

Job Name: The Old Power Station Vastern Road
Job No: 47500
Note No: TN005
Date: 9th September 2020
Prepared By: Joe House / Dan Townsend
Subject: RBC Highway 2nd Response

Introduction

This technical note has been prepared by Stantec on behalf of Berkeley Homes (Oxford and Chiltern) Ltd to provide a response to Reading Borough Council (RBC) highway comments provided in the letter dated 5th August 2020.

The comments provided are in response to the full planning application (ref. 200188) for the demolition of existing structures and erection of a series of buildings ranging in height from 1 to 11 storeys, including residential dwellings (C3 use class) and retail floorspace (A3 use class), together with a new north-south pedestrian link, connecting Christchurch Bridge to Vastern Road.

An initial response to RBC Highway comments (memo dated 28th May 2020) was provided in TN004 and issued to RBC for comment on 11th June 2020.

Internal Vehicle Access Arrangements

RBC have raised concerns regarding the need for larger refuse and delivery vehicles (HGVs) having to reverse over the proposed dedicated foot/cycleway in order to exit the site and the need for general traffic to cross the foot/cycleway.

This area of the masterplan has been carefully designed to absolutely minimise any encroachment by such motor vehicles into the foot/cycleway area. This includes the placement of bollards to prevent access outside of this short 6m crossing section, and clear demarcation to reinforce priority for pedestrians and cyclists including surface treatments, raised table and signage. This design philosophy applies to both of the crossing points where vehicles will be required to give way to, and then cross the foot/cycleway.

In addition, the site has been designed in such a way that vehicle speeds will be very low through the deliberate use of tight bends for traffic, planting and surface materials. Furthermore, the entrance into the undercroft parking area to the north of the site will be secure and fitted with shutters. In turn this will physically slow car speeds on the approach parking area.

It is commonplace for vehicles to have to cross foot/cycleways at site and car park entry points, often without such good design features to slow traffic down.

We are aware of a recent scheme that received highways approval from RBC for a residential development in West Reading at Colliers Way/Tudor Court for 14 homes where a new access across an existing shared pedestrian and cycle path is to be provided with priority for pedestrians/cyclists. This application is within an out of town location with a higher intensity HGV use than proposed at Vastern Road.

The committee reference to a traffic free route for Christchurch Bridge is a statement reflecting the fact that cyclists would no longer *have to* negotiate Reading or Caversham Bridges if they did not want to, since the new bridge would be traffic free. The concept of a traffic free cycleway is one where no traffic is permitted to use the route, or sits directly alongside it. For example, a cycle lane in a road running parallel with traffic with no physical separation would not be traffic free. However, examples such as the cycle super highways in London have significant lengths that are segregated for use only by cycles only and are therefore traffic free. None of this means that there will never be a point where vehicles may need to cross the cycleway, or that junctions may need to be crossed.

In this case, we are indeed providing a 'traffic free' cycle route because motor vehicles will not be permitted to travel along it.

There will be rare occasions where the largest vehicles will need to reverse over the cycle route area to turn around, service and exit the site at the northernmost crossing point. The reversing requirement will be for a matter of seconds as they complete their manoeuvre.

To establish the frequency of such occurrences, a review has been undertaken using TRICS data to understand the recorded volume of HGVs for residential developments comprising of entirely flats. The table below provides the recorded number of HGVs for each of the surveyed sites across England (excluding Greater London) that recorded servicing and delivery numbers. It should be reiterated that all other vehicles (non HGV) will not need to reverse across the foot/cycleway at all.

Site Reference	Location Type	No. of Units	No. of Daily HGV arrivals
BD-03-C-01	Edge of Town Centre	175	0
BD-03-C-02	Edge of Town Centre	62	0
BD-03-C-03	Edge of Town Centre	146	1
DS-03-C-03	Suburban Area (PPS6 Out of Centre)	30	0
HC-03-C-01	Edge of Town Centre	90	4
HF-03-C-03	Edge of Town Centre	91	0
MS-03-C-02	Suburban Area (PPS6 Out of Centre)	184	1
MS-03-C-03	Suburban Area (PPS6 Out of Centre)	9	0
Average HGV Arrival per Day			1

As shown above, from the 8 sites available in TRICS, residential developments would typically have a very limited number of HGVs per day with some of the sites recording no HGV movements at all on the day of the survey. One of the sites appears to have an unusually high number of HGVs (4) for the 90 units on the site (HC-03-C-01), but we have included this to complete a robust analysis.

Taking the weighted average of the above and applying it to the development proposals for 209 units would lead to a value of 1.6HGVs per day. Excluding the anomaly (site HC-03-C-01) this reduces to a 0.6 HGVs per day. It would be reasonable to presume that there could be between 0 and 1 HGV's on a typical day including refuse vehicles.

There is good visibility in this area of the site and all vehicles of this size are now fitted with reversing or white noise beepers. Vehicles making this turn also will be travelling at very low speeds.

Refuse collection at the site would only be once a week and one of the operatives would act as a banksman to safely reverse the vehicle into the designated collection point.

To overcome the need for the refuse collection vehicles being stationary over part of the northern crossing we have sought to relocate the collection point for Building D. The revised collection point for servicing is proposed to be taken directly from the undercroft car park access and prior to the shutters. This will therefore mean the refuse vehicles will be located adjacent to the bin store doors which reduces the carry distances for operatives and in turn the time it takes to service the building. This arrangement would no longer require a HGV to be parked on the northern crossing.

Based on the site location and the low provision of parking, the vehicles trips generated will generally be linked to commuters in the morning and evenings peak periods, and leisure trips across the weekends. The servicing and deliveries will be infrequent and often outside peak periods therefore limiting conflicts internally within the development. The revised swept paths for the new refuse strategy is provided as an extract below and illustrated on drawing 47500/5501/005A contained in Appendix A.



Given the very low frequency of HGVs accessing the site, the good visibility and clear demarcation in design and the very limited time any such HGV will be across the cycleway, we do not believe this has a detrimental issue on the foot/cycleway or causes and risk to health and safety of the users.

As noted however, the vast majority of deliveries will be carried out by LGVs which do not need to reverse across this area to access the site anyway and therefore the frequency of this happening is very low.

With regards to the commercial / café unit servicing, the goods being delivered to such a size of unit would typically be accommodated by smaller vehicles. The proposed unit is only 18sqm. Delivery and servicing of the café would be undertaken from within the northern turning head as per Building EFG. Even if they did require access by the occasional HGV, this would not adversely affect the safety of the site as they could use the above turning facility.

New Pedestrian/Cycle Route through site

It is noted that concerns have been raised regarding the location and design of the pedestrian/cycle route itself.

RBC notes that:

A key consideration of the site is to enhance the pedestrian and cycle connection between Christchurch Bridge and Reading Northern interchange, which via the Station underpass also connects the site with the Town Centre Area.

And that :

I also refer to Paragraph 5.4.6 of the Local Plan which states:

*The successful development of this area hinges on improved accessibility by public transport, and improved permeability for pedestrians and cyclists. In terms of permeability, improving links for pedestrians and cyclists through the centre, particularly in a north-south direction, is one of the key principles for the spatial strategy of the centre, along with removing barriers to access within the centre. If visual links are also provided, this will help change the perception of the area north of the station as a separate entity. The opening of the underpass under the station and the provision of a new pedestrian and cycle bridge over the Thames have recently helped to achieve this vision, but further improvements can still be made. Ensuring active frontages along these routes will assist these to become attractive links, as will the provision of new areas of open space. This is particularly important on the route between the shopping core, the station and the Thames. **In particular, on the Riverside site (CR11g), achieving this north-south link is the main priority for the site, and this should be given substantial weight in development management.***

The above has been a priority in the development of the masterplan and it is clear that the proposed development substantially enhances pedestrian and cycle access on this north-south spine by creating a completely new connection avoiding the need to use the busy Reading and Caversham Bridges, or the less direct route via Norman Place where cyclists are required to mix with general traffic and therefore currently not 'traffic free'.

The scheme therefore delivers this new north-south connection and is clearly in accordance with the above policy.

A concern has been raised regarding the 'directness' and 'legibility' of the proposed route. There is no specific policy requirement in this respect, rather the policy emphasises the need for active frontages and attractive links to assist with visual links. The masterplan has been designed to achieve this.

In terms of legibility, the new route through the site will be clearly visible and Berkeley have worked up a wayfinding strategy for the site (section 3.10 of the DAS) to ensure that we are able to deliver a combination of design moves and signage to aid navigation through the different spaces within the scheme.. The wayfinding strategy submitted shows this in detail.

By their very nature, all commuter pedestrians and cyclists will be regular users, so will very quickly learn of this new connection, and others will see it being used and will follow suit.

In addition, the clear 'wayfinders' for those arriving by train who do not know Reading are:

1. The signage within the station itself to the Thames and Caversham, and
2. The view of the Christchurch Bridge mast from Trooper Pots Way / Vastern Road junction

Similar signage is provided at the southern entrance to the station underpass footway.

Both of these will draw you to the north to cross Vastern Road, and it will be much more important to have a clear avenue through the planned Royal Mail and Aviva site developments that will lead you to the route through this development with clear signage. In the interim, a sign could be placed at the entry to Trooper Potts Way to direct people through the site.

In fact, the masterplan is enhanced (as with other parts of the town centre) in the way that the vista to the river, Christchurch Bridge and the Meadows will open up the further north you get into the site, rather than only having a end to end line of sight. Reading is characterised by such features.

Justification for Northern part of the proposed cycle/footway

When coming from the north, the ramp will extend down directly into the site and be clearly signposted to the station/town centre, so will again provide a direct route and link into the site which will be easily readable and attractive.

Currently commuters must negotiate a 90 degree bend at the foot of the bridge to continue their journey eastbound along the towpath. Following this route to the station via Norman Place, cyclists must negotiate a further 120 degree bend and then join Norman Place carriageway to reach Vastern Road. The new link will be a vast improvement on this and meets the aspirations of the Local Plan.

A secondary concern has been raised with respect to the design of the ramp up to Christchurch Bridge.

This ramp serves 2 clear functions:

1. To make up the level difference to the landing point on Christchurch Bridge
2. To ensure that cycle speeds are managed to acceptable levels to minimise the risk of injuries to pedestrians or people in wheelchairs/with prams or pushchairs

The ramp optimises the space at the northern end of the site, adding to the landscape character and setting and provides an accessible route for all users in keeping with the design philosophy of the public realm areas of the development.

The proposed ramp has the added benefit that it also provides a more attractive, wide and accessible route to Christchurch Bridge from the western towpath by providing a connection for wheelchair users or those with pushchairs/prams.

It is vital to note that this is a shared pedestrian/cycle route, not just a cycle route. This means that high cycling speeds should not be encouraged. It is desirable to have features to slow cyclists down when crossing the bridge at the southern end as they are entering a built up, shared space in an urban environment.

In line with the previous cycle infrastructure design guidance, the geometries of the turns adhere to the minimum turning circles for conventional bikes and as such allows for cyclists to maintain their momentum whilst also keeping speeds to a minimum. The design and layout is appropriate for the location and function proposed.

Switchback ramp designs have been used widely in constrained areas to move people from one level to another. Within Reading, there are switchback / Zig Zag ramp configurations provided at the Reading Station Southern Interchange and at the River Kennett crossing at Kennet Walk with the later outlined as a 'linking route' on RBC's cycle network.

The LTN 1/20 Cycle Infrastructure Design guide referred to was published in July 2020 and as such our designs pre-date the guidance outlined in the new document. It is important to note that this is guidance, and any guidance clearly needs to account for other factors, such as shared use with pedestrians and wider masterplan, public realm, level and design constraints.

It is noted that RBC has suggested a direct ramp along the eastern boundary of the site could be provided and should meet a 5 point criteria; Coherent, Direct, Safe Comfortable and Attractive.

Any design that seeks to remove the switchback and replace with a straighter alignment would need to extend the ramp southwards further into the site (towards Vastern Road). In turn this essentially moves the ramp access away from the northern end of the development (Building EFG) meaning those residents living in the north of the site would need to walk/cycle southbound to access the ramp to then be able to head northbound to Christchurch Bridge. The current design proposals mean that most of the development have direct level access to the switchback ramp in the north without extend or diverted routes, and also provide good connectivity for 'through' commuters, much enhanced over the Norman Place route.

The directness of the route has been highlighted as the main concern by RBC. The LTN1/20 states that *"...routes should provide the shortest and fastest way of travelling from place to place."* In an unconstrained site, directness and the other 4 factors all have the ability to be achieved **for a cycleway**, however due to the complex site shape, the level changes and the need to create an integrated development site there are unavoidably going to be deviations from the core cycle design principles outlined.

Assuming direct is being interpreted as 'straight line', which we do not believe is correct, then we do believe all other criteria have been met.

Furthermore, if RBCs suggested route is provided against the eastern boundary of the site, this would be adjacent to the operational SSE site, and would require additional protection in the form of a 6m security wall due to the sensitivity and high voltage SSE operations/equipment immediately to the east.

This along with the visual impact of a straighter ramp extending through the site rising circa 2.4m would create an unattractive ramp that would damage the setting and public realm proposals.

Directness is also influenced through minimising the effort required to cycle, by enabling cyclists to maintain some momentum. The geometries around the proposed switchback turns allow for cyclists to maintain their momentum and at the crossing points where motor vehicles are required to give way and pedestrians and cyclists given priority. As such, whilst not as 'direct' as a straight ramp in terms of alignment, the proposed switchback has been developed to manage speeds to a reasonable level for a shared route and meet other measures of directness.

To enhance the directness of the switchback ramps, an additional measure could be to fit the 2 sets of steps with wheeling ramps to enable cycles to be rolled up or down a flight of steps. This is suggested as an appropriate measure within the recent LTN1/20 guidance whereby they can be used if an alternative facility is provided which will cater for all users, which we have in the form of the switchback ramps.

Design of Access to Southern Towpath

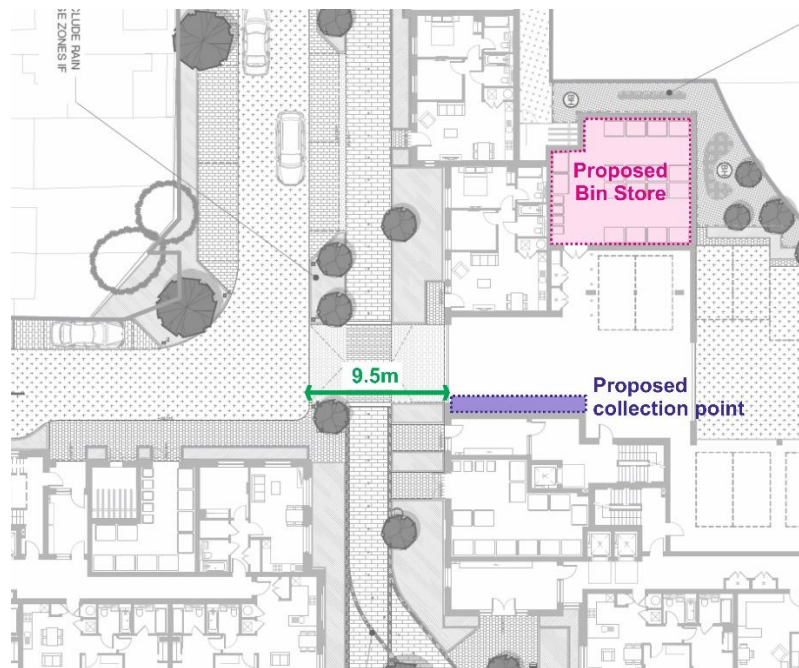
The southern towpath along the River Thames in the vicinity of the proposed connection is not dedicated as a cycle route; as such our proposals have properly been developed on the premise of this being a pedestrian link only. NCN5 actually follows the ramp up to Christchurch Bridge from the east; the cycleway is therefore terminated well before the site boundary is reached. There are also, in fact, physical barriers to the west of Christchurch Bridge to prevent cycling along the towpath close to the site boundary.

The design and gradients that we have been able to achieve mean that it also creates a suitable connection to the towpath for those using wheelchairs or buggies/prams.

Waste Collection Strategy

Based on the carry distances to each of the bin stores it is proposed that on collection days the refuse operatives would collect the bin from the respective bin stores.

The only exception to this is Bin Store 4 which is located 24m from the identified vehicle position. In this instance the management company will be required to actively move the bins to a collection point which is illustrated in the figure below. This location can accommodate around 7 x 1100 litre bins whilst still maintaining adequate carriageway space for vehicles to access the car park. The resulting carry distance for the refuse operatives would be 9.5m and therefore deemed acceptable



Disabled Parking Bays

A review of the proposed disabled bays within the site has been undertaken to ensure the maximum distance requirements can be met.

The parking bay within Building B/C parking areas has been reconfigured into to a formal disabled parking bay with 1.2m accessible strip on both sides. This results in a loss of 1 bay in this location.

One of the two on street bays provided along the internal access road has been moved closer to Buildings D and EFG to provide a site wide provision and be more centrally located, as illustrated below.



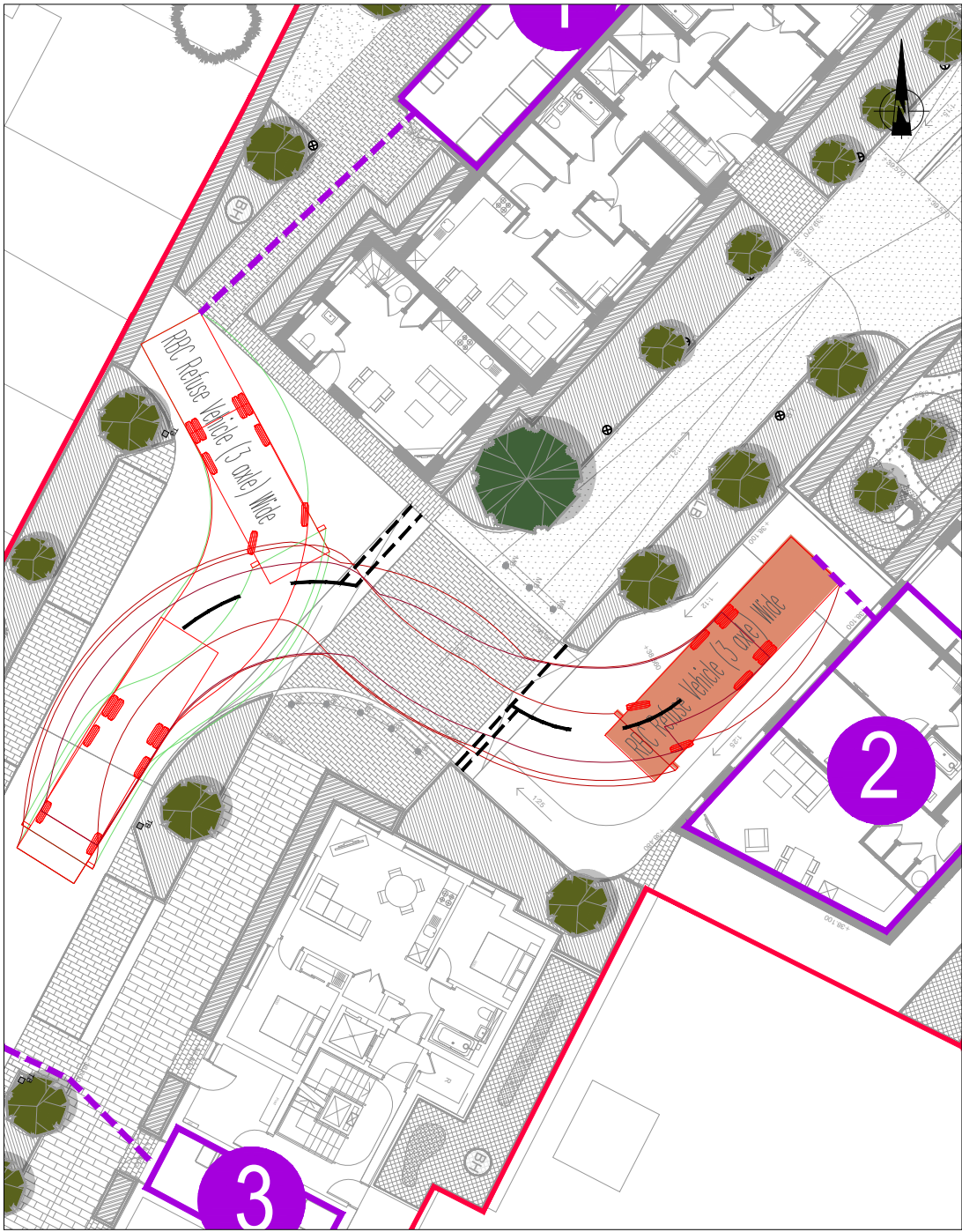
Cycle Store Design

In addition to the 2.35m headroom that is provided at Building D, there is an additional 0.5m headroom provided as part of the service area. At the location of the cycle store this will remain clear and as such provide an overall headroom of 2.85m and suitable for the josta style racks.

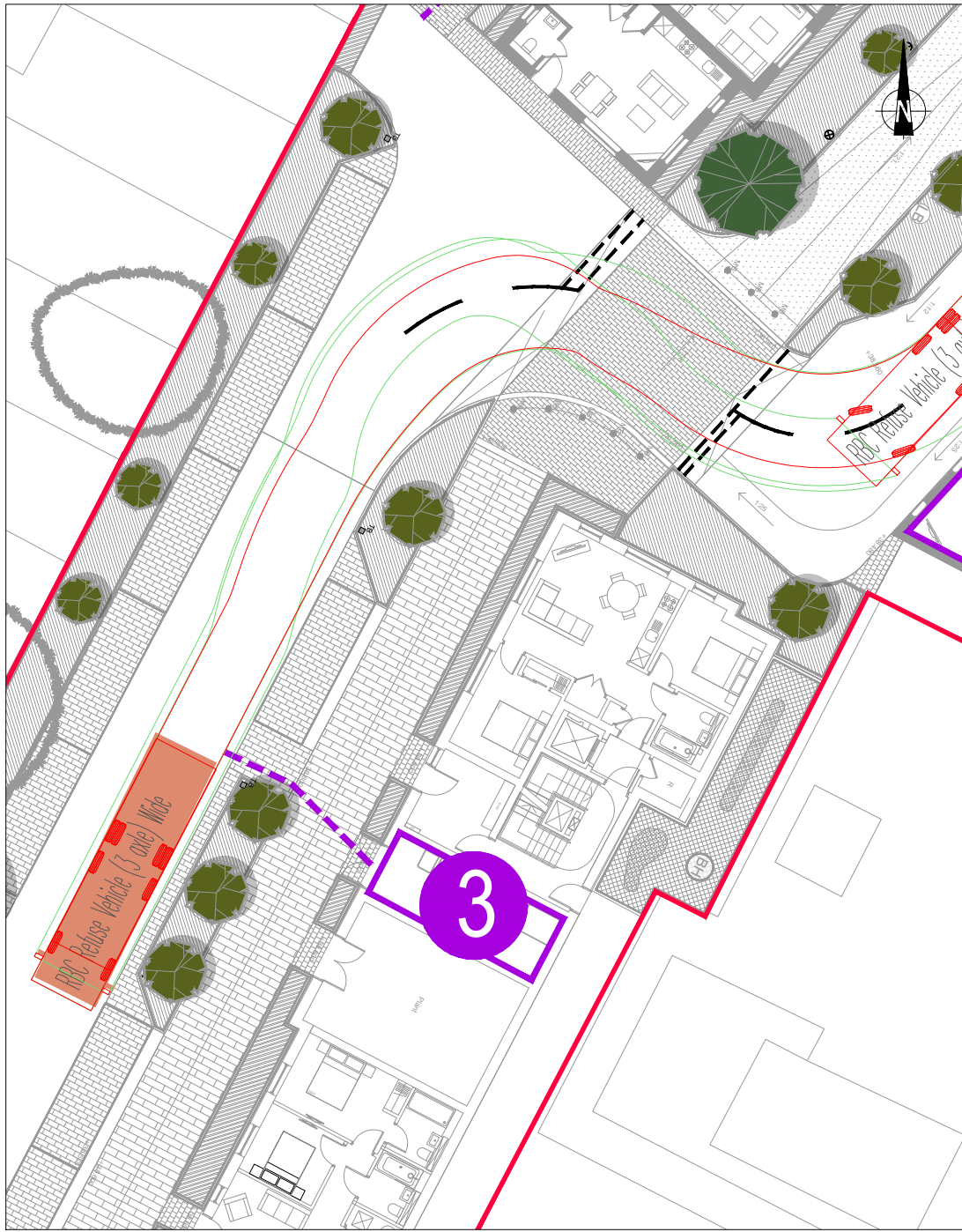
Appendix A – Stantec Drawings



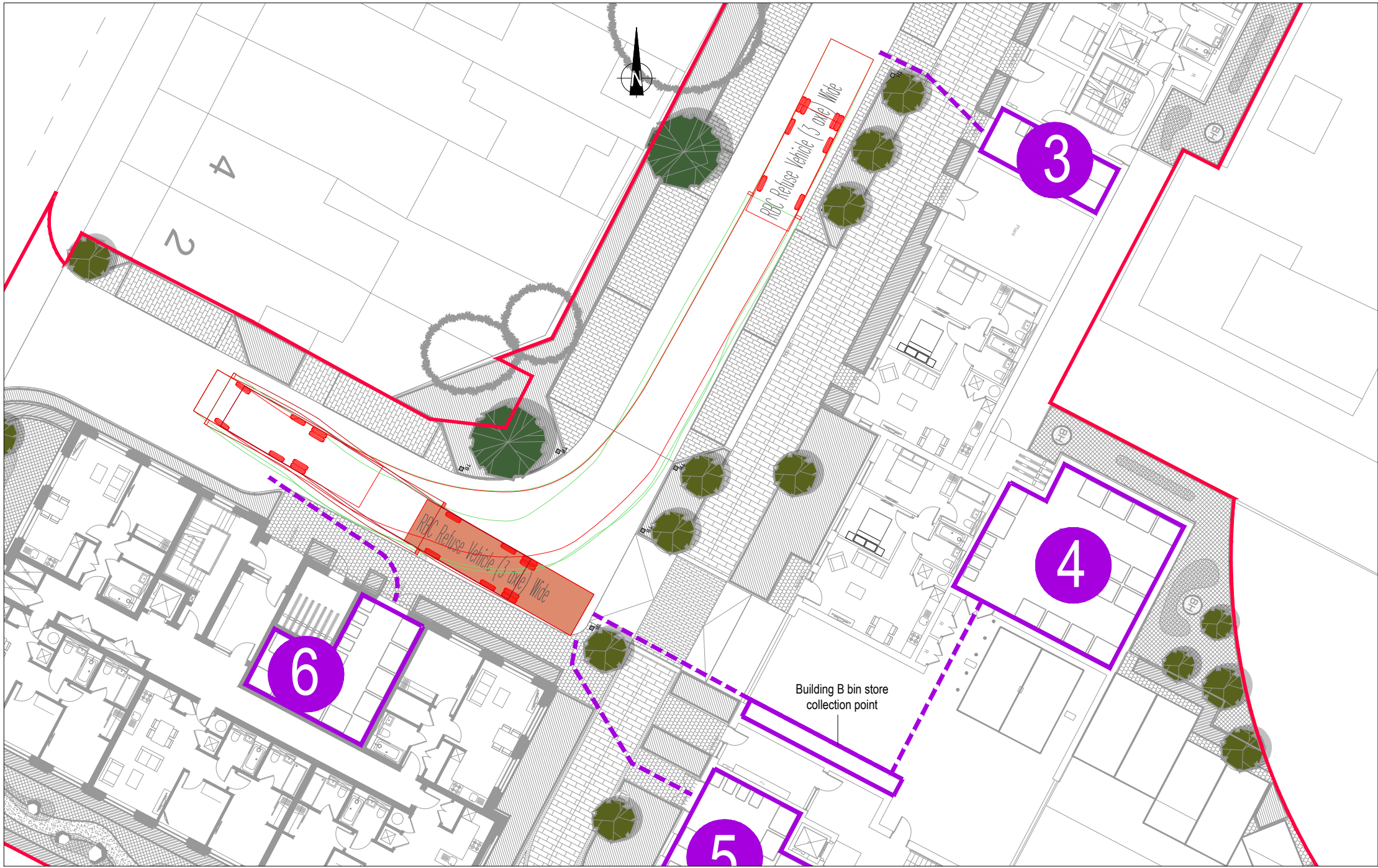
1 - COLLECTION AT BLOCK EFG (STORE 1)



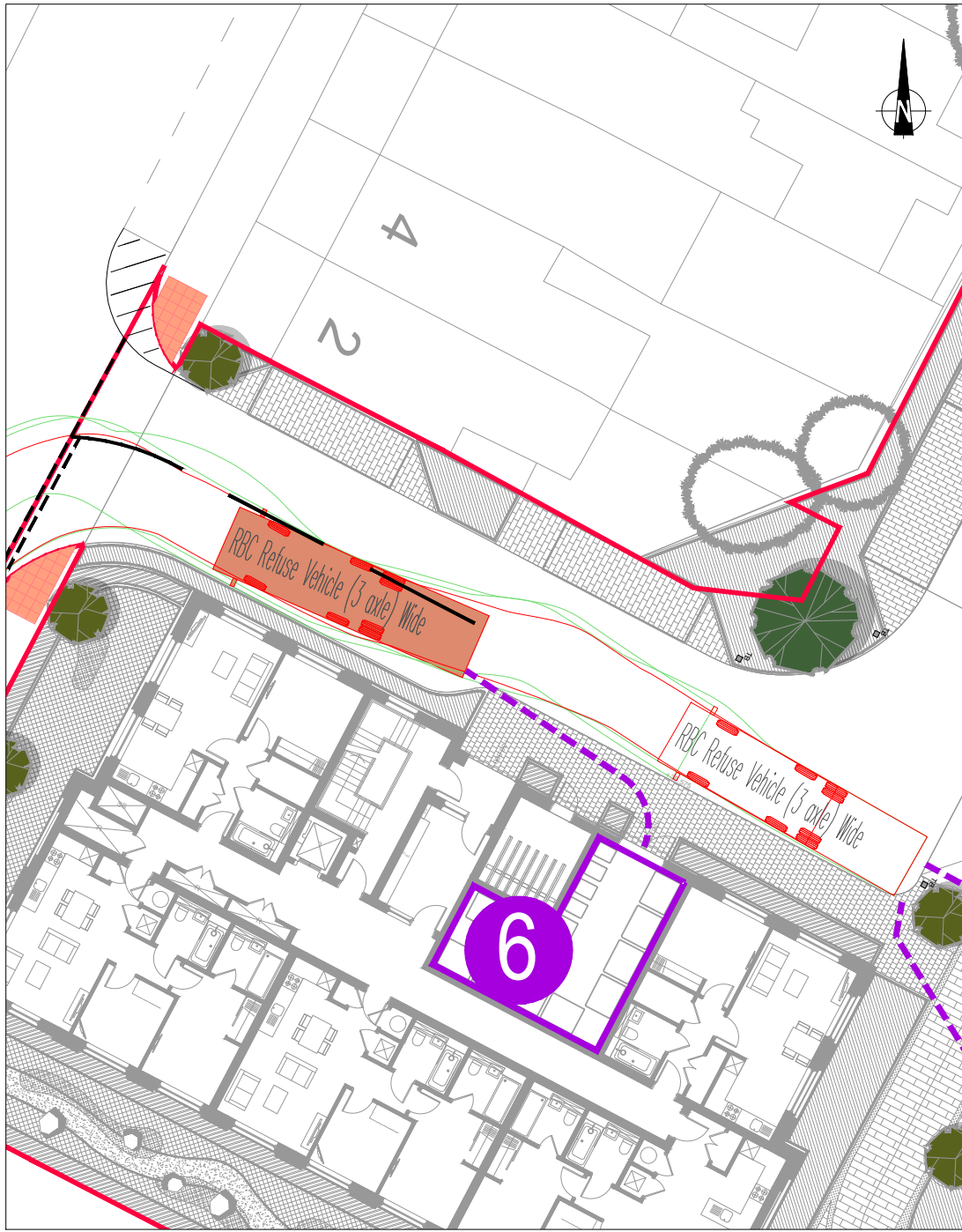
2 - COLLECTION AT BLOCK D (STORE 2)



3 - COLLECTION AT BLOCK C (STORE 3)

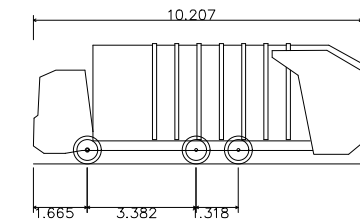


4 - COLLECTION AT BLOCK B (STORES 4 AND 5)



5 - COLLECTION AT BLOCK A (STORE 6)

VEHICLE PROFILE:



RBC Refuse Vehicle (3 axle) Wide
Overall Length 10.207m
Overall Width 2.530m
Overall Body Height 3.748m
Min Body Ground Clearance 0.300m
Track Width 2.480m
Lock to lock time 4.00s
Kerb to Kerb Turning Radius 8.600m

A	REVISED ACCESS ARRANGEMENT FOR BUILDING D	08.09.20	JH	DT	SW
Mark	Revision	Date	Drawn	Chkd	Appd

SCALING NOTE: Do not scale this drawing - any errors or omissions shall be reported to Stantec without delay.
UTILITIES NOTE: The position of any existing public or private sewers, utility services, plant or apparatus shown on this drawing is believed to be correct, but no warranty to this is expressed or implied. Other such plant or apparatus may also be present but not shown. The Contractor is therefore advised to undertake their own investigation where the presence of any existing sewers, services, plant or apparatus may affect their operations.

Drawing Issue Status

FOR INFORMATION

THE OLD POWER STATION
VASTERN ROAD, READING
INTERNAL TURNING HEAD
SWEEP PATH ANALYSIS

Client

Berkeley
Designed for life

Stantec

stantec.com/uk

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Date of 1st Issue	Designed	Drawn
10.06.20	-	AC
A2 Scale	Checked	Approved
1:250	JH	DT

Drawing Number	Revision
47500/5500/005	A