

# Technical Note

## *Introduction & Scope of Assessment*

- 1.1 This Technical Note (TN) on highways and transport has been prepared on behalf of Domusea Developments to consider highways matters relating to the proposed residential development under Use Class C3 comprising of 5 dwelling units at land to the rear of Mistletoe Farm, Horsemere Green Lane, Climping.
- 1.2 This technical note seeks to determine that the proposals would not result in any material traffic impact.

## *Existing Site Description & Proposed Development*

- 1.3 The site is located between Littlehampton and Burndell in West Sussex. The LPA is Arun District Council. The surrounding area consists of residential properties and farmland.
- 1.1 The Site in relation to the regional and local highway network is illustrated at **Figure 1.1** and **Figure 1.2** respectively.
- 1.4 The proposals include 5 private houses, consisting of 3 3-bed detached chalet bungalows, 2 3-bed semidetached houses and 1 4-bed detached bungalow subsequently requiring a parking provision of 13 spaces including 2 visitor spaces including highways and landscaping alterations.
- 1.5 The BIS Design Architects proposals drawing 1071/DPA04 Revision 1 are included within this TN in **Appendix A**.

## *Parking Provision*

- 1.6 Standards of parking provision for residential development Supplementary Planning Guidance Complements Policy GEN12 of the Arun District Local Plan 2003, which relates to the provision of parking in new development. These standards represent the maximum provision for parking.
- 1.7 Table 1 (Housing and Estate Development) states that for single house & estate development (where development does not exceed 15 units) for each dwelling of 1, 2 or 3 bedrooms a maximum provision of 2 car spaces and 1 space for visitors should be provided in curtilage where possible. For each dwelling with 4 or more bedrooms a maximum of 3 garages or car spaces and 1 space for visitors to be provided in curtilage where possible.

- 1.8 In terms of operational requirements for car spaces are required to be provided to a size 4.8m x 2.4m to accommodate a private car of average dimensions.
- 1.9 The proposals include 5 private houses with a parking provision of 13 spaces including 2 visitor spaces and therefore comply with standards.

#### *Visibility Requirements*

- 1.10 In respect of the inter-visibility between vehicles emerging from proposed residential development and traffic on Horsemere Green Lane, the two key elements to be assessed are the setback distance, or 'x' distance, along the minor arm and the distance a driver can see along the major road (i.e. Horsemere Green Lane when exiting, or 'y' distance). The 'x' distance is regarded as a function of capacity. The shorter the distance, the slower traffic will approach a give-way line. The longer the distance, the more opportunities there will be for approaching drivers to look for gaps in traffic on the major road and therefore enable them to approach at a higher speed.
- 1.11 At an 'x' distance of 2.4 metres, an approaching driver will have to slow to a virtual stop at the give way line to observe traffic on the major road without encroaching onto it. Consequently, only one vehicle at a time can safely exit from the minor road under these operating conditions. It is clearly evident that the volume of traffic emerging from the new access way will be low and therefore a 2.4 metre 'x' distance is appropriate.
- 1.12 The 'y' distance is based upon sight stopping distances (SSD's) of traffic approaching on the major arm of a junction. The recorded speed of traffic will be used to determine the appropriate visibility or 'y' distances to the left and right along Horsemere Green Lane for the proposed site access junctions.
- 1.13 The SSD is the distance within which drivers (on the major arm of a junction) need to be able to see ahead and stop from a given speed. In other words, SSD's are a function of vehicle speed, deceleration rate and driver reaction time. The basic formula for calculating SSD is outlined within Design Manual for Roads and Bridges (DMRB) as appropriate. Therefore, a sign posted speed of 30mph (48kph) would require a SSD of 43 meters in both directions.
- 1.14 From **Figure 1.3** it can be seen that the required 'y' distances, as detailed above, can be achieved both to the right and left of each site access without obstruction or encroaching onto land under ownership by a third party from an 'x' distance (or set-back distance) of 2.4 metres along the centre of the proposed new carriageway.
- 1.15 Within the visibility splays, all landscaping would be maintained at a maximum height of 600mm so as not to obstruct sightlines.

### **Movement & Access**

- 1.16 The proposed vehicular access through the site will be by means of a shared surface access road provided to a width of 4.8 metres with buildouts. Furthermore, all dwellings will be within 45 metres of the internal access road, which runs through the development, and therefore access for fire appliances to individual properties would not be required.

### **Delivery & Servicing Arrangement**

- 1.17 The proposed site layout, including parking and access arrangements is provided in **Appendix A** with Swept Path Analysis of a private car accessing the site and the garages shown in **Figures 1.4 & 1.5**.
- 1.18 In relation to refuse collection, Swept Path Analysis of a refuse collection vehicle is shown in **Figure 1.6 & 1.7** showing the collection vehicle entering and exiting the site in a forward gear. Bin storage for the residential units will be stored within the curtilage of each dwelling, as outlined within Manual for Streets (MfS) bin stand locations would result in an operative carry distance no greater than 25 metres.
- 1.19 Given the size of the proposed development, the number of service deliveries would be low and restricted to a weekly collection of refuse plus occasional home delivery services. **Figure 1.8 & 1.9** shows the swept path of a delivery vehicle turning within the turning area within the site.
- 1.20 Should the need arise for a fire appliance to attend the site, the swept path analysis of a standard fire tender is shown in **Figure 1.10 & 1.11**.

### **Trip Generation Analysis**

- 1.21 To establish typical trips to the current site and the development proposals, the TRICS (Trip Rate Information Computer System) database version 7.4.4 has been interrogated to identify similar developments comprising of sample sites from the Residential Houses Privately Owned datasets.
- 1.22 Sample sites for the existing and proposed uses have been selected which are located within South East England, edge of town or suburban locations surveyed between 2009 and 2017. The full TRICS output is contained within **Appendix B** of this note and summarised within **Table 1.1**.

### Proposed Residential Use

- 1.23 The table below provides a summary of the predicted weekday daily profile of multi-modal trip rates by mode of travel associated with the proposed residential use based on trip rates derived from the TRICS database.

| Proposed Residential | AM Peak  |            | PM Peak  |            | Daily     |            |
|----------------------|----------|------------|----------|------------|-----------|------------|
|                      | Arrivals | Departures | Arrivals | Departures | Arrivals  | Departures |
| Vehicles             | 1        | 2          | 2        | 1          | 12        | 12         |
| Public Transport     | 0        | 0          | 0        | 0          | 0         | 0          |
| Cycle                | 0        | 0          | 0        | 0          | 0         | 0          |
| Pedestrians          | 0        | 1          | 0        | 0          | 3         | 3          |
| <b>Total Persons</b> | <b>1</b> | <b>3</b>   | <b>2</b> | <b>1</b>   | <b>15</b> | <b>15</b>  |

Table 1.1: Peak and Daily Trip Profile (Proposed C3 Residential Use)

- 1.24 From **Table 1.1** it can be seen that during the weekday AM & PM peak hourly and daily periods, the proposed residential development has the ability to generate in the order of 30-person trip movements of which 24 daily movements would be vehicular trips with the remainder undertaken by modes other than private car, principally walking and public transport.
- 1.25 Furthermore, in terms of servicing, given the size of the proposed development, the number of service deliveries would be low and restricted to a weekly collection of refuse plus occasional home delivery services.

### Trip Generating Summary

- 1.26 Since the proposed C3 residential development is expected to generate up to 3 vehicle trips during both peak hours, equivalent to 1 movement every 20 minutes. Overall the impact on the operation of the surrounding highway and transport networks would be negligible.

### Summary and Conclusions

- 1.27 This Technical Note on highways and transport has been prepared on behalf of Domusea Developments to consider the trip generation implications relating to the proposed residential development at Mistletoe Farm, Horsemere Green Lane, Climping. The proposals consist of residential scheme of 5 residential units including 13 associated parking spaces and 2 visitor spaces.
- 1.28 A summary of the findings within the Technical Note are provided below:
- » Required visibility splays have been demonstrated onto Horsemere Green Lane in accordance with relevant guidance for the posted speed limit;
  - » The proposed residential parking provision is in accordance with local parking standards;
  - » Fire access, refuse collection and servicing provisions have been set out;
  - » Over a daily period, the proposed residential use will generate a combined total of 24 vehicle movements; and
  - » The proposed use will generate up to 3 vehicle trips during both peak hours, equivalent to 1 movement every 20 minutes. Overall the impact on the operation of the surrounding highway and transport networks would be negligible.
- 1.29 On the basis of the findings within this Technical Note and in the context of the guidelines within para. 32 of the NPPF it is considered that there are no residual cumulative impacts in terms of highway safety or the operational capacity of the surrounding transport network and therefore planning permission should not be withheld on transport grounds.

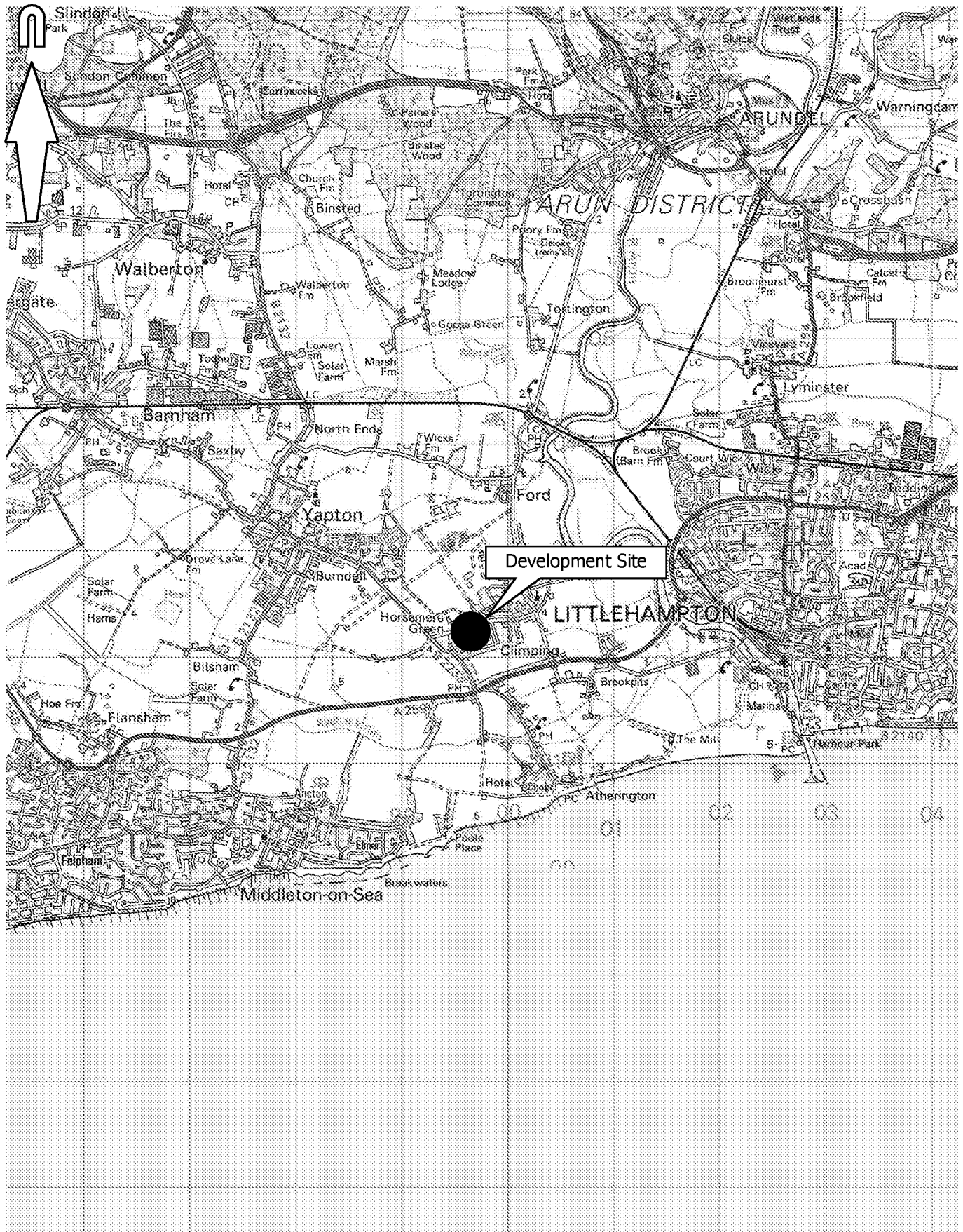
**Client**

**Project Title, Location**

**Type/Name of Report**

## APPENDIX A: TRICS Output

## FIGURES



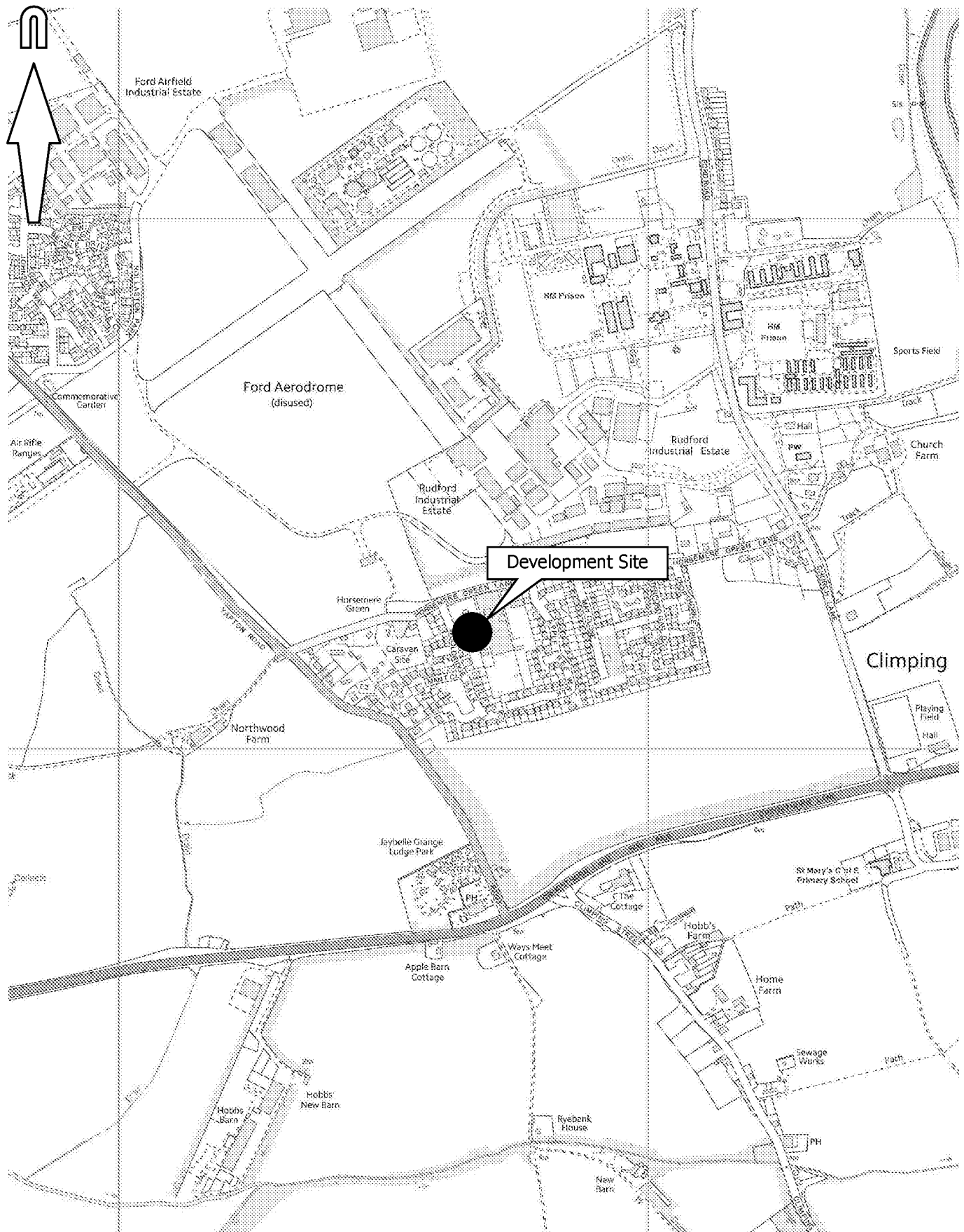
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Site in Relation to the Regional Highway Network

Scale 1:50 000

Figure 1.1



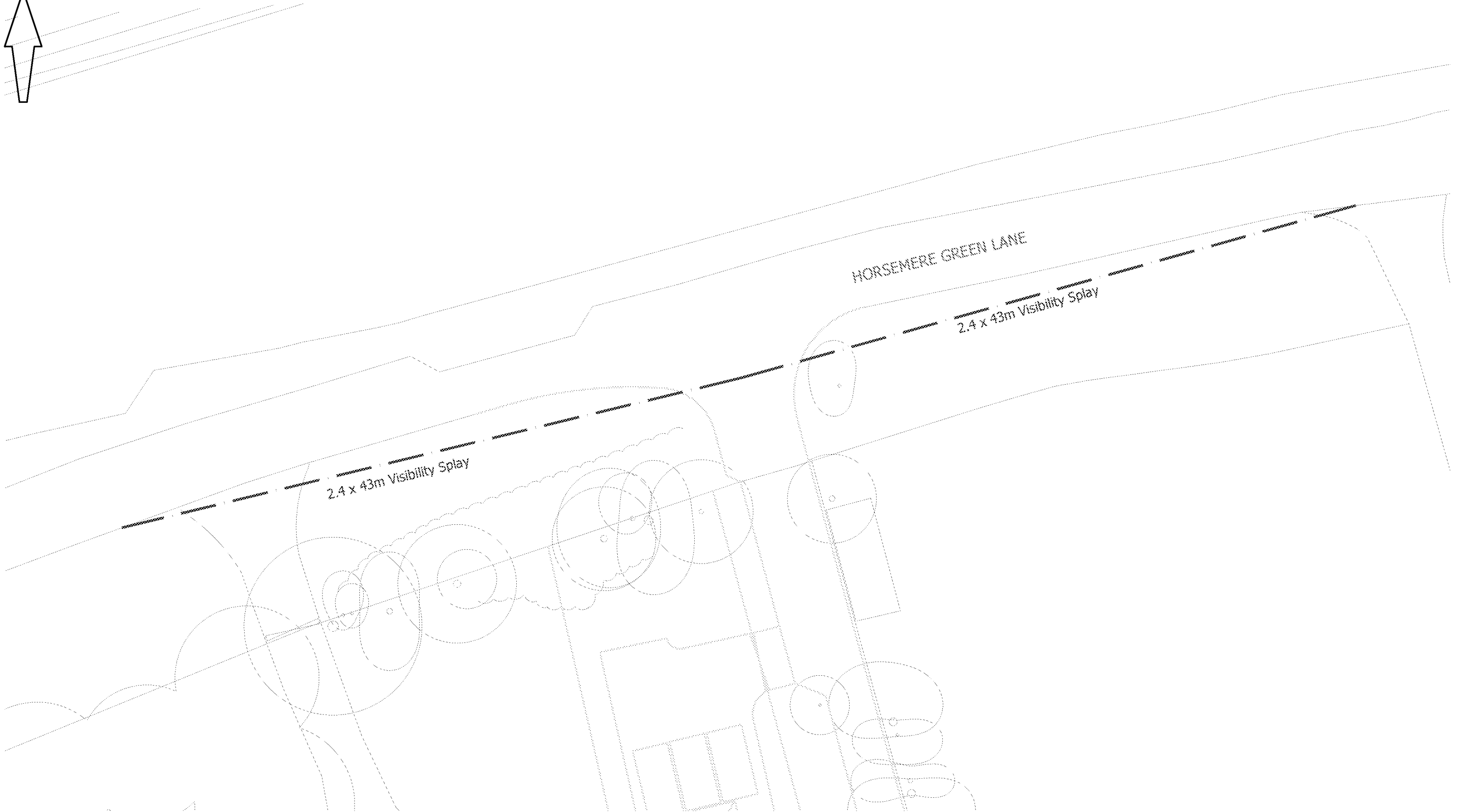
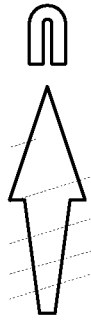
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Site in Relation to the Local Highway Network

Scale 1:10 000

Figure 1.2



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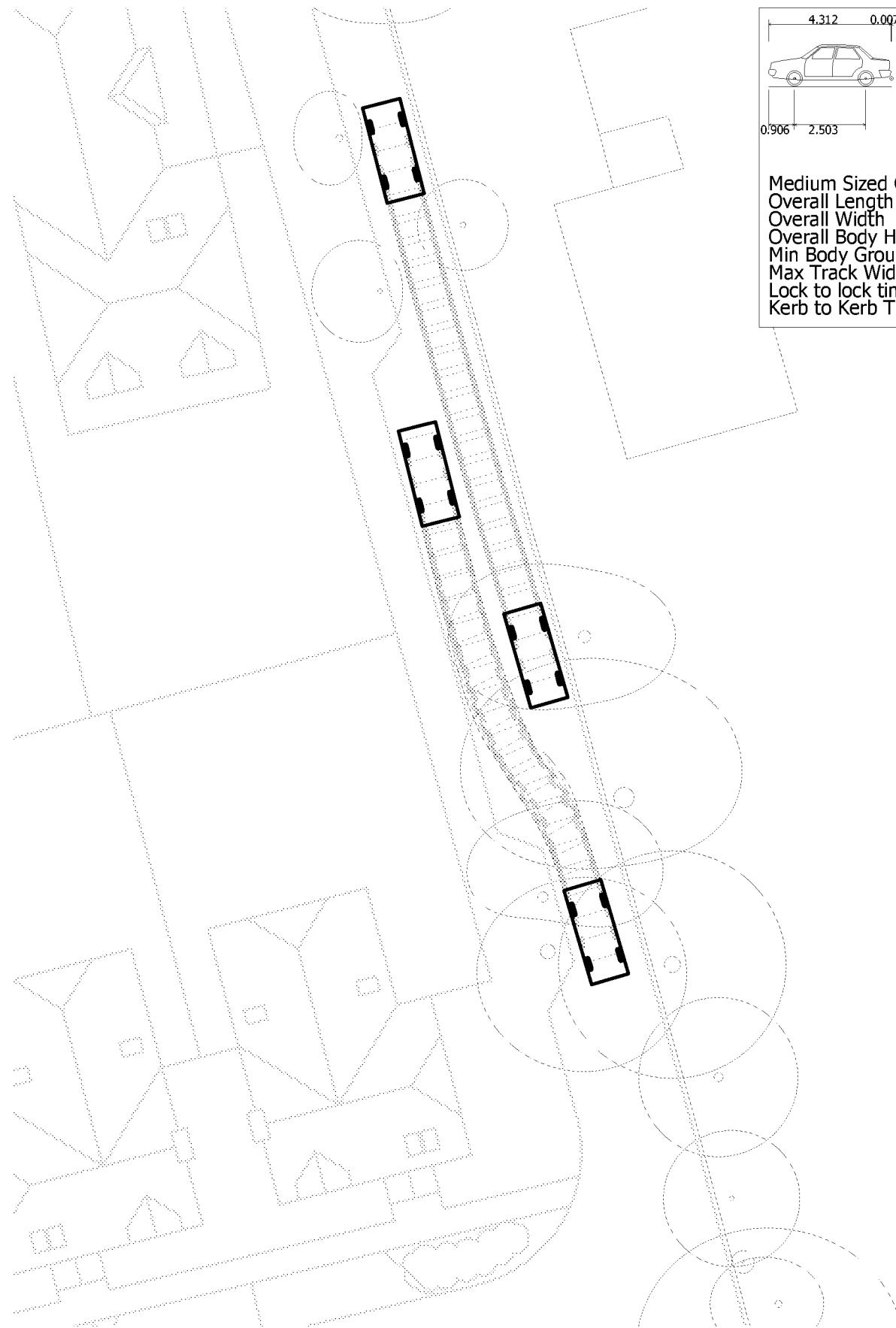
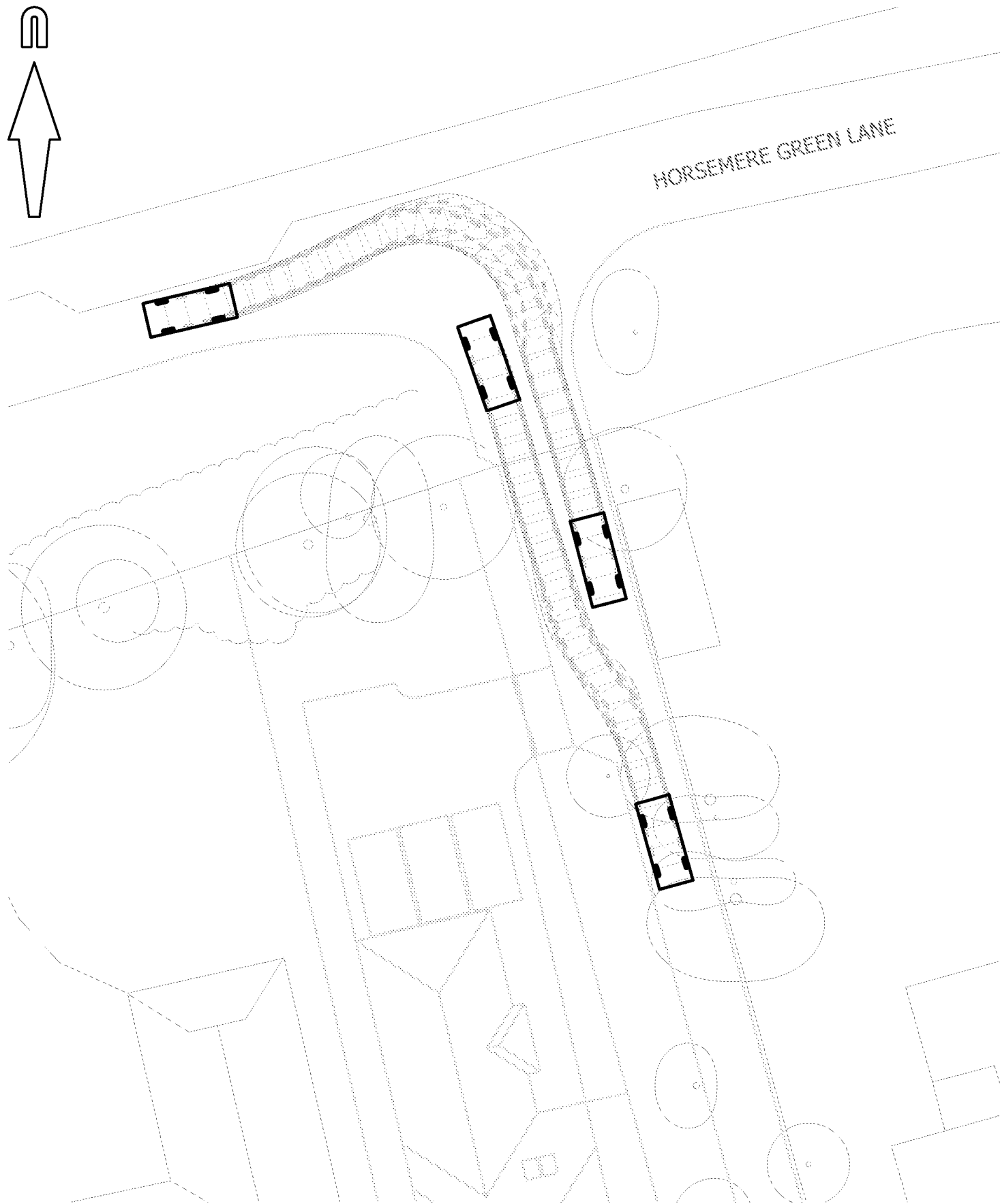
project  
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title  
**VISIBILITY SPLAYS AT ACCESS**

scale 1:250 @ A3 drawn by JME checked by BC

date MARCH 2018 cad file FIGURES REV A.DWG

drawing number **FIGURE 1.3** rev. **A**



Technical drawing of a car showing top and side views with dimensions. The top view shows an overall length of 4.312m and an overall width of 0.007m. The side view shows an overall body height of 0.906m and a wheelbase of 2.503m.

## Medium Sized Car

|                             |        |
|-----------------------------|--------|
| Overall Length              | 4.319m |
| Overall Width               | 1.686m |
| Overall Body Height         | 1.466m |
| Min Body Ground Clearance   | 0.228m |
| Max Track Width             | 1.591m |
| Lock to lock time           | 4.00s  |
| Kerb to Kerb Turning Radius | 5.042m |

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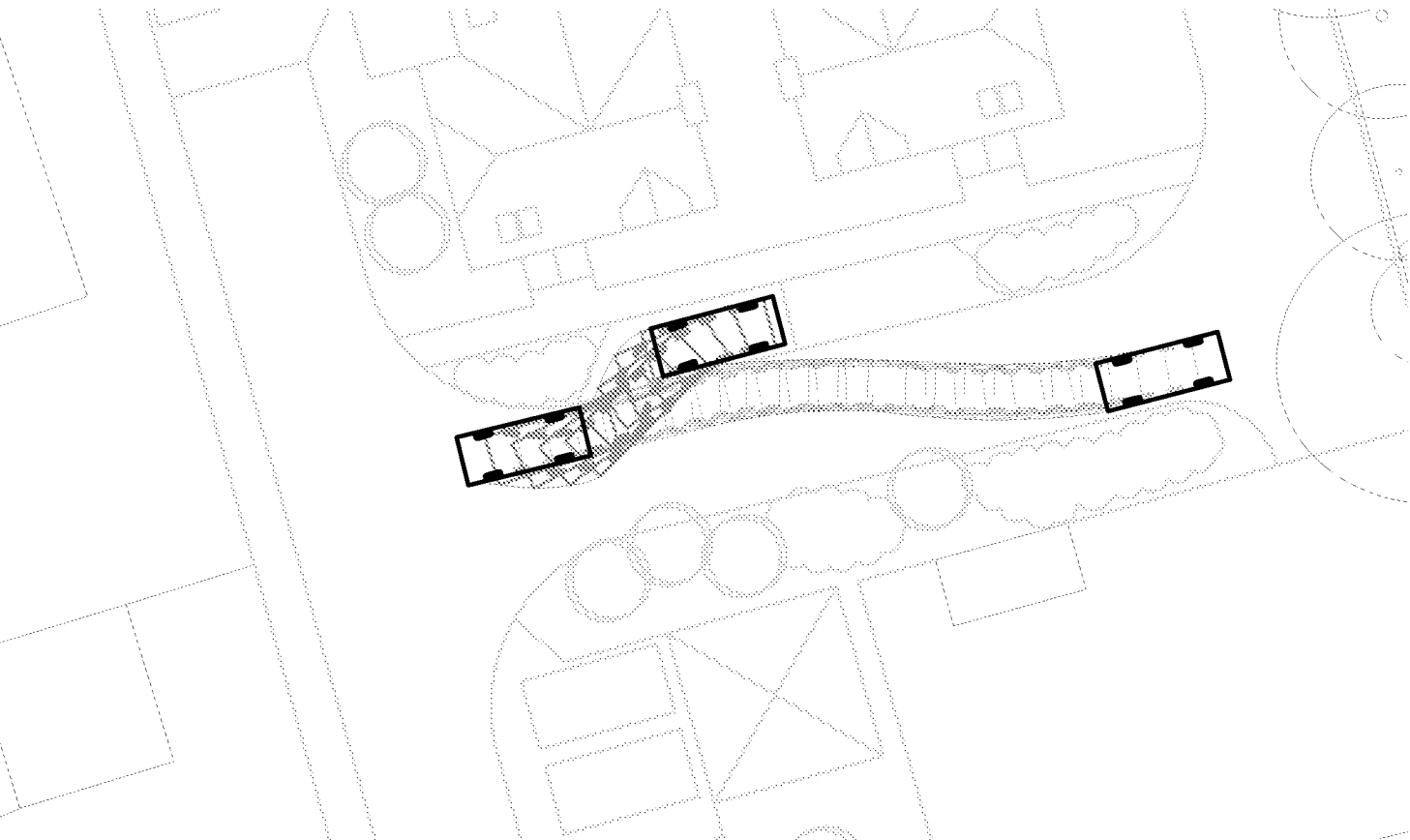
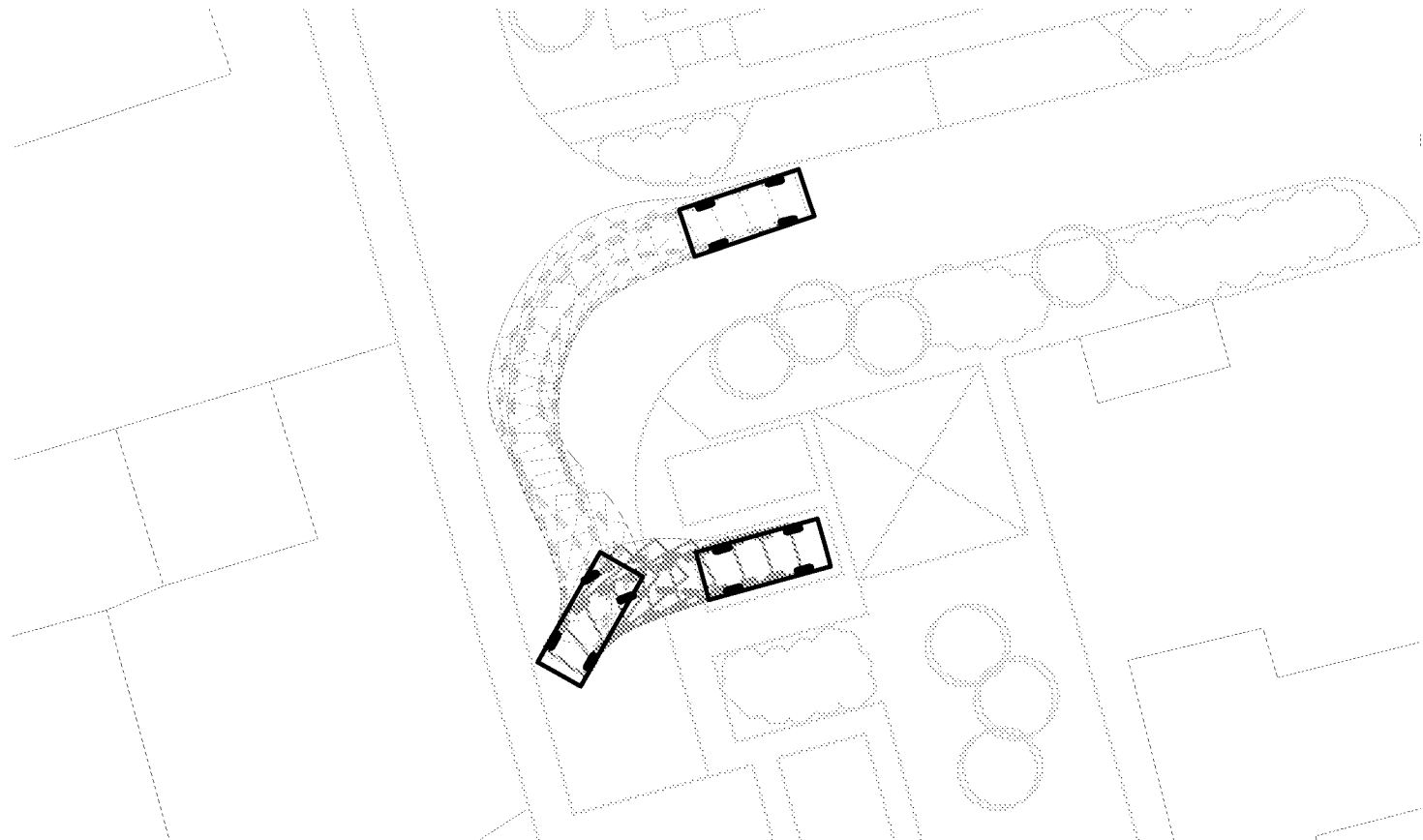
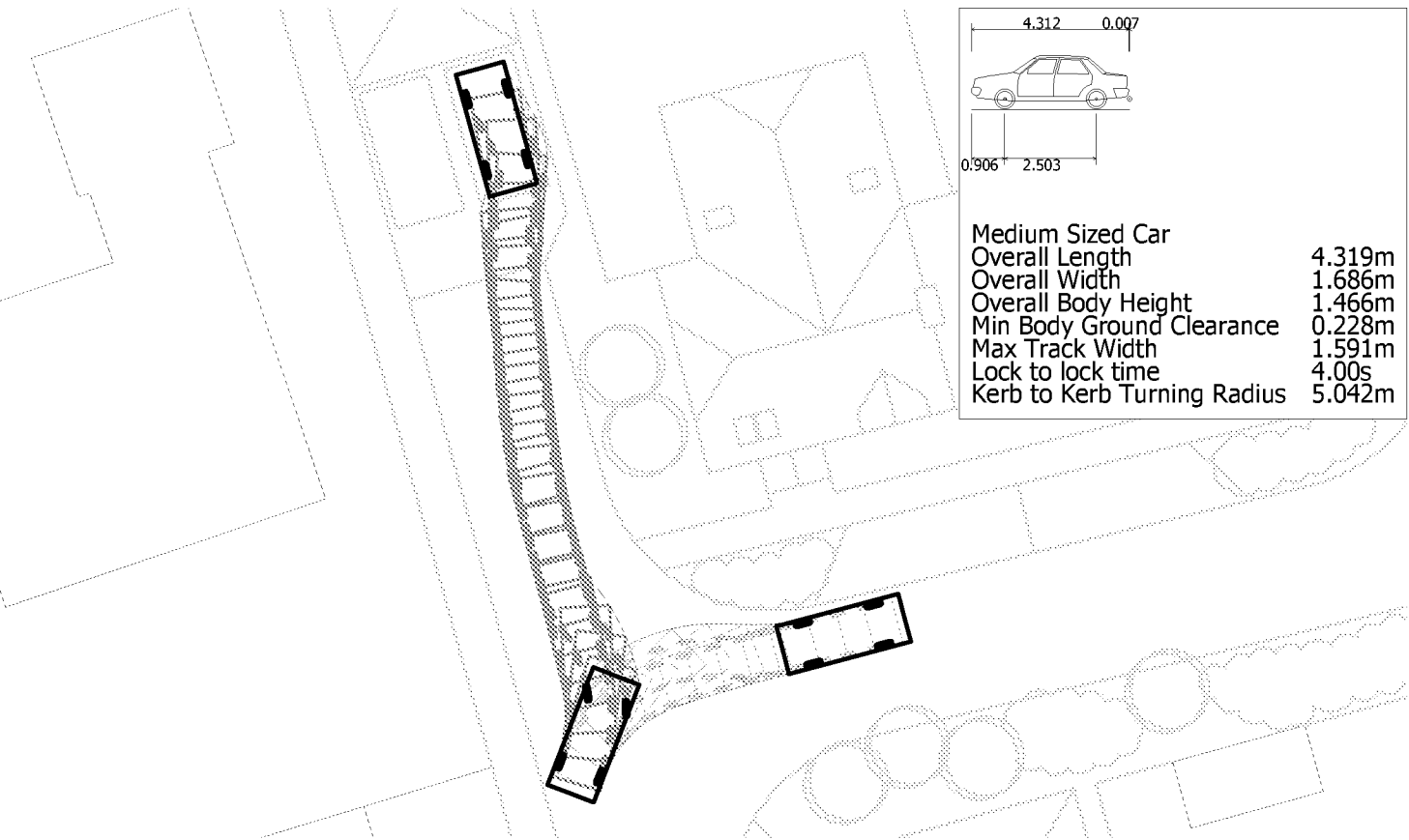
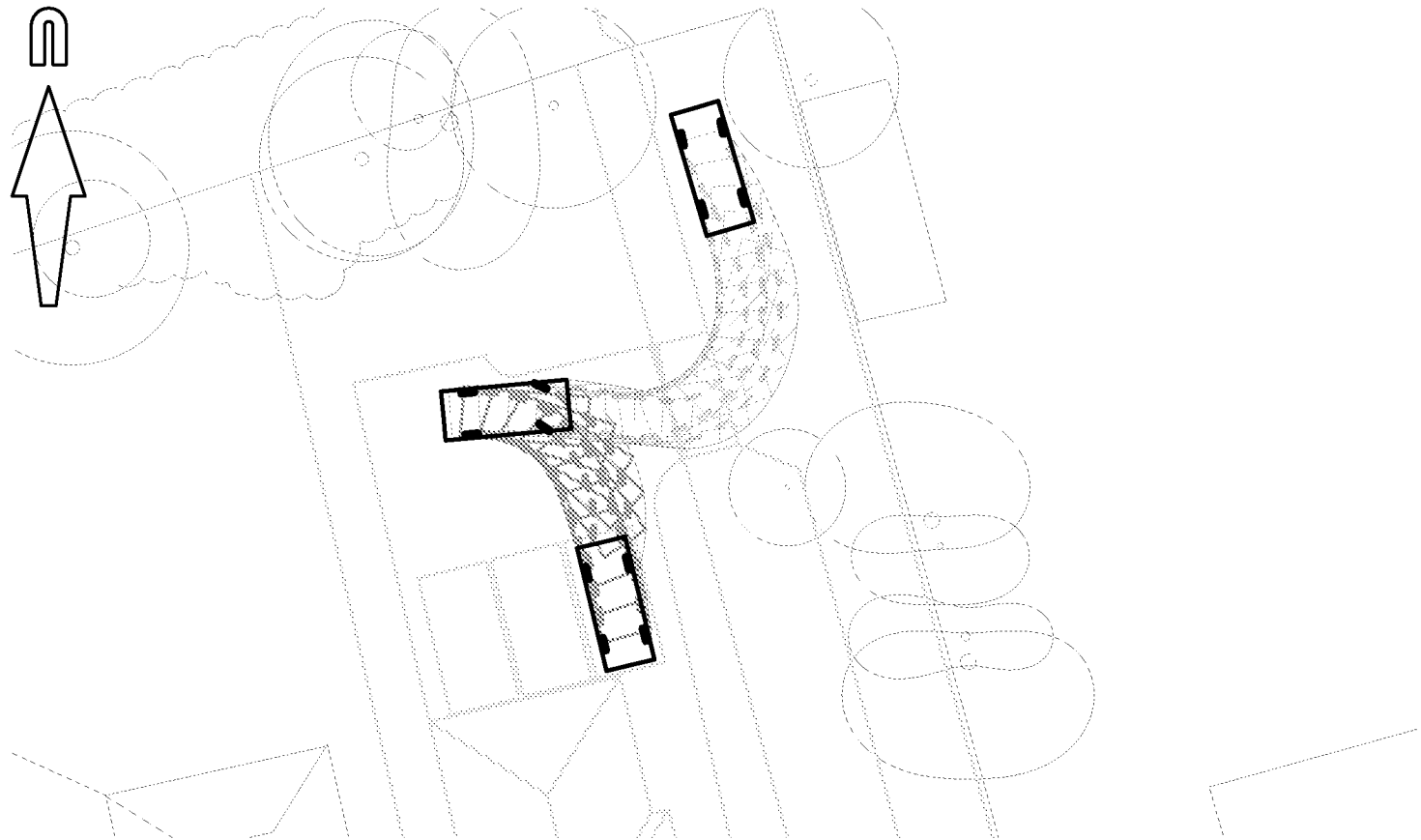
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title  
SWEPT PATH ANALYSIS  
CARS PASSING AT PASSING AREAS

scale 1:250 @ A3 drawn by JME checked by BC

date MARCH 2018 cad file FIGURES REV A.DWG

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FIGURE 1.4  
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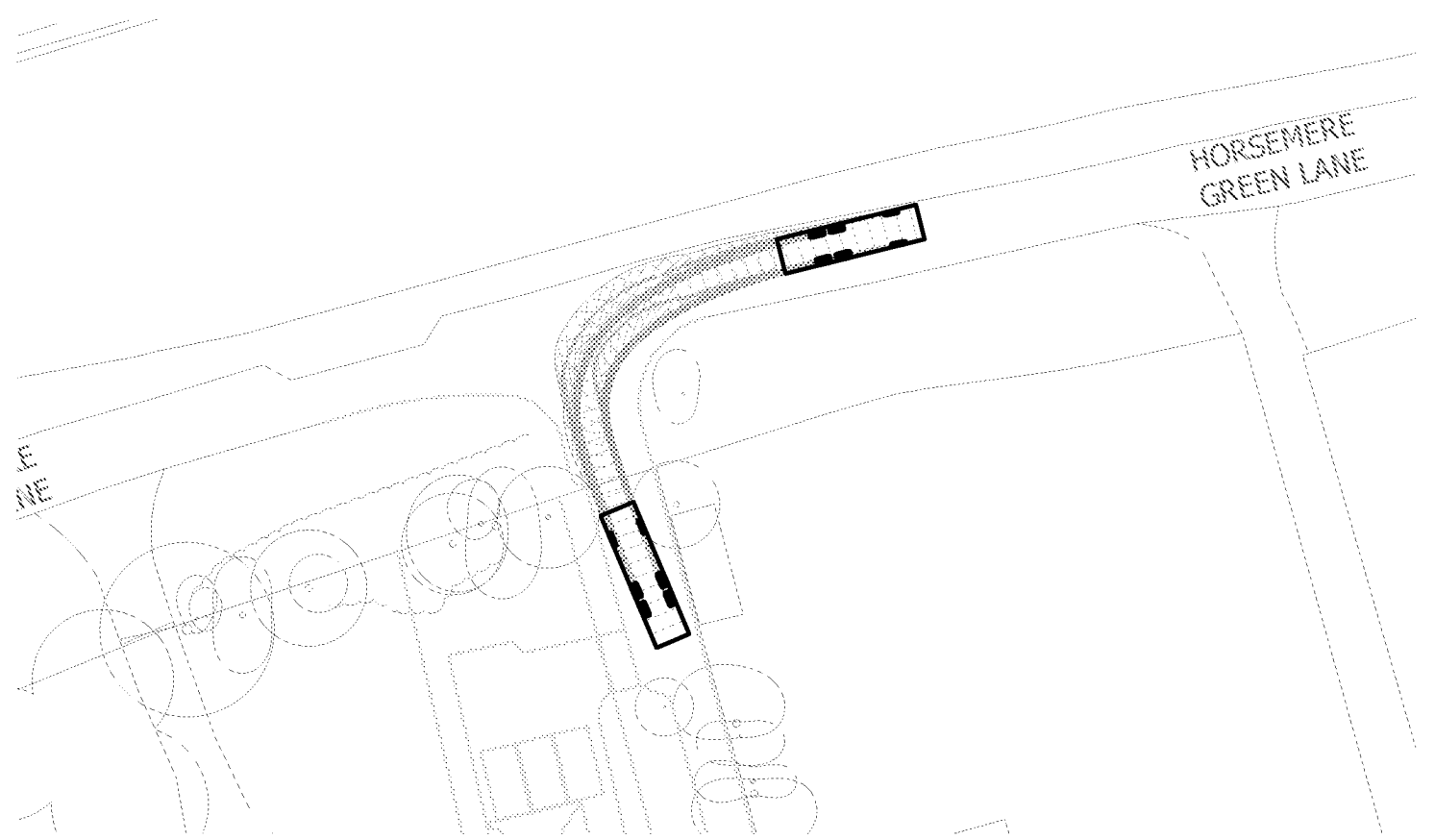
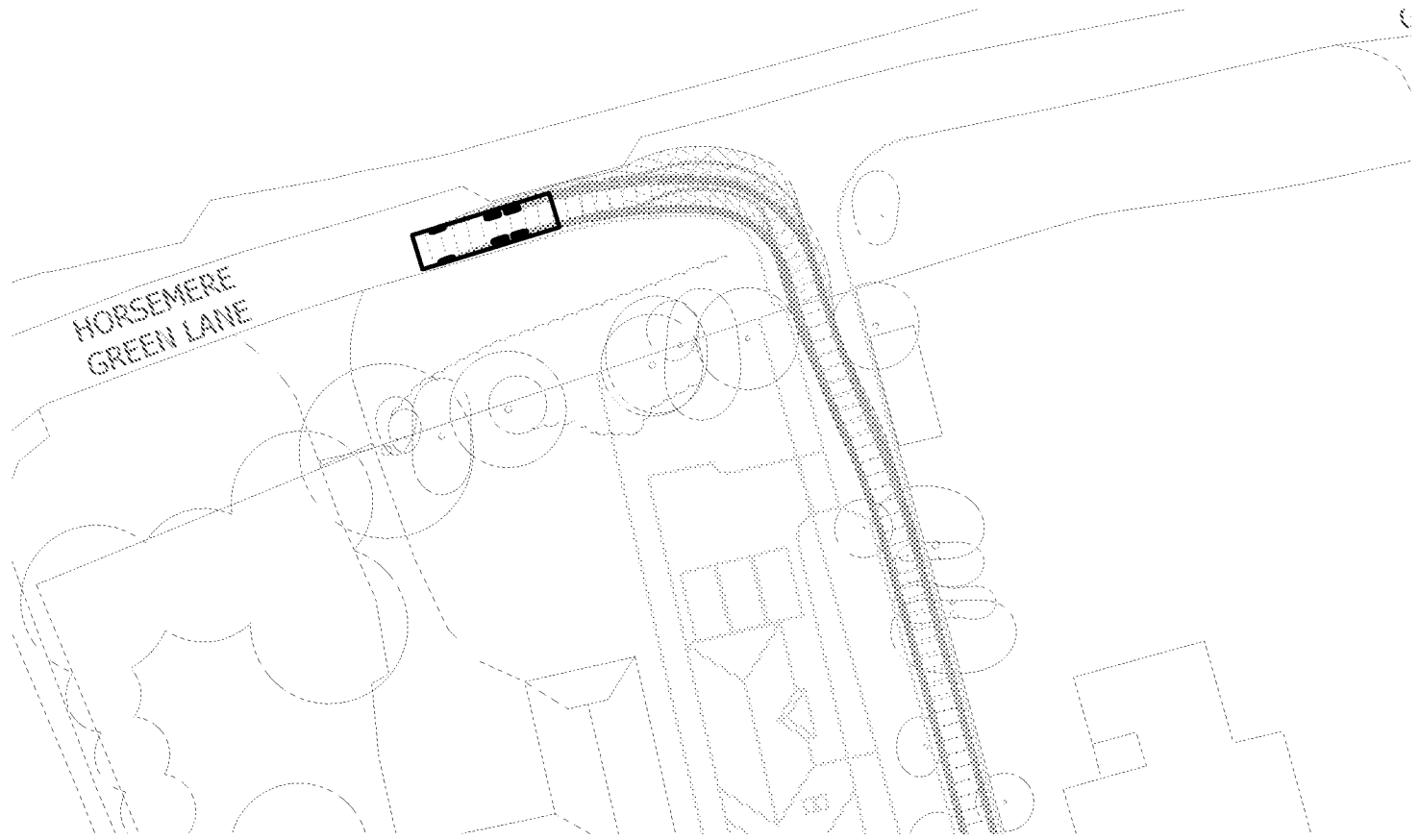
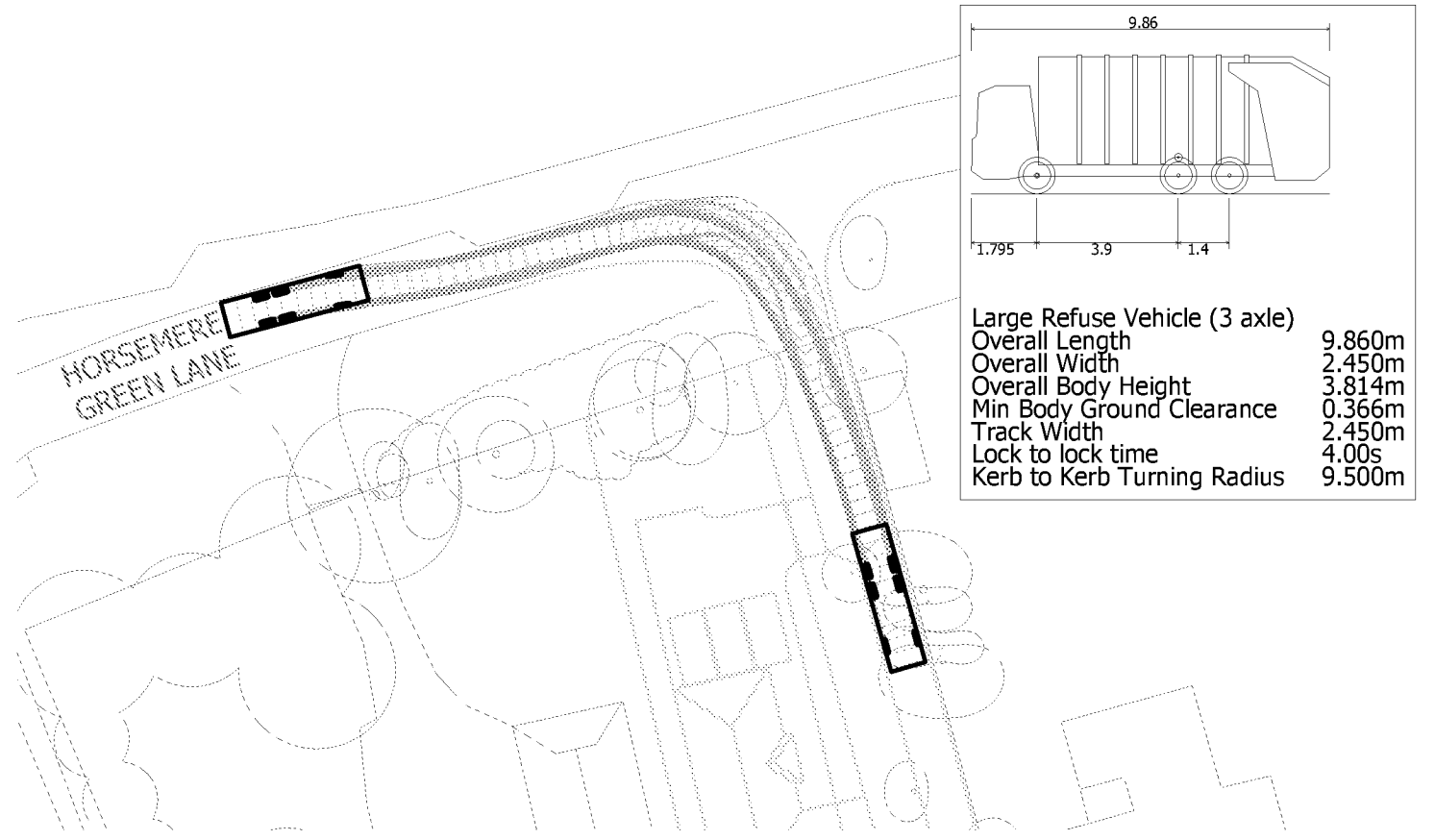
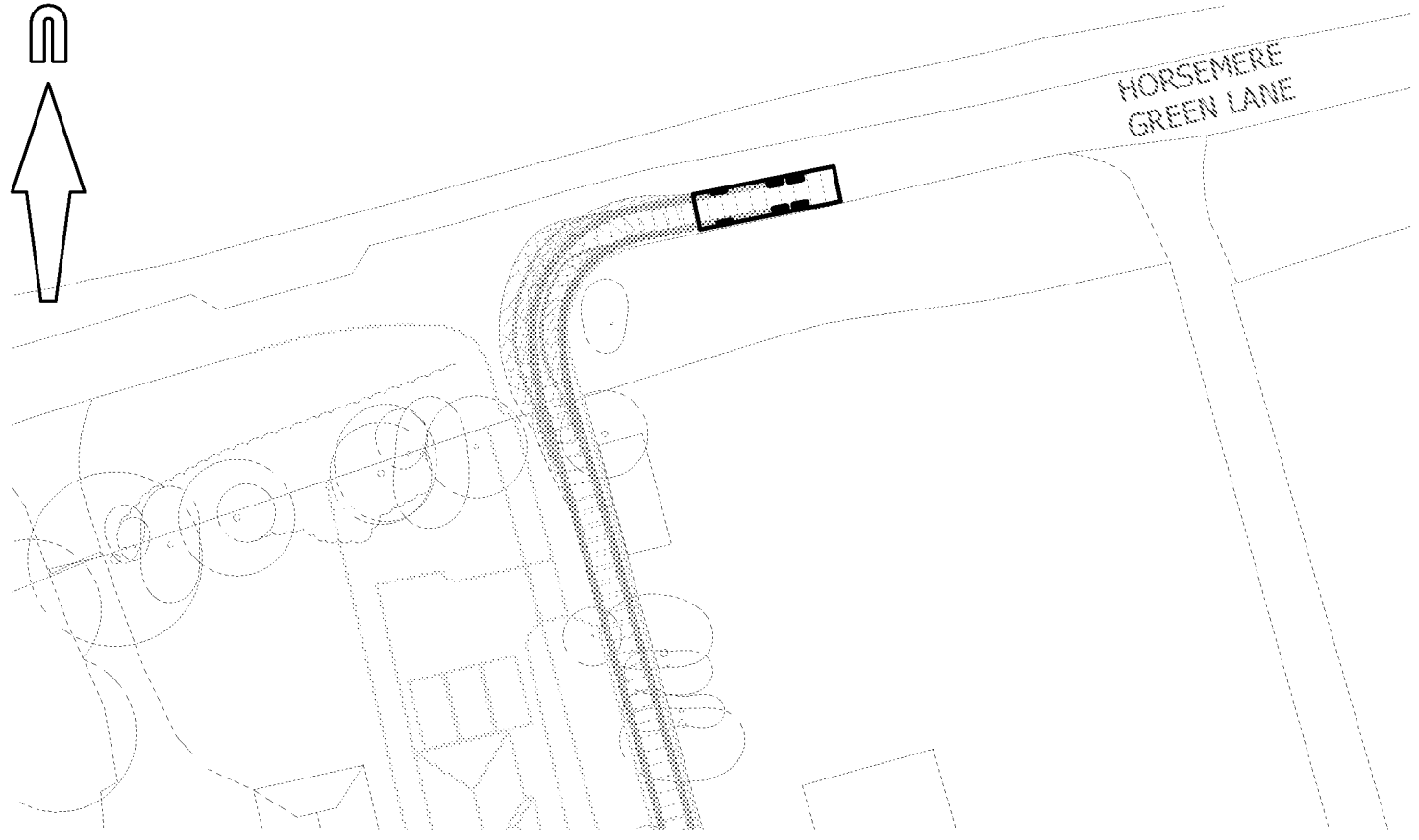
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project  
LAND AT MISTLETOE FARM

title  
SWEPT PATH ANALYSIS  
CAR USING A SELECTION OF BAYS

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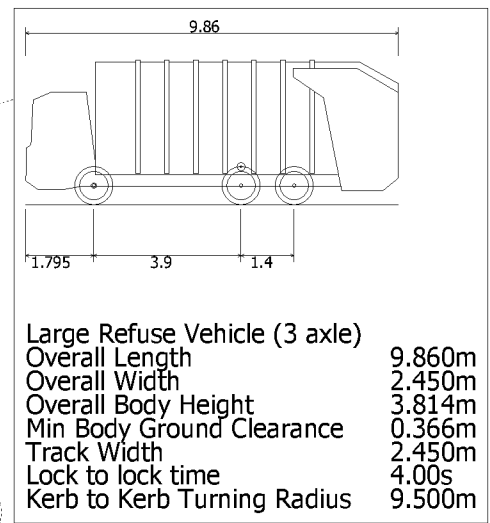
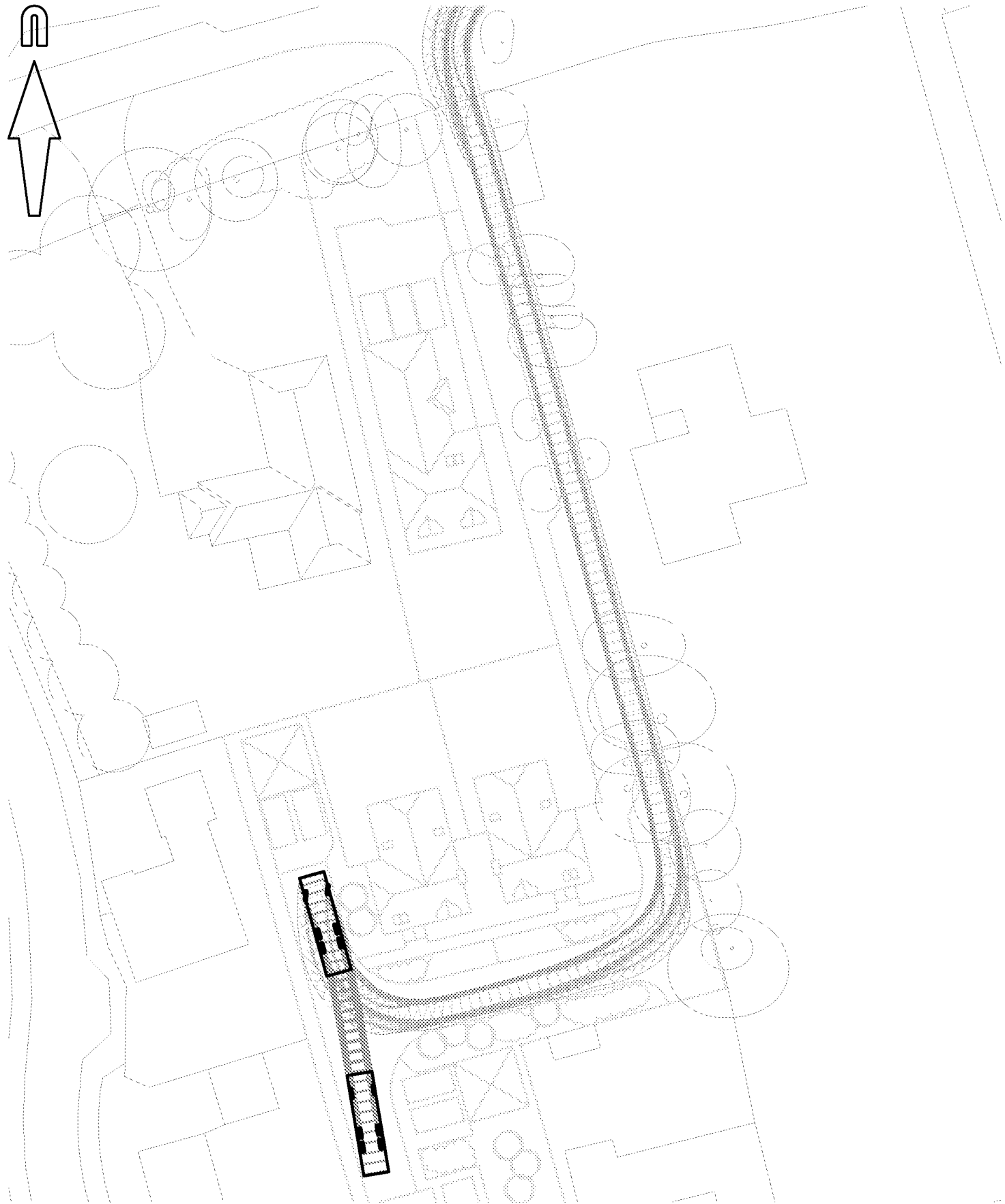
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LAND AT MISTLETOE FARM

title  
SWEPT PATH ANALYSIS  
LARGE REFUSE VEHICLE ENTERING/EXITING SITE

scale 1:500 @ A3 drawn by JME checked by BC

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drawing number  
FIGURE 1.6  
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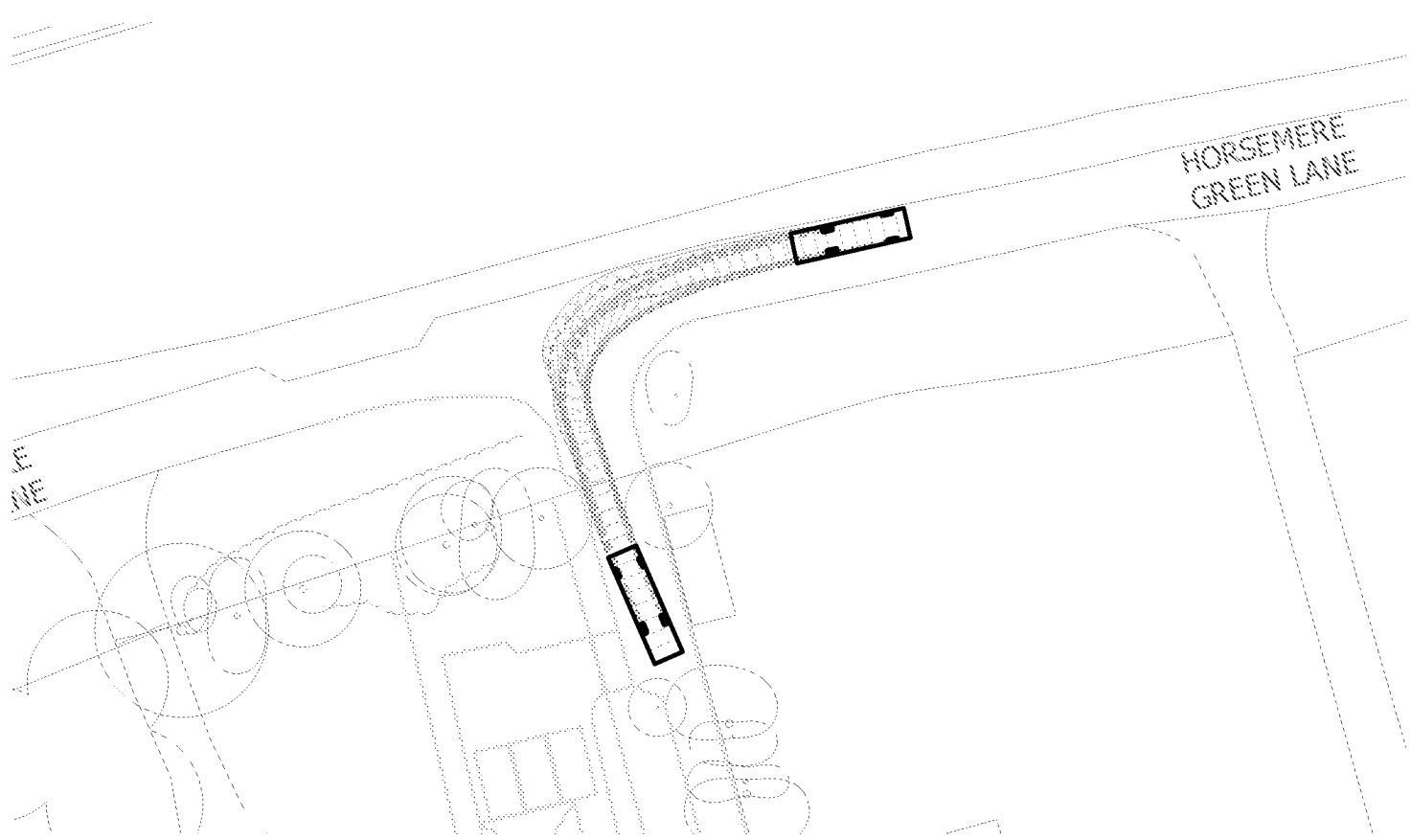
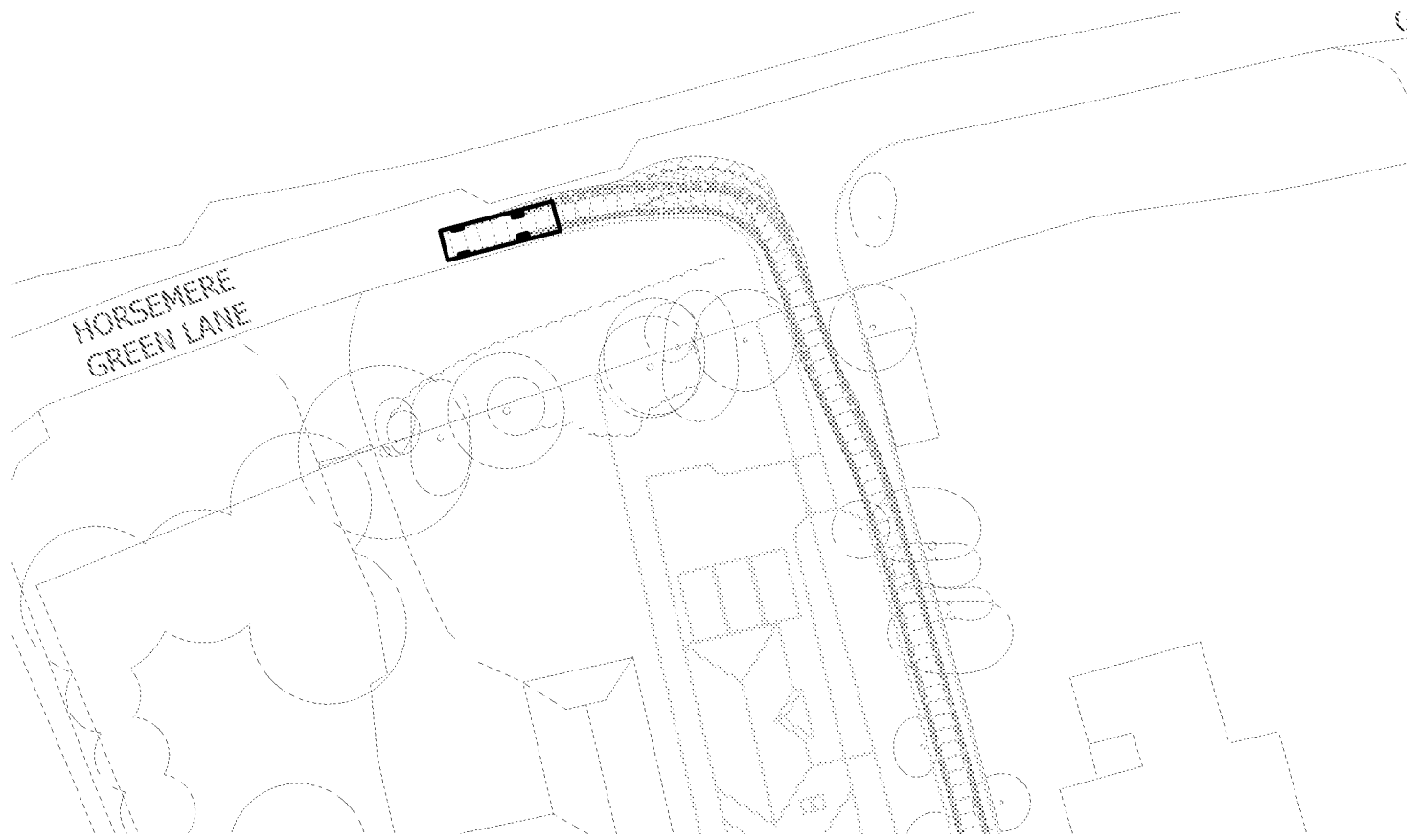
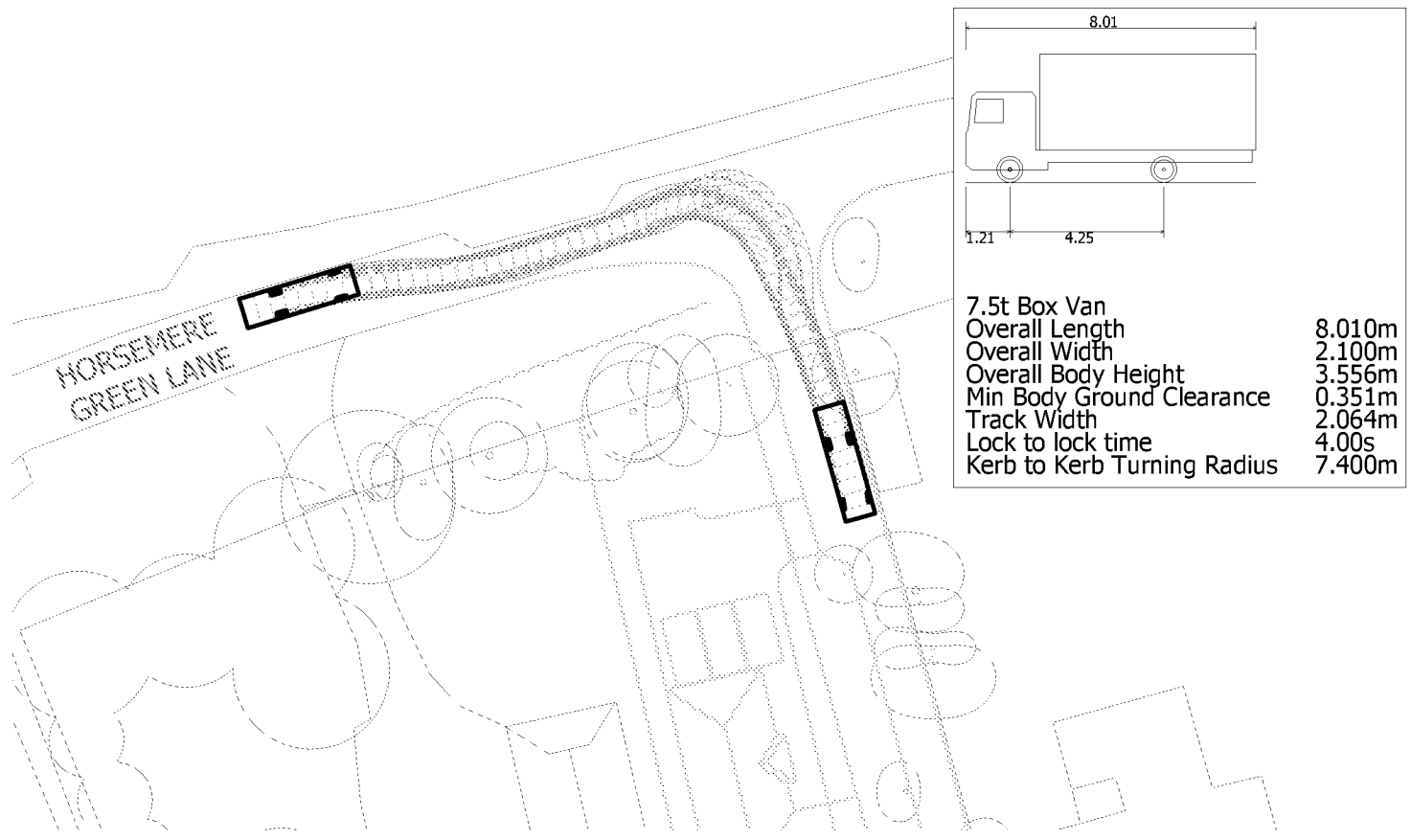
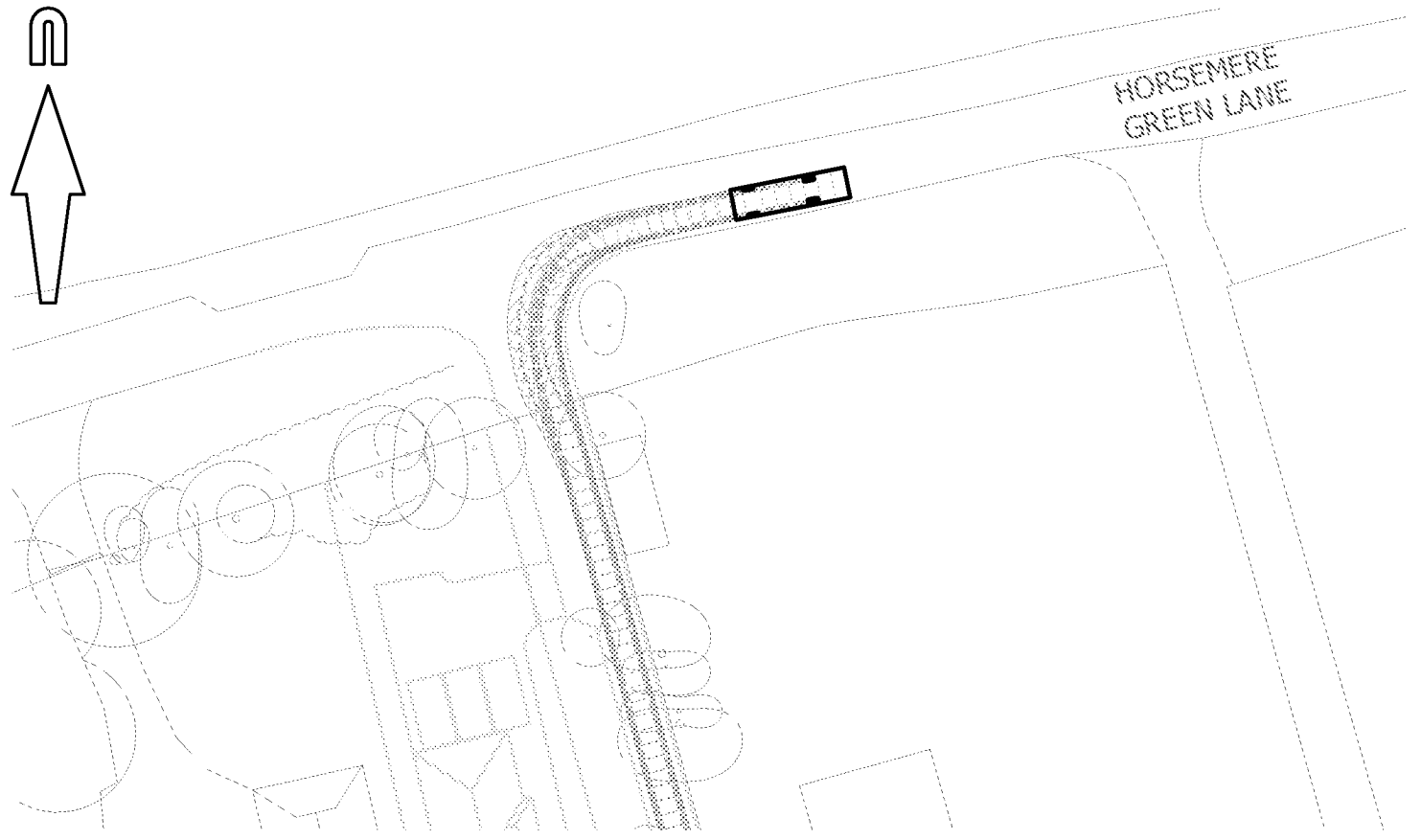
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**SWEPT PATH ANALYSIS  
LARGE REFUSE VEHICLE THROUGH  
SITE AND TURNING AT END**

scale 1:500 @ A3 drawn by JME checked by BC

date MARCH 2018 cad file FIGURES REV A.DWG

drawing number **FIGURE 1.7** rev. **A**



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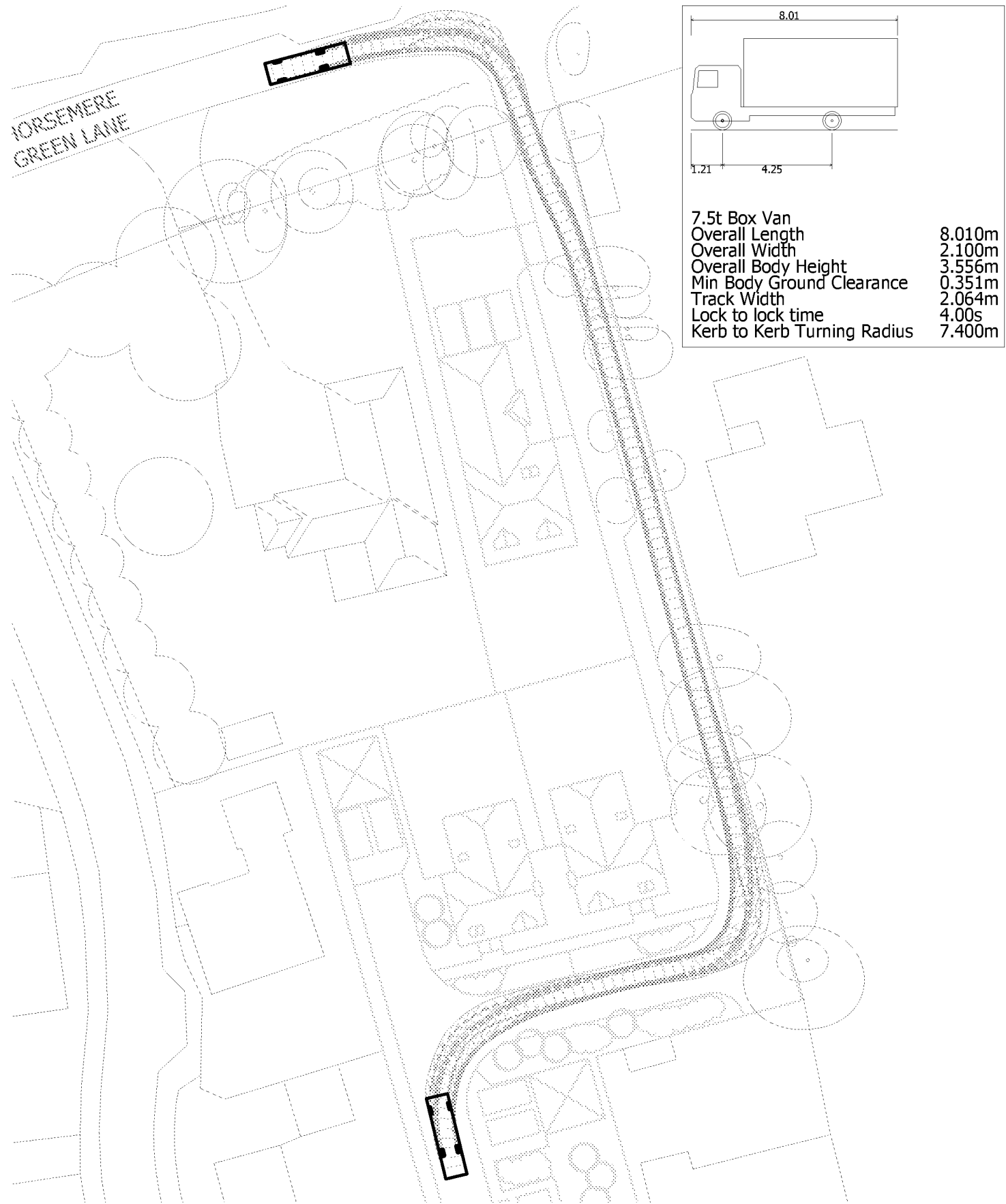
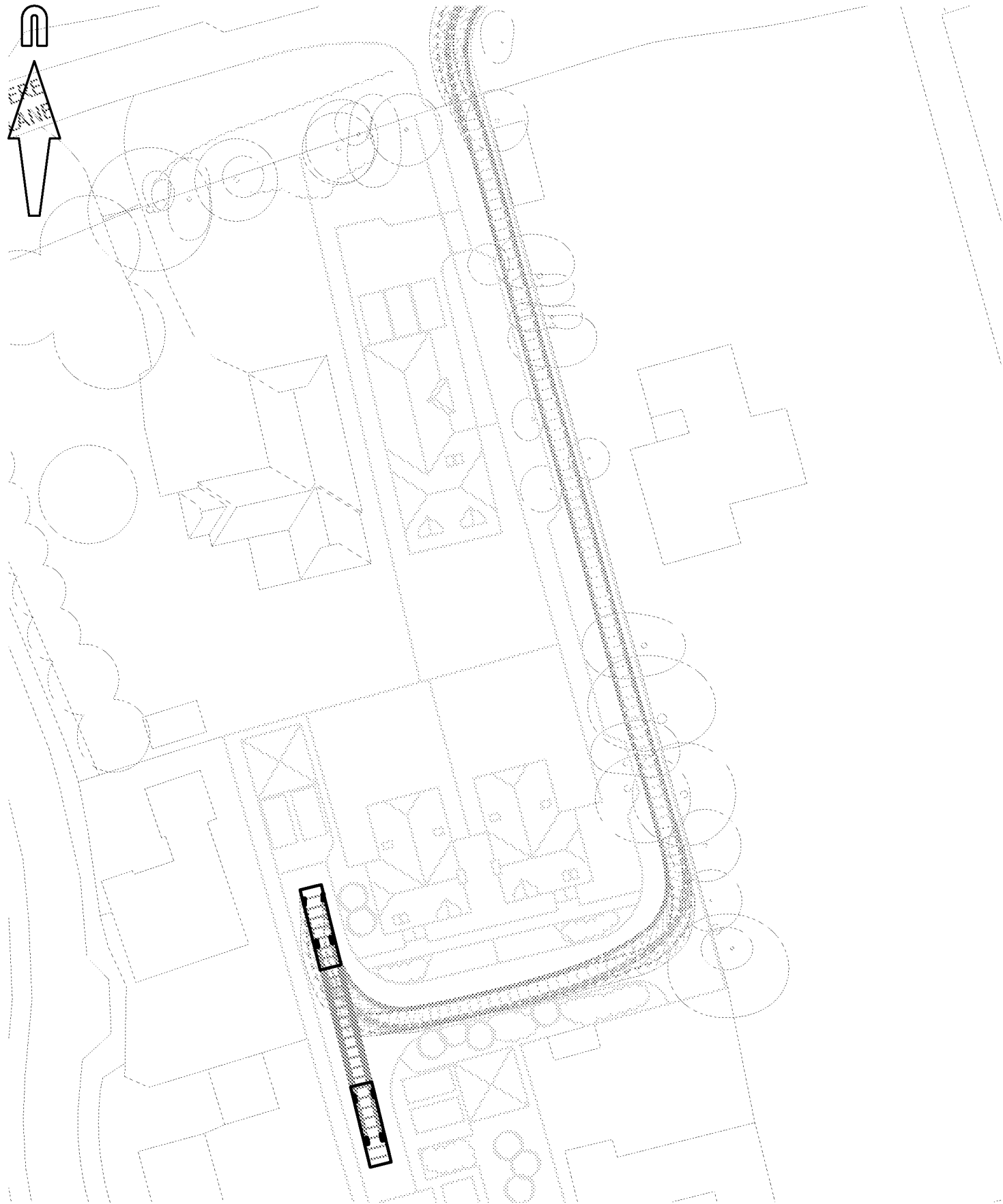
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LAND AT MISTLETOE FARM

title  
SWEPT PATH ANALYSIS  
7.5t BOX VAN ENTERING/EXITING SITE

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| FIGURE 1.8       |              | A                          |



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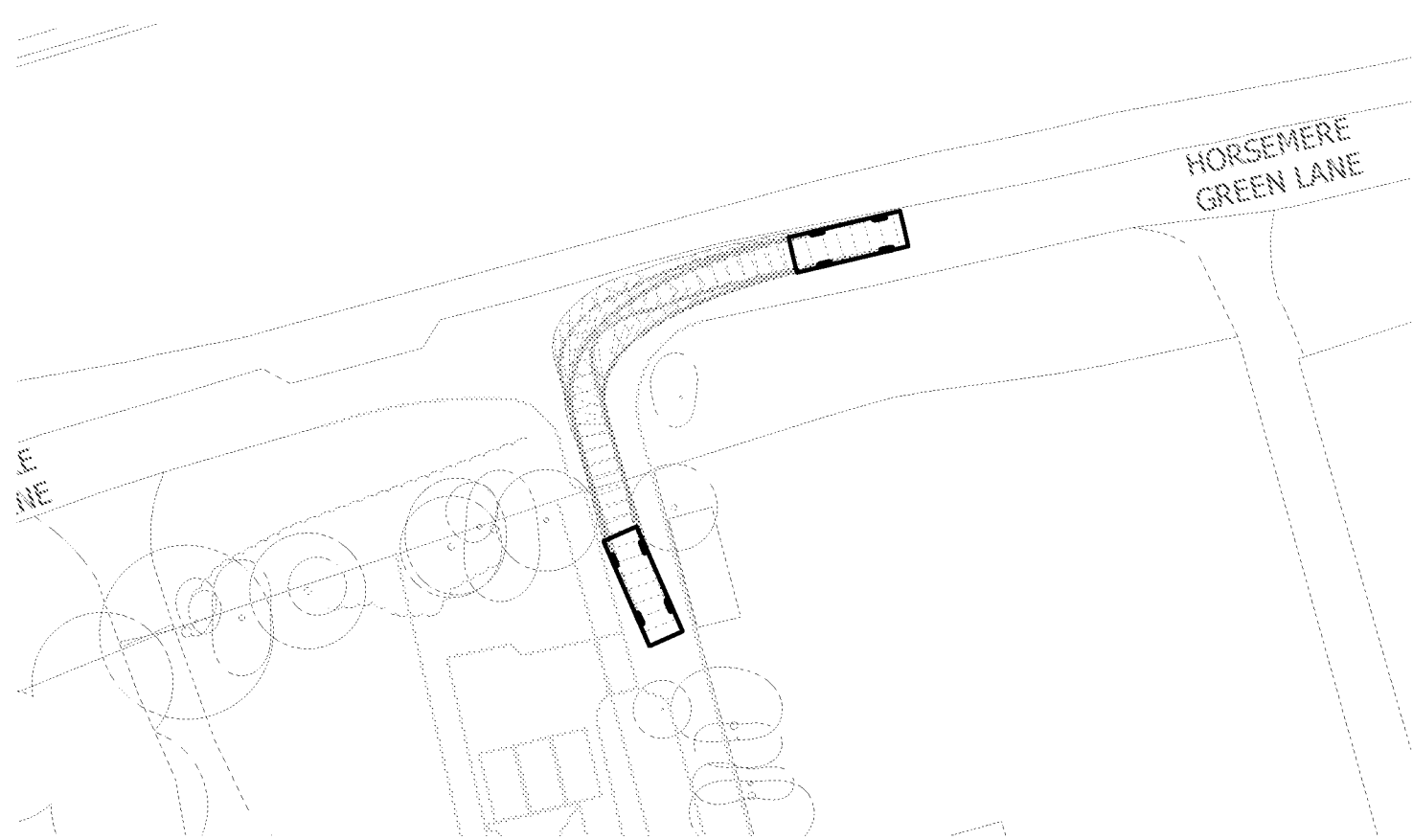
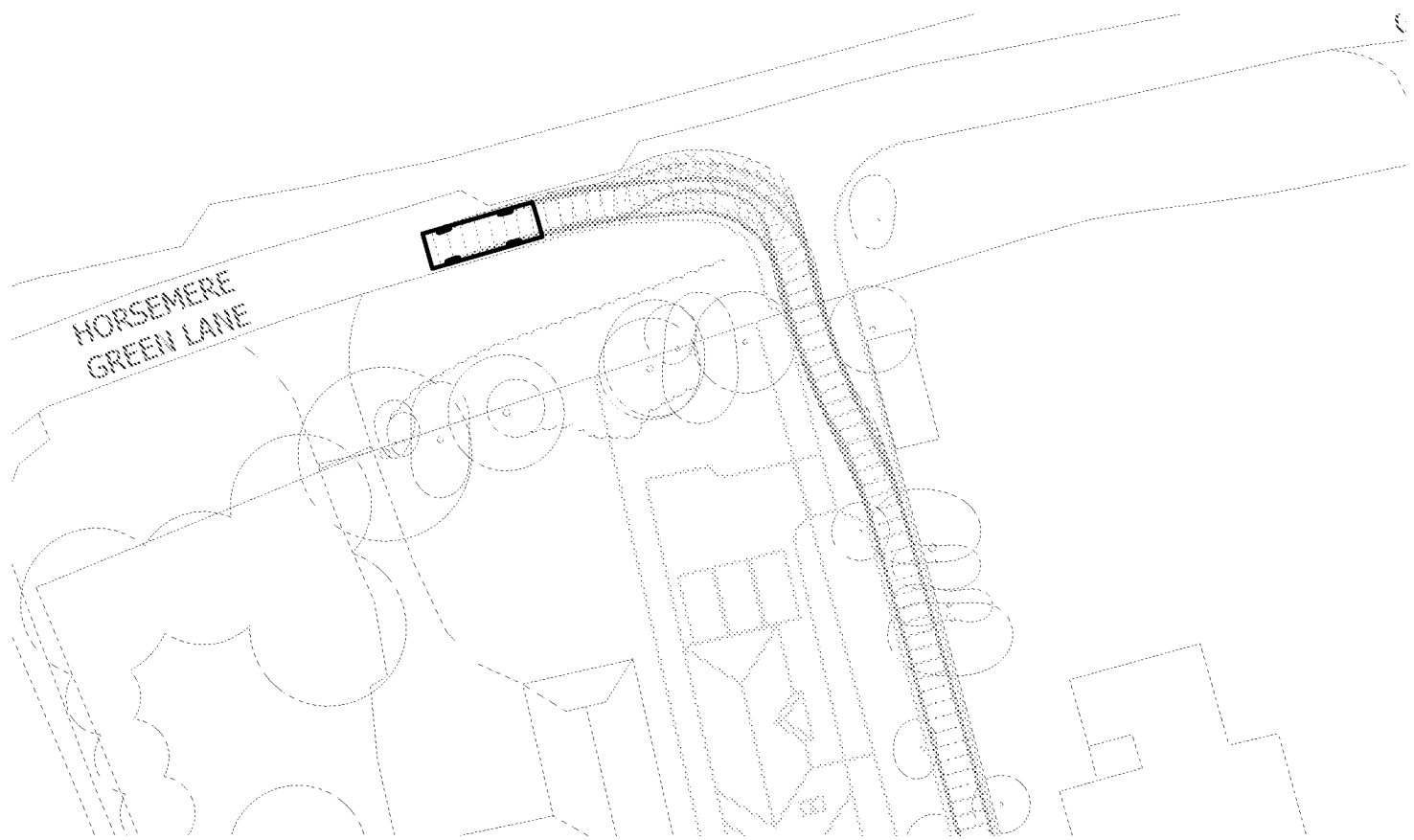
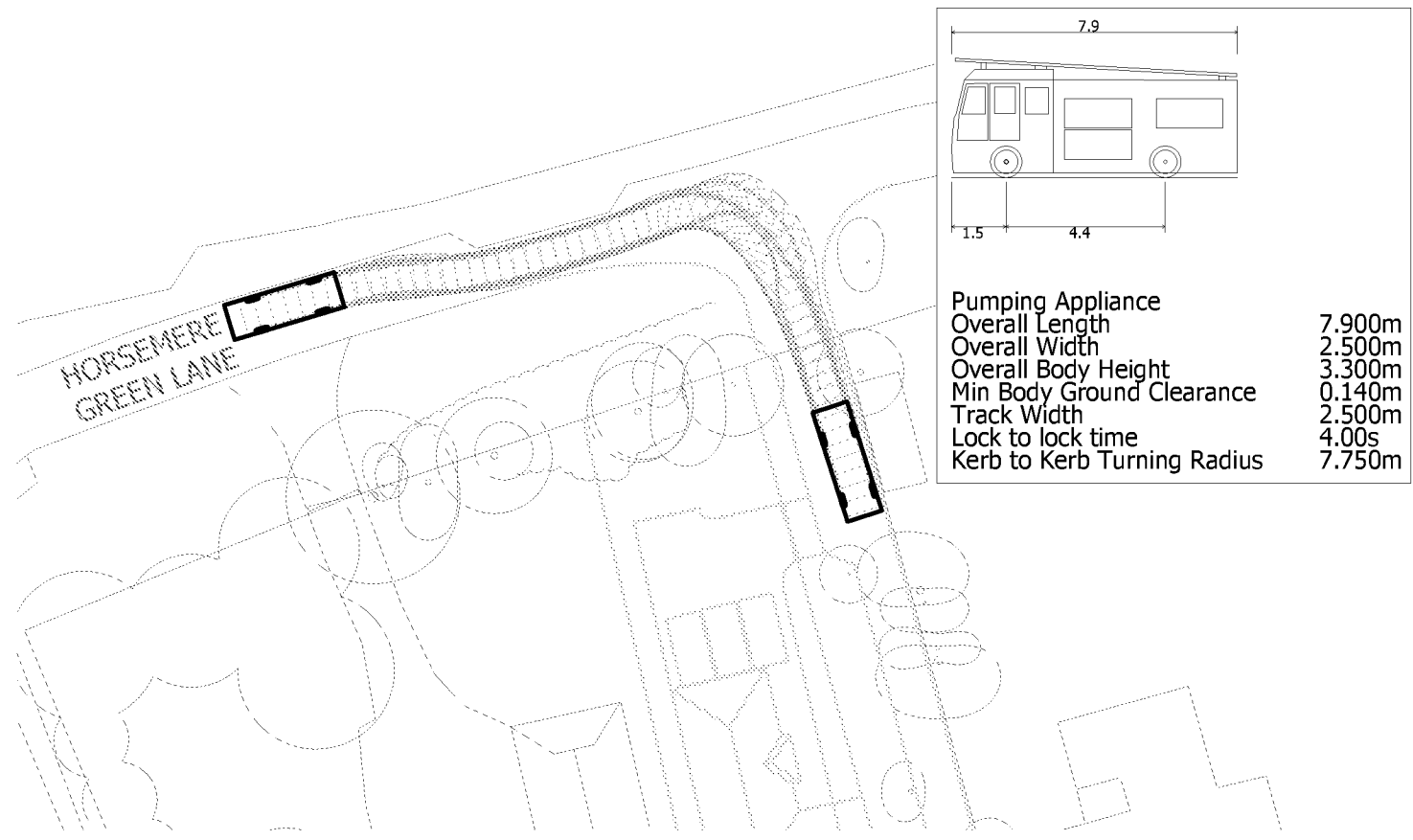
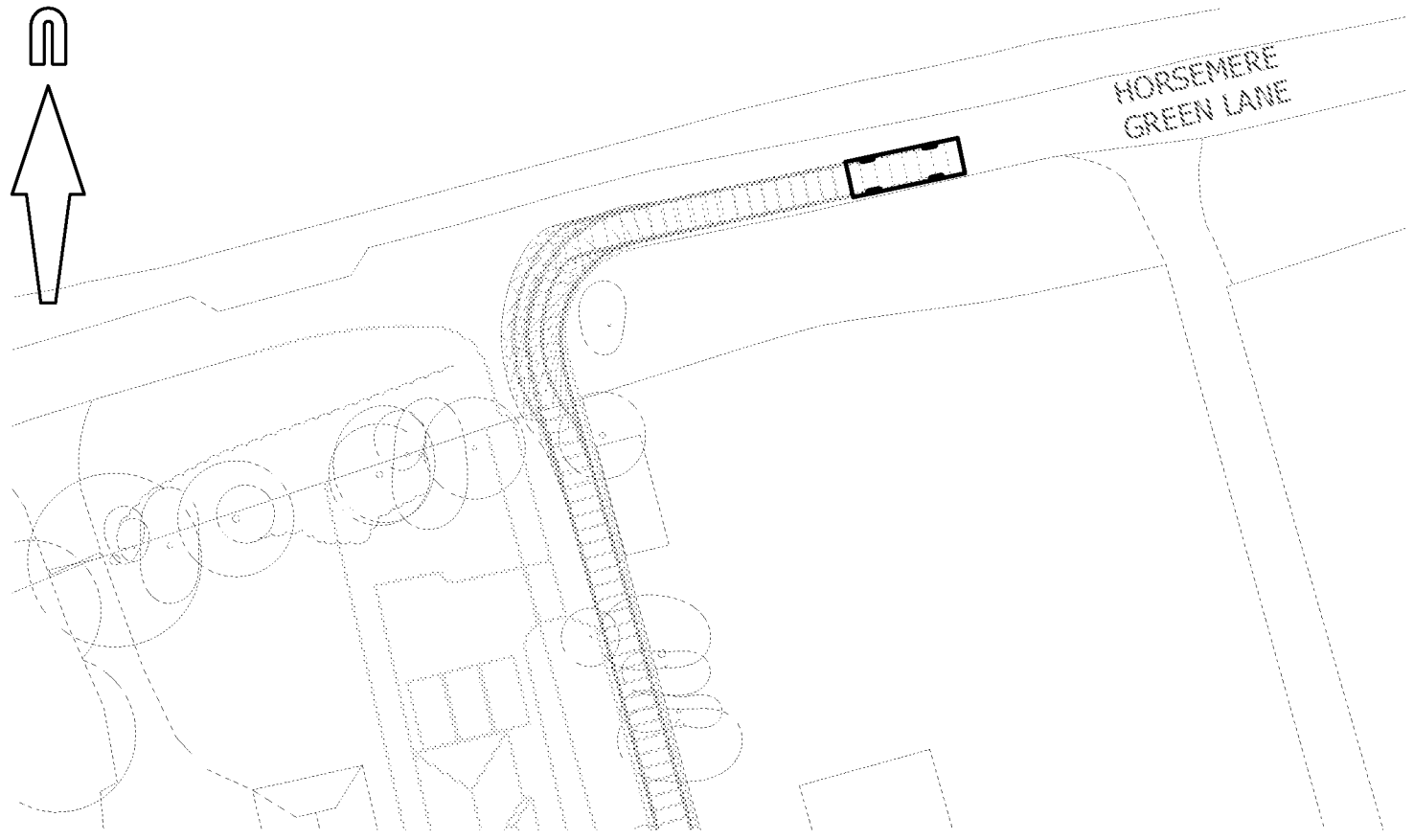
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**LAND AT MISTLETOE FARM**

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**SWEPT PATH ANALYSIS**  
**7.5t BOX VAN THROUGH SITE AND TURNING AT END**

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date MARCH 2018 cad file FIGURES REV A.DWG

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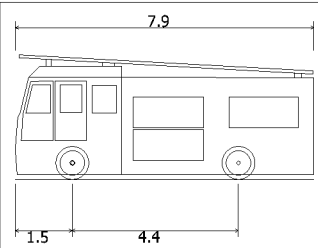
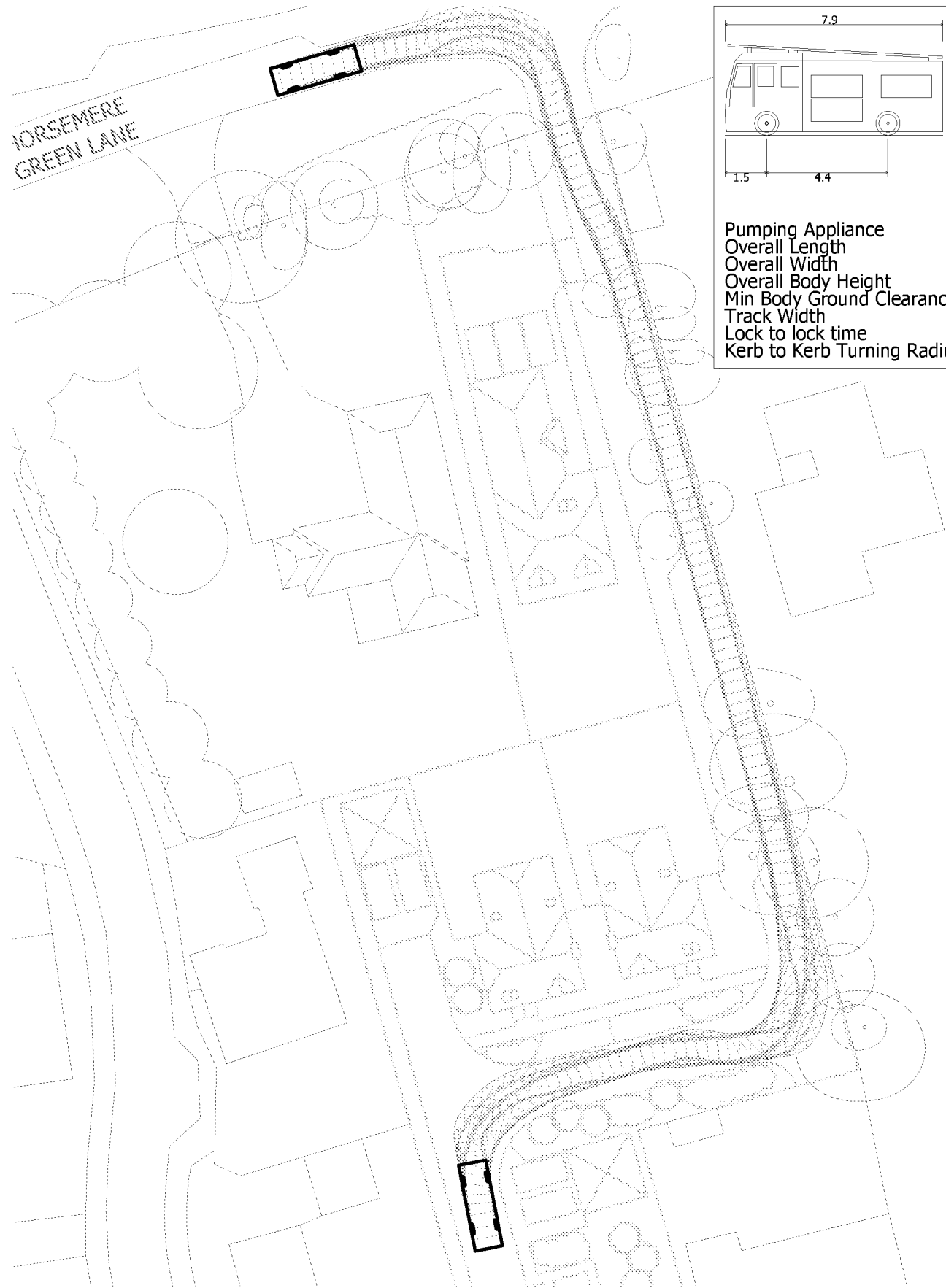
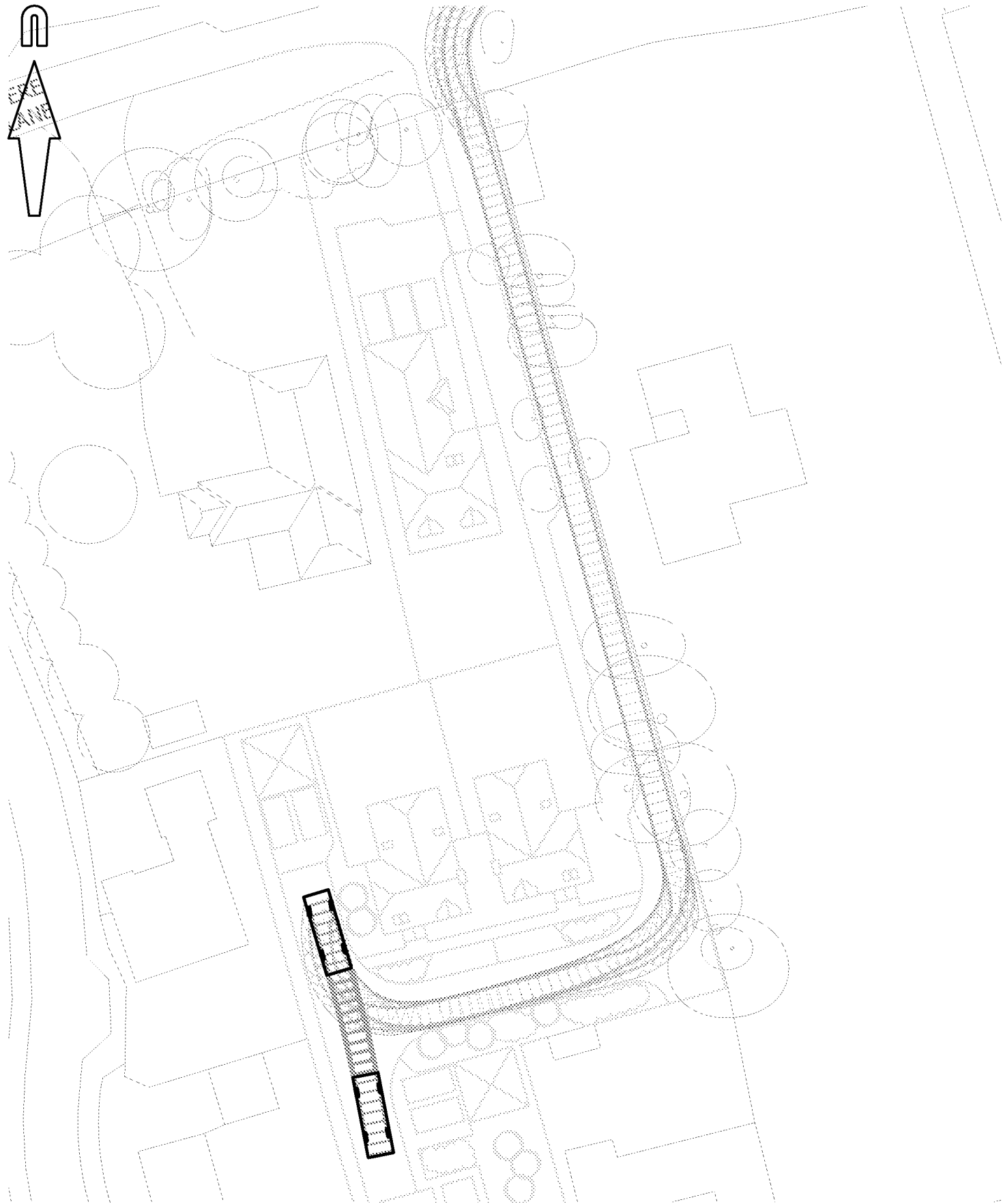
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title  
SWEPT PATH ANALYSIS  
PUMPING APPLIANCE ENTERING/EXITING SITE

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| FIGURE 1.10      |              | A                          |



|                             |        |
|-----------------------------|--------|
| Pumping Appliance           |        |
| Overall Length              | 7.900m |
| Overall Width               | 2.500m |
| Overall Body Height         | 3.300m |
| Min Body Ground Clearance   | 0.140m |
| Track Width                 | 2.500m |
| Lock to lock time           | 4.00s  |
| Kerb to Kerb Turning Radius | 7.750m |

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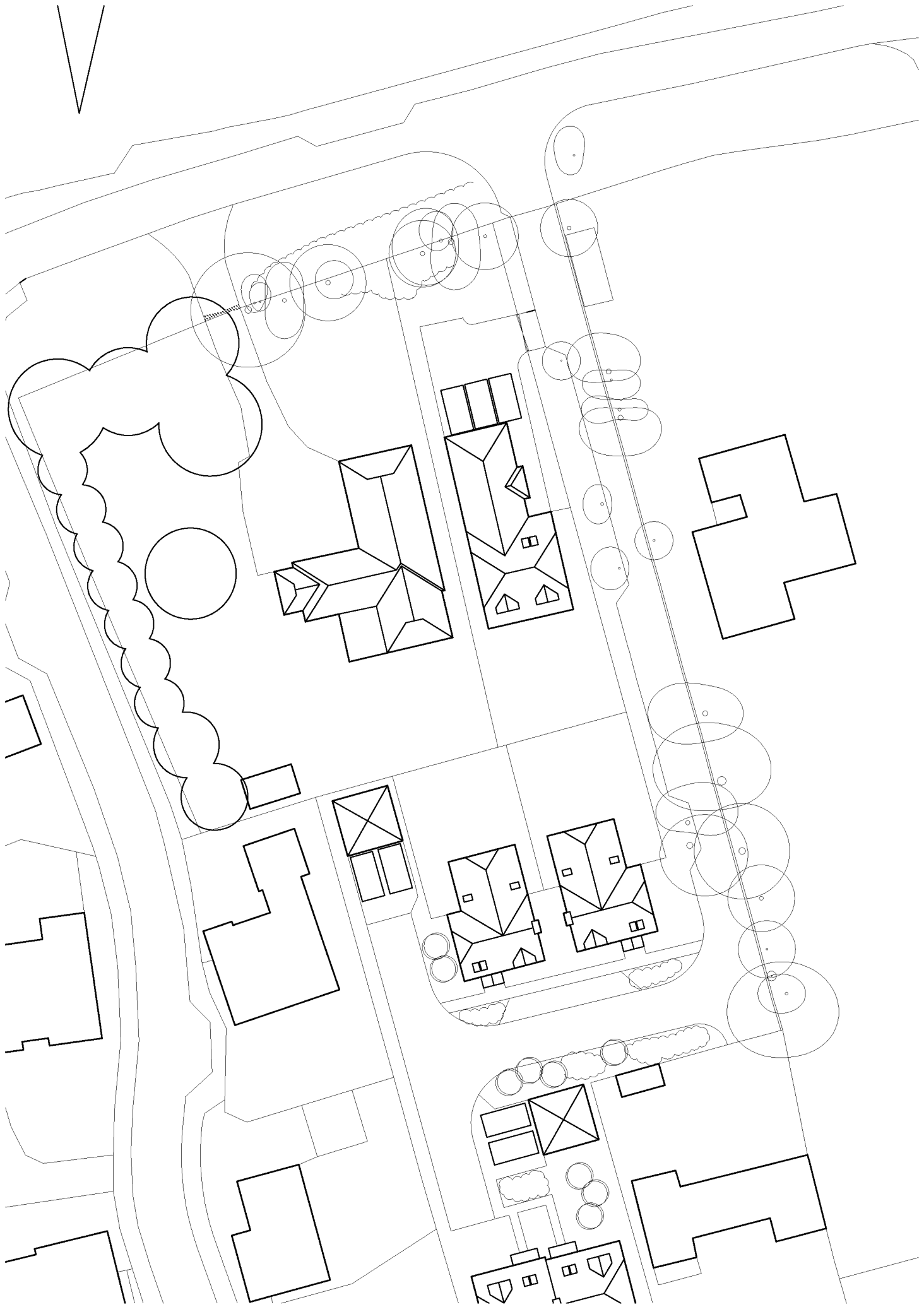
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project  
LAND AT MISTLETOE FARM

title  
SWEPT PATH ANALYSIS  
PUMPING APPLIANCE THROUGH  
SITE AND TURNING AT END

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## APPENDIX A



## APPENDIX B

Calculation Reference: AUDIT-807401-180313-0314

**TRIP RATE CALCULATION SELECTION PARAMETERS:**

Land Use : 03 - RESIDENTIAL  
 Category : A - HOUSES PRIVATELY OWNED

**MULTI-MODAL VEHICLES**Selected regions and areas:

|                      |        |
|----------------------|--------|
| <b>02 SOUTH EAST</b> |        |
| ES EAST SUSSEX       | 1 days |
| HC HAMPSHIRE         | 1 days |
| KC KENT              | 1 days |
| SC SURREY            | 1 days |
| WS WEST SUSSEX       | 3 days |

*This section displays the number of survey days per TRICS® sub-region in the selected set*

**Secondary Filtering selection:**

*This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.*

Parameter: Number of dwellings  
 Actual Range: 37 to 805 (units: )  
 Range Selected by User: 36 to 805 (units: )

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/09 to 27/11/17

*This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.*

Selected survey days:

|           |        |
|-----------|--------|
| Monday    | 1 days |
| Wednesday | 1 days |
| Thursday  | 4 days |
| Friday    | 1 days |

*This data displays the number of selected surveys by day of the week.*

Selected survey types:

|                       |        |
|-----------------------|--------|
| Manual count          | 7 days |
| Directional ATC Count | 0 days |

*This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaken using machines.*

Selected Locations:

|                                    |   |
|------------------------------------|---|
| Suburban Area (PPS6 Out of Centre) | 3 |
| Edge of Town                       | 4 |

*This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.*

Selected Location Sub Categories:

|                  |   |
|------------------|---|
| Residential Zone | 7 |
|------------------|---|

*This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.*

LIST OF SITES relevant to selection parameters

|          |                                    |                                 |                     |
|----------|------------------------------------|---------------------------------|---------------------|
| <b>1</b> | <b>ES-03-A-02</b>                  | <b>PRIVATE HOUSING</b>          | <b>EAST SUSSEX</b>  |
|          | SOUTH COAST ROAD                   |                                 |                     |
|          | PEACEHAVEN                         |                                 |                     |
|          | Edge of Town                       |                                 |                     |
|          | Residential Zone                   |                                 |                     |
|          | Total Number of dwellings:         |                                 | 37                  |
|          | Survey date: FRIDAY                |                                 | 18/11/11            |
|          |                                    |                                 | Survey Type: MANUAL |
| <b>2</b> | <b>HC-03-A-19</b>                  | <b>HOUSES &amp; FLATS</b>       | <b>HAMPSHIRE</b>    |
|          | CANADA WAY                         |                                 |                     |
|          | LIPHOOK                            |                                 |                     |
|          | Suburban Area (PPS6 Out of Centre) |                                 |                     |
|          | Residential Zone                   |                                 |                     |
|          | Total Number of dwellings:         |                                 | 62                  |
|          | Survey date: MONDAY                |                                 | 27/11/17            |
|          |                                    |                                 | Survey Type: MANUAL |
| <b>3</b> | <b>KC-03-A-03</b>                  | <b>MIXED HOUSES &amp; FLATS</b> | <b>KENT</b>         |
|          | HYTHE ROAD                         |                                 |                     |
|          | WILLESBOROUGH                      |                                 |                     |
|          | ASHFORD                            |                                 |                     |
|          | Suburban Area (PPS6 Out of Centre) |                                 |                     |
|          | Residential Zone                   |                                 |                     |
|          | Total Number of dwellings:         |                                 | 51                  |
|          | Survey date: THURSDAY              |                                 | 14/07/16            |
|          |                                    |                                 | Survey Type: MANUAL |
| <b>4</b> | <b>SC-03-A-04</b>                  | <b>DETACHED &amp; TERRACED</b>  | <b>SURREY</b>       |
|          | HIGH ROAD                          |                                 |                     |
|          | BYFLEET                            |                                 |                     |
|          | Edge of Town                       |                                 |                     |
|          | Residential Zone                   |                                 |                     |
|          | Total Number of dwellings:         |                                 | 71                  |
|          | Survey date: THURSDAY              |                                 | 23/01/14            |
|          |                                    |                                 | Survey Type: MANUAL |
| <b>5</b> | <b>WS-03-A-04</b>                  | <b>MIXED HOUSES</b>             | <b>WEST SUSSEX</b>  |
|          | HILLS FARM LANE                    |                                 |                     |
|          | BROADBRIDGE HEATH                  |                                 |                     |
|          | HORSHAM                            |                                 |                     |
|          | Edge of Town                       |                                 |                     |
|          | Residential Zone                   |                                 |                     |
|          | Total Number of dwellings:         |                                 | 151                 |
|          | Survey date: THURSDAY              |                                 | 11/12/14            |
|          |                                    |                                 | Survey Type: MANUAL |
| <b>6</b> | <b>WS-03-A-05</b>                  | <b>TERRACED &amp; FLATS</b>     | <b>WEST SUSSEX</b>  |
|          | UPPER SHOREHAM ROAD                |                                 |                     |
|          | SHOREHAM BY SEA                    |                                 |                     |
|          | Suburban Area (PPS6 Out of Centre) |                                 |                     |
|          | Residential Zone                   |                                 |                     |
|          | Total Number of dwellings:         |                                 | 48                  |
|          | Survey date: WEDNESDAY             |                                 | 18/04/12            |
|          |                                    |                                 | Survey Type: MANUAL |
| <b>7</b> | <b>WS-03-A-06</b>                  | <b>MIXED HOUSES</b>             | <b>WEST SUSSEX</b>  |
|          | ELLIS ROAD                         |                                 |                     |
|          | S BROADBRIDGE HEATH                |                                 |                     |
|          | WEST HORSHAM                       |                                 |                     |
|          | Edge of Town                       |                                 |                     |
|          | Residential Zone                   |                                 |                     |
|          | Total Number of dwellings:         |                                 | 805                 |
|          | Survey date: THURSDAY              |                                 | 02/03/17            |
|          |                                    |                                 | Survey Type: MANUAL |

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

OFF-LINE VERSION Mayer Brown Lion House Woking

Licence No: 807401

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

**MULTI-MODAL VEHICLES****Calculation factor: 1 DWELLS****BOLD print indicates peak (busiest) period**

| Time Range    | ARRIVALS |             |              | DEPARTURES |             |              | TOTALS   |             |              |
|---------------|----------|-------------|--------------|------------|-------------|--------------|----------|-------------|--------------|
|               | No. Days | Ave. DWELLS | Trip Rate    | No. Days   | Ave. DWELLS | Trip Rate    | No. Days | Ave. DWELLS | Trip Rate    |
| 00:00 - 01:00 |          |             |              |            |             |              |          |             |              |
| 01:00 - 02:00 |          |             |              |            |             |              |          |             |              |
| 02:00 - 03:00 |          |             |              |            |             |              |          |             |              |
| 03:00 - 04:00 |          |             |              |            |             |              |          |             |              |
| 04:00 - 05:00 |          |             |              |            |             |              |          |             |              |
| 05:00 - 06:00 |          |             |              |            |             |              |          |             |              |
| 06:00 - 07:00 |          |             |              |            |             |              |          |             |              |
| 07:00 - 08:00 | 7        | 175         | 0.095        | 7          | 175         | 0.366        | 7        | 175         | 0.461        |
| 08:00 - 09:00 | 7        | 175         | 0.151        | <b>7</b>   | <b>175</b>  | <b>0.426</b> | <b>7</b> | <b>175</b>  | <b>0.577</b> |
| 09:00 - 10:00 | 7        | 175         | 0.161        | 7          | 175         | 0.186        | 7        | 175         | 0.347        |
| 10:00 - 11:00 | 7        | 175         | 0.121        | 7          | 175         | 0.151        | 7        | 175         | 0.272        |
| 11:00 - 12:00 | 7        | 175         | 0.149        | 7          | 175         | 0.162        | 7        | 175         | 0.311        |
| 12:00 - 13:00 | 7        | 175         | 0.148        | 7          | 175         | 0.157        | 7        | 175         | 0.305        |
| 13:00 - 14:00 | 7        | 175         | 0.167        | 7          | 175         | 0.162        | 7        | 175         | 0.329        |
| 14:00 - 15:00 | 7        | 175         | 0.144        | 7          | 175         | 0.187        | 7        | 175         | 0.331        |
| 15:00 - 16:00 | 7        | 175         | 0.264        | 7          | 175         | 0.187        | 7        | 175         | 0.451        |
| 16:00 - 17:00 | 7        | 175         | 0.273        | 7          | 175         | 0.158        | 7        | 175         | 0.431        |
| 17:00 - 18:00 | <b>7</b> | <b>175</b>  | <b>0.357</b> | 7          | 175         | 0.161        | 7        | 175         | 0.518        |
| 18:00 - 19:00 | 7        | 175         | 0.329        | 7          | 175         | 0.170        | 7        | 175         | 0.499        |
| 19:00 - 20:00 |          |             |              |            |             |              |          |             |              |
| 20:00 - 21:00 |          |             |              |            |             |              |          |             |              |
| 21:00 - 22:00 |          |             |              |            |             |              |          |             |              |
| 22:00 - 23:00 |          |             |              |            |             |              |          |             |              |
| 23:00 - 24:00 |          |             |              |            |             |              |          |             |              |
| Total Rates:  |          |             | 2.359        |            |             | 2.473        |          |             | 4.832        |

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is:  $COUNT/TRP \times FACT$ . Trip rates are then rounded to 3 decimal places.

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#### Parameter summary

|                                               |                     |
|-----------------------------------------------|---------------------|
| Trip rate parameter range selected:           | 37 - 805 (units: )  |
| Survey date range:                            | 01/01/09 - 27/11/17 |
| Number of weekdays (Monday-Friday):           | 7                   |
| Number of Saturdays:                          | 0                   |
| Number of Sundays:                            | 0                   |
| Surveys automatically removed from selection: | 2                   |
| Surveys manually removed from selection:      | 0                   |

*This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.*

OFF-LINE VERSION Mayer Brown Lion House Woking

Licence No: 807401

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

**MULTI-MODAL CYCLISTS****Calculation factor: 1 DWELLS****BOLD print indicates peak (busiest) period**

| Time Range    | ARRIVALS |             |              | DEPARTURES |             |              | TOTALS   |             |              |
|---------------|----------|-------------|--------------|------------|-------------|--------------|----------|-------------|--------------|
|               | No. Days | Ave. DWELLS | Trip Rate    | No. Days   | Ave. DWELLS | Trip Rate    | No. Days | Ave. DWELLS | Trip Rate    |
| 00:00 - 01:00 |          |             |              |            |             |              |          |             |              |
| 01:00 - 02:00 |          |             |              |            |             |              |          |             |              |
| 02:00 - 03:00 |          |             |              |            |             |              |          |             |              |
| 03:00 - 04:00 |          |             |              |            |             |              |          |             |              |
| 04:00 - 05:00 |          |             |              |            |             |              |          |             |              |
| 05:00 - 06:00 |          |             |              |            |             |              |          |             |              |
| 06:00 - 07:00 |          |             |              |            |             |              |          |             |              |
| 07:00 - 08:00 | 7        | 175         | 0.008        | 7          | 175         | 0.007        | 7        | 175         | 0.015        |
| 08:00 - 09:00 | 7        | 175         | 0.001        | 7          | 175         | 0.010        | 7        | 175         | 0.011        |
| 09:00 - 10:00 | 7        | 175         | 0.001        | 7          | 175         | 0.002        | 7        | 175         | 0.003        |
| 10:00 - 11:00 | 7        | 175         | 0.002        | 7          | 175         | 0.004        | 7        | 175         | 0.006        |
| 11:00 - 12:00 | 7        | 175         | 0.003        | 7          | 175         | 0.003        | 7        | 175         | 0.006        |
| 12:00 - 13:00 | 7        | 175         | 0.002        | 7          | 175         | 0.002        | 7        | 175         | 0.004        |
| 13:00 - 14:00 | 7        | 175         | 0.002        | 7          | 175         | 0.007        | 7        | 175         | 0.009        |
| 14:00 - 15:00 | 7        | 175         | 0.002        | 7          | 175         | 0.001        | 7        | 175         | 0.003        |
| 15:00 - 16:00 | 7        | 175         | 0.006        | 7          | 175         | 0.005        | 7        | 175         | 0.011        |
| 16:00 - 17:00 | 7        | 175         | 0.011        | <b>7</b>   | <b>175</b>  | <b>0.014</b> | 7        | 175         | 0.025        |
| 17:00 - 18:00 | <b>7</b> | <b>175</b>  | <b>0.018</b> | 7          | 175         | 0.012        | <b>7</b> | <b>175</b>  | <b>0.030</b> |
| 18:00 - 19:00 | 7        | 175         | 0.007        | 7          | 175         | 0.006        | 7        | 175         | 0.013        |
| 19:00 - 20:00 |          |             |              |            |             |              |          |             |              |
| 20:00 - 21:00 |          |             |              |            |             |              |          |             |              |
| 21:00 - 22:00 |          |             |              |            |             |              |          |             |              |
| 22:00 - 23:00 |          |             |              |            |             |              |          |             |              |
| 23:00 - 24:00 |          |             |              |            |             |              |          |             |              |
| Total Rates:  |          |             | 0.063        |            |             | 0.073        |          |             | 0.136        |

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is:  $COUNT/TRP \times FACT$ . Trip rates are then rounded to 3 decimal places.

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#### Parameter summary

|                                               |                     |
|-----------------------------------------------|---------------------|
| Trip rate parameter range selected:           | 37 - 805 (units: )  |
| Survey date range:                            | 01/01/09 - 27/11/17 |
| Number of weekdays (Monday-Friday):           | 7                   |
| Number of Saturdays:                          | 0                   |
| Number of Sundays:                            | 0                   |
| Surveys automatically removed from selection: | 2                   |
| Surveys manually removed from selection:      | 0                   |

*This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.*

OFF-LINE VERSION Mayer Brown Lion House Woking

Licence No: 807401

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

**MULTI-MODAL PEDESTRIANS****Calculation factor: 1 DWELLS****BOLD print indicates peak (busiest) period**

| Time Range    | ARRIVALS |             |              | DEPARTURES |             |              | TOTALS   |             |              |
|---------------|----------|-------------|--------------|------------|-------------|--------------|----------|-------------|--------------|
|               | No. Days | Ave. DWELLS | Trip Rate    | No. Days   | Ave. DWELLS | Trip Rate    | No. Days | Ave. DWELLS | Trip Rate    |
| 00:00 - 01:00 |          |             |              |            |             |              |          |             |              |
| 01:00 - 02:00 |          |             |              |            |             |              |          |             |              |
| 02:00 - 03:00 |          |             |              |            |             |              |          |             |              |
| 03:00 - 04:00 |          |             |              |            |             |              |          |             |              |
| 04:00 - 05:00 |          |             |              |            |             |              |          |             |              |
| 05:00 - 06:00 |          |             |              |            |             |              |          |             |              |
| 06:00 - 07:00 |          |             |              |            |             |              |          |             |              |
| 07:00 - 08:00 | 7        | 175         | 0.020        | 7          | 175         | 0.027        | 7        | 175         | 0.047        |
| 08:00 - 09:00 | 7        | 175         | 0.020        | <b>7</b>   | <b>175</b>  | <b>0.158</b> | 7        | 175         | 0.178        |
| 09:00 - 10:00 | 7        | 175         | 0.048        | 7          | 175         | 0.045        | 7        | 175         | 0.093        |
| 10:00 - 11:00 | 7        | 175         | 0.038        | 7          | 175         | 0.037        | 7        | 175         | 0.075        |
| 11:00 - 12:00 | 7        | 175         | 0.033        | 7          | 175         | 0.026        | 7        | 175         | 0.059        |
| 12:00 - 13:00 | 7        | 175         | 0.033        | 7          | 175         | 0.033        | 7        | 175         | 0.066        |
| 13:00 - 14:00 | 7        | 175         | 0.039        | 7          | 175         | 0.024        | 7        | 175         | 0.063        |
| 14:00 - 15:00 | 7        | 175         | 0.040        | 7          | 175         | 0.054        | 7        | 175         | 0.094        |
| 15:00 - 16:00 | <b>7</b> | <b>175</b>  | <b>0.159</b> | 7          | 175         | 0.043        | <b>7</b> | <b>175</b>  | <b>0.202</b> |
| 16:00 - 17:00 | 7        | 175         | 0.077        | 7          | 175         | 0.044        | 7        | 175         | 0.121        |
| 17:00 - 18:00 | 7        | 175         | 0.071        | 7          | 175         | 0.067        | 7        | 175         | 0.138        |
| 18:00 - 19:00 | 7        | 175         | 0.051        | 7          | 175         | 0.035        | 7        | 175         | 0.086        |
| 19:00 - 20:00 |          |             |              |            |             |              |          |             |              |
| 20:00 - 21:00 |          |             |              |            |             |              |          |             |              |
| 21:00 - 22:00 |          |             |              |            |             |              |          |             |              |
| 22:00 - 23:00 |          |             |              |            |             |              |          |             |              |
| 23:00 - 24:00 |          |             |              |            |             |              |          |             |              |
| Total Rates:  |          |             | 0.629        |            |             | 0.593        |          |             | 1.222        |

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is:  $COUNT/TRP \times FACT$ . Trip rates are then rounded to 3 decimal places.

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#### Parameter summary

|                                               |                     |
|-----------------------------------------------|---------------------|
| Trip rate parameter range selected:           | 37 - 805 (units: )  |
| Survey date range:                            | 01/01/09 - 27/11/17 |
| Number of weekdays (Monday-Friday):           | 7                   |
| Number of Saturdays:                          | 0                   |
| Number of Sundays:                            | 0                   |
| Surveys automatically removed from selection: | 2                   |
| Surveys manually removed from selection:      | 0                   |

*This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.*

OFF-LINE VERSION Mayer Brown Lion House Woking

Licence No: 807401

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

**MULTI-MODAL PUBLIC TRANSPORT USERS****Calculation factor: 1 DWELLS****BOLD print indicates peak (busiest) period**

| Time Range    | ARRIVALS |             |              | DEPARTURES |             |              | TOTALS   |             |              |
|---------------|----------|-------------|--------------|------------|-------------|--------------|----------|-------------|--------------|
|               | No. Days | Ave. DWELLS | Trip Rate    | No. Days   | Ave. DWELLS | Trip Rate    | No. Days | Ave. DWELLS | Trip Rate    |
| 00:00 - 01:00 |          |             |              |            |             |              |          |             |              |
| 01:00 - 02:00 |          |             |              |            |             |              |          |             |              |
| 02:00 - 03:00 |          |             |              |            |             |              |          |             |              |
| 03:00 - 04:00 |          |             |              |            |             |              |          |             |              |
| 04:00 - 05:00 |          |             |              |            |             |              |          |             |              |
| 05:00 - 06:00 |          |             |              |            |             |              |          |             |              |
| 06:00 - 07:00 |          |             |              |            |             |              |          |             |              |
| 07:00 - 08:00 | 7        | 175         | 0.001        | <b>7</b>   | <b>175</b>  | <b>0.024</b> | <b>7</b> | <b>175</b>  | <b>0.025</b> |
| 08:00 - 09:00 | 7        | 175         | 0.000        | 7          | 175         | 0.011        | 7        | 175         | 0.011        |
| 09:00 - 10:00 | 7        | 175         | 0.002        | 7          | 175         | 0.008        | 7        | 175         | 0.010        |
| 10:00 - 11:00 | 7        | 175         | 0.002        | 7          | 175         | 0.006        | 7        | 175         | 0.008        |
| 11:00 - 12:00 | 7        | 175         | 0.002        | 7          | 175         | 0.004        | 7        | 175         | 0.006        |
| 12:00 - 13:00 | 7        | 175         | 0.001        | 7          | 175         | 0.003        | 7        | 175         | 0.004        |
| 13:00 - 14:00 | 7        | 175         | 0.007        | 7          | 175         | 0.002        | 7        | 175         | 0.009        |
| 14:00 - 15:00 | 7        | 175         | 0.004        | 7          | 175         | 0.001        | 7        | 175         | 0.005        |
| 15:00 - 16:00 | 7        | 175         | 0.013        | 7          | 175         | 0.002        | 7        | 175         | 0.015        |
| 16:00 - 17:00 | 7        | 175         | 0.010        | 7          | 175         | 0.005        | 7        | 175         | 0.015        |
| 17:00 - 18:00 | <b>7</b> | <b>175</b>  | <b>0.016</b> | 7          | 175         | 0.000        | 7        | 175         | 0.016        |
| 18:00 - 19:00 | 7        | 175         | 0.008        | 7          | 175         | 0.000        | 7        | 175         | 0.008        |
| 19:00 - 20:00 |          |             |              |            |             |              |          |             |              |
| 20:00 - 21:00 |          |             |              |            |             |              |          |             |              |
| 21:00 - 22:00 |          |             |              |            |             |              |          |             |              |
| 22:00 - 23:00 |          |             |              |            |             |              |          |             |              |
| 23:00 - 24:00 |          |             |              |            |             |              |          |             |              |
| Total Rates:  |          |             | 0.066        |            |             | 0.066        |          |             | 0.132        |

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is:  $COUNT/TRP \times FACT$ . Trip rates are then rounded to 3 decimal places.

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#### Parameter summary

|                                               |                     |
|-----------------------------------------------|---------------------|
| Trip rate parameter range selected:           | 37 - 805 (units: )  |
| Survey date range:                            | 01/01/09 - 27/11/17 |
| Number of weekdays (Monday-Friday):           | 7                   |
| Number of Saturdays:                          | 0                   |
| Number of Sundays:                            | 0                   |
| Surveys automatically removed from selection: | 2                   |
| Surveys manually removed from selection:      | 0                   |

*This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.*

