

To: **South Tyneside Council**  
From: **Iceni Projects Ltd (Transportation)**  
Date: **12<sup>th</sup> February 2016**  
Title: **ST/0955/15/FUL - Former Be Modern Premises, Western Approach, South Shields**

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#### **a. Introduction**

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1. Iceni Projects Ltd has been appointed by Travis Perkins (Properties) Ltd to provide highway advice in regard to the development of a Trade Park at the former Be Modern premises, Western Approach, South Shields. The proposal seeks to part demolish, refurbish and change the use of the site from a factory (Class B2) to a mix of commercial uses comprising a *sui generis* builders' merchant, *sui generis* tile merchant, B1(c)/B2/B8 units (with trade counters and ancillary showrooms) and ancillary A3 units (café/sandwich shop).
2. Planning application ref: ST/0955/15/FUL was validated on 24<sup>th</sup> November 2015 and a response on this was provided by the South Tyneside Council (STC) case officer via email dated 21<sup>st</sup> January 2016. A meeting was subsequently held with South Tyneside's Highways Officers on 4<sup>th</sup> February 2016.
3. As part of the validation of the application, the specific uses of the units were refined at the request of STC to reflect the known occupiers, with the units being designated as follows:
  - Unit 1 – Sui Generis Builders' Merchant
  - Units 2-4 – B8 with Trade Counters and ancillary showroom
  - Unit 5 – Sui Generis Tile Merchant
  - Unit 6 & 7 – B1(c)/B2/B8 (see below for changes to Unit 7)
  - Unit 8 – A3 sandwich shop
4. Following further separate discussions with both STC and the applicant it has been decided to amend Unit 7 to become a mixed B1(c)/B2/B8 use to reflect the employment focus of the development.
5. These amendments to the application submitted, upon which the TS was based, are reflected in Iceni Projects' responses contained within this note.
6. This Note has been prepared to provide a response to the highways comments provided, including those received at the recent meeting.

**b. Response to STC Comments**

7. Within this section STC’s comments are in italics and Iceni Projects’ response in normal text.

**Car parking**

8. *55no. car parking spaces are proposed within the car park. The transport statement and supporting covering letter sets out the proposed car parking numbers. Could you please confirm details of the submitted car parking analysis. The TS does not itemise GFAs or any calculations and therefore it is difficult to establish how the car parking numbers / conclusions have been reached.*

9. Table 1 below provides a breakdown of the unit sizes and parking requirements for each of the land uses being applied for, based on the amended uses outlined in paragraph 2 of this Note. As no parking standards are provided for sui generis builders’ merchant uses, B8 standards have been used which is considered to be reasonable, given the similarity between the two uses.

**Table 1 Parking Requirements**

Use	GFA	Cars @ 1:X sqm	Maximum	Cycles @ 1:X sqm	Minimum	Disabled	Disabled spaces	P2Ws	P2W spaces
Builders Merchant	1022	180	6	500	4	6%	0	5%	0
Tile Merchant	371	180	2	500	1	6%	0	5%	0
B1(c)	701	30	23	50	28	6%	4	5%	3
B8	1301	180	7	500	5	6%	1	5%	1
A3	125	10	13	50	5	6%	1	5%	1
TP+B8+B1(c)+A3	3428	-	51	-	44	6%	3	5%	3

10. The standards show that based on the validated land uses a maximum of 51 spaces would be permitted. It should be noted, however, that the B8 standards have been applied to the two sui generis units as guidance only. Travis Perkins typically require 15-20 spaces to accommodate staff and customers driving to the site and all B8 units, being trade counter uses, may also require more parking than a standard B8 unit would.

11. Due to other issues raised by STC with regard to large vehicles being unable to turn within the car park it has been necessary to reduce the parking provision to 53 spaces to accommodate a turning head at the northern end of the car park. This is outlined in more detail in paragraph 17 of this Note.

12. Overall therefore we have sought to strike a balance between the maximum standards and the known parking requirements for trade park such as this. That balance is considered to be 53no. spaces, which notably the key known occupiers, are satisfied with. Indeed, it would not be in Travis Perkins’ interest to provide too few spaces, nor too many spaces. The parking provision is therefore considered to be appropriate.

13. *In the TS this specifies that there should be 100 cycle spaces however these are not provided on the submitted layout plan. The TS identifies that there are 40no. cycle spaces for both staff and customers.*

14. Table 1 also shows the minimum cycle parking required for the different uses being applied for following the amendments at validation. This shows that the minimum requirement is 44 spaces. Travis Perkins and the identified trade counter uses generate very few, if any, customer trips meaning that demand will be very low. This is purely on the basis that with the exception of staff, very few if any customers would access the site by bicycle. This is because of the nature of the goods being sold (i.e. building, heating and plumbing materials).

15. On the basis that some staff may cycle along with a handful of *ad hoc* customers, the proposed 40 spaces, which exceeds the minimum requirement, is considered to be more than adequate to accommodate demand and allow for future increased use of cycling and this provision is deemed to be appropriate.

### Turning manoeuvres

16. *There is no turning head provided for the customer car parking area, this should be created and could lead to a loss of car parking spaces.*
17. A tracking drawing showing the space needed for a long wheel based transit (largest typical trade customer vehicle) to turn to the north of the customer car park should they drive to the end of the car park is shown at Appendix A1. While a turning head could be accommodated in this area, it will impact on existing and proposed landscaping including a TPO tree so it has been necessary to remove two spaces. The likelihood of a large vehicle driving to the end of the car park and not being able to reverse a short distance to utilise the parking area to turn around is low as they will be able to see there are no van spaces at that end of the car park and also that there is insufficient space within which for them to turn. In addition to the turning head, signage will be provide
18. *A turning area for both customers and large HGVs to the rear of Wilson Street will need to be created. On the proposed site layout there is a small turning/ access area to the north west of Tudor Road however this would not provide adequate provision for HGVS to turn around if they have missed the area that they should be parking for units 2-8.*
19. *It is not considered acceptable for the application details to identify that there is currently no turning head on Wilson Street. It is considered that accesses will now be created for multiple businesses rather than the previous 1no. business of Be Modern and therefore a turning area should be created and offered up for adoption by the applicant. It should be noted that revisions to the red line boundary will be required to include these amendments and re-consultation based on these amendments would be needed.*
20. The parking accessed via Wilson Street is staff only parking so no customers will be in this area apart from ad hoc Travis Perkins customers collecting large orders from the storage yard; it should be noted, however, that these vehicle will not be manoeuvring in Wilson Street, rather they will be driving to and from Travis Perkins' storage yard. Staff trips will not generally coincide with deliveries so there will be limited conflict between the users of Wilson Street accessing the site.
21. With regard to servicing, it should be noted that unit 8 will be serviced via the front of the units within the parking area to the west of the site access by 7.5t box vans or smaller, as shown by the tracking drawings included within the TA submitted with the application. As such, these vehicles will not be required to access Wilson Street meaning only vehicles accessing Units 1 (Travis Perkins) to 7 will utilise Wilson Street.
22. Of the known operators at the site, only Travis Perkins and Benchmarx (unit 3) will be served by articulated vehicles. Units 4, 5 and 6 will be served by vehicles no larger than a 10m rigid lorry, which require less space to manoeuvre and take less space within the service area. No occupier has been identified for Units 2 and 7 at the time of writing so for robustness it is assumed these could be served by articulated vehicles.
23. Any large HGVs visiting the site will be from Travis Perkins' own distribution network or regular suppliers who will be aware of the location of the units and each unit will only have a maximum of 1 or 2 HGV deliveries per day, equating to a maximum of 4 articulated HGVs per day serving units 2 to 6 with up to 6 no. 10m rigid lorries. All HGVs will need to drive past the unit they are delivering to in order to reverse back to the loading doors and all units will have signage to the rear making it clear which occupier is in each unit. Even if a vehicle did miss the unit they were delivering to, the maximum distance they would need to reverse above the distance they will need to reverse anyway to access the loading doors would be circa 45m; this assumes that a vehicle delivering to the loading door closest to Tudor Road (Unit 6) does not realise they have missed it until they get

to the furthest loading door (Unit 2). If this is the case, it would only be a 10m rigid vehicle reversing this distance as Unit 6 will not be served by articulated vehicles.

24. All vehicles serving Unit 1 will be able to turn within the site enabling them to enter and exit the site in forward gear and, as already stated, Units 7 and 8 will not be served via Wilson Street meaning there will be a very limited number of vehicles needing to reverse in Wilson Street, with somewhere between 5 and 10 vehicles per day servicing the units directly from Wilson Street, of which a maximum of 4 will be articulated lorries.
25. On this basis, it is considered that a turning head is not required for vehicles visiting the site as the likelihood of a vehicle passing the unit they are delivering to is low and the low number of vehicles means that there is unlikely to be a conflict with other vehicles entering Wilson Street.
26. It may be that a turning head would be beneficial should an articulated lorry enter Wilson Street in error (ie. They are not delivering to the site) then there may be a case to do this. The likelihood of this occurring is very low as there are very limited locations that vehicles of this size will be serving nearby. The coach business will be more likely to receive vehicle parts etc via a transit van or smaller, which are generally used by autoparts suppliers and the adjacent window and door company will also not be served by articulated lorries. The area is predominantly residential so apart from the proposed development there will be no regular deliveries by articulated lorries within the vicinity of Wilson Street, Tudor Road and other adjoining roads.
27. It is considered that a turning head is not essential as it will be seldom used and is more likely to be used as parking by staff of the existing and proposed units once it becomes known that it is not used. Notwithstanding this, consideration has been given to whether a turning head could be provided to enable a long wheel based transit to turn, as this is the largest typical vehicle used by trade customers. A drawing showing this is included at Appendix A1.

## **Wilson Street**

28. *It is considered that Wilson Street will effectively become a private street given the proposed manoeuvres that will have to occur in order to service and deliver goods to units 2-8. Further information is required to show how the proposed deliveries will affect the existing street lighting columns, kerbs and proposed car/ van parking spaces. Within the TS small drawings have been provided to show the vehicle tracking, however these need to be provided on a larger plan showing the whole site so that the effects of the deliveries can be fully assessed.*
29. As outlined above, only Units 2-7 will be served via Wilson Street. Wilson Street is currently a cul-de-sac and this will not change as a result of the proposal. The low number of vehicle movements taking place within Wilson Street associated with these units will not have a material impact on any other users of the road, of which there are very few at present.
30. With regard to the lamp columns, ESP Ltd have held detailed discussions with Balfour Beattie who are the contractor responsible for all street lighting within South Tyneside and have agreed to the relocation of the two existing lamp columns, which will be relocated on the opposite side of Wilson Street. A drawing prepared by Balfour Beattie showing this is included at Appendix A2.
31. *Further information should be provided on the proposed kerb and boundary details proposed to Wilson Street to delineate between the private and adopted highway.*
32. This is a detailed design matter and full details will be submitted to and agreed with STC as part of the detailed design process following the granting of planning permission.
33. *It needs to be taken into consideration that Wilson Street is an adopted highway and therefore open to public use. Therefore the safety of the proposed manoeuvres needs to be fully considered as well as the existing adjacent business and any future development to the north west of the site where buildings have been demolished.*

34. *The vehicle tracking information will also need to show the existing adopted highway and also show whether or not the HGVs will need to use the existing adopted highway whilst parked during servicing.*
35. *May I advise that there are concerns about the servicing arrangements off Wilson Street, however detailed comments and conclusions from the Council's Highway Engineers cannot be made, until all of the above further information is provided.*
36. The building has been sited so that 16.5m articulated lorries can wait off the carriageway. There is no formal footway along the eastern side of Wilson Street at present and no footway will be provided as part of the proposal. Any pedestrians wishing to walk along Wilson Street can do so via the footway on the western side, however, no pedestrians will need to walk to the development site along this road as all units are accessed from the front via the car park area and any pedestrians visiting the existing units on the western side of Wilson Street will walk on the western side in any case. Any future development to the north west could also be accessed via the western footway.
37. In order to demonstrate that the carriageway will not be impeded, a set of drawings are included at Appendix A3 showing the location of vehicles parked at each of the loading doors. On this basis there should be no pedestrians or vehicles affected by vehicles servicing the site apart from up to 10 times per day in total when vehicles may be reversing back to the loading doors. As stated previously, this is very much a worst case as generally there will be fewer than this.
38. In order to consider the impact of the development on the existing coach company located on the western side of Wilson Street a swept path analysis has been undertaken based on 12m coaches entering and exiting the coach company site via their existing accesses assuming a delivery vehicle is parked in each of the loading bays at the proposed development. A drawing showing this is included at Appendix A4. The tracking shows that if a coach attempts to enter or exit the garages while a 16.5m articulated lorry is servicing the proposed development it will not be possible for a coach to manoeuvre into or out of the garages in a simple manoeuvre. It is likely that this could be achieved by undertaking more manoeuvres than those shown on the tracking drawing. It should be noted that the likelihood of conflict is extremely low as there will be a maximum of 2 articulated lorries visiting the units per day meaning that for the rest of the day the manoeuvre will not be impeded.
39. It should also be noted that the tracking shows that the coaches cannot manoeuvre in and out of the garages without travelling onto, or at least overhanging, the development site, which will also be the case at present. Furthermore, the building previously located on the site was closer to the road opposite the garages meaning that manoeuvring would have been more difficult. Relocating the building further back will make manoeuvring easier as there will be more space for the coaches to overhang the site when manoeuvring. As such, apart from a very few occasions that an articulated lorry will be servicing the units opposite the garages, access will be no worse than is currently the case and when no vehicles are loading access will actually be improved with the building moving further back from Wilson Street.

### **Adopted highway**

40. *The red lined boundary is currently located over the existing adopted highway and therefore this should be moved and not included within the boundary unless s278 works are proposed.*
41. The red line boundary has been shown to go over the highway in case highway works were required. This is common practice to avoid the need to submit a new application should highway works be needed following consultation. There is no need to submit a revised plan as this does not affect the application. Notice has also been served on the Highway Authority.

## **Additional matters**

42. *In addition to the above highway comments, I also require further information in respect of waste storage and collection. No bin storage areas have been identified on the proposed plans and the application form has answered 'no' to both questions within section 7. Can you please clarify storage and collection arrangements.*
43. All refuse will be collected by private refuse collectors and waste will be stored within the warehouse of each unit between collections and dragged out by warehouse staff at agreed collection times. Recyclable waste generated by all companies within the Travis Perkins Group is loaded onto their own delivery vehicle and taken back to the warehouse for disposal meaning that only general refuse will be collected by a private company. Further details can be provided post permission if required, however, there is limited additional information that can be provided for the non-Travis Perkins Group occupiers. A tracking drawing is included at Appendix A5 which shows that refuse vehicles can pull off of Wilson Street in front of the staff parking for each unit and run round in this area and the highway to exit Wilson Street in forward gear.
44. *Can you please provide me with details in respect of any enclosure of the site – are details available in terms of boundary treatments and gates?*
45. Again, full details will be provided at the detailed design stage, however, there will be no gates or enclosures associated with units 2-8, but a gate will be provided for Unit 1 across the northern end of Wilson Street, as shown on the site layout plans submitted with the application. The storage yard for Unit 1 will also be enclosed, to secure the stock that will be stored externally.

## **c. Conclusion**

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46. We have sought to provide parking in accordance with the maximum standards spectrum to determine an appropriate level of parking. No standards exist for sui generis units, of which there will be two units within the development and all B8 units also have trade counters. The proposed 55no. spaces, which notably the key known occupiers are satisfied with is higher than the maximum 44 permitted based on B8 standards for sui generis uses and relevant standards for all other uses. Travis Perkins typically require circa 15 spaces (compared to 6 based on B8 standards) so 6 spaces would be insufficient to cater for their staff and customers. Indeed, it would not be in Travis Perkins' interest to provide too few spaces, nor too many spaces. The parking provision is therefore considered to be appropriate.
47. It has been demonstrated that a vehicle can manoeuvre in and out of the northernmost parking space without the need for a turning head. Van parking is provided further south within the car park and long wheel based transit vans can manoeuvre in and out of these spaces safely. Notwithstanding this, consideration has been given to providing a turning head to accommodate a long wheel based transit van. While this can be accommodated, it will result in a significant loss of landscaping which may not be desirable. As such, the parking layout as submitted with the application is considered to be acceptable.
48. All vehicles can service the units via Wilson Street without the need for a turning head. It is highly unlikely that a vehicle will pass the unit they are delivering to and even if they do the maximum distance they would need to reverse would be 45m. The units will be served by the same regular suppliers and Travis Perkins' own delivery vehicles meaning that this issue will probably never occur. This, combined with the low level of traffic using the road, will mean that this is unlikely to present a safety issue. Notwithstanding this, it has been demonstrated that a turning head could be provided to accommodate a long wheel based transit van to turn safely.
49. It may be that an articulated lorry would need to turn round if they entered Wilson Street in error, but the likelihood of this is extremely low given the existing land uses surrounding the site.
50. With regard to the impact on the coach business opposite the site in Wilson Street, while access into the garages may be impeded if all loading bays are in use by articulated lorries, the likelihood

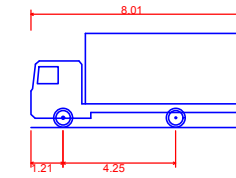
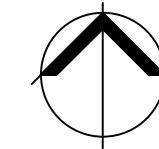
of all bays being occupied at the same time as a coach needs to enter or exit one of the garages is very low with a maximum of two articulated lorries serving the units per day. It should also be noted that the tracking shows that coaches cannot manoeuvre in and out of the garages without at least overhanging the site and the relocation of the building further back from Wilson Street will make manoeuvring easier than at present. As such, apart from the few times a week that a unit is being served by an articulated lorry, access to the garages will be no worse than at present.

51. The relocation of the lamp posts has been discussed in detail between Travis Perkins' electrical engineering consultant and Balfour Beattie and a proposal has been drawn up by Balfour Beattie to relocate the existing street lighting to the other side of Wilson Street.
52. All refuse will be collected by private refuse collectors and waste will be stored within the warehouse of each units between collections and dragged out at agreed collection times by warehouse staff. All recyclable waste generated by Travis Perkins Group companies is collected by the delivery vehicles and returned to the depot for processing. Refuse vehicles can pull off of Wilson Street adjacent to the staff parking for each unit and turn within this area and the highway to exit Wilson Street in forward gear. Further details can be provided post permission if required, however, there is limited additional information that can be provided.
53. Full details of boundary treatments will be provided at the detailed design stage, however, only the entrance to Travis Perkins (Unit 1) will be gated to secure stock which is stored outside.
54. Based on the foregoing it is considered that there are no highways reasons why the development should not be recommended for approval.

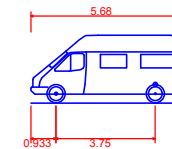
**A1. PROPOSED TURNING HEADS**



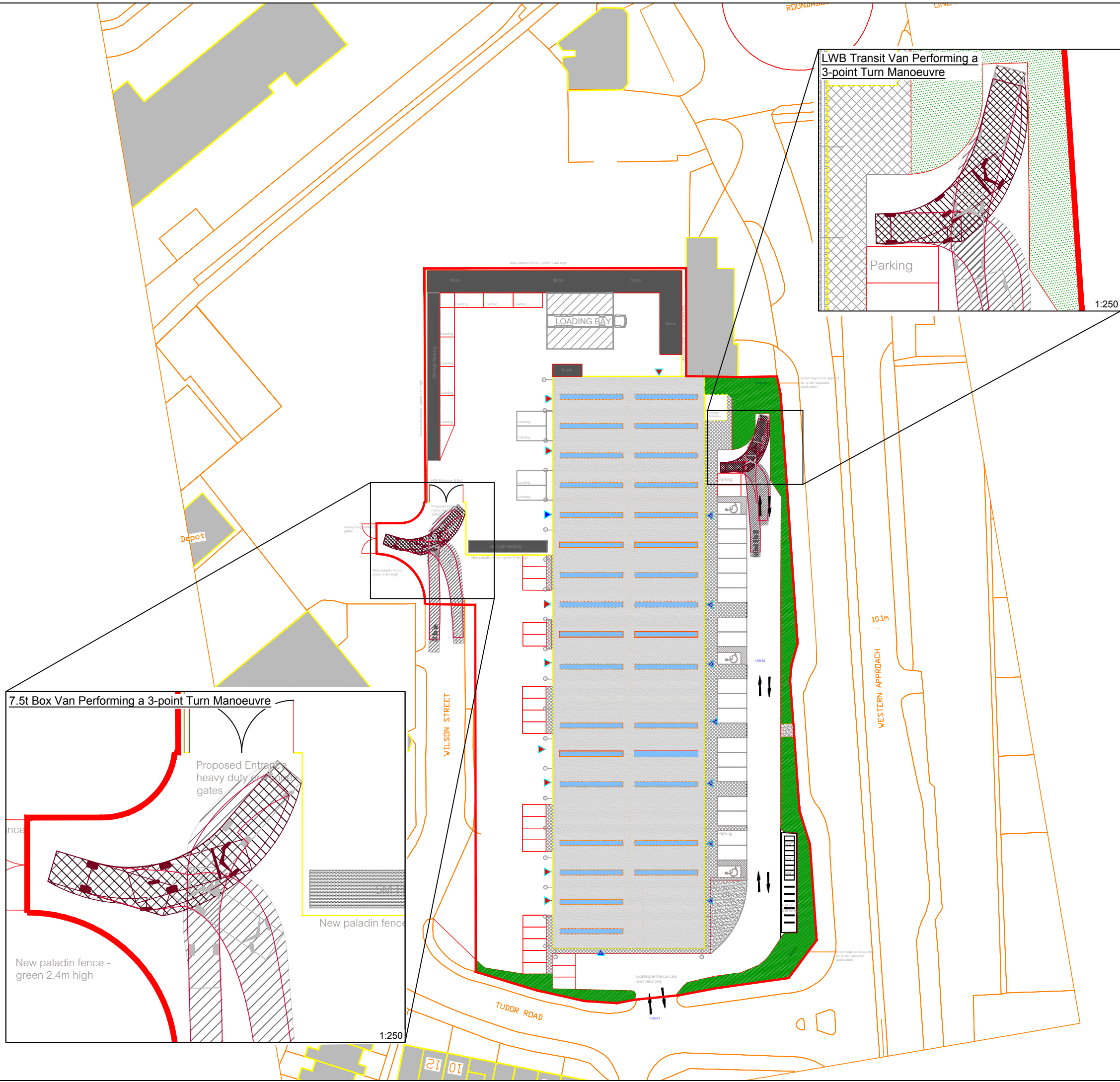
Notes;  
 1.This drawing is based upon drawing number 6962-P-21 supplied by hssp Architects and Icen Projects Ltd. shall not be liable for any inaccuracies or deficiencies.



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



Ford Transit 300 Van LWB  
 Overall Length 5.680m  
 Overall Width 1.974m  
 Overall Body Height 2.563m  
 Min Body Ground Clearance 0.336m  
 Max Track Width 1.975m  
 Lock-to-lock time 4.00s  
 Wall to Wall Turning Radius 7.150m



Rev	Date	Amendments	Drawn	Chk	App
A	12/02/16	Revised Layout	RB	SP	SP

**Iceni Projects**  
 Flitcroft House  
 114-116 Charing Cross Road  
 London, WC2H 0JR  
 T 020 3640 8508  
 F 020 3435 4228  
 mail@iceniprojects.com



Client \_\_\_\_\_  
 Travis Perkins  
 Project \_\_\_\_\_  
 Western Approach, South Shields  
 Title \_\_\_\_\_  
 Swept Path Analysis

Drawn By RB	Checked By SP	Approved By SP
Scale @ A3 NTS	Date 09/02/2016	Date 09/02/2016
Project No. 15-T067	Drawing No. 10	Rev. A

Iceni Projects accept no responsibility for any unauthorised amendments to this drawing. Only figured dimensions are to be worked to.

**A2. STREET LIGHTING RELOCATION PLAN**



**A3. SERVICE VEHICLE TRACKING**

16.5m Articulated Vehicle Entering Space in Reverse Gear



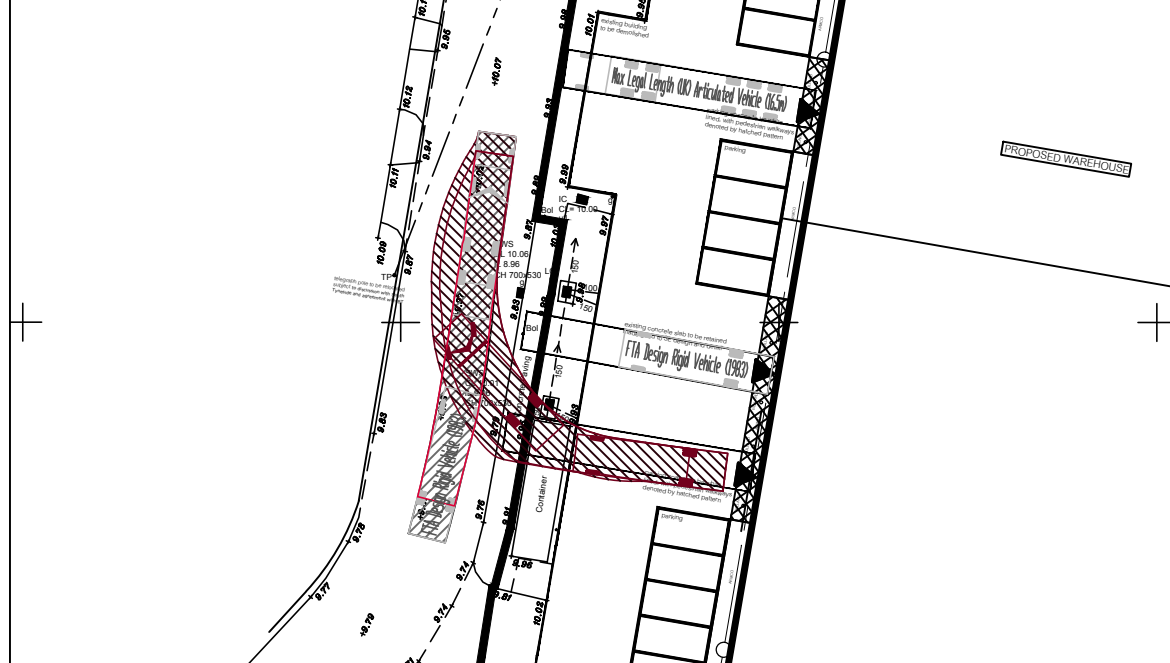
16.5m Articulated Vehicle Entering Space in Reverse Gear



10m Rigid Vehicle Entering Space in Reverse Gear



10m Rigid Vehicle Entering Space in Reverse Gear



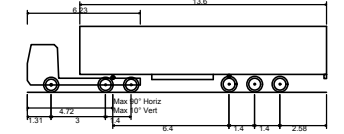
10m Rigid Vehicle Entering Space in Reverse Gear



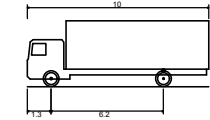
7.5t Box Van Entering Space in Reverse Gear



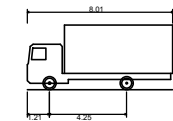
Notes:  
1. This drawing is based upon drawing number 6962T-001 supplied by HSSP Architects and Icen Projects Ltd. shall not be liable for any inaccuracies or deficiencies.



Max Legal Length (UK) Articulated Vehicle (16.5m)  
Overall Length 16.500m  
Overall Width 2.550m  
Overall Body Height 3.632m  
Min Body Ground Clearance 0.395m  
Max Track Width 2.500m  
Lock-to-lock time 6.00s  
Curb to Curb Turning Radius 6.870m



FTA Design Rigid Vehicle (1983)  
Overall Length 10.000m  
Overall Width 2.500m  
Overall Body Height 3.632m  
Min Body Ground Clearance 0.427m  
Track Width 2.500m  
Lock-to-lock time 4.00s  
Curb to Curb Turning Radius 12.000m



7.5t Box Van  
Overall Length 8.010m  
Overall Width 2.100m  
Overall Body Height 3.555m  
Min Body Ground Clearance 0.351m  
Track Width 2.064m  
Lock-to-lock time 4.00s  
Curb to Curb Turning Radius 7.400m

Rev	Date	Amendments	Drawn	Chk	App
A	08.02.16	Parked Heavy Goods Vehicles Added	TG	MG	SP

Iceni Projects  
Flitcroft House  
114-116 Charing Cross Road  
London, WC2H 0JR



T 020 3640 8508  
F 020 3435 4228  
mail@iceniprojects.com



Client \_\_\_\_\_

Travis Perkins

Project \_\_\_\_\_

Western Approach, South Shields

Title \_\_\_\_\_

Swept Path Analysis

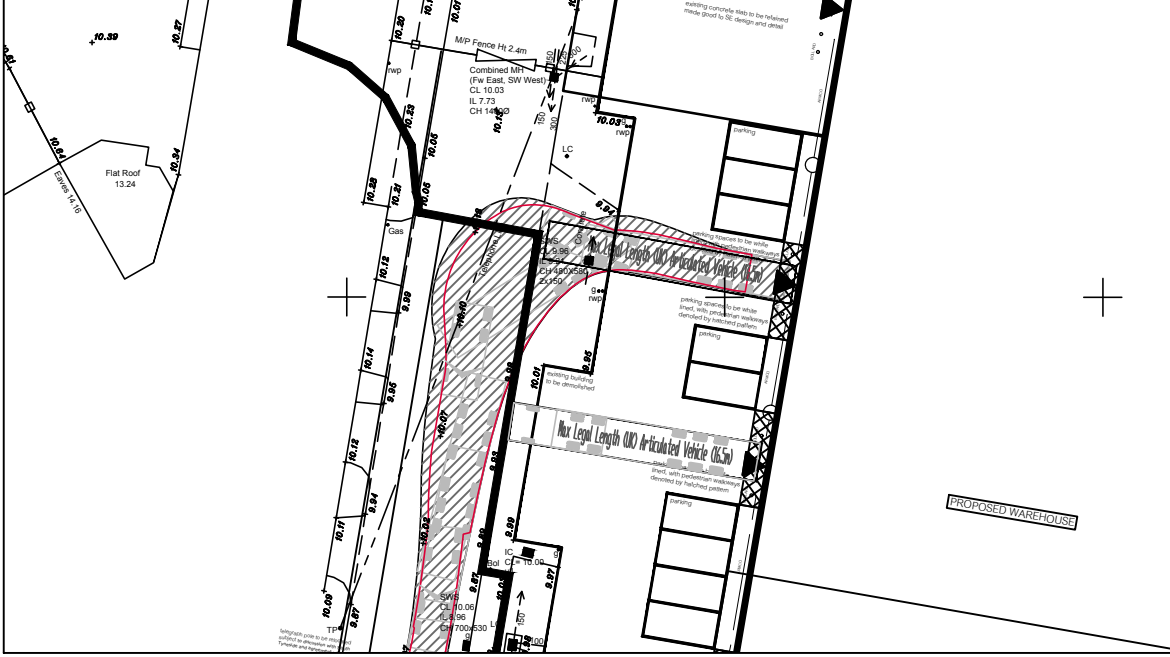
Delivery / Service Vehicles Entering

Drawn By RB	Checked By SP	Approved By SP
	01/02/2016	01/02/2016

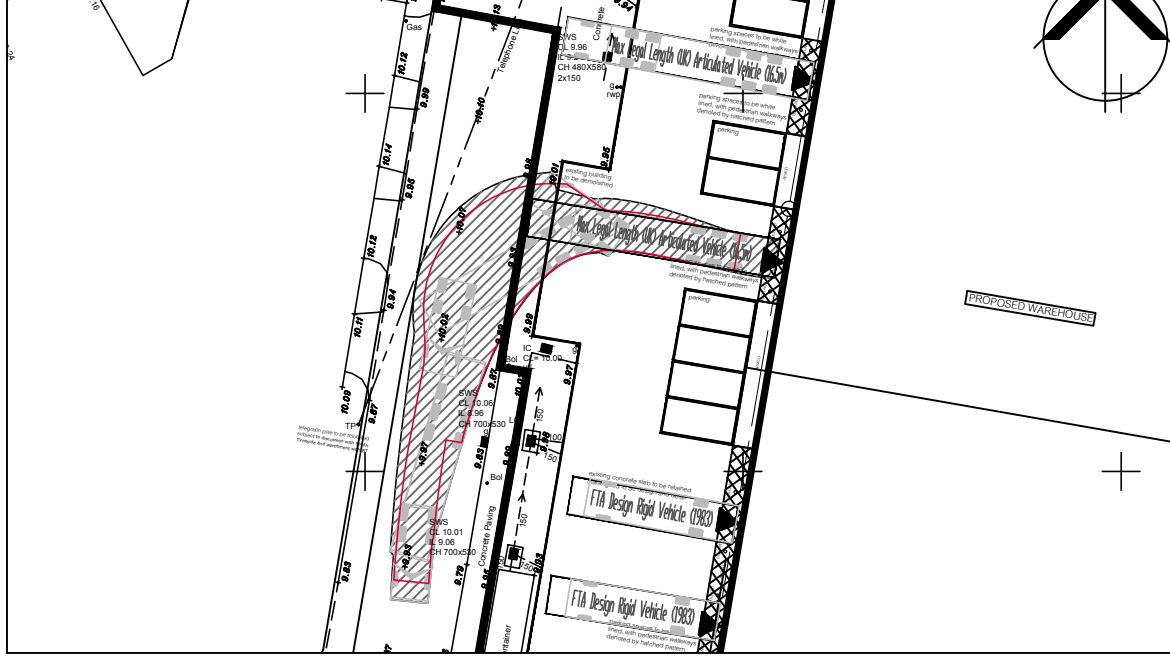
Scale @ A3 1:500	Date 01/02/2016
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Project No. 15-T067	Drawing No. 06.1	Rev. A
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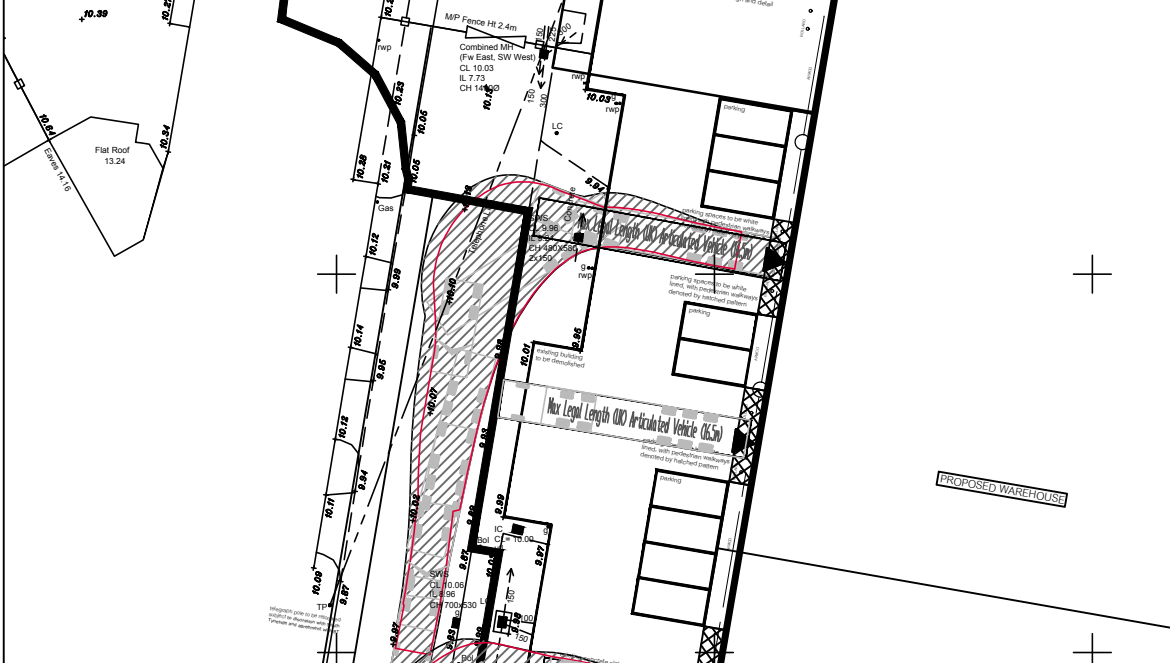
16.5m Articulated Vehicle Exiting Space in Forward Gear



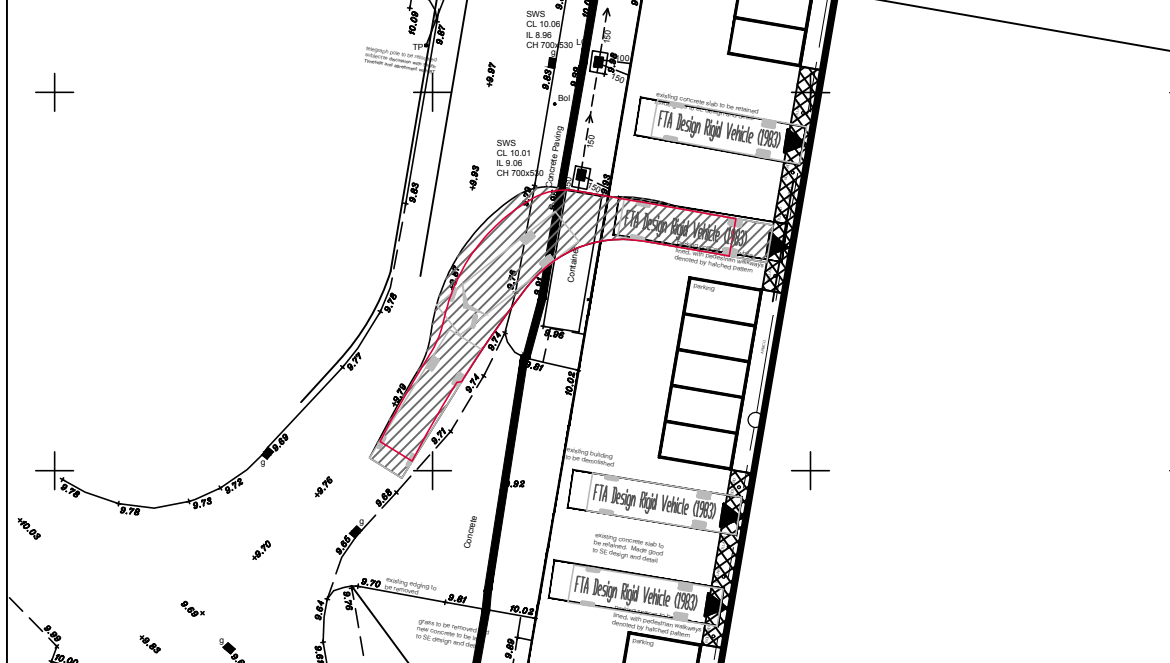
16.5m Articulated Vehicle Exiting Space in Forward Gear



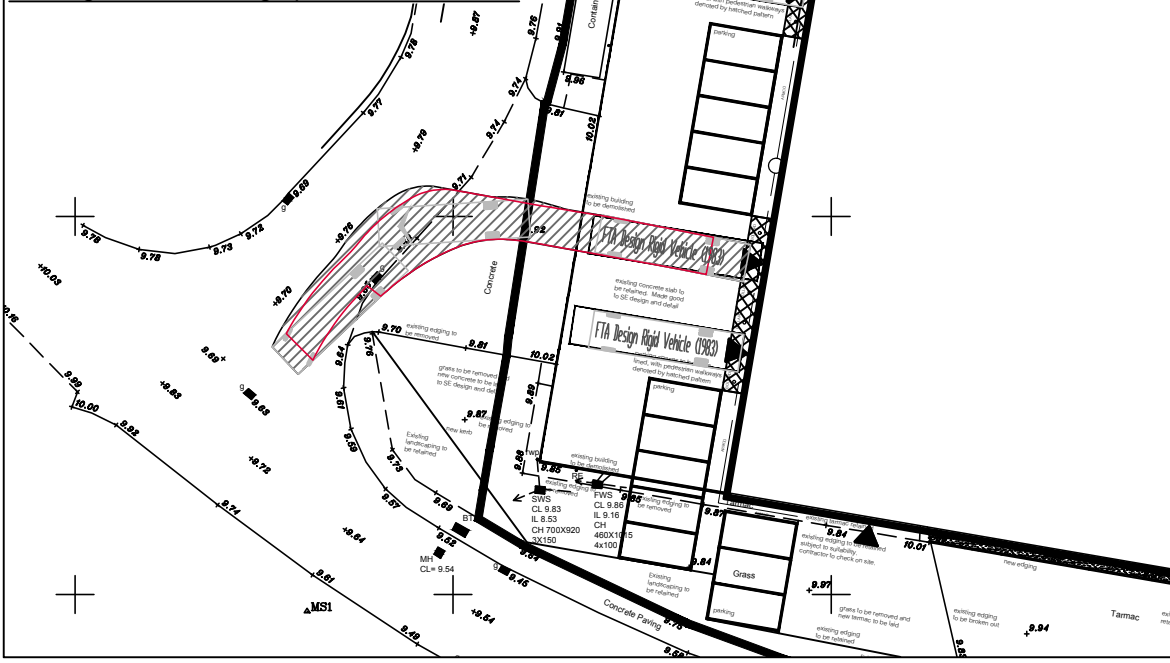
10m Rigid Vehicle Exiting Space in Forward Gear



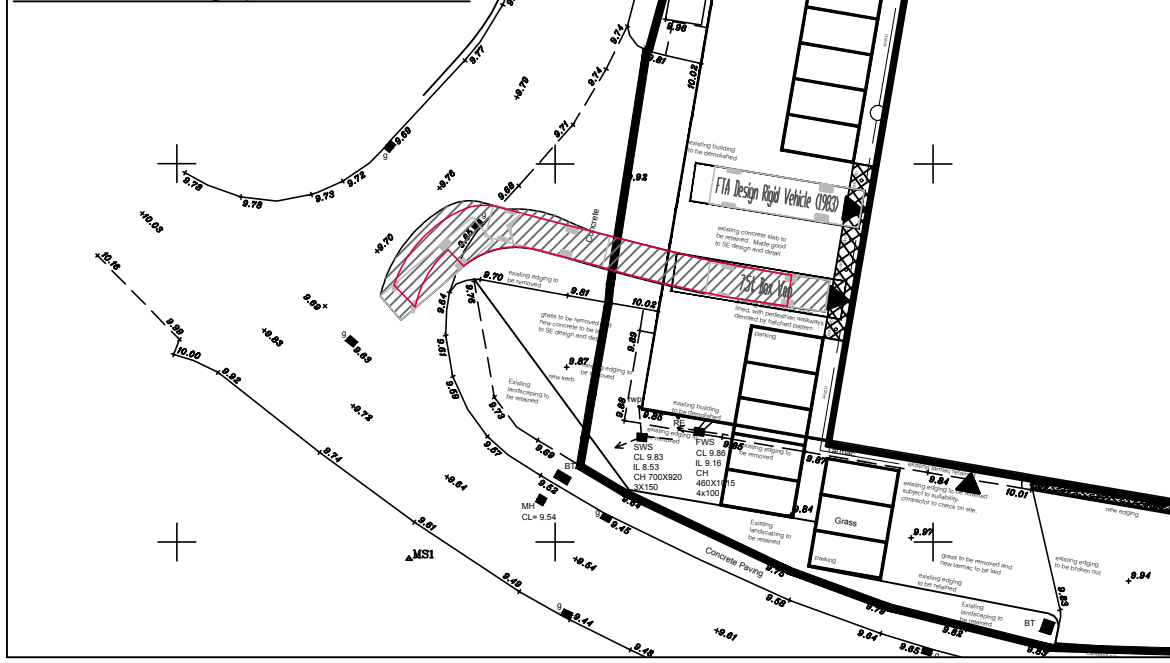
10m Rigid Vehicle Exiting Space in Forward Gear



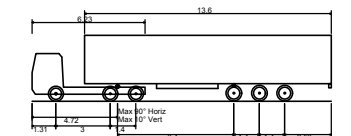
10m Rigid Vehicle Exiting Space in Forward Gear



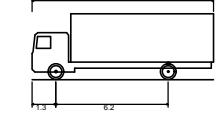
7.5t Box Van Exiting Space in Forward Gear



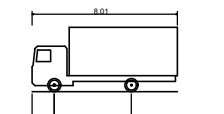
Notes:  
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Max Legal Length (UK) Articulated Vehicle (16.5m)  
Overall Length 16.500m  
Overall Width 3.830m  
Overall Body Height 2.500m  
Min Body Ground Clearance 0.396m  
Max Track Width 2.500m  
Lock-to-lock time 6.00s  
Curb to Curb Turning Radius 6.870m



FTA Design Rigid Vehicle (1983)  
Overall Length 10.000m  
Overall Width 2.500m  
Overall Body Height 3.632m  
Min Body Ground Clearance 0.427m  
Track Width 2.500m  
Lock-to-lock time 4.00s  
Curb to Curb Turning Radius 12.000m



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Track Width 2.064m  
Lock-to-lock time 4.00s  
Curb to Curb Turning Radius 7.400m

Rev	Date	Amendments	Drawn	Chk	App
A	08.02.16	Parked Heavy Goods Vehicles Added	TG	MG	SP

Iceni Projects  
Flitcroft House  
114-116 Charing Cross Road  
London, WC2H 0JR



T 020 3640 8508  
F 020 3435 4228  
mail@iceniprojects.com



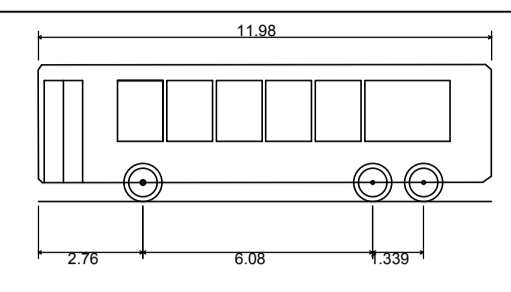
Client: Travis Perkins  
Project: Western Approach, South Shields  
Title: Swept Path Analysis  
Delivery / Service Vehicles Exiting

Drawn By RB	Checked By SP	Approved By SP
Scale @ A3 1:500	Date 01/02/2016	Date 01/02/2016
Project No. 15-T067	Drawing No. 06.2	Rev. A

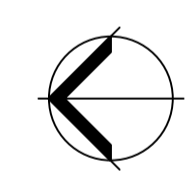
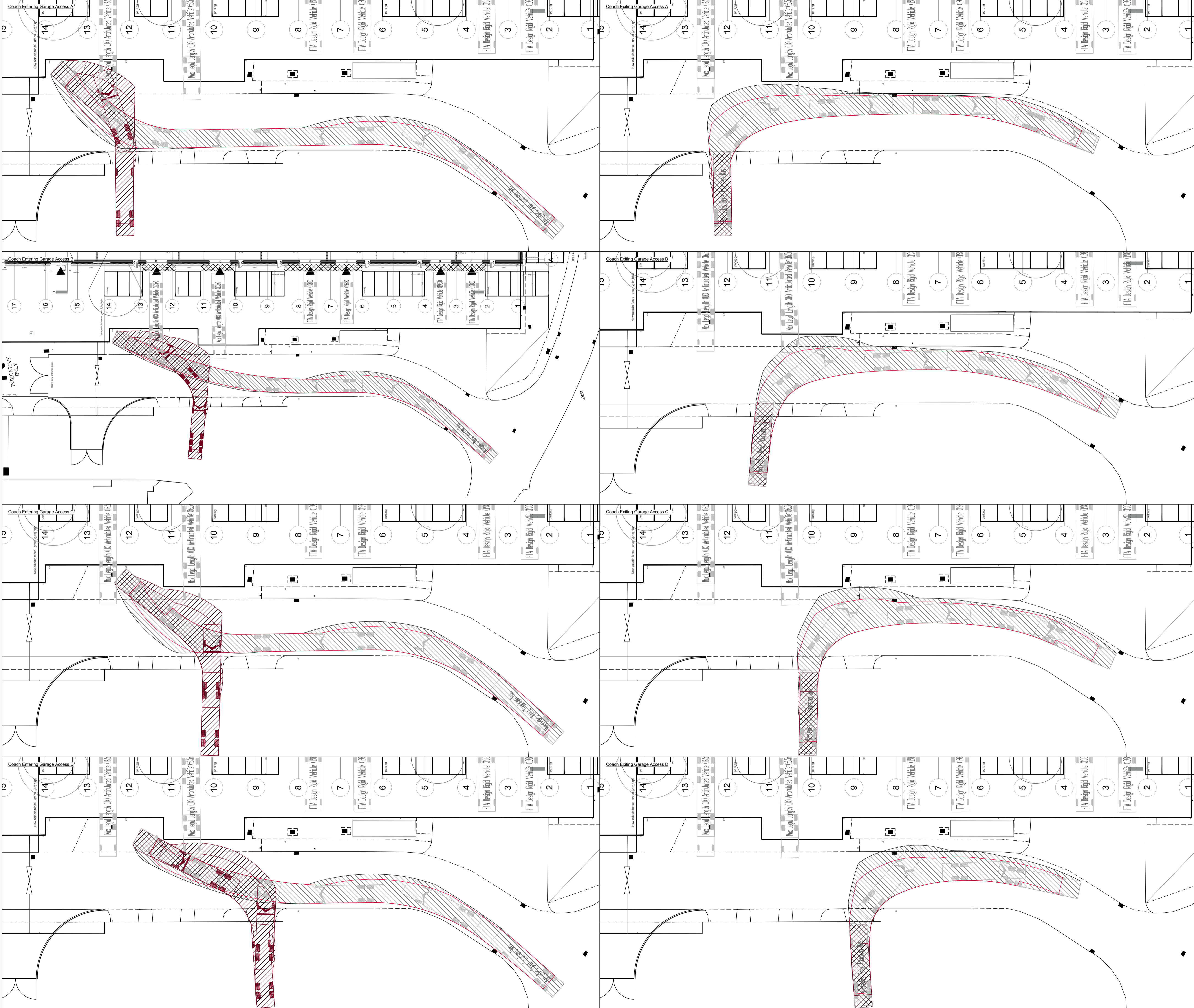
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**A4. COACH TRACKING**

Notes:  
 This drawing is based upon drawing number 6962T-001 supplied by HSSP Architects and Ieni Projects Ltd. shall not be liable for any inaccuracies or deficiencies.



Mercedes Benz Turismo Bus  
 Overall Length 11.98m  
 Overall Width 2.76m  
 Overall Body Height 3.62m  
 Min Body Ground Clearance 0.49m  
 Track Width 2.55m  
 Lock-to-lock time 5.0s  
 Curb to Curb Turning Radius 10.52m



**Ieni Projects**  
 Filcroft House  
 114-116 Charing Cross Road  
 London, WC2H 0JR



T 020 3640 8508  
 F 020 3435 4228  
 mail@ieniprojects.com



Client			
Travis Perkins			
Project			
Western Approach, South Shields			
Title			
Swept Path Analysis Mercedes Benz Turismo Bus			
Drawn By	Checked By	SP	Approved By
TG			SP
Scale @ A1		Date	
1:250		05/02/2016	
Project No.	Drawing No.	Rev.	
15-T067	08	-	

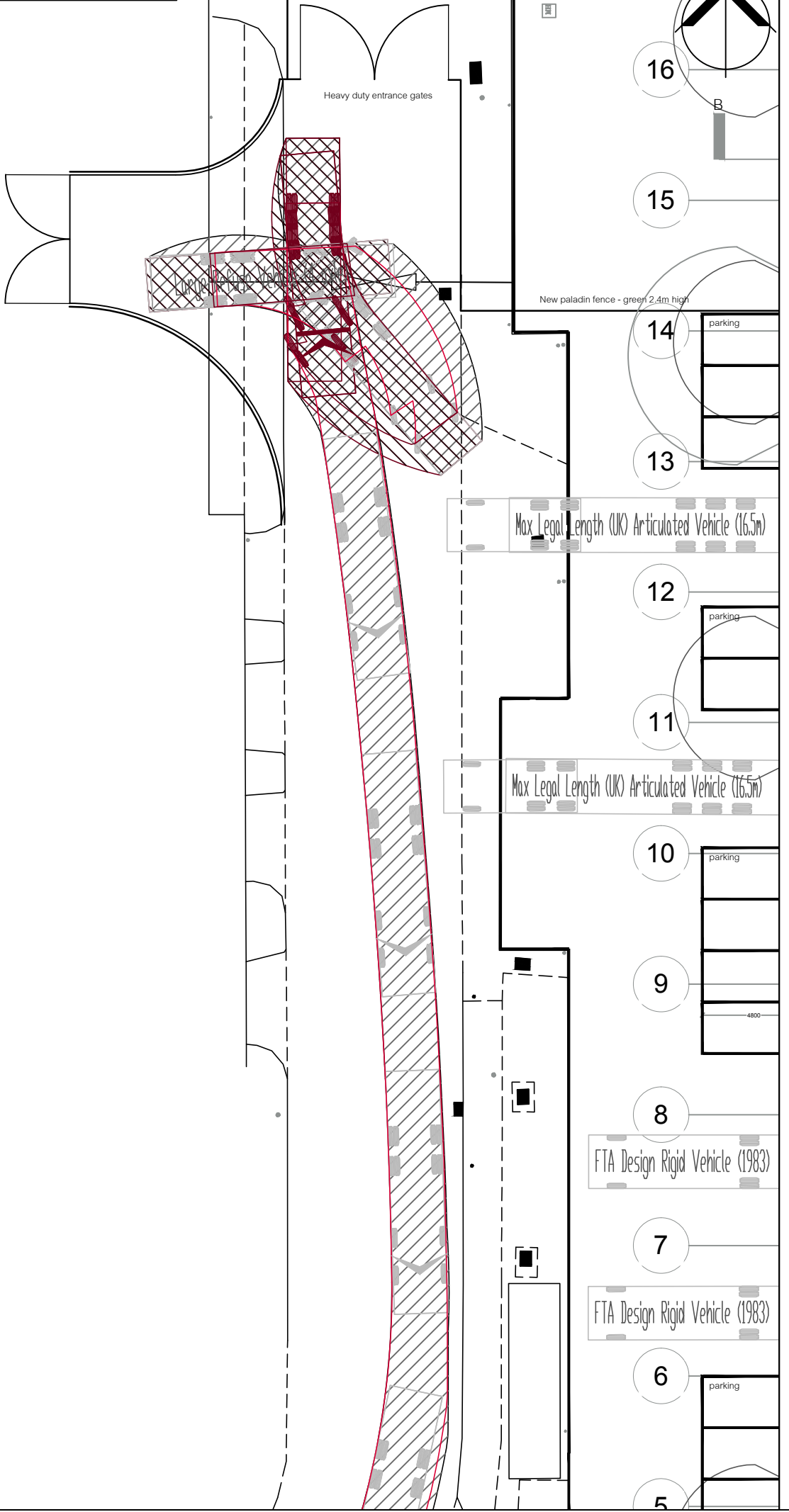
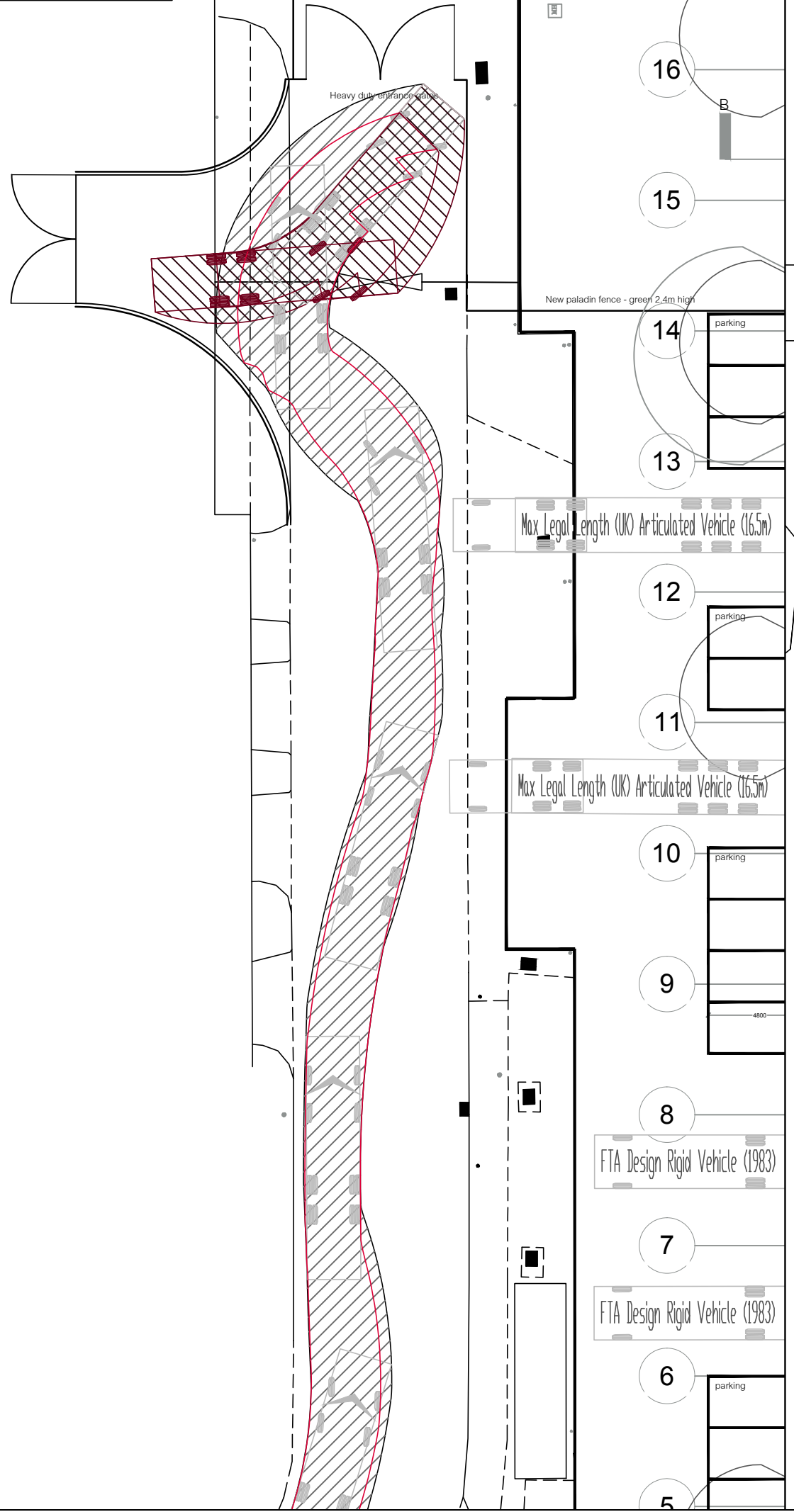
Ieni Projects accept no responsibility for any unauthorised amendments to this drawing. Only figured dimensions are to be worked to.



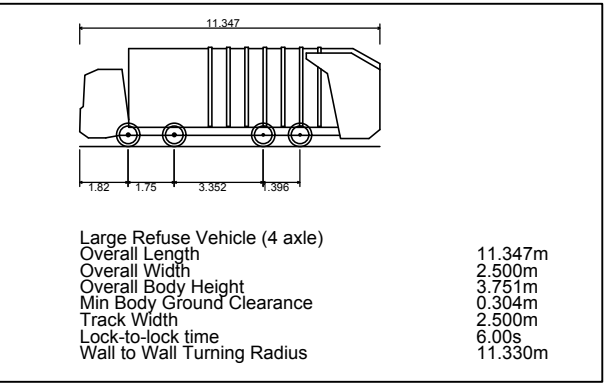
## **A5. REFUSE VEHICLE TRACKING**

Large Refuse Driving In and Turning

Large Refuse Turning and Driving Out



Notes;  
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Flitcroft House  
114-116 Charing Cross Road  
London, WC2H 0JR

T 020 3640 8508  
F 020 3435 4228  
mail@iceniprojects.com



Client  
Travis Perkins

Project  
Western Approach, South Shields

Title  
Swept Path Analysis

Drawn By TG	Checked By SP	Approved By SP
	Date 09/02/2016	Date 09/02/2016

Scale @ A3 1:250	Date 09/02/2016
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Project No. 15-T067	Drawing No. 11	Rev. -
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