Rail
Buildings
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Transport & Environment

Project Title
Norcutt Road

Report Title
Delivery and Servicing Plan

Document Reference:
5654/001/R03

Prepared For
Lockcorp Ltd

Date
March 2017

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Status	Details of Amendments	Date	Checked	Approved
Draft	Issued in Draft	24/02/17	LJB	AMI
Final	Issued in Final	07/03/17	LJB	AMI

CONTENTS

1.0 INTRODUCTION

1.1 This Delivery and Servicing Plan (DSP) has been prepared by Robert West on behalf of Lockcorp Ltd in support of the planning application for student accommodation at No.75 Norcutt Road, Twickenham, TW2 6SR within the London Borough of Richmond upon Thames (LBRuT). The site location is indicated below in **Figure 1.1**.

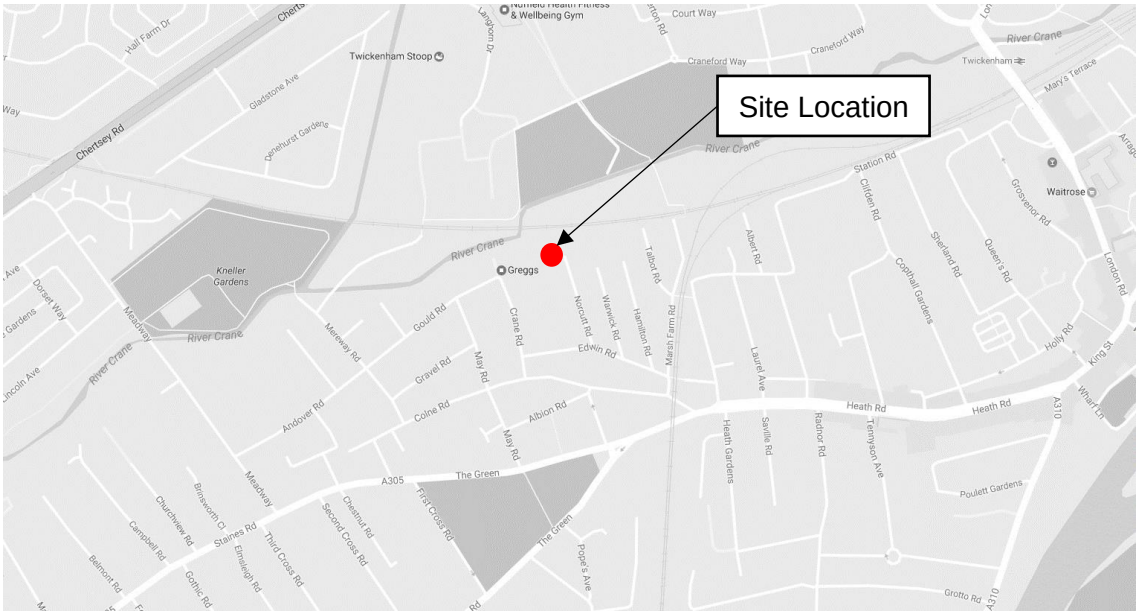

Figure 1.1: Site Location Plan

Existing Site and Use

1.2 The application site is situated at the most northern end of Norcutt Road adjacent to the railway viaduct. It is accessed via Norcutt Road from the south, which serves a predominantly residential street of terraced properties.

1.3 The application site forms part of a larger site immediately to its south. The part of the site to the south has been fully developed comprising a scheme of seven terraced houses and four flats (open market) and a block of 11 flats (affordable housing) together with 22 off-street car parking spaces and associated access and landscaping.

1.4 The application site presently accommodates a light industrial building, which was formerly known as Unit C, The Norcutt Centre and formed one part of a series of three buildings. Units A & B were demolished as part of the implemented scheme but Unit C was allowed to remain because it was then occupied by Gregg's Bakery. This is currently occupied by one of the applicant's business on a temporary basis and is known as Lockcorp House, 75 Norcutt Road, Twickenham. The existing site plan is contained in **Appendix A** of this report.

Proposed Development

1.5 The proposals are the demolition of the existing light industrial building and the erection of a five-storey building to provide student accommodation comprising shared lounge/kitchens and 49 bedrooms, together with cycle storage, landscaping and disabled car parking. The proposed site plan is provided in **Appendix B** of this report.

Scope of DSP

1.6 This DSP has been prepared to outline the principles associated with servicing of the proposed development and establish management measures that will be implemented in order to ensure that the activity associated with deliveries, servicing and refuse collection does not adversely impact upon the operation of the local highway network.

1.7 This DSP is submitted with the planning application and should be read in conjunction with the supporting Transport Statement (TS) and Travel Plan (TP) reports. The DSP complies with the relevant LBRuT and Transport for London (TfL) policy and guidance.

2.0 POLICY CONTEXT

2.1 The policy contained in the following documents has been reviewed:

i. National Planning Policy Framework (NPPF) (2012);

ii. The Planning Practice Guidance;

iii. The London Plan (2016);

iv. The Mayor's Transport Strategy (2010);

v. London Freight Plan (2008);

vi. TfL DSP Guidance (2011); and

vii. London Borough of Richmond upon Thames Local Plan: Refuse and Recycling Storage Requirement SPD.

NPPF (2012)

2.2 The NPPF outlines the Government's planning policies for England and how they are expected to be applied. The NPPF does not contain specific waste management policies, instead, national waste planning policy is contained within the Waste Management Plan for England and the National Planning Policy for Waste and is supported by Planning Practice Guidance.

2.3 Section 4 of the NPPF outlines policy for the promotion of sustainable transport. At paragraph 35, it states that new development should be located and designed to *"accommodate the efficient delivery of goods and supplies"*.

2.4 The Waste Management Plan for England (2013) aims towards a zero-waste economy as part of the transition to a sustainable economy. The document advises to use the "waste hierarchy" (waste prevention, re-use, recycling, recovery and finally disposal as a last option) as a guide to sustainable waste management. The waste hierarchy gives top priority to waste prevention, followed by preparing for reuse, then recycling, other types of recovery (including energy recovery), and last of all disposal (e.g. landfill).

2.5 The National Planning Policy for Waste (2014) sets out detailed waste planning policies. It should be read in conjunction with the National Planning Policy Framework and the Waste Management Plan for England. All local planning authorities should have regard to its policies when discharging their responsibilities to the extent that they are appropriate to waste management.

Planning Practice Guidance

2.6 Planning Practice Guidance (PPG) provides a web-based resource in support of the NPPF. The document entitled 'Waste' outlines the consideration local planning authorities should give towards waste management, both within Local Plans and with regards to the Waste Hierarchy. This includes the following guidance on considerations to be included within development planning applications:

i. The promotion of the *"sound management of waste from any proposed development, such as encouraging on-site management of waste where this is appropriate, or including a planning condition to encourage or require the developer to set out how waste arising from the development is to be dealt with"*;

ii. That steps are *"taken to ensure effective segregation of wastes at source including, as appropriate, the provision of waste sorting, storage, recovery and recycling facilities"*; and

iii. That it will be useful for proposals that are likely to generate significant volumes of waste through the development or operational phases to include a waste audit. "*This audit should demonstrate that in both construction and operational phases of a proposed development, waste will be minimised as far as possible and that such waste as is generated will be managed in an appropriate manner in accordance with the Waste Hierarchy"*.

The London Plan (2016)

2.7 The London Plan is the overall strategic plan for London, and it sets out a fully integrated economic, environmental, transport and social framework for the development of the capital to 2036. This document, published in March 2016, is consolidated with all the alterations to the London Plan since 2011.

2.8 The London Plan forms part of the development plan for Greater London. London boroughs' local plans need to be in general conformity with the London Plan, and its policies guide decisions on planning applications by councils and the Mayor.

2.9 Policy 6.3 of the London Plan requires DSPs to be produced in line with the London Freight Plan and coordinated with Travel Plans.

2.10 Policy 6.11 of the London Plan requires Development Plan Documents prepared by the London Boroughs to incorporate policy that promotes efficient and sustainable arrangements for the transportation and delivery of freight in order to support the policy objective to smoothing traffic flow and congestion.

2.11 Policy 6.14 of the London Plan is related to freight. It states that development proposals should promote uptake of the 'Freight Operators Recognition Scheme' (FORS - a voluntary accreditation scheme that promotes best practice for commercial vehicle operators) and the implementation of DSPs.

The Mayor's Transport Strategy (2010)

2.12 The new Mayor's Transport Strategy is currently being prepared and due to be completed in Spring 2017: the Mayor's Transport Strategy will include proposals that will be brought about by the Mayor through working with TfL, the London Boroughs, developers and stakeholders and will set out the Mayor's transport policies for the next 20 years.

2.13 For the purposes of this report, the previous Mayor's Transport Strategy document has been reviewed and summarised in the following paragraphs.

2.14 The 2010 Mayor's Transport Strategy promotes reduced CO2 emissions from transport (Proposal 99), including freight deliveries through the following mechanisms: implementation of delivery and servicing plans, aiming for 50% of Heavy Goods Vehicles (HGVs) and vans serving London to be part of FORS by 2016; and encouraging improved freight movement efficiency through greater consolidation and more off-peak freight movement.

2.15 At proposal 117, the 2010 Mayor's Transport Strategy promotes:

i. Improving operational efficiency of freight and servicing in London;

ii. Encouraging better driver behaviour, the use of alternative fuels and the uptake of low carbon vehicles;

iii. Reducing freight operators' administrative costs;

iv. Enhancing freight journey planning.

London Freight Plan (2008)

2.16 The London Freight Plan promotes sustainable freight distribution with the objective of ensuring that freight is run efficiently, unnecessary journeys are reduced, journey distances are reduced and loads are maximised and that negative impacts of freight activities on local communities are minimised.

2.17 It is noted that this document is a guidance and not a policy. The freight strategy is continuously evolving and will be updated as part of the Mayor's Transport Strategy in 2017.

2.18 The high level aims of the London Freight Plan are to improve quality of life in London by:

- *"Minimising the impact of noise and vibration caused by freight and servicing"; and*

- *"Reducing the negative impacts of freight and servicing on communities".*

2.19 The ability of land-use planning to influence freight activity through the development control process is identified in paragraph B.60 of the document. The importance of giving full consideration to freight and servicing implications of new development is highlighted in paragraph B64, which states that *"It is essential that freight activity is considered alongside the movement of people, throughout the planning system, to avoid generating conflict with other road users, particularly pedestrians and cyclists"*.

2.20 The London Freight Plan states that DSPs should be used to "increase building operational efficiency by reducing delivery and servicing impacts to premises, specifically CO2 emissions, congestion and collisions". DSPs should aim to reduce deliveries particularly during peak periods.

DSP – Making freight work for you (2011)

2.21 In 2011 TfL provided new guidance on the drafting and production of Delivery and Servicing Plans which are to be produced as part of planning applications, subject to size and types of new development. This guidance has been used in the preparation of this DSP. **Table 2.1** details the potential benefits to those parties affected by the DSP as taken from the TfL guidance document *Delivery and Servicing Plans – Making freight work for you*.

Party	Efficiency	Benefit
Organisation	Save time and money	Lower operating costs if deliveries are consolidated, intensified into larger, less frequent deliveries
		Free up the time staff spend on receiving goods and completing procurement activities, such as processing
		Take advantage of other supply chain efficiencies
	Improve reliability	Ensure supply chain continues to operate effectively during large planned events or other foreseeable disruption
	Improve Safety	Fewer deliveries will help to reduce the risk of accidents
		Ensure health and safety compliance
	Reduce environmental impacts	Produce less harmful emissions associated with your building as a result of fewer journeys to and from the site
		Better manage freight activity and enhance the organisations corporate social responsibility
		Create a more pleasant localised environment
Suppliers	Costs	Fuel saving from reduced mileage
		Less risk of having to park illegally and attracting penalty charge notices (PCNs)
	Time	More certainty on delivery times
	Safety	Reduced risk of collisions due to fewer journeys and less likely to unload in safe location
		Reduced environmental impact
Local Authorities and residents	Safety	Reduced congestion and lower risk of collisions
	Environmental	Improved local air quality through reduced emissions and less noise intrusion

Table 2.1: Potential benefits of a DSP

LBRuT Local Plan: Refuse and Recycling Storage Requirements SPD (Adopted April 2015)

2.22 The Refuse and Recycling Storage Requirements SPD was adopted in April 2015 and provides guidance as to the amount, location and type of refuse storage required at different types of developments. The requirements also details that for the movement of large waste containers, such as Eurobins the path between the bin store and the vehicular access should meet a number of criteria the relevant points are summarised below;

i. The path should be free if kerbs or steps (i.e. provide a dropped kerb if necessary);

ii. Have a solid foundation;

iii. Have a smooth finish (i.e. no cobbled surfaces);

iv. The surface should be level; and

v. The path should be at least 2m wide.

2.23 The standards then go on to state that refuse and recycling should not require to be moved (carried or wheeled) more than 20m from the bin to the collection vehicle in total.

2.24 The residents should not have to carry their refuse or recycling more than 30m from an external door to the refuse storage point.

2.25 Refuse vehicles should not be required to reverse more than 12m, in order to limit the potential for an accident to occur. Greater distances may be acceptable, subject to agreement. This would be dependent on there being substantial gains in relation to other aspects of the design.

3.0 AIMS AND OBJECTIVES

3.1 As identified in **Section 1.0**, this DSP is intended to outline the principles associated with servicing of the proposed development and establish management measures that will be implemented in order to ensure that the activity associated with deliveries, servicing and refuse collection does not have adverse impacts.

3.2 The aims of this DSP are as follows:

i. Ensure adequate arrangements are made for deliveries and servicing to the site and to ensure that the plan protects the amenity of future residents; and

ii. Assist in the management of refuse, delivery and servicing activities at the development by improving the efficiency of these activities and reducing the impact of the development on the local road network.

3.3 The more specific objectives of the DSP are as follows:

i. To minimise delivery trips (particularly during peak periods);

ii. To ensure availability of safe access;

iii. To minimise congestion both within the site and on the approach to the site access;

iv. To increase road network efficiency; and

v. To reduce accidents and maintain good road safety conditions.

3.4 The intended benefits of the DSP are as follows:

i. For site users and the local community - reduced risk of accidents particularly those involving vulnerable road users and reduced congestion on the roads surrounding the application site; and

ii. For the local community and wider environment - reduced CO2 and noise emissions.

4.0 TRIP GENERATION AND SERVICING STRATEGY

Trip Generation

4.1 A trip generation exercise was undertaken as part of the TS submitted with the planning application which identified the total number of vehicle trips to/from the site during peak times and throughout the day as indicated in **Table 4.1**.

Mode	Daily Period (07:00-19:00)		
	Arrivals	Departures	Total
Total Vehicles	3	2	5

Table 4.1: Development Vehicle Trip Generation

4.2 Given the car-free nature of the proposed development (with the exception of management and disabled site users, the trips identified are expected to be trips associated with deliveries, refuse collection or (contracted-out) maintenance services (for which two car parking bays are available on-site).

Servicing Strategy

4.3 Access arrangements, both vehicular and pedestrian, together with turning areas have all been previously approved and built up to the junction of the southern boundary of the application site towards its eastern end. Access to the site would remain as per existing arrangements.

4.4 Vehicular turning areas have all been previously approved and built up to the junction of the southern boundary of the application site as part of planning ref. 06/2018/FUL. The storage of refuse is to be located in accordance with the existing site, and that which was approved as part of planning ref. 06/2018/FUL. As such it remains in the south-west corner of the site.

4.5 Although the movements have previously been approved, Robert West have undertaken a detailed assessment of turning movements for refuse and delivery vehicles to ensure that the development remains accessible under current design guidance.

4.6 A vehicle tracking exercise has been undertaken based on LBRuT's supplementary planning document 'Refuse and Recycling Storage Requirements', and demonstrates that turning is accommodated as previously approved. The vehicle tracking drawings are contained within **Appendix C**.

4.7 Refuse is currently stored near the access to the site (as shown on the image in **Figure 4.1**).

Figure 4.1: Current refuse storage location

4.8 It is recognised that the proposed development maintains refuse storage in the same location. The refuse is located within 20m drag distance of where refuse vehicles would stop as required by LBRuT's requirements. The reversing distance is no more than 12m, and therefore accords with the LBRuT requirements.

5.0 MANAGEMENT MEASURES

5.1 The management measures supporting the servicing strategy are outlined in this Section, with reference to both personnel requirements and actions that would need to be implemented.

Appointment of a DSP Co-ordinator

5.2 A DSP Co-ordinator will be appointed by Lockcorp Ltd. The DSP Co-ordinator will be in charge of implementing the servicing strategy for the development and the recommendations of this report.

5.3 It is recommended that the DSP Co-ordinator is someone who will frequently be on-site and have a good understanding of its operation.

5.4 At the outset of occupation, the DSP Co-ordinator will be required to liaise with the management company in relation to their servicing needs and demands and collect information to facilitate scheduling of deliveries and maintenance visits.

5.5 The main responsibilities of the DSP Co-ordinator will be to manage the delivery and servicing activity generated by the residents:

i. To take ownership of the DSP and implementation of the servicing strategy for the development;

ii. To establish and maintain a delivery and servicing for the development to ensure that the delivery and servicing requirements of all occupiers can be met without conflict within the site;

iii. To monitor the DSP in line with the monitoring methodology set out in this DSP; and

iv. To meet with LBRuT where necessary should any issues associated with delivery and servicing of the site occur in the future.

Servicing Schedule

5.6 It is anticipated that the refuse and recycling will be undertaken by a private contractor. Refuse collections are anticipated once or twice per week for the development.

5.7 A delivery and servicing schedule will be produced and implemented by the DSP Co-ordinator based on the regular deliveries anticipated by the occupiers. Refuse and recycling collections will be included in the schedule.

5.8 The schedule will ensure that there is no conflict for use of the area outside the site access and the access road and that staff will be present for the receiving of deliveries.

5.9 The DSP Co-ordinator should encourage residents to manage their delivery requirements to occur outside network peak periods (07:00 – 10:00 and 16:00 – 19:00) to reduce impact on the local highway network. Refuse collections should also occur outside these times. Limited out of hours (19:00 – 07:00) deliveries should be undertaken to minimise impact on residential amenity and in particular noise disturbance.

Other Measures

5.10 The DSP co-ordinator will deal with complaints in relation to deliveries and servicing issues.

6.0 MONITORNG AND REVIEW

Monitoring and Review

6.1 The development and monitoring of the DSP will be conducted by the nominated DSP co-ordinator. In conjunction with other stakeholders the DSP co-ordinator will monitor and develop the DSP against the targets identified following the undertaking of baseline surveys.

6.2 This DSP will be a 'live' document which is intended to evolve over time. In order to align the DSP and TP such that monitoring and review can be undertaken alongside one another, the DSP will be initially monitored on a five-year cycle.

6.3 The first and second monitoring surveys will be undertaken at Years 1 and 3, on the first and third anniversary of the initial baseline survey with any updates to the document being incorporated as necessary. The final monitoring survey will be carried out on the fifth anniversary of the initial baseline survey. A suggested template for recording survey information is provided below.

6.4 The results of all surveys will be reported to the relevant officers at LBRuT and will inform discussions on the potential scope for reducing road based servicing to the site.

6.5 The DSP co-ordinator will review any survey material and discuss any issues related to servicing that may occur and any remedial measures that will be required with LBRuT. In the interim period between reviews the DSP co-ordinator will make continual checks that deliveries, maintenance visits and refuse collections are made in accordance with the strategy and schedule.

6.6 In particular, the supplier, size of vehicles used and location/timing of deliveries should be noted, to enable review against any agreement with the supplier and the servicing strategy. This will enable the DSP co-ordinator to provide feedback to occupiers should deliveries not be made at the appropriate location or time, in accordance with the servicing strategy.

6.7 Feedback should also be given to individual residents of the development where deliveries have caused issues and agreement reached in relation to measures that should be taken to ensure these are prevented in the future.

6.8 Any complaints received in relation to delivery and servicing activity and actions taken should also be reconsidered at this six-monthly review. This is intended to identify potential requirements for new management measures in relation to deliveries and servicing to ensure that the objectives of the DSP are met and enables continuous improvement in the management of deliveries and servicing.

DSP Surveys

Baseline Survey

6.9 The baseline travel survey will be undertaken within 3 months of the development being occupied. This will capture the profile of the weekly servicing and delivery movements. This baseline survey represents the start of the DSP for monitoring purposes and will be known as Year 0.

6.10 It is recommended, where possible, for the survey to capture the purpose of deliver and servicing vehicles in order to identify potential options for the streamlining of deliveries, and a subsequent reduction of vehicle trips in future years. **Table 6.1** below indicates a format of the baseline survey data outputs required to be collected.

Day	Type of servicing/delivery movement					Total
	Groceries	Goods	Maintenance	Refuse	Other	
Monday						
Tuesday						
Wednesday						
Thursday						
Friday						
Saturday						
Total						

Table 6.1: Baseline Survey Format

6.11 Furthermore, it is recommended that the baseline survey data collection also includes a record of delivery vehicles types such as HGVs, LGVs, cars, motorcycle and others for the purpose of ongoing monitoring. The time of deliveries should also be recorded in order to determine the number of vehicle movements at different periods of the day, and in particular to help monitor delivery volume during network peak periods.

Future Survey

6.12 The first and second monitoring surveys will be undertaken at Years 1 and 3, on the first and third anniversary of the initial baseline survey, with any updates to the document being incorporated as necessary. The final monitoring survey will be carried out on the fifth anniversary of the initial baseline survey.

6.13 The survey schedule presented in **Table 6.2** below will be used as basis for summarising surveyed information, but it will be recorded such that the data can be interrogated to determine the level of movements generated within specific time periods.

Day	Servicing/delivery movement		
	Year 0	**Year 3**	**Year 5**
Monday			
Tuesday			
Wednesday			
Thursday			
Friday			
Saturday			
Total			

Table 6.2: Future Servicing and Delivery Survey Schedule

6.14 Additionally, a record of any issues associated with deliveries and servicing should also be recorded by the DSP Co-ordinator and incorporated into DSP accordingly.

6.15 The results of all surveys will be reported to the relevant officers at LBRuT and will inform discussions on the potential scope for reducing road based servicing to the development.

7.0 SECURING AND ENFORCING THE DSP

Securing

7.1 This DSP has been prepared in support of the planning application. It is expected that in the five year period post occupation, the DSP will be secured through Section 106 agreement, with details to be agreed with LBRuT. Funding will be provided by the developer, including the funding of travel surveys required as part of the monitoring and review process.

Enforcement

7.2 If the monitoring and review process finds that the DSP is under performing and targets are not being achieved, the DSP Co-ordinator would be responsible for meeting with LBRuT officers upon request to discuss the issues and identify where improvements can be made. The possible reasons will be discussed and further improvements or new measures agreed to ensure targets are met in future. Any new measures introduced will then need to be communicated to occupants, as applicable, whilst the areas of weakness will be reviewed regularly to ensure progress is achieved.

Robert West

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Appendix A – Existing Site Layout

General Notes:

Do not scale from this drawing. Use marked dimensions.
Should any discrepancies be noted, please inform this office.

N

Scale Bar:

0m 5 10 25 50m

Rev:	Description:	Date	Drn by:	Ckd by:
P01	Planning Issue	02.02.17	CS	GS

Client: **Jeremy Janion**

Project Name: **75 Norcutt Road**

Drawing Title: **Existing Site Plan**

Project No:	Drawing No:	Revision:	Scale:	Date:
JJ01	P_011	P01	1:500 @ A3	Feb 2017

Drawn By:	Checked By:	Status:
CS	GS	*Planning*

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Appendix B – Proposed Site Layout

General Notes:

Do not scale from this drawing. Use marked dimensions.
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N

KEY

- Boundary line
- Existing Buildings
- Student rooms
- Hall
- Communal space
- Lobby & services
- Plant
- Shared space
- Path
- Trees
- Pedestrain path
- Grass
- Hedge
- Green Wall

1. Short stay - Managment parking
2. Short stay - Managment parking
3. Disabled bay - 3.6 x 4.8m with 1.8m clear pedestrain route to one side

Rev:	Description:	Date	Drn by:	Ckd by:
P01	Issue for comment	13.02.17	CS	GS

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0m 1 2.5 5 10m

Client:
Jeremy Janion

Project Name:
75 Norcutt Road

Drawing Title:
Proposed:
Ground Floor Plan

Project No:	Drawing No:	Revision:	Scale:	Date:
JJ01	P_SK003	P01	1:100 @ A1	Feb 2017
Drawn by: CS	Checked by: GS	Drawing Status: *Planning*		

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Appendix C – Vehicle Tracking

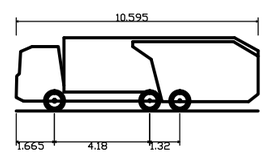
DO NOT SCALE OFF THIS DRAWING

Notes:

1. The contractor is responsible for verifying all site & setting out dimensions before commencing work.
2. This drawing is to be read in conjunction with all relevant Architectural and M & E drawings.
3. All dimensions in millimeters unless stated otherwise.

20m Radius

15m



Phoenix 2-23W (with Elite 2 6x2MS chassis)

Overall Length	10.595m
Overall Width	2.530m
Overall Body Height	3.205m
Min Body Ground Clearance	0.410m
Track Width	2.500m
Lock to Lock Time	4.00s
Kerb to Kerb Turning Radius	10.150m

Rev	Date	By	Comment	Chkd	Appr
P1	22/02/17	LGB	UPDATED SITE LAYOUT	LJB	LJB

Client: LOCKCORP LTD

Project: NORCUTT ROAD

Drawing Title: SWEPT PATH ANALYSIS
REFUSE VEHICLE 10.6M

Status: PRELIMINARY

Drawn	Checked	Approved	Scale
By SM	By LGB	By LJB	1:250 @ A3
Date 08/02/17	Date 08/02/17	Date 08/02/17	

Client No.	Project No.	Discipline	Drawing No.	Rev
5654	001	T	SK-002	P1

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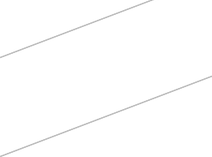

7.5t Box Van

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	By	Comment	Chkd	Appr
P1	22/02/17	LGB	UPDATED LAYOUT	LJB	LJB

Client

Project
NORCUTT ROAD

Status
PRELIMINARY

Drawn	Checked	Approved	Scale
By SM	By LGB	By LJB	1:250 @ A3
Date 08/02/17	Date 08/02/17	Date 08/02/17	

Drawing Title
SWEPT PATH ANALYSIS
7.5T BOX VAN

Client No.	Project No.	Discipline	Drawing No.	Rev
	001	T	SK-003	P1

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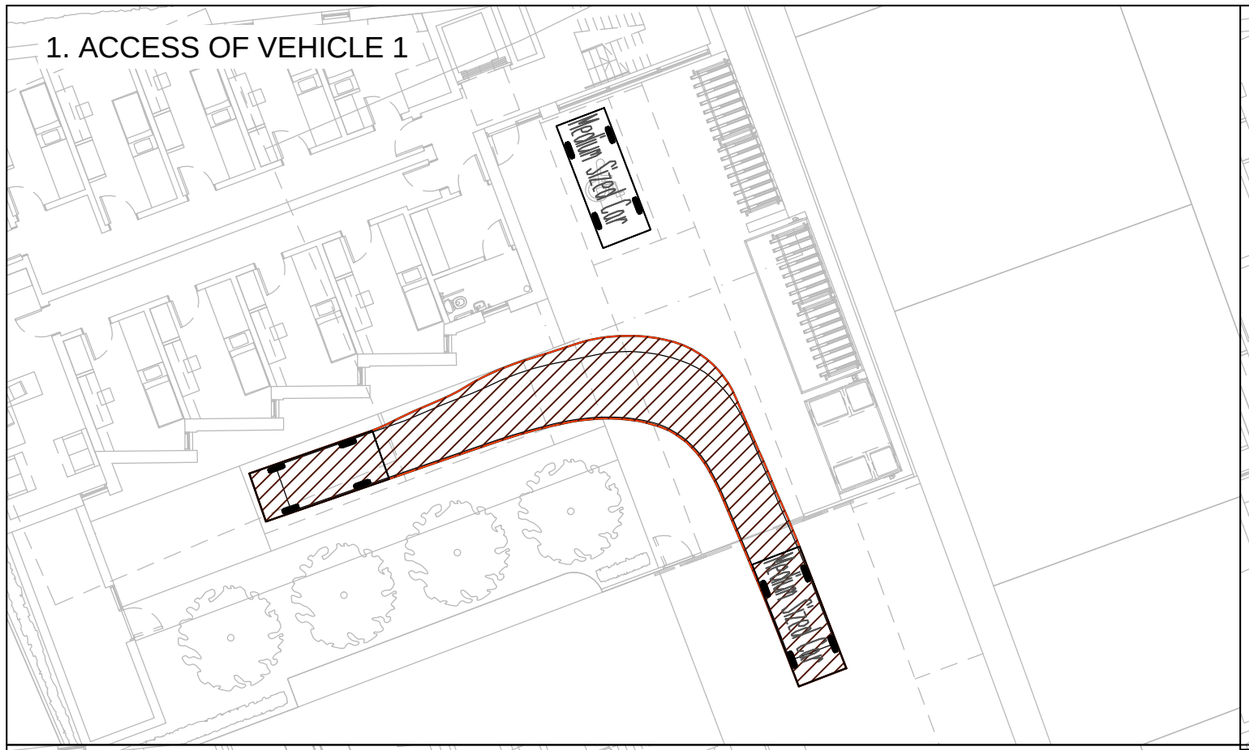
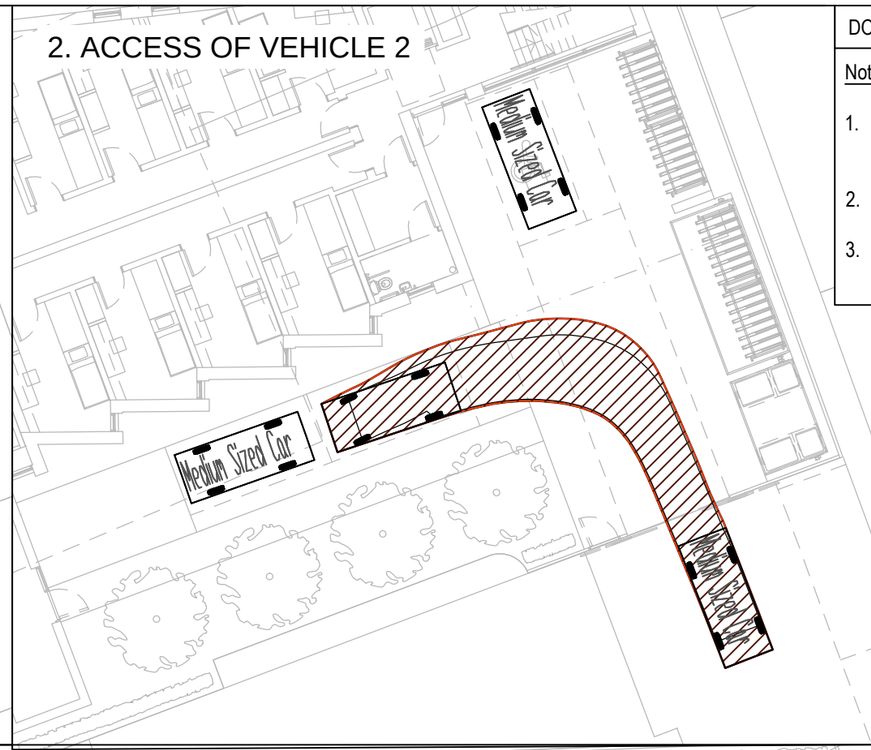
1. ACCESS OF VEHICLE 1



2. ACCESS OF VEHICLE 2



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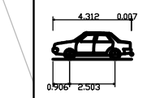
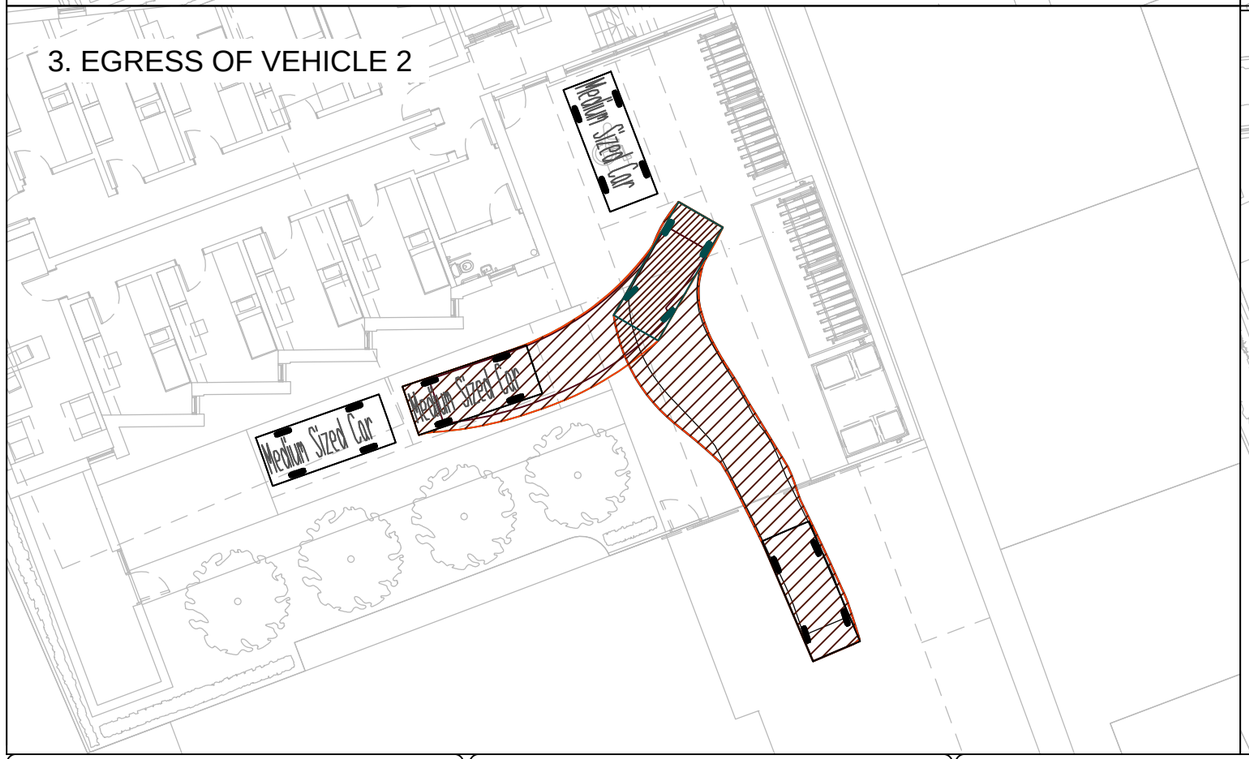
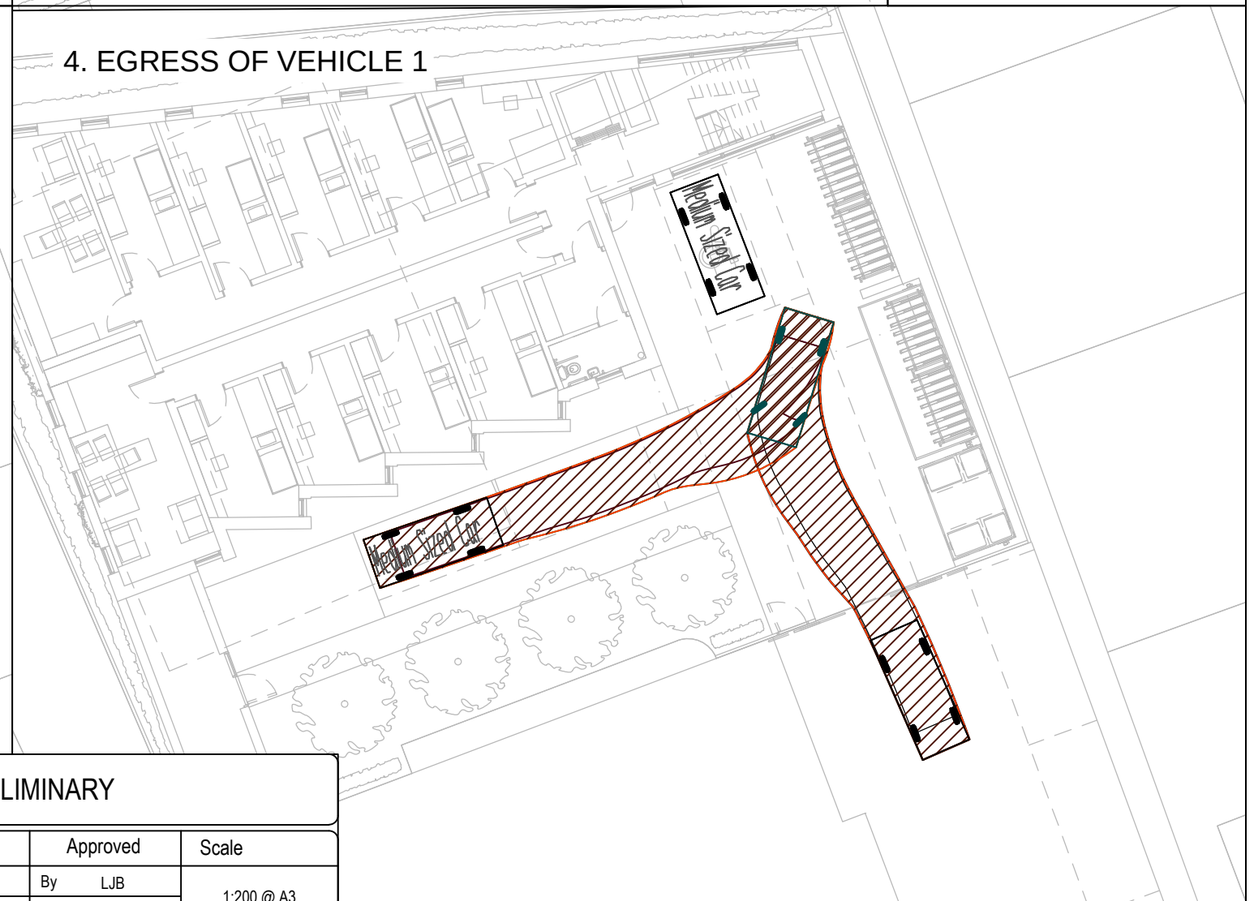


Medium Sized Car	
Overall Length	4.319m
Overall Width	1.686m
Overall Body Height	1.466m
Min Body Ground Clearance	0.228m
Max Track Width	1.591m
Lock to Lock Time	4.00s
Kerb to Kerb Turning Radius	5.042m

3. EGRESS OF VEHICLE 2



4. EGRESS OF VEHICLE 1



Client: LOCKCORP LTD

Project: NORCUTT ROAD

Status: PRELIMINARY

Drawn	Checked	Approved	Scale
By LGB	By LJB	By LJB	1:200 @ A3
Date 22/02/17	Date 22/02/17	Date 22/02/17	

Drawing Title: SWEPT PATH ANALYSIS
MEDIUM CAR
ACCESS AND EGRESS (CAR PARKING BAYS)

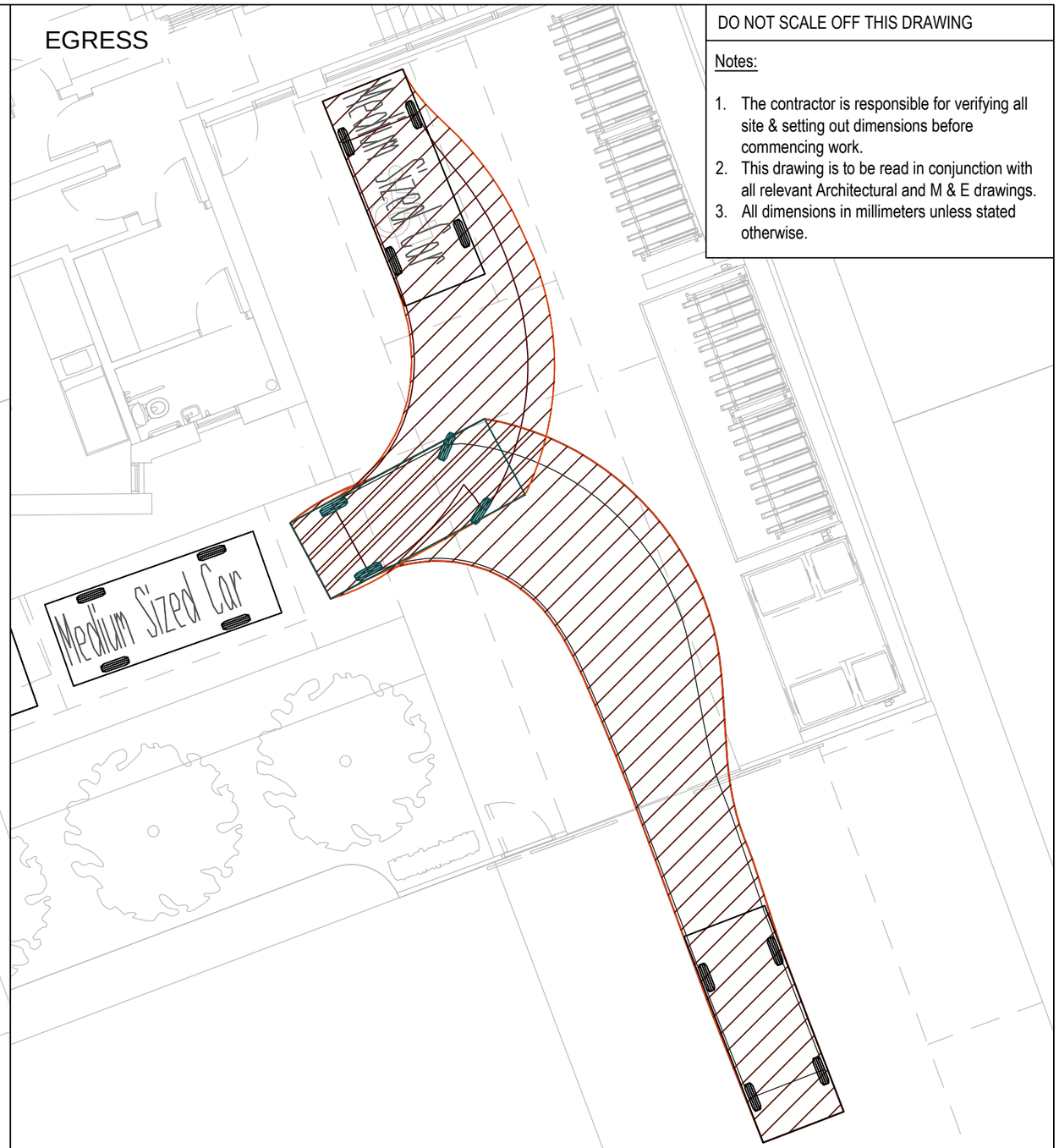
Client No.	Project No.	Discipline	Drawing No.	Rev
5654	001	T	SK-004	

Rev	Date	By	Comment	Chkd	Appr
-	-	-	-	-	-

Robert West
Delta House
175-177
Borough High St
London SE1 1HR
t: 020 7939 9916
f: 020 7939 9909
www.robertwest.co.uk

ACCESS

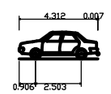
EGRESS



DO NOT SCALE OFF THIS DRAWING

Notes:

1. The contractor is responsible for verifying all site & setting out dimensions before commencing work.
2. This drawing is to be read in conjunction with all relevant Architectural and M & E drawings.
3. All dimensions in millimeters unless stated otherwise.



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

Client
LOCKCORP LTD

Project
NORCUTT ROAD

Status
PRELIMINARY

Drawn	Checked	Approved	Scale
By LGB	By LJB	By LJB	1:100 @ A3
Date 22/02/17	Date 22/02/17	Date 22/02/17	

Drawing Title
SWEPT PATH ANALYSIS
MEDIUM CAR
ACCESS AND EGRESS (DISABLED BAY)

Client No.	Project No.	Discipline	Drawing No.	Rev
5654	001	T	SK-005	

Robert West
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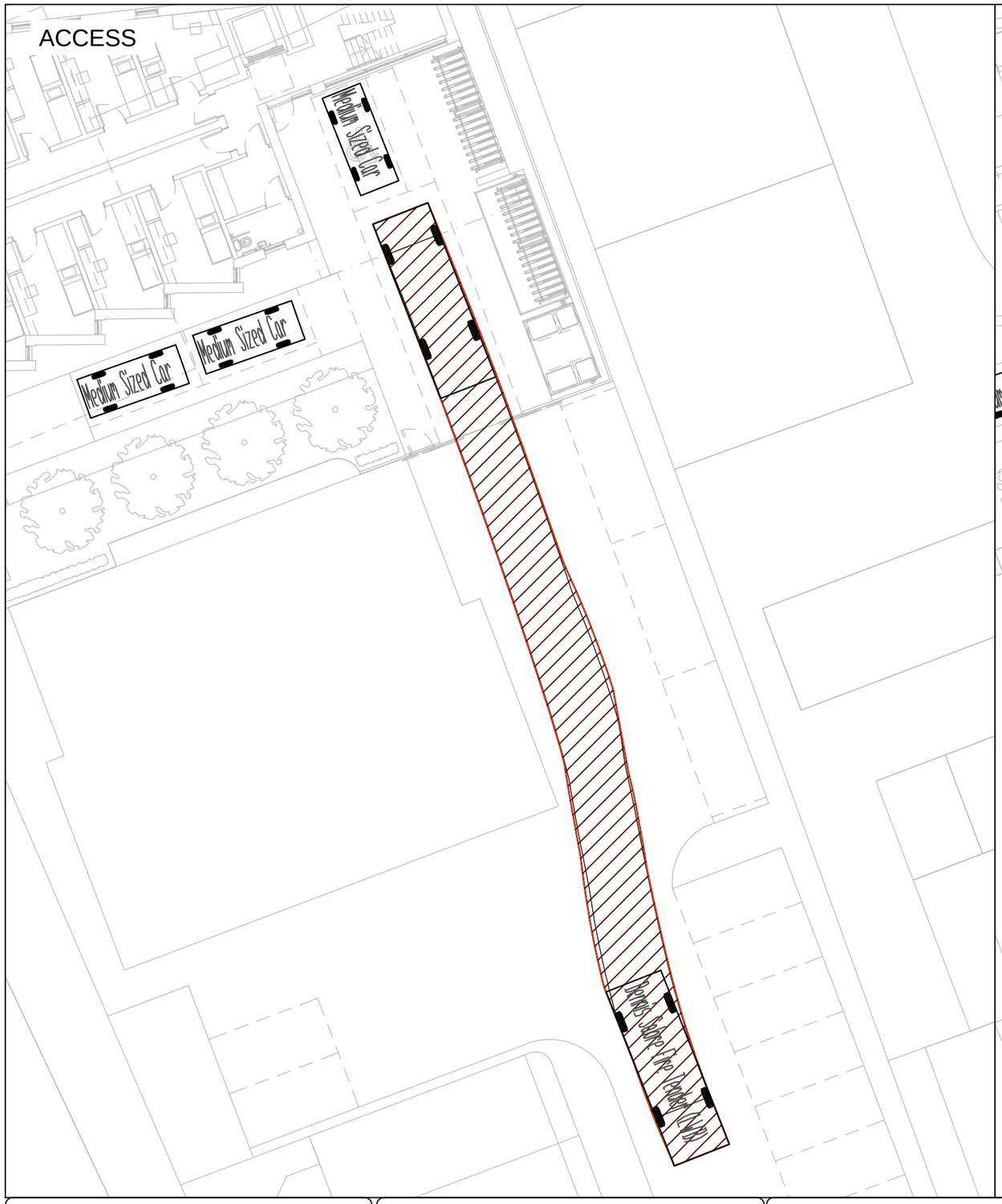
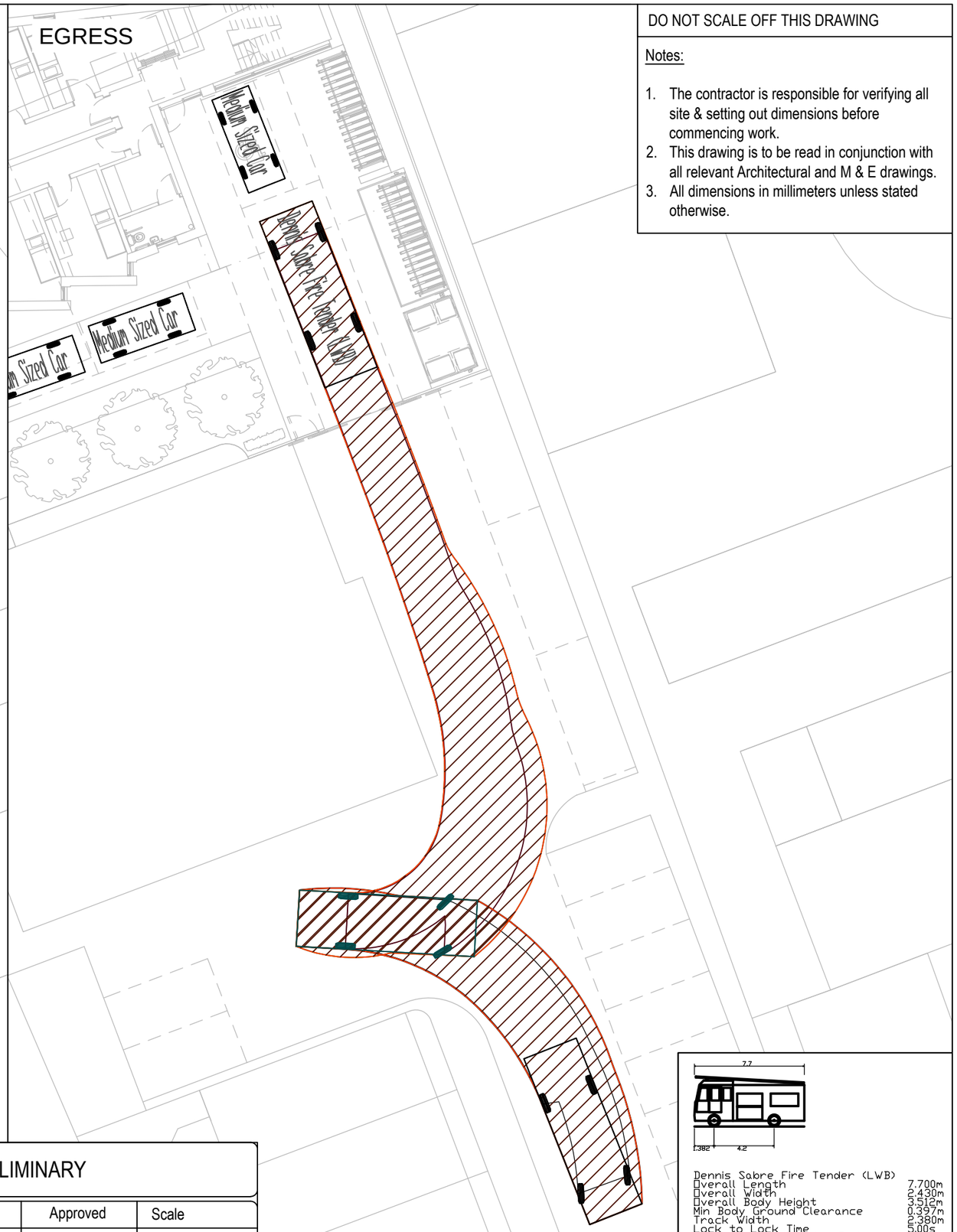
www.robertwest.co.uk

Rev	Date	By	Comment	Chkd	Appr
-	-	-	-	-	-





DO NOT SCALE OFF THIS DRAWING

Notes:

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3. All dimensions in millimeters unless stated otherwise.

Dennis Sabre Fire Tender (LWB)

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	5.00s
Kerb to Kerb Turning Radius	7.400m

Rev	Date	By	Comment	Chkd	Appr
-	-	-	-	-	-

Client
LOCKCORP LTD

Project
NORCUTT ROAD

Status
PRELIMINARY

Drawn	Checked	Approved	Scale
By LGB	By LJB	By LJB	1:100 @ A3
Date 22/02/17	Date 22/02/17	Date 22/02/17	

Drawing Title
SWEPT PATH ANALYSIS
FIRE TENDER
ACCESS AND EGRESS

Client No.	Project No.	Discipline	Drawing No.	Rev
5654	001	T	SK-006	

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