Technical Note

Project:	**Monmouthshire County Council Sites**	Job No: **60720932**
Subject:	**Land To Rear Of Langley Close, Magor**	
Prepared by:	**Ben Burton (Senior Consultant)**	Date: **15/05/2024**
Checked by:	**Spiro Panagi (Associate Director)**	Date: **16/05/2024**
Approved by:	**Spiro Panagi (Associate Director)**	Date: **16/05/2024**

Appendices:

Appendix A Site Access Considerations

1. Introduction

This Technical Note (TN) has been prepared by AECOM to support the investigation into three sites for a potential Traveller settlement land use. The transport planning inputs will inform the assessment of the sites in the consideration for inclusion with the forthcoming Monmouthshire County Council (MCC) Replacement Local Development Plan (RLDP).

The three sites which have been identified for consideration are 'Land to rear of Langley Close, Magor', 'Land at Oak Grove Farm, Portskewett' and 'Land at Bradbury Farm, Crick'. It is understood that the scale of development for any potential site would be around 11 dwellings, to be comprised of temporary structures, potentially in the form of prefabricated units.

This TN discusses the transport considerations associated with 'Land to the Rear of Langley Close, Magor' and includes the following:

- Consideration of local Planning Policy and this specific land use requirement;
- Baseline reporting on existing transport infrastructure for all modes;
- Forecasts of trip generation based on local knowledge, client forecasts and industry standard
- software TRICS;
- Description of development proposals and review against the Council parking and design
- standards; and
- Consideration of the proposed access and how that could appropriately continue to serve the proposed site.

2. Planning Policy Context

The Monmouthshire County Council Local Development Plan (LDP) 2011-2021 was adopted on 27 February 2014, replacing the Monmouthshire Unitary Development Plan (UDP), to become the adopted development plan for the County.

Policy H8 '*Gypsy, Traveller and Travelling Showpeople Sites'* provides the framework for assessing proposals for Traveller sites, whether for permanent, transit or emergency use. Proposals for Traveller sites are assessed against the following criteria, whereby sites:

- *"Would enable the established need to be met at a location that is accessible to schools, shops and health care, by public transport, on foot or by cycle;*
- *Have a safe and convenient access to the highway network and will not cause traffic congestion or safety problems;*

- *Are of a suitable size to allow for the planned number of caravans, amenity blocks, a play area (for children on sites housing multiple families), the access road and include sufficient space for the parking and safe circulation of all vehicles associated with occupiers within the site curtilage;*
- *Do not occupy a prominent location and are consistent with LDP policies for protecting and enhancing character and distinctiveness of the landscape and environment. Where necessary the proposal will include mitigating measures to reduce the impact, and assimilate the proposal into its surroundings e.g. screening and landscaping;*
- *Avoid areas at high risk of flooding and proximity to uses with potential sources of pollution or emissions;*
- *Are of an appropriate scale to their location and do not have an unacceptable impact on the amenities of neighbouring land uses;*
- *Are served, or can be served, by adequate on-site services for water supply, power, drainage, sewage disposal and waste disposal (storage and collection), and for Travelling Showpeople that there is a level area for outdoor storage and maintenance of equipment."*

In terms of transport and highways, the material considerations include accessibility to local facilities and communities, safe and convenient access to the highway network and an acceptable level of traffic impact, and the ability for vehicles to be safely accommodated by internal access routes and parking facilities.

3. Baseline Transport Conditions

Local Highway Network

Access to the proposed site at Langley Close would be provided via St Bride's Road, a single carriageway route that crosses underneath the M4 and meets the A48 approximately 3.2km to the north of the site. South of the proposed site, Langley Close connects to the B4245 via a priority T-Junction.. In the vicinity of the proposed site access, St Bride's Road has an average carriageway width between 5.0-6.0m and is subject to a 20mph speed limit to the south of the site. Approximately 40m to the north of the proposed site access, there is a speed limit increase to 60mph, reflecting the change in road characteristic to a rural route.

Langley Close is a cul-de-sac located directly to the south of the proposed site, which serves approximately 15 properties and connects to St Bride's Road via a priority T-Junction. Netherwent View is a cul-de-sac that forms a junction with the B4245 approximately 30m to the south of Langley Close.

The B4245 is the primary highway that runs in a horizontal alignment through the village of Magor and is located approximately 300m to the south of the proposed site. The B4245 is subject to a 20mph speed limit in the vicinity of the villages of Magor and Undy. The B4245 provides access to Junction 23A of the M4, via the A4810. The A4810 lies approximately 450m to the west of the proposed site and provides a strategic connection between the east of Newport and the M4.

Walking and Cycling Environment

To the south of the proposed site access, St Bride's Road has a footway provision on at least one side of the carriageway and footways are of minimum 2.0m width. To the north of the site and the M4 overbridge, there is little to no active travel provision on St Bride's Road. To the south of St Bride's Road, the B4245 has footways on both sides of the carriageway and includes regular crossing points in the form of pedestrian refuge islands and tactile paving / dropped kerbs. A signalised pedestrian crossing is provided adjacent to the priority junction between St Bride's Road and the B4245.

There are no existing designated active travel routes located within close proximity of the proposed site. A set of Integrated Network Maps was submitted by MCC to the Welsh Government, which set out the Council's plans for improving active travel over the following 15 years. The maps indicate a future walking

and cycling route (ref. MCC-S17C) is proposed along St Bride's Road, between the B4245 and the motorway services located at Junction 23A of the M4. Another future walking and cycling route (ref. MCC-S17A) is proposed along the length of the B4245, to the south of St Bride's Road.

Monmouthshire's Public Rights of Way (PRoW) mapping has been consulted to determine whether any existing routes pass through, or close by, to the site. Footpath ref. 372/87/3 lies close to the proposed site on Netherwent View and connects to a number of routes that cross beneath the M4, adjacent to the Mill Reen watercourse.

National Cycle Network (NCN) Route 4 is available approximately 1.6km to the southeast of the site at the village of Undy. NCN Route 4 provides a long-distance route between Newport and Chepstow, as well as to destinations located further-afield.

Public Transport Accessibility

The IHT's *Guidance for Providing for Public Transport in Developments*, published in 1999, suggests 400m as the 'acceptable' walking distance to a bus stop. The nearest bus stops to the proposed site are located adjacent on the B4245, opposite Queens Gardens, approximately 220m from the proposed site access. Walking access to these stops is achievable via St Bride's Road and a pedestrian connection that provides a cut-through to prevent the need to continue down the length of St Bride's Road to the B4245. **Table 3-1** provides a summary of the key bus services which are available from the bus stops on the B4245. Times and frequencies listed are reflective of the latest available timetable.

Table 3-1: Summary of Local Bus Services

Service	Route	Days	First Service	Last Service	Approximate Frequency
74 / X74	Newport – Chepstow	Mon-Fri	07:14	19:44	Hourly
		Saturday	08:14	19:24	Hourly
	Chepstow - Newport	Mon-Fri	07:31	18:55	Hourly
		Saturday	08:35	19:40	Hourly
Source: Bustimes.org (May 2024)					

In summary, **Table 2-1** demonstrates there is a reasonable availability of local bus services close to the site on the B4245, to which good pedestrian access is provided from the proposed site.

The nearest station to the site is Severn Tunnel Junction, which lies approximately 3.8km to the east, in Rogiet. The majority of services available at this station operate between Cardiff and a range of destinations in South West England, such as Taunton, Exeter and Penzance. On average, there are approximately four stopping services per hour. Ticket machines are available at Severn Tunnel Junction, as well as a 114-space station car park and 10 cycle stands.

Local Facilities

The proposed site at Langley Close is positioned in close proximity to a number of accessible facilities located in the villages of Magor and Undy. These include food convenience stores, schools, community facilities, doctors, pubs / restaurants and sports / leisure facilities. The B4245 provides a continuous active travel provision through both Magor and Undy, ensuring safe access is achievable for prospective residents of the development site.

Personal Injury Collision (PIC) data has been assessed using CrashMap for the most recently available 5-year period (2018-2022) in order to assess the road safety along the network in the vicinity of the site. There have been no PICs recorded on St Bride's Road, from which access to the site is proposed. To the south of St Bride's Road on the B4245, there have been four PICs recorded within the area of Magor, including three 'serious' PICs. The quantity and locations of the recorded incidents do not suggest there to be an existing highways safety issue, or incident hotspot, that could be exacerbated by the development.

4. Potential Trip Generation & Parking Requirement

It is understood that the scale of development for the site would be around 11 dwellings, to be comprised of temporary structures, potentially in the form of prefabricated units. The Trip Rate Information Computer System (TRICS) database has been used to calculate the proposed trip rate and subsequent trip generation for the proposed development. There are a limited number of Traveller sites available within TRICS, and as such, trip rates have been established using privately owned residential houses, with location types filtered to best represent the characteristics of the site at Langley Close. This is considered to represent a worst case scenario in terms of vehicular trip generation. The trip rates and resultant trip generation in terms of vehicle trips, for the traditional peak hours, are presented in **Table 4-1.**

Table 4-1: Vehicle Trip Generation – Proposed Development (11 Dwellings)

Time Period	Trip Rate			Trip Generation		
	Arrivals	Departures	Two-Way	Arrivals	Departures	Two-Way
AM Peak (08.00 – 09.00)	0.118	0.401	0.519	2	5	7
PM Peak (17.00 – 18.00)	0.368	0.153	0.521	5	2	7
Daily (07:00 – 19:00)	2.277	2.366	4.643	26	27	53

Based on the TRICS database, it is anticipated that the proposed development could generate up to seven two-way vehicles trips during the weekday AM and PM peak hours. There could be up to 53 two-way vehicle trips generated over the course of a day (07:00-19:00). In summary, the anticipated trip generation for the proposed development is low and is unlikely to have a material impact on the highway network.

MCC's Adopted Parking Standards Supplementary Planning Guidance (SPG) sets out the required parking levels for a range of development types. The SPG sets out four different parking zones within which to classify a specific site; this site is considered to be within 'Zone 2 – Urban'. The SPG does not contain specific standards relating to Traveller sites, therefore the following requirements in relation to residential housing are considered to be the most comparable to the development at this stage:

Table 4-2: Adopted Parking Standards – Residential

Type	Residents	Visitors
Houses	1 space per bedroom (maximum requirement 3 spaces)	1 space per 5 units

At this stage, the proposed number of bedrooms per unit is unknown and therefore, exact parking requirements for the site would need to be defined once the development design has been sufficiently progressed. Based on the standards above, there would be a requirement for two visitor parking spaces on site. Car parking spaces will need to be designed in accordance with the specifications set out in the SPG. As an indication, this includes the requirement to provide standard parking space dimensions of 4.8m x 2.6m.

5. Site Access Appraisal

The below discussion appraises the proposed access points into the site and should be read in conjunction with the plans provided within **Appendix A.**

A preliminary junction design has been shown at the approximate location of an existing gated field access, adjacent to the existing hardstanding / parking area connecting to St Bride's Road . At this stage, the junction has been designed with a 6m kerb radii and 5.5m access road carriageway width. An indicative 2m footway has been shown on the southern side of the access junction, to tie into the surrounding footway network on the western side of St Bride's Road.

The site has an existing field access that is currently spilling mud onto the highway (viewed following wet weather), this should be prevented as it could interfere with safe carriageway operation and may need attention.

The field gate access is located alongside a turning head. Whilst this may have provided useful in design in the past, it would be an irregular layout should a more formal site access be constructed for the site. The plans included within **Appendix A** show a direct footway connection and a regularisation of the carriageway area. It should be considered that the redundant turning head area may require removal / reinstatement.

Existing levels of visibility have been assessed at the proposed access location. The visibility drawing has been shown to reflect the existing 20mph speed limit to the south of the access location, equating to a 25m visibility splay requirement, in accordance with Manual for Streets (MfS) guidance. To the north, the street setting noticeably changes to a rural route and a 160m visibility splay has been shown in accordance with DMRB requirements for a 60mph road. The change in speed limit from 20 mph to 60 mph happens in the vicinity of the site frontage and a short distance to the north of the proposed access. The indicative location of the speed limit signage change (to national speed limit) has been shown within **Appendix A**.

Photos 5-1 and **5-2** have been included below to show the extents of visibility looking left and right at the location of the proposed access junction. The mapping used, as well as the site photos indicate a significant amount of clearance would likely be required to achieve any level of acceptable visibility looking left out of the access junction, particularly if no speed limit changes were implemented.

Photo 5-1: Proposed Access Junction – Visibility (Looking Left)

Photo 5-2: Proposed Access Junction – Visibility (Looking Right)

An alternative visibility option drawing shows a potential scenario where the 20mph speed limit is extended to allow for 25m splays in each direction. If a speed limit change were to be implemented as shown on the second visibility drawing, there would still be a requirement for significant vegetation clearance to the north of the access junction, however, this would be limited to a length of approximately 18m and would not require any clearance works in the vicinity of the M4 overbridge to the north. This may also result in a potential benefit to pedestrian safety on this section of St Bride's Road. In terms of considering the local constraints it may not be helpful or safe to just extend the 20mph to the bridge face closest to the site. **Appendix A** shows a suggested speed limit change some 110m to the north, which would alert drivers to the speed change on the other side of the M4 overbridge. This would help slow speeds through the M4 under pass and ensure speeds were suitably slow arriving into the site area.

In order to meet the requirements of a street, the carriageway in this area may require additional treatment, such as public lighting across the site frontage. It may also be the case that footways are required to be extended on both sides of the road, including to the north beyond the proposed access. The drawings contained within **Appendix A** currently show footway provision simplistically and linking southwards; this may be a point of discussion with the Highway Authority.

Swept Path Analysis (SPA) has been conducted of the site access layout. This has been assessed with a large car (5.0m length), delivery vehicle (8.0m length) and a large refuse vehicle (11.3m length). These represent the typical daily movements and the servicing needs for the site. No material issues have been identified with regards to access / egress of these vehicles. The use of the access by larger vehicles would require the full width of the access road (see refuse vehicle swept paths as an example), this is generally considered acceptable in street settings. There is sufficient frontage and visibility to widen the site access if needed and therefore this is considered to be a matter for discussion and clarification rather than a high risk issue. Should it be determined that a larger or more irregular vehicle could be required to deliver prefabricated units or static units, we can work with the team to assess the access for this.

6. Conclusions and Recommendations

Overall, the setting for residential would seem an appropriate extension of a residential area and would allow travel by modes other than by car with an established network of footways and footpaths providing access to existing local facilities in Magor and Undy. However, there are clear constraints to access with regard to vehicular visibility splays to the north, looking left on exit. This would require a local change to the speed limit, which is consistent with appropriate design for street settings. There will be additional costs associated with the treatment of the existing turning head located adjacent to the proposed access, as well as for street lighting and speed limit signage. There is also some risk that additional footway extent , beyond what is shown on the plans provided, may be required to allow for movements around the junction and to accommodate street lighting and other signage.

Appendix A

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Preliminary Access Junction Design

Carriageway width: 5.5m

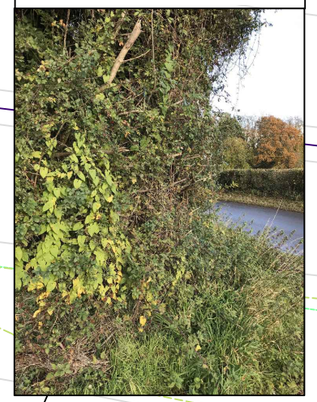
Kerb radii: 6.0m

2.0m footway to tie into existing network

Preliminary Access Junction Visibility Splays - 60mph

N

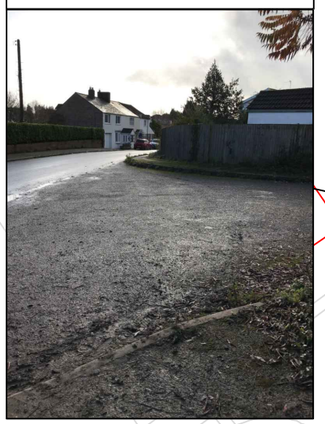
Visibility (looking left)



Objects / vegetation within the visibility splay limited to a maximum height of 0.6m. Significant vegetation / hedgerow clearance would be required to achieve 160m visibility splay in this direction.

Indicative location of existing speed limit signage, representing a change in speed limit between 60mplh (to the north) and 20mph (to the south).

Visibility (looking right)



12.5m

S ROAD

Langley V

Key:

- 2.4m x 160m Visibility Splay (DMRB Guidance for 60mph)
- Area to be kept clear of obstructions
- 2.4m x 25m Visibility Splay (MfS Guidance for 20mph)
- Area to be kept clear of obstructions

Land to rear of Langley Close, Magor

Monmouthshire County Council Sites

Site Access Considerations

AECOM

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Preliminary Access Junction Design

Carriageway width: 5.5m

Kerb radii: 6.0m

2.0m footway to tie into existing network

Preliminary Access Junction Visibility Splays - 20mph

Objects / vegetation within the visibility splay limited to a maximum height of 0.6m.

Suggested relocation of 20mph/60mph speed limit, approximately 110m north of existing signage.

ROAD

Note: Suggested extension of 20mph speed limit (extended approx. 110m to the north of the M4 bridge would require a Traffic Regulation Order (TRO). This would include costs associated with potential traffic calming features, as well as implementation of a system of regular street lighting, as appropriate for 20mph / 30mph speed limit areas.

Key:
- 2.4m x 25m Visibility Splay (MfS Guidance for 20mph)
- Area to be kept clear of obstructions

Land to rear of Langley Close, Magor

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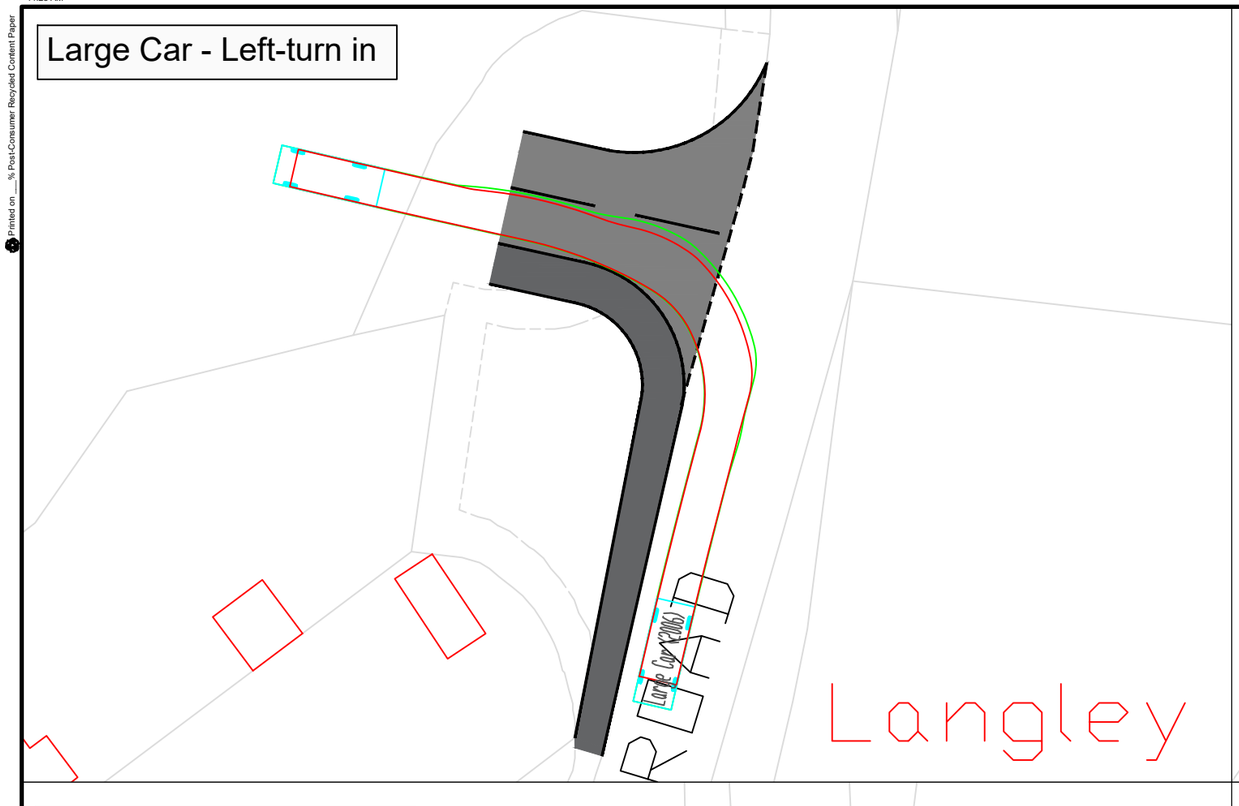
Large Car - Left-turn in



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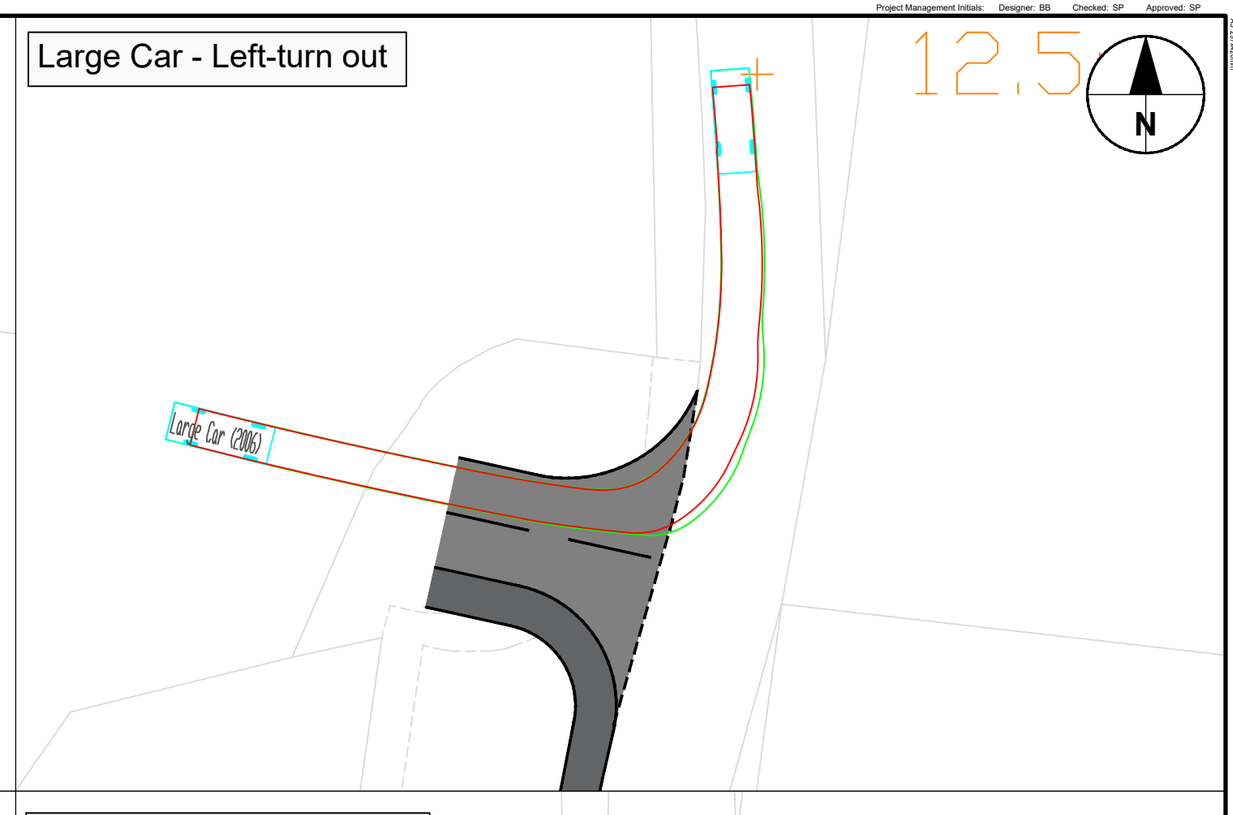

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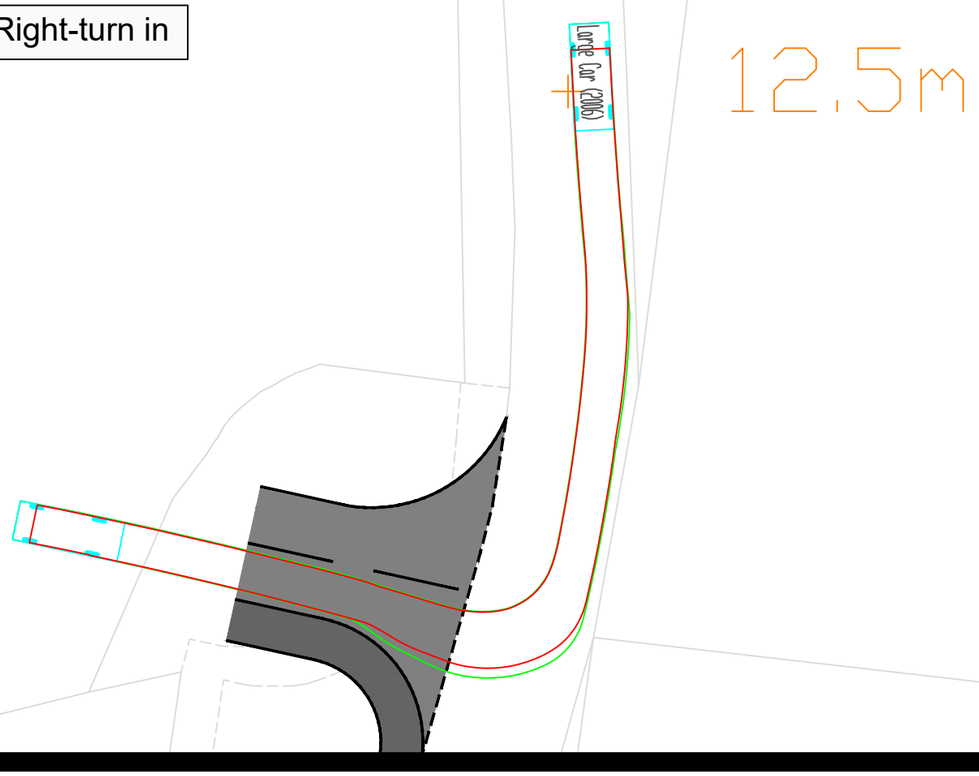

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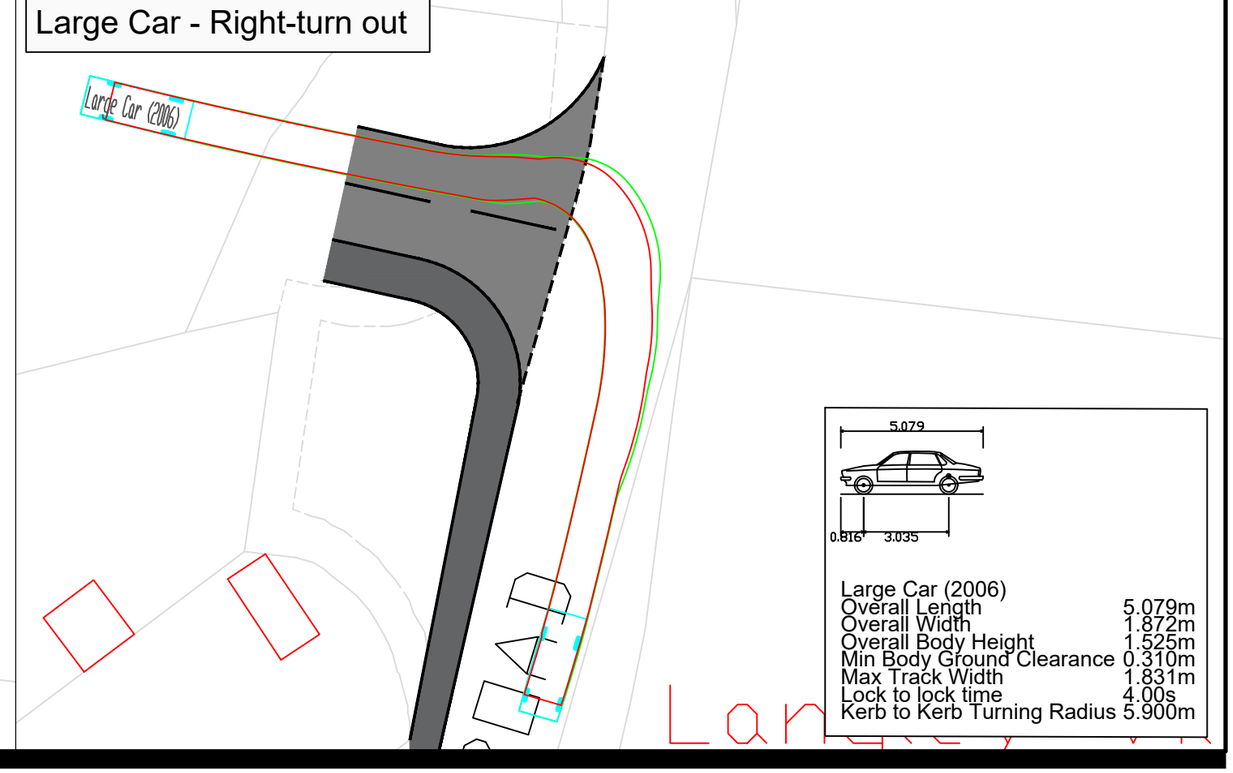

Land to rear of Langley Close, Magor

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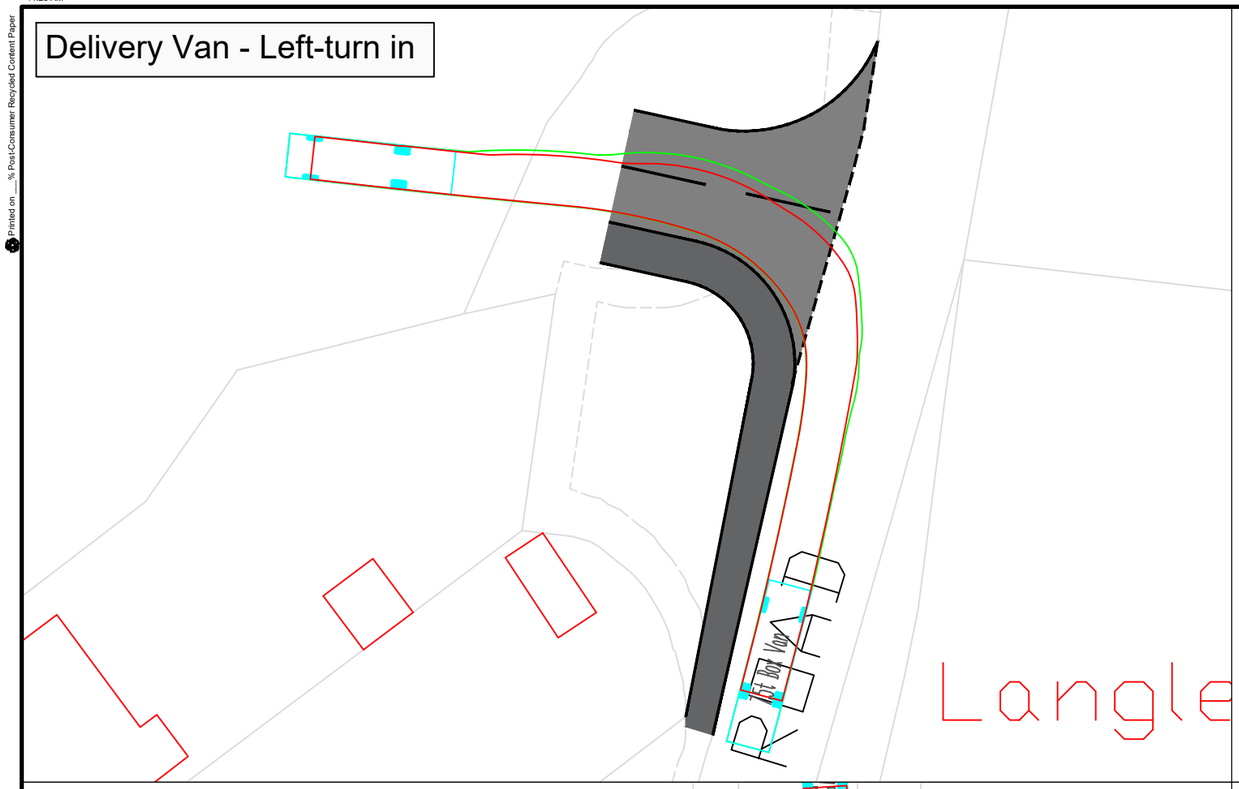
Delivery Van - Left-turn in



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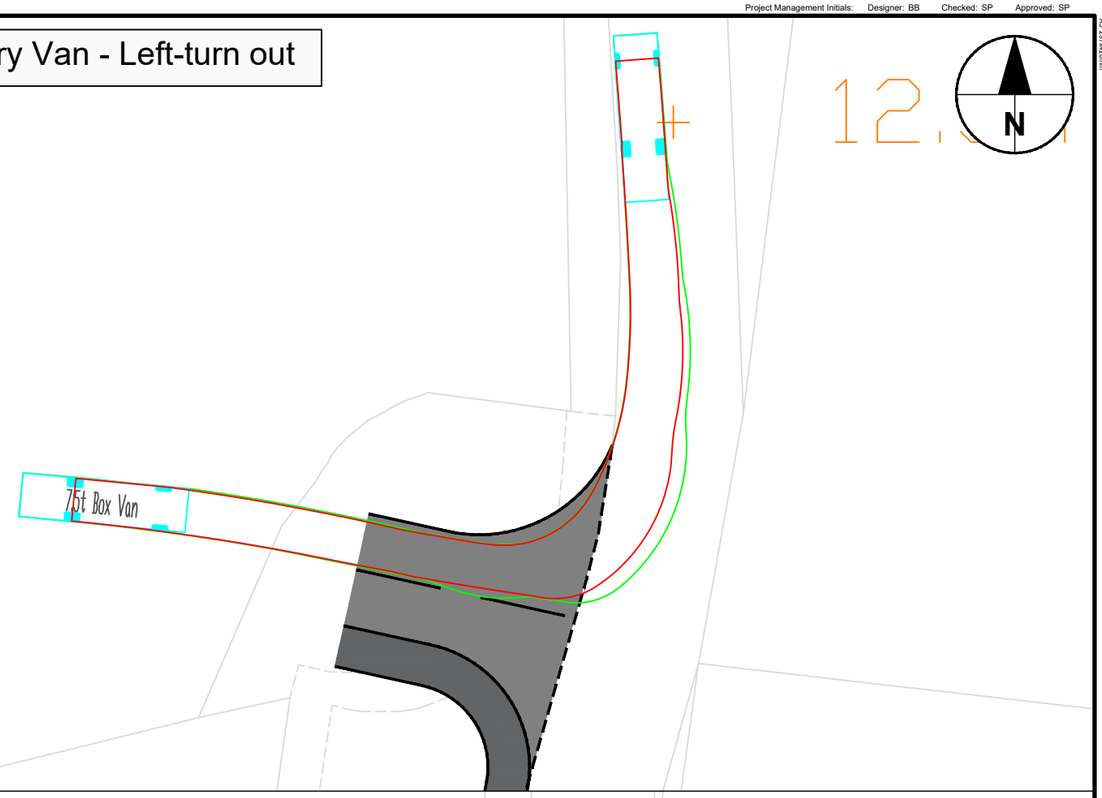
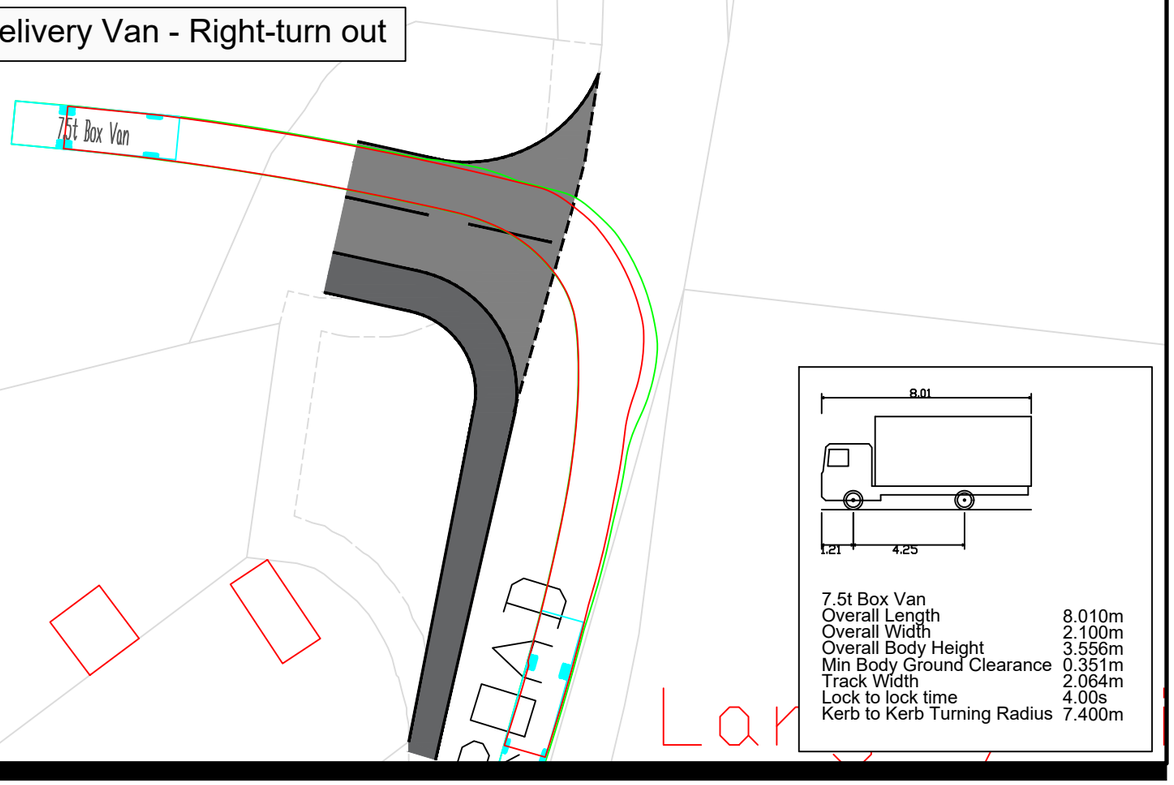


Delivery Van - Right-turn in

Delivery Van - Right-turn out



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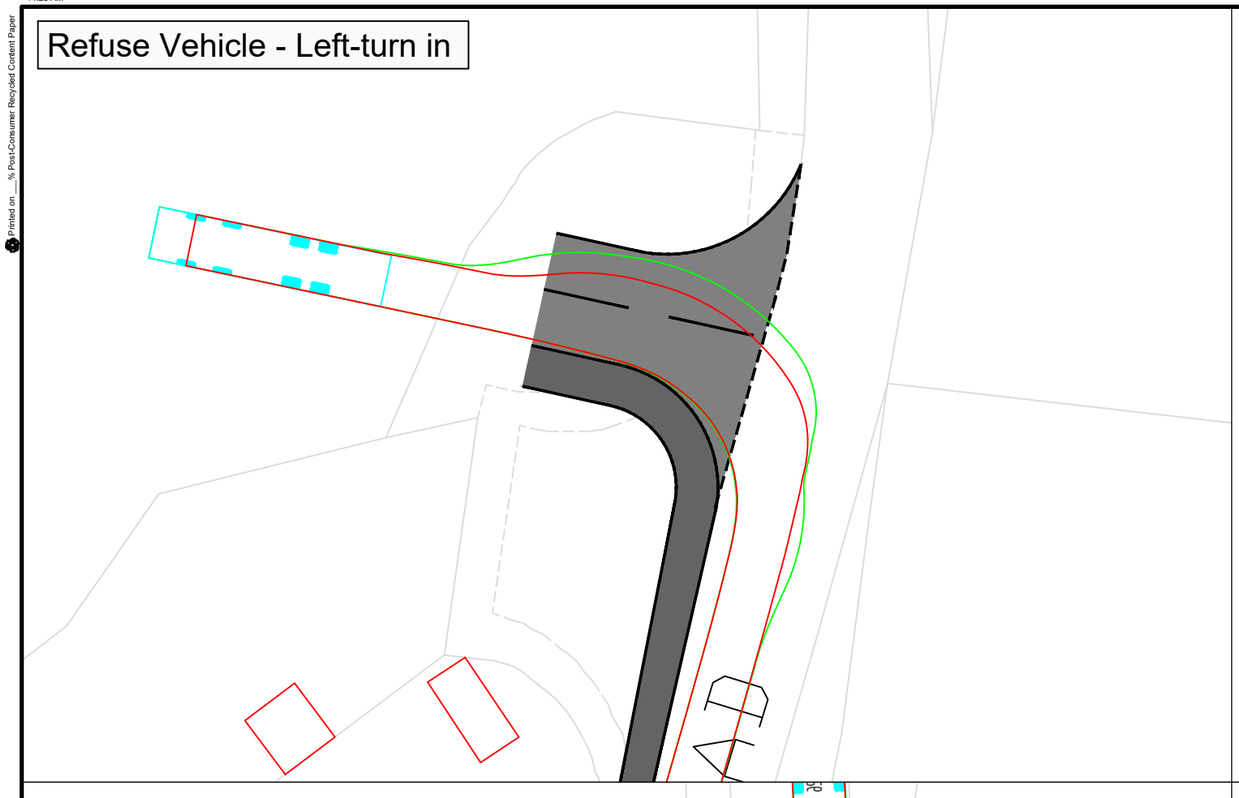
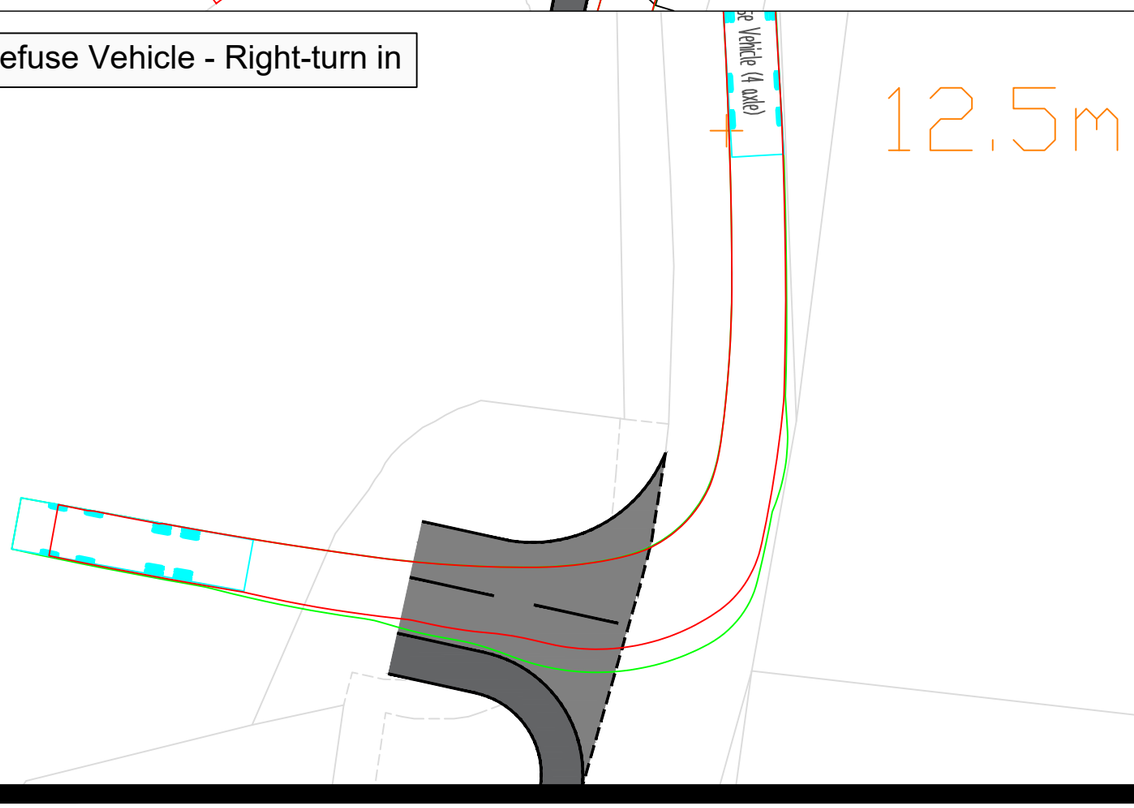
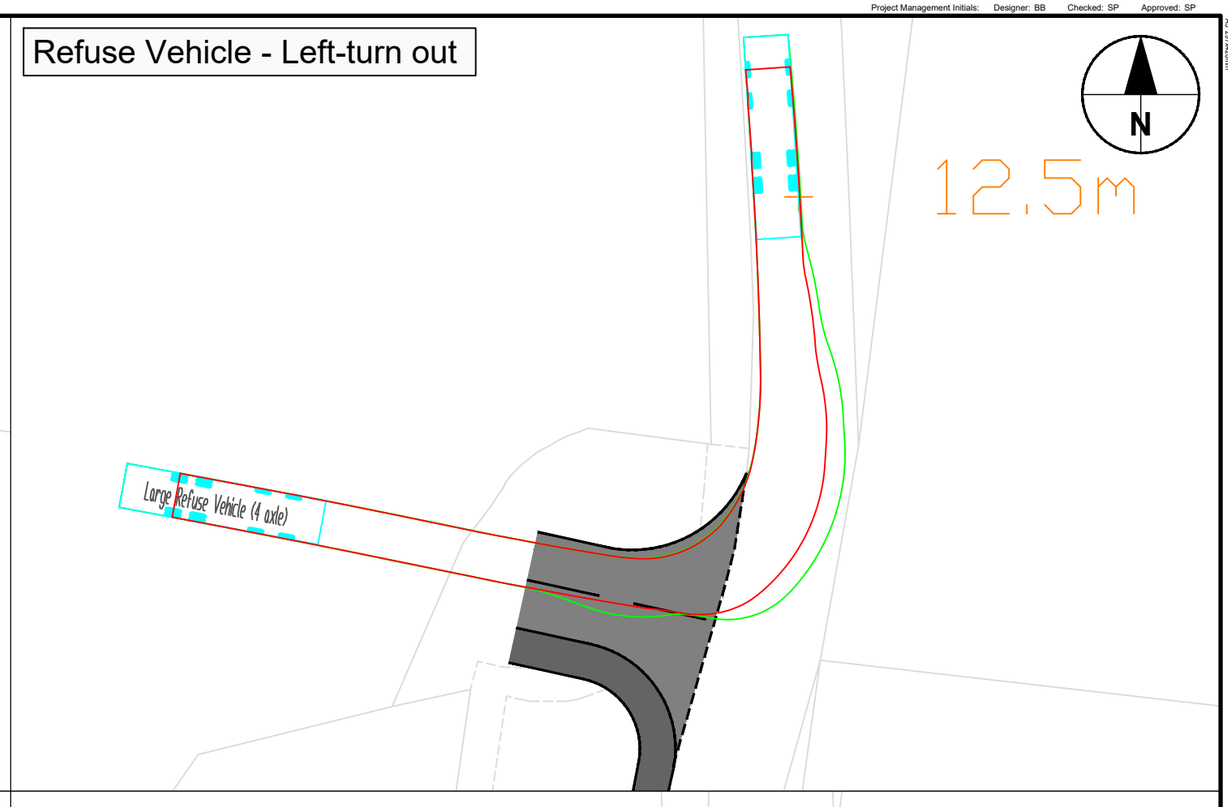
Refuse Vehicle - Left-turn in



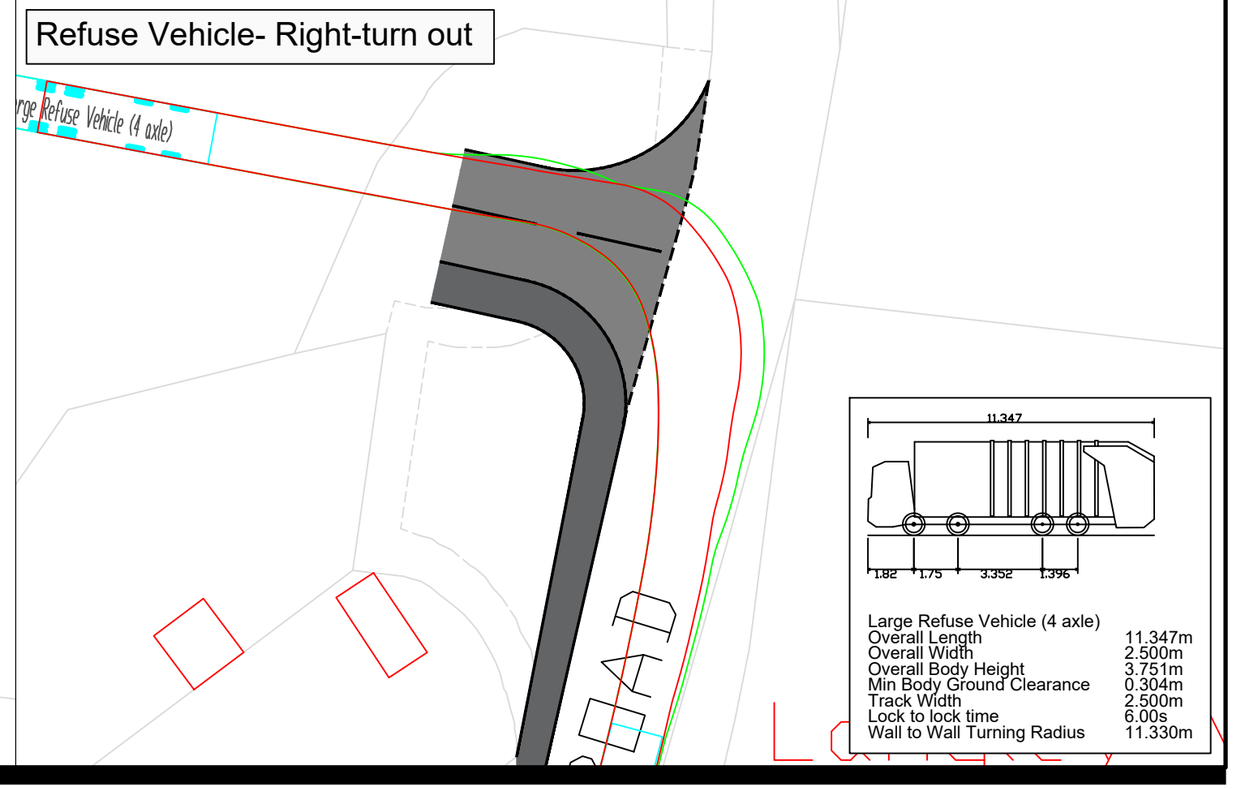
Refuse Vehicle - Right-turn in



Refuse Vehicle - Left-turn out



Refuse Vehicle- Right-turn out



Large Refuse Vehicle (4 axle)	
Overall Length	11.347m
Overall Width	2.500m
Overall Body Height	3.751m
Min Body Ground Clearance	0.304m
Track Width	2.500m
Lock to lock time	6.00s
Wall to Wall Turning Radius	11.330m

Land to rear of Langley Close, Magor

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