BURO HAPPOLD

UoM Fallowfield Campus Redevelopment

Delivery and Servicing Management Strategy

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Glossary

Term	Definition
DSMS	Delivery and Servicing Management Strategy
HGV	Heavy Goods Vehicle
LGV	Light Goods Vehicle
MCC	Manchester City Council
NPPF	National Planning Policy Framework
OWMP	Operational Waste Management Plan
PCL	Pedestrian Comfort Level
RMA	Reserved Matters Application
TA	Transport Assessment
TAA	Transport Assessment Addendum
TfGM	Transport for Greater Manchester
TRICS	Trip Rate Information Computer System
UoM	University of Manchester

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1 Introduction

1.1 Preamble

1.1.1 Buro Happold has been instructed by John Graham Construction Ltd to prepare this Delivery and Servicing Management Strategy (DSMS) with regard to the permitted development of land at Fallowfield Campus, M14 6HD (the site).

1.1.2 Outline planning permission for the site (reference: 138126/OO/2023) was granted by Manchester City Council (MCC) in January 2024 *"……(with access only) for the phased demolition of existing buildings and phased development of up to 3,300 Purpose Built Student Accommodation bedrooms (Sui Generis use class) with associated facilities including waste storage, laundry and cycle storage; up to 4,500 sq m of floorspace to be used for ancillary purposes associated with the student residential use of the site within Use Class F1a, Class E(a), E(b), E(c), E(d), E(g), Sui Generis (drinking establishment and hot food takeaway); ancillary supporting staff accommodation (up to 55 bedrooms) (Sui Generis use class), and up to 1,200 sq m, of ancillary residential dwellings (Use Class C3), plus associated car parking, hard and soft landscaping, open space, utilities, footpaths and roads"*.

1.1.3 The January 2024 outline planning permission was subject to the discharge of various transport related planning conditions (the reserved matters), including the requirement for a Delivery and Servicing Management Strategy, as per Condition 26:

"Prior to the commencement of development in each phase, with the exception of demolition and site clearance, a Delivery and Servicing Management Strategy for that phase shall be submitted to and agreed in writing by the City Council as local planning authority. The submitted strategy shall ensure that servicing/delivery activities across the site are coordinated to ensure efficient use of any internal loading bays/short-stay parking areas. The strategy should also take into consideration food/parcel deliveries, providing clear direction on the following:

- Designated delivery drop-off points
- Delivery and servicing hours for the site
- Provision of clear signage in common areas to guide delivery drivers to the drop-off point;
- Inform all new residents on the designated drop-off point and any specific rules or guidelines they need to follow when receiving deliveries;
- Establish specific delivery hours for residents of the development where possible;
- Periodically review how the drop-off process is working and encourage resident feedback;
- Set up a secure delivery holding area within the development; and
- Monitor Security Concerns.

The development shall operate in accordance with the agreed strategy."

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1.1.4 Accordingly, this Delivery and Servicing Management Strategy (DSMS) has been produced to provide a framework for managing goods and vehicle movements to/from the site, which will enable delivery and servicing activity to be sustainably managed and to minimise impact on the local environment, residents and amenity and the operation of highway and transport infrastructure in terms of safety and capacity.

1.1.5 An initial scoping meeting was held on Monday 9 September 2024 with TfGM and MCC to discuss the proposed scope of the Transport Assessment Addendum (TAA) and the other relevant conditions for the Reserved Matters Application (RMA), including the approach to this DSMS.

1.1.6 At the scoping meeting with MCC on 9 September to discuss the RMA, it was discussed that in Buro Happold's experience, a detailed DSMS would normally be produced prior to occupation, not prior to commencement of development, as Condition 26 for this RMA requires. This longer time period allows detailed design to be substantially complete before the DSMS is written and all the 'finer' details of the operational strategy for the site in terms of deliveries and servicing are available to write into the DSMS.

1.1.7 Although this DSMS has been worked through in some detail with the design team and the UoM, there may be some elements that will be reviewed, developed and updated during the detailed design period though to just prior to occupation of each phase of the development; albeit the strategy overall is unlikely to be materially affected.

1.1.8 Therefore, a two-stage process was discussed with MCC; to submit a site-wide DSMS with the RMA which will contain as much detail about the operational strategy for the development as a whole at time of writing, to ensure that MCC are comfortable that there is a strategy for all key issues related to deliveries and servicing for the site. Then, following a consent, the DSMS would be reviewed and updated (if necessary) prior to 6-months before occupation of each phase of development, for approval by MCC.

1.1.9 It is felt that the strategy presented in this report and the proposed process for developing and updating this DSMS robustly meets the requirements of Condition 26, and there should be no reason why the Condition should not be discharged with the submittal of this DSMS for the RMA on this basis.

1.2 Site Description and Existing Use

1.2.1 The site is located in Fallowfield, approximately three kilometres south of Manchester city centre. Fallowfield is situated two kilometres south of the main university campus, located south of the city centre (Oxford Road and Sackville Street areas).

1.2.2 Fallowfield Campus is the main residential campus for the University of Manchester (UoM). Fallowfield itself has developed as a student hub for south Manchester in part due to the large concentration of student residents at the Fallowfield Campus, and also because of the large student population housed in private accommodation in this area. As a consequence, a high proportion of the surrounding amenities and services cater for student's needs giving access to goods and services, food and beverage and leisure activities.

1.2.3 The site (red line) boundary is shown on Figure 1.1 and in the context of the campus as a whole.

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Figure 1.1 Site Location, Fallowfield (Red Line Boundary)

1.2.4 The area within the red line boundary is currently used as student accommodation for the UoM with 2,374 student beds provided across the site, as follows:

- Owens Park (north part of the site): 1,071 beds,
- Oak House (southwestern part of the site): 1,105 beds, and
- Woolton Hall (southeastern part of the site): 198 beds.

1.2.5 Oak House and Woolton Hall are still in use while Owens Park is currently closed.

1.2.6 In addition to the student residential units, ancillary uses currently exist within the red line boundary including a student bar (Squirrels, within the Oak House complex) plus 'The Limes' – used for catering and other estate/facilities management services. The wider campus ('blue line' area) encompasses additional student accommodation, the Firs Botanic Research Station and the Armitage Sports Centre.

1.3 Proposed Development

1.3.1 UoM is looking to demolish and redevelop areas within Fallowfield Campus currently occupied by student residential halls and facilities including Owens Park, Oak House, Woolton Hall, and The Limes. The outline approval is for:

"Outline planning application (with access only) for the phased demolition of existing buildings and phased development of up to 3,300 Purpose Built Student Accommodation bedrooms (Sui Generis use class) with associated facilities including waste storage, laundry and cycle storage; up to 4,500 sq m of floorspace to be used for ancillary purposes associated with the student residential use of the site within Use Class F1a, Class E(a), E(b), E(c), E(d), E(g), Sui Generis (drinking establishment and hot food takeaway); ancillary supporting staff accommodation (up to 55 bedrooms) (Sui Generis use class), and up to 1,200 sq m, of ancillary residential

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dwellings (Use Class C3), plus associated car parking, hard and soft landscaping, open space, utilities, footpaths and roads".

1.3.2 The proposed development will provide up to 3,300 student beds, up to 55 bedrooms for staff accommodation and 6 bedrooms as part of the ResLife scheme. The ResLife scheme includes postgraduate students and staff who provide support and guidance to students living in halls. This corresponds to an uplift of circa 996 beds (if the site was currently operating at full capacity).

1.3.3 The Limes building is located to the east of the site, along Whitworth Lane and is currently used for catering operations as well as launderettes and other student services area. This building is also proposed to be demolished as part of this application and its facilities and services will be relocated north-east to the Richmond Park car park (under a separate planning application, (planning reference 141536/FO/2024).

1.4 Objectives

1.4.1 This DSMS has been produced to discharge condition 26 as described previously in Section 1.1.

1.4.2 The operation of the proposed development is expected to generate various types of servicing requirement/demands over the course of each day, and it is proposed that a Facilities Management (FM) team appointed on behalf of UoM would be responsible for co-ordinating these.

1.4.3 The overall objective of this DSMS is to minimise the impacts of freight movements and facilitate sustainable freight travel to and from the site. To support the realisation of this overarching objective, several sub-objectives have been set out, and include:

- Promoting smarter operations that reduce the need for servicing travel overall or that reduce or eliminate trips, particularly those in peak periods;
- Encouraging greater use of sustainable freight modes;
- Promoting use of low or zero emission vehicles for delivery and servicing, and associated reduction of CO2 and air pollutant emissions;
- Managing the on-going development and delivery of the DSMS;
- Communication of site servicing/delivery facilities (through dissemination of information) to staff and suppliers; and
- Encouraging the most efficient use of freight vehicles and servicing/delivery trips.

1.4.4 The DSMS is a 'live document' which requires on-going monitoring and review to ensure that the objectives are achieved. The DSMS will therefore be refined and adapted to ensure continuous improvement towards achieving its aims.

1.5 Report Structure

1.5.1 The structure of this DSMS is as follows:

- **Section 2: Policy and Guidance Context** – provides an overview of principal policy requirements and relevant guidance documents;

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- **Section 3: Delivery and Servicing Arrangements** – summarises the servicing demand and physical requirements, e.g. the main types of vehicle that have to be accommodated, along with key aspects of the spatial provision;
- **Section 4: Measures** – sets out the key measures to be adopted to manage delivery and servicing activity;
- **Section 5: Management, Monitoring and Targets** – outlines the responsibility for managing the DSMS and how it will be monitored; and
- Section 6: Summary and Action Plan.

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2 Policy and Guidance Context

2.1 Introduction

2.1.1 This section summarises the key national, regional and local policy and guidance context relevant to the DSMS for the site. For a more detailed exploration of relevant policy documents, please refer to the August 2023 Transport Assessment and the Transport Assessment Addendum (TAA) accompanying the RMA for an overview of policy developments since August 2023.

2.2 National Policy and Guidance

Designing for Deliveries, Freight Transport Association (2016)

2.2.1 Designing for Deliveries is a guide for planners, designers and engineers to aid with the design of service areas and approach roads.

BS:5906 Waste Management in Buildings - Code of Practice (2005)

2.2.2 This document sets out the practice and methodology for waste management, including storage, collection and segregation.

Freight Operator Recognition Scheme (FORS)

2.2.3 The Fleet Operator Recognition Scheme (FORS) is a voluntary accreditation scheme, which aims to raise the level of quality within fleet operations, and to demonstrate which operators are achieving exemplary levels of best practice in safety, efficiency, and environmental protection.

2.2.4 FORS is a unique, industry-led, membership (bronze, silver, gold) scheme to help van and lorry operators in London become safer, more efficient and more environmentally friendly. The scheme offers a number of benefits including advice, training and discounted breakdown assistance.

2.2.5 Bronze accreditation confirms that you employ good practice and comply with the requirements laid out by the FORS Standard. This includes demonstrating dedication to driver and vehicle safety, combined with improving operating practices through effective monitoring of fuel and tyre usage.

2.2.6 By achieving FORS Silver accreditation the vehicle fleet will be compliant with the Construction Logistics Community Safety (CLOCS) Standard.

2.2.7 FORS Gold accreditation is only awarded to exceptional operators who have met challenging targets. FORS Gold operators will actively promote the FORS Standard to their supply chain and produce a case study documenting their progression through to the top level of accreditation.

Ministry of Housing, Communities and Local Government, 'National Planning Policy Framework' (2024)

2.2.8 The National Planning Policy Framework (NPPF) was most recently updated in December 2024. In terms of transport, the proposed revision to the NPPF is to formally adopt a "vision-led" approach to transport planning that moves away from the traditional "predict and provide" approach. The new approach focuses on the desired outcomes for residents and the environment and planning to achieve them.

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2.2.9 The framework sets out the national policy expectations relating to transport, its place within the planning process, and its contribution to the achievement of sustainable development.

2.2.10 It includes guidance to local authorities by setting out what planning policies should achieve in transport matters, including considerations for the setting of parking standards.

2.2.11 Paragraph 116 states that development "should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, *or the residual cumulative impacts on the road network, following mitigation, would be severe, taking into account all reasonable future scenarios*".

2.2.12 Within the context of servicing/deliveries, it notes specifically that applications for development should:

- Create places that are safe, secure and attractive – which minimise the scope for conflicts between pedestrians, cyclists and vehicles, avoid unnecessary street clutter, and respond to local character and design standards; and
- Allow for the efficient delivery of goods, and access by service and emergency vehicles.

2.3 Regional Policy and Guidance

Transport for the North's Strategic Transport Plan and Freight and Logistics Strategy

2.3.1 Transport for the North (TfN) became England's first sub-national transport body in April 2018. As a partnership TfN encompasses 20 local transport authorities in northern England, together with Network Rail and National Highways, to plan and prioritise long-term infrastructure investment in the North.

2.3.2 TfN's role is to add strategic value by ensuring that funding and strategy decisions about transport in the North are informed by local knowledge and requirements. TfN published its Strategic Transport Plan (STP) in 2019 setting out proposals for the northern transport network through to 2050. Following consultation in May to August 2023, the final Plan was approved by the TfN board and submitted to government in March 2024.

2.3.3 It includes the following strategic outcomes:

- Supporting effective spatial planning, well-connected warehousing, consolidation centres and efficient local distribution networks. This will include looking at sustainable 'last mile' connectivity and working with local transport authorities to develop multi modal hubs.
- Reducing the impact of air pollution and noise from freight movements on the health of local communities.

2.3.4 TfN's Freight and Logistics Strategy (2022) supplements the STP with a more detailed review of the existing freight infrastructure across the region, along with specific objectives and freight modelling analysis. It notes that, "there has been considerable recent growth in light goods traffic, driven by increases in online delivery. Cleaner, well integrated, and more efficient last mile freight movements are a priority, particularly in urban areas."

2.3.5 Decarbonisation is another focus area, and Chapter 8 of the Strategy includes TfN's 'decarbonisation pathway', with targets for zero emission cars, vans and HGVs for the next 25 years.

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Places for Everyone

2.3.6 The Places for Everyone (PfE) Plan was adopted by nine of the Greater Manchester Authorities, including Manchester City Council in March 2024, covering the period between 2022 and 2039.

2.3.7 Notable policies include JP-C5 'Streets for All' and JP-C7 'Freight and Logistics'. Policy JP-C5 sates that the authorities will seek to ensure that the design and management of streets will follow a Streets for All approach, including by:

- "Providing appropriate places and routes for servicing, deliveries and 'drop-off;
- Mitigating the impacts of air and noise pollution and carbon emissions from road transport; and
- Ensuring the efficient movement of people and goods on streets with a high 'movement function'."

2.3.8 Policy JP-C7 states that the authorities will support the more efficient and sustainable movement of freight, including by *"ensuring that new development makes appropriate provision for deliveries and servicing in terms of road safety, traffic congestion and environmental impacts"*.

2.4 Local Policy

Greater Manchester Transport Strategy (2021)

2.4.1 The Greater Manchester Transport Strategy (GMTS) sets out the long-term proposals to 2040 to create a cleaner, greener, more prosperous city region through better transport connections and simpler travel. This includes the aspiration for 50% of all journeys in Greater Manchester to be made by walking, cycling and public transport by 2040.

2.4.2 The GMTS sets out an ambition to "enhance freight's role in contributing to economic growth and ensure that it becomes increasingly sustainable, minimising its impact on the environment and on communities in Greater Manchester." It also highlights that, in the region, most freight is carried by road and these movements can cause congestion, carbon emissions, poor air quality and noise as well as leading to potential conflict with vulnerable road users such as cyclists.

2.4.3 Policy 19 states that the authorities "will work, including through the GM logistics forums, to improve journey times and reliability for deliveries, and to reduce the environmental impact of logistics".

Transport Strategy Supporting Strategies

2.4.4 The Greater Manchester Transport Strategy 2040 will be supported by a suite of supporting strategies, including: the published Streets for All Strategy, City Centre Transport Strategy, Electric Vehicle Charging Infrastructure Strategy and the forthcoming Local Bus Strategy, Rapid Transit Strategy and Freight and Logistics Strategy.

2.4.5 It is noted that the site falls outside the area defined in the City Centre Transport Strategy (2021), but it would be reasonable to expect that the challenges, priorities and considerations set out under 'Ambition 6: Goods are moved and delivered sustainably and efficiently into and within the city centre', are likely to be incorporated in the forthcoming Freight and Logistics Strategy.

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Manchester City Council's Core Strategy (2012)

2.4.6 Manchester's Core Strategy was adopted in 2012 and is the key development plan document in the Local Development Framework (LDF). It replaces significant elements of the Unitary Development Plan (UDP) as the document that sets out the long-term strategic policies for Manchester's future development and will form the framework that planning applications will be assessed against. The Core Strategy was updated following the adoption of Places for Everyone Joint Development Plan in March 2024.

2.4.7 Policy C6 discusses the development of Fallowfield as a South Manchester District Centre. It highlights that, "The plans to develop the University of Manchester site are an opportunity to focus student activities and encourage a wider range of uses elsewhere in the District Centre."

2.4.8 Policy T1 (sustainable transport) states that the council will support proposals that take account of the needs of road users according to a broad hierarchy, consisting of the following (in order of priority): 1. pedestrians and disabled people; 2. cyclists, public transport; 3. commercial access (which would include servicing); 4. general off-peak traffic; and 5. general peak time traffic.

Transport for Greater Manchester Delivery and Service Planning Toolkit

2.4.9 The TfGM Toolkit guidance provides a four-step process to help businesses to identify opportunities to better manage deliveries and to help reduce the negative impacts of delivery-related activities, such as harmful emissions, congestion and collisions. The production of a Delivery and Servicing Plan (DSP), or equivalent, is seen as a best-practice approach.

2.4.10 The four key stages of a DSP are summarised in Table 2.1; the Toolkit provides information and advice in relation to each stage, including examples of potential objectives.

Table 2.1 Four Stages of DSP Development (from TfGM Toolkit)

Stage		Typical Processes
1.	Plan	Establish the need; nominate a DSP Coordinator/Champion; create objectives; document the DSP and create an Action Plan; raise awareness
2.	Assess	Collect data; carry out site assessment; review operations
3.	Analyse	Identify key trends; set targets
4.	Implement and re-assess	Select and implement measures; monitor targets; review

2.4.11 Where a development has yet to be implemented, only the first stage (plan) can be achieved, with the subsequent stages carried out after construction, as part of an ongoing process of assessment and review.

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3 Proposed Delivery and Servicing Arrangements

3.1 Introduction

3.1.1 This section of the DSMS provides an overview of the key design constraints to the delivery and servicing strategy (chiefly the types and quantum of vehicles to be accommodated) and the proposed arrangements for servicing activity. The management measures proposed to control servicing are described in further detail in Section 4.

3.2 Proposed Development

3.2.1 The description of development for the proposed RMA is as follows:

"Reserved Matters Application for consideration of appearance, layout, scale and landscaping, pursuant to Outline Planning Permission Ref. 138126/OO/2023 for the redevelopment of the Site to deliver up to 3,300 Purpose Built Student Accommodation (PBSA) bedrooms alongside associated facilities and ancillary accommodation".

3.2.2 The proposed land-use and quantum of development are summarised in Table 3.1. It is important to note that the overall quantum of development is consistent with the outline application, with only minor variations as a result of design development and refinement.

Table 3.1 Proposed Development Quantum

Description of Use (as referenced under Condition 5 of the OPP)	Quantum
Provision of up to **3,300 Purpose Built Student Accommodation bedrooms** (Sui Generis use class) with **associated facilities** including waste storage, laundry and cycle storage;	**3,300** PBSA bedrooms; and **associated facilities** - including: 23 waste stores incorporated in each residential block, 5No. laundrettes located in the neighbourhood hubs 1,2,3 and 5 and residential block 21, 10No. fully enclosed secure cycle stores, and 5 support bedrooms (non-rentable) provided in residential blocks 7&18. **Total GIA 97,178 sqm**
A maximum of 4,500 sqm of **floorspace to be used for ancillary purposes** associated with the student residential use of the site within Use Class F1a, Class E(a), E(b), E(c), E(d), E(g), Sui Generis (drinking establishment and hot food takeaway);	Total of **4,352 sqm.** of ancillary uses; including central hub building and study spaces and associated facilities in 5No. neighbourhood hubs
Ancillary supporting staff accommodation (up to 55 bedrooms) (Sui Generis use class);	55 ResLife bedrooms, **1452 sqm**
A maximum of 1,200 sqm of **ancillary residential dwellings** (Use Class C3)	**441 sqm** of ancillary residential dwellings.
TOTAL GIA	**103,423 sqm**
TOTAL GEA	**115, 984 sqm**

3.2.3 The proposed development is made up of 29 blocks of varying height, predominantly from 6 to 15 storeys (see Figure 3.1). The majority are for student bedrooms and associated kitchens, mostly organised in clusters. Architectural plans are included in Appendix A for reference.

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3.2.4 Supporting these are a range of amenities, including laundry facilities and study areas, in a number of local 'hub' buildings, with a larger central hub building on the eastern edge of the site (where The Limes building is currently located) also accommodating a refectory/dining hall, associated kitchen and venue space with bar.

3.2.5 As noted in Section 1.1.9, the proposed development is located within the wider Fallowfield campus area and shares access and facilities with other parts of the wider campus, as detailed further in the following sections as appropriate.



Figure 3.1 Ground Floor Masterplan

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3.3 Servicing Vehicle Types

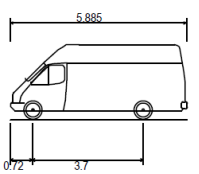
3.3.1 Based on discussions with UoM and experience of other similar sites, it is anticipated that servicing trips will be made using a combination of heavy and light goods vehicles with <20% comprising Heavy Goods Vehicles (HGVs) and >80% comprising Light Goods Vehicles (LGVs) and other smaller service vehicles.

3.3.2 LGVs would typically include vehicles up to 3.5 tonnes GVW such as a 3.5 tonne panel van (often referred to generically as 'transit vans'). These vary widely in size from car-derived vans up to 'jumbo vans' of around 7m long. For the purpose of this simplification, HGVs are considered to generally comprise vehicles in excess of 3.5 tonnes gross vehicle weight (GVW) such as 7.5t box trucks, generally 8 metres in length, and refuse vehicles. With the exception of refuse trucks (which are likely to weigh c.26t GVW), it is likely that vehicles in excess of 7.5t would be infrequent.

3.3.3 The images below show the types of service vehicles that could be typically used, together with indicative vehicle specifications.

LGVs

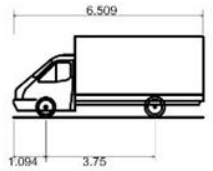
3.3.4 The majority of servicing to site will be undertaken using LGVs, including car-derived vans, panel vans and small box vans.



Light Van	
Overall Length	5.885m
Overall Width	2.000m
Overall Body Height	2.526m
Min Body Ground Clearance	0.299m
Track Width	1.765m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	6.000m



Figure 3.2 LGV - Panel Van



3.5t box van	
Overall Length	6.509m
Overall Width	2.200m
Overall Body Height	2.741m
Min Body Ground Clearance	0.214m
Max Track Width	1.959m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	6.280m



Figure 3.3 LGV - Small Box Van

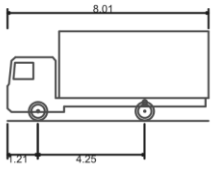
3.3.5 Vans such as these are expected to be used for mail, personal deliveries, food delivery, office supplies, janitorial/housekeeping supplies and maintenance activity.

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3.3.6 Some specialist waste streams, such as sanitary waste may also be collected in vehicles of this size.

HGVs

3.3.7 Larger vehicles will only be used for a small proportion of deliveries. Small box trucks (of c.6-8m long), often categorised as 7.5t trucks (but may include trucks up to 12-14t GVW), are likely to be used for occasional furniture and equipment deliveries along with waste streams including cooking oils, clinical waste and waste electrical and electronic equipment (WEEE).

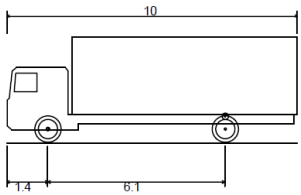


7.5t Box Van	
Overall Length	8.010m
Overall Width	2.100m
Overall Body Height	3.556m
Min Body Ground Clearance	0.351m
Track Width	2.064m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	7.400m



Figure 3.4 HGV – 7.5t Box Truck

3.3.8 Catering deliveries (chilled/dry/non-perishable food) may be delivered by a large rigid truck, assumed to be 18t GVW. It is not expected that this size of vehicle would be used for any other routine deliveries.



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

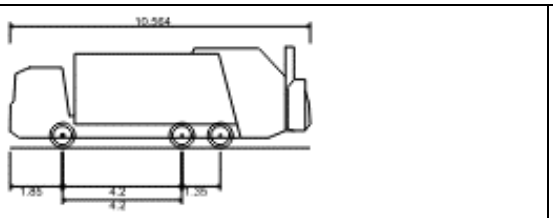


Figure 3.5 HGV - Large Rigid Truck

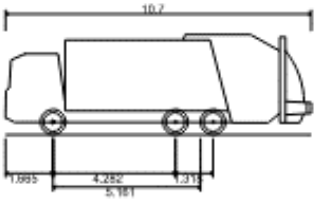
3.3.9 Refuse/recycling collection will also rely on HGVs. General waste, recycling and organic waste would be collected regularly via a conventional rear-end loader with bin-lift by a private contractor.

3.3.10 As private waste contractors may use a variety of vehicle sizes/configurations, a range of large refuse vehicles have been considered in testing the spatial design, as illustrated in Figure 3.6. The two vehicles illustrated include different axle/steering configurations; one is based on e rear-steer vehicle, which is a common approach for urban areas, providing a much smaller turning circle but with a trade-off in terms of rear 'swing' of the vehicle. The second vehicle considered does not include rear steering, to allow designs to be tested for large refuse trucks without this benefit.

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Mercedes Econic 2629LL RS	
Overall Length	10.564m
Overall Width	2.550m
Overall Body Height	3.552m
Min Body Ground Clearance	0.356m
Track Width	2.530m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	7.400m

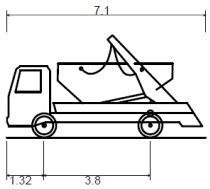


Olympus 2-23W (with Elite 2 6x2ML chassis)	
Overall Length	10.700m
Overall Width	2.550m
Overall Body Height	3.500m
Min Body Ground Clearance	0.416m
Track Width	2.530m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	10.250m



Figure 3.6 HGV - Refuse Trucks

3.3.11 In addition, bulky waste is likely to be stored in skips and collected by a skip truck on an as-needed basis. This is principally for discarded items after students move out in the summer.



Medium Swing Arm Type Garbage Truck	
Overall Length	7.100m
Overall Width	2.480m
Overall Body Height	3.664m
Min Body Ground Clearance	0.410m
Track Width	2.480m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	7.000m



Figure 3.7 HGV - Skip Truck

3.3.12 In addition to the 'traditional' servicing vehicles described above, it is anticipated that proportion of servicing will be undertaken by smaller vehicles, including powered and non-powered two-wheelers such as motorcycles, mopeds, E-cargo bikes and pedal cycles. Powered two-wheelers will typically use any available parking bay rather than a designated area; pedal cycles and cargo bikes would generally utilise the short-stay cycle parking stands located near the building entrance.

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3.4 Servicing Vehicle Forecast

3.4.1 As described in Section 1.1.9, the proposed development site sits within the wider Fallowfield campus, and this influences the level and location of existing and predicted servicing activity. Some servicing will be unique to the 'red-line' area, and some will be associated with servicing of the wider campus ('blue-line' area). A few of the campus facilities are likely to be serviced largely independently of the proposed development (e.g. the Armitage Sports Centre).

3.4.2 As there are several distinct sources/types of servicing activity – some of which are affected by the proposals and some which are not – a summary is provided in Table 3.2 to consolidate the data available and assumptions that are relevant in terms of LGV/HGV activity on site.

Table 3.2 Servicing Demand Forecast

Activity type	Current	Proposed
Within red-line		
Squirrels bar	Data provided by UoM. 4-5 deliveries per week plus waste collections most days, i.e. 1-2 vehicles per day (mixed vans/trucks) Location: Squirrels (within Oak House area)	No increase Relocated to new Central Hub (see below)
New Central Hub (will replace existing Squirrels bar and Woolton Hall kitchen/dining hall)	N/A – not currently present	Mostly replaces existing facilities but conservatively assume 8-10 vehicles per week (including those associated with Squirrels bar replacement), or1 extra van and 1 extra HGV per day. Location: central hub (location of the existing Limes building)
Within red-line and blue-line		
Mail and parcels (for whole blue-line area) - Royal Mail, Parcelforce, Amazon, DPD, DHL, etc	No confirmed figures. Estimate 10-12 van/day split across the various companies (more in first month and December) Location: mainly at Richmond reception (Gunnery Lane), plus Amazon lockers	Potentially no increase, just increase in number of items per vehicle. However, assume 20% increase on campus-wide quantity, i.e. 12-14 van per day, or increase of 1-2 vans/day. Location: unchanged
Supermarket deliveries	No confirmed figures. Understood to be low (due to proximity of supermarkets in walking distance). Assume 3-5 vans per day. Location: highways and campus roads including Moseley Road, Chancellors Way.	Potentially no increase, just increase in number of orders per vehicle. However, assume small increase (increase of 1-2 vans/day). Location: unchanged
Waste	Data provided by UoM. Varies by day and waste stream but assume 1-2 trucks per day. Location: across whole campus	Conservatively, assume 1 extra HGV per day
Takeaways e.g. Deliveroo scooter/bikes	No confirmed numbers. Understood to be low (due to proximity of outlets in walking distance). Mainly mopeds/scooters and bikes, not LGV/HGV and therefore of minimal interest for traffic/emissions etc Location – dispersed across campus.	Assume small increase, but mopeds / scooters and bikes assumed to be of minimal consequence. Location: unchanged

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Outside red-line (in future baseline/proposals)		
Limes (catering and FM)	Data provided in 'New Limes' planning application (Air Quality Assessment): 15 vehicles per day (12-13 vans and 2-3 HGVs) Location: the Limes building (currently within red-line area, but being relocated)	No change to numbers New location at Richmond Park car park, i.e. minimal relevance to 'red-line' area.
Sports centre	No confirmed numbers. Assume limited regular servicing, outside of special events. Minimal relevance to 'red-line' area. Location: dedicated service area	No change
Firs Environmental Research Station "FERS" (aka Botanic Garden)	Data provided by FERS. Limited daily (generally <1 per day), other than mail/packages through Richmond reception. Location: dedicated entrance on Whitworth Lane	No change

3.4.3 As can be seen from the above analysis, it is noted that the development is expected to give rise to only a minimal increase in servicing activity, as the campus is already occupied and in use. The development does result in some intensification, but most servicing activity already takes place and in, most cases, suppliers will simply deliver more goods (or collect more waste/recycling) per vehicle rather than sending more vehicles.

3.4.4 It is also noted that the delivery and servicing locations (i.e. the destination / loading point for vehicles) for the proposed development and the existing wider campus are located well within the boundary of the campus, a reasonable distance from any adjoining non-UoM properties. For example, the proposed Central Hub service yard is located c.300m from properties on Moseley Road. Therefore the servicing activity taking place at the destination point would be largely imperceptible by people and properties outside the campus boundary in the local area.

3.4.5 Notwithstanding, as summarised in Table 3.2, it has conservatively been assumed that there will be an increase in mail/parcel deliveries, food deliveries and waste collection, all requiring more vehicle trips per day.

3.4.6 Additionally, the new kitchen/dining provision proposed for the Central Hub has been conservatively assumed to generate an additional servicing demand over the existing baseline, even though it will generally replace extant facilities (including the Squirrels bar and Woolton Hall kitchen/dining room).

3.4.7 Taken together, these are assumed to give rise to an additional five LGVs and two HGVs visiting the campus per day (though most of these will not enter the red-line boundary – see following sections). This is not expected to have a discernible impact on the surrounding highway network, as discussed above. Where possible, servicing will also be scheduled to avoid network peak periods (see Section 4.3).

3.4.8 With respect to the red-line area, overall servicing activity is anticipated to reduce slightly because of the relocation of the Limes (via a separate planning application) to the nearby Richmond Park car park site, but this will still take place within the wider campus blue-line boundary, so will have little impact on the external highway network.

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3.5 Proposed Servicing Access

3.5.1 There are four principal points of access for vehicles to enter the site, as follows:

- Wilmslow Road (north) – the existing Owens Park vehicular entrance will be retained as part of the redevelopment, but the only vehicular access will be for emergency vehicles and move in/out activity.
- Wilmslow Road (south) – the existing pedestrian/cycle access will be retained and will only provide vehicular access on move in/out days.
- Moseley Road - the existing southern entrance to the campus will be retained for pedestrians and cyclists, but vehicular access will be limited to emergency access and move in/out days only.
- Whitworth Lane – the existing campus vehicular entrance from Whitworth Lane, adjacent to The Limes building, will be retained for servicing and car parking. This is reached either via Chancellors Way and Gunnery Lane to the east or from Old Hall Lane and Whitworth Lane to the north.

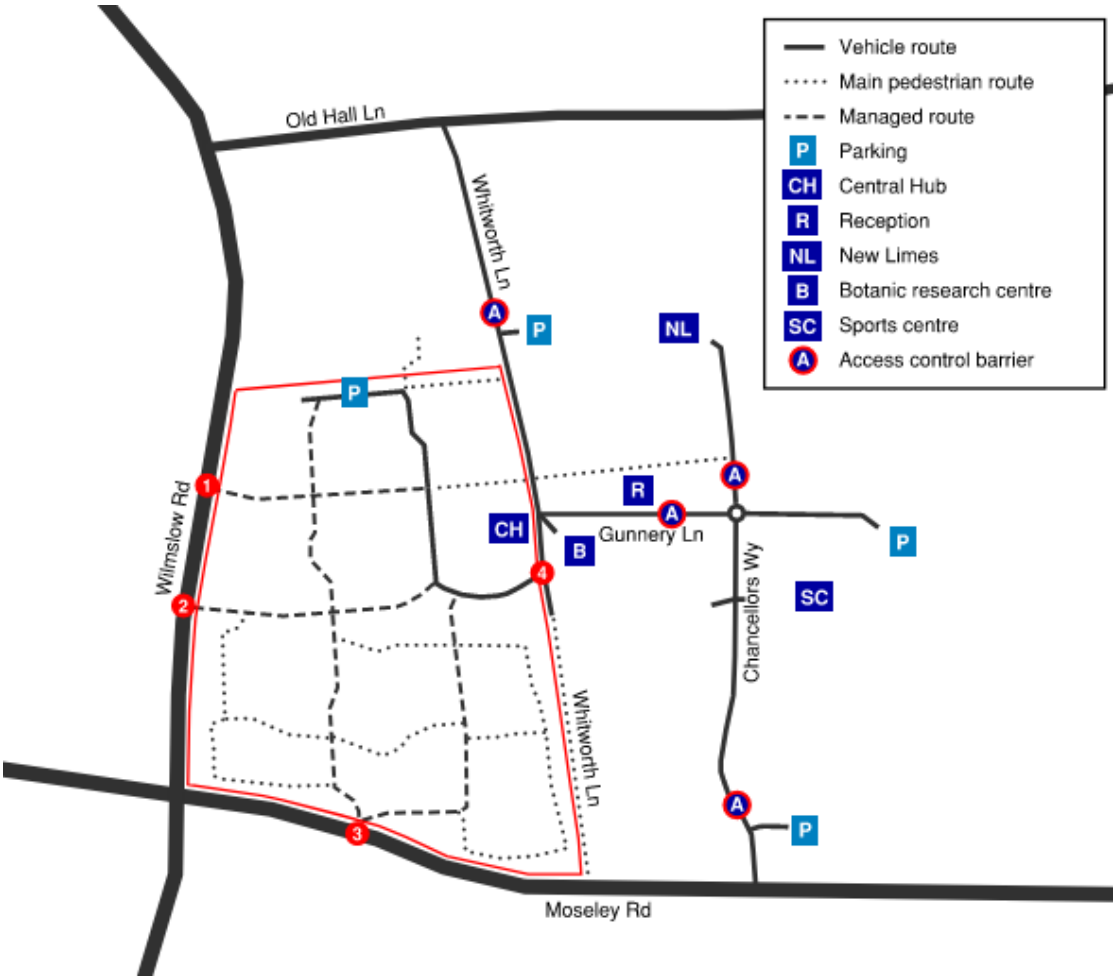


Figure 3.8 Proposed Development - Vehicular Access

3.5.2 Within the site, the public realm will mostly prioritise pedestrians and cyclists, with an extensive network of footpaths and with motor vehicles restricted as far as practical to ensure a campus that encourages active travel and that does not feel dominated by vehicular access.

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3.5.3 Daily traffic within the site boundary will be limited as far as practical to a short route, connecting the main vehicular entry at Whitworth Lane to the proposed accessible parking area at the northern boundary.

3.5.4 However, it is essential for the campus to accommodate a certain level of vehicular access for functional servicing such as refuse collection and maintenance and the emergency services. To this end, an 'inner loop' of routes has been created within the campus boundary, where pedestrian/cycle paths have been sized to cater for refuse trucks, fire engines and ambulances. These 'managed' routes will only need to provide vehicular access a few times a week but will otherwise generally be free of motor vehicles.

3.5.5 In the case of refuse collection, trucks will arrive and depart via Chancellors Way/Gunnery Lane, via the Whitworth Lane entrance. Emergency vehicle access is proposed via the Whitworth Lane, Moseley Road and Wilmslow Road (north) access points. (see Sections 3.6 and 3.7 for further details).

3.5.6 The network of inner managed routes can also be used during move in/out at the beginning and end of the academic year, connecting the inner loop to the Wilmslow Road and Moseley Road access points – see Section 3.8 for further details. Aside from the refuse and emergency access requirements, most of the van and HGV servicing activity will be kept outside the red-line boundary (as per the existing use). Deliveries by bicycle can be accommodated across campus, with short-stay cycle parking available across all neighbourhoods.

3.5.7 Access control to the campus is provided at a number of locations (including lifting arm barriers on Whitworth Lane, Chancellors Way and Gunnery Lane – see Figure 3.8); these controls are currently controlled by Reception during office hours (8am-6pm) and by security outside this time. Access will generally not be granted after 11pm for deliveries/servicing, without special circumstances.

3.5.8 A summary is provided below for the principal types of servicing activity.

Mail/Parcels

3.5.9 Mail and parcels for the student accommodation across the whole campus (and other campus buildings) are all delivered to the Fallowfield Reception building (location 'R' in Figure 3.8). This is located within the Richmond Park area, with vans parking on Gunnery Lane (typically approaching via Chancellors Way). This facility caters for all mail (Royal Mail) and typical parcel/courier delivery from Amazon and other major carriers such as DPD, DHL, Evri, etc. Deliveries are sorted into parcels and letters.

3.5.10 Letters are currently delivered out to halls by post room assistants (either on foot or utilising a small electric vehicle); the proposed development provides dedicated post-rooms in the various hub buildings. Packages/parcels are logged into an online system and stored either in the adjacent locker system or held at Reception, with students notified to collect the item.

3.5.11 Amazon lockers are also provided at several locations on campus and are an integral part of the campus postal strategy. The nearest lockers are at the Fallowfield reception building; the location of relocated lockers will be confirmed during design development.

Food/Perishables

3.5.12 Due to the proximity of local supermarkets, delivery of food shopping to site by supermarket vans is understood to be limited. Typically, these deliveries will continue to park ad-hoc within the campus, including on Chancellors Way, the Chancellors Way car park and the sports centre car park, as well as on Moseley Road in the unrestricted parking bays. Drivers would typically message residents to meet them to collect their order rather than progressing into the residential areas.

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3.5.13 There are also multiple fast-food/takeaway outlets within convenient walking distance of the campus, especially on Wilmslow Road along the western edge of the site. Despite this, a small number of deliveries by moped/bike by companies such as Deliveroo and UberEats are to be expected. Takeaway deliveries are met by the resident at the roundabout at the Chancellors Way/Gunnery Lane intersection or in one of the car parks as per supermarket deliveries – no access is given beyond the barriers.

Bars, Catering and General Maintenance

3.5.14 There are two main components to bar and catering servicing currently, namely the Squirrels bar (within the Oak House area of the red-line site) and the Limes building, which provides the University's Catering Central Processing Unit (CPU) and primary maintenance facilities. The existing Squirrels bar servicing, consisting of several vehicles per day on average, accesses the site via the main entrance from Whitworth Lane, navigating through the campus to reach the bar.

3.5.15 The existing Limes building is also accessed from Whitworth Lane, with a dedicated service yard area adjacent to the building. As the CPU services other University properties, this generates a moderate amount of traffic to and from other parts of the city. As discussed in Section 1.3, the Limes is being relocated (under a separate planning application) to the Richmond Park car park and will instead be accessed from Chancellors Way, such that the main CPU and maintenance servicing traffic will no longer need to access the red-line area.

3.5.16 A new Central Hub is proposed as part of the RMA application, in the location currently occupied by The Limes and this will incorporate a replacement for the Squirrels bar as well as various other student amenities. It is expected, therefore, to attract servicing for the proposed bar and kitchen, and will have a small, dedicated service yard, accessed from Whitworth Lane, to cater for c.8-10 vehicles per week, i.e. several vehicles per day (see Figure 3.9 and Figure 3.10).

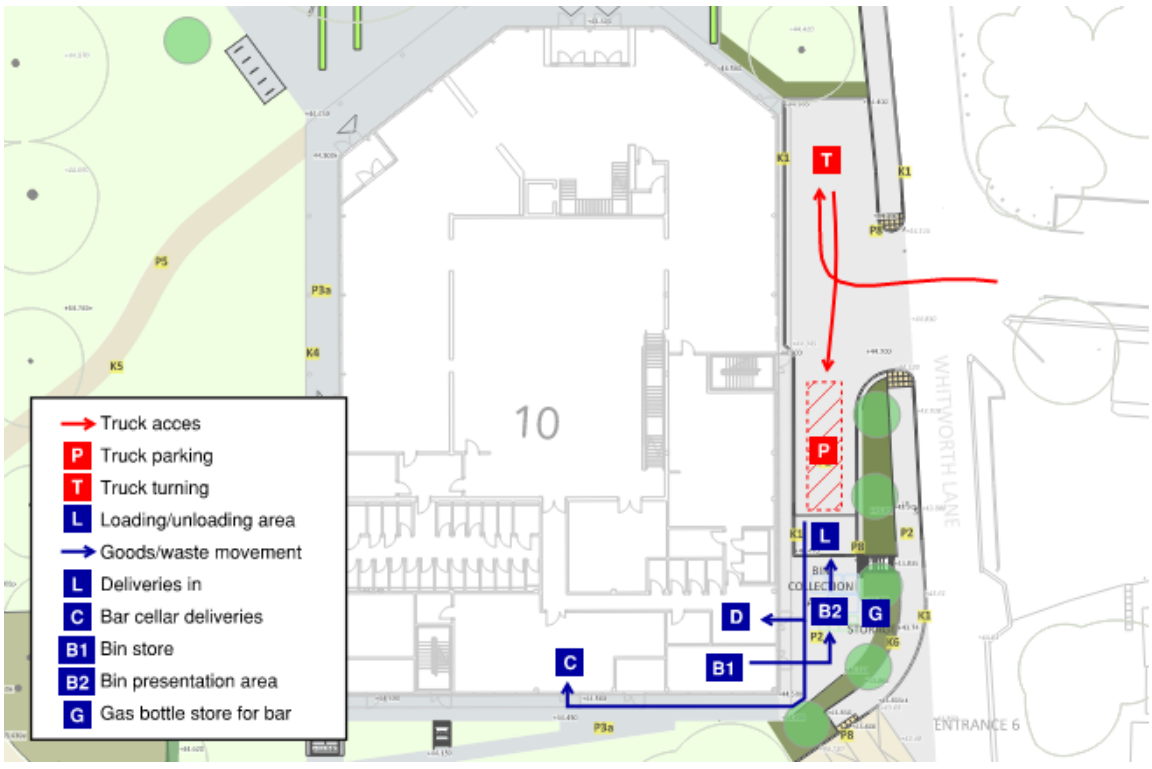


Figure 3.9 Preliminary Service Yard Layout for Central Hub

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3.5.17 Swept path analysis for the yard is provided in Appendix B; an extract is shown in Figure 3.10.

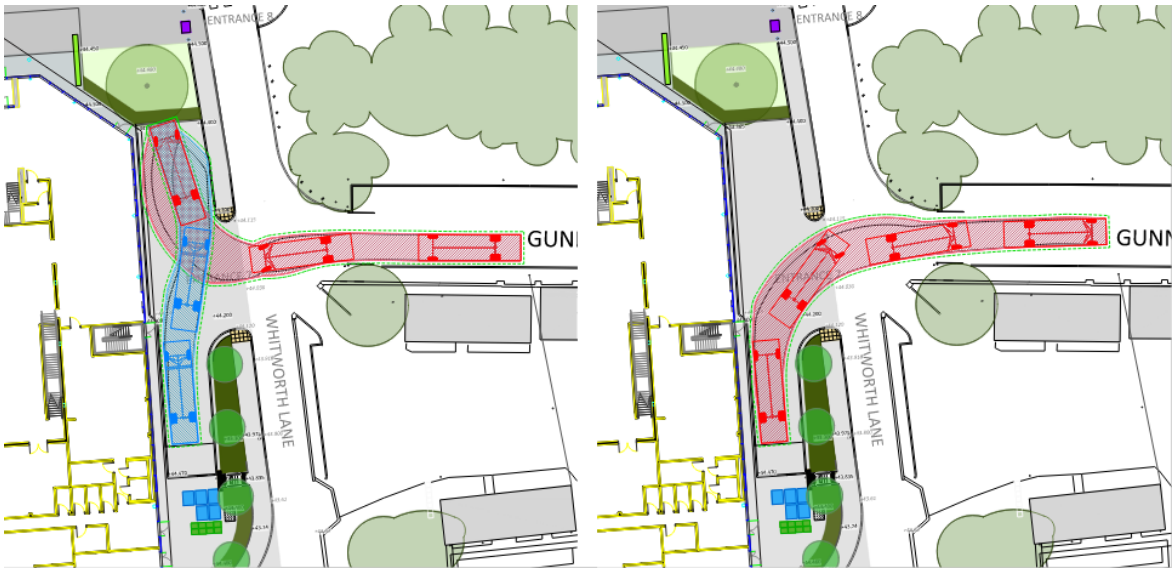


Figure 3.10 Delivery Truck Swept Path Analysis for Central Hub

3.5.18 It is noted that there is a headroom restriction along the western edge of the yard area, where the first-floor level projects out above ground floor. Whilst the clearance (c.4.2-4.3m) is sufficient for the types of vehicles envisaged, it is recommended that signage is provided to clearly communicate height restrictions in this area as the clearance is less than 'standard' highway clearance (of 5.03m).

Taxis and Drop Off/Pick-Up

3.5.19 Taxi pick-up and drop-off usually takes place at the car park at the bottom of Chancellors Way or by the roundabout at the Chancellors Way/Gunnery Lane intersection and this will continue under the proposals. Access for disabled pick-up/drop-off will be permitted through the barriers to take place on site as required.

Botanic Garden

3.5.20 The Firs Environmental Research Station (FERS), also known as the Botanic Garden, is located centrally in the campus with an access from Whitworth Lane. Deliveries are mainly ad-hoc/occasion, e.g. gas lab van once every 2-4 weeks, cleaning services van once per fortnight and compost deliveries quarterly. Mail, parcels and office supplies mainly go via the nearby campus Reception building or are delivered directly.

3.5.21 The proposals do not affect servicing of the Botanic Garden.

Refuse and Emergency Vehicles

3.5.22 As discussed above, an 'inner loop' of routes has been created within the site boundary, where pedestrian/cycle paths have been sized to cater for refuse trucks, fire engines and ambulances. These 'managed' routes will only need to provide vehicular access a few times a week but will otherwise generally be free of motor vehicles.

3.5.23 In the case of refuse collection, trucks will arrive and depart via Chancellors Way/Gunnery Lane, via the Whitworth Lane entrance. Emergency vehicle access is proposed via the Whitworth Lane, Moseley Road and Wilmslow Road (north) access points (see Sections 3.6 and 3.7 for further details).

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3.6 Waste Management Strategy

3.6.1 The public realm proposals for the site have been developed to incorporate refuse vehicle access across the campus. The inner loop path described above for refuse collection connects to the main site access on Whitworth Lane and the design has been tested through swept path analysis to cater for a large refuse truck as operated by MCC (see Appendix B).

3.6.2 A more detailed description of the building's refuse collection strategy, including bin numbers and collection frequencies, can be found in the **Operational Waste Management Plan** (OWMP).

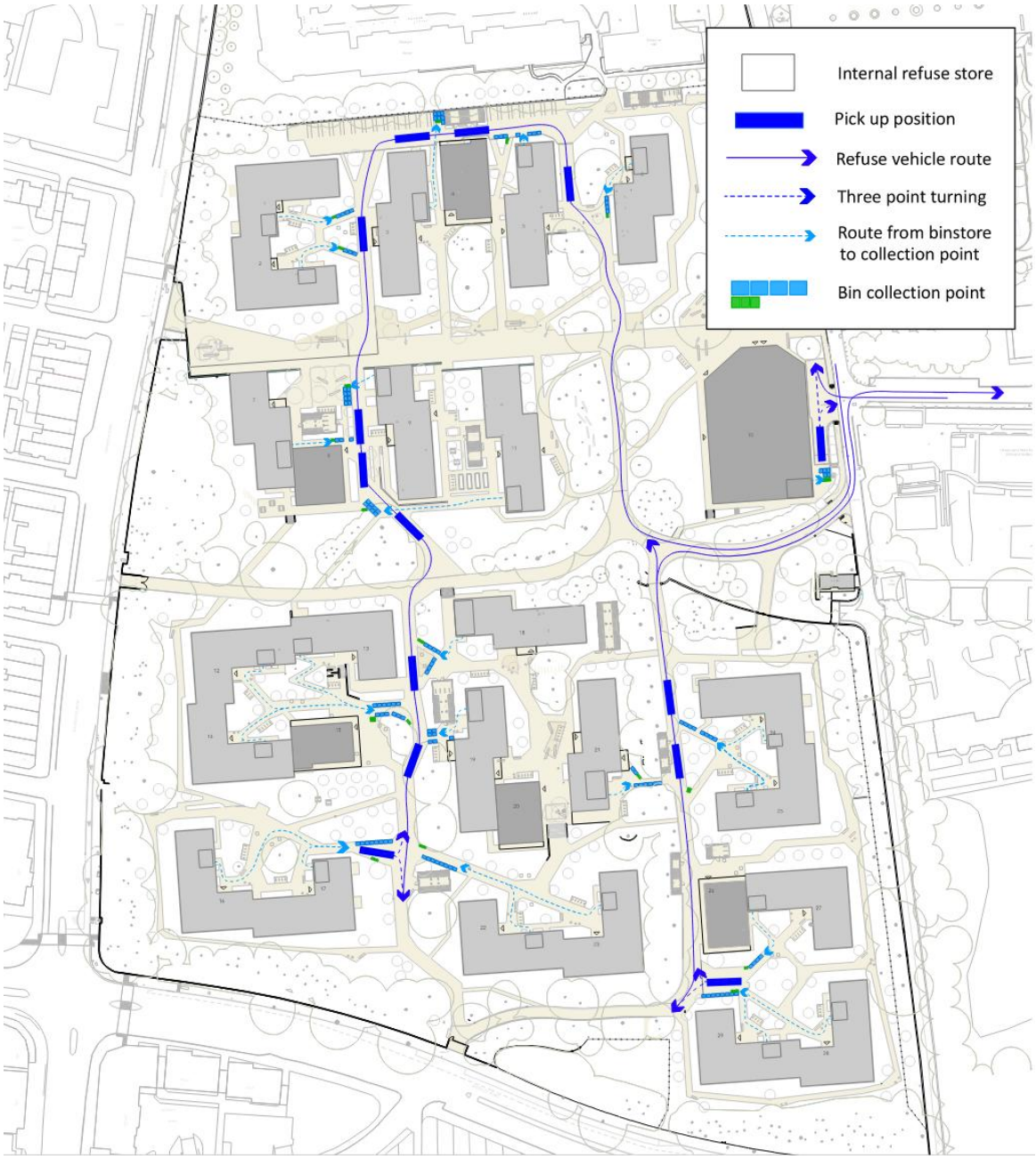


Figure 3.11 Proposed Waste Management Strategy

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3.6.3 The principles of the operational site wide waste management strategy for the student residences are as follows:

- Point of generation - waste generated in each building will be separated at source into a minimum of four waste streams;
- Point of generation to waste storage rooms - students will move waste from point of generation to waste storage rooms containing bins located on the ground floor throughout the day; and
- Waste storage rooms to bin collection points - Facilities Management (FM) staff will move bins to temporary bin presentation areas within the public realm on collection days. A refuse vehicle will directly pick up waste from a temporary bin presentation area. Bins will be returned to their respective waste storage rooms by FM staff.

3.6.4 The student residential waste management strategy is shown illustratively in Figure 3.12.



Figure 3.12 Student Residential Waste Management Strategy

3.6.5 Waste will be segregated into four primary waste streams within the residential accommodation blocks: residual, paper and cardboard, dry mixed recycling and food waste (see Figure 3.13). Each of the four waste streams will be collected at least twice per week.

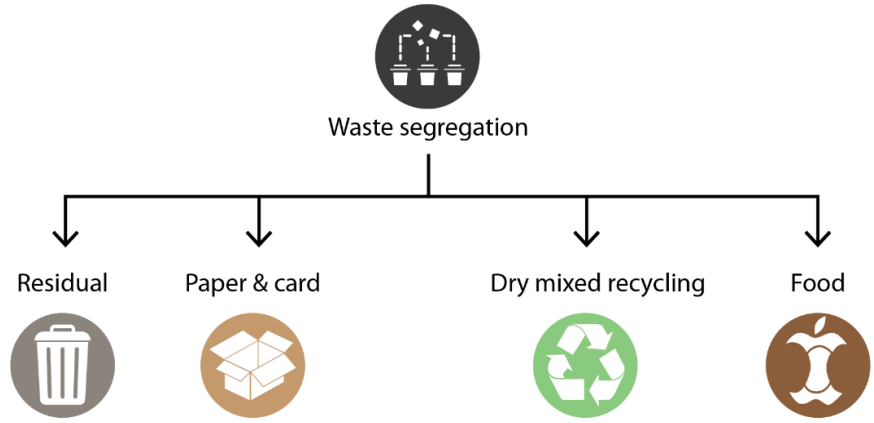


Figure 3.13 Residential Accommodation Waste Stream Segregation

3.6.6 For the satellite hubs, waste will be transferred by the cleaning/FM team to a designated bin store in one of the neighbouring blocks. It is proposed that four streams of waste will be collected, as per the residential accommodation. Waste will effectively be consolidated with and collected with the residential waste.

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3.6.7 The satellite hub waste management strategy is shown illustratively in Figure 3.14.



Figure 3.14 Satellite Hub Waste Management Strategy

3.6.8 For the Central Hub, the cleaning/FM staff will transfer waste to the dedicated bin room within the building. It is proposed that waste should be segregated into a minimum of residual waste, food waste, paper/cardboard and dry mixed recyclables such as plastics and metals. In addition, due to the provision of a bar within the proposed development, it is also recommended that glass should segregated. The resultant segregation strategy is illustrated in Figure 3.15.

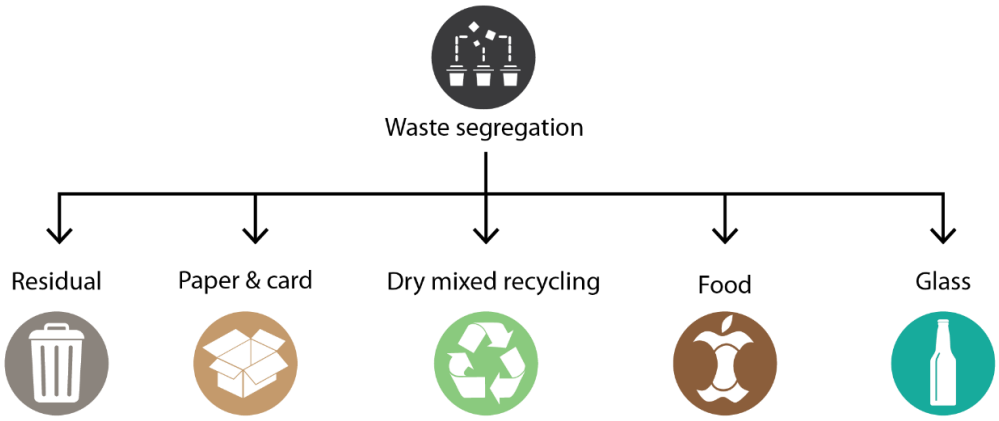


Figure 3.15 Central Hub Waste Segregation

3.6.9 The Central Hub waste management strategy is shown illustratively in Figure 3.16.

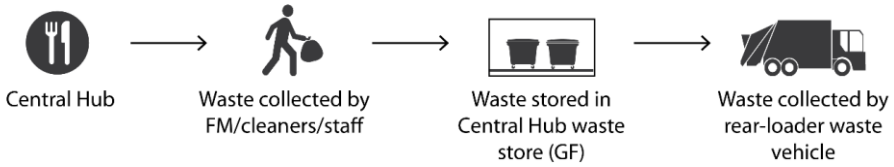


Figure 3.16 Central Hub Waste Management Strategy

3.6.10 Waste is proposed to be collected a minimum of three times per week. A refuse truck can park in the dedicated service yard for the Central Hub and bins can be collected either directly from the bin room or can be marshalled by the FM team on the adjacent hardstanding for collection (see Figure 3.17). Swept path analysis for the refuse collection vehicle is included in Appendix B.

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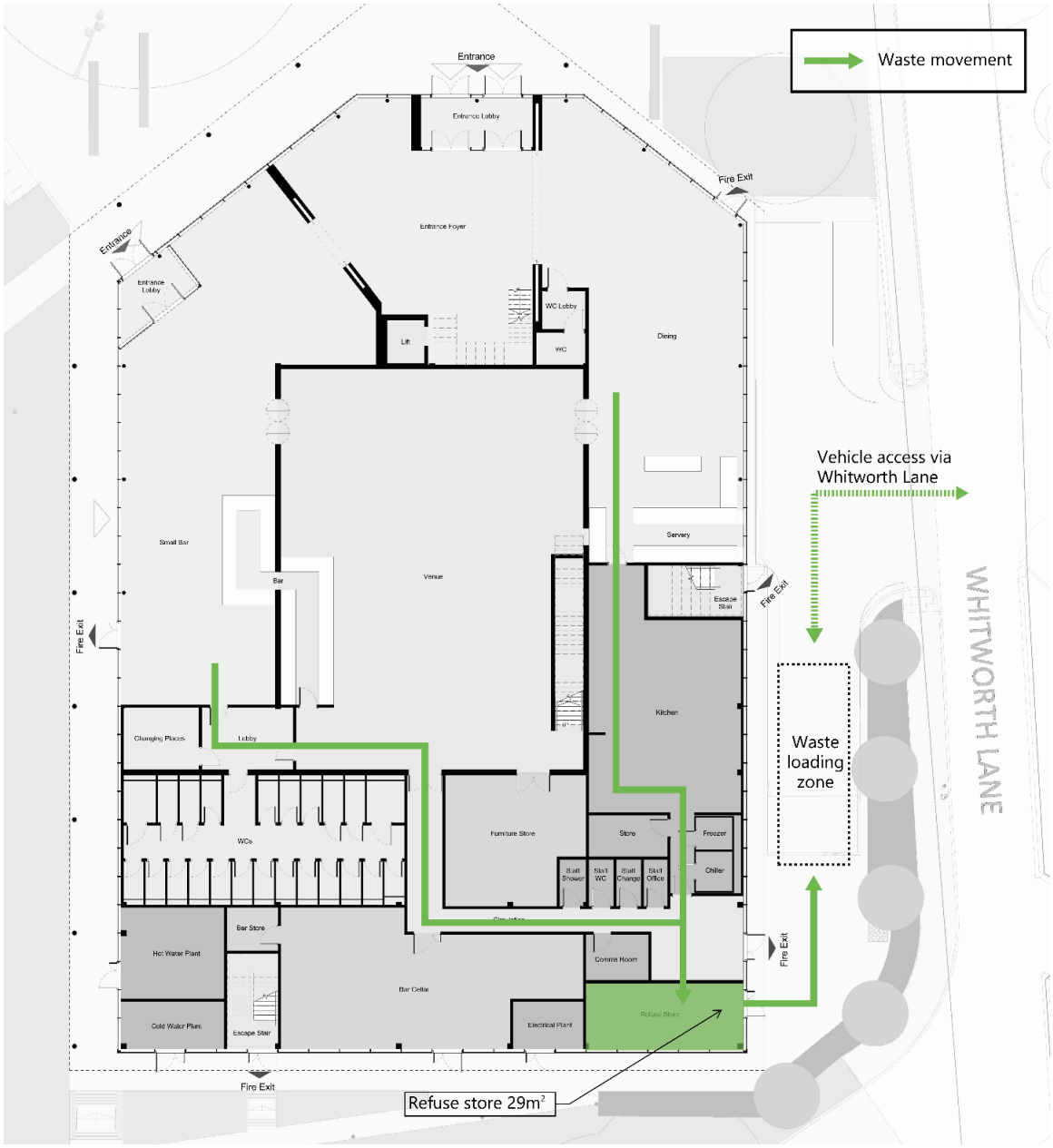


Figure 3.17 Central Hub Waste Storage and Collection

3.6.11 The waste strategy set out in the OWMP has been presented to the MCC Waste Officer during the pre-application stage and no concerns we raised over the proposals.

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3.7 Emergency Vehicles

3.7.1 The public realm proposals for the site have been developed to incorporate appropriate emergency services access across the campus. In addition to the main east-west pedestrian route through the middle of the campus, the inner loop path described above for refuse collection also caters for access by fire engines (and ambulances). Several of the site boundary access points will be available to use by the emergency services if required but are not for general day to day traffic or servicing use.

3.7.2 Swept path analysis has been used to check the design for a standard fire tender; as an ambulance is significantly smaller, this has not been specifically evaluated (see Appendix B). At this stage, no requirement for high reach appliances has been confirmed.



Figure 3.18 Proposed Emergency Access Strategy

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3.8 Moving In/Out

3.8.1 The Fallowfield campus has been operational for many years and the University has developed a specific management plan to deal with the large numbers of students moving in and out at the beginning and end of the academic year, involving the cooperation of the Facilities Management team, campus administration and security teams.

3.8.2 This process is spread over a number of days, with students required to pre-book a day and time slot in advance to avoid too many arrivals/departures on any given day. Students are assigned a half-hour slot during which they can unload on campus before the vehicle has to be relocated to a long-stay car park further afield. Students are provided details of the parking options to assist with this. Trolleys are also provided to help with moving belongings.

3.8.3 Additional temporary signage is put up to help navigation and 'traffic marshals' employed to help direct and manage traffic on campus and in the vicinity.

3.8.4 Access points not used for vehicular access are opened and temporary traffic circulation patterns (e.g. one-way routes) can be employed to help regulate movements. In this way, at least four locations can used for access/egress (Wilmslow Road north and south entrances, Moseley Road entrance and main Whitworth Lane/Oak Drive access). Entry is provided via Chancellors Way and Gunnery Lane, allowing arriving vehicles to queue if necessary, without impacting traffic flows on Wilmslow Road and Mosely Road. The other three access points are then used to disperse departing traffic over multiple locations (see Figure 3.19).

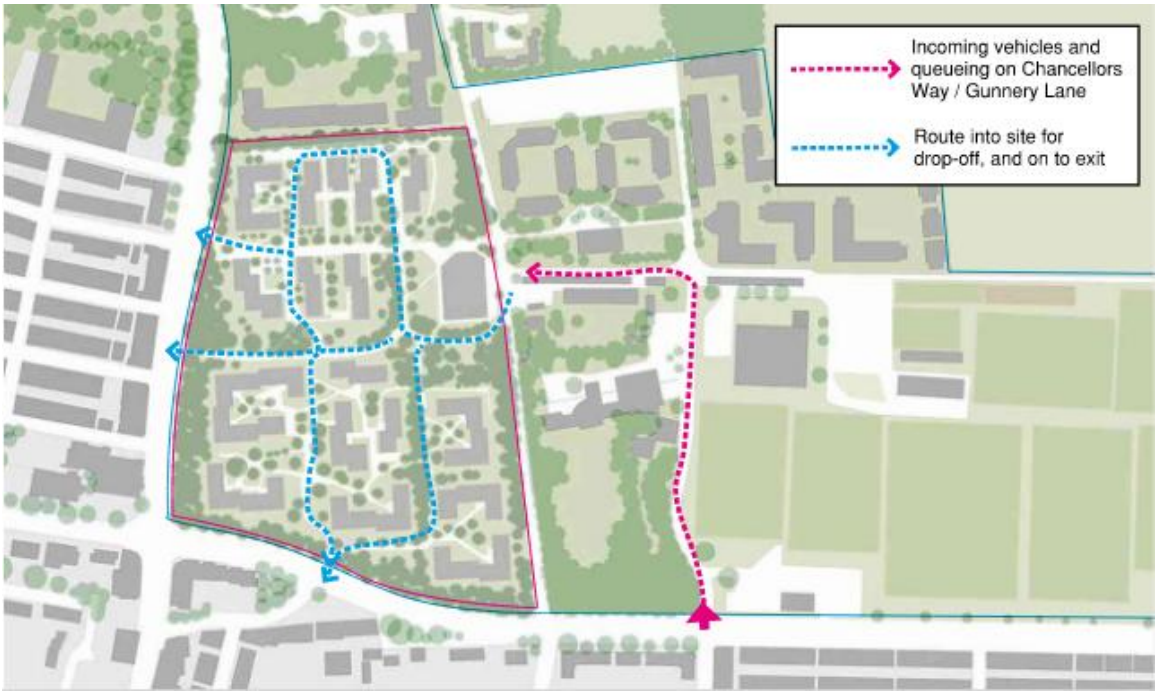


Figure 3.19 Access/Egress for Moving In/Out

3.8.5 The management of moving in/out will continue to be maintained as a separate plan, rather than as part of the Delivery and Servicing Management Strategy.

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4 Measures

4.1 Introduction

4.1.1 The FM team will put in place a series of measures to mitigate the impact of delivery and servicing trips associated with the development, where practical. The aim is to reduce the number of vehicle trips, identify appropriate routing for vans and trucks and to control the timing of trips, all of which would have the following benefits:

- Increase in safety for vulnerable road users, such as pedestrians and cyclists; and
- Improvement in environmental conditions, including noise and air quality.

4.1.2 At this stage it is anticipated that the FM team will implement the following measures – as far as practical - to achieve the above aims:

- Centralised campus-wide coordination;
- Delivery/servicing scheduling;
- Staff training;
- Co-ordination and collaboration between user groups/departments at the site: and,
- Review of supply chain operations.

4.2 DSMS Coordination and Management

4.2.1 In order to ensure that the foundations for a sound DSMS are established, it is important to identify a servicing operations coordinator, referred to herein as the DSMS Coordinator, whose role will be to ensure that the servicing of the development occurs smoothly and in compliance with the DSMS. The DSMS Coordinator's role will include the following activities:

- Acting as the centralised point of contact for all responsibilities pertaining to deliveries and servicing for the site;
- Coordinating with the various 'tenants' (e.g. departments, divisions etc such as The Limes, Firs Botanical Research Centre, the campus bar, site maintenance, etc) to coordinate the efficient temporal distribution of deliveries, as far as practical; and
- Liaising with contractors and suppliers in order to minimise the traffic, parking and operational impact of those on the site and in the surrounding area through consolidation and other measures outlined below.

4.2.2 The value of the DSMS Coordinator role lies in the centralisation of responsibilities. By allocating a specific individual/group to the role, the focus of the service activities is shifted from impersonal processes and systems to circumstances that allow the construction of personal relationships. Strong and positive working relationships add value to the procedure and will be established with suppliers and delivery/service contractors, adjacent and local occupiers and the local authority. In the unlikely event of issues, these agencies will be able to address them to a single point of contact.

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4.3 Delivery Scheduling

4.3.1 It is recommended that, as far as possible, a centralised scheduling system is used to organise and manage controllable servicing activity. This helps to avoid congestion on the site, in the service areas and/or on the surrounding roads.

4.3.2 It is recognised that, currently, it is impractical to control most residential deliveries, but it should be possible to schedule (to some degree) many of the deliveries and servicing activities associated with the bar (Squirrels), catering services, cleaning/maintenance, etc. Similarly, refuse collections may not take place on a precise schedule but it is likely that collection days and approximate collection times would be known and these can be considered when planning other deliveries and servicing to avoid these times.

4.3.3 The principal objectives of a scheduling system are:

- To spread the delivery activity throughout the day, as far as practical, reducing the potential for congestion on the roads or on the site and reducing potential 'spikes' in the time-profile of servicing by using typically quieter periods for servicing that is not time-sensitive;
- To manage those servicing activities that can practically be controlled, including 'abnormal servicing' such as removals, to also accommodate those that cannot readily be scheduled;
- To ensure time-sensitive deliveries are achieved at the right time;
- To assist rapid turnaround by ensuring recipients are ready to receive their delivery and assist drivers;
- To enable FM staff to be deployed efficiently when required; and
- To avoid or reduce servicing activity at times that might be undesirable, e.g. during rush hour traffic or at times that might inconvenience neighbouring properties.

4.3.4 As discussed further below, there would be an aspiration to get tenants/occupiers across the campus to work together and use the same supplier(s) where possible to reduce the number of separate suppliers making deliveries to the site. The FM team would facilitate this through the DSMS Coordinator and Steering Group (see Section 5).

4.4 Coordination and Collaboration Across the Campus

4.4.1 Working with other tenants/occupiers/departments across the campus to better manage deliveries can deliver cost savings and reduce servicing traffic in the neighbourhood. There may be opportunities for organisations to co-ordinate and collaborate on the following:

- Working together on delivery slots for the same suppliers;
- Identifying and procuring the same suppliers for the same products (e.g. stationery, courier collections, vending, cleaning, catering, waste, servicing and maintenance); and
- Agreeing the same time for waste and business postal collections.

4.4.2 The DSMS Coordinator and Steering Group should aim to bring together individuals from various departments and/or organisations within the Fallowfield campus to consider any suitable opportunities for such coordination. This should ideally include the ResLife team, The Limes, the Food in Residences team, the bar

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management team, Botanical Research Centre and Armitage Sports Centre.

4.5 Supply Chain Management and Efficiency

4.5.1 It will primarily be the responsibility of the various occupying departments/businesses and the FM team to review supply chains to see where efficiencies can be found, as this has numerous benefits, such as:

- Less frequent visits by companies delivering to the site can result in less traffic in the neighbourhood, fewer journeys, less mileage and therefore reduced emissions associated with the site.
- Some commercial deliveries may attract a delivery charge, particularly if the value of the goods being delivered is small. These charges could potentially be waived if deliveries are consolidated, and greater volumes are ordered (or proportional cost is reduced for larger orders).
- Simplifying the supplier base could also deliver cost benefits, as well as improved efficiency because of reduced ordering and invoice processing.
- A centralised ordering system can reduce the likelihood of different suppliers being used for the same products, or of numerous orders being made to the same company. As a result, there could be savings by negotiating with suppliers due to economies of scale. Also, invoicing and processing costs could be reduced.

4.5.2 Departments/businesses at the site would be encouraged to contract suppliers registered with a best practice scheme such as FORS (described in more detail in Section 2). By limiting the number of suppliers used, the number of vehicles delivering the site can be reduced by consolidating deliveries together. The scale of the campus will allow larger suppliers and delivery companies (e.g. DHL) to make single deliveries to the site with multiple packages, rather than multiple small deliveries by separate carriers.

4.5.3 The DSMS Coordinator will work with the departments to consolidate deliveries/servicing in this way, limiting the number of separate suppliers as far as possible for deliveries, servicing and waste collections. They will be able to facilitate the selection of suppliers/carriers used across the site and communicate this information to interested departments/businesses. They would also seek to ensure that, as far as possible, non-residential waste is collected by a single operator to avoid the need for multiple waste contractors to visit the site.

4.6 Parcel Deliveries/Collections

4.6.1 Parcel deliveries to residential blocks are difficult to restrict, but a consolidated delivery/collection point is proposed to minimise the potential impact of this.

4.6.2 A central facility has been provided within the adjacent Richmond Park reception building; this will continue to serve the entire campus development once future phases have been completed. Post is distributed from this location on foot or using a trolley where needed; parcels generally require the student to come and collect from this facility after receiving a notification.

4.6.3 The use of bicycles for deliveries should be encouraged where suitable. The proposals include short-stay cycle parking within the public realm across the development that would be able to facilitate this option.

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4.7 Facilities Management Staff Training

4.7.1 The FM team will be required to undertake appropriate training so they can implement the requirements of this DSMS efficiently. In addition to the procedural aspects of the DSMS, there is likely to be a need for specific equipment training (e.g. for buggies/tugs used for bin transport).

4.8 Summary

4.8.1 Table 4.1 summarises the indicative measures proposed to ensure that the best practice of delivery and servicing is experienced at all times. In addition to outlining the timescale for their implementation, the measures aim to achieve the DSMS sub-objectives (refer to Section 1.4), minimising the impact of the servicing and deliveries for the development as far as practical.

Table 4.1 Outline DSMS Measures

Measure	Description	Benefit	Timescale
Management of the DSMS			
Adoption of the DSMS	Early buy in from the FM team will be essential to ensure the DSMS is an active, living document.	The involvement of the relevant departments/businesses will mean that more policies can be implemented, and better results delivered.	Following completion of baseline surveys and prior to the occupation of each building.
Assign Responsibility of the DSMS to the DSMS coordinator	DSMS Co-ordinator to be responsible for managing the ongoing development, delivery and promotion of the DSMS.	To ensure that the DSMS is taken forward and results delivered.	Prior to first occupation of each building.
Raise awareness and promote DSMS initiatives	Provide site information and promote the DSMS to residents, FM team, departments and other key stakeholders.	To promote the measures and targets of the DSMS to a wide audience.	Following first occupation of each building.
Training of Staff	All staff associated with the delivery and servicing of the Proposed Development will be required to undertake appropriate training.	To ensure staff are aware of and understand the measures of the DSMS to implement them effectively.	Following first occupation of each building.
Tenant/department awareness	Ensure all tenants/departments (etc) are made aware of the DSMS and its requirements (incorporate in tenancy agreements where appropriate).	To ensure all tenants/ departments etc are aware of the DSMS and its likely implications.	Prior to first occupation of each building.
Reducing Servicing and Delivery Trips			
Use of local sources/suppliers	Encourage and facilitate tenants/departments to source items/services locally.	To reduce volume of motorised servicing/freight traffic in the area in favour of smaller/greener vehicles such as cargo bikes.	Within 1 year of first occupation of each building or as otherwise agreed with LPA.
Consolidation	Encourage and facilitate tenants/departments to source items/services from the same supplier.	To reduce the number of delivery vehicles making trips to the Proposed Development.	Within 1 year of first occupation of each building or as agreed with LPA.

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Servicing and Delivery Operations			
Site information	Publish details of servicing/delivery facilities, indicating preferred delivery times; delivery locations; preferred local suppliers	To encourage deliveries to take place outside of peak times, in appropriate locations and by preferred suppliers.	Prior to first occupation of each building.
Fleet Operator Recognition Scheme (FORS)	Encourage the use of suppliers who are FORS members and encourage non FORS members to sign up to the scheme.	To promote best practice operational guidelines that contribute towards driver training, fleet management, safety and reduced emissions.	Prior to first occupation of each building and ongoing.

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5 Management, Monitoring and Targets

5.1 Management of the DSMS

5.1.1 The success of the DSMS will depend on its organisation and management, as well as focused and sustainable measures. It is therefore important to have a suitable structure in place from the start, from which the DSMS will be set up, delivered and reviewed. The DSMS is an overarching plan, setting a framework to better manage all types of freight vehicle movement to and from individual buildings within the campus. Ideally, neighbouring buildings/plots within the wider Fallowfield campus should be aligned to the DSMS for maximum benefit.

5.1.2 The University's Travel Plan and the management of the DSMS should be aligned.

5.1.3 The Facilities Management/Estate Management team will the role of DSMS coordinator, to supervise the development and implementation of the DSMS. This does not need to be a full-time role and can be completed in parallel to other FM duties. The role may be undertaken by the designated Travel Plan Coordinator for the campus, as it is good practice for the Travel Plan and DSMS to be aligned.

5.1.4 A Travel Plan Steering Group (TPSG) may be set up to provide an additional mechanism to engage with staff, students and relevant stakeholders (e.g. The Limes, Firs Botanical Research Centre, etc).

5.1.5 The Outline DSMS will be implemented upon first occupation of the site and will be developed into a Detailed DSMS after the comprehensive servicing and delivery surveys have been carried out (within six months of occupation). The UoM will work with the FM team to ensure the Detailed DSMS is implemented and developed over time.

5.2 Raising Awareness

5.2.1 It will be important to inform all relevant occupiers/suppliers about this DSMS including:

- The content and reason/need for the DSMS;
- The importance of the DSMS, freight movements and its impacts;
- What occupants can do to help encourage the use of sustainable servicing and delivery movement to and from the site; and
- The potential benefits of successfully using and implementing a DSMS.

5.2.2 Raising awareness will help to garner support from the occupants for the DSMS and ensure that the specified targets, protocol and measures are met.

5.2.3 To increase awareness of the DSMS, relevant staff and suppliers will be given information on the DSMS and encouraged to use sustainable freight to and from the site.

5.2.4 It is recognised and accepted that students will make up the majority of the campus population and that they will generally have little awareness of the DSMS and strategy for managing deliveries and servicing. Key elements will be communicated to them through the student accommodation handbook/guidelines, e.g. in relation to where post and parcels will be delivered to, restrictions applicable to food deliveries and taxis, access hours to the campus for deliveries, etc.

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5.2.5 It is essential that relevant employees working at the site and suppliers are involved in the implementation and ongoing development of the DSMS. The servicing/delivery surveys will contribute to raising awareness at the outset. They will also allow staff and suppliers to have an input into the ongoing development and review of the DSMS.

5.3 Review and Monitoring

5.3.1 The following paragraphs outline an indicative schedule of monitoring.

Stage 1 – Pre-Occupation

5.3.2 Prior to occupation, this DSMS would be updated (If necessary) to incorporate any elements of the design or servicing strategy that have been developed further during the detailed design stage.

5.3.3 The revised document would be submitted to MCC for approval and would form the basis of subsequent development into a Detailed DSMS after occupation.

Stage 2 – Initial Development (six months)

5.3.4 The first stage of the monitoring and review programme will be to undertake comprehensive servicing and delivery surveys within six months of full occupation of the first building, carried out over 2-4 weeks.

5.3.5 Best practice guidance provides a template for the survey questions, which should cover:

- Frequency of visits;
- Who the provider is;
- Type of goods/materials being delivered;
- Quantity or size of goods being delivered;
- Urgency of the deliveries;
- Access and arrival routes;
- Mode of transport and vehicle size; and
- The destination of the delivery

Stage 3 – Continued Monitoring and Review

5.3.6 Following the implementation of the detailed DSMS, regular monitoring and review will be required to maintain the live document.

5.3.7 Table 5.1 sets out an indicative programme for monitoring and review of the DSMS; the precise timescales for monitoring and review may change if the development is completed in a phased manner and this would be discussed further with the LPA if applicable.

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Table 5.1 Indicative Programme of Monitoring and Review

Action	Timescale
Update DSMS to reflect design development	Prior to 6-months before occupation of each phase
Baseline delivery surveys	Within 6 months of full occupation of the first building.
Update the DSMS to include targets based on surveys	Within 9 months of full occupation of the first building (3 months after the baseline survey).
Future servicing and delivery surveys	3rd and 5th year anniversaries of the date of full occupation of the first building
Undertake comprehensive strategic review of all aspects of the DSMS (including the objectives, targets, action plan and monitoring programme)	6 months, 3rd and 5th year anniversaries from the date of full occupation of the first building

5.4 DSMS Targets

5.4.1 Without detailed data on existing servicing activity, it is difficult to develop specific targets for the DSMS. Once the servicing and delivery surveys have been undertaken, a series of targets can be taken forward with the Developer to compile the detailed DSMS. The targets should align with the objectives and measures set out previously and should be SMART (Specific, Measurable, Achievable, Relevant, Timebound).

5.4.2 Examples of targets that could be developed are as follows:

- Number, or a specific percentage of, servicing and delivery trips to be undertaken during the AM and PM peak hours (to be capped, ideally);
- A limit on the number of servicing and deliveries to be undertaken overnight (00:00 – 06:00) – assumed to be entirely restricted;
- All, or a specific proportion of, servicing and delivery companies used to be a member of FORS; and
- A specific percentage of the Proposed Development servicing and delivery vehicles to be 'green' vehicles.

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6 Summary and Action Plan

6.1 Summary

6.1.1 This Delivery and Servicing Management Strategy (DSMS) has been prepared on behalf of John Graham Construction Ltd in relation to the Reserved Matters Application (RMA) for the proposed redevelopment of the Student Residences at the Fallowfield Campus, M14 6HD (the site).

6.1.2 The proposed development will provide up to 3,300 student beds, up to 55 bedrooms for staff accommodation and 15 bedrooms as part of the ResLife scheme. The ResLife scheme includes postgraduate students and staff who provide support and guidance to students living in halls. This corresponds to an uplift of circa 996 beds (if the site was currently operating at full capacity). Additional amenities (such as laundry facilities, bar, study rooms etc) will be provided in conjunction with the student residences.

6.1.3 This DSMS demonstrates how deliveries and servicing at the site will be managed. Most servicing will continue in the same manner as the existing campus, with only small increases in activity resulting from the additional population.

6.1.4 It is noted that the delivery and servicing locations (i.e. the destination / loading point for vehicles) for the proposed development and the existing wider campus are located well within the boundary of the campus, a reasonable distance from any adjoining non-UoM properties. For example, the proposed Central Hub service yard is located c.300m from properties on Moseley Road. Therefore the servicing activity taking place at the destination point would be largely imperceptible by people and properties outside the campus boundary in the local area.

6.1.5 In order to ensure that the foundations for a sound DSMS are established, an Action Plan has been provided to set out timescales to implement the proposed measures (see below).

6.1.6 This DSMS will be a 'live document' that is regularly monitored and reviewed to ensure that it reflects the changing requirements of the development and is up to date with servicing/delivery options available.

6.1.7 At the scoping meeting with MCC on 9 September to discuss the RMA, it was discussed that in Buro Happold's experience, a detailed DSMS would normally be produced prior to occupation, not prior to commencement of development, as Condition 26 for this RMA requires. This longer time period allows detailed design to be substantially complete before the DSMS is written and all the 'finer' details of the operational strategy for the site in terms of deliveries and servicing are available to write into the DSMS.

6.1.8 Although this DSMS has been worked through in some detail with the design team and the UoM, there may be some elements that will be reviewed, developed and updated during the detailed design period though to just prior to occupation of each phase of the development; albeit the strategy overall is unlikely to be materially affected.

6.1.9 Therefore, a two-stage process was discussed with MCC; to submit a site-wide DSMS with the RMA which will contain as much detail about the operational strategy for the development as a whole at time of writing, to ensure that MCC are comfortable that there is a strategy for all key issues related to deliveries and servicing for the site. Then, following a consent, the DSMS would be reviewed and updated (if necessary) prior to 6-months before occupation of each phase of development, for approval by MCC.

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6.1.10 It is felt that the strategy presented in this report and the proposed process for developing and updating this DSMS robustly meets the requirements of Condition 26, and there should be no reason why the Condition should not be discharged with the submittal of this DSMS for the RMA on this basis.

6.2 Action Plan

6.2.1 In support of the overarching principles of this DSMS, specific objectives have been identified as part of this exercise and an action plan developed with a view to ensuring that the development can meet the requirements. This plan will need to be reviewed periodically as operations evolve but it represents a statement of intent. The Action Plan is summarised below in Table 6.1.

Table 6.1 DSMS Action Plan

Objective	Measure	Timescale
To ensure that goods and services can be delivered and waste removed in a safe, efficient and environmentally friendly way	Appoint Facilities Manager	Prior to occupation (of new buildings)
	Develop guidance to be shared with occupants/tenants on the delivery and servicing management strategy	Prior to occupation
	Investigate whether specifying suppliers' use of delivery companies committed to sustainable freight distribution schemes (such as Freight Operator Recognition Scheme FORS or ECOStars) is feasible without distorting or preventing competition	Prior to occupation
	Recommend procedures for the onsite management of deliveries	Work to be completed as part of the FM review
	Review/identify core processes that can be managed centrally in order to control the impact on the number of delivery and servicing events	Upon occupation
	Develop a delivery schedule or booking system to regulate, control and monitor the servicing and deliveries of the site (where practical, e.g. commercial deliveries)	Prior to occupation
	Discourage personal deliveries and specialised deliveries during peak hours (educating staff and providing guidance)	Following occupation

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Appendix A Site Layout Plans

UMRF-LAP-XX-00-DR-L-00002-P5 Landscape GA

UMRF-LAP-XX-00-DR-L-10000-P2 Neighbourhood 1 GA

UMRF-LAP-XX-00-DR-L-20000-P2 Neighbourhood 2 GA

UMRF-LAP-XX-00-DR-L-30000-P2 Neighbourhood 3 GA

UMRF-LAP-XX-00-DR-L-40000-P2 Neighbourhood 4 GA

UMRF-LAP-XX-00-DR-L-50000-P2 Neighbourhood 5 GA

UMRF-LAP-XX-00-DR-L-60000-P2 Neighbourhood Central Hub & Open Space GA

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Sheavyn House
Ashburne Hall
Hilltop Court
Elmton House
WILMSLOW ROAD
FALLOWFIELD BROW
MOSELEY ROAD
GUNNERY LANE
CARILL DRIVE
Ladybarn House
Revolution (PH)
POND
ENTRANCE 1
ENTRANCE 2
ENTRANCE 3
ENTRANCE 4
ENTRANCE 5
ENTRANCE 6
ENTRANCE 7
ENTRANCE 8

LANDSCAPE KEY

HARD LANDSCAPE
See drawing UMRF-LAP-XX-00-DR-L-00008

STREET FURNITURE
Seating and benches. See drawing UMRF-LAP-00-DR-L-00012

Cycle stores.

Cycle racks. See drawing UMRF-LAP-XX-00-DR-L-00022

LIGHTING
Feature lighting columns to Concourse
Other lighting fittings. See drawing UMRF-LAP-XX-00-DR-L-00011

BOUNDARIES
See drawing UMRF-LAP-XX-00-DR-L-00014

SIGNAGE AND WAYFINDING
See drawing UMRF-LAP-XX-00-DR-L-00019

SOFT LANDSCAPING
TREES
Existing trees retained. See drawing UMRF-LAP-XX-00-DR-L-00003 for removals

Proposed trees. See drawing UMRF-LAP-XX-00-DR-L-00016

PLANTING
See soft landscaping drawings UMRF-LAP-XX-00-DR-L-10001-60001
Ornamental planting beds

Mixed scrub

Grass, mown and wildflower lawn

REV P5	RD	2025-02-19	Landscape layout updates.
REV P4	RD	2025-02-12	Entrance 6 updated
REV P3	RD	2025-02-06	Final GA updates, key added
REV P2	RD	2025-02-04	Building GA plans updated
REV P1	RD	2025-01-20	Draft planning issue

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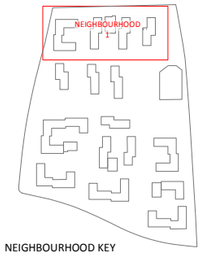
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CLIENT	University of Manchester
TITLE	Proposed Landscape GA
SCALE	1:600 @ A1
DATE	2025-01-20
STATUS	S3
PURPOSE	Planning
DRAWN	RCD
CHECKED	NS
REFERENCE	UMRF-LAP-XX-00-DR-L-00002
REV	P5



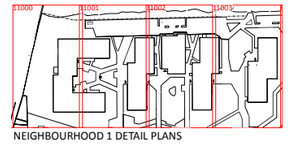
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NEIGHBOURHOOD KEY



NEIGHBOURHOOD 1 DETAIL PLANS

HARD LANDSCAPING

P1	Buff coloured asphalt to existing vehicular circulation route.
P2	Standard asphalt
P3	Concrete block pavers with granitic aggregate top layer. % of porous paving to be determined at detail design stage. Assumed 50%
P3v	- to new shared route through site.
P3a	- to access paths around site, maintenance vans intermittently
P3g	- to courtyard gardens, maintenance vans intermittently
P3c	- to the Concourse, with areas of complimentary slab paving
P4	Porous resin bonded gravel to tree pits in hard landscaping
P5	Bound gravel paving (porous)
P6	Grasscrete paving infilled with grass/forb mixure
P6	As above filled with gravel (porous)
P7	200mm wide loose gravel strip with timber edging where planting abuts building facades
P8	Tactile paving, blister to crossings, corduroy to steps

KERBS AND EDGINGS

K1	Standard HB road kerbs
K2	Conservation type kerbs 255 wide
K3	Conservation type kerb 145mm wide
K4	Tegula type block flush edgings
K5	Flush steel edgings
K6	Concrete edgings

BOUNDARIES

B-A	Mesh panel fence. 1.2m high within planting bed (A1) and 2m high to protect pond (A2)
B-B	Existing bin store wall on line of Whitworth Lane taken down to level of adjacent wall. New concrete coping to match adjacent.
B-C	New wall 1m high using reclaimed bricks and coping to close gap left by gate removal
B-D	Flat top railings on low masonry plinth to match those adjacent tio close pedestrian access
B-E	Retaining walls to match adjacent building masonry
B-F	2m high railings, flat top painted black
B-G	Feature wall to public realm to be developed at detailed design stage

STREET FURNITURE

- Feature benches associated with the Concourse
- Feature benches associated with Hub Spaces
- Seating to residential entrances
- Trim trail seating
- Pic-nic benches

All seating to have accessible options within each grouping.

F1	Lockable drop bollards, 1100mm high
F2	Canopy/shelters to Concourse to be developed at detailed design stage
	Sheffield type cycle stands
	Cycle shelters see drawing UMRF-LAP-XX-00-DR-L-00022
F5	Totem wayfinding signage to be developed at detail design stage
F6	Feature signage to be developed at detail design stage

LIGHTING

For lighting strategy see drawing UMRF-LAP-XX-00-DR-L-00011. Specification by others.

ANNOTATIONS

- 6 Block numbers
- Building entrances
- *+43.190* Existing retained levels
- +43.380 Proposed levels

FOR ADJACENT SHEET SEE DRAWING UMRF-LAP-XX-00-DR-L-20000

REV P2	RD 2025-02-19	Landscape layout updated with tracking info.
REV P1	RD 2025-02-13	First issue

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JOB TITLE	UoM Residences DBFO
CLIENT	University of Manchester
TITLE	Neighbourhood 1 GA
SCALE	1:250 @ A1
DATE	2024-11-25
STATUS	S3
PURPOSE	Planning
DRAWN	RCD
CHECKED	NS
REFERENCE	UMRF-LAP-XX-00-DR-L-10000 REV P2

FOR ADJACENT SHEET SEE DRAWING UMRF-LAP-XX-00-DR-L-10000

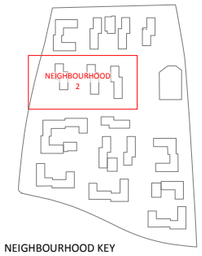


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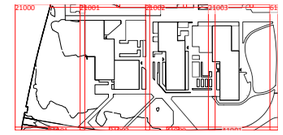
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NEIGHBOURHOOD KEY



NEIGHBOURHOOD 2

FOR ADJACENT SHEET SEE DRAWING UMRF-LAP-XX-00-DR-L-60000

HARD LANDSCAPING

- P1 Buff coloured asphalt to existing vehicular circulation route.
- P2 Standard asphalt
- P3 Concrete block pavers with granitic aggregate top layer. % of porous paving to be determined at detail design stage. Assumed 50%
- P3v - to new shared route through site.
- P3a - to access paths around site, maintenance vans intermittently
- P3g - to courtyard gardens, maintenance vans intermittently
- P3c - to the Concourse, with areas of complimentary slab paving
- P4 Porous resin bonded gravel to tree pits in hard landscaping
- P5 Bound gravel paving (porous)
- P6 Grasscrete paving infilled with grass/forb mixure
- P6 As above filled with gravel (porous)
- P7 200mm wide loose gravel strip with timber edging where planting abuts building facades
- P8 Tactile paving, blister to crossings, corduroy to steps

KERBS AND EDGINGS

- K1 Standard HB road kerbs
- K2 Conservation type kerbs 255 wide
- K3 Conservation type kerb 145mm wide
- K4 Tegula type block flush edgings
- K5 Flush steel edgings

BOUNDARIES

- B-A Mesh panel fence. 1.2m high within planting bed (A1) and 2m high to protect pond (A2)
- B-B Existing bin store wall on line of Whitworth Lane taken down to level of adjacent wall. New concrete coping to match adjacent.
- B-C New wall 1m high using reclaimed bricks and coping to close gap left by gate removal
- B-D Flat top railings on low masonry plinth to match those adjacent tio close pedestrian access
- B-E Retaining walls to match adjacent building masonry
- B-F 2m high railings, flat top painted black
- B-G Feature wall to public realm to be developed at detailed design stage

STREET FURNITURE

- Feature benches associated with the Concourse
- Feature benches associated with Hub Spaces
- Seating to residential entrances
- Trim trail seating
- Pic-nic benches

All seating to have accessible options within each grouping.

- F1 Lockable drop bollards, 1100mm high
- F2 Canopy/shelters to Concourse to be developed at detailed design stage
- Sheffield type cycle stands
- Cycle shelters see drawing UMRF-LAP-XX-00-DR-L-00022
- F5 Totem wayfinding signage to be developed at detail design stage
- F6 Feature signage to be developed at detail design stage

LIGHTING

For lighting strategy see drawing UMRF-LAP-XX-00-DR-L-00011. Specification by others.

ANNOTATIONS

- 6 Block numbers
- Building entrances
- +43.190 Existing retained levels
- +43.380 Proposed levels

REV P2	RD 2025-02-19	Landscape layout updated with tracking info.	
REV P1	RD 2025-02-13	First issue	

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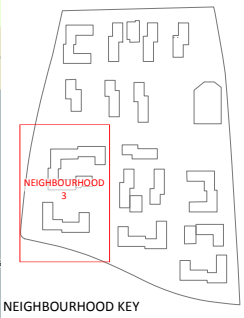
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JOB TITLE	UoM Residences DBFO
CLIENT	University of Manchester
TITLE	Neighbourhood 2 GA
SCALE	1:250 @ A1
DATE	2024-11-25
STATUS	S3
PURPOSE	Planning
DRAWN	RCD
CHECKED	NS
REFERENCE	UMRF-LAP-XX-00-DR-L-20000
REV	P2

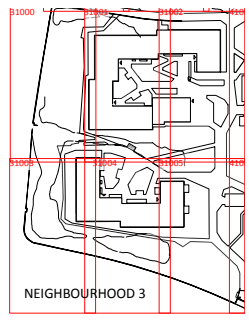
FOR ADJACENT SHEET SEE DRAWING UMRF-LAP-XX-00-DR-L-20000

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NEIGHBOURHOOD KEY



NEIGHBOURHOOD 3

HARD LANDSCAPING

- P1 Buff coloured asphalt to existing vehicular circulation route.
- P2 Standard asphalt
- P3 Concrete block pavers with granitic aggregate top layer. % of porous paving to be determined at detail design stage. Assumed 50%
- P3v - to new shared route through site.
- P3a - to access paths around site, maintenance vans intermittently
- P3g - to courtyard gardens, maintenance vans intermittently
- P3c - to the Concourse, with areas of complimentary slab paving
- P4 Porous resin bonded gravel to tree pits in hard landscaping
- P5 Bound gravel paving (porous)
- P6 Grasscrete paving infilled with grass/forb mixure
- P6 As above filled with gravel (porous)
- P7 200mm wide loose gravel strip with timber edging where planting abuts building facades
- P8 Tactile paving, blister to crossings, corduroy to steps

KERBS AND EDGINGS

- K1 Standard HB road kerbs
- K2 Conservation type kerbs 255 wide
- K3 Conservation type kerb 145mm wide
- K4 Tegula type block flush edgings
- K5 Flush steel edgings
- K6 Concrete edgings

BOUNDARIES

- B-A Mesh panel fence. 1.2m high within planting bed (A1) and 2m high to protect pond (A2)
- B-B Existing bin store wall on line of Whitworth Lane taken down to level of adjacent wall. New concrete coping to match adjacent.
- B-C New wall 1m high using reclaimed bricks and coping to close gap left by gate removal
- B-D Flat top railings on low masonry plinth to match those adjacent tio close pedestrian access
- B-E Retaining walls to match adjacent building masonry
- B-F 2m high railings, flat top painted black
- B-G Feature wall to public realm to be developed at detailed design stage

STREET FURNITURE

- Feature benches associated with the Concourse
- Feature benches associated with Hub Spaces
- Seating to residential entrances
- Trim trail seating
- Pic-nic benches

All seating to have accessible options within each grouping.

- F1 Lockable drop bollards, 1100mm high
- F2 Canopy/shelters to Concourse to be developed at detailed design stage
- Sheffield type cycle stands
- Cycle shelters see drawing UMRF-LAP-XX-00-DR-L-00022
- F5 Totem wayfinding signage to be developed at detail design stage
- F6 Feature signage to be developed at detail design stage

LIGHTING

For lighting strategy see drawing UMRF-LAP-XX-00-DR-L-00011. Specification by others.

ANNOTATIONS

- 6 Block numbers
- Building entrances
- +43.190 Existing retained levels
- +43.380 Proposed levels

FOR ADJACENT SHEET SEE DRAWING UMRF-LAP-XX-00-DR-L-50000

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REV P1	RD	2025-02-13	First issue

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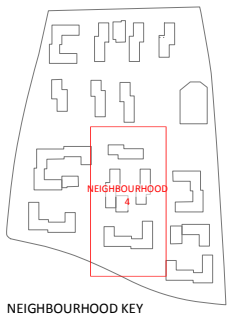
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CLIENT	University of Manchester
TITLE	Neighbourhood 3 GA
SCALE	1:250 @ A1
DATE	2024-11-25
STATUS	S3
PURPOSE	Planning
DRAWN	RCD
CHECKED	NS
REFERENCE	UMRF-LAP-XX-00-DR-L-30000
REV	P2

FOR ADJACENT SHEET SEE DRAWING UMRF-LAP-XX-00-DR-L-20000

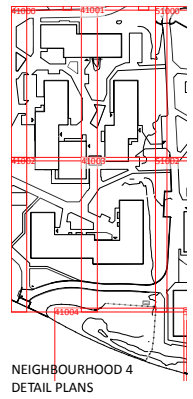
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NEIGHBOURHOOD KEY



NEIGHBOURHOOD 4
DETAIL PLANS

HARD LANDSCAPING

P1	Buff coloured asphalt to existing vehicular circulation route.
P2	Standard asphalt
P3	Concrete block pavers with granitic aggregate top layer. % of porous paving to be determined at detail design stage. Assumed 50%
P3v	- to new shared route through site.
P3a	- to access paths around site, maintenance vans intermittently
P3g	- to courtyard gardens, maintenance vans intermittently
P3c	- to the Concourse, with areas of complimentary slab paving
P4	Porous resin bonded gravel to tree pits in hard landscaping
P5	Bound gravel paving (porous)
P6	Grasscrete paving infilled with grass/forb mixure
P6	As above filled with gravel (porous)
P7	200mm wide loose gravel strip with timber edging where planting abuts building facades
P8	Tactile paving, blister to crossings, corduroy to steps

KERBS AND EDGINGS

K1	Standard HB road kerbs
K2	Conservation type kerbs 255 wide
K3	Conservation type kerb 145mm wide
K4	Tegula type block flush edgings
K5	Flush steel edgings
K6	Concrete edgings

BOUNDARIES

B-A	Mesh panel fence. 1.2m high within planting bed (A1) and 2m high to protect pond (A2)
B-B	Existing bin store wall on line of Whitworth Lane taken down to level of adjacent wall. New concrete coping to match adjacent.
B-C	New wall 1m high using reclaimed bricks and coping to close gap left by gate removal
B-D	Flat top railings on low masonry plinth to match those adjacent tio close pedestrian access
B-E	Retaining walls to match adjacent building masonry
B-F	2m high railings, flat top painted black
B-G	Feature wall to public realm to be developed at detailed design stage

STREET FURNITURE

- Feature benches associated with the Concourse
- Feature benches associated with Hub Spaces
- Seating to residential entrances
- Trim trail seating
- Pic-nic benches

All seating to have accessible options within each grouping.

F1	Lockable drop bollards, 1100mm high
F2	Canopy/shelters to Concourse to be developed at detailed design stage
	Sheffield type cycle stands
	Cycle shelters see drawing UMRF-LAP-XX-00-DR-L-00022
F5	Totem wayfinding signage to be developed at detail design stage
F6	Feature signage to be developed at detail design stage

LIGHTING

For lighting strategy see drawing UMRF-LAP-XX-00-DR-L-00011. Specification by others.

ANNOTATIONS

6	Block numbers
	Building entrances
+43.190	Existing retained levels
+43.380	Proposed levels

REV P2	RD 2025-02-19	Landscape layout updated with tracking info.
REV P1	RD 2025-02-13	First issue

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JOB TITLE	UoM Residences DBFO
CLIENT	University of Manchester
TITLE	Neighbourhood 4 GA
SCALE	1:250 @ A1
DATE	2024-11-25
STATUS	S3
PURPOSE	Planning
DRAWN	RCD
CHECKED	NS
REFERENCE	UMRF-LAP-XX-00-DR-L-40000
REV	P2

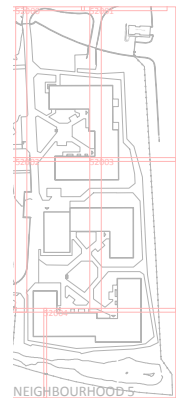
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NEIGHBOURHOOD KEY



NEIGHBOURHOOD 5 DETAIL PLANS

HARD LANDSCAPING

- P1 Buff coloured asphalt to existing vehicular circulation route.
- P2 Standard asphalt
- P3 Concrete block pavers with granitic aggregate top layer. % of porous paving to be determined at detail design stage. Assumed 50%
- P3v - to new shared route through site.
- P3a - to access paths around site, maintenance vans intermittently
- P3g - to courtyard gardens, maintenance vans intermittently
- P3c - to the Concourse, with areas of complimentary slab paving
- P4 Porous resin bonded gravel to tree pits in hard landscaping
- P5 Bound gravel paving (porous)
- P6 Grasscrete paving infilled with grass/forb mixure
- P6 As above filled with gravel (porous)
- P7 200mm wide loose gravel strip with timber edging where planting abuts building facades
- P8 Tactile paving, blister to crossings, corduroy to steps

KERBS AND EDGINGS

- K1 Standard HB road kerbs
- K2 Conservation type kerbs 255 wide
- K3 Conservation type kerb 145mm wide
- K4 Tegula type block flush edgings
- K5 Flush steel edgings
- K6 Concrete edgings

BOUNDARIES

- B-A Mesh panel fence. 1.2m high within planting bed (A1) and 2m high to protect pond (A2)
- B-B Existing bin store wall on line of Whitworth Lane taken down to level of adjacent wall. New concrete coping to match adjacent.
- B-C New wall 1m high using reclaimed bricks and coping to close gap left by gate removal
- B-D Flat top railings on low masonry plinth to match those adjacent tio close pedestrian access
- B-E Retaining walls to match adjacent building masonry
- B-F 2m high railings, flat top painted black
- B-G Feature wall to public realm to be developed at detailed design stage

STREET FURNITURE

- Feature benches associated with the Concourse
- Feature benches associated with Hub Spaces
- Seating to residential entrances
- Trim trail seating
- Pic-nic benches

All seating to have accessible options within each grouping.

- F1 Lockable drop bollards, 1100mm high
- F2 Canopy/shelters to Concourse to be developed at detailed design stage
- Sheffield type cycle stands
- Cycle shelters see drawing UMRF-LAP-XX-00-DR-L-00022
- F5 Totem wayfinding signage to be developed at detail design stage
- F6 Feature signage to be developed at detail design stage

LIGHTING

For lighting strategy see drawing UMRF-LAP-XX-00-DR-L-00011. Specification by others.

ANNOTATIONS

- 6 Block numbers
- Building entrances
- +43.190 Existing retained levels
- +43.380 Proposed levels

REV P2	RD	2025-02-19	Landscape layout updated with tracking info.
REV P1	RD	2025-02-13	First issue

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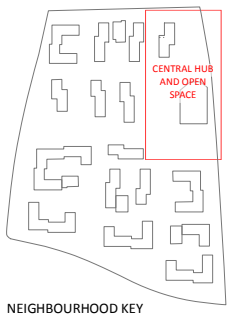
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JOB TITLE	UoM Residences DBFO
CLIENT	Graham
TITLE	Neighbourhood 5 GA
SCALE	1:250 @ A1
DATE	2024-11-25
STATUS	S3
PURPOSE	Planning
DRAWN	RCD
CHECKED	NS
REFERENCE	UMRF-LPL-XX-00-DR-L-5000
REV	P2

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NEIGHBOURHOOD KEY

CENTRAL HUB AND OPEN SPACE DETAIL PLANS

HARD LANDSCAPING

- P1 Buff coloured asphalt to existing vehicular circulation route.
- P2 Standard asphalt
- P3 Concrete block pavers with granitic aggregate top layer. % of porous paving to be determined at detail design stage. Assumed 50%
- P3v - to new shared route through site.
- P3a - to access paths around site, maintenance vans intermittently
- P3g - to courtyard gardens, maintenance vans intermittently
- P3c - to the Concourse, with areas of complimentary slab paving
- P4 Porous resin bonded gravel to tree pits in hard landscaping
- P5 Bound gravel paving (porous)
- P6 Grasscrete paving infilled with grass/forb mixure
- P6 As above filled with gravel (porous)
- P7 200mm wide loose gravel strip with timber edging where planting abuts building facades
- P8 Tactile paving, blister to crossings, corduroy to steps

KERBS AND EDGINGS

- K1 Standard HB road kerbs
- K2 Conservation type kerbs 255 wide
- K3 Conservation type kerb 145mm wide
- K4 Tegula type block flush edgings
- K5 Flush steel edgings
- K6 Concrete edgings

BOUNDARIES

- B-A Mesh panel fence. 1.2m high within planting bed (A1) and 2m high to protect pond (A2)
- B-B Existing bin store wall on line of Whitworth Lane taken down to level of adjacent wall. New concrete coping to match adjacent.
- B-C New wall 1m high using reclaimed bricks and coping to close gap left by gate removal
- B-D Flat top railings on low masonry plinth to match those adjacent tio close pedestrian access
- B-E Retaining walls to match adjacent building masonry
- B-F 2m high railings, flat top painted black
- B-G Feature wall to public realm to be developed at detailed design stage

STREET FURNITURE

- Feature benches associated with the Concourse
- Feature benches associated with Hub Spaces
- Seating to residential entrances
- Trim trail seating
- Pic-nic benches

All seating to have accessible options within each grouping.

- F1 Lockable drop bollards, 1100mm high
- F2 Canopy/shelters to Concourse to be developed at detailed design stage
- Sheffield type cycle stands
- Cycle shelters see drawing UMRF-LAP-XX-00-DR-L-00022
- F5 Totem wayfinding signage to be developed at detail design stage
- F6 Feature signage to be developed at detail design stage

LIGHTING

For lighting strategy see drawing UMRF-LAP-XX-00-DR-L-00011. Specification by others.

ANNOTATIONS

- 6 Block numbers
- Building entrances
- +43.190 Existing retained levels
- +43.380 Proposed levels

Upstand kerbs installed to replace crossover. Footway level lifted to rear.

Drop kerbs installed. Existing narrow footpath retained past this point

Zebra crossing markings installed

Flush K1 kerb joining existing flush kerb on Whitworth Lane at this point.

FOR ADJACENT SHEET SEE DRAWING UMRF-LAP-XX-00-DR-L-20000

FOR ADJACENT SHEET SEE DRAWING UMRF-LAP-XX-00-DR-L-50000

REV P2	RD 2025-02-19	Landscape layout updated with tracking info.
REV P1	RD 2025-02-13	First issue

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JOB TITLE	UoM Residences DBFO
CLIENT	University of Manchester
TITLE	Central Hub & Open Space GA
SCALE	1:250 @ A1
DATE	2024-11-25
STATUS	S3
PURPOSE	Planning
DRAWN	RCD
CHECKED	NS
REFERENCE	UMRF-LAP-XX-00-DR-L-60000
REV	P2

Appendix B Swept Path Analysis

UMRF-KRD-XX-XX-DR-C-00151 -Tracking (Waste)

UMRF-KRD-XX-XX-DR-C-00150 - Tracking (Fire)

UMRF-KRD-XX-XX-DR-C-00152 - Tracking (Maintenance)

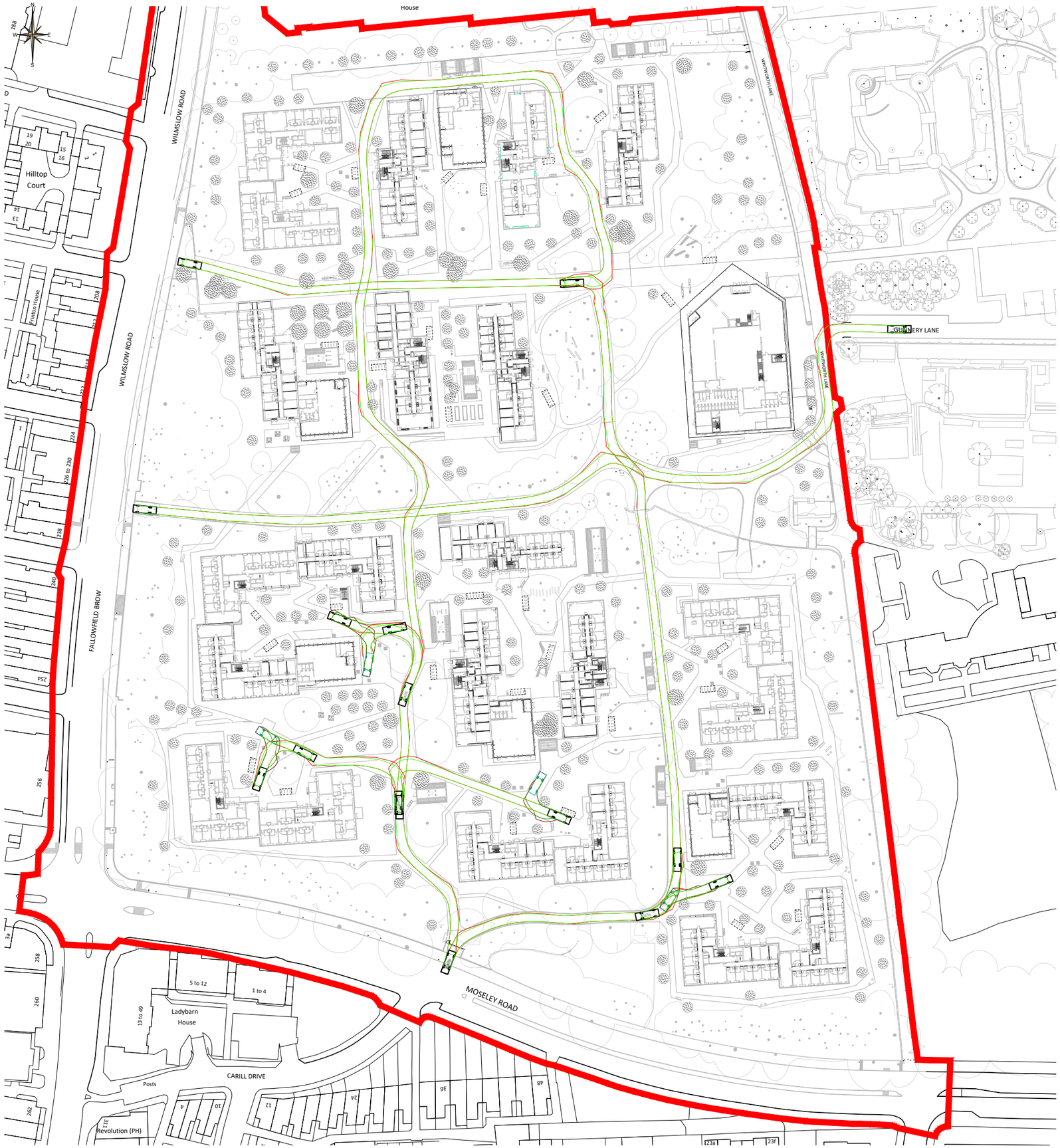
SK-CH-TP-0010 Central Hub – Large (18t) delivery truck

SK-CH-TP-0020 Central Hub – Medium (7.5t) delivery truck

SK-CH-TP-0030 Central Hub – Large refuse truck

SK-CH-TP-0040 Central Hub – Rear-steer refuse truck

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TRACKING ROUTE - FIRE TENDER
(SCALE 1:500)

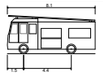
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LEGEND

- VEHICLE BODY - FORWARD DIRECTION
- VEHICLE BODY - REVERSE DIRECTION
- VEHICLE CHASSIS - FORWARD DIRECTION
- VEHICLE CHASSIS - REVERSE DIRECTION

VEHICLE PROFILE



UoM Type B Pump

Overall Length	8.100m
Overall Width	2.500m
Overall Body Height	3.533m
Min Body Ground Clearance	0.418m
Track Width	2.500m
Lock to lock time	6.00s
Wall to Wall Turning Radius	8.200m

THE ROUTE TESTED ON THIS DRAWING IS TAKEN FROM SKETCH TITLED "FIRE ACCESS" RECEIVED BY EMAIL FROM GRAHAM DATED 14-02-25.

REV	DATE	DESCRIPTION	ORN	CHK	APP
P05	19.02.25	AMENDED TO SUIT LAYOUT	A W	J H	P V
P04	17.02.25	AMENDED TO SUIT LAYOUT	A W	J H	P V
P03	05.11.24	DRAWING NUMBER AMENDED (PREVIOUS NUMBER - 6005)	A W	J H	P V
P02	24.05.24	AMENDED TO SUIT LAYOUT	A W	P V	D. B
P01	08.03.24	FIRST ISSUE	A W	P V	D. B

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Kennedy Redford

CLIENT: GRAHAM

PROJECT NAME: UoM STUDENT RESIDENCES FALLOWFIELD

DRAWING TITLE: PROPOSED TRACKING FIRE TENDER

DATE	SCALE	SHEET SIZE	REV
08.03.24	1:500	A0	P05

DRAWING STATUS: S3 - FOR REVIEW / COMMENT

DRAWING NUMBER: UMRF - KRD - XX - XX - DR - C - 00150



TRACKING ROUTE - REFUSE VEHICLE
(SCALE 1:500)

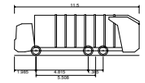
NOTES

1. THIS DRAWING IS PRELIMINARY AND IS SUBJECT TO CHANGE DEPENDING ON FURTHER DEVELOPMENT OF THE G.A. AND SITE LAYOUT.
2. TO BE READ IN CONJUNCTION WITH ALL RELEVANT KENNEDY REDFORD DRAWINGS AND SPECIFICATION.
3. TO BE READ IN CONJUNCTION WITH EXTERNAL ARCHITECTURAL, MEP, AND LANDSCAPE DESIGN DRAWINGS.
4. ANY DISCREPANCIES IN THE DESIGN INFORMATION SHOULD BE RAISED TO THE ENGINEER IMMEDIATELY.

LEGEND

- VEHICLE BODY - FORWARD DIRECTION
- VEHICLE BODY - REVERSE DIRECTION
- VEHICLE CHASSIS - FORWARD DIRECTION
- VEHICLE CHASSIS - REVERSE DIRECTION

VEHICLE PROFILE



UoM - Manchester Council	
Overall Length	11.500m
Overall Width	2.550m
Overall Body Height	3.760m
Min Body Ground Clearance	0.312m
Track Width	2.550m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	8.940m

VEHICLE SPECIFICATION BASED ON:
GD 04 WASTE STORAGE AND COLLECTION GUIDANCE FOR NEW DEVELOPMENTS, MANCHESTER CITY COUNCIL, VERSION 7.00

THE ROUTE TESTED ON THIS DRAWING IS TAKEN FROM SKETCH TITLED "WASTE COLLECTION" RECEIVED BY EMAIL FROM GRAHAM DATED 14-02-25.

REV	DATE	DESCRIPTION	DRN	CHK	APR
P02	19.02.25	AMENDED TO SUIT LAYOUT	A.W	J.H	P.V
P01	17.02.25	FIRST ISSUE	A.W	J.H	P.V

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Kennedy Redford

CLIENT: GRAHAM

PROJECT NAME: UoM STUDENT RESIDENCES FALLOWFIELD

DRAWING TITLE: VEHICLE TRACKING REFUSE VEHICLE

DATE	SCALE	SHEET SIZE	REV
17/02/25	1:500	A0	P02

DRAWING STATUS: S3 - FOR REVIEW / COMMENT

DRAWING NUMBER: UMRF -KRD - XX - XX -DR - C - 0151



TRACKING ROUTE - MAINTENANCE VEHICLE
(SCALE 1:500)

NOTES

1. THIS DRAWING IS PRELIMINARY AND IS SUBJECT TO CHANGE DEPENDING ON FURTHER DEVELOPMENT OF THE G.A. AND SITE LAYOUT.
2. TO BE READ IN CONJUNCTION WITH ALL RELEVANT KENNEDY REDFORD DRAWINGS AND SPECIFICATION.
3. TO BE READ IN CONJUNCTION WITH EXTERNAL ARCHITECTURAL, MEP, AND LANDSCAPE DESIGN DRAWINGS.
4. ANY DISCREPANCIES IN THE DESIGN INFORMATION SHOULD BE RAISED TO THE ENGINEER IMMEDIATELY.

LEGEND

- VEHICLE BODY - FORWARD DIRECTION
- VEHICLE BODY - REVERSE DIRECTION
- VEHICLE CHASSIS - FORWARD DIRECTION
- VEHICLE CHASSIS - REVERSE DIRECTION

VEHICLE PROFILE



3.5t Panel Van	
Overall Length	5.339m
Overall Width	1.986m
Overall Body Height	2.565m
Min Body Ground Clearance	0.338m
Track Width	1.986m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	6.400m

THE ROUTE TESTED ON THIS DRAWING IS TAKEN FROM SKETCH TITLED "DAY TO DAY" RECEIVED BY EMAIL FROM GRAHAM DATED 14-02-25.

REV	DATE	DESCRIPTION	ORIG	CHK	APP
P02	19.02.25	AMENDED TO SUIT LAYOUT	A.W	J.H	P.V
P01	17.02.25	FIRST ISSUE	A.W	J.H	P.V

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CLIENT
GRAHAM

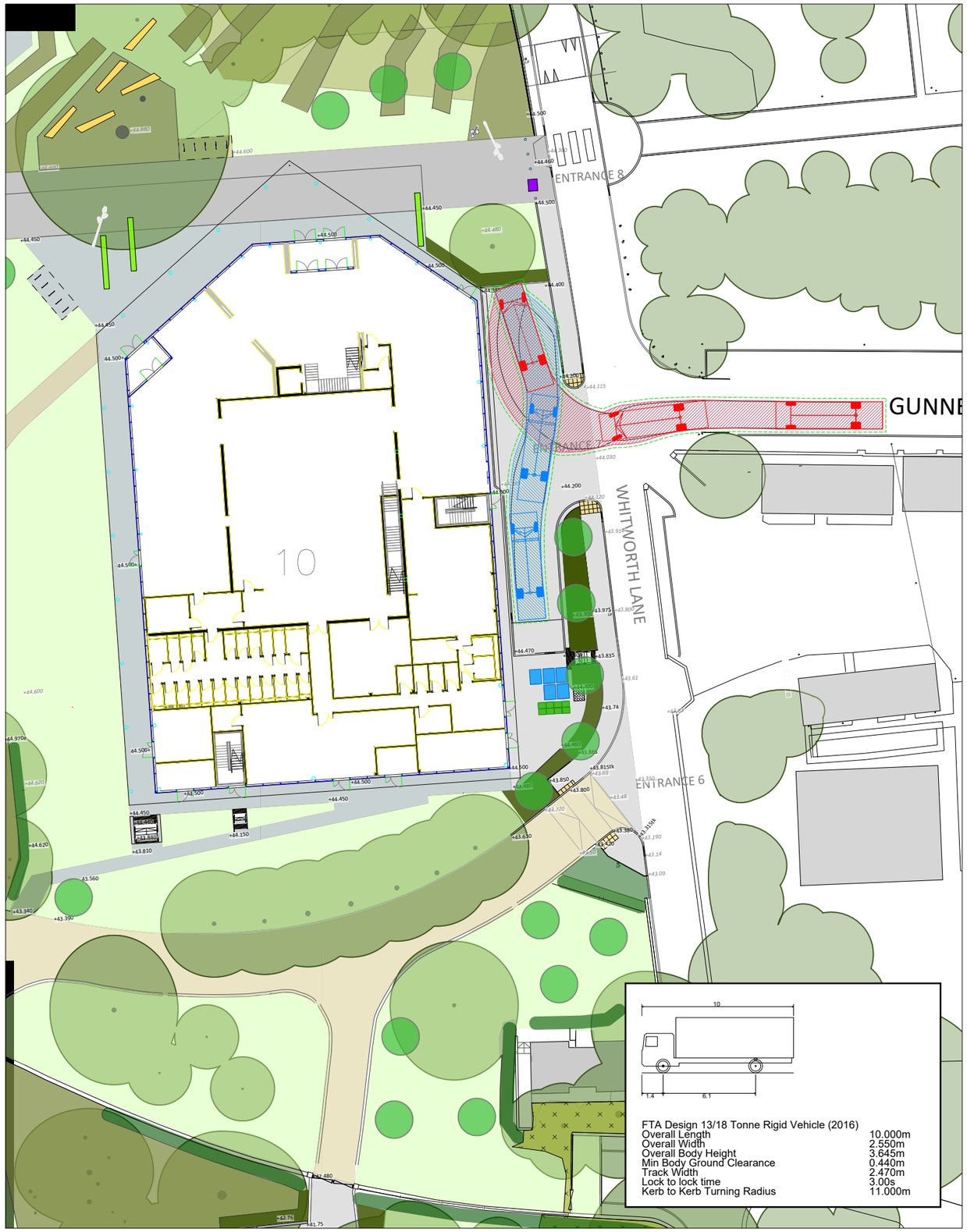
PROJECT NAME
UoM STUDENT RESIDENCES FALLOWFIELD

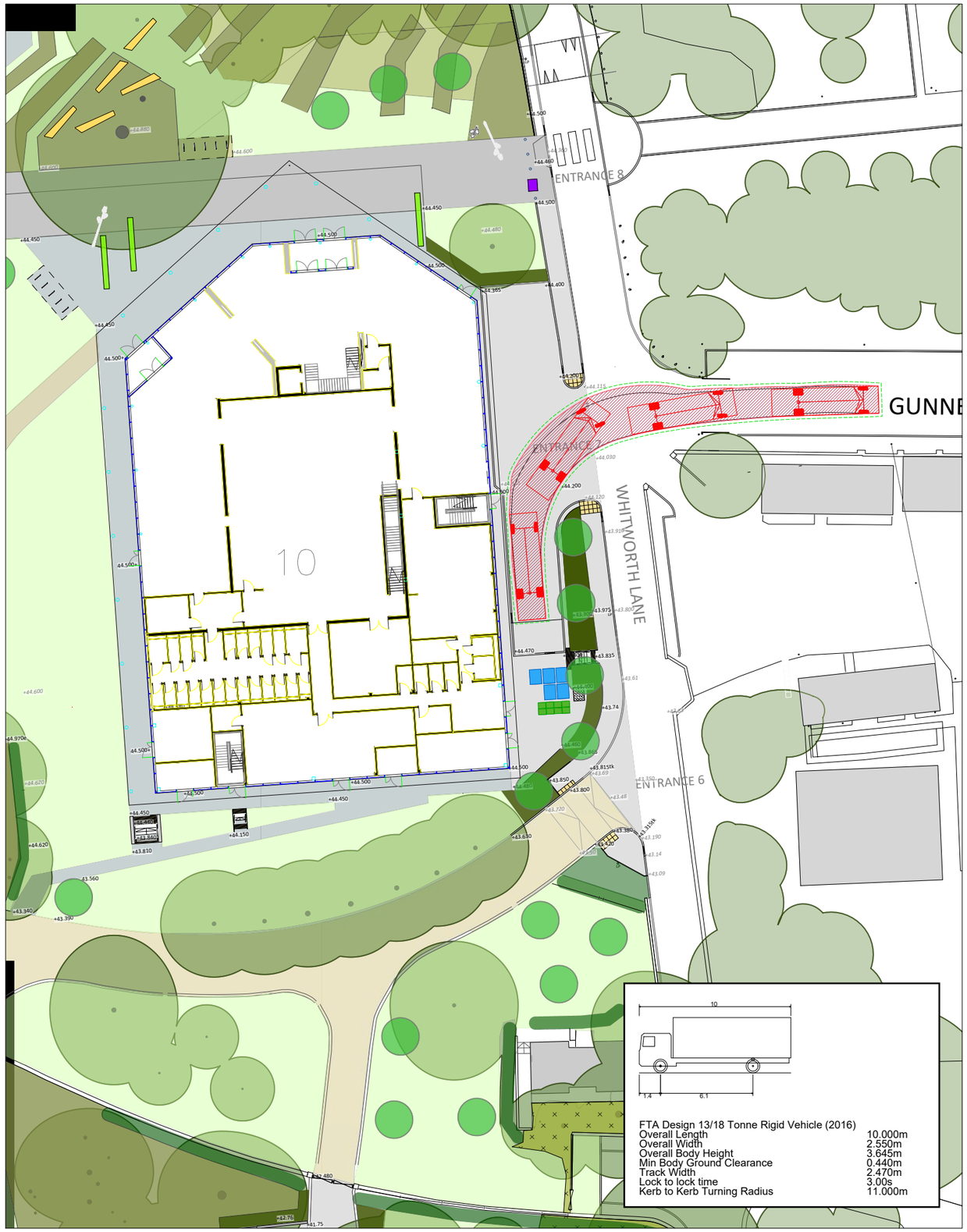
DRAWING TITLE
VEHICLE TRACKING MAINTENANCE VEHICLE

DATE	SCALE	SHEET SIZE	REV
17/02/25	1:500	A0	P02

DRAWING STATUS
S3 - FOR REVIEW / COMMENT

DRAWING NUMBER
UMRF - KRD - XX - XX - DR - C - 0152

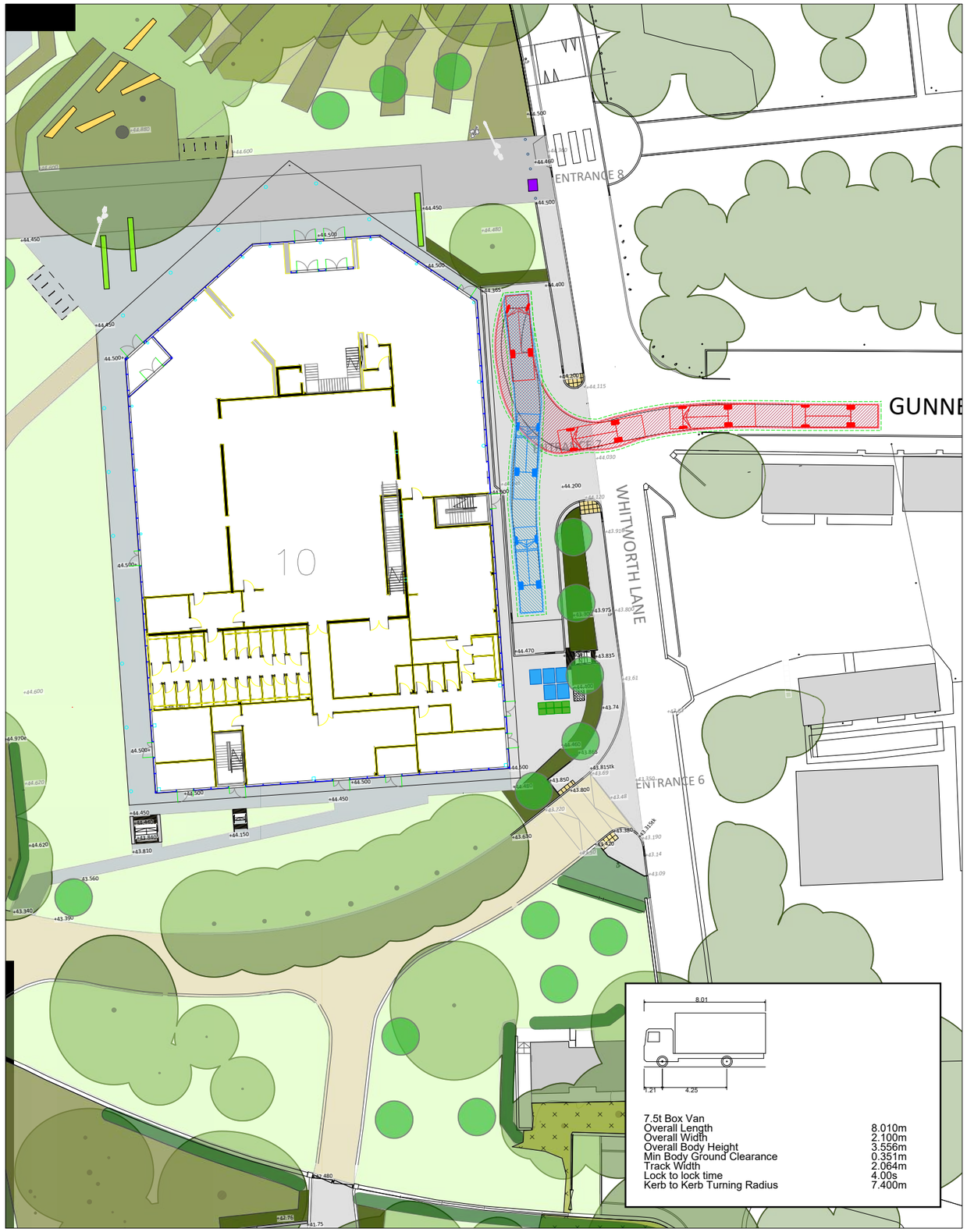


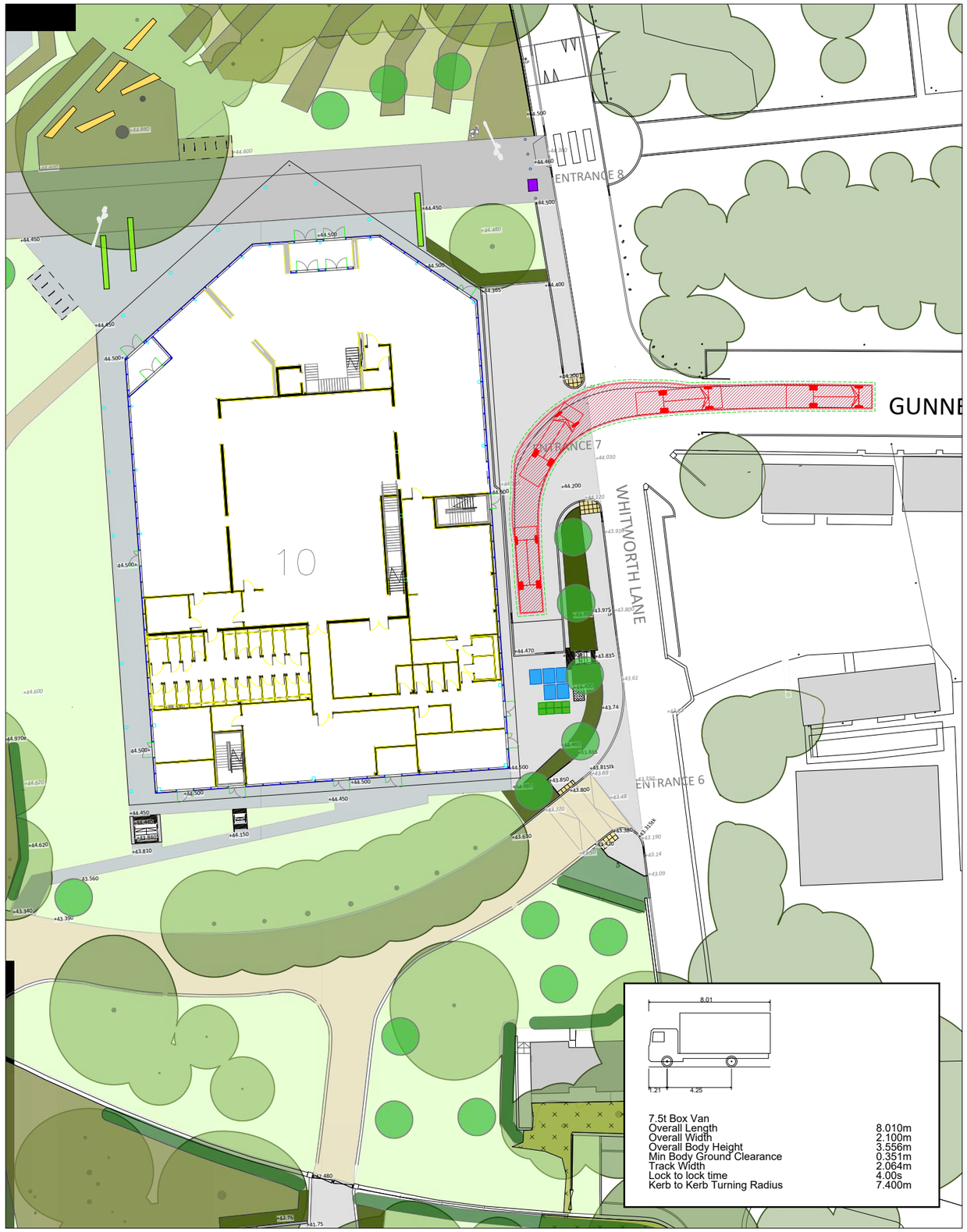


BURO HAPPOLD

Project:	Project Number:	Status:		
UoM Fallowfield Campus Redevelopment	0062342	For information		
Sketch Title:	Sketch Number:	Date:	Initials:	Revision:
Central Hub - Large (18t) delivery truck	SK-CH-TP-0010	14/02/25	NJH	P01

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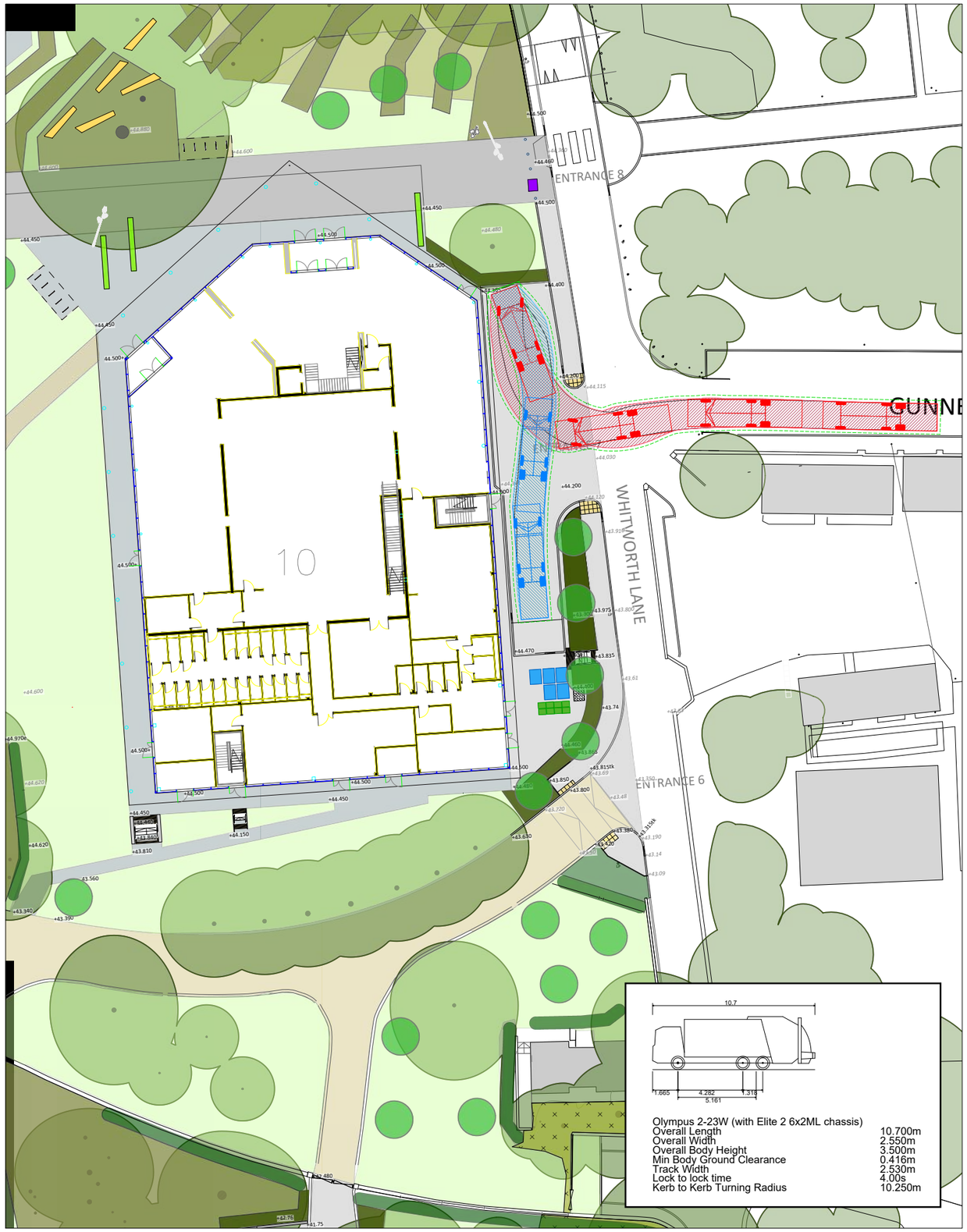


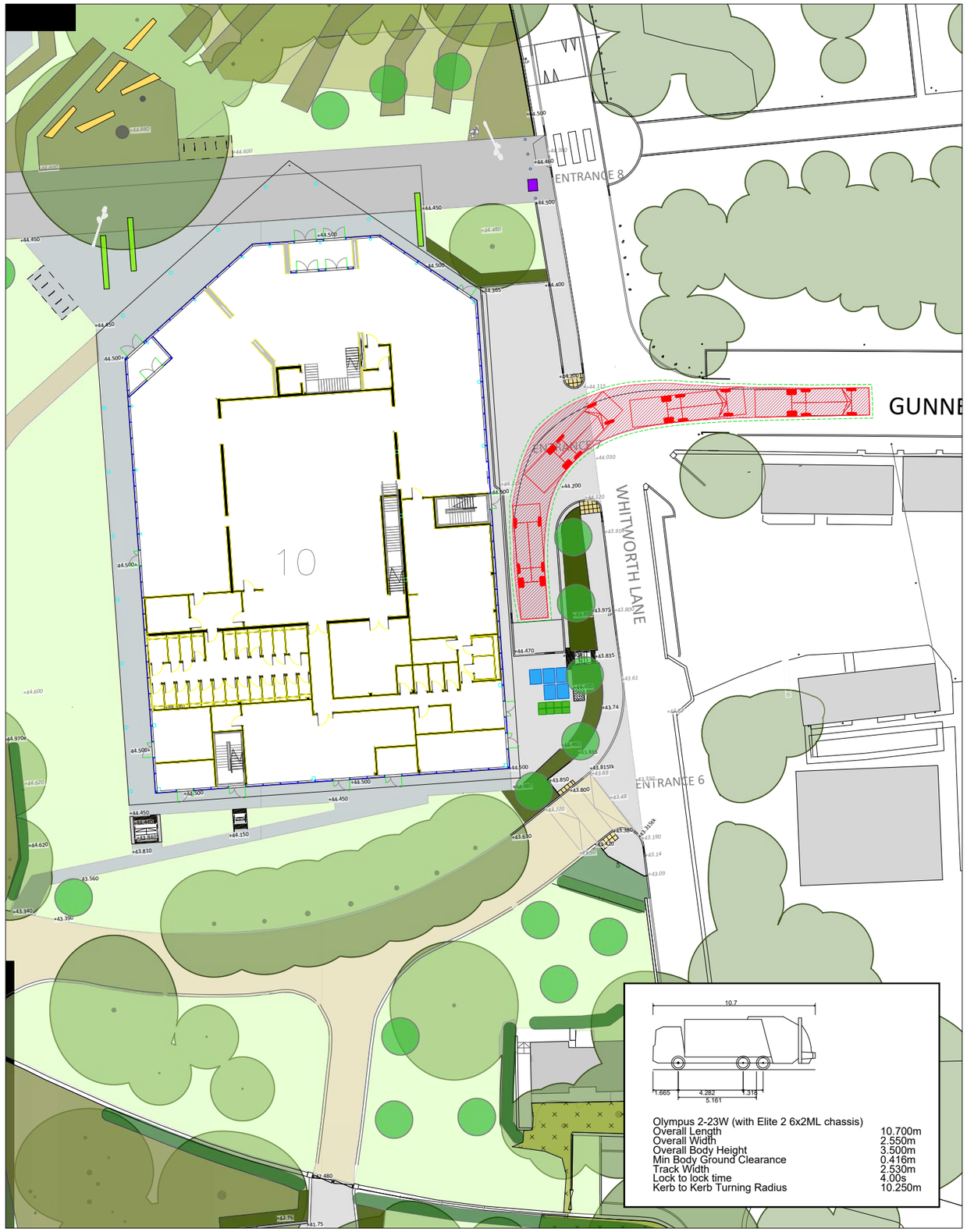


BURO HAPPOLD

Project:	Project Number:	Status:		
UoM Fallowfield Campus Redevelopment	0062342	For information		
Sketch Title:	Sketch Number:	Date:	Initials:	Revision:
Central Hub - Medium (7.5t) delivery truck	SK-CH-TP-0020	14/02/25	NJH	P01

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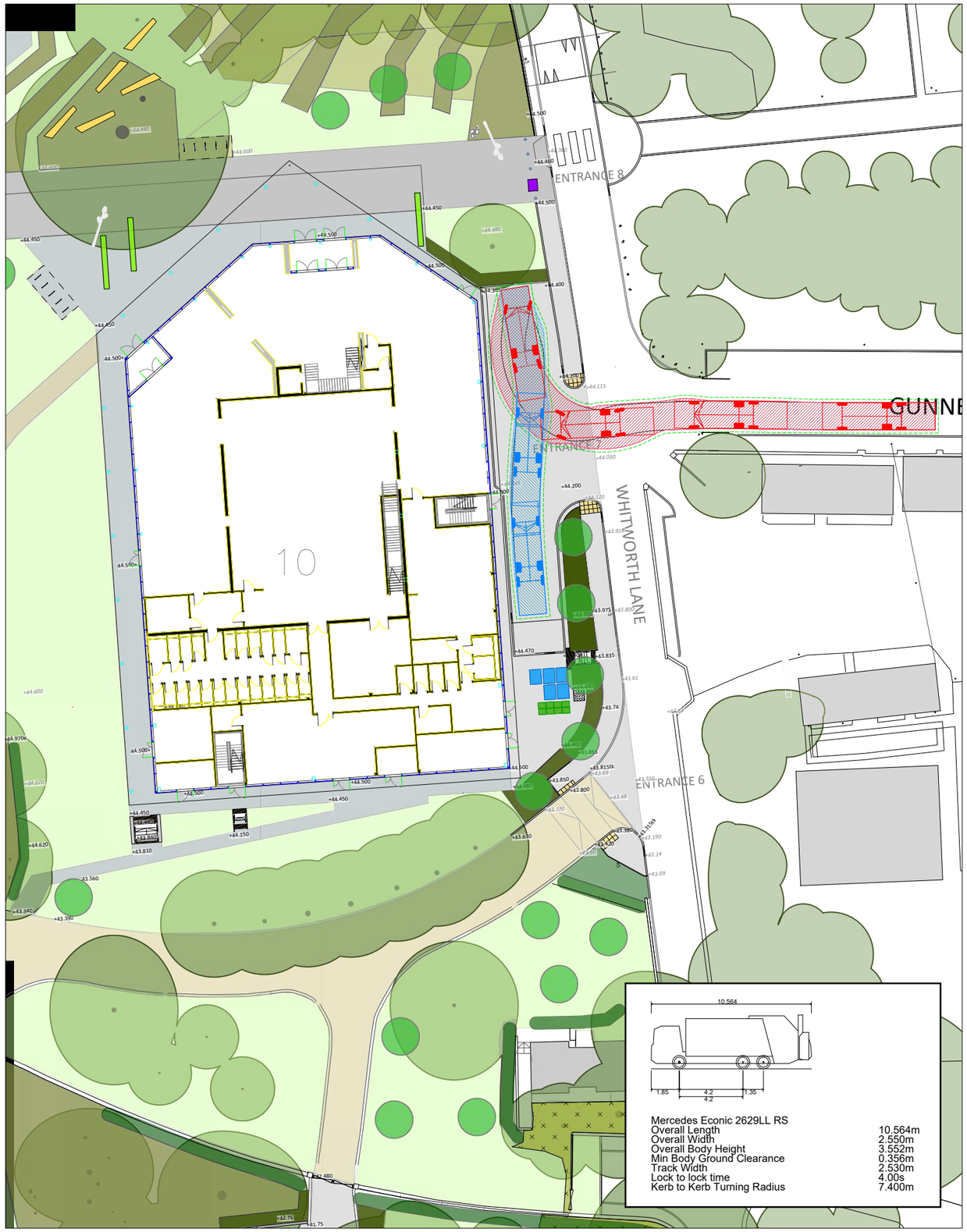


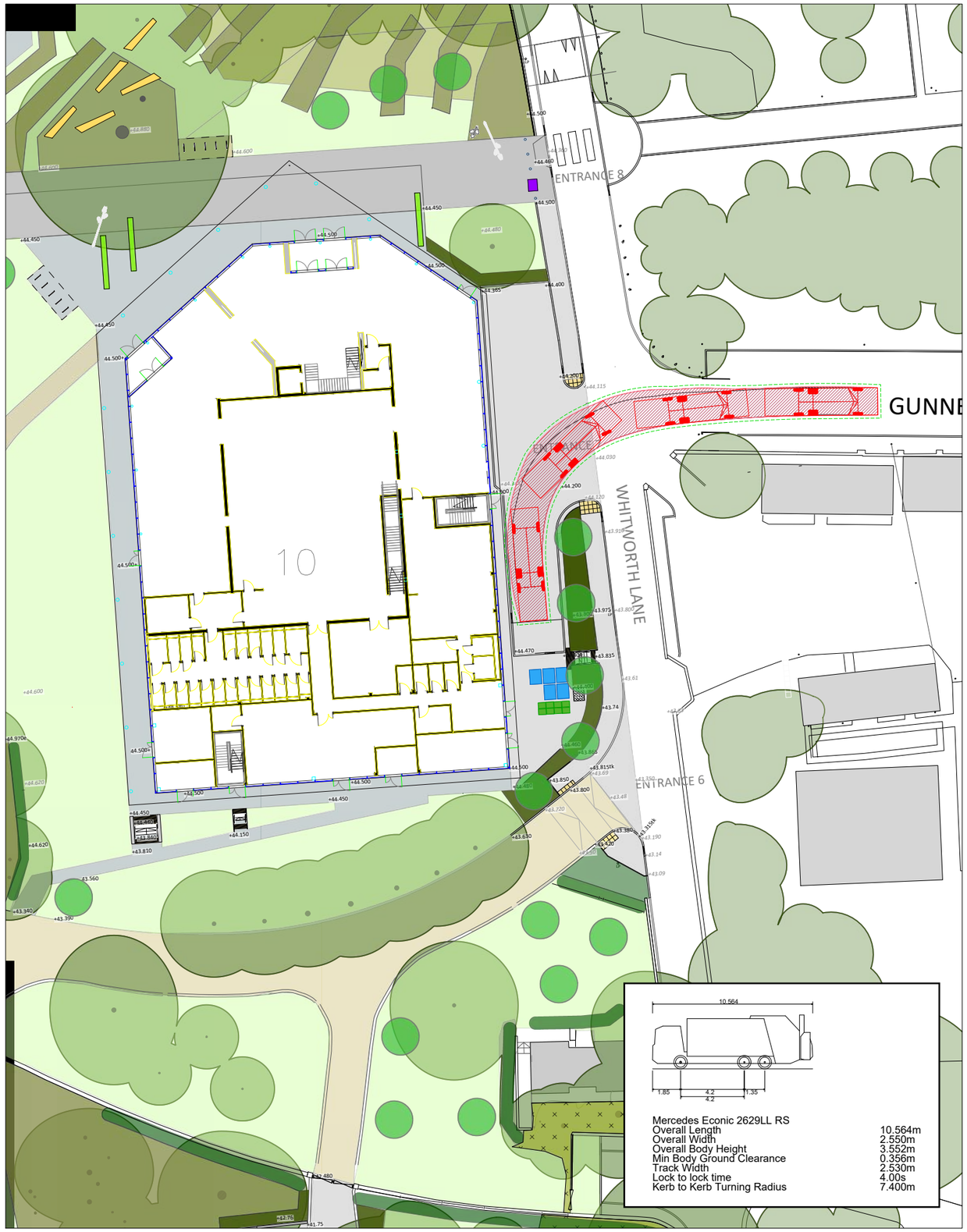


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Project:	Project Number:	Status:		
UoM Fallowfield Campus Redevelopment	0062342	For information		
Sketch Title:	Sketch Number:	Date:	Initials:	Revision:
Central Hub - Large refuse truck	SK-CH-TP-0010	14/02/25	NJH	P01

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Project:	Project Number:	Status:		
UoM Fallowfield Campus Redevelopment	0062342	For information		
Sketch Title:	Sketch Number:	Date:	Initials:	Revision:
Central Hub - Rear-steer refuse truck	SK-CH-TP-0040	14/02/25	NJH	P01

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