



Civic Engineers

Job Title

Newsome Mills

Prepared for

Collaborate Living

Report Type

Transport Statement v1.1

Date

27 April 2023

Contents

1. Introduction.....	1
1.1 Development Proposals.....	1
1.2 Extant Planning Application.....	1
1.3 Precedents.....	1
1.4 Liaison with Kirklees Council Highways Officers.....	2
1.5 Report Structure.....	2
2. Policy Context.....	3
2.1 National Planning Policy Framework.....	3
2.2 Transport Strategy 2040.....	5
2.3 Kirklees Local Plan.....	5
2.4 Kirklees Highway Design Guide SPD.....	5
3. Existing Situation.....	7
3.1 Location.....	7
3.2 Pedestrian Network.....	8
3.3 Cycle Network.....	10
3.4 Public Transport Network.....	12
3.5 Highways and Parking.....	13
3.6 Car ownership in the area.....	13
4. Development Proposals.....	14
4.1 Overview.....	14
4.2 Pedestrian Access.....	14
4.3 Cycle Access and Parking.....	14
4.4 Public Transport Access.....	14
4.5 Vehicle Access & Parking.....	14
4.6 Comments on Proposals.....	17
4.7 Trip Generation.....	19
5. Summary.....	20

Transport Statement v1.1

Prepared by Michael Cameron

Reviewed by Emily Ingham

Civic Job No. 2588

Issued 25 April 2023 v1.0

Revised 27 April 2023 v1.1

This report is the copyright of Civic Engineers and is for the sole use of the person/organisation to whom it is addressed. It may not be used or referred to in whole or in part by anyone else without the express agreement of Civic Engineers. Civic Engineers do not accept liability for any loss or damage arising from any unauthorised use of this report. Civic Engineers is a trading name of Civic Engineers (Leeds) Ltd (registered number 07879122), which is a limited company registered in England, registered address Carver's Warehouse, 77 Dale Street, Manchester M1 2HG

1. Introduction

Civic Engineers has been commissioned by Connect and Collaborate Living to produce this Transport Statement for 78 new dwellings off Ruth Street in Newsome, Huddersfield. The development will include 37 over 55s apartments, 8 supported living apartments, 27 houses, and 6 cottage flats. Parking at the development will be provided at levels found in the surrounding area (using census data) and as such will be 'low-car' (compared to previous local policy), this will help encourage travel by sustainable modes. By not overproviding parking spaces the proposals utilise the land available to provide communal green space between the houses, helping to promote biodiversity and foster a sense of community. An innovative low traffic environment has been designed by using tight road geometry and planting to encourage low speeds instead of rigidly following design standards to provide an over-engineered environment based primarily on vehicle movements.

1.1 Development Proposals

The development proposals are as follows:

- 78 dwellings consisting of 41 new dwellings and 37 apartments
- 42 cycle parking spaces
- 58 car parking spaces, including 19 accessible spaces
- Associated landscaping.

Development proposals are provided in Appendix A.

1.2 Extant Planning Application

The site was granted planning permission for a residential development (planning references: 2019/60/91630/W and 2019/60/91633/W) in June 2020. The proposals were for 33 flats in the mill, 30 houses, and 12 flats. 60 car parking spaces were proposed for the houses and flats with a further 30 spaces in the mill, two visitor spaces were also proposed. In total, 75 dwellings and 90 parking spaces.

The overall number of units is similar and the number parking spaces in the extant planning permission exceed the proposals of this application.

1.3 Precedents

It is useful to consider other developments around the country that are like the proposed development in terms of their vision of a sustainable development and their approach to parking provision.

Connect housing have provided parking information from snapshot surveys at three of their existing schemes, they are:

- Darkwoods, Leeds – a development with 106 homes and a parking ratio of 0.7 spaces per dwelling, out of 78 parking spaces there were 71 taken.

- Belmont Close, Huddersfield – for 33 properties there are 11 spaces and 6 visitor spaces a parking ratio of 0.5 spaces per dwelling if including visitor parking. All visitor parking was empty, and 9 resident spaces were taken.
- Havercroft and Wheatcroft – a 48-unit scheme with 17 car parking spaces, a ratio of 0.4 spaces per dwelling. All but one space was occupied.

Other developments that have low car parking ratios include the following:

City of York Council proposed low car parking provision for their own residential developments at Burnholme, Duncombe Barracks, and Ordnance Lane. At Burnholme 74 parking spaces are proposed for 85 dwellings, Duncombe Barracks proposes 19 parking spaces for 34 dwellings, and Ordnance Lane proposes 28 parking spaces for 85 dwellings. This is a range of 0.3-0.9 spaces per dwelling. The lower ratio is found at Ordnance Lane, closer to the city centre and with a mix of flats and houses with multigenerational homes. The higher ratio is found at Burnholme, near the edge of the city where the proposals are for terraced housing including some homes with 4 bedrooms.

Climate Innovation District, Leeds – Phase 1 of development has 255 parking spaces for 312 homes and Phase 2 proposes 90 spaces for 249 homes, this is a parking ratio of 0.4-0.8. To ensure low car ownership, early engagement with potential home buyers establishes that households are not able to have more than one space, spaces are sold separately from homes.

As well as the similarities in the parking ratios of these developments, they have also provided communal gardens, streets that are not dominated by private or servicing vehicles, and been designed on a human scale that reflects the day-to-day operation of the site.

1.4 Liaison with Kirklees Council Highways Officers

Civic Engineers had an introductory meeting with Kirklees Highway Development officers on the 18th January 2023 to discuss the following:

- The access road width based on the information in the Kirklees Highway Design Guide
- Agreement of the strategy to determine the level of parking provision based on census data due to the absence of Kirklees own parking standards
- Cycle parking provision
- Car club provision.

The points above were discussed with the client and design team; they have been incorporated into the development design where possible. Where it was not possible an explanation has been given in this TA. The minutes from this meeting were accepted by the highway development officer and are in Appendix B.

Comments were received by the Section 38 team at Kirklees on the development proposals, many of the comments are related to the geometry of the highway layout. The comments are addressed in Section 4.6.

1.5 Report Structure

This report provides policy context in Section 2 then examines the existing transportation networks in Section 3, the development proposals in Section 4, and concludes with a summary in Section 5.

2. Policy Context

The proposed development aligns with the following National, Regional, and Local policies as listed below.

2.1 National Planning Policy Framework

The National Planning Policy Framework¹ was first published in 2012, it has been revised and updated over the years since then with the most recent revision on 20 July 2021. It sets out the government's planning policies for England and how these are expected to be applied. It provides a framework within which locally prepared plans for housing and other development can be produced.

The purpose of the planning system is to contribute to the achievement of sustainable development. At a very high level, the objective of sustainable development can be summarised as meeting the needs of the present without compromising the ability of future generations to meet their own needs.

Achieving sustainable development means that the planning system has three overarching objectives, which are interdependent and need to be pursued in mutually supportive ways (so that opportunities can be taken to secure net gains across each of the different objectives):

- a) an economic objective – to help build a strong, responsive and competitive economy, by ensuring that sufficient land of the right types is available in the right places and at the right time to support growth, innovation and improved productivity; and by identifying and coordinating the provision of infrastructure;
- b) a social objective – to support strong, vibrant and healthy communities, by ensuring that a sufficient number and range of homes can be provided to meet the needs of present and future generations; and by fostering a well-designed and safe built environment, with accessible services and open spaces that reflect current and future needs and support communities' health, social and cultural well-being; and
- c) an environmental objective – to contribute to protecting and enhancing our natural, built and historic environment; including making effective use of land, helping to improve biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy.

Paragraph 104 of the NPPF states that "Transport issues should be considered from the earliest stages of plan-making and development proposals, so that:

- a) the potential impacts of development on transport networks can be addressed;
- b) opportunities from existing or proposed transport infrastructure, and changing transport technology and usage, are realised – for example in relation to the scale, location or density of development that can be accommodated;

¹ National Planning Policy Framework. Ministry of Housing, Communities and Local Government, 2021. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1005759/NPPF_July_2021.pdf

- c) opportunities to promote walking, cycling and public transport use are identified and pursued;
- d) the environmental impacts of traffic and transport infrastructure can be identified, assessed and taken into account – including appropriate opportunities for avoiding and mitigating any adverse effects, and for net environmental gains; and
- e) patterns of movement, streets, parking and other transport considerations are integral to the design of schemes and contribute to making high quality places."

Paragraph 110 states that "In assessing sites that may be allocated for development in plans, or specific applications for development, it should be ensured that:

- a) appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location;
- b) safe and suitable access to the site can be achieved for all users;
- c) the design of streets, parking areas, other transport elements and the content of associated standards reflects current national guidance, including the National Design Guide and the National Model Design Code; and
- d) any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree."

Paragraph 111 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 would be severe."

Paragraph 112 states that "Within this context, applications for development should:

- a) give priority first to pedestrian and cycle movements, both within the scheme and with neighbouring areas; and second – so far as possible – to facilitating access to high quality public transport, with layouts that maximise the catchment area for bus or other public transport services, and appropriate facilities that encourage public transport use;
- b) address the needs of people with disabilities and reduced mobility in relation to all modes of transport;
- c) 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;
- d) allow for the efficient delivery of goods, and access by service and emergency vehicles; and
- e) be designed to enable charging of plug-in and other ultra-low emission vehicles in safe, accessible and convenient locations."

2.2 Transport Strategy 2040

The Transport Strategy 2040² is a strategy for the West Yorkshire Combined Authority area, it was adopted in August 2017 and covers the period to 2040. The high-level objectives set out in the strategy are:

Economy – create a more reliable, less congested, better connected transport network, increasing business productivity and access to wider labour markets.

Environment – have a positive impact on our built and natural environment and increase resilience against climate change.

People and place – put people first to create a strong sense of place – increasing access in a safe, inclusive way and encouraging walking and cycling for health and other benefits.

2.3 Kirklees Local Plan

The Kirklees Local Plan³ was adopted as policy in February 2019 and covers the period 2013-2031. The plan contains a vision and strategic objectives for the development of Kirklees, clear policy to guide decisions on planning applications, and an indication of how the policies will be delivered and implemented.

Transport policy relating to the proposed development includes:

- LP20 – Sustainable travel, which seeks to ensure that new development is located where there is a reduced need to travel and in locations that are served by public transport. LP20 also states that development proposals should include measures to encourage the use of sustainable travel options, electronic communication, and home working.
- LP21 – Highways and access, states that all proposals shall ensure the safe and efficient flow of traffic within the development, take into account access for emergency, service and refuse collection vehicles, and provide on-site safe secure and convenient cycle parking/storage facilities to encourage sustainable travel modes.
- LP22 – parking, sets out parking requirements at new developments. Parking provision should be determined by the availability of public transport, local car ownership levels, and the type, mix and use of the development. Parking should be visually unobtrusive, include a mix of on- and off-street parking and accommodate disabled people and cyclists.

2.4 Kirklees Highway Design Guide SPD

The Kirklees Highway Design Guide⁴ (KHDG) is a supplementary planning document to the Local Plan, it does not introduce new policy, rather it provides more detail regarding the specifics of highway design.

The vision set out in the KHDG states “The most successful streets are those where traffic and other activities have been integrated together with buildings, spaces and the needs of people, rather than

² Transport 2040, West Yorkshire Combined Authority 2017 <https://www.westyorks-ca.gov.uk/media/2379/transport-strategy-2040.pdf>

³ Kirklees Local Plan, Kirklees Council 2019 <https://www.kirklees.gov.uk/beta/planning-policy/pdf/local-plan-strategy-and-policies.pdf>

⁴ Kirklees Highway Design Guide – Supplementary Planning Document, Kirklees Council 2019 <https://www.kirklees.gov.uk/beta/planning-policy/pdf/highway-design-guide-spd.pdf>

vehicles, shaping the area and creating a sense of place". It goes on to state that the rigid application of highway engineering standards can result in developments that contradict the principles of urban design today. The guide seeks to facilitate innovative designs which are appropriate to context and character noting that the most successful streets are those where the needs of people, rather than vehicles, shape the area and create a sense of place.

The design guide notes that there are no set local parking standards for residential development. Parking provision should consider accessibility, type, mix, and use of development, availability of public transport, and local car ownership levels in line with the NPPF and Kirklees Local Plan.

Response to policy

The proposed development aligns with the objectives set out in the Transport Strategy 2040 for the WYCA area. Notably the objective of people and place, by putting people first in the design development to create a strong sense of place and encourage walking and cycling. It achieves this by following the vision set out in the KHGD for streets to meet the needs of people rather than vehicles. The design proposals accommodate the movements of refuse vehicles in a way that is appropriate to the context and character of the area. Table 1 summarises the response to specific policies set out in the Kirklees Local Plan.

Table 1: Response to policy

Policy	Response
Kirklees Local Plan	
LP20 – sustainable travel	Site is located near to public transport and local services. Cycle parking is provided, and a Travel Plan will promote and encourage sustainable travel
LP21 – highways and access	Vehicle tracking has been carried out on the development proposals with a refuse vehicle and fire tender. Secure cycle storage is provided on-site.
LP22 - parking	Proposed parking provision has been determined by the availability of public transport, local car ownership and the mix, use, and type of development. It includes a mix of on- and off-street parking and accommodates for disabled people and cyclists.

3. Existing Situation

3.1 Location

The site is located off Ruth Street in Newsome, to the south of Huddersfield. It is bound by Ruth Street to the southeast, Hart Street to the northeast, and by woodland to the west. The site location is shown in Figure 1.

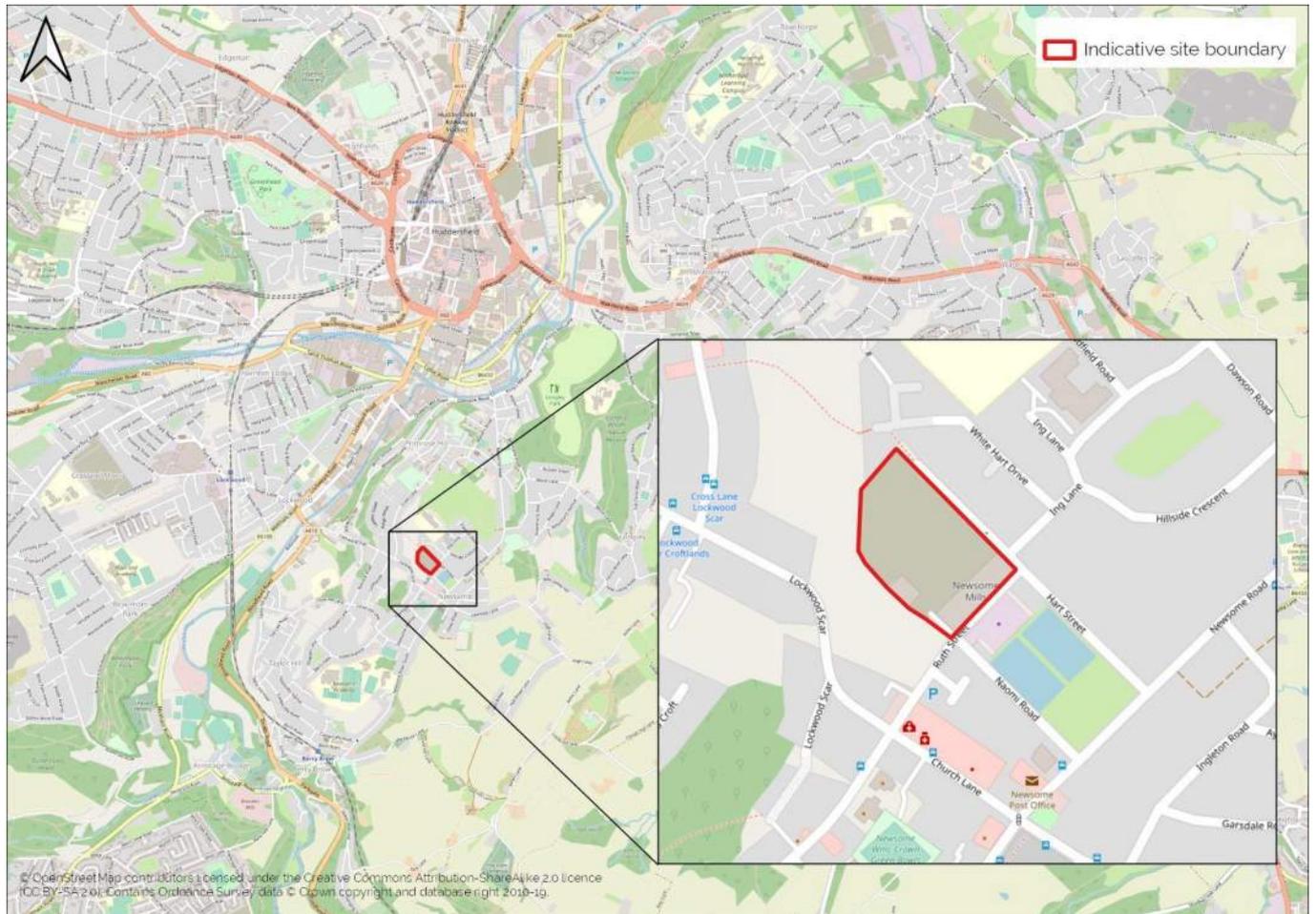


Figure 1: Site location

3.2 Pedestrian Network

Ruth Street has footways on both sides of the carriageway, at the junction with Hart Street there is a dropped kerb to facilitate the crossing of Ruth Street but none on Hart Street for crossing here. To the south of Ruth Street, Hart Street has footways on both sides, to the north there is no footway on the western side of the street. North of the junction with Ing Lane there are no footways and Hart Street is closed to motor vehicles by the use of boulders in the highway. This section of Hart Street is a Public Right of Way (ref: HUD-185-10), providing a connection north to White Hart Drive for non-motorised users (walking, wheeling, scooting, cycling) only. The terrain is quite steep in the area and some of the footpaths from Newsome to the surrounding areas have steps on them meaning they are not accessible to all. Pedestrian facilities in the area are shown in Figure 2.

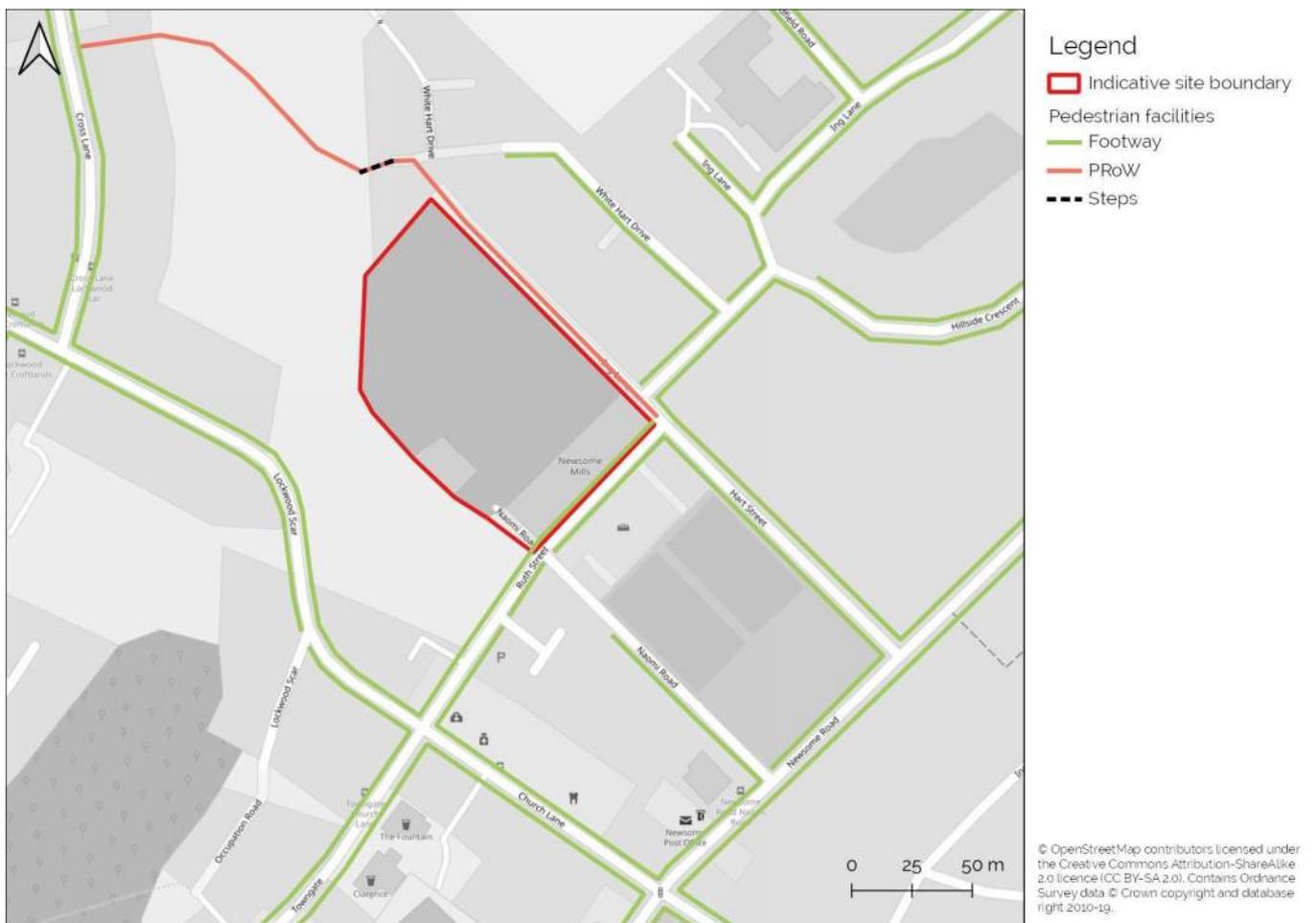


Figure 2: Pedestrian facilities

For commuting or trips to school a walking distance of 500m is considered desirable, 1km is acceptable, and 2km a preferred maximum⁵. These distances are shown in Figure 3.

⁵ Guidelines for Providing for Journeys on Foot, IHT 2000.

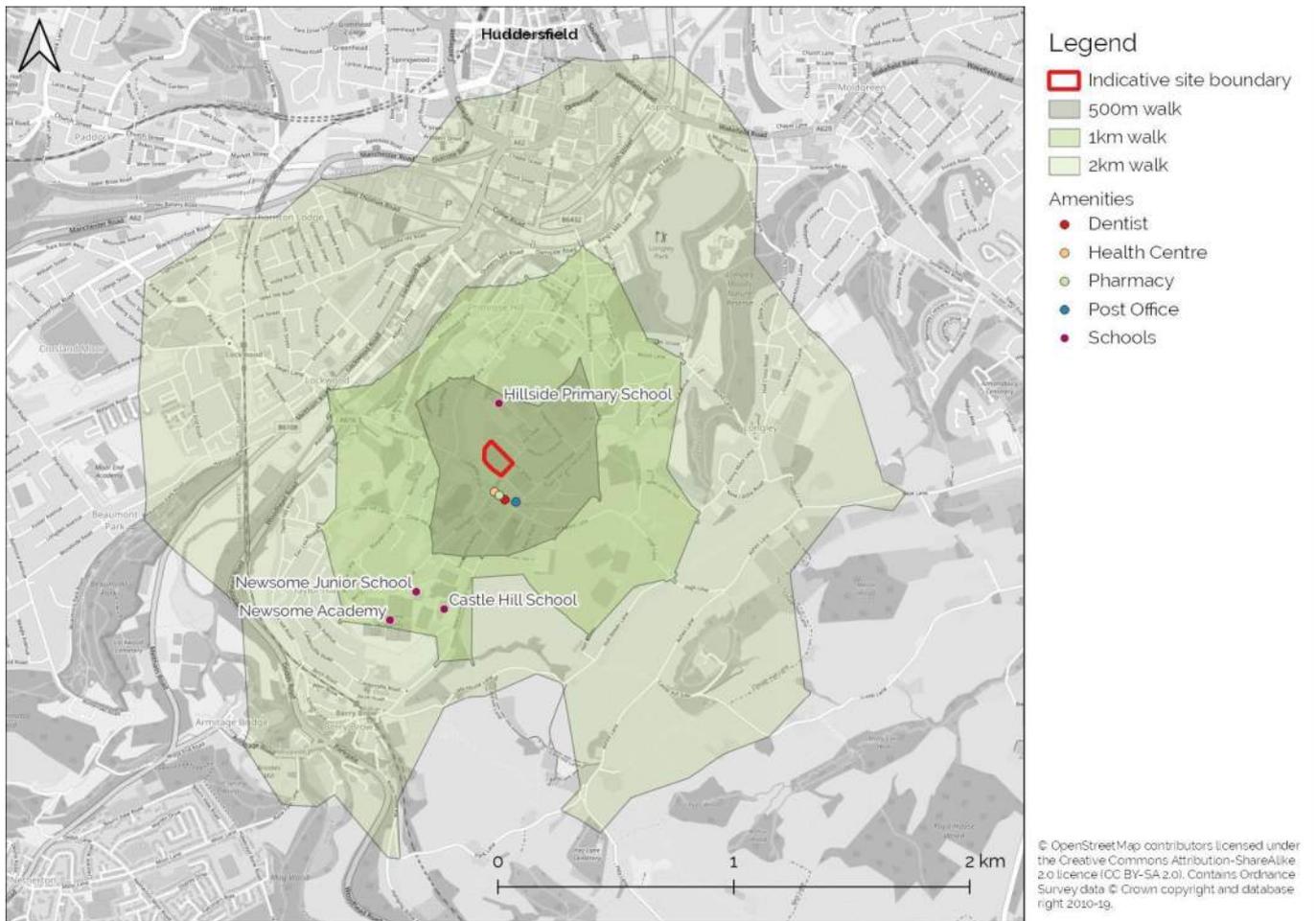


Figure 3: Walking isodistances

Around a 150m to the south of the site is Newsome village where there are local shops, a health centre, and bus stops. Within 500m of the site is Hillside Primary School, and around 1km from the site are Newsome Junior School, Newsome Academy, Castle Hill School, and Huddersfield town centre.

3.3 Cycle Network

The nearest cycleways to the site are the riverside way path along the banks of the River Holme and the parallel signed route on the other side of the river along Albert Street, both of which lead to Huddersfield town centre. Lockwood Scar, High Lane, and Newsome Road are all advisory cycle routes that connect the neighbourhood to the wider area. It should be noted that although there are cycle routes nearby, the routes to these are over steep terrain.

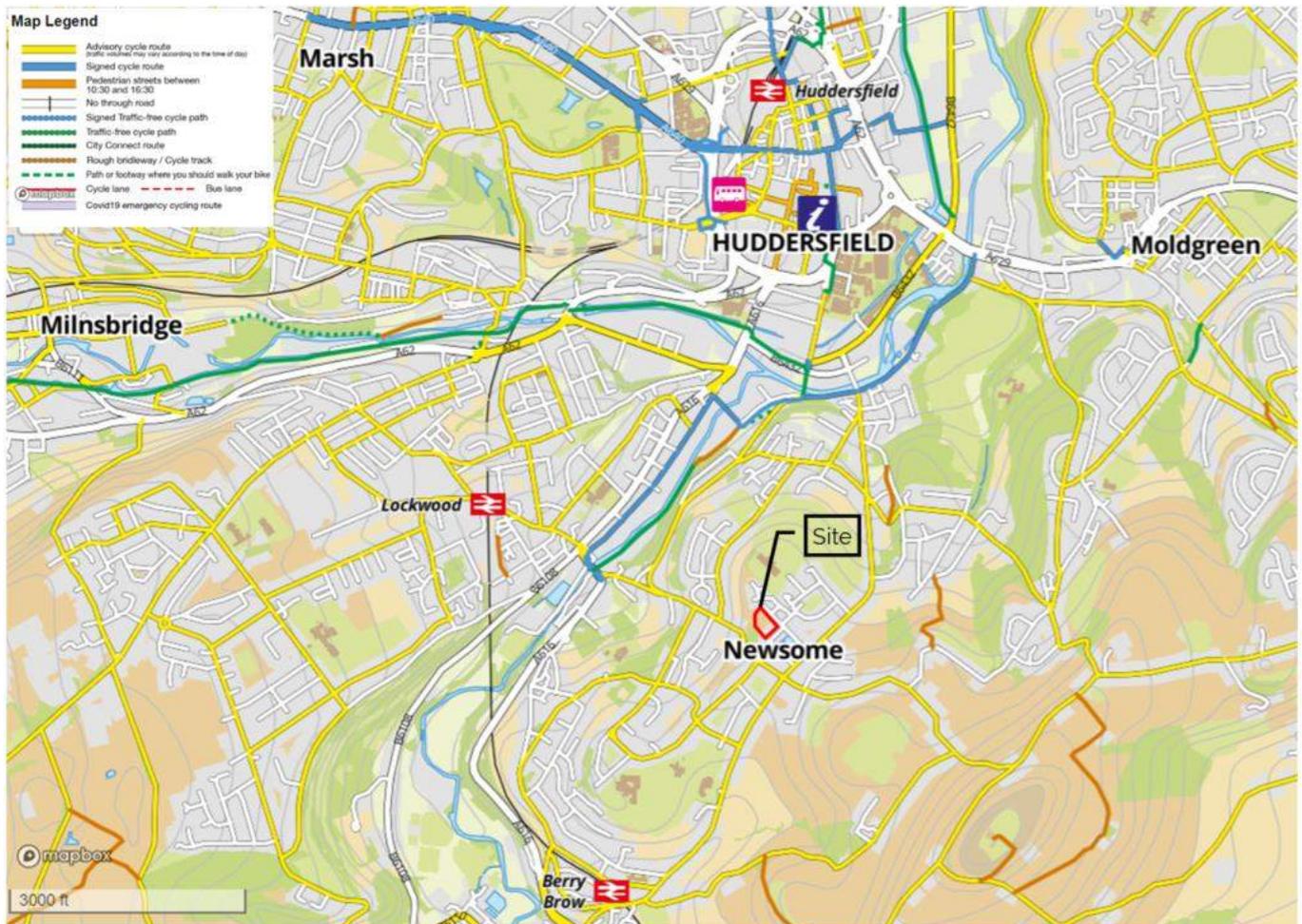


Figure 4: Extract from West Yorkshire interactive cycle map

8km is considered a distance that people would be willing to cycle for a commute, this distance is shown in Figure 5 and covers all of Huddersfield and the surrounding area.

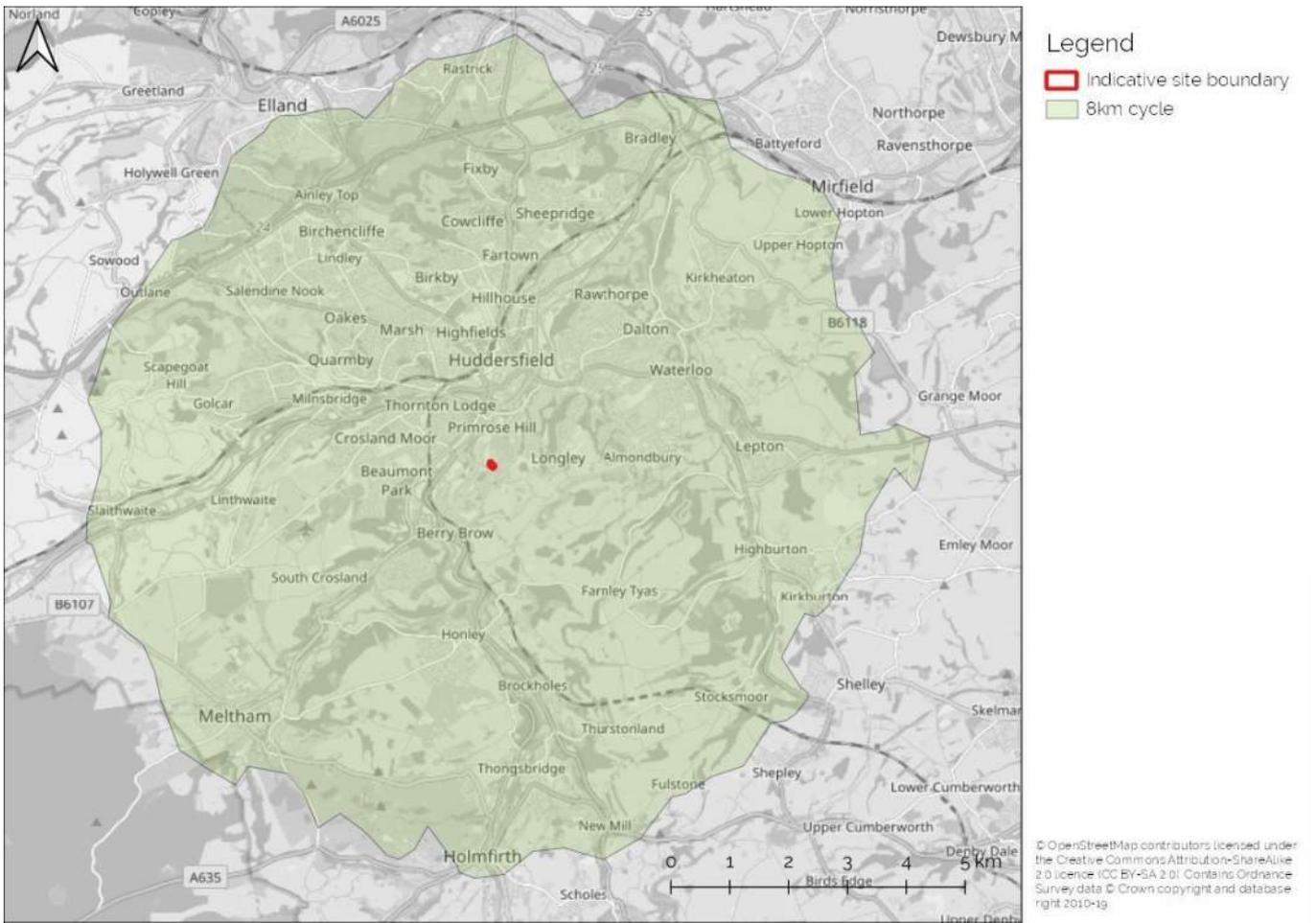


Figure 5: Cycle isodistance

3.4 Public Transport Network

The site is accessible by public transport, with bus stops nearby and train stations within 1.5km of the site. The locations of the nearest stops and stations are shown in Figure 6.

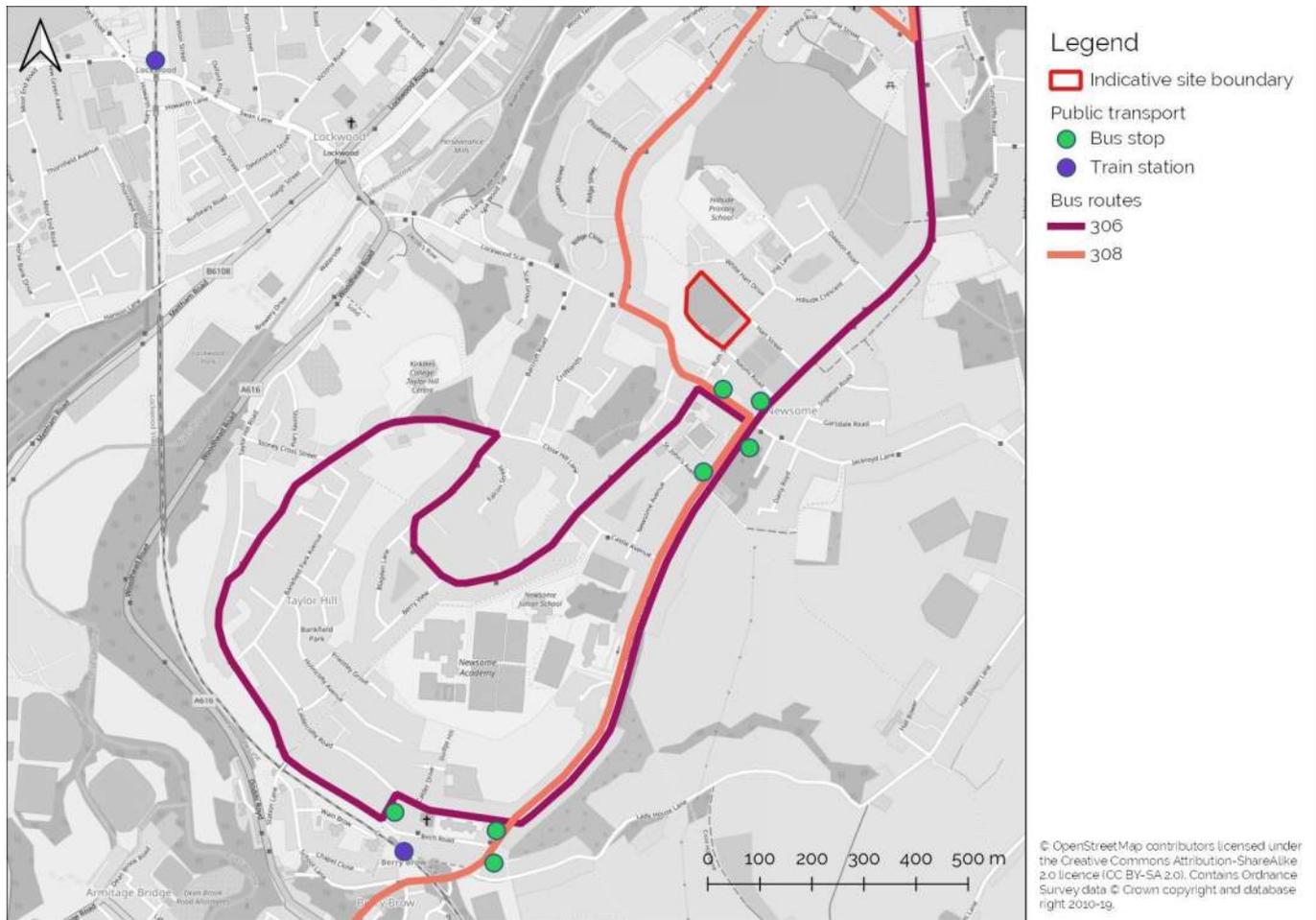


Figure 6: Public transport

Bus

Near to the site there are bus stops on Church Lane and Newsome Road. These are all within 250m of the site entrance. Buses that serve these stops are the numbers 306 and 308 which provide services to Huddersfield town centre. The 308 also provides access to Holmfirth.

Table 2: Bus services and frequencies (as of 6 April 2023)

Service	Route	Peak frequency (buses per hour)		
		Mon-Fri	Sat	Sun
306	Huddersfield – Taylor Hill Circular	3	3	1
308	Huddersfield - Holmfirth	2	2	1
Number of services to Huddersfield per hour		5	5	2

Both services use the stops on Church Street and the 306 also stops on Newsome Road for buses to Huddersfield. Combined there are five services an hour to Huddersfield town centre Monday to Saturday and two an hour on Sunday.

Train

The two stations nearest the site are Lockwood and Berry Brow, both are on the same line and are 1.4km from the site. The buses 306 and 308 both have stops near Berry Brow station. Trains provide services between Huddersfield and Sheffield at a frequency of one per hour, Monday to Sunday with shorter operating hours on Sundays. Lockwood Station has cycle stands with space for 10 cycles and CCTV coverage. Berry Brow has no cycle facilities.

For more frequent services and destinations nationwide, Huddersfield Station is 2.7km from the site. Any of the bus services listed above can be used to get to Huddersfield Bus Station which is around 400m from the train station.

3.5 Highways and Parking

The streets in the immediate vicinity of the site are Hart Street, Ruth Street, Ing Lane and Naomi Road. They are all local access streets and the only parking or waiting restrictions are on Ing Lane north of the junction with Hillside Crescent where there is a single yellow line with restrictions from 8am-5pm Mon-Fri. Hart Street to the north of Ing Lane is closed to motorised traffic with the use of bollards in the highway.

The carriageway is approximately 7.5m wide on Ruth Street and Hart Street. Ing Lane has a carriageway width of approximately 5.5m. Parking is accommodated on both streets, it can be observed on google streetview on both sides of Ruth Street and on one side of Ing Lane. All have footways on both sides of the street. Naomi Road has a carriageway of around 4.5m wide and has no footways at its northern end.

For connections to the strategic road network the A616 can be reached via Ruth Street and Lockwood Scar. To the south the A616 provides connections for routes to Holmfirth. To the north the A616 provides access to Huddersfield town centre or to the ring road from which connections can be made to the A629 eastbound for journeys to the east and south, A629 westbound to junction 24 on the M62, or the A640 westbound to junction 23 on the M62.

3.6 Car ownership in the area

Car and van availability from the 2011 census⁶ gives an indication of the parking demand that might be expected in the area. Using the data from LSOAs Kirklees 048A and 048B shows that in the area there is 0.3 cars per household for flats and 0.9 cars per household for houses.

⁶ LC4415EW - Accommodation type by car or van availability by number of usual residents aged 17 or over in household. 2011 Census

4. Development Proposals

4.1 Overview

The development proposals are as follows:

- 78 dwellings consisting of 41 new dwellings and 37 apartments
- 42 cycle parking spaces
- 58 car parking spaces, including 19 accessible spaces
- Associated landscaping.

4.2 Pedestrian Access

The primary pedestrian accesses will be from the south of the site. There are two pedestrian only entrances off Ruth Street, the historic entrance to the mill and garden opposite Naomi Street and another between the Mill building and the Weavers apartments. There is also a pedestrian access along the south-eastern side of Hart Street. The existing pedestrian connection from Hart Street to White Hart Drive to the north of the site (PROW HUD-185-10) will be retained. Within the site there is a network of pedestrian paths connecting between the blocks in a traffic free environment.

4.3 Cycle Access and Parking

The main cycle access to the site is at the historic Mill entrance, though cycling through the proposed development should be comfortable for all abilities due to the low volume of traffic. The cycle store is on the ground floor of the mill. The store will only be accessible to residents through the entrance lobby to the mill. Space for 50 cycles is provided on Sheffield stands, this is a provision of one space for every house and one for every five flats. This provision was agreed as acceptable at the meeting with Kirklees highways on 18 January 2023 (in Appendix B). A cycle maintenance stand is provided in the cycle store.

4.4 Public Transport Access

Bus stops are located within 250m of the site on Church Lane and Newsome Road. The pedestrian entrances on Ruth Street provide convenient access to the walking routes to these stops along Ruth Street and Naomi Road.

4.5 Vehicle Access & Parking

The vision set out in the KHDG states "The most successful streets are those where traffic and other activities have been integrated together with buildings, spaces and the needs of people, rather than vehicles, shaping the area and creating a sense of place". It goes on to state that the rigid application of highway engineering standards can result in developments that contradict the principles of urban design today. The guide seeks to facilitate innovative designs which are appropriate to context and character noting that the most successful streets are those where the needs of people, rather than vehicles, shape the area and create a sense of place.

Access

The access road from Hart Street is 5.5m wide to the first junction within the site, beyond which Hart Street has a 4.8m carriageway with an additional 2m for on-street parking on the west side of the street. The other options considered for Hart Street were either to have a wider road or a shared

space environment. Both options were discarded for the following reasons, a wider road would result in smaller gardens and cause overlooking issues between the rows of houses. Shared space was considered for Hart Street but with no footway, if parking was on the west side of the street access to the shared space would be blocked by parked cars and if parking were on the east side of the street it would require more hardstanding so that people were not exiting their vehicles into soft landscaping.

Feedback from the Highways Development officer was that 4.8m does not meet minimum adoptable road width, however, a 4.8m of clear carriageway is a wider usable width than other streets in the area. Hart Street south of Ruth Street is 7.5m wide with parking allowed on both sides of the street (evidence of this is seen on satellite imagery), reducing the effective width to 3.5m, the same arrangement is found on Ruth Street. Ing Lane is 5.5m wide with parking allowed on both sides of the street, with vehicles parked on one side of the street there is an effective width of 3.5m here, in practice vehicles do not park on both sides as this would block the street.

The proposed arrangement provides an on-street parking solution that allows for trees and facilitates an innovative design that is appropriate to the context and character of the area while aligning with today's urban design principles. The KHDG supports this approach to design, noting that the rigid application of highway engineering standards can result in utilitarian development. The KHDG also presents the diagram in Figure 7 which is from Manual for Street, showing that 4.8m is sufficient for cars and large vehicles to pass. Very few large vehicles are expected at the site and Hart Street north of the junction within the site provides access to 19 car parking spaces, seven of which are on Hart Street.

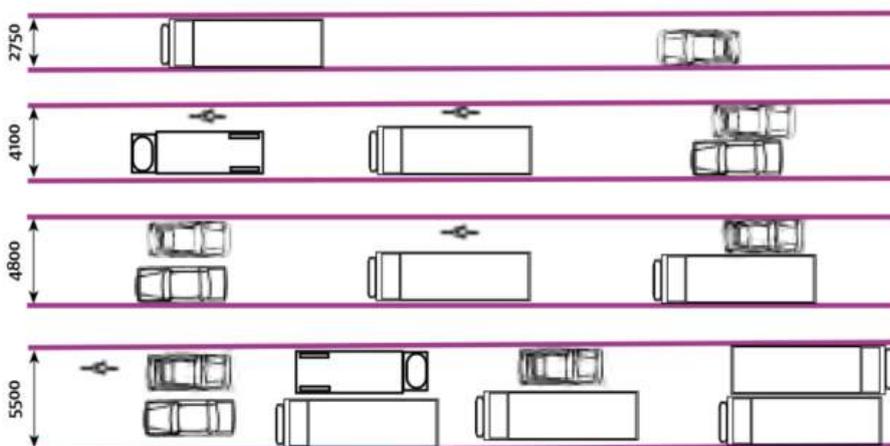


Figure 7: Extract from KHDG

The two streets perpendicular to Hart Street into the development are 6m wide to provide sufficient space between the parking provided here. The street in the north provides access to seven parking spaces and has a turning head between the housing blocks which is large enough to accommodate a refuse vehicle or fire tender. The street in the south provides access to parking, the mill building, and the square which is a pedestrian priority area that can accommodate vehicle turning, mainly by delivery vehicles but also a fire tender if needed.

Visibility splays have been provided for the new junction on Hart Street into the site and forwards visibility around the corner within the site, these are provided in Appendix C. Parking and other features within visibility splays are common in urban environments. Vehicles parked in the visibility splays result in drivers edging out streets. This is appropriate here, where traffic is low, and speeds

are low. From Manual for Streets 2 'at urban junctions where visibility is limited by buildings and parked cars, drivers of vehicles on the minor arm tend to nose out carefully until they can see oncoming traffic.' Visibility is possible through the windows of the parked cars and over the boot/bonnet of the parked cars.

Parking

Policy LP22 of the Kirklees Local Plan states that parking provision should be determined by the availability of public transport, local car ownership levels, and the type, mix and use of the development. Local car ownership has been estimated using the 2011 census data for car or van availability presented in Section 3.6, with this a demand for parking at the proposed development was estimated. This methodology was agreed with Kirklees Highway Control officers at a meeting on the 18th January 2023. If parking demand is the same as that already in the area at 0.9 cars per house and 0.3 cars per flat then demand at the proposed development would be 25 parking spaces for the houses and 15 parking spaces for the flats. This does not account for the potential of the supportive living accommodation having a lower demand for parking than single family homes meaning the actual demand may be lower.

The proposals include 58 parking spaces, including 19 accessible spaces and visitor spaces. Parking is provided both on-street and off-street within the mill building. Parking will be unallocated because this helps to reduce demand, it means if a household does not have a car there is not an empty, unusable space. This has been a successful strategy used by Connect on previous schemes they have developed, see section 1.3.

Opportunity for car club

The developer will explore the opportunity to include a car club vehicle on site in one of the on-street parking bays, which would help to further reduce the parking demand at the proposed development and provide a valuable amenity for people who don't own a car or would like to give up their car. It would provide access to a vehicle for people living at the new development who then might not need to own a second vehicle, and depending on circumstance could replace a household's only vehicle. A car club would also provide an amenity to the wider community. Enterprise car club already operate in Huddersfield which shows there is already demand for the service.

Servicing & deliveries

Waste collection will take place from the kerbside. Refuse vehicles will reverse in for access to the refuse stores at the square while in the north of the site they will use the turning head provided, this strategy was agreed with Kirklees Waste Services at a meeting with the Architects in February 2023. Refuse vehicle tracking has been carried out using a vehicle with the dimensions provided in the KHDG and is provided in Appendix D. The refuse vehicle stopping points will be no more than 25m from where the bins are presented, the distance set out in the KHDG, the Bin Strategy Site Plan is provided in Appendix D.

Delivery vehicles can turn in the square and there is enough space for them to stop here while unloading if there are no parking spaces available. In the north of the site delivery vehicles can use the turning head to turn and then stop on carriageway while unloading. It is unlikely that a delivery vehicle will need to stop for more than five minutes while making a delivery.

Emergency vehicle access in the south of the site will be to the square, where vehicles can turn. The tracking of a fire tender in this space is provided in Appendix D. In the north of the site access to the houses will be from the end of the street and vehicles can use the turning head.

4.6 Comments on Proposals

Table 3 presents comments received by email on 7th February 2023 during the pre-app period from the Section 38 team at the council and the design responses to the comments.

Table 3: Comments from KC Section 38 team on proposed design

S.38 Team Comment	Civic Engineers Response
<p>There are a series of 90-degree speed bends proposed that pose manoeuvrability issues for refuse vehicles and contraflow normal vehicle movement too. This is further compounded by issues with the lack of forward visibility</p>	<p>A refuse vehicle with dimensions agreed with KC waste services has been tracked through the development. Paragraph 6.11 of the Kirklees Highway Design Guide, states that on very lightly trafficked roads where the chance of two large vehicles needing to pass on a bend is sufficiently remote, widening may be unnecessary and it may be possible for large vehicles to wait until a bend is clear. Servicing by large vehicles will be very infrequent due to the size of the development, and KHDG warns against designing spaces to accommodate vehicles first.</p>
<p>A turning head is proposed at the northwest corner that is insufficiently sized to serve its purpose</p>	<p>This has since been removed. A turning head is provided between the housing blocks.</p>
<p>There is a lack of stagger between Ing Lane and the first junction into the development. This should be increased and accompanied by a vertical speed deflection</p>	<p>There is 18m between Ing Lane and the first junction within the site, this is greater than the 16.5m in the Kirklees Highway Design Guide for spacing of staggered junctions on Local Residential streets (Type B), and it is a right-left stagger, which is preferred. It is noted that this arrangement has a greater stagger than the left-right stagger junction at Ing Lane and Ruth Street which is only 6m. A check of crashmap.co.uk shows that during the past 23 years of data gathered there have been no collisions causing injury at the Ing Lane/Ruth Street junction. A raised table can be added to the proposed junction within the site to provide vertical speed deflection, and to mark that drivers are entering a space where they should drive courteously and give priority to other users.</p>
<p>Parking and tree arrangement seems over congested and unrealistic for the first set of plots</p>	<p>Arrangement of trees has been updated since this comment was received, see plans at Appendix A. The carriageway between parking bays is 6m wide and parking bays are 2.4m</p>

S.38 Team Comment	Civic Engineers Response
	wide as is standard for car parking bays. Car parking has been tracked using a standard design vehicle.
Trees are proposed. and Any trees placed at an offset less than 5m from the adoptable highway will require root protection measures	Noted
Overall, there is a lack of parking allowance for residence and visitors across the development especially where residential dwellings are proposed	There are no set local parking standards for residential development. Parking provision has been determined by the availability of public transport, local car ownership levels, and the type, mix and use of the development as required by policy LP22 in the Kirklees Local Plan. LP22 also states parking should have a mix of on- and off-street provision and should accommodate disabled people and cyclists, the proposals align with this policy.

Further comments were received on the 14th of March 2023 from KC Highways Development Management, these are presented in Table 4 with the design response.

Table 4: Comments from KC Highways Development Management

KC Highways Development Mgr Comment	Civic Engineers Response
Access to the site is taken via an existing unadopted Road which currently hosts a PROW (ref HUD-185-10), which should be acknowledged and incorporated accordingly into any submissions.	Noted
<p>The internal arrangements should accord with the Councils Supplementary Planning Document – Highway Design Guide. The proposed plan (ref NSM - TRI - ZZ - ZZ - DR - A – 3010) indicates that the layout would not be adequate for adoption by the Council in its current form which is summarised briefly as follows:</p> <ul style="list-style-type: none"> • Reduced forward visibility on bends and junctions. • Unsuitable centreline radius provision on internal roads. • Minimum adoptable road widths not satisfied. 	<p>Visibility splays are provided in Appendix C.</p> <p>Based on the design speed of the road and the expected vehicle movements per day the centreline radius has been based on the vehicle tracking as is acceptable for Type C streets in the KHDG.</p> <p>Road width, including parking, is 6.8m which gives an effective width of 4.8m. This is wider than the effective width on other residential streets in the area, as discussed in section 4.5.</p>

<p>As of the adoption of the Local Plan Kirklees Council no longer has car parking standards. Policy LP22 sets out the criteria for establishing parking requirements for new developments, which should be evidence based within the planning application submission.</p>	<p>The criteria set out in Policy LP22 has been used to determine the proposed parking levels, see section 4.5.</p>
<p>A stage 1 safety audit and designers response is required.</p>	<p>A Stage 1 Road Safety Audit is being progressed and the audit and designers' response will be provided when available.</p>
<p>Visibility splays and forward visibility envelopes should be demonstrated and achievable within the adopted highway.</p>	<p>Provided in Appendix C.</p>

4.7 Trip Generation

A trip generation exercise has not been carried out for this Transport Statement. The extant planning permission for the site is for a similar number of dwellings and significantly more car parking spaces, therefore it would have a greater impact on the highway network than the proposals presented in this TS, and assessment of this less intensive use of the site is not required.

5. Summary

This Transport Statement accompanies a planning application for a residential development in Newsome, Huddersfield. The proposed development is for 78 dwellings, comprised of 41 new houses and 37 apartments. 45 of the dwellings will include supportive living accommodation and apartments for over 55s.

The site is located off Ruth Street in Newsome, to the south of Huddersfield, around a 2km walk from the town centre. It is well located for access to local amenities and public transport with eight services an hour to the town centre. The local cycle network is nearby but steep topography in the area may be a barrier to some potential cyclists.

The proposed development prioritises pedestrian movements with two pedestrian only accesses from Ruth street to the south, one to White Hart Drive in the north, and traffic free routes through the site. Cycle access to the site will be predominantly on the low traffic streets within the site. There is a cycle store in the mill building. Sheffield stands provide parking for 42 cycles and a maintenance stand is provided in the store.

Car parking provision has been determined in line with Local Plan policy by using data on local car ownership levels, access to public transport, and the type, mix, and use of the development. 58 spaces are provided, including 19 accessible spaces and visitor spaces. Car parking will be unallocated and spaces provided as a mix of on- and off-street parking.

There is a turning head in the north of the site large enough to accommodate a refuse vehicle. The square provides a place for vehicles to turn in the south of the site. Refuse vehicles will reverse in for collections here and therefore will not need to turn. Stopping points for refuse collection will be no more than 25m from where bins are presented.

Taking into account the location of the proposed development, access to public transport, and the low-car nature of the development, this development should be supported from a transport perspective.

Appendix A: Development proposals



Proposed Site Plan
1:500



© TRIANGLE ARCHITECTS LIMITED
 THIS DRAWING IS THE SUBJECT OF COPYRIGHT WHICH VESTS IN TRIANGLE ARCHITECTS LIMITED. IT IS AN INFRINGEMENT OF COPYRIGHT TO REPRODUCE THIS DRAWING, BY WHATEVER MEANS, INCLUDING ELECTRONIC, WITHOUT THE EXPRESS WRITTEN CONSENT OF TRIANGLE ARCHITECTS LIMITED WHICH RESERVES ALL ITS RIGHTS.
 TRIANGLE ARCHITECTS LIMITED ASSERTS ITS RIGHTS TO BE IDENTIFIED AS THE AUTHOR OF THIS DESIGN.
 DRAWING NOT TO BE SCALED. FIGURE DIMENSIONS TO BE WORKED TO IN ALL CASES.
 THE CONTRACTOR IS RESPONSIBLE FOR CHECKING DIMENSIONS, TOLERANCES & REFERENCES.
 ANY DISCREPANCY TO BE VERIFIED WITH THE ARCHITECT BEFORE PROCEEDING WITH THE WORKS.
 REPORT ERRORS & OMISSIONS TO ARCHITECT.
 WHERE AN ITEM IS COVERED BY DRAWINGS OF DIFFERENT SCALE, THE LARGER SCALE DRAWING TO BE WORKED TO. DO NOT SCALE FROM THE DRAWING. FIGURED DIMENSIONS TO BE WORKED TO IN ALL CASES.
 CHECK ALL DIMENSIONS ON SITE.
 DRAWING TO BE READ IN CONJUNCTION WITH THE HEALTH & SAFETY PLAN AND ALL RELEVANT RISK ASSESSMENTS AND THE FOLLOWING DRAWINGS:

SCHEDULE OF ACCOMMODATION

NAME	QUANTITY
Housing Site	
House Type A (2b4p)	11
House Type B (3b5p)	6
House Type C (3b5p)	5
House Type E - Wheelchair adaptable (4b7p)	5
Cottage Flat - Ground Floor Wheelchair Accessible (2b3p)	3
Cottage Flat - First Floor (1b2p)	3
Total Dwellings	33
Standard Parking Spaces (excluding Newsome Mill)	16
Accessible Parking Spaces (excluding Newsome Mill)	11
Total Parking Spaces (excluding Newsome Mill)	27

* Schedule of accommodation excludes Newsome Mill and the Weavers Apartments.

SITE PLAN LEGEND

- Pedestrian areas & landscaping (with vehicular turning head zones as indicated).
- Landscaping / Planting
- Vehicular access zones (surface treatments TBC)
- Rear Gardens
- Front Gardens / 'Defensible Space'
- Retaining slope - refer to engineer's drawings
- Indicative Planting (refer to arboricultural survey & landscaping design)
- Indicative Existing Trees (refer to arboricultural survey)

P03	04.04.23	JS	Site plan updated as client comments.
P02	02.03.23	JS	Updated site plan issued for comment.
P01	12.01.23	JS	Issued for pre-app.
Rev	Date	By	Remarks

Client:	Connect Housing
Project No. / Project Name:	21-003 / Newsome Mills
Drawing Name:	Proposed Site Plan
Drawing Purpose:	INFORMATION
Project:	Origin: Vol/Sys Level: Type: Role: Drg No: Revision
NSM - TRI - ZZ - ZZ - DR - A - 3010	P03
Status:	Scale @ A1 Drawn Check Date
1 : 500	JS BPM January 2023

TRIANGLE ARCHITECTS

Tel: 0161 272 3500
 E-mail: studio@trianglearchitects.co.uk
 Web: www.trianglearchitects.co.uk
 Twitter: @TriangleArch

Raven House,
 113 Fairfield Street,
 Manchester,
 M12 6EL

Appendix B: Minutes of meeting with Kirklees Highways Officer

 Project Name: Newsome Mills

Subject: Highways and parking Job number: 2588

Location: Online Held on: 18 January 2023

 Attendees: [REDACTED] Cc:

Ref	Item	Action
1.0	Adoption	
	<p>If to be adopted the access road should have a minimum width of 5.5m with 0.6m hard margins, the width is needed to provide services and drainage. Suggestion that removal of footway being provided here could bring the road to adoptable standard.</p> <p>On-street parking also to be adopted, layout of footways and parking does not work if on-street parking is to remain private.</p> <p>Tracking of refuse vehicle as specified in the Highway Design Guide will be required, a draft of this has already been carried out showing that the layout can accommodate a vehicle this size, some adjustments have been made since the plan we were looking at.</p> <p>Layout not typical of the area so need to be sure that it will be of adoptable standard, Ryan to share current layout with S38 team for comment.</p>	
2.0	Parking strategy	
	<p>It was acknowledged that Kirklees do not currently have parking standards, the old policy is to be used as a guide.</p> <p>Agreement that the strategy of using census data to find existing levels of parking demand in the area is appropriate if the methodology is explained in the TS to justify the reduction in provision compared with old policy levels.</p> <p>Supportive living tends to have lower demand on parking than single family homes.</p> <p>Concern over impact on local area if parking provision is not sufficient, including visitor parking.</p>	
3.0	Cycle parking	
	Provision is welcome, ratio of cycle parking is ok.	
4.0	Car club	
	Presence of car club would help to strengthen the case for providing parking at levels less than the old policy.	

Ref	Item	Action
5.0	Extant planning permission	
	The proposed development is likely to have a lower trip generation than the development that already has planning permission. It would be acceptable to use the trip generation provided in that application if it is less than 3 years old.	

Appendix C: Visibility splays



STANDARD NOTES

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECT'S AND ENGINEER'S DRAWINGS AND THE SPECIFICATIONS.
2. THIS DRAWING SHOULD NOT BE SCALED.
3. ALL DIMENSIONS ARE TO BE VERIFIED BY THE CONTRACTOR ON SITE.
4. ALL DISCREPANCIES SHOULD BE REPORTED TO C.A./E.A. PRIOR TO THE COMMENCEMENT OF WORKS.

© CIVIC ENGINEERS LIMITED

NOTES

1. ASSUMED X-DISTANCE 2.4m BASED ON MANUAL FOR THE STREETS, ASSUMED Y-DISTANCE BASED ON 20mph DESIGN VEHICLE SPEED
2. SITE PLAN RECEIVED FROM TRIANGLE ARCHITECTS, DATED 26.04.23

26.04.23	P02	FOR INFORMATION	MC	EI
23.03.23	P01	SUBMITTED FOR INFORMATION	ZH	EI
DATE	REV	DESCRIPTION	DRAWN	CHKD

Civic Engineers

MANCHESTER: Carver's Warehouse, 77 Dale Street, Manchester, M1 3HG, Tel: 0161 228 8707
 LONDON: Revets Wharf, 33 Mill Street, London SE1 2AA, Tel: 020 7253 2977
 LEEDS: 1 Saw Mill Street, Huddersfield, Leeds, LS1 3AW, Tel: 0113 2025 1300
 GLASGOW: 20 Virginia Street, Glasgow, G2 1TN, Tel: 0141 279 1829

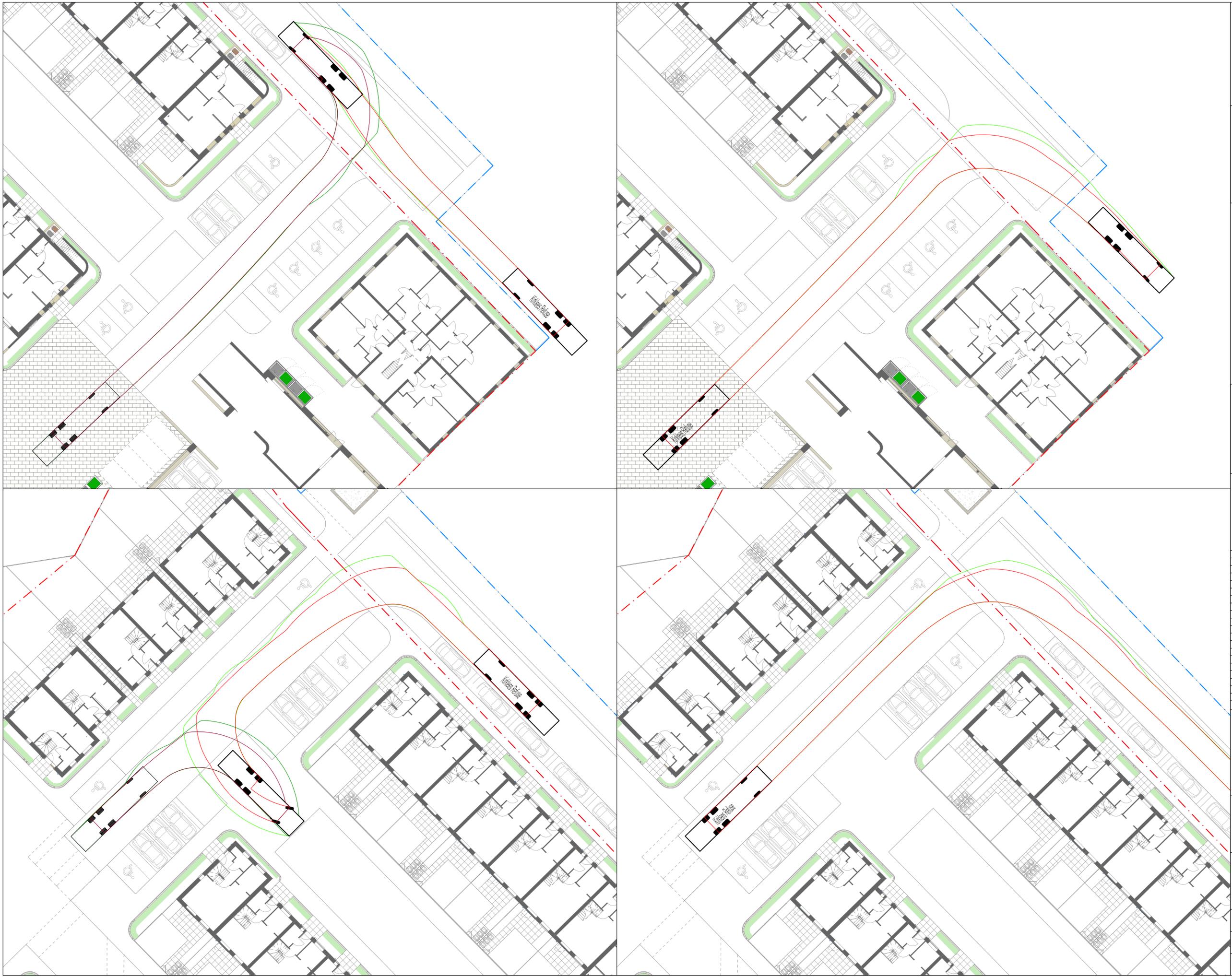
www.civicingengineers.com

PROJECT
 NEWSOME MILLS

TITLE
 SITEWIDE VISI-SPLAYS

DRAWING STATUS					STATUS CODE
INFORMATION					-
CE PROJECT No.	SCALE @ A1	DATE CREATED	DRAWN	CHECKED	
2588	1:250	MAR 23	MB	EI	
DRAWING No.					REV
2588-CIV-XX-XX-TR-00004					P02

Appendix D: Vehicle tracking and Bin Strategy

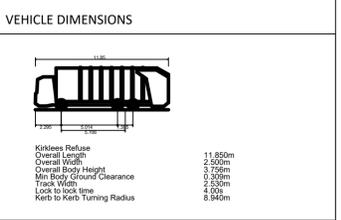


- STANDARD NOTES**
1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECT'S AND ENGINEER'S DRAWINGS AND THE SPECIFICATIONS.
 2. THIS DRAWING SHOULD NOT BE SCALED.
 3. ALL DIMENSIONS ARE TO BE VERIFIED BY THE CONTRACTOR ON SITE.
 4. ALL DISCREPANCIES SHOULD BE REPORTED TO C.A./E.A. PRIOR TO THE COMMENCEMENT OF WORKS.



- NOTES**
1. SITE PLAN PROVIDED BY TRIANGLE ARCHITECTS. RECEIVED 26.04.23.
 2. THE VEHICLE MOVEMENT ENVELOPES SHOWN ARE GENERATED USING AUTODESK VEHICLE TRACKING SOFTWARE AND ARE INDICATIVE ONLY. THE ENVELOPES SHOWN DO NOT MAKE ALLOWANCE FOR DRIVER ABILITY, GRADIENTS AND ALTERNATIVE VEHICLE SPECIFICATIONS.

- KEY**
- CHASSIS ENVELOPE
 - BODY ENVELOPE
 - - - CHASSIS ENVELOPE (REVERSING)
 - - - BODY ENVELOPE (REVERSING)



DATE	REV	DESCRIPTION	DRAWN	CHKD
27.04.23	P03	UPDATED SITE PLAN	MC	-
06.03.23	P02	UPDATED SITE PLAN	MC	-
12.01.23	P01	FOR INFORMATION	MC	-

Civic Engineers

MANCHESTER: Carver's Warehouse, 77 Dale Street, Manchester, M1 2HG, Tel: 0161 228 6711
 LONDON: Revs Wharf, 33 Abchurch Lane, London EC4A 3DF, Tel: 020 7293 2977
 LEEDS: 1 Saw Mill Street, Water Lane, Leeds, LS1 5WF, Tel: 0113 2025 180
 GLASGOW: Grafton Chambers, 45 West Nile St, Glasgow, G2 2PT, Tel: 0141 579 1229

www.civicengineers.com

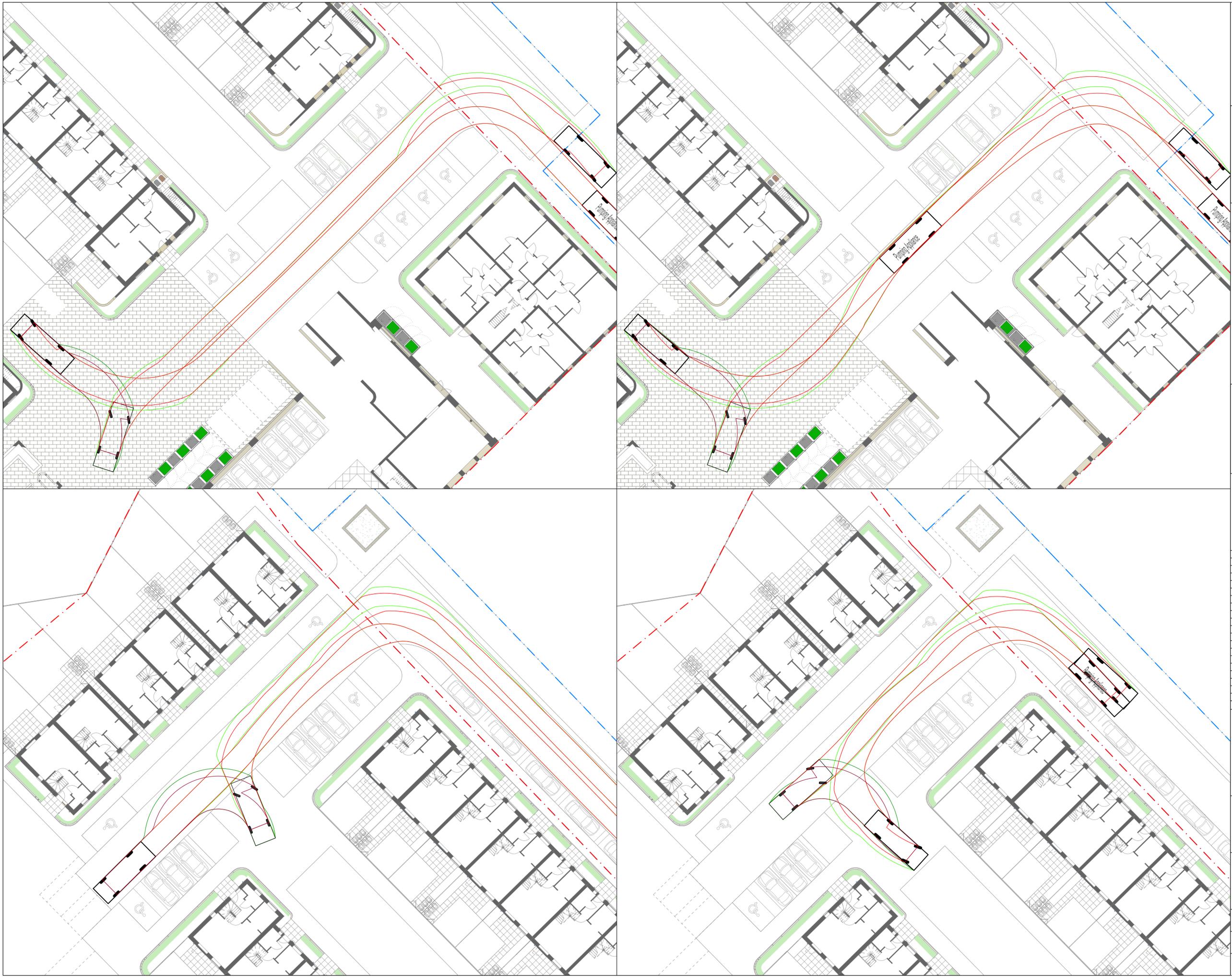
PROJECT
 NEWSOME MILL

TITLE
 VEHICLE TRACKING
 REFUSE VEHICLE

DRAWING STATUS		STATUS CODE	
FOR INFORMATION		-	
CE PROJECT No.	SCALE @ A1	DATE CREATED	DRAWN
2588	1:200	12.01.23	MC
DRAWING No.		REV	CHKD
2588-CIV-XX-XX-D-H-40001			P03

FILE LOCATION PATH: P:\PROJECTS HOT\2588 NEWSOME MILLS\004 BIM\TRANSPORT\2588 CIV-XX-XX-D-H-40001.DWG

FILE LOCATION PATH: P:\PROJECTS HOT\2588 NEWSOME MILLS\004 BIM\TRANSPORT\2588 CIV-XX-D-H-40002.DWG



STANDARD NOTES

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECT'S AND ENGINEER'S DRAWINGS AND THE SPECIFICATIONS.
2. THIS DRAWING SHOULD NOT BE SCALED.
3. ALL DIMENSIONS ARE TO BE VERIFIED BY THE CONTRACTOR ON SITE.
4. ALL DISCREPANCIES SHOULD BE REPORTED TO C.A./E.A. PRIOR TO THE COMMENCEMENT OF WORKS.

© CIVIC ENGINEERS LIMITED



NOTES

1. SITE PLAN PROVIDED BY TRIANGLE ARCHITECTS. RECEIVED 26.04.23.
2. THE VEHICLE MOVEMENT ENVELOPES SHOWN ARE GENERATED USING AUTODESK VEHICLE TRACKING SOFTWARE AND ARE INDICATIVE ONLY. THE ENVELOPES SHOWN DO NOT MAKE ALLOWANCE FOR DRIVER ABILITY, GRADIENTS AND ALTERNATIVE VEHICLE SPECIFICATIONS.

KEY

- CHASSIS ENVELOPE
- BODY ENVELOPE
- - - CHASSIS ENVELOPE (REVERSING)
- - - BODY ENVELOPE (REVERSING)

VEHICLE DIMENSIONS

Pumping Appliance	7.800m
Overall Length	2.500m
Overall Width	3.300m
Min Body Ground Clearance	0.140m
Track Width	2.500m
Lock to Lock Time	4.50s
Kerb to Kerb Turning Radius	7.750m

DATE	REV	DESCRIPTION	DRAWN	CHKD
26.04.23	P03	UPDATED SITE PLAN	MC	-
06.03.23	P02	UPDATED SITE PLAN	MC	-
12.01.23	P01	FOR INFORMATION	MC	-

DATE	REV	DESCRIPTION	DRAWN	CHKD
26.04.23	P03	UPDATED SITE PLAN	MC	-
06.03.23	P02	UPDATED SITE PLAN	MC	-
12.01.23	P01	FOR INFORMATION	MC	-

Civic Engineers

MANCHESTER: Carriv's Warehouse, 77 Dale Street, Manchester, M1 2HG, Tel: 0161 228 6711
 LONDON: News Wharf, 33 Abchurch Lane, London EC4A 3DF, Tel: 020 7293 2977
 LEEDS: 1 Saw Mill Street, Water Lane, Leeds, LS1 5WF, Tel: 0113 2025 140
 GLASGOW: Greenhill Chambers, 410 West Nile St, Glasgow, G2 2PT, Tel: 0141 379 1229

www.civicengineers.com

PROJECT
 NEWSOME MILL

TITLE
 VEHICLE TRACKING
 FIRE TENDER

DRAWING STATUS		STATUS CODE	
FOR INFORMATION		-	
CE PROJECT No.	SCALE @ A1	DATE CREATED	DRAWN
2588	1:200	12.01.23	MC
DRAWING No.			REV
2588-CIV-XX-XX-D-H-40002			P03

© TRIANGLE ARCHITECTS LIMITED
 THIS DRAWING IS THE SUBJECT OF COPYRIGHT WHICH VESTS IN TRIANGLE ARCHITECTS LIMITED. IT IS AN INFRINGEMENT OF COPYRIGHT TO REPRODUCE THIS DRAWING, BY WHATEVER MEANS, INCLUDING ELECTRONIC, WITHOUT THE EXPRESS WRITTEN CONSENT OF TRIANGLE ARCHITECTS LIMITED WHICH RESERVES ALL ITS RIGHTS.
 TRIANGLE ARCHITECTS LIMITED ASSERTS ITS RIGHTS TO BE IDENTIFIED AS THE AUTHOR OF THIS DESIGN.
 DRAWING NOT TO BE SCALED. FIGURE DIMENSIONS TO BE WORKED TO IN ALL CASES.
 THE CONTRACTOR IS RESPONSIBLE FOR CHECKING DIMENSIONS, TOLERANCES & REFERENCES.
 ANY DISCREPANCY TO BE VERIFIED WITH THE ARCHITECT BEFORE PROCEEDING WITH THE WORKS.
 REPORT ERRORS & OMISSIONS TO ARCHITECT.
 WHERE AN ITEM IS COVERED BY DRAWINGS OF DIFFERENT SCALE, THE LARGER SCALE DRAWING TO BE WORKED TO. DO NOT SCALE FROM THE DRAWING. FIGURED DIMENSIONS TO BE WORKED TO IN ALL CASES.
 CHECK ALL DIMENSIONS ON SITE.
 DRAWING TO BE READ IN CONJUNCTION WITH THE HEALTH & SAFETY PLAN AND ALL RELEVANT RISK ASSESSMENTS AND THE FOLLOWING DRAWINGS.



BIN STORE 2

Waste Type	Bin Size (litres)	Quantity	Dwellings Served	Volume/Dwelling (litres)
General	1100	6	37	178
Recycling	1100	6	37	178

BIN STORE 1

Waste Type	Bin Size (litres)	Quantity	Dwellings Served	Volume/Dwelling (litres)
General	1100	2	8	275
Recycling	1100	2	8	275



Precedent image 01 - MetroSTOR PBM bin storage housing - precedent with sedum roof.



Precedent image 02 - MetroSTOR PBM bin storage housing - timber clad option.

The following guidance is adapted from the "Waste Management Design Guide for New Developments, v5 October 2020." by Kirklees Council.

APARTMENTS

For large developments with shared facilities[...] the number of required 1100ltr (Eurobin) containers' is as follows:

- 3no. general waste containers per 20 households;
 - 3no. recycling waste containers per 20 households.
- This equates to 1no. 1100ltr container per 6.67 households.
- 165hrs minimum of general waste storage capacity per household;
 - 165hrs minimum of recycling waste storage capacity per household.

HOUSES

"Generally, new households occupying an individual plot with private access and external space (including HMOs) will require standard 240ltr wheeled bins for general and recyclable waste and have the option to subscribe to the garden waste service."

- Kirklees Council currently provides the following waste collection service to domestic properties:
- Green wheeled bin for commingled recyclable materials to include paper, card, plastic bottles, tins and cans (incl. aerosols), collected on a fortnightly basis;
 - Grey wheeled bin for general waste, collected on a fortnightly basis;
 - Brown wheeled bin for garden waste including grass cuttings, tree/hedge clippings, plants, flowers and leaves, collected Fortnightly between February and November, with an optional annual subscription service available to wheeled bin households.

P03	04.04.23	JS	Site plan updated as client comments.
P02	02.03.23	JS	Updated site plan issued for comment.
P01	03.02.23	JS	Bin strategy issued for client comment.
Rev	Date	By	Remarks

Client:	Connect Housing
Project No. / Project Name:	21-003 / Newsome Mills
Drawing Name:	Bin Strategy Site Plan
Drawing Purpose:	INFORMATION
Project:	Origin: Vol/Sys Level: Type: Role: Drg No: Revision
NSM - TRI - ZZ - ZZ - DR - A - 3020	P03
Status:	Scale @ A1 Drawn Check Date
1 : 250	JS BPM February 2023

TRIANGLE ARCHITECTS

Tel: 0161 272 3500
 E-mail: studio@trianglearchitects.co.uk
 Web: www.trianglearchitects.co.uk
 Twitter: @TriangleArch

Raven House,
 113 Fairfield Street,
 Manchester,
 M12 6EL



Civic Engineers

Manchester

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

London

Lloyds Wharf
2 Mill Street
London SE1 2BD
+44 (0)20 7253 2977

Leeds

Unit 02/01 Tower Works
Globe Road
Leeds LS11 5QG
+44 (0)113 2025 130

Glasgow

35 Virginia Street
Glasgow G1 1TN
+44 (0)141 370 1829