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# Manor Road / Richmond

## Waste Management Strategy Addendum

Momentum Transport Consultancy

November 2019

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# MANOR ROAD, RICHMOND

Revised Waste Management Strategy Addendum

20/11/2019



# DOCUMENT CONTROL ISSUE SHEET

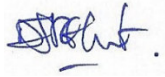
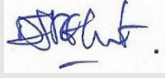
## Project & Document Details

Project Name	Manor Road, Richmond
Project Number	M000476
Document Title	Waste Management Strategy

## Document History

Issue	Status	Reason for Issue	Issued to
2.0	Draft	Issued for comment	Fairhurst
3.0	Final	For Submission	Fairhurst

## Issue Control

Issue	Date	Author	Contributors	Authorisation	
				Name	Signature
2.0	23/10/19	JDr	-	DH	
3.0	20/11/19	JDr	-	DH	

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# 1. INTRODUCTION

- 1.1.1 Momentum Transport Consultancy (Momentum) has been appointed by the applicant, Avanton Richmond Development Ltd to provide a Revised Waste Management Strategy to support the planning application for the residential and commercial development at Manor Road, North Sheen, within the London Borough of Richmond upon Thames (LBRuT).
- 1.1.2 On behalf of Avanton Richmond Development Ltd, a detailed planning application (ref. 19/0510/FUL) was submitted to the London Borough of Richmond Upon Thames (LBRuT) in February 2019 for the redevelopment of the Homebase store at 84 Manor Road, North Sheen.
- 1.1.3 The application was considered at LBRuT Planning Committee on 3 July 2019 and was recommended for refusal by LBRuT officers. The Planning Committee resolved that they were minded to refuse the Application in line with the officer's recommendation for six reasons relating to affordable housing; design; residential amenity; living standards; energy; and absence of a legal agreement.
- 1.1.4 On 29 July 2019 the Mayor issued a Direction pursuant to Article 7 of the Town and Country Planning (Mayor of London) Order 2008 and powers conferred by Section 2A of the Town and Country Planning Act (1990) that he would act as the LPA for the purposes of determining the Application.
- 1.1.5 Further to the Mayor's direction to take over the Planning Application for his determination, the Applicant, in consultation with the GLA and TfL, has taken the opportunity to review the scheme with the principle aim of increasing the delivery of affordable housing through additional density and addressing other issues raised in the Mayor's Stage 2 Report.
- 1.1.6 The proposed changes necessitate an amendment to the Applications description of development. The revised description of development is as follows:

Demolition of existing buildings and structures and comprehensive phased residential-led redevelopment to provide residential units (Class C3), flexible retail /community / office uses (Classes A1, A2, A3, D2, B1), a police facility (Use Class B1), a bus layover with driver facilities (Sui Generis Use), provision of car and cycle parking, landscaping, public and private open spaces and all other necessary enabling works.
- 1.1.7 The amended scheme is referred as the 'Amended Proposed Development' and its previous iteration that was considered at LBRuT Planning Committee in 3 July 2019, is referred to as the 'Original Proposed Development'.
- 1.1.8 This is a revised Waste Management Strategy to the one originally submitted, taking into account the proposed amendments to the scheme since it has been called in by the GLA. This includes the introduction of Block E to the north of the site resulting in an increased number of residential units.
- 1.1.9 This revised Waste Management Strategy provides details on how operational waste produced by the proposed development will be internally processed, stored and removed from site. The strategy will ensure compliance with local, regional and national policy.
- 1.1.10 It is suggested that details contained within the revised Waste Management Strategy be secured by way of a planning condition.
- 1.1.11 This section of the report forms the introduction. The rest of the report is structured as follows:
  - Chapter 2 outlines the relevant legislation and planning policy

- Chapter 3 outlines the site context
- Chapter 4 explains the development proposals
- Chapter 5 sets out the waste generated by the proposed development
- Chapter 6 outlines the waste storage, collection and management strategy
- Chapter 7 concludes the report

## 2. LEGISLATION AND PLANNING POLICY

### 2.1 National Legislation

#### ENVIRONMENTAL PROTECTION ACT (1990)

- 2.1.1 The Environmental Protection Act states that it is an offence not to comply with the duty of care obligations and regulators can take enforcement actions (such as court proceedings) which may give rise to an unlimited fine or sanctions) against offences.

#### WASTE, DUTY OF CARE CODE OF PRACTICE (2016)

- 2.1.2 This legislation, produced by the Department for Environment, Food and Rural Affairs (DEFRA), sets out practical guidance on how to meet the waste duty of care requirements.
- 2.1.3 Section 34 imposes a duty of care on anyone handling controlled waste to ensure the safe management of waste to protect human health and the environment. The code applies to any party who produces, carries, treats, disposes of, or has control of certain waste in England and Wales.
- 2.1.4 It is the responsibility of the individual waste holder to check whether a person or business is authorised to take waste before any waste is transferred to them. On transferring waste an accurate written description of the waste must be produced and signed by the transferee and transferor of the waste.

#### THE WASTE (ENGLAND & WALES) REGULATION (2011)

- 2.1.5 Under these regulations started from 1<sup>st</sup> January 2015, waste collection authorities have been required to make arrangements for the separate collection of paper, metal, plastic and glass waste.

#### THE CONTROLLED WASTE (ENGLAND & WALES) REGULATIONS (2012)

- 2.1.6 The Controlled Waste Regulations define waste into three categories: household waste, commercial waste and industrial waste. Waste is classified by its place of production or by the nature of the waste or the activity that produces it. In order to limit the cost of the taxpayer funded waste disposal, regulations permit the local authorities to charge a fee for waste disposal services provided by local authorities to certain non-domestic properties.

### 2.2 National Policy

#### NATIONAL PLANNING POLICY FRAMEWORK (2019)

- 2.2.1 The National Planning Policy Framework (NPPF) has been produced by the Department for Communities and Local Government, published in 2018 with minor amendments made in 2019.
- 2.2.2 The National Planning Policy Framework (NPPF) sets out the Government's planning policies for England and how they are expected to be applied. The NPPF does not have any specific policies on waste, although minimising waste and pollution are objectives within guidance towards achieving sustainable development. National Planning Practice Guidance also provides advice on waste management and issues associated with waste when determining planning applications.



2.2.3 The NPPF should be read in conjunction with the National Planning Policy for Waste (2014) and the Waste Management Plan for England (2013), as these documents contain relevant policy.

### **NATIONAL PLANNING POLICY FOR WASTE (2014)**

2.2.4 The National Planning Policy for Waste sets out detailed waste planning policies. It requires waste planning authorities to prepare Local Plans which identify sufficient opportunities to meet the identified needs of their area for the management of waste streams. Waste planning authorities should identify sites and or areas for new or enhanced waste management facilities in appropriate locations.

2.2.5 When determining non-waste development planning applications, waste planning authorities should consider whether:

- The proposed, non-waste related development has an acceptable impact on existing waste management facilities and on sites and areas allocated for waste management, and does not prejudice the implementation of the waste hierarchy and/or the efficient operation of such facilities
- New, non-waste development makes sufficient provision for waste management and promotes good design to secure the integration of waste management facilities with the rest of the development and, in less developed areas, with the local landscape. This includes providing adequate storage facilities at residential premises, for example by ensuring that there is sufficient and discrete provision for bins, to facilitate a high quality, comprehensive and frequent household collection service
- The handling of waste arising from the construction and operation of the proposed development maximises reuse/recovery opportunities and minimises off-site disposal.

### **WASTE MANAGEMENT PLAN FOR ENGLAND (2013)**

2.2.6 The Waste Management Plan for England issued pursuant to the mandatory requirements of Article 28 of the revised Waste Framework Directive (WFD) outlines how to move towards a zero-waste economy might be considered as part of the transition to a sustainable economy. It provides an analysis of the current waste management situation in England and evaluates how the plan will support implementation of the objectives and provisions of the WFD.

## **2.3 Regional Policy**

### **THE LONDON PLAN (2016)**

2.3.1 The adopted London Plan (2016) sets out the Mayor's vision for waste management in Greater London, aiming to achieve net self-sufficiency for household and commercial waste by 2026. This would mean that there are sufficient waste management sites to deal with the apportioned waste to each borough.

2.3.2 The areas of focus to achieve this aspiration of net waste self-sufficiency for London are as follows:

- Minimising waste
- Encouraging the reuse and recycling of waste
- Exceeding recycling/composting levels in commercial and industrial waste of 70% by 2020
- Exceeding recycling/composting levels in local authority collected waste (LACW) of 45 per cent by 2015, 50 per cent by 2020 and aspiring to achieve 60 per cent by 2031
- Exceeding recycling and reuse levels in construction, excavation and demolition (CE&D) waste of 95 per cent by 2020

- Improving London's net self-sufficiency through reducing the proportion of waste exported from the capital over time
- Working with neighbouring regional and district authorities to coordinate strategic waste management across the greater south east of England.

### **THE DRAFT LONDON PLAN (2019)**

2.3.3 The Draft London Plan (first published 2017, with minor amendments in 2018 and 2019) outlines the Mayor's commitment to making better use of waste and its management. As part of wider attempts to reduce London's production of waste and disposal of waste as well as increasing material re-use and recycling, the following policies are set out in the draft plan:

- Promoting a more circular economy that improves resource efficiency and innovation to keep products and materials at their highest use for as long as possible
- Encouraging waste minimisation and waste avoidance through the reuse of materials and using fewer resources in the production and distribution of products
- Ensuring that there is zero biodegradable or recyclable waste to landfill by 2026
- Meeting or exceeding the recycling targets for each of the following waste streams and generating low-carbon energy in London from suitable remaining waste:
  - Municipal waste – 65 per cent by 2030
  - Construction, demolition and excavation waste – 95 per cent by 2020
- Designing developments with adequate and easily accessible storage space that supports the separate collection of dry recyclables (at least card, paper, mixed plastics, metals, glass) and food.

### **THE MAYOR'S BUSINESS WASTE STRATEGY FOR LONDON (2011)**

2.3.4 The Mayor's Business Waste Strategy for London details the policy proposals which are intended to set out the overall direction for the management of business waste in London for the period from 2010 to 2031. Specific actions to facilitate the move to sustainable resource and waste management within the next two to three years.

2.3.5 The Mayor wants London to become a world leader in waste management, making use of innovative techniques and technologies to minimise the impact of waste on our environment and to exploit the considerable economic value of waste. The key target for the management of business waste is to achieve 70 per cent reuse, recycling and composting of commercial and industrial waste by 2020 and to maintain this level until 2031. The primary aims of the strategy are:

- Focus on waste reduction and the more efficient management of resources to reduce the financial and environmental impact of waste
- Manage as much of London's waste within its boundaries as practicable
- Boost recycling performance and energy generation to deliver environmental and economic benefits to London.

### **THE MAYOR'S MUNICIPAL WASTE MANAGEMENT STRATEGY (2011)**

2.3.6 The Mayor's Municipal Waste Management Strategy provides further guidance on the management of municipal waste in addition to policies contained within the London Plan. The strategy sets out the Mayor's vision for London to excel among global cities, achieving the highest environmental standards and becoming a world leader in tackling climate change.

2.3.7 To achieve this goal, the strategy states that innovative techniques and technologies should be deployed to minimise the impact of waste on the environment. Municipal waste should be reduced, recycling and composting increased, and energy from rubbish that cannot be reused or recycled should be generated.

## 2.4 Local Authority Policy

### LBRUT LOCAL PLAN (2018)

- 2.4.1 The LBRuT Local Plan, adopted in July 2018, sets out policies and guidance over the following 15 years until 2033.
- 2.4.2 The Local Plan is one of the key documents used to make decisions on planning applications, of which section 6.5 covers Waste Management
- 2.4.3 Policy LP 24 Waste Management determines the following:
- All new developments or changes of use should provision adequate waste storage, allowing for ease of access for residents and occupiers, along with ease of collection by refuse contractors.
  - Where appropriate, development proposals should make use of the rail and waterway network for transportation of bulk materials and wastes, with this also applying to the River Thames.
  - All major developments and others likely to generate large quantities of waste are required to produce site waste management plans to manage efficient demolition, excavation and construction.
- 2.4.4 6.5.4-6.5.6 determines that LBRuT adopted the West London Waste Plan (WLWP) in 2015 which will be used to assess the waste footprint of new developments and their impact upon existing and proposed waste facilities.
- 2.4.5 6.5.7 indicates that LBRuT will aim to achieve self-sufficiency and contribute to the Mayor of London's aim of managing 100% of London's waste within London by 2031, and work towards sending zero biodegradable / recyclable waste to landfill by 2031.

### LBRUT REFUSE AND RECYCLING STORAGE REQUIREMENTS (2015)

- 2.4.6 The Refuse and Recycling Storage Requirements Supplementary Planning Document (SPD) adopted in April 2015 provides detailed guidance on the application of refuse policies contained within the Local Plan as well as on any neighbourhood plans that may also have come into effect. The document will help applicants make successful applications.
- 2.4.7 All planning applications which will materially affect the generation of waste must follow the guidance. Principle 1.1 of the SPD states that residential developments will be serviced by refuse vehicles collecting refuse and recycling.
- 2.4.8 Principle 1.3 determines the following refuse requirements, which are outlined in Table 2.1 below:

*Table 2.1 LBRuT Refuse Waste Requirements*

Number of Bedrooms	Refuse
Individual Units with 3-Bedrooms or Fewer	240L
Individual Units with 3-Bedrooms or More	360L
Developments with Communal Waste Storage	70L/Bedroom

- 2.4.9 For recycling, in houses of up to two units, storage must be made for two 55L recycling boxes with one box being for mixed paper, card and cartons and the other for mixed containers including: glass, cans, foil, aerosols, plastic bottles, tubs and trays. For developments with

three or more units, pairs of bins must be stored together alongside refuse bins for ease of access.

- 2.4.10 Storage capacity of one 23L food waste container per unit must be made. There is currently no communal food waste collection for developments with six or more units.
- 2.4.11 Additional storage space should be made within larger residential developments for bulky household goods such as fridges/freezers, furniture, cookers, IT equipment etc. These items will be collected on request for a fee.
- 2.4.12 For commercial developments 2.6 cubic metres of waste storage should be provided for 1,000m<sup>2</sup> gross floor space. 50% of this capacity must be for separated recyclable waste.
- 2.4.13 In mixed use developments, residential and commercial waste must be stored and collected separately. Storage spaces must be separate with different entrances to each one.
- 2.4.14 If a developer is considering engaging a private licensed waste contractor to handle waste produced by commercial premises, they should consult potential waste contractors on the design of purpose-built facilities at an early stage, copying their proposals to the Council. The SPD details of the kinds of on-site containers that are commonly used by the Council, those used by the private sector contractors are very similar.

#### **JOINT WEST LONDON WASTE PLAN (2015)**

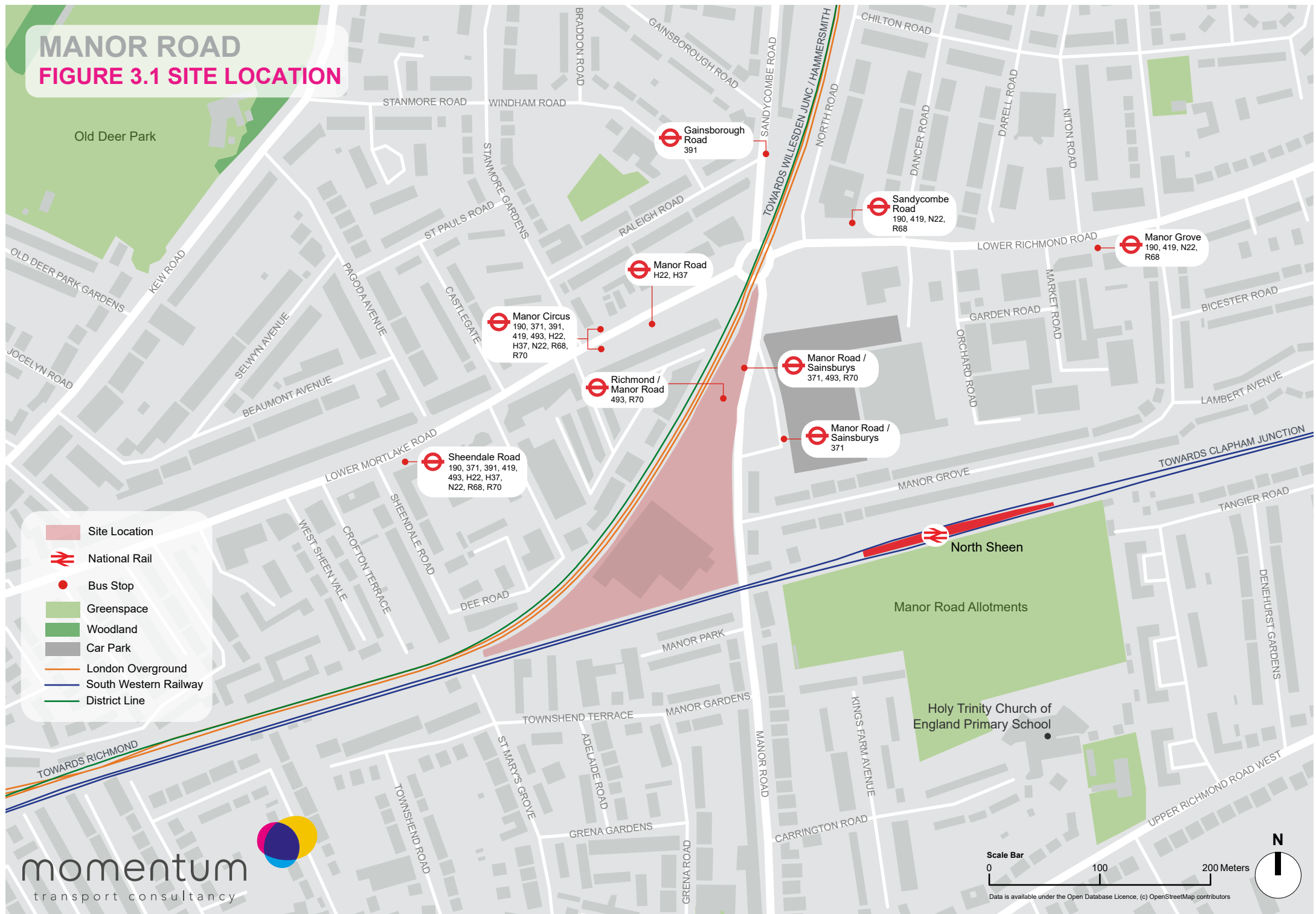
- 2.4.15 The West London Waste Plan adopted in July 2015 is a cooperative waste plan authored by six West London Boroughs of Brent, Ealing, Harrow, Hillingdon, Hounslow, Richmond upon Thames along with the Old Oak and Park Royal Development Corporation. The plan sets out targets up until 2031.
- 2.4.16 The plan includes sections outlining its visions and objectives, details of existing waste management methods, estimated future needs and capacities, descriptions of existing waste management sites within the plans spatial constraint along with applicable policies.
- 2.4.17 Its primary aims include:
  - Detailing estimated waste amounts and types within its spatial scope up until 2031;
  - Identification and protection of current sites to deal with said waste;
  - Identification of the shortfall of capacity needed over the life of the plan;
  - Allocation of sites aimed at meeting potential shortfall.
- 2.4.18 As part of targets set out in the London Plan (2011), this includes each individual borough achieving 100% net-self-sufficiency in waste management by 2031. This is to ensure no waste from London is 'exported' into landfill sites in the South East and East of England.
- 2.4.19 Policy WLWP 6 determines the need for 'Site Waste Management Plans' whilst undertaking sustainable site waste management, which are intended to describe the type and estimate waste quantities, along with identify the relevant waste management action.
- 2.4.20 To encourage sustainable waste management, developments need to indicate that:
  - At least 10% of materials used in the construction/operation of the development are re-used/recycled and sourced within 100km of the site;
  - Construction, demolition and excavation wastes are minimised and subsequently re-used/recycled on site where practicable and environmentally sustainable;
  - Site Waste Management Plans are comprehensive and capable of being delivered;
  - Where on-site waste management is not feasible, consideration has been given to the transportation of wastes from the site by modes other than road, e.g. via water and rail.

## 3. SITE CONTEXT

- 3.1.1 The proposed development is located on Manor Road, North Sheen, within the LBRuT. The site is bound by railway lines to the west and south of the site, while Manor Road bounds the site to the east and north.
- 3.1.2 At present, the site is occupied by a series of retail units and associated car parking.
- 3.1.3 Figure 3.1 presents the site location.

# MANOR ROAD

## FIGURE 3.1 SITE LOCATION



## 4. DEVELOPMENT PROPOSALS

4.1.1 The redevelopment proposals for the Manor Road site include the demolition of existing buildings and structures and comprehensive residential-led redevelopment of five buildings of between three and ten storeys to provide 433 residential units (Class C3), flexible retail /community / office uses (Classes A1, A2, A3, D2, B1), a police facility (Use Class B1), a bus layover with driver facilities (Sui Generis Use), provision of car and cycle parking, landscaping, public and private open spaces and all other necessary enabling works.

4.1.2 Table 4.1 presents the updated area schedule for the proposed development, with a comparison to the originally submitted development proposals:

*Table 4.1: Proposed Development Area Schedule*

Land Use	NIA (m <sup>2</sup> )	GIA (m <sup>2</sup> )	GEA (m <sup>2</sup> )
C3 (Residential)	28,922 (+1,242)	36,974 (+1,860)	40,283 (+2,527)
Flexible (A1, A2, A3, D2, B1)	-	490 (+10)	583 (+49)
<b>Total (inc. ancillary space)</b>	<b>-</b>	<b>39,570 (+1,870)</b>	<b>43,170 (+2,576)</b>

4.1.3 To ensure the most robust waste generation assessment has been undertaken, for the flexible commercial aspect of the development, the most onerous land use of the two has been used, which is assumed to be Food Retail (A3).

4.1.4 Table 4.2 outlines the total breakdown of the residential units, with the number in brackets indicating the difference in unit mix compared to the development proposals submitted as part of the original planning application:

*Table 4.2: Residential Unit Breakdown*

Residential Unit Mix				
Studio	1 Bed	2 Bed	3 Bed	Total Units
10 (+10)	148 (-4)	224 (+46)	61 (+6)	433 (+48)

# 5. PROPOSED DEVELOPMENT WASTE GENERATION

## 5.1 Waste Management Principles

- 5.1.1 The main principles applied to the operation of the site will be to manage waste and its removal in an effective, efficient and clean manner, causing as little disruption to the surrounding environment as possible. Targets of high standards of waste performance will be set, and through monitoring of waste generation and management, ongoing improvements will be possible to the operation of the site.
- 5.1.2 The waste management strategy will comply with all national and local policy requirements, as well as contributing towards achieving current and long-term government, Greater London Authority (GLA), and LBRuT targets for waste minimisation, recycling and re-use.
- 5.1.3 All handling and removal of operational waste will comply with legal requirements.
- 5.1.4 Facilities will be provided in suitable locations easy to access both from within the development and from externally for collections. Storage and collection will be distributed across the site to ensure that waste remains relatively unobtrusive and no individual waste removal operation is too onerous.
- 5.1.5 The “Waste Hierarchy” is a tool used to evaluate resource use and energy consumption from most to least favourable actions. The goal of the hierarchy is to inform behaviour and activity so that the generation of waste is minimised and in ideal cases eradicated. The hierarchy is summarised as follows (most favourable to least favourable action descending):
- Prevention of the waste generation
  - Waste reuse
  - Waste recycling
  - Recover of energy by waste incineration
  - Disposal in landfill of waste not otherwise recoverable
- 5.1.6 Using the hierarchy as a guide, waste management can take place in a way that minimises unfavourable actions and promotes prevention, reuse or recycling.

## 5.2 Waste Generation Rates

- 5.2.1 The anticipated waste generation rates for the proposed development have been informed by LBRuT Refuse and Recycling Storage Requirements, Supplementary Planning Document (2015). All waste generation rates are based on a seven-day output.
- 5.2.2 LBRuT Refuse and Recycling Storage Requirements state that in residential developments using communal refuse storage containers, such as the proposed development at Manor Road, storage capacity should be provided of 70 litres per bedroom. This requirement relates to communal waste containers.
- 5.2.3 For commercial developments, the requirements state that 2.6 cubic metres waste storage should be provided for every 1,000m<sup>2</sup> gross floor space, with 50% of this capacity to be retained for the storage of separated waste for recycling.



- 5.2.4 For mixed use developments (i.e. commercial and residential), the commercial and residential waste must be stored and collected separately. The commercial waste storage area should be clearly separate from the storage area for residential waste, with separate access to each.
- 5.2.5 Residual waste and recycling capacity for commercial and residential waste should be provided as per LBRuT guidance.

## 5.3 Forecast Waste Production

- 5.3.1 Based on the waste generation rates above, it is forecast that the proposed development will generate the following waste, based on a seven-day, uncompacted output and compared to the originally submitted development proposals:

*Table 5.1: Forecast Waste Generated by the Proposed Development*

Land Use	General (L)	Recyclable (L)	Total (L)
Residential (C3)	54,530 (+7,420)	40,826 (+4,526)	<b>95,356 (+11,946)</b>
Flexible (A1, A2, A3, D2, B1)*	637 (+13)	637 (+13)	1,274 (+26)
<b>Total</b>	<b>55,167 (+7,433)</b>	<b>41,463 (+4,539)</b>	<b>96,630 (+11,972)</b>

*\*assumed food retail A3*

- 5.3.2 Table 5.1 shows that general waste forms the main stream of waste, with 56% of the total, with recyclable waste making up the other 44%. Due to the size of the respective land uses, the residential development expectedly generates the bulk of the waste on site.

## 5.4 Waste Compaction

- 5.4.1 As the proposed development is primarily residential in nature, it is not proposed to compact any waste generated by the development.
- 5.4.2 Due to the minimal waste generated by the commercial aspect of the development, compaction will not be of sufficient benefit. As such, it is not proposed to compact commercial waste.

## 5.5 Waste Containers

- 5.5.1 It is proposed to store all residential waste in in 1,100 litre Eurobins, compliant with the British Standard for Mobile Waste Containers. The bins are made of galvanised steel meaning they are hard wearing and resistant to fire. Each bin has a watertight lid to prevent rain and water from getting inside.
- 5.5.2 The Eurobins have fitted wheels allowing their easy transportation around the storage facilities and into position to be emptied into waste collection vehicles.
- 5.5.3 All commercial waste is to be stored in smaller, 660 litre Eurobins. As with the 1,100 litre Eurobins, these are also made of galvanised steel and are watertight.
- 5.5.4 Typical dimensions of the 660 litre and 1,100 litre Eurobins to be used are shown in Table 5.2:

Table 5.2: Waste Container Dimensions

<b>Eurobin Capacity (L)</b>	<b>Height (mm)</b>	<b>Width (lid open) (mm)</b>	<b>Length (mm)</b>
1,100	1,370	1,260	980
660	1,320	1,250	720

# 6. WASTE STORAGE, COLLECTION AND MANAGEMENT STRATEGY

## 6.1 Introduction

6.1.1 This chapter outlines how the strategy of how residential and commercial waste generated by the proposed development will be stored and collected.

## 6.2 Waste Storage Requirements

6.2.1 Applying the forecast waste production to the Eurobin capacities stated above, Table 6.1 outlines the required number of Eurobins to service the proposed development, alongside a comparison to the originally submitted development proposals. Please note that these requirements are based on an uncompacted, 4-day output. This takes into account the proposed waste collection frequency of two collections per week for the residential units and one per week for the commercial unit. This is detailed in Section 6.4.

Table 6.1: Waste Storage Requirements (Uncompacted 4-Day Output)

Land Use	Eurobin Type	General	Recyclable	Total
Residential (C3)	1,100L	30 (+5)	24 (+5)	54 (+10)
Flexible (A1, A2, A3, D2, B1)	660L	1	1	2
<b>Total</b>		<b>31 (+5)</b>	<b>25 (+5)</b>	<b>56 (+10)</b>

6.2.2 As can be seen above, a total of 30 general and 24 recyclable 1,100 litre Eurobins will be required to store the waste generated by the residential aspect of the development. One general and one recyclable 660 litre Eurobin are required to store the waste generated by the commercial land use.

## 6.3 Waste Holding Arrangements

6.3.1 Waste generated by each building is to be stored within individual refuse storage areas. There are a total of eleven ground floor level refuse storage areas across the site, with a minimum of one storage area per block.

6.3.2 These storage areas have been designed to incorporate the design requirements as outlined within LBRuT’s Refuse and Recycling Storage Requirements SPD (2015). These design measures include:

- No waste to be stored on the public highway
- Household and recycling waste are to be stored separately from non-residential waste
- Pairs of recycling bins will be sited together so that residents can easily access both streams of recycling
- Recycling bins will also be located alongside refuse bins, so residents can easily access both bins
- Clear labels to illustrate where different recyclables and waste materials should be deposited;

- Sufficient clearance to allow full opening of bin lids
- 2m width of access threshold to allow for removal and return of containers whilst servicing

## 6.4 Waste Collection Strategy

- 6.4.1 Liaison will be required with the LBRuT waste team to coordinate the waste collection process and agree the collection days / times. It has been forecast that two collections a week for residential waste, and one collection a week for commercial waste will be sufficient to cater for forecast waste generated by the proposed development.
- 6.4.2 Three out of the eleven refuse storage areas (indicated by Appendix A as red arrows) are proposed to be directly serviced by refuse vehicles on collection days.
- 6.4.3 On the designated waste collection day, to coincide with collections, the on-site Facilities Management Team will move the waste generated by the residential and commercial land uses from the five remaining communal refuse storage areas (indicated by Appendix A as blue arrows) to the refuse holding area (indicated as the blue area on Appendix A).
- 6.4.4 The Facilities Management Team will be responsible for taking out and returning the bins from eight out of the eleven refuse storage areas to the refuse collection vehicle at the time of collection and facilitating collection to the remaining three.
- 6.4.5 The location of refuse storage will ensure that waste collection operatives will not have to move Eurobins more than 20 metres in total or carry refuse or recycling more than 30 metres from an external door. This ensures compliance with LBRuT policy.
- 6.4.6 The refuse vehicle swept paths are indicated by Appendix B.

## 7. CONCLUSION

- 7.1.1 This revised Waste Management Strategy has been prepared by Momentum Transport Consultancy on behalf of Avanton Richmond Development Ltd to outline how waste will be collected, stored and removed in a sustainable and efficient way following the redevelopment of Manor Road, North Sheen, Richmond.
- 7.1.2 A total of 56 1,100 litre and 2 660 litre Eurobins are required to storage the waste forecast by the proposed development, based on a four-day, uncompacted output.
- 7.1.3 Waste is to be stored first within individual refuse storage areas in each building, with eight out of the eleven refuse storage areas' bins moved to the refuse holding area by the Facilities Management Team, and the three remaining refuse storage areas being serviced directly by refuse vehicles.
- 7.1.4 Collections are to be made on a twice-weekly basis by the LBRuT waste collection service. A single loading bay is provided on site, located directly outside of the bin lift. This ensures that bins are not required to be moved more than the 20m stipulated within LBRuT policy.
- 7.1.5 The proposed amendments will not impact on the waste strategy and are acceptable in waste strategy terms.


# **APPENDIX A – WASTE COLLECTION LAYOUT**





**MNR-ASA-ZZ-XX-SK-A-0981-P1**  
Refuse Strategy sketch  
**ASSAEL**  
October 2019  
1:1000 @A3



**Key:**

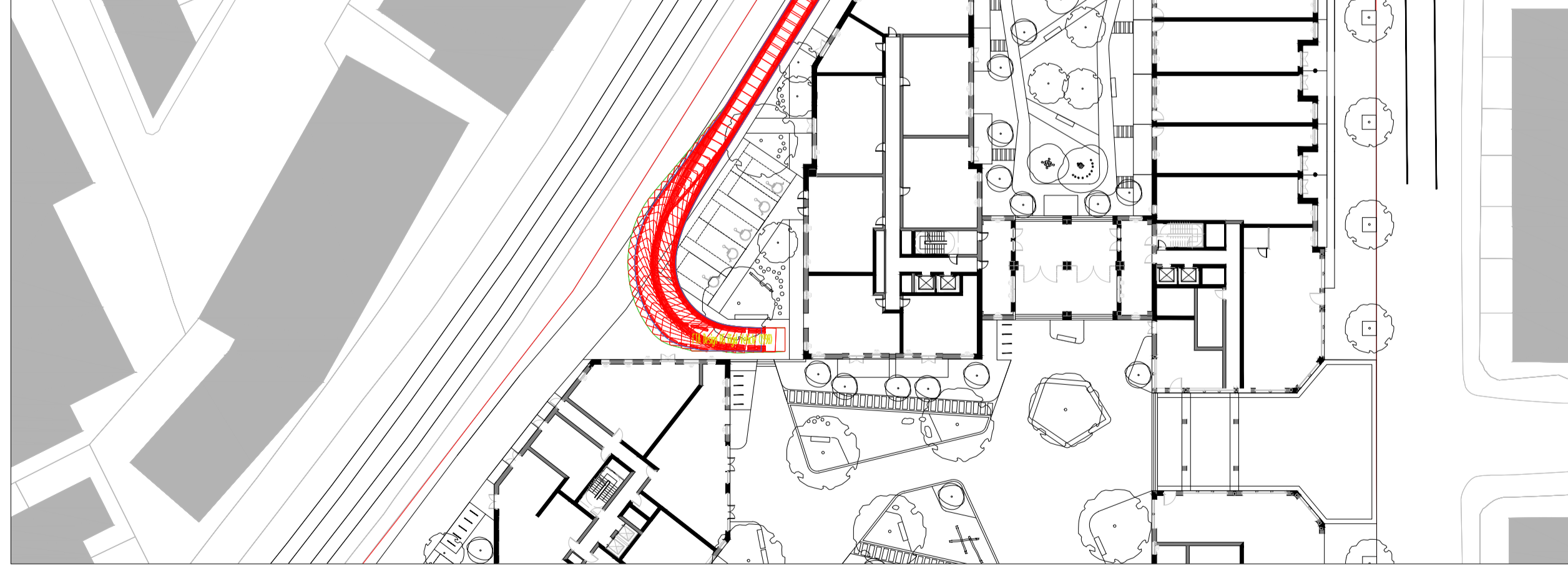
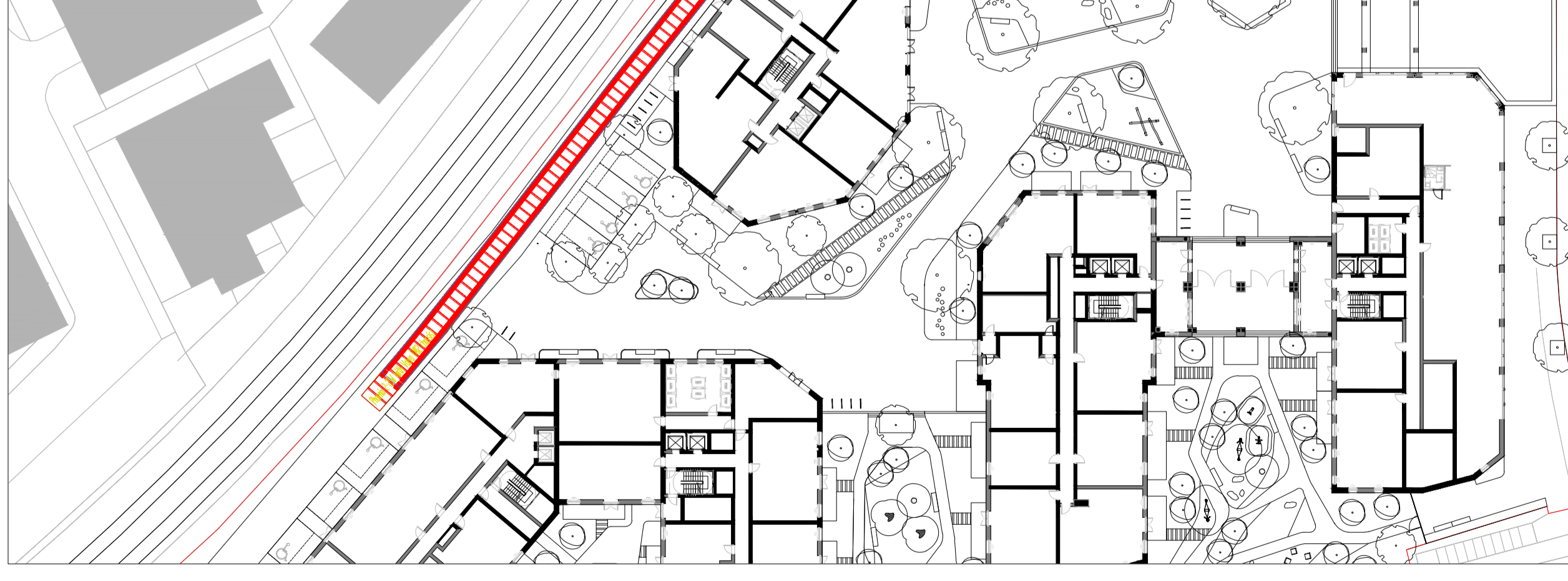
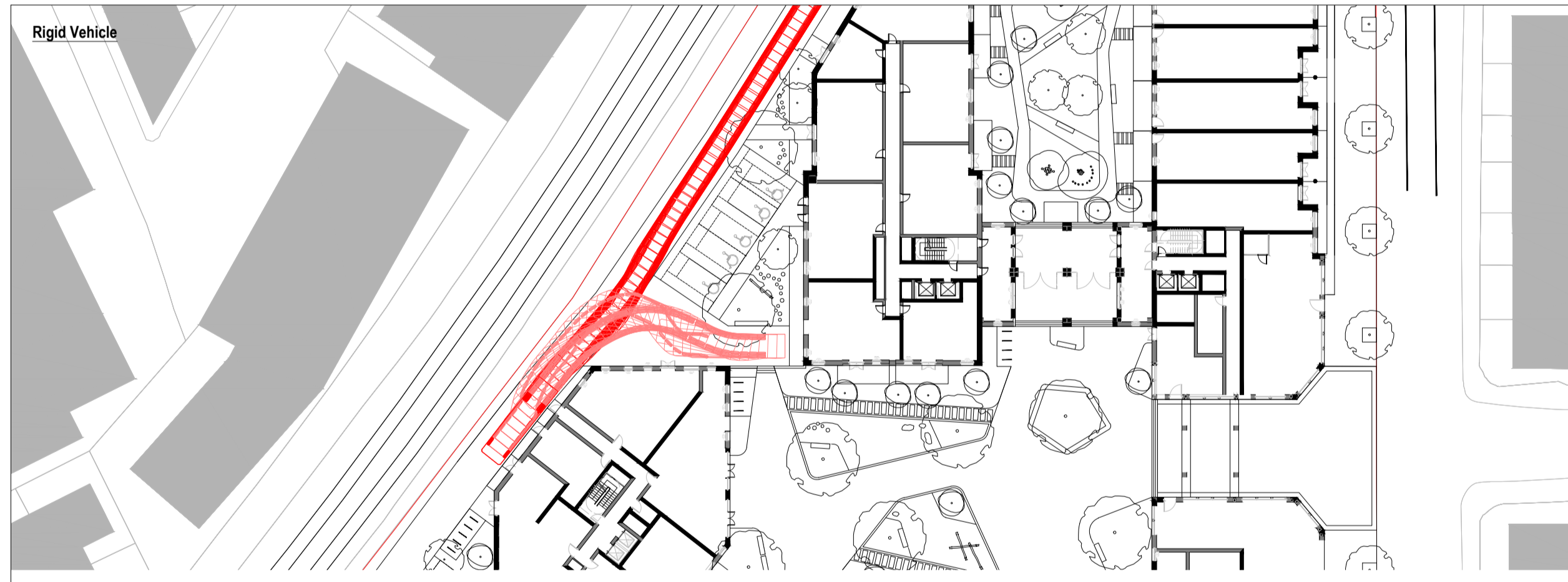
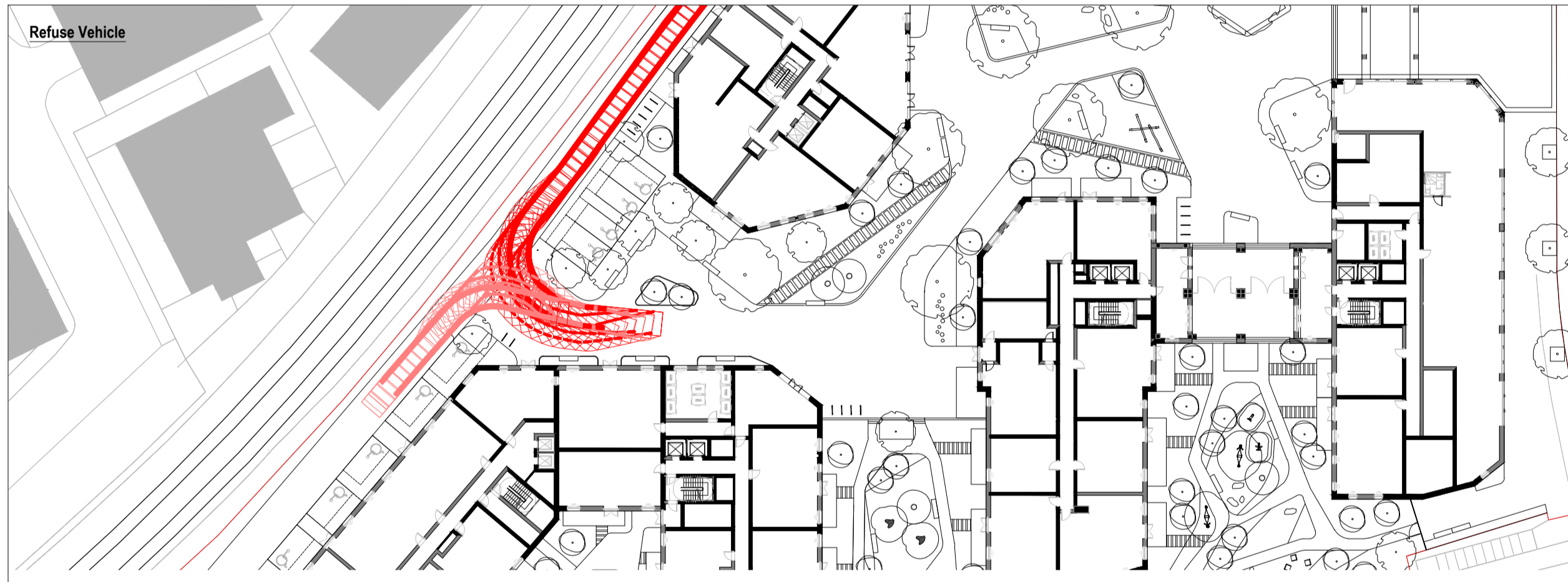
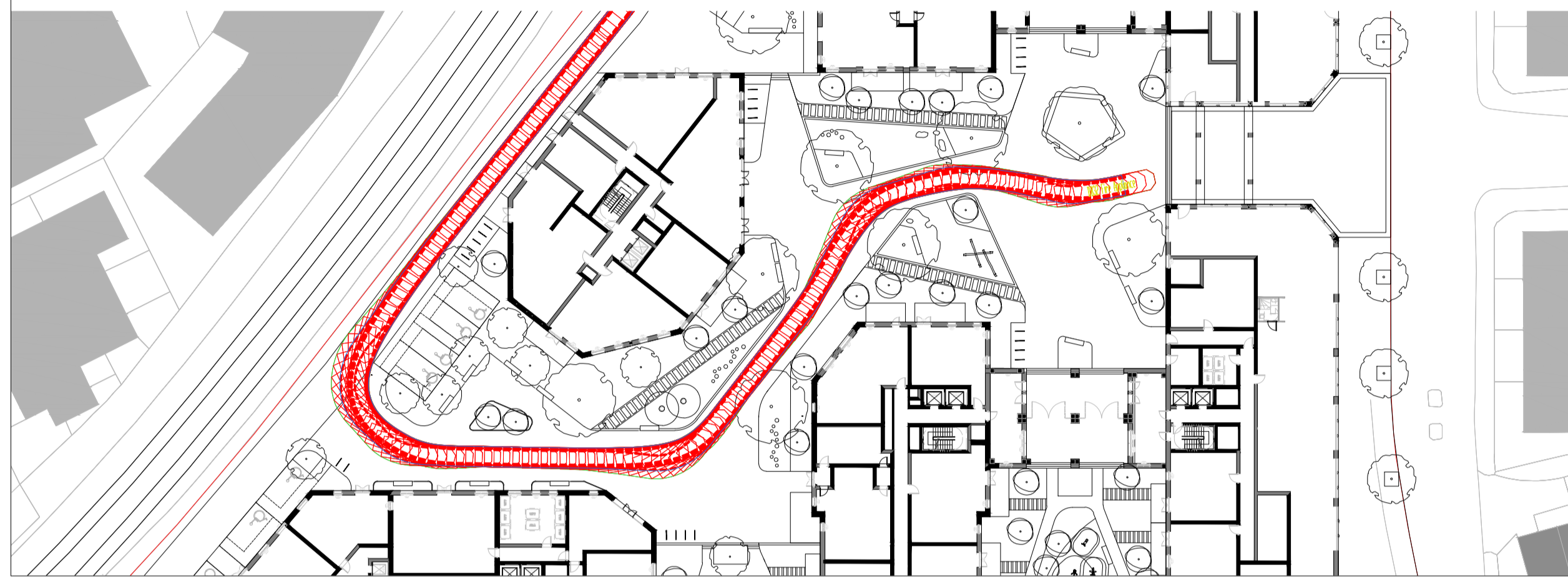
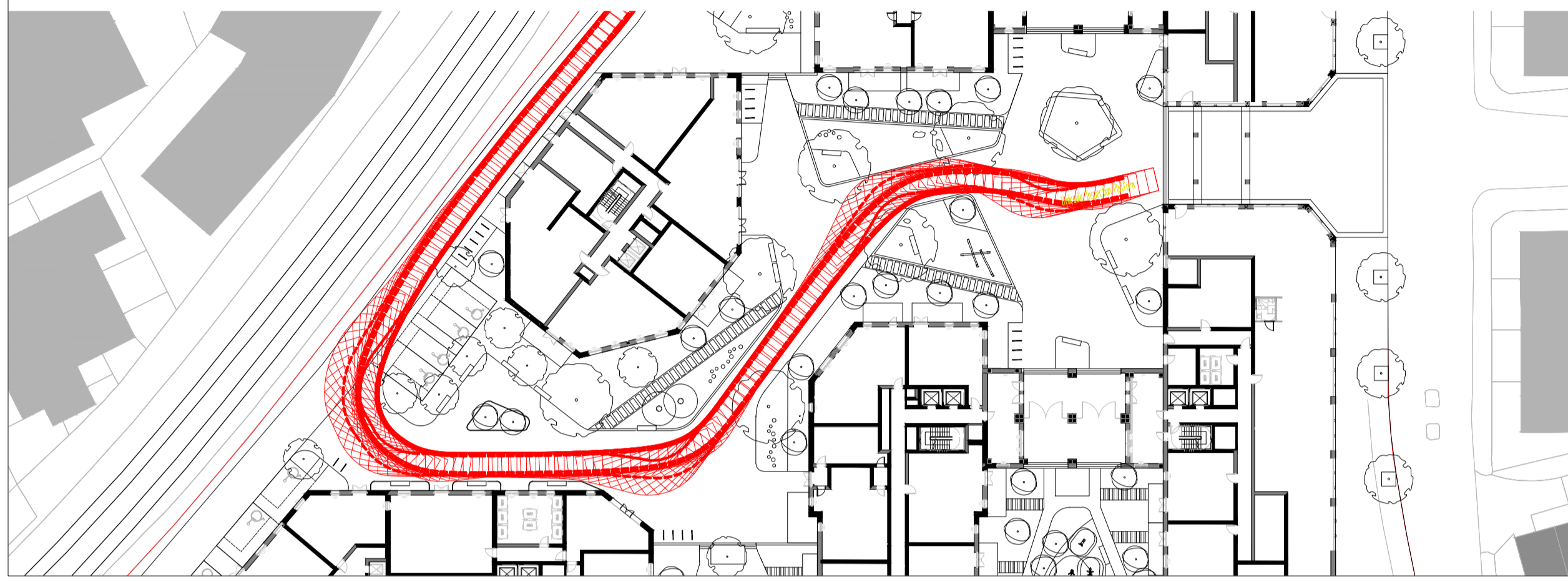
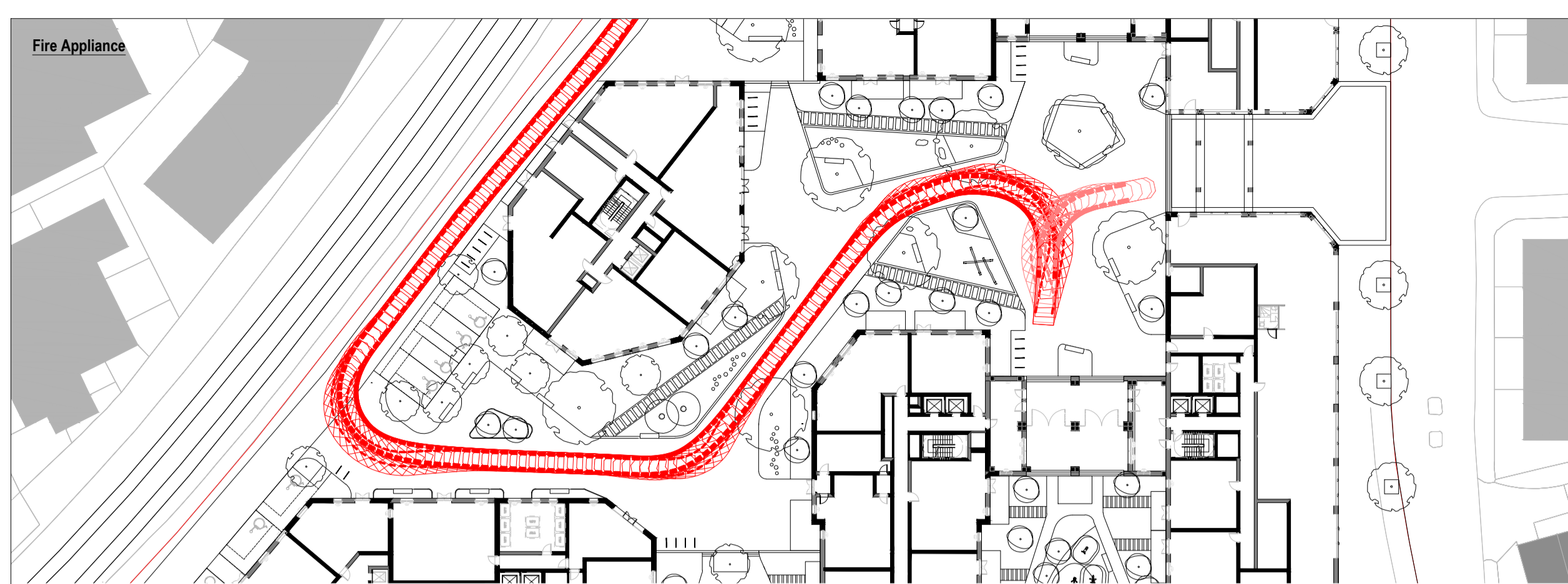
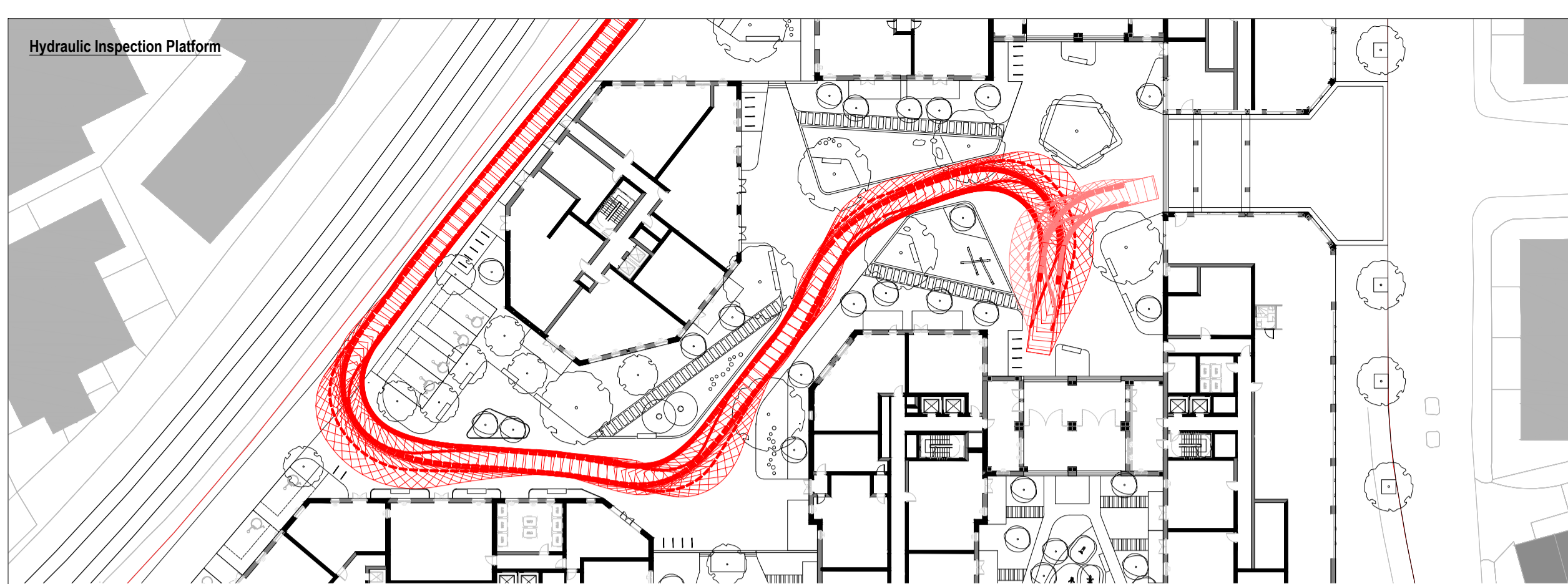
 Refuse truck to access directly

 Managed refuse strategy

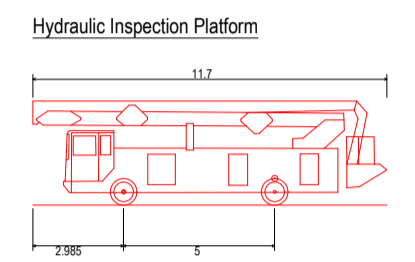
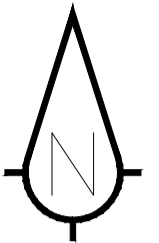
 Holding Area

# **APPENDIX B – REFUSE VEHICLE SWEPT PATHS**

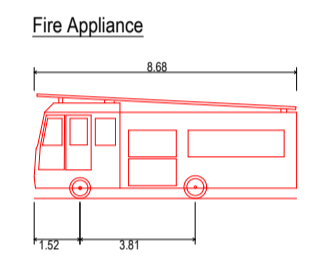




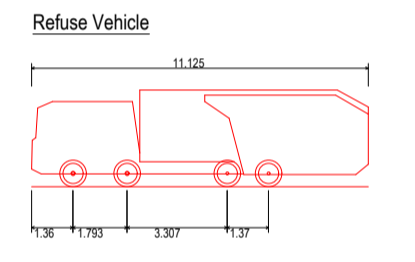
- Sanderson Associates (Consulting Engineers) Ltd ("the consultant"), has not checked or verified, and shall have no liability whatsoever for any inaccuracies which may be attributable to any data, reports, base plans and drawings provided by the client, or purchased by the consultant on the client's behalf, that may have been utilised within this drawing.
- The consultant shall not be liable for the use by any person of any document for any purpose other than that for which the same were provided by the consultant.
- No liability whatsoever is accepted by the consultant for any error or omissions.
- The consultant accepts no liability for any vehicle specification errors within the vehicle track software used and / or its vehicle libraries.
- The locations of utilities apparatus, if shown, is reproduced from plans supplied to the consultant, although care has been taken when duplicating this information. These locations are approximate only and no guarantee can be given for their accuracy. It is the client's or its appointed agent/contractors responsibility to verify the exact locations on site by hand dug trial holes or other appropriate means prior to mechanical excavation.
- Service connections are not shown but their presence should be anticipated.
- Reference to any third party equipment shown on this drawing was only relevant at the time the drawing was prepared.
- It is the client's responsibility to ensure that any equipment ordered meets the design.



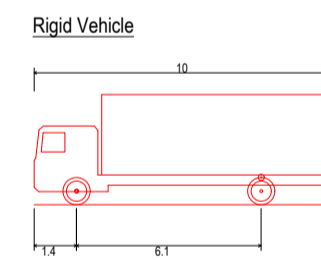
Hydraulic Inspection Platform	
Overall Length	11.700m
Overall Width	2.460m
Overall Body Height	2.435m
Min Body Ground Clearance	0.416m
Track Width	2.460m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	9.375m



Fire Appliance	
Overall Length	8.680m
Overall Width	2.180m
Overall Body Height	2.452m
Min Body Ground Clearance	0.337m
Max Track Width	2.171m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	7.910m



Refuse Vehicle	
Overall Length	11.125m
Overall Width	2.530m
Overall Body Height	2.500m
Min Body Ground Clearance	0.410m
Track Width	2.500m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	9.250m



FTA Design HG Rigid Vehicle (1998)	
Overall Length	10.000m
Overall Width	2.500m
Overall Body Height	3.045m
Min Body Ground Clearance	0.440m
Track Width	2.470m
Lock to lock time	3.00s
Kerb to Kerb Turning Radius	11.000m