8	16	0	5	5
Heavy Goods Vehicle Movements	1	1	2	0	0	0
<b>Total Vehicles</b>	<b>9</b>	<b>9</b>	<b>18</b>	<b>0</b>	<b>5</b>	<b>5</b>

4.2.2 As summarised in **Table 4.1**, the existing use on the site generates circa 18 movements in the morning period (an average of six movements an hour) and five movements in the evening period (an average of two movements an hour).

4.2.3 The survey of the site access also captured the existing use of Whitehall Works by traffic associated with the existing residential dwellings located to the north of the access. In total there were three two-way movements in the morning and evening period associated with the existing residential dwellings (an average of one vehicle movement an hour).

### 4.3 Proposed Use

4.3.1 In order to determine the likely number of vehicle trips associated with the six houses, vehicle trip rates have been obtained from the TRICS database. The trip rates were obtained using the following parameters:

- Sites within England (Excluding Greater London);
- Sites under TRICS land-use class 03 – Residential, sub-category A – Houses Privately Owned;

- Sites with between 8 and 19 dwellings; and
- Sites located within Suburban Area and Edge of Town only.

4.3.2 The trip rates and corresponding traffic generation for the six houses is summarised in **Table 4.2**. The full TRICS report has been reproduced in full in **Appendix C**.

**Table 4.2: Proposed Six Houses – Trip Rates and Traffic Generation**

	Morning Peak Hour (0700-1000)			Evening Peak Hour (1600-1900)		
	Arrive	Depart	Two-way	Arrive	Depart	Two-way
Trip Rates (per dwelling)	0.416	0.782	1.198	0.813	0.511	1.324
Vehicle Trips (6 dwellings)	2	5	7	5	3	8

Source: TRICS and Consultant's Calculations

4.3.3 As summarised in **Table 4.2**, the proposed development at the site is likely to generate circa seven - eight two-way vehicle movements in the morning and evening periods. This broadly equates to two vehicle movements per hour.

#### 4.4 Net Impact

4.4.1 Based on the traffic survey of the existing access and the traffic generation of the proposed new houses, the net impact of the development is as follows:

- A reduction in traffic movements in the morning period of circa 10 vehicles – this equates to circa three fewer vehicle movements per hour; and
- An increase in traffic movements in the evening period of circa three vehicles – this equates to one additional vehicle movement per hour.

4.4.2 The redevelopment of the site will therefore result in a modest reduction in the level of traffic generated in the morning period and a modest increase in the level of traffic generated in the evening period.

#### 4.5 Summary

4.5.1 The existing use on the site generates circa 18 movements in the morning period and five movements in the evening period. The proposed development at the site is likely to generate circa seven - eight two-way vehicle movements in the morning and evening periods. The redevelopment of the site will therefore result in a modest reduction in the level of traffic generated in the morning period and a modest increase in the level of traffic generated in the evening period. This will not have a noticeable impact on the operation of the highway network.

## SECTION 5 Summary and Conclusion

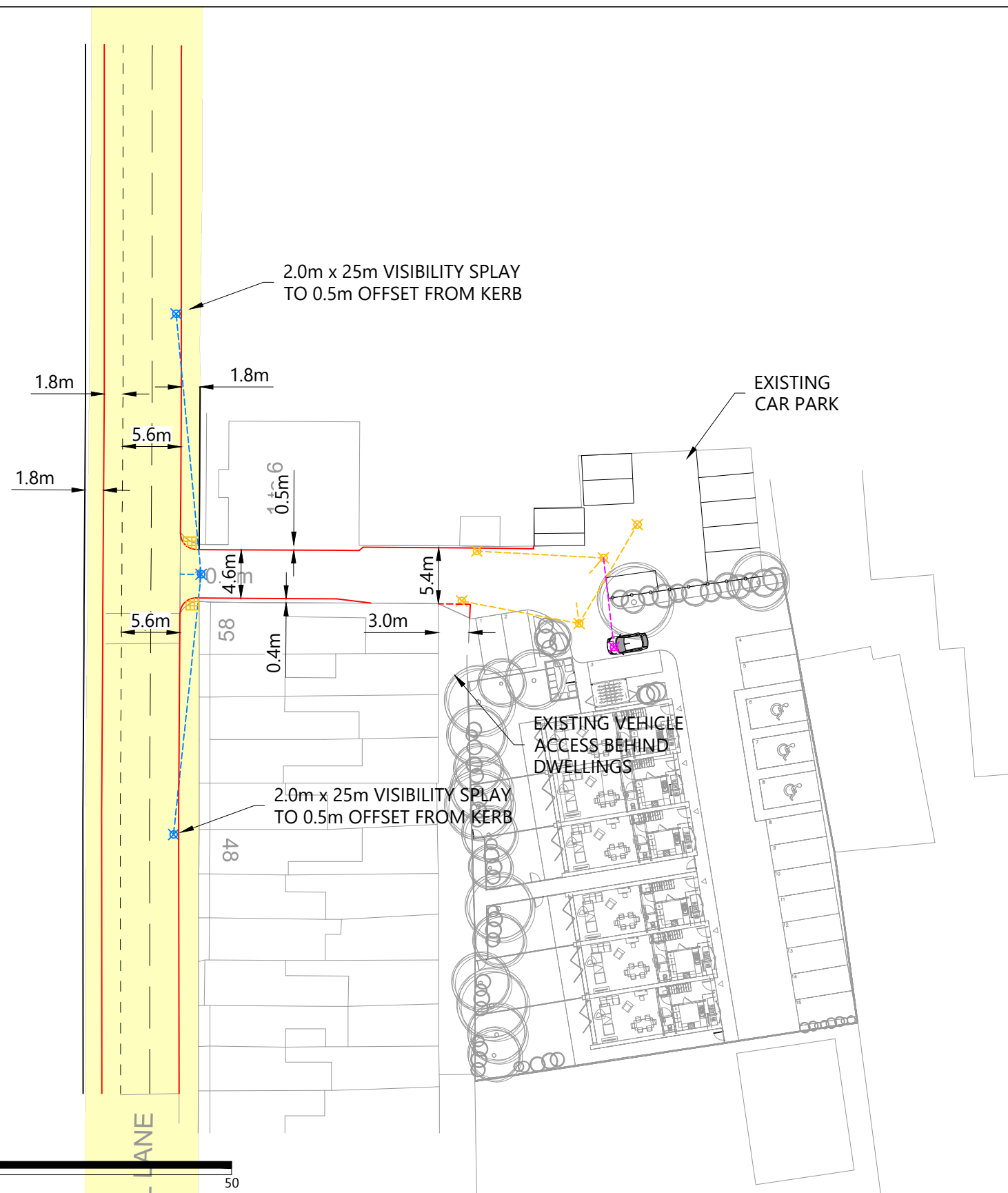
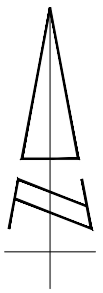
- 5.1.1 i-Transport LLP has been appointed by Spire Contracts to provide highways and transport advice to support a full planning application for the proposed redevelopment of Whitehall Works, Grays. The site is currently used as a builders yard (with office and storage space) and the proposal is to redevelop the existing site to provide six three-bedroom houses.
- 5.1.2 There is a good standard of provision for walking and cycling in the vicinity of the site and there are a number of services and facilities within a comfortable walking and cycling distance. This includes Gray's Town Centre which is circa 1.2km to the west of the site. There are half hourly buses operating during the week within a short walk of the site which provide access to Grays Town centre, Little Thurrock, Tilbury Town and Chadwell Ct Mary. The railway station is located circa 1.1km to the west of the site providing access to destinations further afield by public transport. The site is therefore ideally located to encourage travel by means other than the private car. There have been no accidents on Whitehall Lane in the vicinity of the site.
- 5.1.3 It is proposed to re-use Whitehall Works to provide access to the site. The access has an established level of use and there have been no accidents in the vicinity of the access in the most recent five-year period. The proposed development will result in a modest reduction in the level of traffic using Whitehall Works in the morning period and a modest increase in the level of traffic generated in the evening period. This increase in the evening period will not be a noticeable increase (with the increase only being one vehicle movement per hour).
- 5.1.4 Appropriate visibility can be achieved at the junction with Whitehall Lane and along the length of the proposed street providing access to the site. The access is proposed in the form of a shared surface and complies with the recommendations in Manual for Streets for when a shared surface arrangement is acceptable.
- 5.1.5 Cycle parking and car parking has been provided in accordance with standards. Six spaces will be provided with an electric vehicle charging facility in accordance with the Building Regulations. Turning has been provided on site for delivery vehicles and the emergency services and adequate provision has been made for refuse collection arrangements.
- 5.1.6 The existing use on the site generates circa 18 movements in the morning period and five movements in the evening period. The proposed development at the site is likely to generate circa seven - eight two-way vehicle movements in the morning and evening periods. The redevelopment of the site will therefore result in a modest reduction in the level of traffic



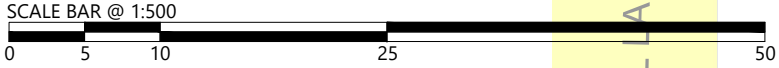
generated in the morning period and a modest increase in the level of traffic generated in the evening period. This will not have a noticeable impact on the operation of the highway network.

5.1.7 Overall, the proposal is acceptable from a highways and transport perspective.

# DRAWINGS



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**KEY:**

- HIGHWAY BOUNDARY
- 2.0m x 11m VISIBILITY SPLAY
- 2.0m x 8.6m VISIBILITY SPLAY TO CENTRE OF LANE



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REV	DATE	BY	DESCRIPTION	CHK	APD
C	25.08.23	JB	SITE LAYOUT UPDATED	BH	BH
B	12.06.23	JB	HIGHWAY BOUNDARY ADDED	LC	BH
A	24.05.23	JB	EXISTING LAYOUT UPDATED FOLLOWING ON-SITE MEASUREMENTS	BH	BH

STATUS: FOR INFORMATION

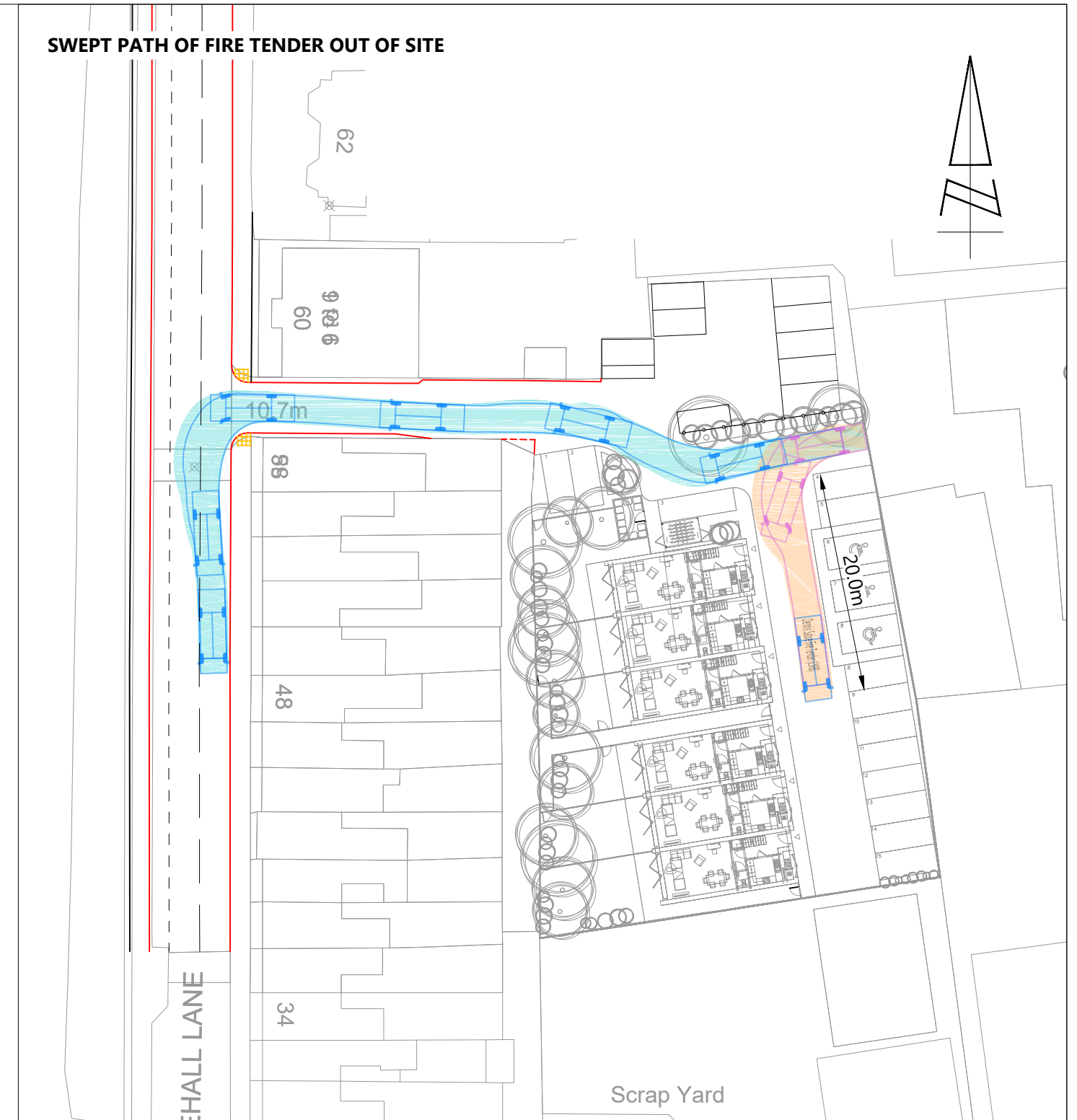
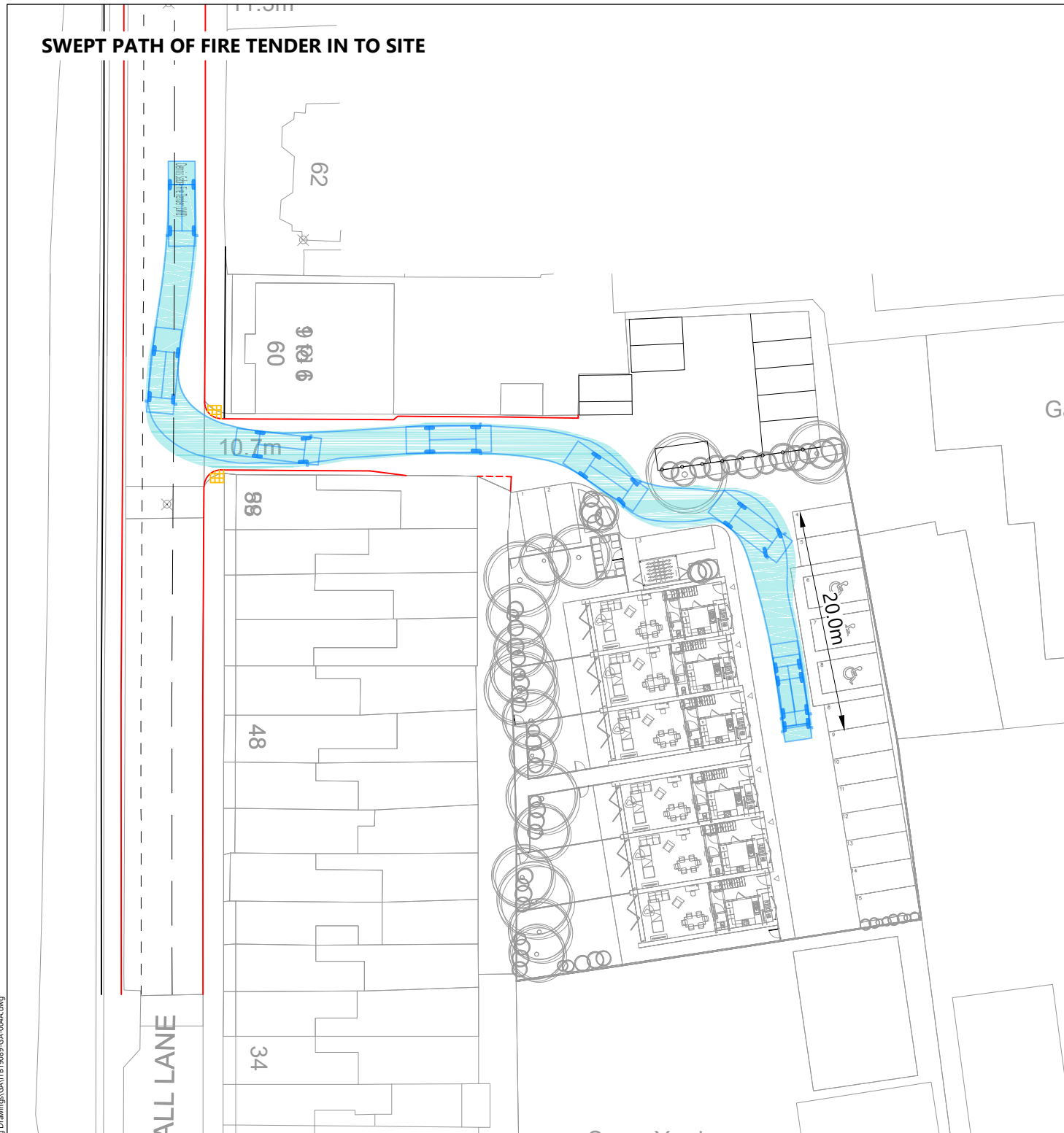
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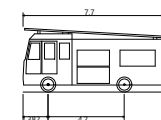
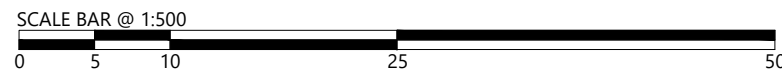
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**SWEPT PATH OF FIRE TENDER IN TO SITE**

**SWEPT PATH OF FIRE TENDER OUT OF SITE**



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Dennis Sabre Fire Tender (LWB) - including wing mirror  
 Overall Length 7.700m  
 Overall Width 2.430m  
 Overall Body Height 3.512m  
 Min Body Ground Clearance 0.397m  
 Track Width 2.380m  
 Lock to lock time 5.0s  
 Kerb to Kerb Turning Radius 7.400m

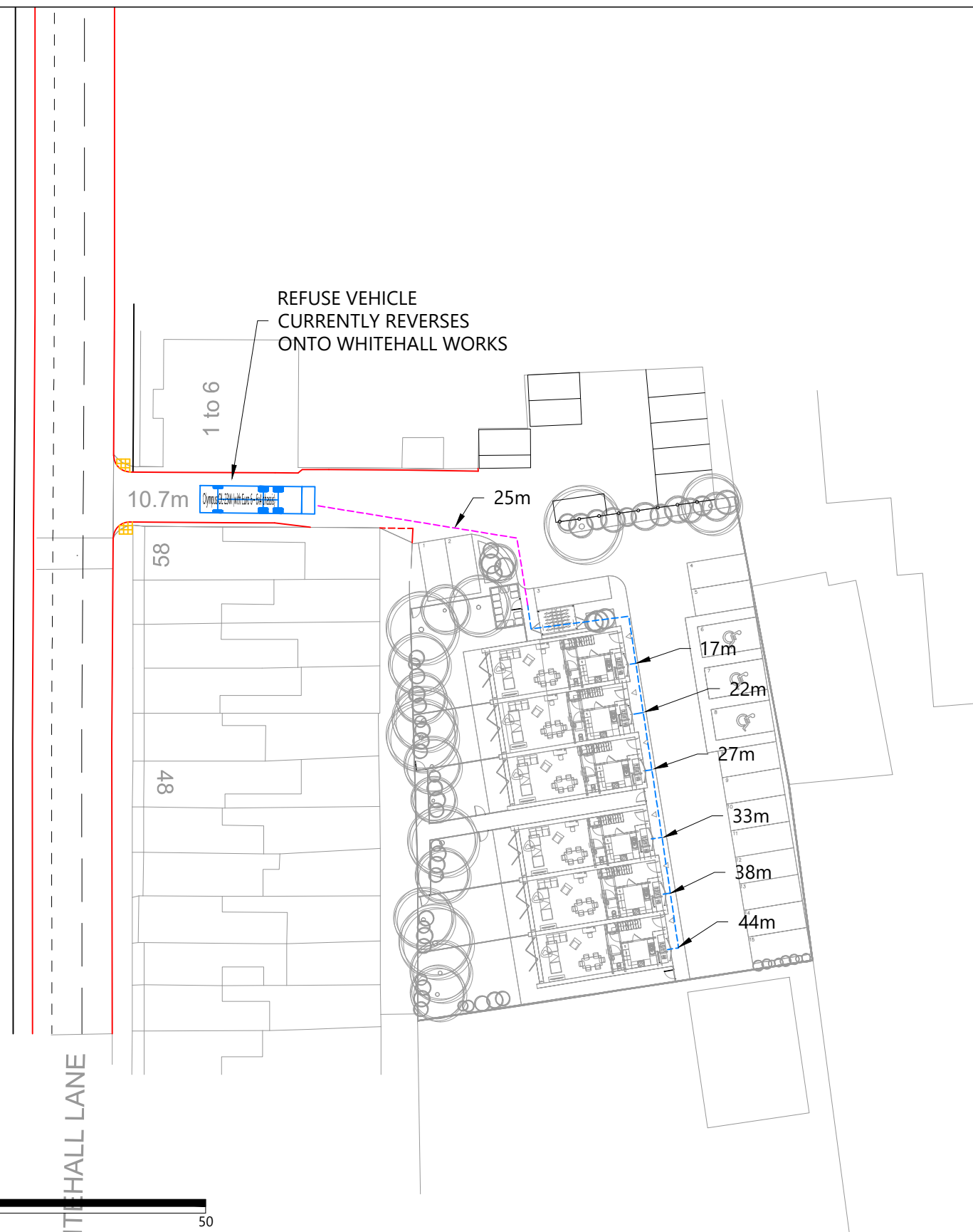
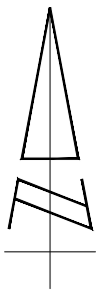


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STATUS: FOR INFORMATION					

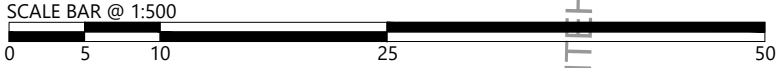
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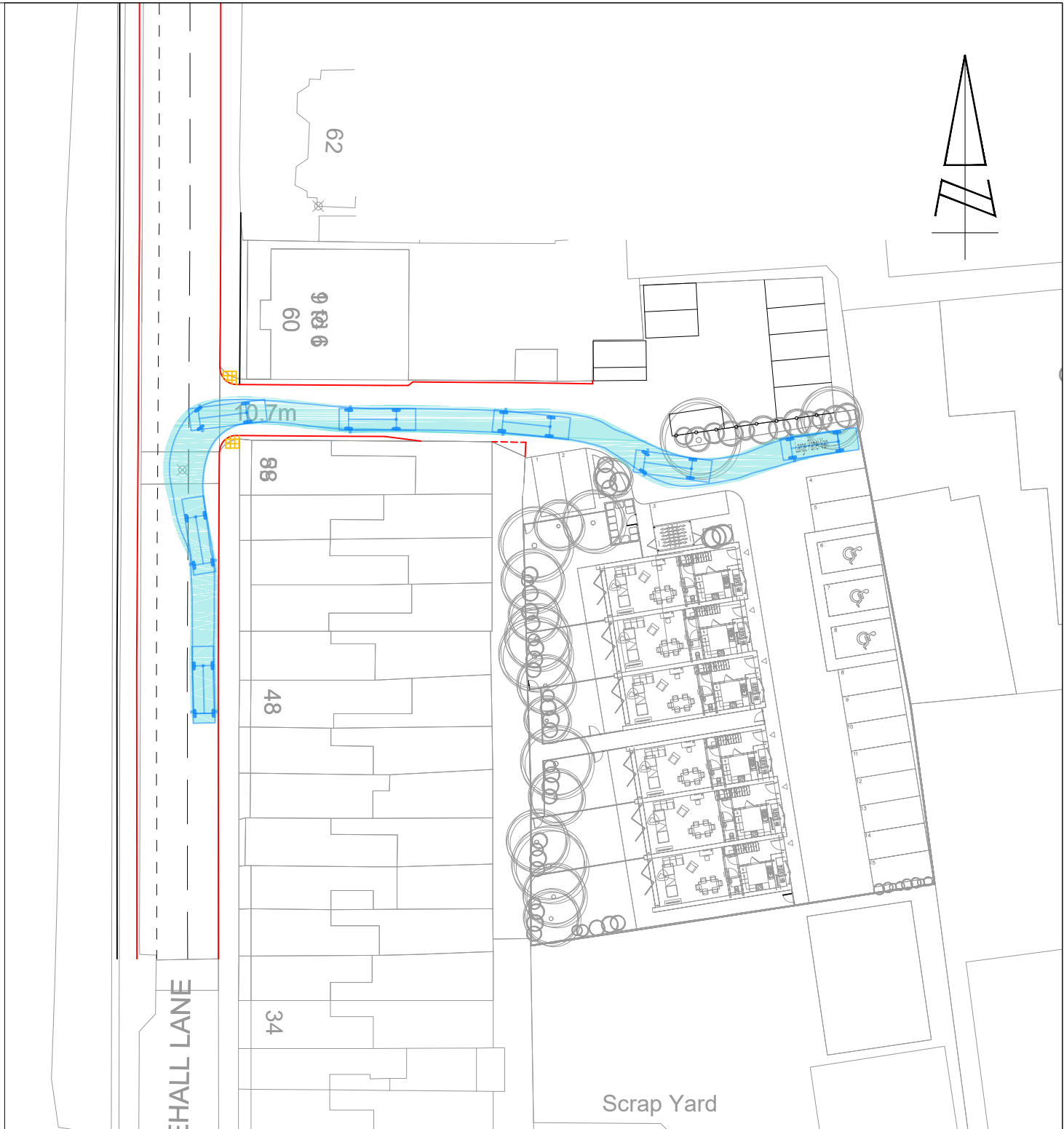
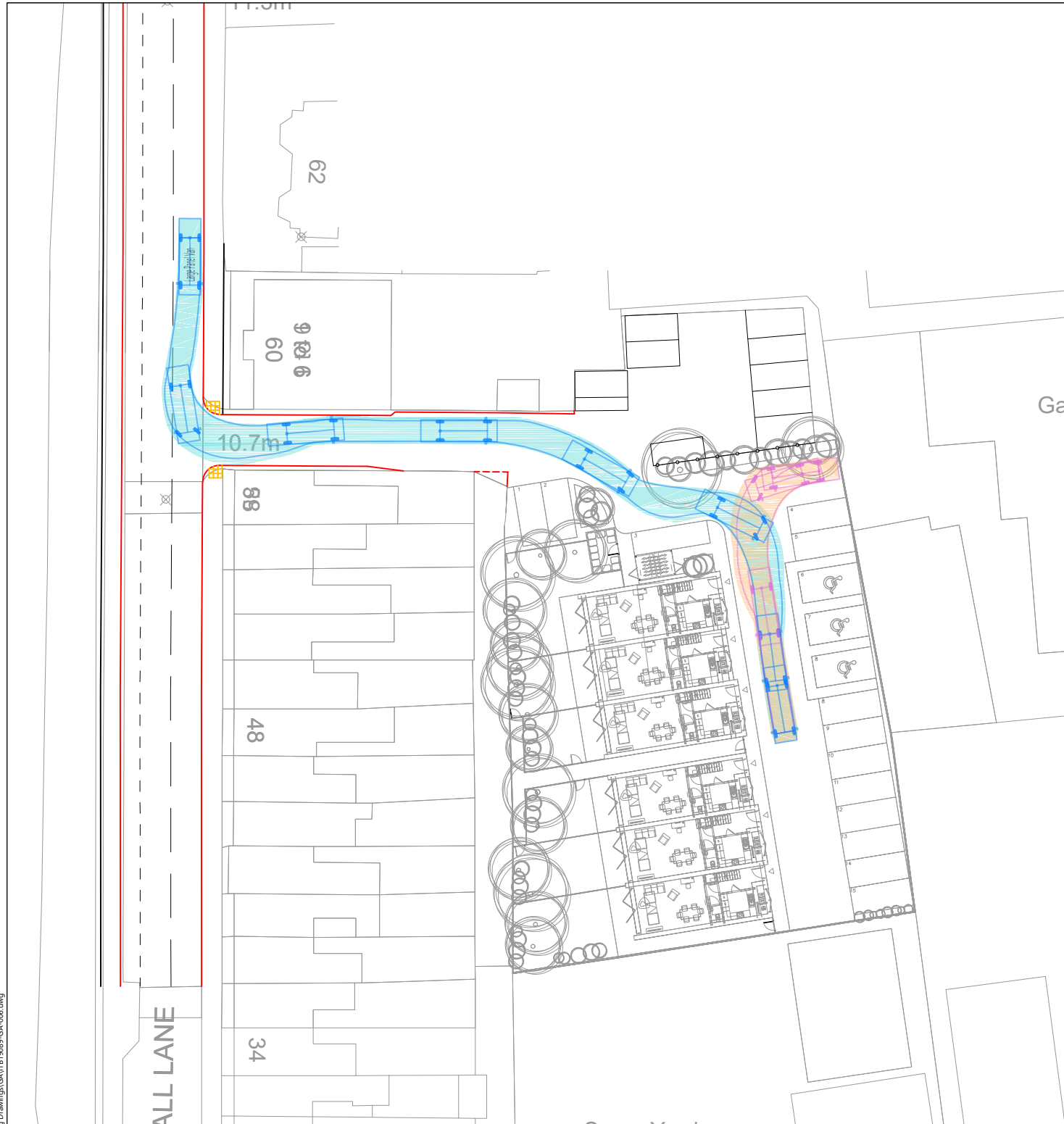
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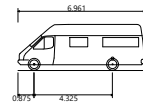
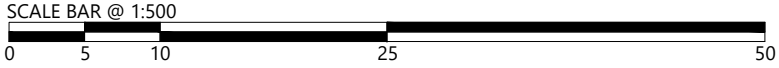
TITLE: <b>BIN DRAG DISTANCES</b>	
PROJECT: <b>WHITEHALL WORKS, GRAYS</b>	CLIENT: <b>SPIRE CONTRACTS</b>

DRAWN: <b>JB</b>	CHECKED: <b>BH</b>	APPROVED: <b>BH</b>
PROJECT No: <b>ITM19089</b>	SCALE @ A3: <b>1:500</b>	DATE: <b>08.08.23</b>
DRAWING No: <b>ITM19089-GA-005</b>		REV:

T:\Projects\19000 Series\19089\19089-005.dwg



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Large Panel Van - including wing mirrors  
 Overall Length 6.961m  
 Overall Width 1.993m  
 Overall Body Height 2.544m  
 Min Body Ground Clearance 0.316m  
 Track Width 1.865m  
 Lock to lock time 4.00s  
 Kerb to Kerb Turning Radius 7.400m



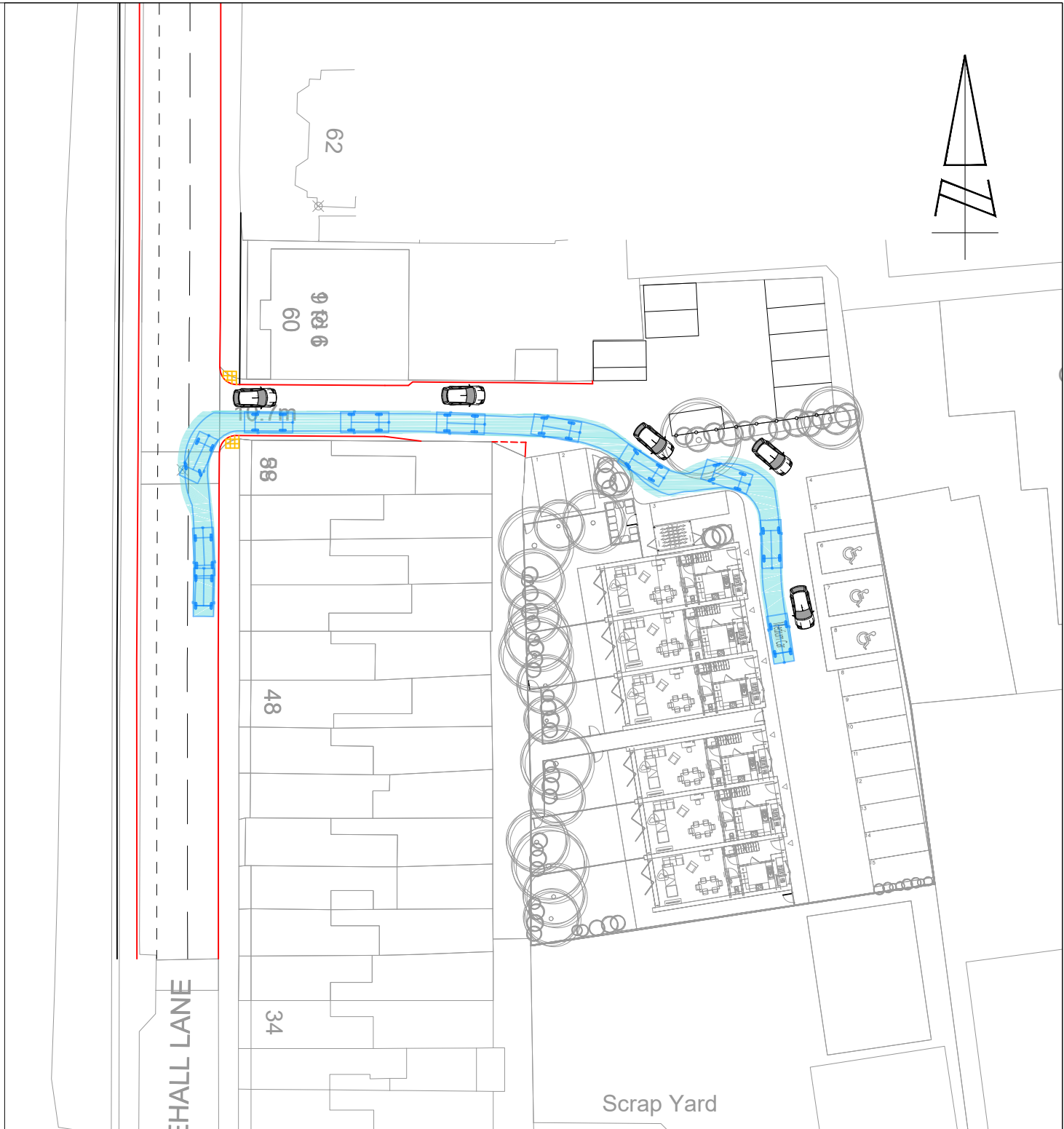
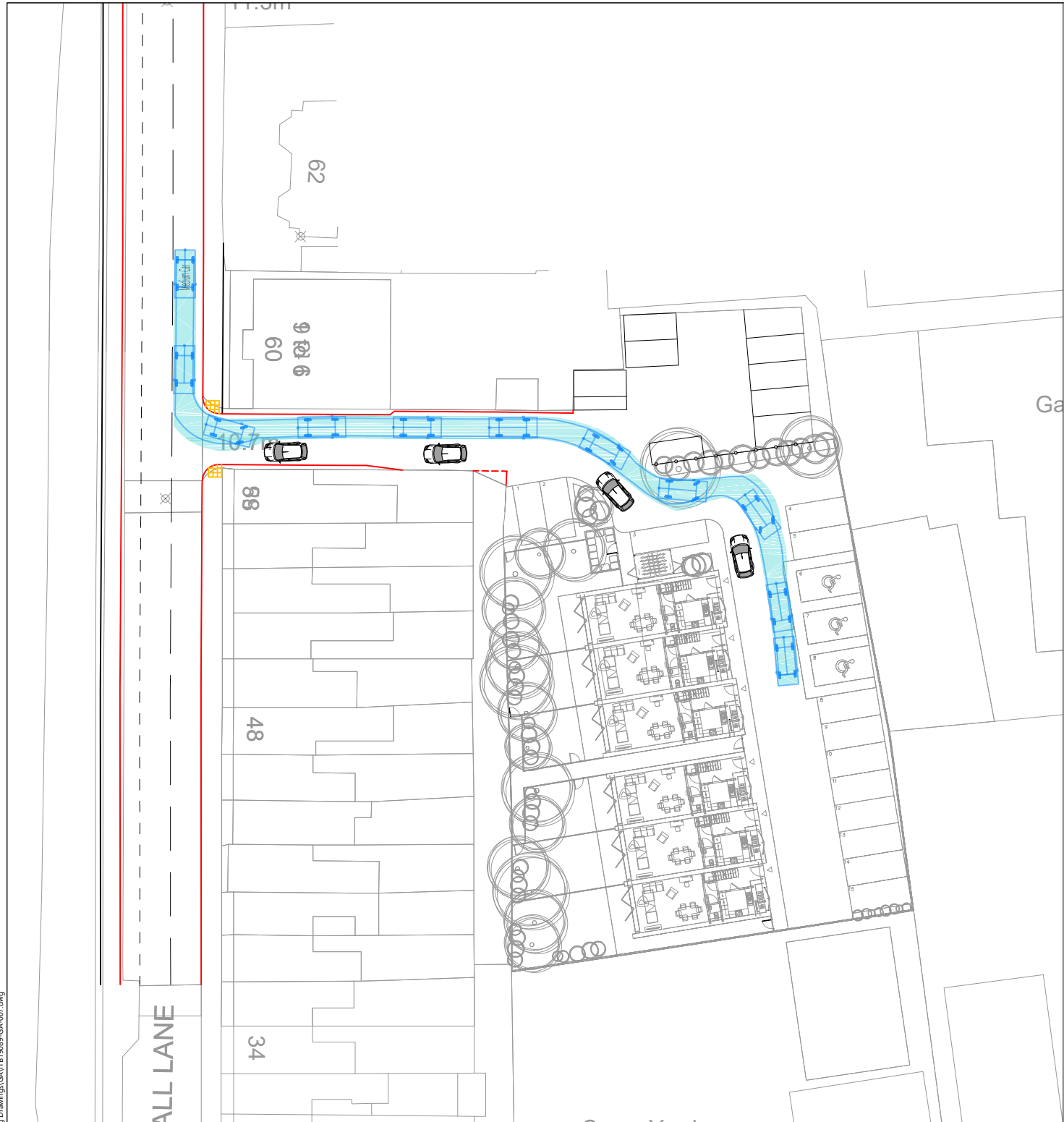
The Square, Basing View,  
 Basingstoke, Hampshire, RG21 4EB  
 Tel: 01256 637940  
 www.i-transport.co.uk

REV	DATE	BY	DESCRIPTION	CHK	APD
STATUS: FOR INFORMATION					

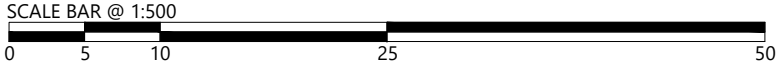
TITLE:	SWEPT PATH ANALYSIS - LARGE PANEL VAN	
PROJECT:	WHITEHALL WORKS, GRAYS	CLIENT: SPIRE CONTRACTS

DRAWN:	CHECKED:	APPROVED:
JB	BH	BH
PROJECT No:	SCALE @ A3:	DATE:
ITB19089	1:500	25.08.23
DRAWING No:	REV:	
ITB19089-GA-006		

T:\Projects\19000 Series\19089\19089-06 - Whitehall Works, Grays\Tech\Acad\1-Transport Drawings\Working Drawings\GA\ITB19089-GA-006.dwg



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Medium Sized Car including wing mirrors	4.376m
Overall Length	1.857m
Overall Width	1.466m
Overall Body Height	0.229m
Min Body Ground Clearance	1.591m
Max Track Width	4.00s
Lock to lock time	5.042m
Kerb to Kerb Turning Radius	



The Square, Basing View,  
Basingstoke, Hampshire, RG21 4EB  
www.i-transport.co.uk  
Tel: 01256 637940

REV	DATE	BY	DESCRIPTION	CHK	APD
			FOR INFORMATION		

TITLE: SWEPT PATH ANALYSIS - MEDIUM SIZED CAR	PROJECT: WHITEHALL WORKS, GRAYS	CLIENT: SPIRE CONTRACTS
--	------------------------------------	----------------------------

DRAWN: JB	CHECKED: BH	APPROVED: BH
PROJECT No: ITB19089	SCALE @ A3: 1:500	DATE: 25.08.23
DRAWING No: ITB19089-GA-007		REV:

T:\Projects\19089 Series\19089-07B - Whitehall Works, Grays\Tech\Acad\Transport Drawings\Working Drawings\GA\ITB19089-GA-007.dwg

## **APPENDIX A.** Site Layout





SCALE @ A1: 1:100  
SCALE @ A3: 1:200

0 1.0 2.0 3.0 4.0 M

A1  
A3

N

**NOTES**

- Default drawing size is A1  
- To print at A3 please 'scale by 50%'  
- Check printed scale against scale bar above

DRAWING DATE: 30/08/2023  
Sawkings Architects Ltd copyright 2023  
This drawing must not be reproduced in part or whole without prior written consent.  
Scale to be checked against scale bar as this drawing has been provided electronically.  
Check and confirm all dimensions on site prior to commencing work.  
If IN DOUBT ASK.

REV.	DATE	NOTES
D1	02/06/2023	Draft issue for comment
D2	11/08/2023	Revised site plan issue
D3	16/08/2023	Revised site plan issue
D4	21/08/2023	Draft issue for comment
P1	30/08/2023	Planning Issue

**PROJECT**  
Whitehall Works

**CLIENT**  
Glenn Mullet

Sawkings Architects  
The Box Hill Studio  
1 The Quarry,  
Batchworth,  
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E hello@sawkingsarchitects.com  
W www.sawkingsarchitects.com

RIBA Chartered Practice

STATUS <b>PLANNING</b>	DRAWN BY IL	CHECKED BY GMF
JOB NO. A4560	DRAWING NO. 2000	REV P1
DRAWING TITLE <b>Proposed Site Plan</b>		

**HAZARDS LEADING TO UNUSUAL OR SIGNIFICANT RISK DURING THE CONSTRUCTION PROCESS ARE IDENTIFIED ON THIS DRAWING AS:**  
SAWKINGS ARCHITECTS SPECIFIC RISKS & HAZARDS:

NOTE: THE LIST ABOVE IDENTIFIES CERTAIN RISKS WHICH ARE DEEMED TO BE UNUSUAL, ABNORMAL OR UNEXPECTED TO A COMPETENT CONTRACTOR CARRYING OUT WORK OF THIS NATURE BUT DOES NOT COVER ALL POSSIBLE SITUATIONS WHICH MAY BE ENCOUNTERED DURING THE CONSTRUCTION PROCESS. IT IS THEREFORE THE MAIN CONTRACTOR'S RESPONSIBILITY TO IDENTIFY ANY FURTHER RISKS/HAZARDS AND TAKE APPROPRIATE ACTION.

## **APPENDIX B.** Speed Data

1710 09 GRAYS									
OCTOBER 2017									
Site	Location	Direction	Start Date	End Date	Posted Speed Limit (PSL)	Total Vehicles	5 Day Ave.	7 Day Ave.	Average 85%ile Speed
Site No: 22241001	Site 1, Whitehall Lane, Grays (Sign Post) TQ 62299 78036	Channel: Northbound	Wed 18-Oct-17	Tue 24-Oct-17	30	11128	1517	1590	24.5
		Channel: Southbound	Wed 18-Oct-17	Tue 24-Oct-17		12290	1577	1756	23.4

## **APPENDIX C.** TRICS Data

Calculation Reference: AUDIT-236601-230825-0840

## TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL  
 Category : A - HOUSES PRIVATELY OWNED  
 TOTAL VEHICLES

Selected regions and areas:

02	SOUTH EAST	
	HF HERTFORDSHIRE	1 days
	KC KENT	1 days
	MW MEDWAY	1 days
04	EAST ANGLIA	
	NF NORFOLK	2 days
	SF SUFFOLK	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	NY NORTH YORKSHIRE	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: 8 to 19 (units: )  
 Range Selected by User: 6 to 20 (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: 01/01/15 to 06/06/22

*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	1 days
Tuesday	1 days
Wednesday	5 days

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

Selected survey types:

Manual count	6 days
Directional ATC Count	1 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)	1
Edge of Town	6

*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	7
------------------	---

*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:*

Secondary Filtering selection:

Use Class:

C3 7 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:

1,001 to 5,000	1 days
10,001 to 15,000	4 days
15,001 to 20,000	1 days
20,001 to 25,000	1 days

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

Population within 5 miles:

5,001 to 25,000	1 days
25,001 to 50,000	2 days
50,001 to 75,000	2 days
125,001 to 250,000	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
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:

Yes	3 days
No	4 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	7 days
-----------------	--------

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

Covid-19 Restrictions	Yes	At least one survey within the selected data set was undertaken at a time of Covid-19 restrictions
-----------------------	-----	--

LIST OF SITES relevant to selection parameters

1	HF-03-A-04 HOLMSIDE RISE WATFORD SOUTH OXHEY Edge of Town Residential Zone Total No of Dwellings:	TERRACED HOUSES      8	HERTFORDSHIRE
	<i>Survey date: TUESDAY</i>	<i>08/06/21</i>	<i>Survey Type: MANUAL</i>
2	KC-03-A-09 WESTERN LINK FAVERSHAM DAVINGTON Edge of Town Residential Zone Total No of Dwellings:	MIXED HOUSES & FLATS      14	KENT
	<i>Survey date: WEDNESDAY</i>	<i>09/06/21</i>	<i>Survey Type: MANUAL</i>
3	MW-03-A-02 OTTERHAM QUAY LANE RAINHAM  Edge of Town Residential Zone Total No of Dwellings:	MIXED HOUSES      19	MEDWAY
	<i>Survey date: MONDAY</i>	<i>06/06/22</i>	<i>Survey Type: MANUAL</i>
4	NF-03-A-03 HALING WAY THETFORD  Edge of Town Residential Zone Total No of Dwellings:	DETACHED HOUSES      10	NORFOLK
	<i>Survey date: WEDNESDAY</i>	<i>16/09/15</i>	<i>Survey Type: MANUAL</i>
5	NF-03-A-10 HUNSTANTON ROAD HUNSTANTON  Edge of Town Residential Zone Total No of Dwellings:	MIXED HOUSES & FLATS      17	NORFOLK
	<i>Survey date: WEDNESDAY</i>	<i>12/09/18</i>	<i>Survey Type: DIRECTIONAL ATC COUNT</i>
6	NY-03-A-13 CATTERICK ROAD CATTERICK GARRISON OLD HOSPITAL COMPOUND Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings:	TERRACED HOUSES      10	NORTH YORKSHIRE
	<i>Survey date: WEDNESDAY</i>	<i>10/05/17</i>	<i>Survey Type: MANUAL</i>
7	SF-03-A-05 VALE LANE BURY ST EDMUNDS  Edge of Town Residential Zone Total No of Dwellings:	DETACHED HOUSES      18	SUFFOLK
	<i>Survey date: WEDNESDAY</i>	<i>09/09/15</i>	<i>Survey Type: MANUAL</i>

*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/A - HOUSES 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	7	14	0.104	7	14	0.271	7	14	0.375
08:00 - 09:00	7	14	0.229	7	14	0.344	7	14	0.573
09:00 - 10:00	7	14	0.083	7	14	0.167	7	14	0.250
10:00 - 11:00	7	14	0.188	7	14	0.208	7	14	0.396
11:00 - 12:00	7	14	0.115	7	14	0.135	7	14	0.250
12:00 - 13:00	7	14	0.250	7	14	0.219	7	14	0.469
13:00 - 14:00	7	14	0.229	7	14	0.198	7	14	0.427
14:00 - 15:00	7	14	0.115	7	14	0.188	7	14	0.303
15:00 - 16:00	7	14	0.250	7	14	0.198	7	14	0.448
16:00 - 17:00	7	14	0.219	7	14	0.167	7	14	0.386
17:00 - 18:00	7	14	0.344	7	14	0.219	7	14	0.563
18:00 - 19:00	7	14	0.250	7	14	0.125	7	14	0.375
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.376			2.439			4.815

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:	8 - 19 (units: )
Survey date range:	01/01/15 - 06/06/22
Number of weekdays (Monday-Friday):	7
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.



