DRAFT

Collyhurst Village

Waste Management Strategy - Rev PL
March 2023

Version history

Project name: Collyhurst Village
Project number: 8871
Client: FEC and MCC

Rev:	Date:	Status
PL	21.03.21	DRAFT - First issue for information

This document has been prepared for the titled project or named part thereof and should not be relied upon or used for any other project without an independent check being carried out as to its suitability and prior written authority of Buttress being obtained. Buttress accepts no responsibility or liability for the consequences of this document being used for a purpose other than the purposes for which it was commissioned. Any person using or relying on the document for such other purpose agrees and will by such use or reliance be taken to confirm his agreement to indemnify Buttress for all loss or damage resulting therefore. Buttress accepts no responsibility or liability for this document to any party other than the person by whom it was commissioned.

Contents

1.0 Introduction 3

2.0 Development Proposals 3

3.0 Scope of the Report 3

4.0 Policy Context 4

5.0 Waste Forecasts 4

6.0 Waste Storage and Collection Frequency 6

6.1 Plot A 6
6.2 Plot B 7
6.3 Plot C 8
6.4 Plot D 9
6.5 Apartment Block 1 (Plot A) 10
6.6 Apartment Block 2 (Plot C) 11
6.7 Commercial Refuse Store - Consented Scheme 12
6.8 Commercial Refuse Store - Current Scheme 13

7.0 Waste Management Strategy Summary 14

7.1 Housing 14
7.2 Apartment Block 1 14
7.3 Apartment Block 2 14
7.4 Retail Unit 14

8.0 Appendix B - Waste Proforma 15

9.0 Appendix C - Refuse Tracking 17

Buttress

Buttress Architects Ltd.
41 Bengal St.
Manchester
M4 6AF

T: 0161 236 3303
W: www.buttress.net

1.0 Introduction

This Waste Strategy report is prepared by Buttress on behalf of FEC and MCC in support of Collyhurst Village.

2.0 Development Proposals

A Schedule of accommodation is provided in the Design and Access Statement and is summarised as follows:

Housing

- 56 x 2B4P
- 88 x 3B5P
- 23 x 4B6P
- 1 x 5B7P

Apartment Block 1

- 6 x 2B3P Duplex
- 2 x 3B5P Duplex
- 18 x 1B2P Apartment
- 24 x 2B3P Apartment

Apartment Block 2

- 6 x 2B3P Duplex
- 2 x 3B5P Duplex
- 6 x 1B2P Apartment
- 12 x 2B3P Apartment

Commercial Space (in Apartment Block 1)

- Class E 123.7 sqm sales area

3.0 Scope of the Report

This report has been prepared to help explain and summarise the strategy for the storage and disposal of refuse for the residential apartments and houses, and inclusion of a commercial refuse store in Apartment Block 1.

This strategy establishes the means of recycling the material generated and sets out the following:

- Forecast waste generation & recycling rates;
- Proposed waste management strategy;
- Proposed waste storage facilities; and
- Forecast the refuse collection frequency.

This report sets out the policy context for waste management, forecast the waste generated, the number of bins required, the collection frequency, the management and oversight of the waste collection strategy.

4.0 Policy Context

The development falls within the City of Manchester and MCC have published guidance on the design and management of buildings to produce waste management strategies that maximise the amount of waste that is recycled. Manchester City Council requests that a Waste Pro Forma is completed to support development applications and this is presented later in this document.

To achieve high recycling rates, it states that all refuse should be separated at source and stored off the highway in purpose built refuse stores minimising the distance to collection thus reducing the opportunity for spillage. In accordance with Section 34 of the Environmental Protection Act 1990, the manager of the development has a legal 'Duty of Care' to ensure that waste is securely stored and disposed of legally. The most convenient way to achieve this is by using a registered waste carrier.

The Waste (England and Wales) (amendment) Regulations 2012 has introduced changes and updates that affect both waste producers and waste management companies alike. These include the need to separate waste-paper, metal, plastic and glass in different waste streams. Another change will be the obligatory use of SIC codes in all documentation relating to waste management services and a compulsory commitment from waste producers to adhere to the waste hierarchy as described and published by DEFRA under regulation 15(1) of the Waste (England and Wales) Regulations 2011.

To demonstrate compliance with regulations, a Waste Transfer Note is required when that waste is collected by the waste carrier. This may be provided electronically. Many carriers are also able to provide environmental reports to inform on the waste management performance. There will be food waste generated from the residential uses and also potentially from a commercial units such as a café in the ancillary uses on site. Food Waste needs to be covered by the Animal By Products (Enforcement) (England) Regulations 2011. The volumes of waste will be greater than 20kg and therefore need to be stored in a labelled container and collected by a licensed carrier and records kept.

Interventions are needed in all stages of the process to minimise waste going to landfill. The minimisation of waste and recycling interventions by occupiers and the management company can help meet MCC's and the government's aspirations.

All new developments must meet the requirements of Part H6 of the Building Regulations 2000 (solid waste storage) which states:

- Adequate means of storing solid waste shall be provided; and
- Adequate means of access should be provided for people in the building to the place of storage, and, from the place of storage to a collection point agreed by the waste collection authority.

5.0 Waste Forecasts

The waste forecasts for Apartment Residential Waste is based on a rule of thumb calculation (Manchester Residential Quality Guidance) of 110 litres per apartment per week as shown:

Number of Dwellings x 110	=	Weekly waste in litres

Applying this to the development mix provides the following waste forecast. The forecast for both the commercial and residential has used general rates derived from BS5906:2005.

We have also reviewed current advice from DEFRA (Statistics on waste managed by local authorities in England in 2019/20) who advise that separately collected food waste accounts for less than 3% of the volume of total residential waste. Organic food waste will be stored in 240l bins in the separate refuse stores, and each apartment will be provided with a 21litre caddy for food waste.

Houses with a rear garden will be provided with a 240 litre food waste bin, and houses without rear gardens will be provided with a 21 litre food waste caddy.

The waste forecast and recycling proportions for the Residential and Commercial space are set out in the tables (right).

It should be noted that the General Refuse Waste Stream can be further subject to recycling post collection depending on the collector's waste recovery strategy.

For Collyhurst Village Waste Proforma see Appendix A

HOUSING (FORTNIGHTLY COLLECTIONS)

• 2 Bed	56
• 3 Bed	88
• 4 Bed	23
• 5 Bed	1
Total	168

Forecast :

Residential Bin Storage Requirement per household with rear garden	4x 240L Wheely Bin
Residential Bin Storage Requirement per household without rear garden	3x 240L Wheely Bin and 21L Food Caddy

240 litre Wheely Bin

• General non-recyclable refuse	168 bins
• Paper / Card	168 bins
• Plastic / Metal / Glass	168 bins
• Organic food waste	112 bins

23 litre Food Caddy

• Organic food waste	56 bins

Total

616 x 240 litre Wheely Bin and 56 x 23 litre Food Caddy

APARTMENT BLOCK 1 (FORTNIGHTLY COLLECTIONS)

• 1 Bed	18
• 2 Bed	30
• 3 Bed	2
Total Number of Units	50

Forecast :

Fortnightly Waste Forecast 220L per Apartment (50*220)	11,000L per fortnight
GD04 Residential Bin Storage Requirement per apartment (0.43sqm / apartment)	21.5sqm

Waste storage based on :

• General non-recyclable refuse	47%	5,170L
• Organic food waste	3%	300L
• Paper / Card	25%	2,750L
• Plastic / Metal / Glass	25%	2,750L

1100 litre Eurobins

• General non-recyclable refuse	5 bins
• Paper / Card	3 bins
• Plastic / Metal / Glass	3 bins

240 litre Wheely Bin

• Organic food waste	2 bins

Total

11 x 1100L Euro Bins and 2 x 240 litre Wheely Bin

APARTMENT BLOCK 2 (FORTNIGHTLY COLLECTIONS)

• 1 Bed	6
• 2 Bed	18
• 3 Bed	2
Total Number of Units	26

Forecast :

Fortnightly Waste Forecast 220L per Apartment (26*220)	5720L per fortnight
GD04 Residential Bin Storage Requirement per apartment (0.43sqm / apartment)	11.2sqm

Waste storage based on :

• General non-recyclable refuse	47%	2,689L
• Organic food waste	3%	171L
• Paper / Card	25%	1,430L
• Plastic / Metal / Glass	25%	1430L

1100 litre Eurobins

• General non-recyclable refuse	3 bins
• Paper / Card	1 bins
• Plastic / Metal / Glass	1 bins

240 litre Wheely Bin

• Organic food waste	1 bins
• Plastic / Metal / Glass	1 bins
• Paper / Card	1 bins

Total

5 x 1100L Euro Bins and 3 x 240 litre Wheely Bin

RETAIL / SHOP - example only, subject to occupant

Commercial Space	123.7 sqm
BS5906:2005 10 litres per sqm of sales area per week	2474L per fortnight

Recycling Streams Based on WRAP Waste Ratios

• General refuse / organic	40%	990L
• Paper / Card	30%	742L
• Plastic / Metal / Glass	30%	742L

1100 litre Eurobins

• General refuse / organic	1 bins
• Paper / Card	1 bins
• Plastic / Metal / Glass	1 bins

Total

3 x 1100L Euro Bins

6.0 Waste Storage and Collection Frequency

6.1 Plot A

Each house will store their bins in their own dedicated external bin store and will move their own bins on collection day to their dedicated collection area.

Each apartment block has a mechanically ventilated internal refuse store. On collection days management will move the full bins to the kerb side, and return them to the refuse store immediately after collection.

The commercial unit will hold their waste within their own dedicated bin store and be collected by private collection. On collection days the occupant will move the full bins to the kerb side, and return them to the refuse store immediately after collection.

See Appendix B for waste tracking.

Key

- Residents route
- Residential refuse management route
- Commercial refuse route
- Residential refuse collection point (apartments)
- Commercial refuse collection point
- Residential refuse collection point (houses)

6.2 Plot B

See Appendix B for waste tracking.

Key

- Residents route
- Residential refuse collection point
- Proposed combined refuse collection point built into soft landscape

6.3 Plot C

See Appendix B for waste tracking.

Key

- Residents route
- Residential refuse management route
- Residential refuse collection point (apartments)
- Proposed comined refuse collection point built into soft landscape
- Residential refuse collection point (houses)

6.4 Plot D

See Appendix B for waste tracking.

Key

- Residents route
- Residential refuse collection point
- Proposed comined refuse collection point built into soft landscape

6.5 Apartment Block 1 (Plot A)

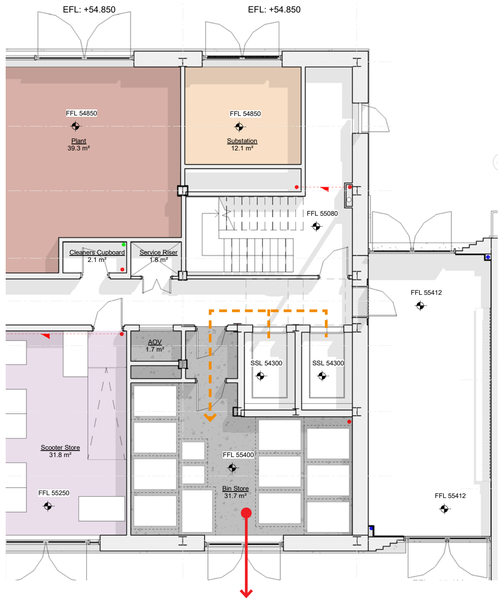
One large refuse store is located in close access to the main lifts and stairs, allowing residents to travel and dispose of waste without leaving the building. As part of the refuse strategy the bin store will be managed to allow for suitable rotation of bins when they get full.

As previously described, Based on the MCC document 'GD 04 Waste Storage and Collection Guidance for New Developments Version 6' the developer needs to provide 0.43m2 of space per apartment. Apartment Block 1 will deliver 50 apartments and on this basis the minimum requirement for residential bins is 21.5sqm.

The apartment block residential bin store planned within the building:

Apartment Block 1	31.7sqm
(50 units)	

In total there is enough space within the store to hold the required 11 Eurobins and 2 240l Wheelie Bins assuming fortnightly collections.



Key

Residents route

Residential refuse management route

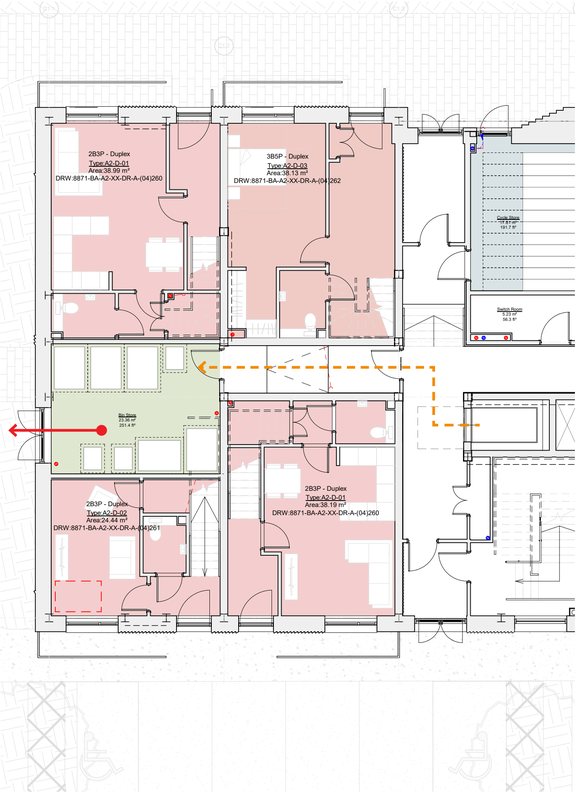
6.6 Apartment Block 2 (Plot C)

One large refuse store is located in close access to the main lifts and stairs, allowing residents to travel and dispose of waste without leaving the building.

As previously described, Based on the MCC document 'GD 04 Waste Storage and Collection Guidance for New Developments Version 6' the developer needs to provide 0.43m2 of space per apartment. Apartment Block 2 will deiver 26 apartments and on this basis the minimum requirement for residential bins is 11.18sqm.

Apartment Block 2	23.4sqm
(26 units)	

In total there is enough space within the store to hold the required 5 Eurobins and 3 240l Wheelie Bins assuming fortnightly collections.



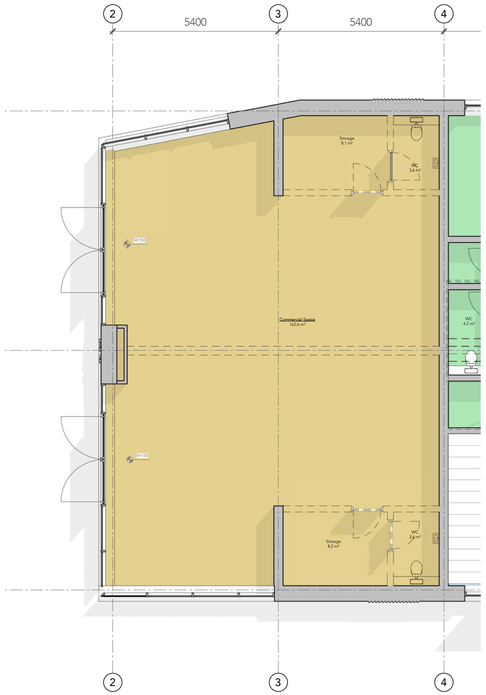
Key

Residents route

Residential refuse management route

6.7 Commercial Refuse Store - Consented Scheme

As part of Planning Condition 23, a scheme for the storage and disposal of refuse for the commercial unit needs to be submitted.

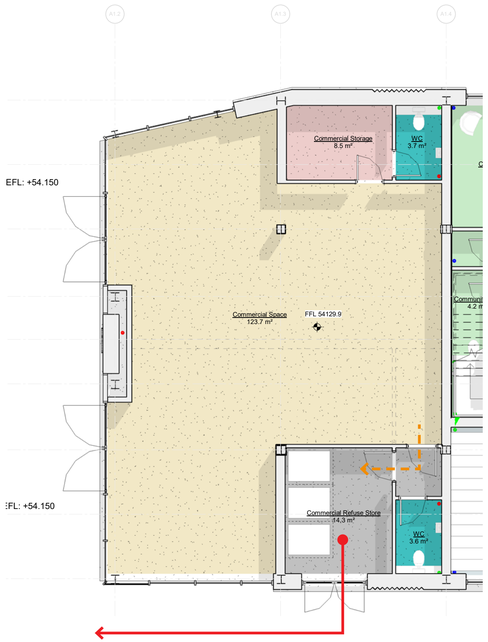


6.8 Commercial Refuse Store - Current Scheme

The total waste requirement for the commercial store has been forecasted using BS5906-2005, which is 10 litres per sqm of sales area per week:

Commercial Unit Area	123.7sqm
Total refuse forecast	2474L per fortnight (3 bins)

A refuse store measuring 14.3sqm has been added to accommodate a total of 3 bins assuming a fortnightly collection.



Key

- Residents route
- Residential refuse management route

7.0 Waste Management Strategy Summary

7.1 Housing

Waste collection for individual house units will be located in bin stores on the individual plots with the resident being responsible for the bins being brought out prior to collection and returned after and to ensure areas are kept clean. In some instances residents will be responsible for taking the bins to the combined bin collection points.

It is proposed that Residential Waste will be collected by the local Authority waste collection company.

7.2 Apartment Block 1

Waste collection for the apartment block will be supervised by the on-site building management team, and involves the rotation of full/ empty bins, bins being brought out immediately prior to collection and returned immediately after, and to ensure areas are kept clean.

It is proposed that Residential Waste will be collected by the local Authority waste collection company.

7.3 Apartment Block 2

Waste collection for the apartment block will be supervised by the on-site building management team and involves bins being brought out immediately prior to collection and returned immediately after and to ensure areas are kept clean.

It is proposed that Residential Waste will be collected by the local Authority waste collection company.

7.4 Retail Unit

The waste from the commercial unit will be collected by a licensed waste carrier in accordance with government legislation requiring the appropriate documentation to ensure that waste is disposed of in a hygienic and environmentally sustainable way. The refuse containers will be wheeled a short distance from the refuse store to the collection vehicle.

The route will be step free and will have a minimum width of 1.54m, ensuring adequate space for a bin to pass.

8.0 Appendix A - Waste Proforma

Appendix E Proforma for Planning Applications

MANCHESTER CITY COUNCIL

Planning Application – Waste Management Strategy

Planning Application Number:
Date Submitted:

Estimated volumes/ m² required by the development

Low Rise Domestic

Waste Types	Capacity Required (litres)	Number of bins required per household	Confirm what is to be provided
General refuse	140 / 240	1 x wheeled bin	168 x 240L
Pulpable Recycling	140 / 240	1 x wheeled bin	168 x 240L
Mixed Recycling	140 / 240	1 x wheeled bin	168 x 240L
Garden Waste	140 / 240	1 x wheeled bin	112 x 240L
Food Waste	23	1 x 23 litre caddy	56 x 24L

High Rise Apartment Developments

	Yes/No - how much space has been provided?
0.43m² has been provided per apartment for the container space. Space to manoeuvre and access containers individually has also been provided so that each container can be accessed and removed for collection individually.	Yes, 0.43sqm has been provided per apartment providing a total of 11 x 1100L Eurobins and 2 x 240L wheely bins for Apartment Block 1, and 5 1100L Eurobins and 3 x 240L wheely bins for Apartment Block 2. Circulation space to manoeuvre and access containers has been provided to allow for a managed rotation of bins and removal for collection.

23

Commercial Developments

Please state number of bins you propose, showing calculations where appropriate.

General Waste -	1
Pulpable Recycling -	1
Mixed Recycling -	1
Food Waste -	0
Industrial Waste -	0

Has / will a contract be obtained with a licenced waste carrier?	☒

Mixed Use Developments

Are the stores for residential and commercial separate from each other?	☒

Internal Stores (Residential and Commercial)

Please provide details of internal stores / segregation of waste and recycling.

Residents have access on the ground floor to the internal residential refuse store via the circulation core, and an external door is provided for removal on bin collection days. The residential store will be managed by facilities staff. Separate eurobins will be provided for waste and recycling.

Currently the commercial space is designed as a shell to allow flexibility to accommodate different future uses. A commercial refuse store has been provided to provide suitable bin storage in accordance with BS5906:2005

Storage Areas for Waste Containers (Residential and Commercial)

Please provide details of container stores, attaching plans if appropriate.

Residential storage areas for the low rise development have waste containers providing space for 4 x 240L bins for properties with rear gardens. For properties with no rear gardens an area for 3 x 240L bins is provided, with a 23L food caddy to be stored internally. These storage areas are located on front drives in high quality design timber and brick stores.

Ensure all bins in the store are accessible	☒
Ensure recycling facilities are as easy to access as general refuse	☒

24

Please confirm details of waste store ventilation and hygiene / cleaning proposals

Ventilation - Residential waste stores for the low rise development are in self-contained stores which are covered and screened for weather protection and are fully ventilated. Internal residential refuse stores for the high rise will be fully ventilated with louvred/perforated doors provided.

Hygiene - Residential stores for the low rise development will be constructed and finished in materials which are impervious and easy to clean.
Internal residential refuse stores will have floor finishes that can be easily cleaned and sprayed down. These stores will be regularly cleaned by the facility staff.

Please provide details of who will be responsible for placing the bins at the collection point and returning them to the store / property promptly e.g. resident / management company

All stores for the low rise development are located close to the adopted highway and will be put onto the road side by residents on bin collection days.
The refuse stores for the high rise development will be moved to bin collection points for the apartments by the facility staff. Following collection the facility staff will ensure all containers have been returned to the refuse stores.

Please ensure that you have attached:

Detailed plans of waste stores	☒
Location plans showing stores	☒
Location plans showing the proposed collection point and the route the collection vehicle will take	☒

Please ensure that you have completed this form in accordance with our GD04 Waste Storage and Collection Guidance for New Developments

25

9.0 Appendix B - Refuse Tracking

Civic Engineers

Manchester
Carver's Warehouse
77 Dale Street
Manchester M1 2HG
-
+44 (0)161 228 6757

Our Ref: - 1226-01 Collyhurst Village Housing

Planning Ref: 129393/VO/21

15 June 2021

Collyhurst Housing – Refuse Strategy Clarification

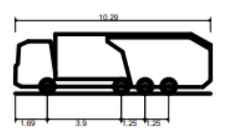
Further to consultation feedback from MCC and the meeting held on 14 June between Avison Young, Civic Engineers, FEC, MCC Planning and MCC Highways, we would like to clarify the proposed refuse strategy as follows:

1. MCC Waste Storage and Collection Guidance for New Development GD04 states that developments should be designed to accommodate maneuvering of a refuse vehicle to the following dimensions:

Length	11.5 metres
Length when loading	13.1 metres
Width	3 metres
Width when loading	4.1 metres
Height	4 metres
Height when loading	6 metres
Turning circle (between kerbs)	17.88 metres
Turning circle (between walls)	19.39 metres

The 11.5m x 3m vehicle ('MCC Vehicle') has been tracked utilising Autotrack software and maneuvers are shown on Civic Engineers drawing 1226-01-CIV-XX-VIL-DR-HI-0300, 1226-01-CIV-XX-VIL-DR-HI-0302, 1226-01-CIV-XX-VIL-DR-HI-0304, 1226-01-CIV-XX-VIL-DR-HI-0306. Due to the density of the scheme and scale of the MCC Vehicle, tracking has shown that the maneuvers could not be accommodated within all of the Living Streets and as such 6 No. centralised refuse collection points would be required.

2. .Due to the impact that tracking such a large vehicle around the development would have on the streetscape Civic Engineers made contact with Biffa (MCC's refuse provider) who provided a data sheet for the largest vehicle in their fleet. The correspondence with Biffa is attached for reference. The largest specification provided is attached for ease of reference and is the Olympus OL-27W 8x4MS. The dimensional specification of this vehicle ('Olympus Vehicle') is as shown below. The dimensions of the MCC Vehicle as shown above therefore do not reflect the vehicles currently in operation.



OLYMPUS OL-27W 8x4MS

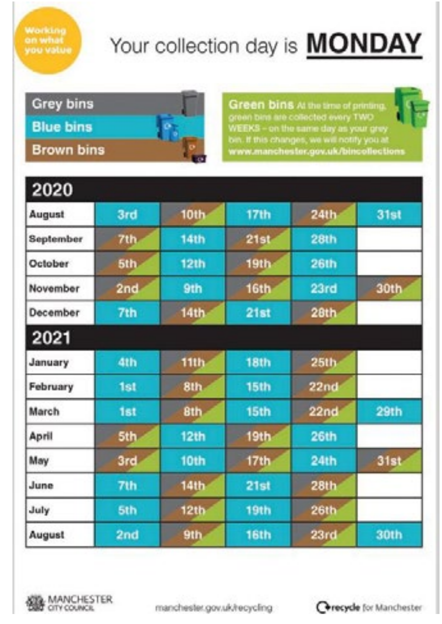
Overall Length	10.290m
Overall Width	2.530m
Overall Body Height	3.153m
Min Body Ground Clearance	0.358m
Track Width	2.200m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	11.200m

Tracking the proposals with the Olympus Vehicle showed that the living streets would be more straightforwardly accessible, in particular the living street accessed from Paget Street and that this would enable bins from the properties on this living street to be collected from the property itself. Based on this tracking only 4No. centralised collection points would be required. This scenario is shown on Civic Engineers drawings 1226-01-CIV-XX-ZZ-SK-C-0020 and 1226-01-CIV-XX-ZZ-SK-C-0022.

3. It is proposed that the centralised collection points would be identified through signage and that residents would wheel their bins to the collection point on collection day and return the bins to their homes once collection has taken place. Details of this strategy would be included in the homeowner pack when residents move into the development.

   Each centralised collection point would provide for a maximum of 4No. homes. Based on information found online (extract as included below) refuse collection day in Collyhurst is Monday and every other week a maximum of 3No. bins per household could be collected. This would mean a maximum of 12No. bins per collection point.

Civic Engineers Limited (registered number 06824088)
Registered in England and Wales at: Carvers Warehouse, 77 Dale Street, Manchester M1 2HG
civicengineers.com
Manchester / London / Leeds / Glasgow



The footway at collection points would be widened locally where required to maintain a 2m clear width when bins are positioned at the back of footway.

The following drawings are attached and should be read in conjunction with this note:

1226-01-CIV-XX-VIL-DR-HI-0300
1226-01-CIV-XX-VIL-DR-HI-0302
1226-01-CIV-XX-VIL-DR-HI-0304
1226-01-CIV-XX-VIL-DR-HI-0306
1226-01-CIV-XX-ZZ-SK-C-0020
1226-01-CIV-XX-ZZ-SK-C-0022.

Civic Engineers Limited (registered number 06824088)
Registered in England and Wales at: Carvers Warehouse, 77 Dale Street, Manchester M1 2HG
civicengineers.com
Manchester / London / Leeds / Glasgow

Standard Notes

1. This drawing is to be read in conjunction with all relevant Architect's and Engineer's drawings and the specification.
2. This drawing should not be scaled.
3. All dimensions are to be verified by the contractor on site.
4. All discrepancies should be reported to the C.A. prior to the commencement of the works.

© CIVIC ENGINEERS LIMITED

Notes and Keys

A. TOPOGRAPHICAL SURVEY CONDUCTED BY SURVEY OPERATIONS TITLED "TOPOGRAPHICAL SURVEY OF LAND AT: LAND OFF ROCHDALE ROAD COLLYHURST MANCHESTER" DRAWING NUMBER 19K190/003 DATED DECEMBER 2019.
B. SITE LAYOUT PROVIDED BY EXTERIOR LANDSCAPE ARCHITECTS, RECEIVED 11.05.2021
C. AUTODESK VEHICLE TRACKING SOFTWARE AND ARE INDICATIVE ONLY. THE ENVELOPES SHOWN DO NOT MAKE ALLOWANCE FOR DRIVER ABILITY, GRADIENTS AND ALTERNATIVE VEHICLE SPECIFICATIONS.

MCC Refuse Vehicle	
Overall Length	11.520m
Overall Width	3.000m
Overall Body Height	3.804m
Min Body Ground Clearance	0.356m
Track Width	2.800m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	8.940m

KEY

- CHASSIS ENVELOPE
- BODY ENVELOPE
- 15m RADIUS
- 25m RADIUS

Date	Rev	Description	Drawn	Chkd
11.05.21	P07	UPDATED TO PLANNING COMMENTS	RSH	CFK
26.01.21	P06	LATEST LANDSCAPE ARCHITECT SITE LAYOUT	ZG	CFK
16.12.20	P05	ISSUED FOR PLANNING	RSH	PM
21.10.20	P04	REVISED TRACKING TO UPDATED LAYOUT	RSH	PM
08.04.20	P03	REMOVAL OF DB32 REFUSE VEHICLE	RSH	-
23.03.20	P02	ISSUED FOR INFORMATION	RSH	-
28.02.20	P01	ISSUED FOR INFORMATION	RSH	PM

Civic Engineers
MANCHESTER Carver's Warehouse, 77 Dale Street, Manchester, M1 2HG. Tel: 0161 228 6757
LONDON Reeds Wharf, 33 Mill Street, London SE1 2AX. Tel: 020 7253 2977
LEEDS Tower Works, Unit 02-01, Globe Road, Leeds, LS11 5QG. Tel: 0113 2025 130
GLASGOW Gresham Chambers, 45 West Nile St, Glasgow, G1 2PT. Tel: 0141 370 1829
www.civicengineers.com

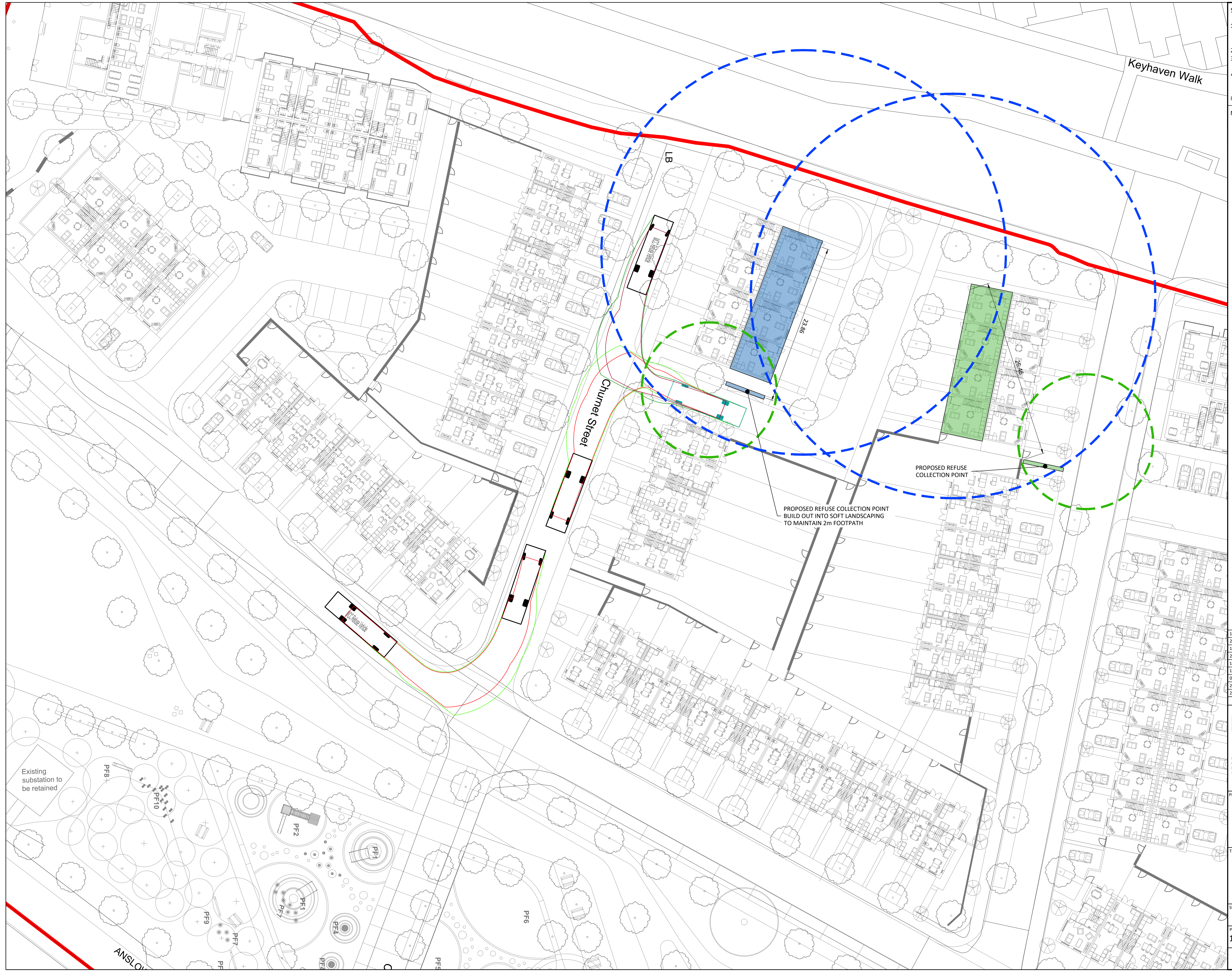
Project
COLLYHURST HOUSING
MANCHESTER

Title
COLLYHURST VILLAGE (NORTH SITE)
VEHICLE TRACKING
PLOT A
REFUSE VEHICLE

Status
INFORMATION

Project Number	Scale @ A1	Date Created	Drawn	Checked	Suitability
1226-01	1:250	26.02.20	RSH	PM	--

Drawing Number	Revision
1226-01-CIV-XX-VIL-DR-HI-0300	P07



Standard Notes

1. This drawing is to be read in conjunction with all relevant Architect's and Engineer's drawings and the specification.
2. This drawing should not be scaled.
3. All dimensions are to be verified by the contractor on site.
4. All discrepancies should be reported to the C.A. prior to the commencement of the works.

© CIVIC ENGINEERS LIMITED

Notes and Keys

A. TOPOGRAPHICAL SURVEY CONDUCTED BY SURVEY OPERATIONS TITLED "TOPOGRAPHICAL SURVEY OF LAND AT: LAND OFF ROCHDALE ROAD COLLYHURST MANCHESTER" DRAWING NUMBER 19K190/003 DATED DECEMBER 2019.
B. SITE LAYOUT PROVIDED BY EXTERIOR LANDSCAPE ARCHITECTS, RECEIVED 11.05.2021
C. AUTODESK VEHICLE TRACKING SOFTWARE AND ARE INDICATIVE ONLY. THE ENVELOPES SHOWN DO NOT MAKE ALLOWANCE FOR DRIVER ABILITY, GRADIENTS AND ALTERNATIVE VEHICLE SPECIFICATIONS.

MCC Refuse Vehicle	
Overall Length	11.520m
Overall Width	3.000m
Overall Body Height	3.804m
Min Body Ground Clearance	0.356m
Track Width	2.800m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	8.940m

KEY

- CHASSIS ENVELOPE
- BODY ENVELOPE
- 10m RADIUS
- 30m RADIUS
- HOUSES SERVING REFUSE COLLECTION POINT 1
- HOUSES SERVING REFUSE COLLECTION POINT 2
- HOUSES SERVING REFUSE COLLECTION POINT 3
- HOUSES SERVING REFUSE COLLECTION POINT 4
- HOUSES SERVING REFUSE COLLECTION POINT 5
- HOUSES SERVING REFUSE COLLECTION POINT 6

Date	Rev	Description	Drawn	Chkd
15.06.21	P09	REVISED COLLECTION POINTS	RSH	PM
28.05.21	P08	REVISED INDICATIVE COLLECTION POINTS	RSH	PM
11.05.21	P07	UPDATED TO PLANNING COMMENTS	RSH	CFK
26.01.21	P06	LATEST LANDSCAPE ARCHITECT SITE LAYOUT	ZG	CK
16.12.20	P05	ISSUED FOR PLANNING	RSH	PM
11.11.20	P04	MCC WASTE VEHICLE SPEC	RSH	PM
09.04.20	P03	DB32 REFUSE VEHICLE REMOVED	RSH	-
23.03.20	P02	ISSUED FOR INFORMATION	RSH	-
28.02.20	P01	ISSUED FOR INFORMATION	RSH	PM

Civic Engineers
www.civicengineers.com

Project
COLLYHURST HOUSING
MANCHESTER

Title
COLLYHURST VILLAGE (NORTH SITE)
VEHICLE TRACKING
PLOT B
REFUSE VEHICLE

Status
INFORMATION

Project Number	Scale @ A1	Date Created	Drawn	Checked	Suitability
1226-01	1:200	26.02.20	RSH	PM	--

Drawing Number	Revision
1226-01-CIV-XX-VIL-DR-HI-0302	P09

Standard Notes

1. This drawing is to be read in conjunction with all relevant Architect's and Engineer's drawings and the specification.
2. This drawing should not be scaled.
3. All dimensions are to be verified by the contractor on site.
4. All discrepancies should be reported to the C.A. prior to the commencement of the works.

© CIVIC ENGINEERS LIMITED

Notes and Keys

A. TOPOGRAPHICAL SURVEY CONDUCTED BY SURVEY OPERATIONS TITLED "TOPOGRAPHICAL SURVEY OF LAND AT: LAND OFF ROCHDALE ROAD COLLYHURST MANCHESTER" DRAWING NUMBER 19K190/003 DATED DECEMBER 2019.
B. SITE LAYOUT PROVIDED BY EXTERIOR LANDSCAPE ARCHITECTS, RECEIVED 11.05.2021
C. AUTODESK VEHICLE TRACKING SOFTWARE AND ARE INDICATIVE ONLY. THE ENVELOPES SHOWN DO NOT MAKE ALLOWANCE FOR DRIVER ABILITY, GRADIENTS AND ALTERNATIVE VEHICLE SPECIFICATIONS.

11.52 / 1.82 / 6.5

MCC Refuse Vehicle	
Overall Length	11.520m
Overall Width	3.000m
Overall Body Height	3.804m
Min Body Ground Clearance	0.356m
Track Width	2.800m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	8.940m

KEY

- CHASSIS ENVELOPE
- BODY ENVELOPE
- 10m RADIUS
- 30m RADIUS
- HOUSES SERVING REFUSE COLLECTION POINT 1
- HOUSES SERVING REFUSE COLLECTION POINT 2
- HOUSES SERVING REFUSE COLLECTION POINT 3
- HOUSES SERVING REFUSE COLLECTION POINT 4
- HOUSES SERVING REFUSE COLLECTION POINT 5
- HOUSES SERVING REFUSE COLLECTION POINT 6

Date	Rev	Description	Drawn	Chkd
15.06.21	P09	REVISED COLLECTION POINTS	RSH	PM
28.05.21	P08	REVISED INDICATIVE COLLECTION POINTS	RSH	PM
11.05.21	P07	UPDATED TO PLANNING COMMENTS	RSH	CFK
26.01.21	P06	LATEST LANDSCAPE ARCHITECT SITE LAYOUT	ZG	CFK
16.12.20	P05	ISSUED FOR PLANNING	RSH	PM
21.10.20	P04	REVISED TRACKING TO UPDATED LAYOUT	RSH	PM
08.04.20	P03	DB32 VEHICLE REMOVED	RSH	-
23.03.20	P02	ISSUED FOR INFORMATION	RSH	-
28.02.20	P01	ISSUED FOR INFORMATION	RSH	PM

Civic Engineers
MANCHESTER Carver's Warehouse, 77 Dale Street, Manchester, M1 2HG. Tel: 0161 228 6757
LONDON Reeds Wharf, 33 Mill Street, London SE1 2AX. Tel: 020 7253 2977
LEEDS Tower Works, Unit 02-01, Globe Road, Leeds, LS11 5QG. Tel: 0113 2025 130
GLASGOW Gresham Chambers, 45 West Nile St, Glasgow, G1 2PT. Tel: 0141 370 1829
www.civicengineers.com

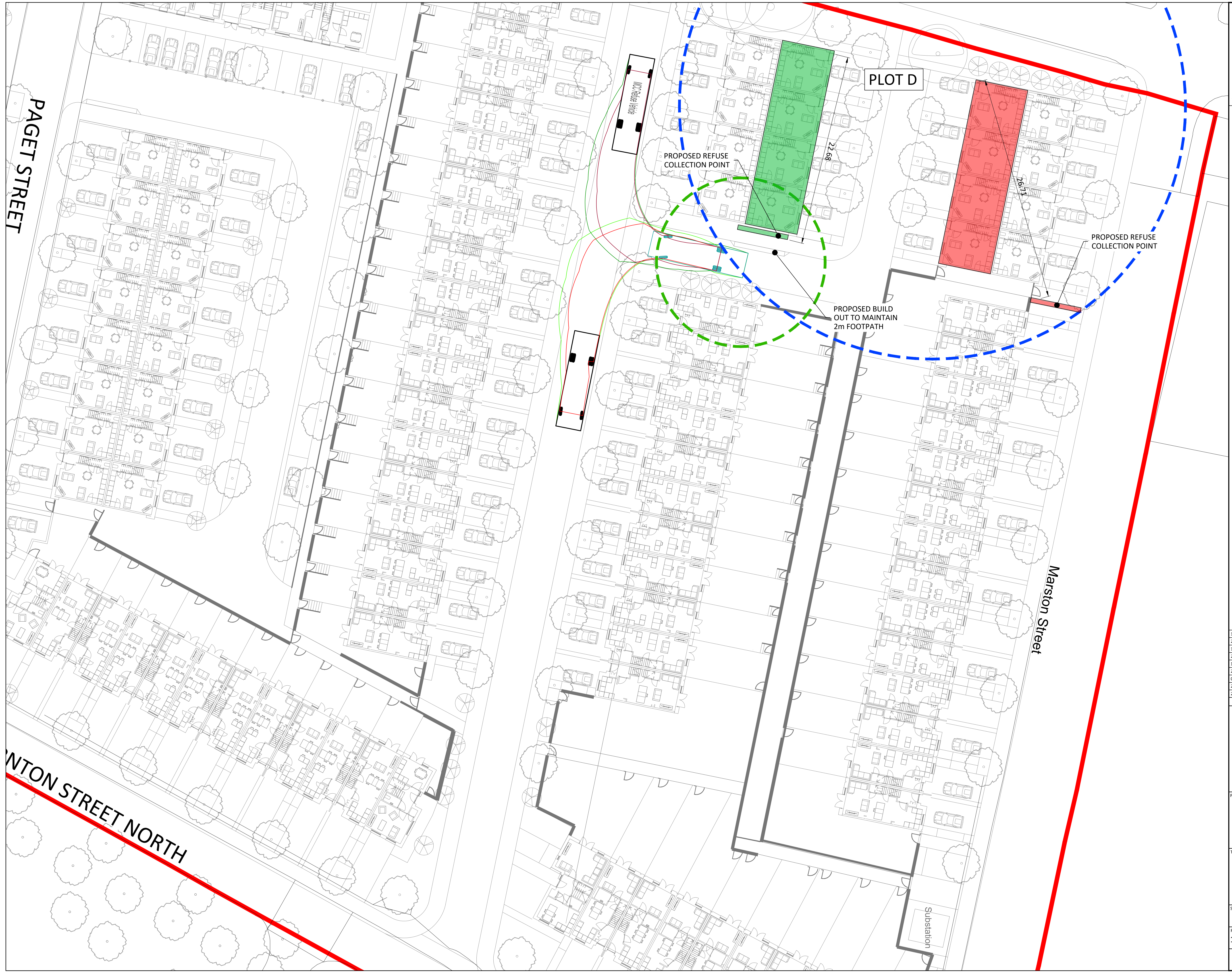
Project
COLLYHURST HOUSING
MANCHESTER

Title
COLLYHURST VILLAGE (NORTH SITE)
VEHICLE TRACKING
PLOT C
REFUSE VEHICLE

Status
INFORMATION

Project Number	Scale @ A1	Date Created	Drawn	Checked	Suitability
1226-01	1:200	26.02.20	RSH	PM	--

Drawing Number	Revision
1226-01-CIV-XX-VIL-DR-HI-0304	P09



Standard Notes

1. This drawing is to be read in conjunction with all relevant Architect's and Engineer's drawings and the specification.
2. This drawing should not be scaled.
3. All dimensions are to be verified by the contractor on site.
4. All discrepancies should be reported to the C.A. prior to the commencement of the works.

© CIVIC ENGINEERS LIMITED

Notes and Keys

A. TOPOGRAPHICAL SURVEY CONDUCTED BY SURVEY OPERATIONS TITLED "TOPOGRAPHICAL SURVEY OF LAND AT: LAND OFF ROCHDALE ROAD COLLYHURST MANCHESTER" DRAWING NUMBER 19K190/003 DATED DECEMBER 2019.
B. SITE LAYOUT PROVIDED BY EXTERIOR LANDSCAPE ARCHITECTS, RECEIVED 11.05.2021
C. AUTODESK VEHICLE TRACKING SOFTWARE AND ARE INDICATIVE ONLY. THE ENVELOPES SHOWN DO NOT MAKE ALLOWANCE FOR DRIVER ABILITY, GRADIENTS AND ALTERNATIVE VEHICLE SPECIFICATIONS.

MCC Refuse Vehicle
Overall Length 11.520m
Overall Width 3.000m
Overall Body Height 3.804m
Min Body Ground Clearance 0.356m
Track Width 2.800m
Lock to lock time 6.00s
Kerb to Kerb Turning Radius 8.940m

KEY

- CHASSIS ENVELOPE
- BODY ENVELOPE
- 10m RADIUS
- 30m RADIUS
- HOUSES SERVING REFUSE COLLECTION POINT 1
- HOUSES SERVING REFUSE COLLECTION POINT 2
- HOUSES SERVING REFUSE COLLECTION POINT 3
- HOUSES SERVING REFUSE COLLECTION POINT 4
- HOUSES SERVING REFUSE COLLECTION POINT 5
- HOUSES SERVING REFUSE COLLECTION POINT 6

Date	Rev	Description	Drawn	Chkd
15.06.21	P09	REVISED COLLECTION POINTS	RSH	PM
28.05.21	P08	REVISED INDICATIVE COLLECTION POINTS	RSH	PM
11.05.21	P07	UPDATED TO PLANNING COMMENTS	RSH	CFK
26.01.21	P06	LATEST LANDSCAPE ARCHITECT SITE LAYOUT	ZG	CK
16.12.20	P05	ISSUED FOR PLANNING	RSH	PM
21.10.20	P04	TRACKING REVISED TO UPDATED LAYOUT	RSH	PM
09.04.20	P03	DB32 REFUSE TRACKING REMOVED	RSH	RSH
23.03.20	P02	ISSUED FOR INFORMATION	RSH	RSH
28.02.20	P01	ISSUED FOR INFORMATION	RSH	PM

Civic Engineers
MANCHESTER Carver's Warehouse, 77 Dale Street, Manchester, M1 2HG. Tel: 0161 228 6757
LONDON Reeds Wharf, 33 Mill Street, London SE1 2AX. Tel: 020 7253 2977
LEEDS Tower Works, Unit 02-01, Globe Road, Leeds, LS11 5QG. Tel: 0113 2025 130
GLASGOW Gresham Chambers, 45 West Nile St, Glasgow, G1 2PT. Tel: 0141 370 1829
www.civicengineers.com

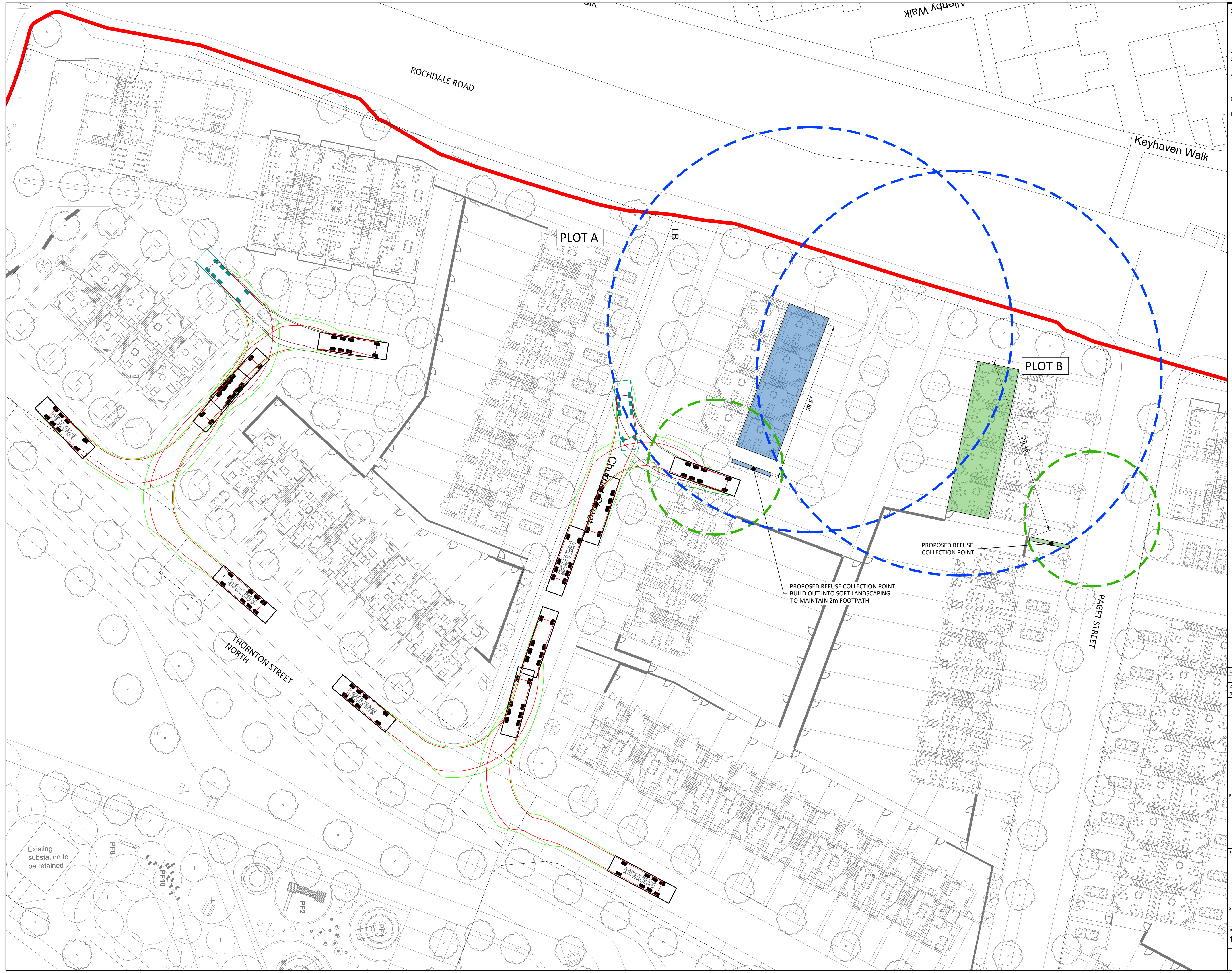
Project
COLLYHURST HOUSING
MANCHESTER

Title
COLLYHURST VILLAGE (NORTH SITE)
VEHICLE TRACKING
PLOT D
REFUSE VEHICLE

Status
INFORMATION

Project Number	Scale @ A1	Date Created	Drawn	Checked	Suitability
1226-01	1:200	26.02.20	RSH	PM	--

Drawing Number	Revision
1226-01-CIV-XX-VIL-DR-HI-0306	P09



Standard Notes

1. This drawing is to be read in conjunction with all relevant Architect's and Engineer's drawings and the specification.
2. This drawing should not be scaled.
3. All dimensions are to be verified by the contractor on site.
4. All discrepancies should be reported to the C.A. prior to the commencement of the works.

© CIVIC ENGINEERS LIMITED

Notes and Keys

A. TOPOGRAPHICAL SURVEY CONDUCTED BY SURVEY OPERATIONS TITLED "TOPOGRAPHICAL SURVEY OF LAND AT: LAND OFF ROCHDALE ROAD COLLYHURST MANCHESTER" DRAWING NUMBER 19K190/003 DATED DECEMBER 2019.
B. SITE LAYOUT PROVIDED BY EXTERIOR LANDSCAPE ARCHITECTS, RECEIVED 11.05.2021
C. AUTODESK VEHICLE TRACKING SOFTWARE AND ARE INDICATIVE ONLY. THE ENVELOPES SHOWN DO NOT MAKE ALLOWANCE FOR DRIVER ABILITY, GRADIENTS AND ALTERNATIVE VEHICLE SPECIFICATIONS.

OLYMPUS OL-27W 8x4MS

Overall Length	10.290m
Overall Width	2.530m
Overall Body Height	3.153m
Min Body Ground Clearance	0.358m
Track Width	2.200m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	11.200m

KEY

- CHASSIS ENVELOPE
- BODY ENVELOPE
- 10m RADIUS
- 30m RADIUS
- HOUSES SERVING REFUSE COLLECTION POINT 1
- HOUSES SERVING REFUSE COLLECTION POINT 2
- HOUSES SERVING REFUSE COLLECTION POINT 3
- HOUSES SERVING REFUSE COLLECTION POINT 4
- HOUSES SERVING REFUSE COLLECTION POINT 5
- HOUSES SERVING REFUSE COLLECTION POINT 6

Date	Rev	Description	Drawn	Chkd
15.06.21	P04	REVISED COLLECTION POINTS	RSH	PM
10.06.21	P03	ISSUED FOR INFORMATION	RSH	PM
28.10.20	P02	ISSUED FOR INFORMATION	RSH	PM
09.04.20	P01	ISSUED FOR INFORMATION	RSH	PM

Civic Engineers

MANCHESTER Carver's Warehouse, 77 Dale Street, Manchester, M1 2HG. Tel: 0161 228 6757
LONDON Reeds Wharf, 33 Mill Street, London SE1 2AX. Tel: 020 7253 2977
LEEDS Tower Works, Unit 02-01, Globe Road, Leeds, LS11 5QG. Tel: 0113 2025 130
GLASGOW Gresham Chambers, 45 West Nile St, Glasgow, G1 2PT. Tel: 0141 370 1829
www.civicengineers.com

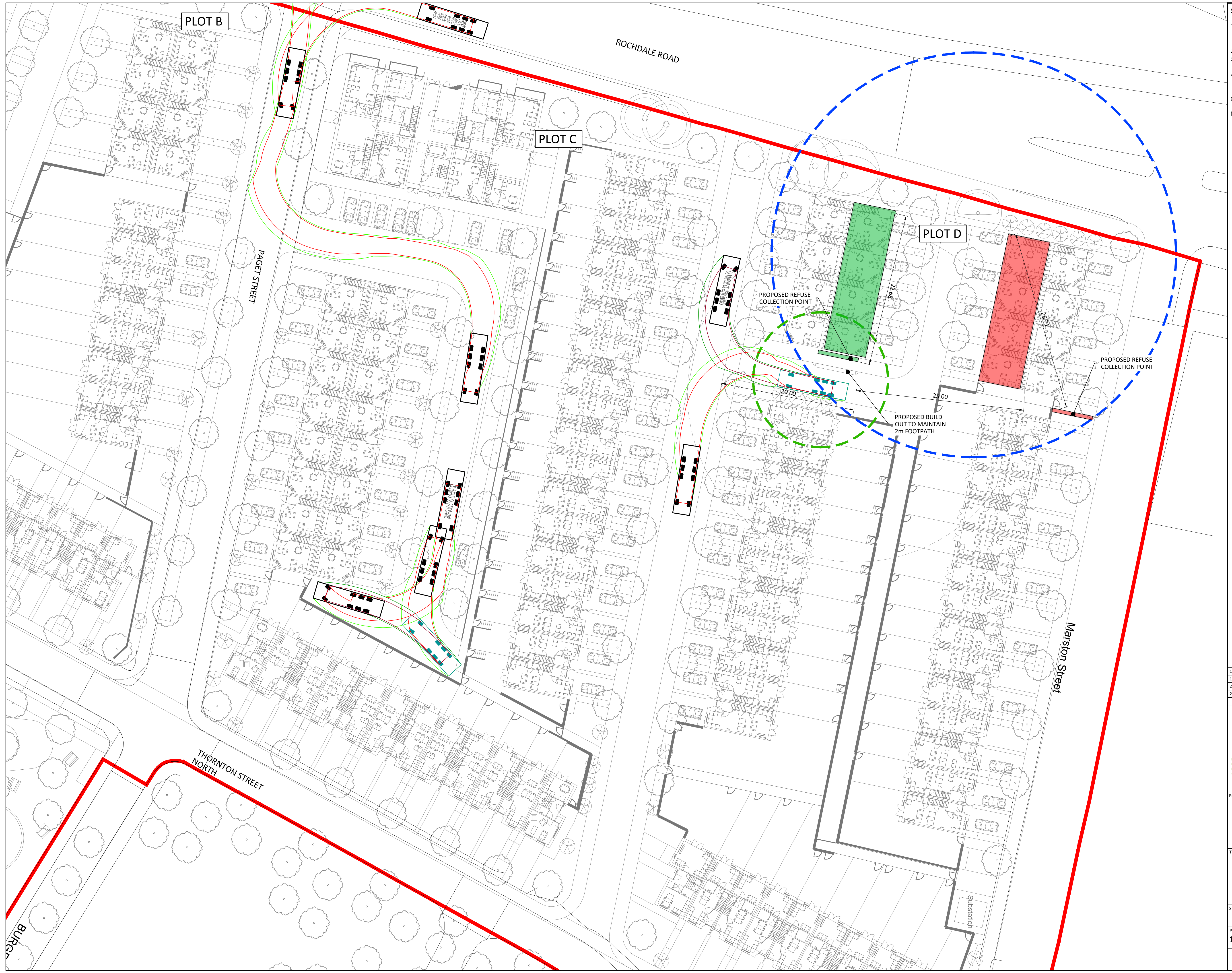
Project
COLLYHURST HOUSING
MANCHESTER

Title
COLLYHURST VILLAGE (NORTH SITE)
VEHICLE TRACKING
PLOT A
REFUSE VEHICLE

Status
INFORMATION

Project Number	Scale @ A1	Date Created	Drawn	Checked	Suitability
1226-01	1:250	26.02.20	RSH	PM	--

Drawing Number	Revision
1226-01-CIV-XX-ZZ-SK-C-0020	P04



Standard Notes

1. This drawing is to be read in conjunction with all relevant Architect's and Engineer's drawings and the specification.
2. This drawing should not be scaled.
3. All dimensions are to be verified by the contractor on site.
4. All discrepancies should be reported to the C.A. prior to the commencement of the works.

© CIVIC ENGINEERS LIMITED

Notes and Keys

A. TOPOGRAPHICAL SURVEY CONDUCTED BY SURVEY OPERATIONS TITLED "TOPOGRAPHICAL SURVEY OF LAND AT: LAND OFF ROCHDALE ROAD COLLYHURST MANCHESTER" DRAWING NUMBER 19K190/003 DATED DECEMBER 2019.
B. SITE LAYOUT PROVIDED BY EXTERIOR LANDSCAPE ARCHITECTS, RECEIVED 11.05.2021
C. AUTODESK VEHICLE TRACKING SOFTWARE AND ARE INDICATIVE ONLY. THE ENVELOPES SHOWN DO NOT MAKE ALLOWANCE FOR DRIVER ABILITY, GRADIENTS AND ALTERNATIVE VEHICLE SPECIFICATIONS.

OLYMPUS OL-27W 8x4MS
Overall Length 10.290m
Overall Width 2.530m
Overall Body Height 3.153m
Min Body Ground Clearance 0.358m
Track Width 2.200m
Lock to lock time 4.00s
Kerb to Kerb Turning Radius 11.200m

KEY
CHASSIS ENVELOPE
BODY ENVELOPE
10m RADIUS
30m RADIUS
HOUSES SERVING REFUSE COLLECTION POINT 1
HOUSES SERVING REFUSE COLLECTION POINT 2
HOUSES SERVING REFUSE COLLECTION POINT 3
HOUSES SERVING REFUSE COLLECTION POINT 4
HOUSES SERVING REFUSE COLLECTION POINT 5
HOUSES SERVING REFUSE COLLECTION POINT 6

15.06.21 P04 REVISED COLLECTION POINTS RSH PM
10.06.21 P03 ISSUED FOR INFORMATION RSH PM
28.10.20 P02 ISSUED FOR INFORMATION RSH PM
09.04.20 P01 ISSUED FOR INFORMATION RSH PM
Date Rev Description Drawn Chkd

Civic Engineers
www.civicengineers.com

Project
COLLYHURST HOUSING
MANCHESTER

Title
COLLYHURST VILLAGE (NORTH SITE)
VEHICLE TRACKING
PLOT C
REFUSE VEHICLE

Status
INFORMATION

Project Number	Scale @ A1	Date Created	Drawn	Checked	Suitability
1226-01	1:250	26.02.20	RSH	PM	--

Drawing Number	Revision
1226-01-CIV-XX-ZZ-SK-C-0022	P04

Buttress

Architects | Masterplanners | Heritage Consultants