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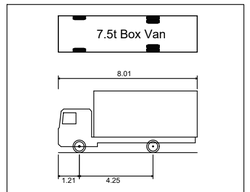

7.5t Box Van	
Overall Length	8.010m
Overall Width	2.100m
Overall Body Height	3.556m
Min Body Ground Clearance	0.351m
Track Width	2.064m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	7.400m

Rev	Date	Description	Drn	Chk	App
D	20/07/22	UPDATED GA LAYOUT	GSF	MP	SF
C	06/04/22	UPDATED GA LAYOUT	GSF	MP	SF
B	28/03/22	SWEPT PATHS REVISED	GSF	MP	SF
A	10/03/22	FIRST ISSUE	GSF	MP	SF

VELOCITY
Transport Planning

Drawing Status
S2 - FOR INFORMATION

Client
LONDON SQUARE

Architect
ASSAEL

Project Title
GREGGS FACTORY, TWICKENHAM

Drawing Title
RESIDENTIAL & INDUSTRIAL SCHEME
GROUND FLOOR PLAN
SWEPT PATH ANALYSIS - 7.5T BOX VAN

Scale @ A2	Date	Designed/Drawn	Checked	Approved
1:500	10/03/22	GSF	MP	SF

Project Ref	Drawing Number	Rev
3760-1180	3760-1180-T-046	D

Drawing file: 3760-1180-T-044-048-D - Resi+Ind - Swept Path Analysis.dwg Date: Jul 20, 2022 - 3:25pm

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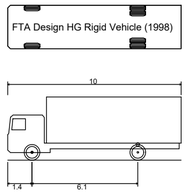

FTA Design HG Rigid Vehicle (1998)	
Overall Length	10.000m
Overall Width	2.500m
Overall Body Height	3.645m
Min Body Ground Clearance	0.440m
Track Width	2.470m
Lock to lock time	3.00s
Kerb to Kerb Turning Radius	11.000m

Rev	Date	Description	Drn	Chk	App
D	20/07/22	UPDATED GA LAYOUT	GSF	MP	SF
C	06/04/22	UPDATED GA LAYOUT	GSF	MP	SF
B	28/03/22	SWEPT PATHS REVISED	GSF	MP	SF
A	10/03/22	FIRST ISSUE	GSF	MP	SF

VELOCITY
Transport Planning

Drawing Status
S2 - FOR INFORMATION

Client
LONDON SQUARE

Architect
ASSAEL

Project Title
GREGGS FACTORY, TWICKENHAM

Drawing Title
RESIDENTIAL & INDUSTRIAL SCHEME
GROUND FLOOR PLAN
SWEPT PATH ANALYSIS - 10m RIGID

Scale @ A2	Date	Designed/Drawn	Checked	Approved
1:500	10/03/22	GSF	MP	SF

Project Ref	Drawing Number	Rev
3760-1180	3760-1180-T-047	D

Drawing file: 3760-1180-T-044-048-D - Resi+Ind - Swept Path Analysis.dwg Date: Jul 20, 2022 - 3:25pm

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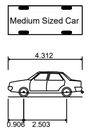


Medium Sized Car	
Overall Length	4.319m
Overall Width	1.686m
Overall Body Height	1.466m
Min Body Ground Clearance	0.228m
Max Track Width	1.591m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	5.042m

Rev	Date	Description	Drn	Chk	App
D	20/07/22	UPDATED GA LAYOUT	GSF	MP	SF
C	06/04/22	UPDATED GA LAYOUT	GSF	MP	SF
B	28/03/22	SWEPT PATHS REVISED	GSF	MP	SF
A	10/03/22	FIRST ISSUE	GSF	MP	SF

VELOCITY
Transport Planning

Drawing Status
S2 - FOR INFORMATION

Client
LONDON SQUARE

Architect
ASSAEL

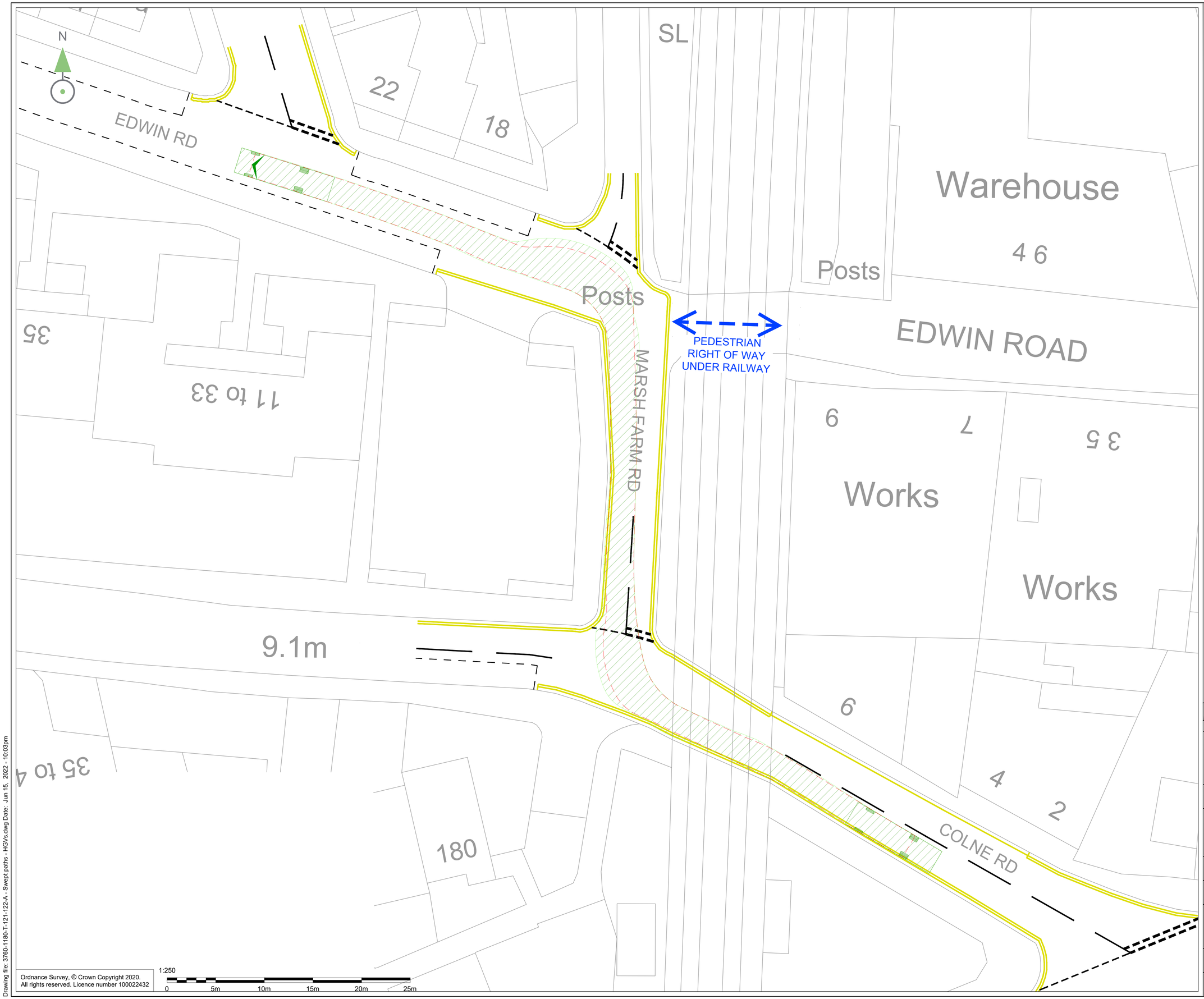
Project Title
GREGGS FACTORY, TWICKENHAM

Drawing Title
RESIDENTIAL & INDUSTRIAL SCHEME
GROUND FLOOR PLAN
SWEPT PATH ANALYSIS - MEDIUM CAR

Scale @ A2	Date	Designed/Drawn	Checked	Approved
1:500	10/03/22	GSF	MP	SF

Project Ref	Drawing Number	Rev
3760-1180	3760-1180-T-048	D

Drawing file: 3760-1180-T-044-048-D - Resi+Ind - Swept Path Analysis.dwg Date: Jul 20, 2022 - 3:26pm



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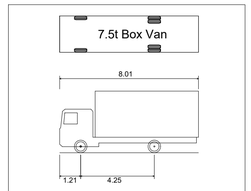

7.5t Box Van	
Overall Length	8.010m
Overall Width	2.100m
Overall Body Height	3.556m
Min Body Ground Clearance	0.351m
Track Width	2.064m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	7.400m

Rev	Date	Description	Drn	Chk	App
A	27/05/22	FIRST ISSUE	TC	MP	SF

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Transport Planning
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Drawing Status
S2 - FOR INFORMATION

Client
LONDON SQUARE

Architect
ASSAEL

Project Title
GREGGS TWICKENHAM

Drawing Title
SWEPT PATH ANALYSIS OF A 7.5t BOX VAN THE COLNE ROAD/MARSH FARM LANE/EDWIN ROAD

Scale @ A2	Date	Designed/Drawn	Checked	Approved
1:200	27/05/22	TC	MP	SF

Project Ref	Drawing Number	Rev
3760-1180	3760-1180-T-121	A

Drawing file: 3760-1180-T-121-122-A - Swept paths - HGVs.dwg Date: Jun 15, 2022 - 10:03pm

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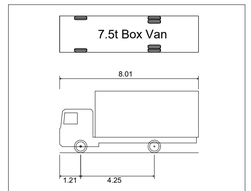

7.5t Box Van	
Overall Length	8.010m
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Overall Body Height	3.556m
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Track Width	2.064m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	7.400m

Rev	Date	Description	Drn	Chk	App
A	27/05/22	FIRST ISSUE	TC	MP	SF

VELOCITY Transport Planning

Drawing Status
S2 - FOR INFORMATION

Client
LONDON SQUARE

Architect
ASSAEL

Project Title
GREGGS TWICKENHAM

Drawing Title
SWEPT PATH ANALYSIS OF A 7.5t BOX VAN
MAY ROAD/COLNE ROAD/CRANE ROAD

Scale @ A2	Date	Designed/Drawn	Checked	Approved
1:200	27/05/22	TC	MP	SF

Project Ref	Drawing Number	Rev
3760-1180	3760-1180-T-122	A

APPENDIX D

STAGE 1 RSA AND DESIGNER'S RESPONSE

FORMER GREGGS FACTORY, TWICKENHAM RESIDENTIAL & INDUSTRIAL

STAGE 1 RSA DESIGNERS RESPONSE

PROJECT NO. 3760/1180 DOC NO. TN005

DATE: JULY 2022

VERSION: 0.1

CLIENT: LONDON SQUARE DEVELOPMENT LTD

Velocity Transport Planning Ltd

www.velocity-tp.com

VELOCITY
Transport Planning

DOCUMENT CONTROL SHEET

Document Reference

Project Title	Former Greggs Factory, Twickenham Residential & Industrial
Document Title	Stage 1 RSA Designers Response
Project Number	3760/1180
Document Number	TN005
Revision No.	0.1
Document Date	JULY 2022

Document Review

	Name	Date completed
Prepared By	MP	15/07/2022
Reviewed By		
Authorised By		

Notes

The document reference number, revision number and date are given on the footer of each page

TABLE OF CONTENTS

FIGURES

NO TABLE OF FIGURES ENTRIES FOUND.

TABLES

1 DESIGNER'S STATEMENT

1.1 INTRODUCTION

1.1.1 Velocity Transport Planning (VTP) has been appointed by London Square Developments Ltd (The Applicant) to provide highways and transportation support in relation to the proposed development of the Former Greggs Bakery Site and No.2 Gould Road, Twickenham, TW2 6RT.

1.1.2 The proposed development seeks to provide a residential development for 97 dwellings (Use Class C3), 883 sqm Industrial floorspace (Use Class Egiii) and 117 sqm commercial floorspace (Use Class E).

1.1.3 The proposed development description is as follows:

> *Demolition of existing buildings (with retention of a single dwelling) and redevelopment of the site to provide up to 97 residential units, 883 sqm industrial floorspace (Use Class E) and 117 sqm commercial floorspace with associated hard and soft landscaping, car parking and highways works and other associated works.'*

1.1.4 The proposed development will provide two points of access as follows:

- The southern access to the industrial and commercial unit is taken from Edwin Road; and
- The northern access on Gould Road/Crane Road will form the primary access for residents. The access will lead into the on-site car parking and landscaping area for residents.

1.1.5 The existing northern access point will be provided with a 4.8m carriageway and provision of a 2.0m footway on both sides of the junction but provided as a shared use within the site.

1.1.6 The southern access point is to be relocated to the west of it existing location and will be provided with a 6.0m shared use.

1.1.7 A shared use design approach is proposed on-site to encourage lower vehicular speeds, better driver attention and offer priority for non-motorised users (i.e., pedestrians and cyclists). The proposed access and shared-space design approach are intended to reflect the principles of a typical London mews street which is further reinforced by the housing typologies proposed.

1.1.8 Visibility splays for both junctions will be provided in accordance with Manual for Streets.

1.1.9 The Stage 1 Road Safety Audit (RSA) was carried out by an independent audit company, Acorn Projects Ltd, and a number of comments were raised, which this Designer's Response seeks to address.

1.1.10 I have considered the issues and problems raised in the Stage 1 RSA, and my comments are set out within this Designer's Response.

Signed: MP

Date: 13th July 2022

2 INTRODUCTION

2.1 OVERVIEW

2.1.1 Acorn Projects Ltd were commissioned by VTP to carry out a Stage 1 RSA of the proposed access arrangements and highway alterations comprising:

- Provision of two site access points, the northern one in the existing location servicing the residential development and the southern one relocated to the west of its current location serving the industrial element of the development;
- Provision of shared use design approach to encourage lower vehicular speeds, better driver attention and offer priority for non-motorised users

2.1.2 The Stage 1 RSA considered the following drawings:

- **3760-1180-T-053 Rev B** - Site Access and Visibility Splays
- **3760-1180-T-004 to 048 Rev A** – Swept path analysis
- **GBT-ASA-ZZ-00-DR-A-0250** – Proposed Ground Floor Plan

2.1.3 The signed Stage 1 RSA prepared by Acorn Projects Ltd is included in **APPENDIX A**.

2.1.4 This Designer's Response addresses the problems raised in the Stage 1 RSA and draws together the following documents and information:

- identifies the location number in the Stage 1 RSA;
- summarises the problem identified within the Stage 1 RSA;
- details the problem identified;
- sets out the Auditor's recommendation; and
- sets out the Designer's Response;

2.1.5 The revised Visibility Splay drawing prepared in response to the Stage 1 RSA comments is included in **APPENDIX B**.

3 DESIGNERS RESPONSE

3.1 OVERVIEW

3.1.1 The summary of items raised at the Stage 1 Road Safety Audit is set out in **Table 3-1**.

Table 3-1: Summary of Problems

DESIGN STANDARD CATAGORY	PROBLEM IDENTIFIED	DRAWING LOCATION REFERENCE
Local Alignment	Yes	1, 2, 3 and 4
General	No	N/A
Junctions	Yes	5 and 6
Walking, Cycling and Horse Riding	Yes	7 and 8
Traffic Signs, carriageway Markings and Lighting	No	N/A

3.2 ITEMS RAISED AT STAGE 1 ROAD SAFETY AUDIT

LOCAL ALIGNMENT

LOCATION

3.2.1 Locations 1, 2, 3 & 4 - Within the alignment of the proposed residential development site access road (Drawing No. GBT-ASA-ZZ-00-DR-A-0250).

SUMMARY

3.2.2 Forward visibility impacted upon by the presence of the proposed trees could lead to a potential increased risk of head-on type vehicular collisions occurring or offside to offside vehicular collisions occurring, whereby vehicle occupants could sustain personal injury. In addition, the forward visibility impacted upon by the presence of the proposed trees could lead to a potential increased risk of vehicular and pedestrian and pedal cyclist collisions occurring, whereby pedestrians and pedal cyclists could sustain a personal injury.

DETAIL

3.2.3 The scheme proposals confirm that the development site road will operate on a two-way traffic flow basis and that the carriageway through the site will be 4.8 metres in width with a 2.0-metre wide footway on the western side, thus providing an overall shared area width of 6.8 metres.

3.2.4 The scheme drawing indicates the presence of proposed tree planting at the locations indicated. When fully mature, the proposed trees could impact forward visibility for drivers travelling in the northbound, westbound and southbound directions through the development site.

3.2.5 Concern arises that this situation could lead to a potential increased risk of head-on type vehicular collisions occurring or offside to offside type vehicular collisions occurring within the access road between opposing flows of vehicular traffic, whereby vehicle occupants could sustain personal injury.

3.2.6 In addition, the forward visibility impacted upon by the presence of the proposed trees could lead to a potential increased risk of vehicular collisions occurring with pedestrian and pedal cyclists within the shared area, whereby pedestrians and pedal cyclists could sustain personal injury.

RECOMMENDATION

3.2.7 It is recommended that the proposed trees should be omitted or relocated in order to ensure that a driver's forward visibility to opposing flows of vehicular traffic and to oncoming pedestrians and pedal cyclists is optimised.

DESIGNERS RESPONSE

3.2.8 The RSA comment on the forward visibility within the site is noted, and the location of the trees will be reviewed as part of Stage 2 on-site design with the view to relocating the trees where possible.

3.2.9 As part of the proposed design, the internal mews road through the site has incorporated a shared-use approach to encourage lower vehicular speeds, focus driver attention and offer priority for non-motorised users. There are a number of additional design interventions which have been employed on the north-south mews street to reinforce the shared-surface approach and hierarchy of users, such as planters and landscaping features located along the western side, adjacent to the mews houses.

3.2.10 These design interventions result in an environment where low speeds are encouraged, non-motorised users have priority and where there is sufficient space to allow different users to safely navigate the road. In the Department for Transport publication Manual for Streets (DfT 2007), the utilisation of planting is outlined to be a clear benefit in softening urban street scenes whilst acting to "limit forward visibility to help reduce vehicle speeds" (see MfS section 5.12).

3.2.11 The following relevant text extracted from Chapter 7, "Street Geometry", summarises the stance on obstacles to visibility:

> *7.8.6 The impact of other obstacles, such as street trees and street lighting columns, should be assessed in terms of their impact on the overall envelope of visibility. In general, occasional obstacles to visibility that are not large enough to fully obscure a whole vehicle or a pedestrian, including a child or wheelchair user, will not have a significant impact on road safety."*

JUNCTIONS

LOCATION

3.2.12 Locations 5 & 6 - The proposed residential development site access road priority T-junctions with Edwin Road and Crane Road/Gould Road (Drawing Nos. 3760-1180-T-053 Rev B & GBT-ASA-ZZ-00-DR-A-0250).

SUMMARY

3.2.13 Proposed visibility splays at the Edwin Road and Crane Road/Gould Road junctions could result in a potential increased risk of side impact vehicular collisions occurring, whereby vehicle occupants could sustain personal injury.

DETAIL

3.2.14 The scheme drawing indicates the proposed visibility splays at the Edwin Road and Crane Road/Gould Road junctions, respectively. In accordance with the London Borough of Richmond upon Thames Borough Wide speed initiative, a design speed and speed limit of 20 mph has been adopted. Thus, the proposed visibility splays at both the Edwin Road and Crane Road/Gould Road junctions are indicated as being 2.4 x 25 metres.

3.2.15 The visibility splays are shown as being measured to the centre of the Edwin Road and Crane Road/Gould Road carriageways and not the effective edges of the vehicular carriageways, which are the longitudinal carriageway markings which form and delineate the on-street parking bays. In effect, this results in a "y" distance which is less than the required minimum of 25 metres.

3.2.16 Concern arises that this situation could result in a potential increased risk of side impact vehicular collisions occurring between vehicles exiting the junctions and vehicular traffic in the Edwin Road and Crane Road/Gould Road carriageways, whereby vehicle occupants could sustain personal injury.

RECOMMENDATION

3.2.17 It is recommended that the proposed visibility splays should be measured to the effective edges of the vehicular carriageways, which are the longitudinal carriageway markings which form and delineate the on-street parking bays.

3.2.18 In order to ensure that operational road safety is not compromised in the future scenario, this may result in adjustments being required to the existing on-street parking bay provision.

DESIGNERS RESPONSE

3.2.19 The RSA has raised concern that there "could result in a potential increased risk" of vehicle collisions occurring as a result of reduced visibility due to the presence of on-street parking.

3.2.20 It is noted in Manual for Streets that improved visibility and/or increased carriageway width are considered to correlate with increased vehicle speeds (see MfS section 7.4) and should be taken into account in layout design and street geometry.

3.2.21 The following relevant text extracted from Chapter 7, "Street Geometry", summarises the stance on obstacles to visibility:

> *"7.8.5 Parking in visibility splays in built-up areas is quite common, yet it does not appear to create significant problems in practice. Ideally, defined parking bays should be provided outside the visibility splay. However, in some circumstances, where speeds are low, some encroachment may be acceptable."*

WALKING, CYCLING & HORSE RIDING

LOCATION

3.2.22 Locations 7 & 8 - The proposed residential development site access road priority T-junctions with Edwin Road and Crane Road/Gould Road (Drawing Nos. 3760-1180-T-053 Rev B & GBT-ASA-ZZ-00-DR-A-0250)

SUMMARY

3.2.23 Accommodating pedestrian movements into and out of the proposed development site in order to ensure that pedestrian safety is not compromised in the future scenario.

DETAIL

3.2.24 The scheme proposals confirm that the development site road will operate on a two-way traffic flow basis and that the carriageway through the site will be 4.8 metres in width with a 2.0-metre wide footway on the western side, thus providing an overall shared area width of 6.8 metres.

3.2.25 Concern arises as to how pedestrians leaving the footways in Edwin Road and Crane Road/Gould Road will enter the proposed development site as suitable and appropriate facilities have not been indicated. As there does not appear to be a form of tie-in between the footways of Edwin Road and Crane Road/Gould Road and the proposed development site access road, concern arises that there could be a potential increased risk of pedestrian and vehicular collisions occurring, whereby pedestrians could sustain personal injury.

RECOMMENDATION

3.2.26 It is recommended that the existing footways in Edwin Road and Crane Road/Gould Road should tie into the overall shared area width of 6.8 metres of the development site access road and that the pedestrian access routes are clearly defined in order to ensure that pedestrian safety is not compromised in the future scenario.

DESIGNERS RESPONSE

3.2.27 The proposed development will largely retain the two existing access points, albeit with changes to the entry treatment. The proposed entry treatments along both the south and north entrances would reinstate the footway across each access, with the vehicular accesses being akin to Copenhagen-style crossings rather than formal junctions, with pedestrians crossing having the right of way over vehicle traffic.

3.2.28 The detailed design of the two accesses and arrangements would still be the subject of an s278 Agreement, detailed design and technical approval. If the preferred entry treatment described above was not accepted, then we proposed to revert to traditional kerbed access, which would incorporate dropped kerbs and tactile paving.

APPENDIX A

STAGE 1 RSA

ACORNS PROJECTS LIMITED

Former Greggs Factory, Twickenham, London Borough of Richmond upon Thames

Scheme 1 - Proposed Site Access Arrangements

Stage 1 Road Safety Audit

For Velocity Transport Planning

Prepared by Acorns Projects Limited

Safety Traffic Project Management & Highway Engineering Consultants

JUNE 2022

Acorns Projects Limited
Safety Traffic Project Management & Highway Engineering Consultants
Redwood House
3 Eaton Park
Eaton Bray
Bedfordshire
LU6 2SP

Telephone: 01525-222359
Mobile: 07860-629328
E-mail: abc@acornsprojects.com

Version No: 1.0

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Revision History

This document has the following history:

Version No.	Version Date	Summary of Changes	Changes marked
1.0	01/06/2022	N/A	N/A

Approvals

This document requires the following approvals:

Name	Title
Adriano B. Cappella	Audit Team Leader
Lisa Allen	Audit Team Member

Distribution

This document has also been distributed to:

Name	Title & Organisation
Matt Penn	Associate - Velocity Transport Planning
Steve Foxcroft	Director - Velocity Transport Planning

1.0 INTRODUCTION

1.1 This report results from a Stage 1 Road Safety Audit carried out on the Former Greggs Factory, Twickenham, London Borough of Richmond upon Thames, Scheme 1 - Proposed Site Access Arrangements Project, at the request of the Overseeing Organisation, i.e. the Local Highway Authority, London Borough of Richmond upon Thames, Transport Planning, Civic Centre, 44 York Street, Twickenham, TW1 3BZ. The Design Organisation is Velocity Transport Planning, Unit B, Taper Studios, The Leather Market, 120 Weston Street, London, SE1 4GS. The Third Party Organisation is London Square Developments, One York Road, Uxbridge, Middlesex, UB8 1RN.

1.2 The scheme proposals comprise the redevelopment of the Former Greggs Factory in Twickenham, London Borough of Richmond upon Thames. Scheme 1 (identified as being Residential and Industrial), is for 97 residential dwellings which will be accessed from Crane Road and Gould Road respectively.

The redevelopment of the site will include 86 car parking spaces, cycle parking for 182 pedal cycles and an industrial unit (880sqm GIA) to the south of the site with 22 car parking spaces and 12 pedal cycle spaces. A communal car club bay will also be implemented along Edwin Road, to the south of the site.

The accesses in Edwin Road and Crane Road/Gould Road will be retained as two-way and the carriageway through the site will be 4.8 metres in width with a 2.0 metre wide footway on the western side, thus providing an overall shared area width of 6.8 metres. The carriageway will accommodate a London Borough of Richmond refuse collection vehicle, which is expected to be the largest vehicle type requiring access to the site. These vehicles will egress the residential development through the proposed industrial site, which comprises an industrial unit of approximately 880sqm GIA, with access being proposed from Edwin Road. The existing two-way access point from Edwin Road to the development site is to be relocated to the west of its current location.

1.3 The Road Safety Audit Team Membership was as follows:

Adriano B. Cappella	IEng, FIHE, MCIHT, MSoRSA, HA RSA Certificate of Competency
(Audit Team Leader)	Director, Acorns Projects Limited
Lisa Allen	MSc, BEng (Hons), MCIHT, MSoRSA, HA RSA Certificate of Competency
(Audit Team Member)	Associate Consultant, Acorns Projects Limited

1.4 The Audit took place at the Eaton Bray office of Acorns Projects Limited during March and June 2022. The Audit was undertaken in accordance with the Road Safety Audit Brief contained in the Design Organisation E-Mail to Acorns Projects Limited dated the 19th March 2022. The Audit comprised an examination of the drawings, documents and data sheets provided by the Design Organisation and, are listed in Appendix A.

1.5 The drawings, documents and data sheets consisted of the access points and visibility splays, swept path analysis (5 No. sheets), the ground floor plan, the March 2022 Velocity Transport Planning Stage 1 Road Safety Audit Brief, the March 2022 Velocity Transport Planning Greggs Twickenham - Scheme 1 - Transport Assessment (Draft) document, road traffic collision data and, the February 2022 vehicular traffic flow and distribution data. Copies of the drawings at both A3 and A4 size were provided for the Audit Team's use. Pedestrian and pedal cyclist accessibility information and, public transport information is contained within the March 2022 Transport Assessment (Draft) document.

1.6 A visit to the site was undertaken between 13.30 pm and 14.55 pm during the afternoon of the 22nd March 2022 by both Audit Team Members together. During the afternoon site visit the weather was mild and sunny and the existing carriageway surface was dry. Vehicular traffic conditions at the time of the afternoon site visit were observed to be light. Five pedestrians and three pedal cyclists were observed during the afternoon site visit.

1.7 The terms of reference of the Audit are as described in DMRB GG 119 Road Safety Audit. The Audit Team has examined and reported only on the road safety implications of the scheme as presented and, has not examined or verified the compliance of the designs to any other criteria. However, to clearly explain a safety problem or the recommendation made to resolve the identified problem, the Audit Team may, on occasion, have referred to a Design Standard without touching on technical audit.

1.8 No Departures from Design Standards have been reported by the Design Organisation.

1.9 All Problems and Recommendations are referenced to the design drawings and the locations have been indicated on the A4 plan supplied for use by the Audit Team in Annex B.

1.10 Issues identified or observations made during this Stage 1 Road Safety Audit and site inspection which the Terms of Reference exclude from this report, but which the Audit Team wishes to draw to the attention of the Overseeing Organisation, i.e. the Local Highway Authority, London Borough of Richmond upon Thames, will be set out in a separate letter.

These issues could include maintenance items and operational issues. The Audit Team has not identified any issues during this Stage 1 Road Safety Audit and site inspection that are considered to be outside the Terms of Reference.

2.0 ITEMS RAISED AT THIS STAGE 1 ROAD SAFETY AUDIT

2.1 LOCAL ALIGNMENT

2.1.1 PROBLEM

Locations 1, 2, 3 & 4 - Within the alignment of the proposed residential development site access road (Drawing No. GBT-ASA-ZZ-00-DR-A-0250).

Summary - Forward visibility impacted upon by the presence of the proposed trees could lead to a potential increased risk of head-on type vehicular collisions occurring or offside to offside vehicular collisions occurring, whereby vehicle occupants could sustain personal injury. In addition, the forward visibility impacted upon by the presence of the proposed trees could lead to a potential increased risk of vehicular and pedestrian and pedal cyclist collisions occurring, whereby pedestrians and pedal cyclists could sustain personal injury.

Detail - The scheme proposals confirm that the development site road will operate on a two-way traffic flow basis and, that the carriageway through the site will be 4.8 metres in width with a 2.0 metre wide footway on the western side, thus providing an overall shared area width of 6.8 metres.

The scheme drawing indicates the presence of proposed tree planting at the locations indicated. When fully mature, the proposed trees could impact upon forward visibility for drivers travelling in the north bound, west bound and south bound directions through the development site.

Concern arises that this situation could lead to a potential increased risk of head-on type vehicular collisions occurring or offside to offside type vehicular collisions occurring within the access road between opposing flows of vehicular traffic, whereby vehicle occupants could sustain personal injury.

In addition, the forward visibility impacted upon by the presence of the proposed trees could lead to a potential increased risk of vehicular collisions occurring with pedestrian and pedal cyclists within the shared area, whereby pedestrians and pedal cyclists could sustain personal injury.

RECOMMENDATION

It is Recommended that the proposed trees should be omitted or relocated, in order to ensure that a drivers forward visibility to opposing flows of vehicular traffic and to oncoming pedestrians and pedal cyclists is optimised.

2.2 GENERAL

2.2.1 No Problems identified in this category at this Stage 1 Road Safety Audit.

2.3 JUNCTIONS

2.3.1 PROBLEM

Locations 5 & 6 - The proposed residential development site access road priority T-junctions with Edwin Road and Crane Road/Gould Road (Drawing Nos. 3760-1180-T-053 Rev B & GBT-ASA-ZZ-00-DR-A-0250).

Summary - Proposed visibility splays at the Edwin Road and Crane Road/Gould Road junctions could result in a potential increased risk of side impact vehicular collisions occurring, whereby vehicle occupants could sustain personal injury.

Detail - The scheme drawing indicates the proposed visibility splays at the Edwin Road and Crane Road/Gould Road junctions respectively. In accordance with the London Borough of Richmond upon Thames Borough Wide speed initiative, a design speed and speed limit of 20 mph has been adopted. Thus, the proposed visibility splays at both the Edwin Road and Crane Road/Gould Road junctions are indicated as being 2.4 x 25 metres.

The visibility splays are shown as being measured to the centre of the Edwin Road and Crane Road/Gould Road carriageways and not the effective edges of the vehicular carriageways, which are the longitudinal carriageway markings which form and delineate the on-street parking bays. In effect, this results in a “y” distance which is less than the required minimum of 25 metres.

Concern arises that this situation could result in a potential increased risk of side impact vehicular collisions occurring between vehicles exiting the junctions and vehicular traffic in the Edwin Road and Crane Road/Gould Road carriageways, whereby vehicle occupants could sustain personal injury.

RECOMMENDATION

It is Recommended that the proposed visibility splays should be measured to the effective edges of the vehicular carriageways, which are the longitudinal carriageway markings which form and delineate the on-street parking bays.

In order to ensure that operational road safety is not compromised in the future scenario, this may result in adjustments being required to the existing on-street parking bay provision.

2.4 WALKING, CYCLING AND HORSE RIDING

2.4.1 PROBLEM

Locations 7 & 8 - The proposed residential development site access road priority T-junctions with Edwin Road and Crane Road/Gould Road (Drawing Nos. 3760-1180-T-053 Rev B & GBT-ASA-ZZ-00-DR-A-0250).

Summary - Accommodating pedestrian movements into and out of the proposed development site in order to ensure that pedestrian safety is not compromised in the future scenario.

Detail - The scheme proposals confirm that the development site road will operate on a two-way traffic flow basis and, that the carriageway through the site will be 4.8 metres in width with a 2.0 metre wide footway on the western side, thus providing an overall shared area width of 6.8 metres.

Concern arises as to how pedestrians leaving the footways in Edwin Road and Crane Road/Gould Road will enter the proposed development site as suitable and appropriate facilities have not been indicated. As there does not appear to be a form of tie-in between the footways of Edwin Road and Crane Road/Gould Road and the proposed development site access road, concern arises that there could be a potential increased risk of pedestrian and vehicular collisions occurring, whereby pedestrians could sustain personal injury.

RECOMMENDATION

It is Recommended that the existing footways in Edwin Road and Crane Road/Gould Road should tie-into the overall shared area width of 6.8 metres of the development site access road and that the pedestrian access routes are clearly defined, in order to ensure that pedestrian safety is not compromised in the future scenario.

2.5 TRAFFIC SIGNS, CARRIAGEWAY MARKINGS AND LIGHTING

2.5.1 No Problems identified in this category at this Stage 1 Road Safety Audit.

END OF PROBLEMS IDENTIFIED AND RECOMMENDATIONS OFFERED IN THIS STAGE 1 ROAD SAFETY AUDIT

3.0 ROAD SAFETY AUDIT TEAM STATEMENT

We certify that this Road Safety Audit has been carried out in accordance with DMRB GG 119.

ROAD SAFETY AUDIT TEAM LEADER

Adriano B. Cappella IEng, FIHE, MCIHT, MSoRSA, HA RSA Certificate of Competency

Signed :

Associate Consultant

Acorns Projects Limited

Safety Traffic Project Management & Highway Engineering Consultants

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Date : 12th July 2022

ROAD SAFETY AUDIT TEAM MEMBER

Lisa Allen MSc, BEng (Hons), MCIHT, MSoRSA, HA RSA Certificate of Competency

Signed :

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Date : 12th July 2022

APPENDIX A

APPENDIX A

FORMER GREGGS FACTORY, TWICKENHAM, LONDON BOROUGH OF RICHMOND UPON THAMES

SCHEME 1 - PROPOSED SITE ACCESS ARRANGEMENTS

STAGE 1 ROAD SAFETY AUDIT

LIST OF VELOCITY TRANSPORT PLANNING DRAWINGS SUBMITTED FOR AUDITING

DRAWING NO.	TITLE
3760-1180-T-044 Rev A	Swept Path Analysis
3760-1180-T-045 Rev A	Swept Path Analysis
3760-1180-T-046 Rev A	Swept Path Analysis
3760-1180-T-047 Rev A	Swept Path Analysis
3760-1180-T-048 Rev A	Swept Path Analysis
3760-1180-T-053 Rev B	Access Points and Visibility Splays
GBT-ASA-ZZ-00-DR-A-0250	Proposed Ground Floor Plan

LIST OF DOCUMENTS AND DATA SHEETS REVIEWED AT THIS STAGE 1 ROAD SAFETY AUDIT

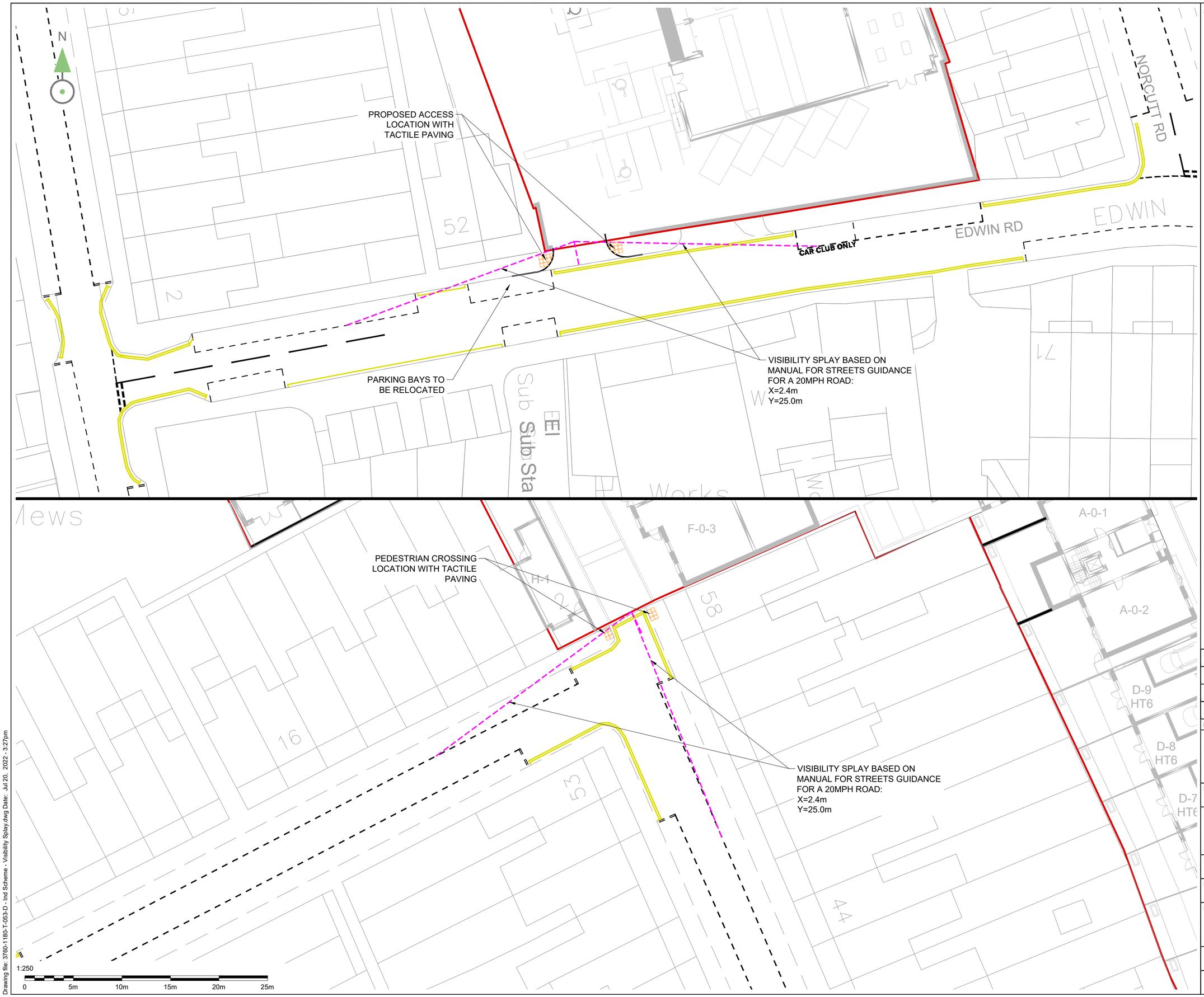
Velocity Transport Planning - Greggs Site, Twickenham - Scheme 1 - Stage 1 Road Safety Audit Brief - March 2022
Velocity Transport Planning - Greggs Twickenham - Scheme 1 - Transport Assessment (Draft) - March 2022
CrashMap - Collision data - 60 Months - 2016 to 2021
Traffic Flow and Distribution Data - 22nd Feb to 28th February 2022

APPENDIX B

APPENDIX A - PROBLEM LOCATION PLAN

APPENDIX B

VTP DRAWING NO. 3760-1180-T-053 REV C



Notes:

1. DO NOT SCALE FROM THIS DRAWING.
2. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE STATED.
3. THIS DRAWING IS TO BE PRINTED IN COLOUR.
4. THIS DRAWING HAS BEEN ISSUED FOR INFORMATION PURPOSES AND MUST NOT BE USED FOR CONSTRUCTION.

Rev	Date	Description	Drn	Chk	App
D	20/07/22	UPDATED GA LAYOUT	GSF	MP	SF
C	06/04/22	UPDATED GA LAYOUT	GSF	MP	SF
B	18/03/22	ADDITIONAL INFORMATION ADDED	GSF	MP	SF
A	11/03/22	FIRST ISSUE	GSF	MP	SF

VELOCITY Transport Planning

Drawing Status
S2 - FOR INFORMATION

Client
LONDON SQUARE

Architect
ASSAEL

Project Title
GREGGS FACTORY, TWICKENHAM

Drawing Title
RESIDENTIAL & INDUSTRIAL SCHEME
GROUND FLOOR PLAN
VISIBILITY SPLAY

Scale @ A2	Date	Designed/Drawn	Checked	Approved
1:250	11/03/22	GSF	MP	SF

Project Ref	Drawing Number	Rev
3760-1180	3760-1180-T-053	D

Drawing file: 3760-1180-T-053-D - Ind Scheme - Visibility Splay.dwg Date: Jul 20, 2022 - 3:27pm

APPENDIX C

DECISION LOG