



1.0 Introduction

- 1.1 This Note considers the draft response prepared by Medway Council on the application for 1,250 houses with primary school, local centre and care facilities on land at Pump Farm and Bloors Farm, Lower Rainham. A copy of the response is included in **Appendix A**.
- 1.2 A meeting was held with Highway Officers on 17th September 2019 to discuss the points raised. This Note has been provided in response to the queries following the meeting.
- 1.3 The response provided by Medway had a number of areas still under review. It was also agreed at the meeting that consideration of the wider impacts would be reviewed once the Aimsun modelling is available. These points will be covered in a subsequent note.

2.0 Care Home Trip Rates

- 2.1 There was a query in respect of the care home trip rates as it is not considered that the site is on the edge of town centre location or suburban area. It was requested the assessment be re-run.
- 2.2 A re-run of the trip rates has been undertaken to include edge of town sites and the revised rates are included in **Appendix B**. The AM and PM peak period rates per resident are summarised in **Table 1**. The trip rates used within the Transport Assessment (TA) are also included for comparison.

Table 1 – Care Home Trip Rates

Time Period	Revised Trip Rates			Trip Rates in TA		
	Arrivals	Departures	Totals	Arrivals	Departures	Totals
AM Peak	0.038	0.032	0.070	0.085	0.062	0.147
PM Peak	0.038	0.051	0.089	0.041	0.087	0.128



- 2.3 As set out above the revised trip rates are lower than those used within the TA and therefore it is not proposed to update these as they are a worst case.

3.0 Education Trips

- 3.1 It was requested the Education Department at Medway were contacted to establish the likely catchment area for the proposed 2FE primary school. The assumptions in the TA have been reviewed and a number of suggestions were made in respect of catchment size and staff numbers. A copy of the correspondence is included in **Appendix C**.

- 3.2 Medway suggest that a 1FE school typically serves 775 dwellings rather than 750 as assessed in the TA. The figures have been revised accordingly. It was also suggested staff numbers should be nearer 50 than 42 and this has been amended accordingly.

- 3.3 In terms of the comments regarding how the school will be filled, it is likely there will be a phased arrangement, however a future year assessment has been undertaken in 2029 when it is assumed the site will be built out and therefore fully operational.

- 3.4 The NTS data identifies that 41% of primary school education trips were undertaken by car. The Council have queried whether this is too low given the location of the site to existing residential areas. The education department have confirmed the catchment for a primary school is generally less than 2km. A 2km walking catchment from the existing local primary schools and the proposed primary school have been plotted as shown in **Appendix D**. This shows the existing local catchment is extremely well served by existing primary schools.

- 3.5 Travel Plans are available for a number of the existing primary schools within the vicinity. The mode share for journeys to school are shown in **Table 2** below.

**Table 2** – Primary School Travel Plan Mode Share Data

School	Mode share to car
Riverside Primary	25%
Byron Primary	9%

- 3.6 The existing travel patterns show comparatively low proportions of pupils arriving by car. The majority of pupils walk. The NTS proportion of 41% of pupils arriving by car is therefore likely to be an overestimate rather than underestimate. The walk routes to the south (where external catchment would come from) is good, as are existing and proposed links to the north and east. The proportion adopted in the TA is therefore considered robust.
- 3.7 Staff numbers are revised from 42 to 50 on a pro-rata basis. Using the NTS assumptions for mode share and on/off-site staff trips, this equates to 16 inbound AM peak trips and 16 outbound PM peak trips.
- 3.8 Based on the revised numbers, there will be a draw of 81 external pupils. Based on a proportion of 41% this equates to 33 inbound and 33 outbound trips in the morning peak. This would equate to 49 external pupil car trips. The overall external vehicular trip generation associated with primary education is shown in **Table 3** below.

Table 3 – Primary School External Pupil and Staff Trips

Primary School Staff	In	Out	Total
AM peak	16	0	16
PM peak	0	16	16
Primary School Pupils	In	Out	Total
AM peak	33	33	66
PM peak	0	0	0
Totals	In	Out	Total
AM peak	49	33	82
PM peak	0	16	16



4.0 Local Centre Trips

- 4.1 The application includes an area for a Local Centre comprising 1,000 sqm. The use classes are not defined, but it is likely to include a local shop together with a number of similar uses which could include health or hot food takeaway type use. Based on similar sites within the TRICS database, the proposed floor space could provide up to 6 or 8 units and therefore a range of amenities for residents. The greater the range of amenities on site the reduced need for journeys to be made off-site for shopping purposes. Similar sites are set out in **Table 4**. The site selection is included in **Appendix E**.

**Table 4 – TRICS Sites for Local Centre (up to 1,800 sqm)**

Site Reference	Type of Use	GFA	Population within 1.6km (2017)	AM Peak		PM Peak	
				In	Out	In	Out
LE-01-I-02/01	Tesco Express Pie Shop Pizza outlet Chinese takeaway	550	10,750	72	74	77	77
SH-01-I-02/01	Pharmacy Co-op Flooring outlet Opticians Bakery Coral Fish bar Indian takeaway Chinese takeaway	900	11,983	43	42	81	84
CH-01-I-02	Farm shop Post Office Wine shop	260	17,691	13	11	11	11
TV-01-I-03/01	Bakers Acklam Financial Your Move Butchers Dance Studio Dressing Room Finlays Newsagents Pizza Pan The Sandwich Bar Fish Bar The Regent Cleopatra Post Office Barbers Chemist Spar Stores Hairdressers Cleaners	1840	18,454	55	48	129	147
CH-01-I-03	Post Office Bargain Booze Fish bar Bakery Hair and beauty	365	14,303	20	19	27	26
TV-01-I-04	Hair Salon Sandwich bar Newsagents Convenience store Fish bar Flower shop	585	16,603	55	55	24	28
TW-01-I-02	Butchers Convenience store Chinese takeaway Indian takeaway Newsagent Hair salon Fish bar	540	21,312	22	19	18	32



4.2 The site will provide a similar set of uses within the local centre. The Applicant is content in a condition to limit the local centre to these types of use.

4.3 There is little need for external residents to use the local centre as they are already well served with existing local centres in Gillingham, Twydall and Rainham. A 1.6km walking catchment for each of the existing local centres are shown in **Appendix F**. The same catchment for the proposed local centre is also shown. This shows there is an overlap between the catchment areas which confirms the local area is well served. The local centres at Twydall and Rainham provide a range of uses including card shops, home stores, hairdressers, coffee shops, pharmacy, bakeries and banks and more.

4.4 In the event external trips did occur, these are likely to be in low numbers and will be a local trip diverted from a similar use elsewhere and therefore already on the network. It is therefore reasonable to assume that the local centre will not generate external new trips.

5.0 Shopping and Personal Business Trips

5.1 It has been assumed in the TA that 25% of shopping and personal business related trips will be internal. The Council have asked for further justification of this proportion. 10% of external shopping related trips have been assigned to the Co-op/McDonalds on Beechings Way, with the majority of other external trips assigned further afield to Gillingham Business Park, Tesco Extra, and Asda Gillingham.

5.2 Given the location and range of uses at the Rainham High Street and at the local centre in Twydall it is likely that external trips will be made to these locations. On this basis, the internal trip proportions have been amended to assign 10% to each of the local shopping centres at Twydall and Rainham. 5% of trips are assumed to be internal. The revised distribution of shopping and personal business trips is set out below:

- Asda Gillingham – 20%;
- Gillingham Business Park – 20%



- Tesco Extra Gillingham – 25%;
- McDonalds/Co-op Beechings Way – 10%;
- Twydall Local Centre – 10%;
- Rainham Local Centre – 10%; and
- Internalised trips – 5%

6.0 Leisure Trips

6.1 The TA assumed that 30% of leisure trips will be internal to the site. The NTS defines a leisure trips as visiting friends either at someone's home or elsewhere, or 'other' leisure trips which include entertainments, sport, holidays and day trips. Based on the definitions, it is likely that the majority of trips could be external, however there will be a small proportion of internalisation relating to visiting friends or entertainment and therefore 5% of trips have assumed to be internal to the site. Based on these assumptions, the total external leisure trips are set out in **Table 5**.

Table 5 – External Leisure Vehicular Trips

Leisure/other	In	Out	Total
AM peak	6	23	29
PM peak	67	31	98

7.0 Total External Trips

7.1 Based on the revised assumptions above, the total external residential trip generation is set out in **Table 6** below. This is a revised version of Table 31 of the TA.

**Table 6 – Total External Trips**

Vehicle Trips by purpose			
Commuting	In	Out	Total
AM peak	34	134	168
PM peak	160	73	234
Business	In	Out	Total
AM peak	5	21	27
PM peak	19	9	28
Education/escort education	In	Out	Total
AM peak	14	54	67
PM peak	8	4	12
Shopping	In	Out	Total
AM peak	4	16	20
PM peak	39	18	57
Personal business	In	Out	Total
AM peak	15	60	75
PM peak	66	30	96
Leisure/other	In	Out	Total
AM peak	6	23	29
PM peak	67	31	98
Primary School Staff and Pupils	In	Out	Total
AM peak	49	33	82
PM peak	0	16	16
Total External Vehicle Trips			
Total	In	Out	Total
AM peak	127	341	469
PM peak	360	181	541
Total External Vehicle (including Care Home)			
Total	In	Out	Total
AM peak	139	350	489
PM peak	365	193	558

7.2 The total trip generations for the residential, care home and combined total are included in **Appendix G**.

8.0 Road Safety Audit

8.1 It was requested that the proposed access junctions were subject to a Stage 1 Road Safety Audit (RSA). A copy of the RSA is included in **Appendix H**. The Audit raised a number of queries. These have been reviewed and taken into account within a



Designer's Response with revised plans where appropriate. The Designers Response is included in **Appendix I**.

9.0 Walking, Cycling and Horse Riding Assessment

9.1 It was requested that a review of cycling routes to the Secondary Schools and key facilities. As such a Walking, Cycling and Horse Riding Assessment has been prepared which focuses on these routes. The scope of the assessment was agreed at the meeting and a copy of the assessment is included in **Appendix J**.

10.0 Travel Plan

10.1 Comments from the Travel Plan team were provided on the Travel Plan included with the application. The Travel Plan has been updated accordingly and a copy is included in **Appendix K**.

11.0 Junction Improvements

11.1 The Council have queried the mitigation strategy at the Lower Rainham Road/ Yokosuka Way roundabout junction and whether it will provide additional benefit to traffic on the ground.

11.2 The existing arrangement include a single lane approach with hatching on the nearside lane. The queue surveys show a queue of more than 15 vehicles for a prolonged period in the morning peak on this approach. This is reflected in the JUNCTIONS model which shows a queue of 17 PCUs in the 2018 base, 82 PCUs in the 2029 base scenario and around in the 2029 + development scenario.

11.3 The improvements include the removal of the hatching and a section of the central island with widening on the off-side to provide two lanes on approach for a distance of around 35m from the entry point to the junction. The mitigation scheme is included in **Appendix L** of this note. This will allow up to 6 vehicles to use each lane on approach



to the junction at any one time. All other arms on the roundabout benefit from a two-lane approach. The improvements will also provide a further benefit to the roundabout as a whole, by providing a consistent design across all arms.

11.4 The improvement scheme will reduce the queue on the approach to around 5 vehicles in the with development scenario which is a significant improvement over the existing situation.

11.5 Overall, therefore it is considered the improvements are beneficial and provide a holistic solution to the junction.

12.0 Lower Rainham Road

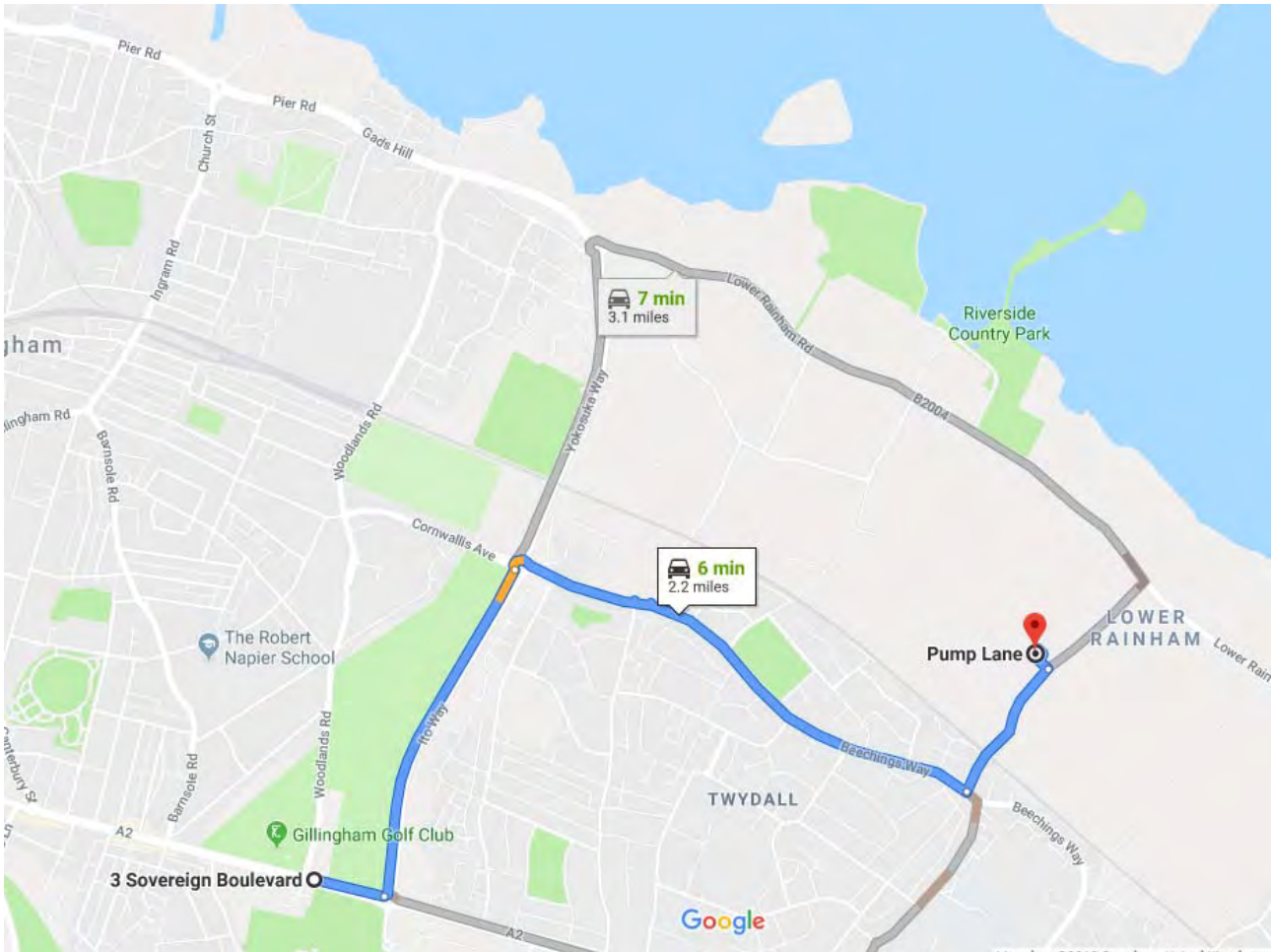
12.1 The Council have raised concern in respect of Lower Rainham Road and congestion through the signal controlled shuttle working section to the east of the Pump Lane junction.

12.2 The location of the accesses and draw of traffic to the wider network mean the majority of which will be to/from the west and south of the site and therefore very little additional traffic will route through this junction. The total traffic generation is set out in Appendix J of the TA and included in **Appendix G** of this note. This shows a total of 15 and 21 trips will use this link in the AM and PM peak periods respectively. This equates to one additional vehicle every 3 minutes and therefore the impact on the junction will be negligible.

13.0 Local Assignment

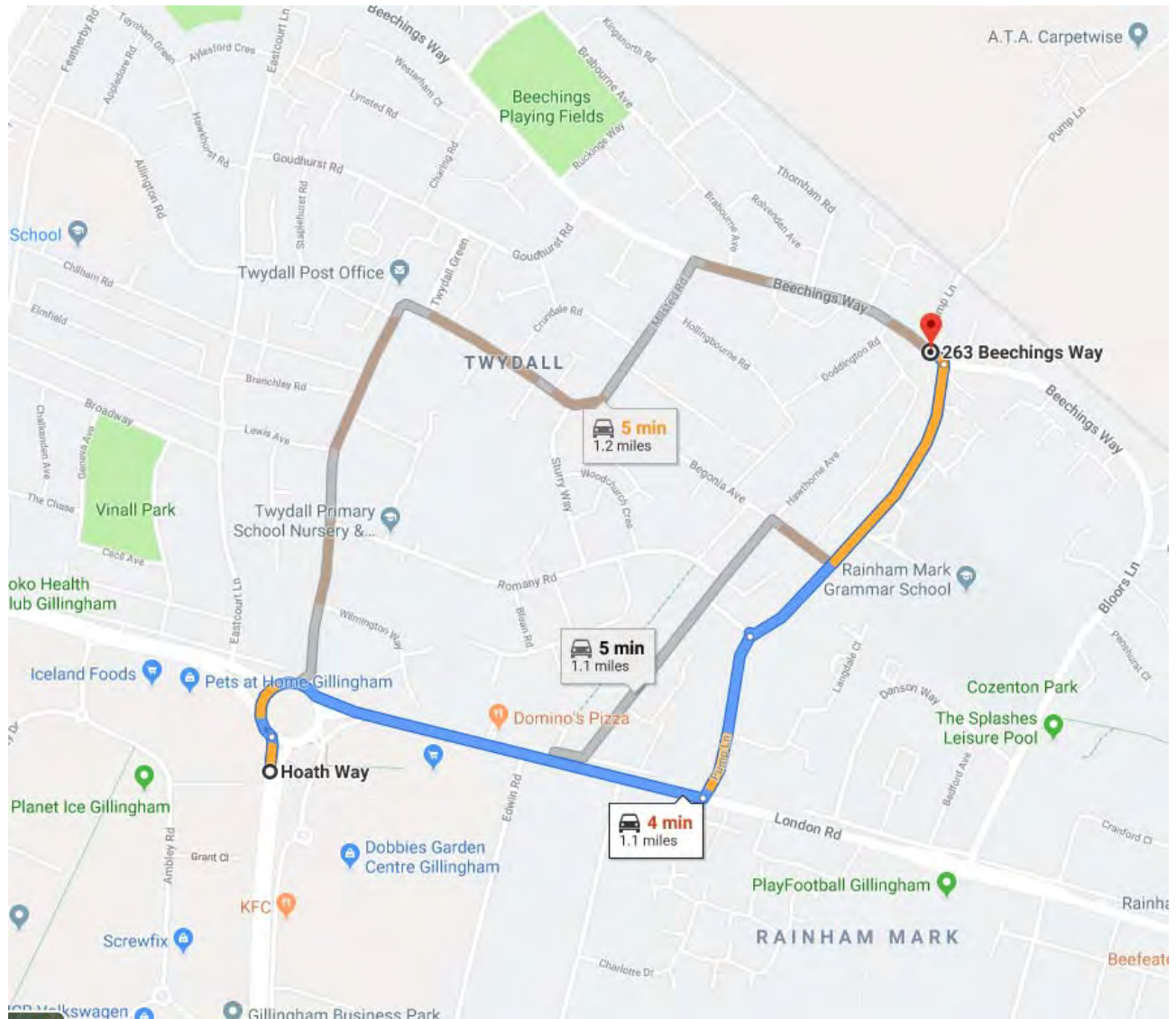
13.1 The Council requested further clarification on the local assignment of trips from Beechings Way to the wider network on Hoath Way and A2 west of Ito Way. All trips to /from A2 west of Ito Way are assigned to route 50/50 via Lower Rainham Road and Beechings Way with traffic from both routes continuing south on Ito Way. This is shown in Appendix J of the TA and set out in **Image 1**.

Image 1 – Routes to A2 West



13.2 There are also several routes to reach Hoath Way from Beechings Way and as such a 50/50 split of traffic via Twydall Lane and Pump Lane has been applied. The routes both have a similar distance and travel time and therefore it is appropriate to provide a split of traffic to each. The journey times are set out in **Image 2**.

Image 2 – Routes to Hoath Way



14.0 Public Transport Letter

- 14.1 Initial discussions have been undertaken with Arriva potentially extending the existing services or bringing services into the site. A letter of support is included in **Appendix M**.



Appendix A

Development Proposals

This revised application for the land seeks for the permission for the following scale of development:

- Up to 1250 new homes
- 60 Bed extra care facility
- 80 Bed care home
- Land for a new 2 form entry primary school
- A local centre incorporating retail and community facilities

The site is located to the north of Rainham and east of the Yokoskua Way and is divided into two main parcels situated both sides of Pump Lane.

Accessibility

The existing pedestrian and cycling provisions in the vicinity of the site is limited due to the nature of the existing land use and current demand and need for pedestrian and cyclist connections to agricultural farm land.

A Non-Motorised User (NMU) audit should be undertaken by the applicant to establish suitable walking and cycling routes from the site to key facilities.

This should include routes to the nearest secondary schools. The NMU audit should also consider routes by external pupils travelling to the proposed on-site 2FE primary school. The applicant should contact Medway Councils Education department to establish where the catchment area for the school is forecast to be.

The proposed development is not considered to be easily accessible by public transport based on the proposals submitted within the Transport Assessment. The nearest bus stop is circa 10-minute walk from the commercial element of the site. The majority of the residential areas of the site are at least 15 minutes from bus stops with regular services. Existing bus services based on their current routeing are not considered to be agreeable without further assessment work.

The nearest railway station is Rainham and is approx 2.5km from the centre of the application site. The rail station provides services to London Waterloo to the east and Dover to the west. The station provides cycle and car parking, 64 and 233 spaces respectively, however no assessment has been provided to whether there is any spare capacity to accommodate any additional demand from the development. The applicant has suggested that rail could be used as a multi-modal journey with cycling. The applicant should provide more information on a suitable cycle route/improvements from the site to the rail station and may need to provide additional cycle parking for the highway authority to consider this as a realistic travel choice. This should be covered within the NMU audit.

Baseline Conditions

The applicant has undertaken ATC surveys to obtain the baseline conditions on the local road network. The surveys collected data over a 7 day period from the 4th September 2019 to the 10th September 2019.

The applicant has stated that the ATC surveys identified peak hours of 08:00 – 09:00 and 17:00 – 18:00. It is noted however that traffic spikes occur around 11am.

Regarding Manual Classified Counts, the applicant undertook assessments at the following junctions,

- A289/lower Rainham Road/Yoksouka Way
- Yokosuka Way/Beechings Way/Ito/Conrwallis Avenue
- Bloors Lane/ A2 London Road/ Playfootball Gillingham
- Bedchings Way/Pump Lane
- Pump Lane/ Beechings Way
- Lower Rainham Road/ Pump Lane
- Pump Lane/A2 London Road
- A2/ Will Adams/ITO Way
- A2/Sovereign Boulevard/Hoath Way/Twydall Lane/ Courteney Road

For clarity, a map should be provided outlining the location of the ATC and the locations of the junction assessments

PIA

The applicant has included five years of recorded Personal Injury Accident data from June 2013 to May 2018 and this is considered acceptable to the Highway Authority, however the survey area is too narrow and due to the large scale nature of the development would need to cover the routes connecting to the main carriageways i.e A2 and Ito Way.

Trip Generation

The applicant has calculated trip using TRICS online database with a person trip rate for the residential and employment elements of this application. The highway authority is satisfied that these trip rates for the residential units are robust, however the trips for the commercial or care home facilities and the methodology to calculate the level of trips on the external highway is not agreed.

Residential

The applicant has outlined that some trips would be internalised between the different land uses on the site and would not route via the external highway network. For example, children living in the residential component of the development would attend the on-site primary school, and residents would use the on-site commercial units for shopping and leisure. However given that the

commercial units are generic (i.e no class has been provided) it is not considered that the level of reduction is acceptable.

Care Home

Concerns would be raised to the outputs selected, it is not considered that the application is on the edge of a town centre location or suburban area and therefore the assessment needs to be redone.

Education

This application proposes a 2FE school site, meaning external education trips will occur as set out in the Transport Assessment. TRICS has been used to establish a trip rate for the generation of trips from outside of the site to the school. The applicants have identified that 41% of these children would be driven, however this figure is considered too low given the location of the site to the existing residential areas. The proposed vehicle trip generation for the schools is therefore not agreed at this stage.

Commercial

Additionally, the Transport Assessment does not include any trip generation for the proposed commercial area, it is noted that within the TA, no indication to the class use has been provided. Further information should be provided by the applicant and evidence why all trips associated with these land uses will be internal or pass by trips to the site. It is noted that these land uses could range from independent take-aways/restaurants to large national companies which could contribute to external vehicular trips.

Trip Assignment

The distribution of residential and employment trips generated by the proposed development has been forecast using Census 2011 Location of Usual Residence and Place of Work data and has used the Middle Super Output Area (MSOA) Medway 018. Vehicular trips were then assigned to the various routes connecting the site to the identified workplace destinations. Assignment was based on the most likely or direct route.

The highway authority does not agree that the methodology used to calculate the internal trips as well as the trips resulting from the education use. The applicant should contact Medway's Council's Education department to establish the likely catchment area for the proposed 2FE primary and update trip rates travelling by car accordingly.

Future Year Scenario

The applicant has suggested that a future year scenario of 2029 will be used due to the scale and build out time of the development. The Highway Authority is not satisfied that a future year scenario of 2029 will capture the full impact of the proposals.

TEMPRO, an industry standard software tool, has been used to forecast the increase in the baseline vehicular trips on the local road network and the MSOA Medway 018 has been used. The below growth factors have been derived.

2018-2029 AM Peak	
2018-2029 PM Peak	

Waiting to review these rates

The applicant should provide commentary on Medways Council's Draft Local Plan 2035 which proposes a considerable development within the Medway Towns. Confirmation is therefore required that this and any other relevant emerging allocation is appropriately accounted for within the TEMPRO growth factors or propose alternative methods for how these emerging allocations are suitably accounted for and tested within the TA.

Committed Development

The applicant has included the following committed development traffic;

- Site 1 – Land at Station Road, Rainham, Kent ME8 7QZ – 90 Units. (Allowed)
- Site 3 – Land North of Moor Street, Rainham – 190 Units. (Refused, but identified in the Council's supply in SLAA)
- Site 4 – Land At Otterham Quay Lane Rainham Kent – 300 Units. (Approved)
- Site 6 – Berengrave Nursery, Berengrave Lane, Rainham, Gillingham ME8 7NL – 121 Units. (Approved)
- Site C - Land South Of Lower Rainham Road Rainham Gillingham Medway ME8 7UD – 202 Units. (Currently Live)

The applicant has mentioned TEMPRO has taken into account existing developments as outlined above and therefore does not need to provide a further up lift. The highway authority is not satisfied that this is the case and the applicant should provide a separate assessment with committed development and the proposed development.

Further developments the applicant need to take into account are

MC/18/3160 - Land off Lower Rainham Road (Approved)

Junction Assessment

The junctions were assessed against a number of scenarios which include:

- 2018 Surveyed base
- 2029 Surveyed base
- 2029 Base + Committed Developments; and Proposed Development

As set out in the committed development section, an additional scenario should be include

- 2029 Base + Committed Developments

The following junctions were assessed

- Site 1: A289/Lower Rainham Road/ Yokosuka Way (4-arm roundabout) –
- Site 2: Yokosuka Way/ Beechings Way/ Ito Way/ Cornwallis Avenue (4-arm roundabout) –
- Site 3: Bloors Lane/ A2 London Road/ Playfootball Gillingham (4-way cross roads) –
- Site 4: Beechings Way/ Pump Lane (3-arm roundabout) –
- Site 5: Pump Lane/ Beechings Way (T-junction) –
- Site 6: Lower Rainham Road/ Pump Lane (T-junction) –
- Site 7: Pump Lane/ A2 London Road (T-junction) –
- Site 8: A2/ Will Adams Way/ Ito Way (4-arm roundabout) –
- Site 9: A2/ Sovereign Boulevard/ Hoath Way/ Twydall Lane/ Courteney Road (5-arm signalised roundabout)

The junction modelling cannot be assessed by the Highway Authority until the vehicle trip generation and distribution for the site has been agreed. However it is noted that further junctions that need to be included are

Three Mariners Signalise shuttle corridor
 Pump Lane/Lower Rainham Road (T Junction)
 Eastcourt Lane/Lower Rainham Road (T Junction)
 Lower Featherby Road/Lower Rainham Road (T Junction)
 Hoath Way (RBT)
 Berengrave Lane/Lower Rainham Road (RBT)
 Station Road/ Lower Rainham Road (RBT)
 Otterham Quay Lane/A2 (Junction)

Whilst it is noted that no assessment on the Strategic Road network has been done, this matter will be covered by Highways England.

Medway Own Modelling assessment (AIRSUM) to be added when available

Proposed Vehicular Accesses

Drawing 20230-05-02 shows an overview of the proposed vehicular access to the site from Lower Rainham Road with drawing 20230-05-Rev A demonstrating the proposed Pump Lane Railway Bridge Improvements to form the secondary access point.

Drawing 20230-05-02 shows a new priority junction onto Lower Rainham Road. Speed surveys have been undertaken in the vicinity of the access with 85thile speeds recorded as 35.1mph, Therefore appears the visibility splays would be acceptable. It is noted that it would be beneficial to move the 30mph further eastwards to reduce speeds near the access point.

Drawing 20230-05-Rev A - A shuttle working scheme through the bridge which would provide a 2.5m wide combined footway/ cycleway and a 3m wide running carriageway

An independent Stage One Road Safety Audit should be provided for the proposed highway works.

The Highway Authority would require the applicant to commit to providing additional traffic calming measures as required to ensure that speeds are in accordance with the revised speed limit proposals. This could be covered by condition.

It is noted that application only provides details with regards to the access of Lower Rainham Road and not access arrangements along Pump Lane. These will need to be provided as this is not a matter that is reserved.

Bus Service Improvements

The applicant has proposed sustainable transport mitigation by way of providing an extended provision

a) Extend the existing 191 to and through the site. This would provide a 20 minute service to serve to supplement the 191.

b) Consider connections between 191 and 182 to provide inter-working and potentially a clockwise and anti-clockwise combined service running through the site.

c) Diversions to Nos 120 / 121 to route through the site and provide a connection to Rainham High Street and Station.

Should the bus service providers be open to this, a patronage test should be provided by the applicant to ensure that the bus service would be self-sufficient without the need for bus subsidy from Medway Council.

The internal layout will need to reflect the above aspiration, however this will be dealt with during the reserved matters stage if granted approval.

Travel Plan

This Framework Travel Plan (FTP) has been assessed. Whilst the quality of this FTP is generally good, it still requires some amendments before it can be approved.

Background

A policy section should be added to the FTP which includes summaries of relevant national and local policy including, but not limited to: the National Planning Policy Framework (2018), Medway's Car parking Standards and Manual for Streets 2.

Consultation and Partnerships

The FTP should contain evidence of preliminary liaisons with local cycle shops and public transport operators to scope the possibility of arranging for discounts on equipment and services respectively. These communications can then form the basis for further negotiations between these companies and the Site-Wide Travel Plan Manager (SWTPM).

Site Audit

The travel plan has not provided any isotopes diagrams to demonstrate walking/cycling destinations within the vicinity, these should be provided to allow potential targets improvements to be provided.

Targets

The table of targets needs amending to provide clarification on what the objectives. A table of targets should be included in section 5 under “Indicative Targets”; please see the example table below. A percentage decrease or increase should be given to each travel mode. The baseline for these targets can be arrived at by using the MSOA data from the 2011 census or existing survey results for similar developments in the area.

	1 st Year (Baseline)	3 rd Year	5 th Year
Car Driver			
Car Passenger			
Bus			
Train			
Foot			
Cycle			
Powered Two-Wheeler (PTW)			

Table 1 - Example table for displaying modal split targets

An explanation of how these targets have been developed should be included as well.

Measures

It is noted that the travel plan provides no financial incentives for residents to change their mode of transport. The price and nature of the voucher will be agreed via a Section 106 Agreement. However, we would anticipate that a cost estimate is included in the FTP; residential travel vouchers are typically estimated to cost around £50 per household and have an uptake rate of around 50%.

There are a number of additional measures for the residential portion of the development which should be considered for inclusion in the FTP:

- Promotion of free health/exercise apps for mobile phone,
- Formation of a Bicycle Users Group (BUG),
- Use of social media to promote the Travel Plan and disseminate sustainable travel information.

There are also a number of additional measures for the employment portions of the development which should be considered for inclusion in the FTP:

- Showers and lockers on site,

- Umbrella loan schemes for pedestrians,
- Including the FTP as an item on team meeting agendas,
- Use of social media to promote the Travel Plan and disseminate sustainable travel information.

An action plan should be included in the appendix which details each measure to be conducted as part of the site-wide Travel Plan (including resources to be allocated to the SWTPM role). The action plan should be similar in layout to the example table below.

Objective	Action	Start Date	Due Date	Responsibility	Mode affected	Cost Estimate

Table 2 - Example Action Plan

Monitoring

Monitoring should continue for a minimum of 5 years after full occupation; section 10 should be updated to include this commitment. Section 6 should also commit the monitoring reports to contain a summary of measures enacted over the previous year, and the resources expended on the Travel Plan over the same period.

A minimum 35% response rate must be attained in order for travel questionnaire surveys to be considered statistically significant. If this cannot be achieved, then discussions should be had with Integrated Transport regarding carrying out TRICS SAM or ATC surveys.

There are currently no measures in place to encourage members of staff or residents to complete a questionnaire survey. Entry into a prize draw could be offered to those who complete a survey, although it should be noted that the prize should not be travel-related (e.g., bus tickets, cycle vouchers, etc). Businesses could mandate that staff complete the survey, rather than offer entry into a prize draw.

A sample questionnaire survey should be provided in the appendices. An example residential questionnaire survey has been attached which could also be adapted to serve a commercial site.

Delivery and Enforcement

There should be a reference in the document to a means for enforcing the FTP. Typically, this is accomplished through a Section 106 agreement. Sanctions should be in place in the event of non-compliance with the terms of the FTP.

Others Matters

No reference within the travel plan has been provided with regards to the primary school or commercial aspect of the proposal. There should be a

commitment for the School Travel Plan Champion to liaise with Medways school travel plan team.

Conclusion

The FTP will require further amendments as set out above before it can be considered acceptable for submission in conjunction with the proposed site.

Recommendation

Additional information is required in order to fully assess the impact of the proposed development. This information should address the following matters as set out in detail within our response:

- Trip distribution
- NMU Audit
- Trip generation
- PIA study area and further commentary
- Access arrangements Pump Lane
- **Background traffic growth (TEMPRO)**
- Sensitivity testing taking into consideration emerging local plans
- Updated junction assessment
- Road Safety Audit Stage 1
- Further information for improved bus services
- Updates to the Framework Travel Plan

If the Planning Authority are minded to determine this application prior to the submission of the requested additional information please contact the highway authority for my recommendation.

It should be noted that even with the above information provided, serious concerns would be raised regarding the level of vehicles on the local network with may not be able to be overcome.



Appendix B

Calculation Reference: AUDIT-623801-190913-0941

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 05 - HEALTH
 Category : F - CARE HOME (ELDERLY RESIDENTIAL)
 VEHICLES

Selected regions and areas:

02	SOUTH EAST	
	HC HAMPSHIRE	1 days
04	EAST ANGLIA	
	SF SUFFOLK	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	NY NORTH YORKSHIRE	1 days
08	NORTH WEST	
	GM GREATER MANCHESTER	1 days
	LC LANCASHIRE	1 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 residents
 Actual Range: 17 to 42 (units:)
 Range Selected by User: 17 to 180 (units:)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/11 to 02/05/19

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
Tuesday	2 days
Wednesday	1 days
Friday	1 days

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

Selected survey types:

Manual count	5 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:

Edge of Town	5
--------------	---

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	4
No Sub Category	1

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.

Secondary Filtering selection:

Use Class:

C2 5 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 1 mile:

1,000 or Less 1 days
5,001 to 10,000 1 days
10,001 to 15,000 1 days
15,001 to 20,000 1 days
25,001 to 50,000 1 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

25,001 to 50,000 1 days
125,001 to 250,000 2 days
250,001 to 500,000 2 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.6 to 1.0 1 days
1.1 to 1.5 4 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:

No 5 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

No PTAL Present 5 days

This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1	GM-05-F-03 HALIFAX ROAD ROCHDALE	NURSING HOME		GREATER MANCHESTER
	Edge of Town Residential Zone			
	Total Number of residents:		30	
	Survey date: WEDNESDAY		29/05/13	Survey Type: MANUAL
2	HC-05-F-01 BOTLEY ROAD SOUTHAMPTON	CARE HOME		HAMPSHIRE
	Edge of Town No Sub Category			
	Total Number of residents:		42	
	Survey date: TUESDAY		24/11/15	Survey Type: MANUAL
3	LC-05-F-02 LYTHAM ROAD BLACKPOOL SQUIRES GATE	NURSING HOME		LANCASHIRE
	Edge of Town Residential Zone			
	Total Number of residents:		31	
	Survey date: TUESDAY		27/09/16	Survey Type: MANUAL
4	NY-05-F-05 SEAGRIM CRESCENT RICHMOND	NURSING HOME		NORTH YORKSHIRE
	Edge of Town Residential Zone			
	Total Number of residents:		37	
	Survey date: MONDAY		04/03/19	Survey Type: MANUAL
5	SF-05-F-01 COLCHESTER ROAD IPSWICH	CARE HOME		SUFFOLK
	Edge of Town Residential Zone			
	Total Number of residents:		17	
	Survey date: FRIDAY		18/09/15	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.

TRIP RATE for Land Use 05 - HEALTH/F - CARE HOME (ELDERLY RESIDENTIAL)

VEHICLES

Calculation factor: 1 RESIDE

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	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	5	31	0.108	5	31	0.045	5	31	0.153
08:00 - 09:00	5	31	0.038	5	31	0.032	5	31	0.070
09:00 - 10:00	5	31	0.089	5	31	0.045	5	31	0.134
10:00 - 11:00	5	31	0.108	5	31	0.064	5	31	0.172
11:00 - 12:00	5	31	0.083	5	31	0.115	5	31	0.198
12:00 - 13:00	5	31	0.096	5	31	0.115	5	31	0.211
13:00 - 14:00	5	31	0.146	5	31	0.070	5	31	0.216
14:00 - 15:00	5	31	0.134	5	31	0.204	5	31	0.338
15:00 - 16:00	5	31	0.140	5	31	0.197	5	31	0.337
16:00 - 17:00	5	31	0.064	5	31	0.140	5	31	0.204
17:00 - 18:00	5	31	0.038	5	31	0.051	5	31	0.089
18:00 - 19:00	5	31	0.051	5	31	0.038	5	31	0.089
19:00 - 20:00	5	31	0.025	5	31	0.038	5	31	0.063
20:00 - 21:00	5	31	0.076	5	31	0.064	5	31	0.140
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.196			1.218			2.414

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: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

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Parameter summary

Trip rate parameter range selected:	17 - 42 (units:)
Survey date date range:	01/01/11 - 02/05/19
Number of weekdays (Monday-Friday):	5
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
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.

TRIP RATE for Land Use 05 - HEALTH/F - CARE HOME (ELDERLY RESIDENTIAL)

TAXI S

Calculation factor: 1 RESIDE

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	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	5	31	0.000	5	31	0.000	5	31	0.000
08:00 - 09:00	5	31	0.000	5	31	0.000	5	31	0.000
09:00 - 10:00	5	31	0.000	5	31	0.000	5	31	0.000
10:00 - 11:00	5	31	0.006	5	31	0.000	5	31	0.006
11:00 - 12:00	5	31	0.006	5	31	0.013	5	31	0.019
12:00 - 13:00	5	31	0.000	5	31	0.000	5	31	0.000
13:00 - 14:00	5	31	0.000	5	31	0.000	5	31	0.000
14:00 - 15:00	5	31	0.013	5	31	0.013	5	31	0.026
15:00 - 16:00	5	31	0.006	5	31	0.006	5	31	0.012
16:00 - 17:00	5	31	0.013	5	31	0.013	5	31	0.026
17:00 - 18:00	5	31	0.000	5	31	0.000	5	31	0.000
18:00 - 19:00	5	31	0.000	5	31	0.000	5	31	0.000
19:00 - 20:00	5	31	0.000	5	31	0.000	5	31	0.000
20:00 - 21:00	5	31	0.000	5	31	0.000	5	31	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.044			0.045			0.089

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*FACT. Trip rates are then rounded to 3 decimal places.

TRIP RATE for Land Use 05 - HEALTH/F - CARE HOME (ELDERLY RESIDENTIAL)

OGVS

Calculation factor: 1 RESIDE

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	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	5	31	0.006	5	31	0.000	5	31	0.006
08:00 - 09:00	5	31	0.000	5	31	0.006	5	31	0.006
09:00 - 10:00	5	31	0.000	5	31	0.000	5	31	0.000
10:00 - 11:00	5	31	0.000	5	31	0.000	5	31	0.000
11:00 - 12:00	5	31	0.006	5	31	0.006	5	31	0.012
12:00 - 13:00	5	31	0.006	5	31	0.006	5	31	0.012
13:00 - 14:00	5	31	0.000	5	31	0.000	5	31	0.000
14:00 - 15:00	5	31	0.000	5	31	0.000	5	31	0.000
15:00 - 16:00	5	31	0.006	5	31	0.006	5	31	0.012
16:00 - 17:00	5	31	0.000	5	31	0.000	5	31	0.000
17:00 - 18:00	5	31	0.000	5	31	0.000	5	31	0.000
18:00 - 19:00	5	31	0.000	5	31	0.000	5	31	0.000
19:00 - 20:00	5	31	0.000	5	31	0.000	5	31	0.000
20:00 - 21:00	5	31	0.000	5	31	0.000	5	31	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.024			0.024			0.048

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*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 05 - HEALTH/F - CARE HOME (ELDERLY RESIDENTIAL)

PSVS

Calculation factor: 1 RESIDE

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	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	5	31	0.000	5	31	0.000	5	31	0.000
08:00 - 09:00	5	31	0.006	5	31	0.006	5	31	0.012
09:00 - 10:00	5	31	0.000	5	31	0.000	5	31	0.000
10:00 - 11:00	5	31	0.000	5	31	0.000	5	31	0.000
11:00 - 12:00	5	31	0.000	5	31	0.000	5	31	0.000
12:00 - 13:00	5	31	0.006	5	31	0.000	5	31	0.006
13:00 - 14:00	5	31	0.000	5	31	0.006	5	31	0.006
14:00 - 15:00	5	31	0.000	5	31	0.000	5	31	0.000
15:00 - 16:00	5	31	0.000	5	31	0.000	5	31	0.000
16:00 - 17:00	5	31	0.000	5	31	0.000	5	31	0.000
17:00 - 18:00	5	31	0.000	5	31	0.000	5	31	0.000
18:00 - 19:00	5	31	0.000	5	31	0.000	5	31	0.000
19:00 - 20:00	5	31	0.000	5	31	0.000	5	31	0.000
20:00 - 21:00	5	31	0.000	5	31	0.000	5	31	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.012			0.012			0.024

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: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

TRIP RATE for Land Use 05 - HEALTH/F - CARE HOME (ELDERLY RESIDENTIAL)

CYCLISTS

Calculation factor: 1 RESIDE

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	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	5	31	0.000	5	31	0.006	5	31	0.006
08:00 - 09:00	5	31	0.000	5	31	0.000	5	31	0.000
09:00 - 10:00	5	31	0.000	5	31	0.000	5	31	0.000
10:00 - 11:00	5	31	0.000	5	31	0.000	5	31	0.000
11:00 - 12:00	5	31	0.000	5	31	0.000	5	31	0.000
12:00 - 13:00	5	31	0.000	5	31	0.000	5	31	0.000
13:00 - 14:00	5	31	0.000	5	31	0.000	5	31	0.000
14:00 - 15:00	5	31	0.000	5	31	0.000	5	31	0.000
15:00 - 16:00	5	31	0.006	5	31	0.006	5	31	0.012
16:00 - 17:00	5	31	0.000	5	31	0.000	5	31	0.000
17:00 - 18:00	5	31	0.000	5	31	0.006	5	31	0.006
18:00 - 19:00	5	31	0.000	5	31	0.000	5	31	0.000
19:00 - 20:00	5	31	0.000	5	31	0.000	5	31	0.000
20:00 - 21:00	5	31	0.000	5	31	0.000	5	31	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.006			0.018			0.024

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: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

TRIP RATE for Land Use 05 - HEALTH/F - CARE HOME (ELDERLY RESIDENTIAL)

CARS

Calculation factor: 1 RESIDE

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	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	5	31	0.064	5	31	0.025	5	31	0.089
08:00 - 09:00	5	31	0.025	5	31	0.013	5	31	0.038
09:00 - 10:00	5	31	0.064	5	31	0.025	5	31	0.089
10:00 - 11:00	5	31	0.064	5	31	0.045	5	31	0.109
11:00 - 12:00	5	31	0.057	5	31	0.064	5	31	0.121
12:00 - 13:00	5	31	0.076	5	31	0.096	5	31	0.172
13:00 - 14:00	5	31	0.102	5	31	0.038	5	31	0.140
14:00 - 15:00	5	31	0.076	5	31	0.140	5	31	0.216
15:00 - 16:00	5	31	0.096	5	31	0.134	5	31	0.230
16:00 - 17:00	5	31	0.045	5	31	0.121	5	31	0.166
17:00 - 18:00	5	31	0.038	5	31	0.045	5	31	0.083
18:00 - 19:00	5	31	0.032	5	31	0.025	5	31	0.057
19:00 - 20:00	5	31	0.025	5	31	0.038	5	31	0.063
20:00 - 21:00	5	31	0.064	5	31	0.045	5	31	0.109
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.828			0.854			1.682

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*FACT. Trip rates are then rounded to 3 decimal places.

TRIP RATE for Land Use 05 - HEALTH/F - CARE HOME (ELDERLY RESIDENTIAL)

LGVS

Calculation factor: 1 RESIDE

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	Trip Rate	No. Days	Ave. RESIDE	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	5	31	0.006	5	31	0.000	5	31	0.006
08:00 - 09:00	5	31	0.000	5	31	0.000	5	31	0.000
09:00 - 10:00	5	31	0.019	5	31	0.019	5	31	0.038
10:00 - 11:00	5	31	0.013	5	31	0.013	5	31	0.026
11:00 - 12:00	5	31	0.013	5	31	0.006	5	31	0.019
12:00 - 13:00	5	31	0.006	5	31	0.006	5	31	0.012
13:00 - 14:00	5	31	0.032	5	31	0.019	5	31	0.051
14:00 - 15:00	5	31	0.019	5	31	0.019	5	31	0.038
15:00 - 16:00	5	31	0.025	5	31	0.032	5	31	0.057
16:00 - 17:00	5	31	0.006	5	31	0.006	5	31	0.012
17:00 - 18:00	5	31	0.000	5	31	0.006	5	31	0.006
18:00 - 19:00	5	31	0.019	5	31	0.006	5	31	0.025
19:00 - 20:00	5	31	0.000	5	31	0.000	5	31	0.000
20:00 - 21:00	5	31	0.000	5	31	0.006	5	31	0.006
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.158			0.138			0.296

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*FACT. Trip rates are then rounded to 3 decimal places.



Appendix C

Jacqueline Aggiss

From: clarke, paul <paul.clarke@medway.gov.uk>
Sent: 18 September 2019 12:40
To: Jacqueline Aggiss
Subject: RE: Pump Farm, Lower Rainham - Education assumptions

Dear Jacqueline,

In response to your email below; Whilst I totally understand your rationale for the findings, here are a few thoughts;

We usually work to 775 dwellings for 1FE rather than 750. Not a huge difference but will reduce the number of external draw in your calculations.

Medway does not operate formal catchment areas and all parents are able to state a preference for any school they choose. However, with primary schools the distance parents are prepared to travel is less than secondary. We would usually not expect parents to choose a school more than 2 miles from their home, so perhaps using a radius may assist.

The other consideration is how the school will open, will it be all year groups which is very difficult to plan for as we will not know how many and how old children will be when they move into the development, or will it be from reception upwards, the usual and easier way of doing it...that will produce some unhappy parents of slightly older children. That route would mean a gradual filling of the school so a build of traffic patterns over time.

Also, until it happens we won't know how many of the families moving in are from Medway and may choose to keep their children at the current schools rather than moving to the new school, which will create more spaces for external children.

42 is quite low for the staff number , I would have thought 50 more realistic, but again over time starting from a small number and increasing as the school fills.

Hope this helps,

Happy to discuss

Kind regards

Paul

Paul Clarke
Programme Lead
School Organisation and Capital Services
Medway Council
Gun Wharf
Dock Road
Chatham
ME4 4TR

01634 331031

Paul.clarke@medway.gov.uk

From: Jacqueline Aggiss <JA@dtatransportation.co.uk>
Sent: 18 September 2019 11:41
To: clarke, paul <paul.clarke@medway.gov.uk>
Subject: RE: Pump Farm, Lower Rainham - Education assumptions

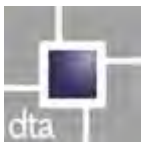
Hi Paul,

Please find attached the TA.

Please confirm safe receipt. Thanks.

Regards,

Jacqueline Aggiss
David Tucker Associates
Transport Planning Consultants



Forester House, Doctors Lane, Henley in Arden, Warwickshire B95 5AW
Tel: +44(0)1564 793598
Fax: +44(0)1564 793983
<http://www.dtatransportation.co.uk>

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From: clarke, paul [<mailto:paul.clarke@medway.gov.uk>]
Sent: 18 September 2019 11:07
To: Jacqueline Aggiss <JA@dtatransportation.co.uk>
Subject: RE: Pump Farm, Lower Rainham - Education assumptions

Hi Jacqueline,

Should be.

Give it a try.

Thanks

Paul

Paul Clarke
Programme Lead
School Organisation and Capital Services
Medway Council
Gun Wharf
Dock Road
Chatham
ME4 4TR

01634 331031

Paul.clarke@medway.gov.uk

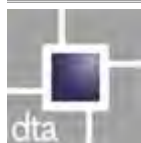
From: Jacqueline Aggiss <JA@dtatransportation.co.uk>
Sent: 18 September 2019 10:40
To: clarke, paul <paul.clarke@medway.gov.uk>
Subject: RE: Pump Farm, Lower Rainham - Education assumptions

Hi Paul,

The report is around 17mb – are you able to receive it by email?

Regards,

Jacqueline Aggiss
David Tucker Associates
Transport Planning Consultants



Forester House, Doctors Lane, Henley in Arden, Warwickshire B95 5AW
Tel: +44(0)1564 793598
Fax: +44(0)1564 793983
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From: clarke, paul [<mailto:paul.clarke@medway.gov.uk>]
Sent: 16 September 2019 11:41
To: Jacqueline Aggiss <JA@dtatransportation.co.uk>
Subject: RE: Pump Farm, Lower Rainham - Education assumptions

Dear Jacqueline,

Unfortunately, our system does not allow access to the dropbox link. Is there another way it can be sent please?

Thanks

Paul

Paul Clarke
Programme Lead
School Organisation and Capital Services
Medway Council
Gun Wharf
Dock Road
Chatham
ME4 4TR

01634 331031
Paul.clarke@medway.gov.uk

From: Jacqueline Aggiss <JA@dtatransportation.co.uk>
Sent: 13 September 2019 11:19

To: clarke, paul <paul.clarke@medway.gov.uk>

Cc: Simon Tucker <slt@dtatransportation.co.uk>; neave, robert <robert.neave@medway.gov.uk>

Subject: Pump Farm, Lower Rainham - Education assumptions

Dear Paul,

I have been provided your details by Robert Neave in Highways. We prepared the Transport Assessment for the proposed development at Pump Farm, Lower Rainham and are working through comments from the LHA. The proposals are for 1250 dwellings with a 2FE primary school on site.

It is requested that we contacted the education department to establish where the catchment area for the proposed school is forecast to be. I attach a copy of our report in the link below which sets out the assumptions for education related trips at section 5.5 which are based on NTS data and similar sites elsewhere.

https://www.dropbox.com/s/61p14ipgz1pdgi2/20230-03_Final%20TA_R%20%28280519%29.pdf?dl=0

We've assumed that all primary school education related trips will be internal, however we've made assumptions on the number of pupil places for a 2FE primary school which will result in an external draw of 70 pupils. The assumptions are set out in paragraph 5.6 of our report and based on information at similar sites elsewhere. The NTS data shows that 41% of education trips are made by car. The LHA have stated this seems too low given the location of the site to the existing residential areas. Given the majority of all primary school trips will be internal this would only apply to a small proportion of trips relating to external draw.

We've assumed 42 staff are needed per day for a 2FE primary school, of which 50% could be arriving off-site.

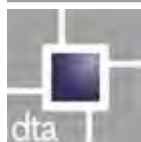
I'd be grateful for your review and any comments you may have in relation to primary school education trips.

Regards,

Jacqueline Aggiss

David Tucker Associates

Transport Planning Consultants



Forester House, Doctors Lane, Henley in Arden, Warwickshire B95 5AW

Tel: +44(0)1564 793598

Fax: +44(0)1564 793983

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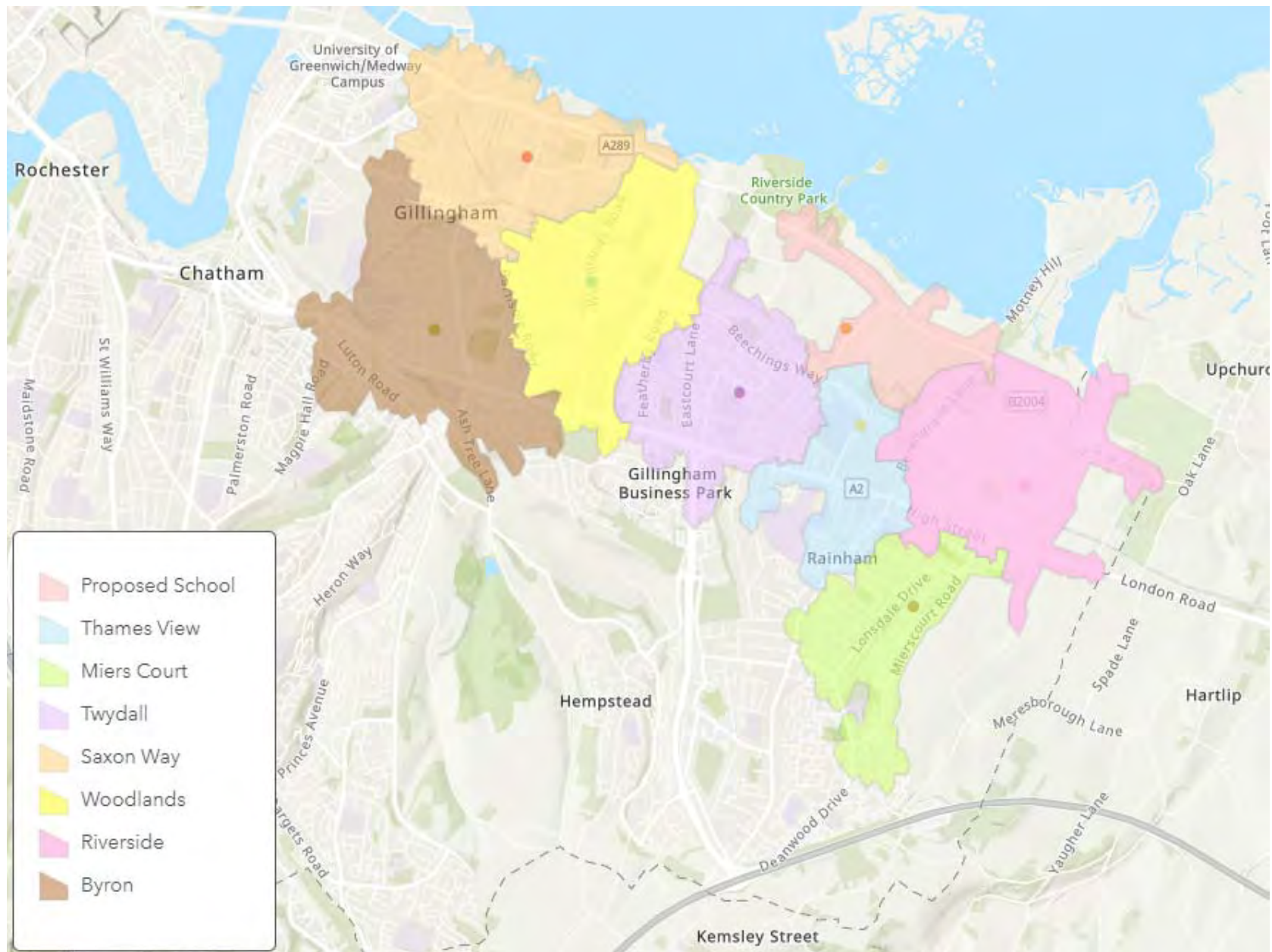
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Appendix D



1.6km walking catchment from existing and proposed primary schools



Appendix E

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 01 - RETAIL
 Category : I - SHOPPING CENTRE - LOCAL SHOPS
 MULTI-MODAL VEHICLES

Selected regions and areas:

05	EAST MIDLANDS	
	LE LEICESTERSHIRE	1 days
06	WEST MIDLANDS	
	SH SHROPSHIRE	1 days
08	NORTH WEST	
	CH CHESHIRE	2 days
09	NORTH	
	TV TEES VALLEY	2 days
	TW TYNE & WEAR	1 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: Gross floor area
 Actual Range: 260 to 1840 (units: sqm)
 Range Selected by User: 240 to 1890 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/11 to 28/10/14

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
Tuesday	2 days
Wednesday	1 days
Thursday	2 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:

Edge of Town	2
Neighbourhood Centre (PPS6 Local Centre)	5

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.

Secondary Filtering selection:

Use Class:

A1 1 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 1 mile:

5,001 to 10,000 1 days
 10,001 to 15,000 1 days
 20,001 to 25,000 2 days
 25,001 to 50,000 3 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

100,001 to 125,000 3 days
 125,001 to 250,000 1 days
 250,001 to 500,000 3 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.6 to 1.0 2 days
 1.1 to 1.5 5 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Petrol filling station:

Included in the survey count 0 days
 Excluded from count or no filling station 7 days

This data displays the number of surveys within the selected set that include petrol filling station activity, and the number of surveys that do not.

Travel Plan:

No 7 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

No PTAL Present 7 days

This data displays the number of selected surveys with PTAL Ratings.

TRIP RATE for Land Use 01 - RETAIL/I - SHOPPING CENTRE - LOCAL SHOPS

MULTI-MODAL VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	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	1	540	1.296	1	540	1.296	1	540	2.592
07:00 - 08:00	7	720	5.040	7	720	4.286	7	720	9.326
08:00 - 09:00	7	720	5.556	7	720	5.317	7	720	10.873
09:00 - 10:00	7	720	6.726	7	720	6.032	7	720	12.758
10:00 - 11:00	7	720	6.528	7	720	5.913	7	720	12.441
11:00 - 12:00	7	720	7.698	7	720	7.976	7	720	15.674
12:00 - 13:00	7	720	9.623	7	720	8.968	7	720	18.591
13:00 - 14:00	7	720	7.976	7	720	7.758	7	720	15.734
14:00 - 15:00	7	720	6.964	7	720	7.321	7	720	14.285
15:00 - 16:00	7	720	6.389	7	720	6.825	7	720	13.214
16:00 - 17:00	7	720	6.845	7	720	6.706	7	720	13.551
17:00 - 18:00	7	720	7.282	7	720	8.036	7	720	15.318
18:00 - 19:00	7	720	7.857	7	720	8.393	7	720	16.250
19:00 - 20:00	5	883	7.633	5	883	7.384	5	883	15.017
20:00 - 21:00	5	883	5.436	5	883	5.844	5	883	11.280
21:00 - 22:00	5	883	3.851	5	883	4.507	5	883	8.358
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			102.700			102.562			205.262

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: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

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Parameter summary

Trip rate parameter range selected:	260 - 1840 (units: sqm)
Survey date range:	01/01/11 - 28/10/14
Number of weekdays (Monday-Friday):	7
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	1
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.

TRIP RATE for Land Use 01 - RETAIL/I - SHOPPING CENTRE - LOCAL SHOPS

MULTI-MODAL TAXIS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	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	1	540	0.000	1	540	0.000	1	540	0.000
07:00 - 08:00	7	720	0.000	7	720	0.000	7	720	0.000
08:00 - 09:00	7	720	0.099	7	720	0.099	7	720	0.198
09:00 - 10:00	7	720	0.099	7	720	0.079	7	720	0.178
10:00 - 11:00	7	720	0.079	7	720	0.099	7	720	0.178
11:00 - 12:00	7	720	0.139	7	720	0.139	7	720	0.278
12:00 - 13:00	7	720	0.079	7	720	0.060	7	720	0.139
13:00 - 14:00	7	720	0.060	7	720	0.060	7	720	0.120
14:00 - 15:00	7	720	0.060	7	720	0.060	7	720	0.120
15:00 - 16:00	7	720	0.079	7	720	0.079	7	720	0.158
16:00 - 17:00	7	720	0.060	7	720	0.040	7	720	0.100
17:00 - 18:00	7	720	0.040	7	720	0.060	7	720	0.100
18:00 - 19:00	7	720	0.060	7	720	0.079	7	720	0.139
19:00 - 20:00	5	883	0.000	5	883	0.000	5	883	0.000
20:00 - 21:00	5	883	0.023	5	883	0.023	5	883	0.046
21:00 - 22:00	5	883	0.023	5	883	0.000	5	883	0.023
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.900			0.877			1.777

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: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

TRIP RATE for Land Use 01 - RETAIL/I - SHOPPING CENTRE - LOCAL SHOPS

MULTI-MODAL OGVS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	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	1	540	0.000	1	540	0.000	1	540	0.000
07:00 - 08:00	7	720	0.159	7	720	0.119	7	720	0.278
08:00 - 09:00	7	720	0.099	7	720	0.060	7	720	0.159
09:00 - 10:00	7	720	0.298	7	720	0.278	7	720	0.576
10:00 - 11:00	7	720	0.119	7	720	0.099	7	720	0.218
11:00 - 12:00	7	720	0.159	7	720	0.179	7	720	0.338
12:00 - 13:00	7	720	0.159	7	720	0.238	7	720	0.397
13:00 - 14:00	7	720	0.139	7	720	0.159	7	720	0.298
14:00 - 15:00	7	720	0.139	7	720	0.099	7	720	0.238
15:00 - 16:00	7	720	0.079	7	720	0.060	7	720	0.139
16:00 - 17:00	7	720	0.099	7	720	0.079	7	720	0.178
17:00 - 18:00	7	720	0.040	7	720	0.040	7	720	0.080
18:00 - 19:00	7	720	0.000	7	720	0.060	7	720	0.060
19:00 - 20:00	5	883	0.000	5	883	0.023	5	883	0.023
20:00 - 21:00	5	883	0.000	5	883	0.000	5	883	0.000
21:00 - 22:00	5	883	0.023	5	883	0.023	5	883	0.046
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.512			1.516			3.028

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.

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TRIP RATE for Land Use 01 - RETAIL/I - SHOPPING CENTRE - LOCAL SHOPS

MULTI-MODAL PSVS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	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	1	540	0.000	1	540	0.000	1	540	0.000
07:00 - 08:00	7	720	0.020	7	720	0.020	7	720	0.040
08:00 - 09:00	7	720	0.000	7	720	0.000	7	720	0.000
09:00 - 10:00	7	720	0.000	7	720	0.000	7	720	0.000
10:00 - 11:00	7	720	0.000	7	720	0.000	7	720	0.000
11:00 - 12:00	7	720	0.020	7	720	0.020	7	720	0.040
12:00 - 13:00	7	720	0.000	7	720	0.000	7	720	0.000
13:00 - 14:00	7	720	0.020	7	720	0.020	7	720	0.040
14:00 - 15:00	7	720	0.020	7	720	0.000	7	720	0.020
15:00 - 16:00	7	720	0.000	7	720	0.020	7	720	0.020
16:00 - 17:00	7	720	0.040	7	720	0.040	7	720	0.080
17:00 - 18:00	7	720	0.000	7	720	0.000	7	720	0.000
18:00 - 19:00	7	720	0.000	7	720	0.000	7	720	0.000
19:00 - 20:00	5	883	0.000	5	883	0.000	5	883	0.000
20:00 - 21:00	5	883	0.000	5	883	0.000	5	883	0.000
21:00 - 22:00	5	883	0.045	5	883	0.045	5	883	0.090
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.165			0.165			0.330

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: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

TRIP RATE for Land Use 01 - RETAIL/I - SHOPPING CENTRE - LOCAL SHOPS

MULTI-MODAL CYCLISTS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	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	1	540	0.185	1	540	0.000	1	540	0.185
07:00 - 08:00	7	720	0.198	7	720	0.119	7	720	0.317
08:00 - 09:00	7	720	0.238	7	720	0.258	7	720	0.496
09:00 - 10:00	7	720	0.198	7	720	0.179	7	720	0.377
10:00 - 11:00	7	720	0.179	7	720	0.159	7	720	0.338
11:00 - 12:00	7	720	0.139	7	720	0.139	7	720	0.278
12:00 - 13:00	7	720	0.119	7	720	0.139	7	720	0.258
13:00 - 14:00	7	720	0.159	7	720	0.179	7	720	0.338
14:00 - 15:00	7	720	0.179	7	720	0.238	7	720	0.417
15:00 - 16:00	7	720	0.437	7	720	0.337	7	720	0.774
16:00 - 17:00	7	720	0.337	7	720	0.298	7	720	0.635
17:00 - 18:00	7	720	0.099	7	720	0.179	7	720	0.278
18:00 - 19:00	7	720	0.377	7	720	0.317	7	720	0.694
19:00 - 20:00	5	883	0.227	5	883	0.249	5	883	0.476
20:00 - 21:00	5	883	0.023	5	883	0.091	5	883	0.114
21:00 - 22:00	5	883	0.227	5	883	0.181	5	883	0.408
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			3.321			3.062			6.383

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: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

TRIP RATE for Land Use 01 - RETAIL/I - SHOPPING CENTRE - LOCAL SHOPS

MULTI-MODAL VEHICLE OCCUPANTS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	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	1	540	1.481	1	540	1.481	1	540	2.962
07:00 - 08:00	7	720	6.151	7	720	5.119	7	720	11.270
08:00 - 09:00	7	720	7.540	7	720	6.964	7	720	14.504
09:00 - 10:00	7	720	8.393	7	720	7.361	7	720	15.754
10:00 - 11:00	7	720	8.571	7	720	7.698	7	720	16.269
11:00 - 12:00	7	720	9.921	7	720	10.278	7	720	20.199
12:00 - 13:00	7	720	12.262	7	720	11.647	7	720	23.909
13:00 - 14:00	7	720	9.881	7	720	10.079	7	720	19.960
14:00 - 15:00	7	720	9.187	7	720	9.722	7	720	18.909
15:00 - 16:00	7	720	8.611	7	720	9.226	7	720	17.837
16:00 - 17:00	7	720	9.187	7	720	8.869	7	720	18.056
17:00 - 18:00	7	720	9.861	7	720	11.210	7	720	21.071
18:00 - 19:00	7	720	11.448	7	720	12.004	7	720	23.452
19:00 - 20:00	5	883	10.917	5	883	10.759	5	883	21.676
20:00 - 21:00	5	883	7.429	5	883	7.678	5	883	15.107
21:00 - 22:00	5	883	5.119	5	883	5.436	5	883	10.555
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			135.959			135.531			271.490

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*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 01 - RETAIL/I - SHOPPING CENTRE - LOCAL SHOPS

MULTI-MODAL PEDESTRIANS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	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	1	540	4.259	1	540	3.333	1	540	7.592
07:00 - 08:00	7	720	3.234	7	720	2.361	7	720	5.595
08:00 - 09:00	7	720	8.512	7	720	9.127	7	720	17.639
09:00 - 10:00	7	720	6.528	7	720	5.556	7	720	12.084
10:00 - 11:00	7	720	6.468	7	720	6.429	7	720	12.897
11:00 - 12:00	7	720	6.528	7	720	6.250	7	720	12.778
12:00 - 13:00	7	720	8.155	7	720	7.937	7	720	16.092
13:00 - 14:00	7	720	7.460	7	720	7.480	7	720	14.940
14:00 - 15:00	7	720	6.944	7	720	7.004	7	720	13.948
15:00 - 16:00	7	720	10.139	7	720	10.754	7	720	20.893
16:00 - 17:00	7	720	5.813	7	720	5.933	7	720	11.746
17:00 - 18:00	7	720	4.325	7	720	5.119	7	720	9.444
18:00 - 19:00	7	720	4.722	7	720	4.921	7	720	9.643
19:00 - 20:00	5	883	3.941	5	883	4.168	5	883	8.109
20:00 - 21:00	5	883	2.854	5	883	3.262	5	883	6.116
21:00 - 22:00	5	883	2.446	5	883	2.854	5	883	5.300
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			92.328			92.488			184.816

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: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

TRIP RATE for Land Use 01 - RETAIL/I - SHOPPING CENTRE - LOCAL SHOPS
MULTI-MODAL BUS/TRAM PASSENGERS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	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	1	540	0.741	1	540	1.111	1	540	1.852
07:00 - 08:00	7	720	0.139	7	720	0.179	7	720	0.318
08:00 - 09:00	7	720	0.198	7	720	0.397	7	720	0.595
09:00 - 10:00	7	720	0.119	7	720	0.060	7	720	0.179
10:00 - 11:00	7	720	0.198	7	720	0.218	7	720	0.416
11:00 - 12:00	7	720	0.397	7	720	0.575	7	720	0.972
12:00 - 13:00	7	720	0.417	7	720	0.337	7	720	0.754
13:00 - 14:00	7	720	0.496	7	720	0.198	7	720	0.694
14:00 - 15:00	7	720	0.317	7	720	0.159	7	720	0.476
15:00 - 16:00	7	720	0.516	7	720	0.179	7	720	0.695
16:00 - 17:00	7	720	0.317	7	720	0.258	7	720	0.575
17:00 - 18:00	7	720	0.278	7	720	0.198	7	720	0.476
18:00 - 19:00	7	720	0.159	7	720	0.198	7	720	0.357
19:00 - 20:00	5	883	0.317	5	883	0.204	5	883	0.521
20:00 - 21:00	5	883	0.136	5	883	0.159	5	883	0.295
21:00 - 22:00	5	883	0.249	5	883	0.181	5	883	0.430
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			4.994			4.611			9.605

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: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

TRIP RATE for Land Use 01 - RETAIL/I - SHOPPING CENTRE - LOCAL SHOPS
 MULTI-MODAL TOTAL RAIL PASSENGERS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	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	1	540	0.000	1	540	0.000	1	540	0.000
07:00 - 08:00	7	720	0.040	7	720	0.020	7	720	0.060
08:00 - 09:00	7	720	0.020	7	720	0.020	7	720	0.040
09:00 - 10:00	7	720	0.020	7	720	0.020	7	720	0.040
10:00 - 11:00	7	720	0.000	7	720	0.000	7	720	0.000
11:00 - 12:00	7	720	0.000	7	720	0.000	7	720	0.000
12:00 - 13:00	7	720	0.020	7	720	0.020	7	720	0.040
13:00 - 14:00	7	720	0.079	7	720	0.060	7	720	0.139
14:00 - 15:00	7	720	0.000	7	720	0.000	7	720	0.000
15:00 - 16:00	7	720	0.000	7	720	0.040	7	720	0.040
16:00 - 17:00	7	720	0.000	7	720	0.000	7	720	0.000
17:00 - 18:00	7	720	0.000	7	720	0.000	7	720	0.000
18:00 - 19:00	7	720	0.040	7	720	0.040	7	720	0.080
19:00 - 20:00	5	883	0.000	5	883	0.000	5	883	0.000
20:00 - 21:00	5	883	0.000	5	883	0.000	5	883	0.000
21:00 - 22:00	5	883	0.000	5	883	0.000	5	883	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.219			0.220			0.439

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*FACT. Trip rates are then rounded to 3 decimal places.*

TRIP RATE for Land Use 01 - RETAIL/I - SHOPPING CENTRE - LOCAL SHOPS

MULTI-MODAL COACH PASSENGERS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	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	1	540	0.000	1	540	0.000	1	540	0.000
07:00 - 08:00	7	720	0.020	7	720	0.020	7	720	0.040
08:00 - 09:00	7	720	0.000	7	720	0.000	7	720	0.000
09:00 - 10:00	7	720	0.000	7	720	0.000	7	720	0.000
10:00 - 11:00	7	720	0.000	7	720	0.000	7	720	0.000
11:00 - 12:00	7	720	0.020	7	720	0.020	7	720	0.040
12:00 - 13:00	7	720	0.000	7	720	0.000	7	720	0.000
13:00 - 14:00	7	720	0.020	7	720	0.020	7	720	0.040
14:00 - 15:00	7	720	0.000	7	720	0.000	7	720	0.000
15:00 - 16:00	7	720	0.000	7	720	0.000	7	720	0.000
16:00 - 17:00	7	720	0.020	7	720	0.020	7	720	0.040
17:00 - 18:00	7	720	0.000	7	720	0.000	7	720	0.000
18:00 - 19:00	7	720	0.000	7	720	0.000	7	720	0.000
19:00 - 20:00	5	883	0.000	5	883	0.000	5	883	0.000
20:00 - 21:00	5	883	0.000	5	883	0.000	5	883	0.000
21:00 - 22:00	5	883	0.045	5	883	0.136	5	883	0.181
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.125			0.216			0.341

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: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

TRIP RATE for Land Use 01 - RETAIL/I - SHOPPING CENTRE - LOCAL SHOPS

MULTI-MODAL PUBLIC TRANSPORT USERS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	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	1	540	0.741	1	540	1.111	1	540	1.852
07:00 - 08:00	7	720	0.198	7	720	0.218	7	720	0.416
08:00 - 09:00	7	720	0.218	7	720	0.417	7	720	0.635
09:00 - 10:00	7	720	0.139	7	720	0.079	7	720	0.218
10:00 - 11:00	7	720	0.198	7	720	0.218	7	720	0.416
11:00 - 12:00	7	720	0.417	7	720	0.595	7	720	1.012
12:00 - 13:00	7	720	0.437	7	720	0.357	7	720	0.794
13:00 - 14:00	7	720	0.595	7	720	0.278	7	720	0.873
14:00 - 15:00	7	720	0.317	7	720	0.159	7	720	0.476
15:00 - 16:00	7	720	0.516	7	720	0.218	7	720	0.734
16:00 - 17:00	7	720	0.337	7	720	0.278	7	720	0.615
17:00 - 18:00	7	720	0.278	7	720	0.198	7	720	0.476
18:00 - 19:00	7	720	0.198	7	720	0.238	7	720	0.436
19:00 - 20:00	5	883	0.317	5	883	0.204	5	883	0.521
20:00 - 21:00	5	883	0.136	5	883	0.159	5	883	0.295
21:00 - 22:00	5	883	0.294	5	883	0.317	5	883	0.611
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			5.336			5.044			10.380

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: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

TRIP RATE for Land Use 01 - RETAIL/I - SHOPPING CENTRE - LOCAL SHOPS

MULTI-MODAL TOTAL PEOPLE

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

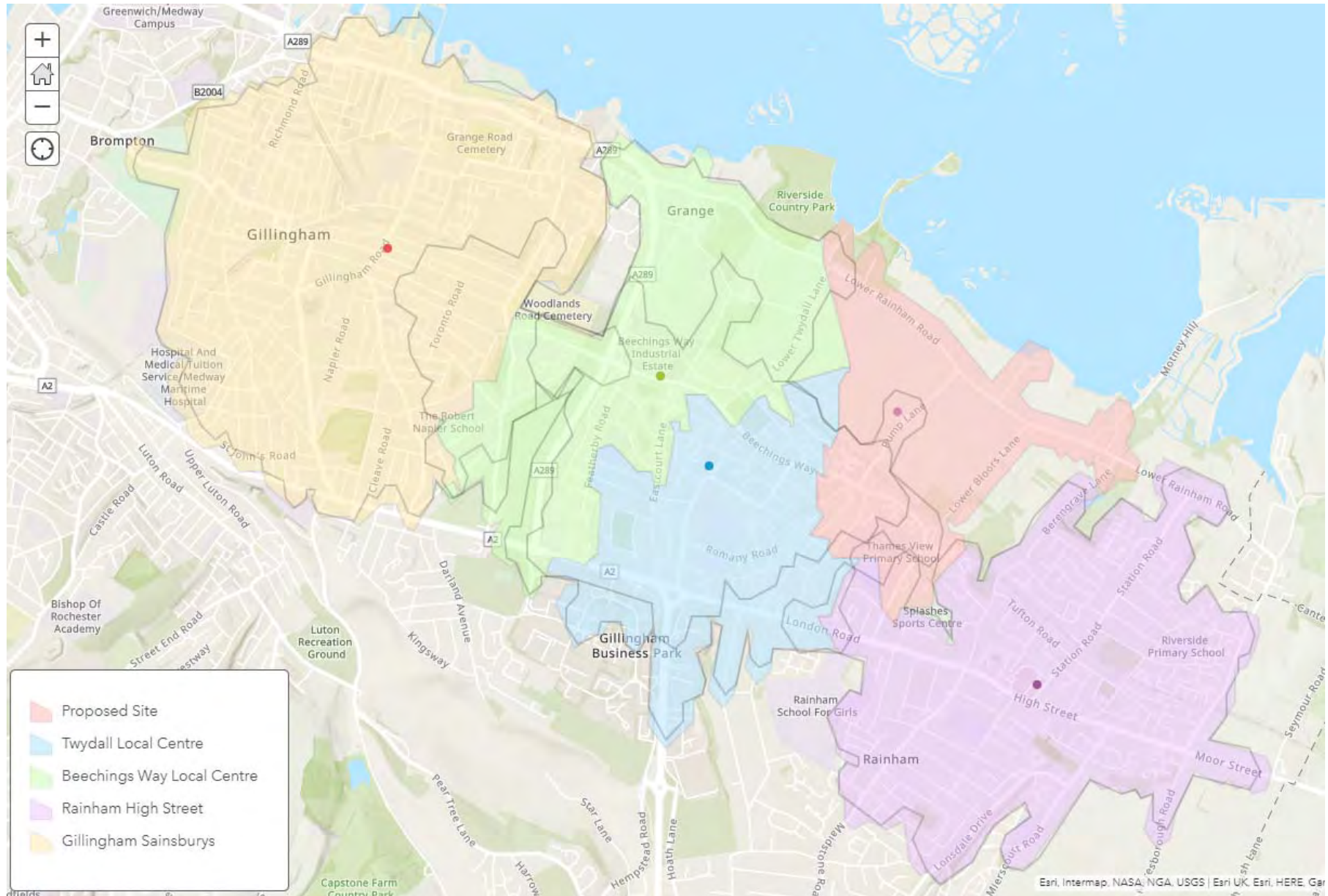
Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	1	540	6.667	1	540	5.926	1	540	12.593
07:00 - 08:00	7	720	9.782	7	720	7.817	7	720	17.599
08:00 - 09:00	7	720	16.508	7	720	16.766	7	720	33.274
09:00 - 10:00	7	720	15.258	7	720	13.175	7	720	28.433
10:00 - 11:00	7	720	15.417	7	720	14.504	7	720	29.921
11:00 - 12:00	7	720	17.004	7	720	17.262	7	720	34.266
12:00 - 13:00	7	720	20.972	7	720	20.079	7	720	41.051
13:00 - 14:00	7	720	18.095	7	720	18.016	7	720	36.111
14:00 - 15:00	7	720	16.627	7	720	17.123	7	720	33.750
15:00 - 16:00	7	720	19.702	7	720	20.536	7	720	40.238
16:00 - 17:00	7	720	15.675	7	720	15.377	7	720	31.052
17:00 - 18:00	7	720	14.563	7	720	16.706	7	720	31.269
18:00 - 19:00	7	720	16.746	7	720	17.480	7	720	34.226
19:00 - 20:00	5	883	15.402	5	883	15.379	5	883	30.781
20:00 - 21:00	5	883	10.442	5	883	11.189	5	883	21.631
21:00 - 22:00	5	883	8.086	5	883	8.788	5	883	16.874
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			236.946			236.123			473.069

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: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.



Appendix F

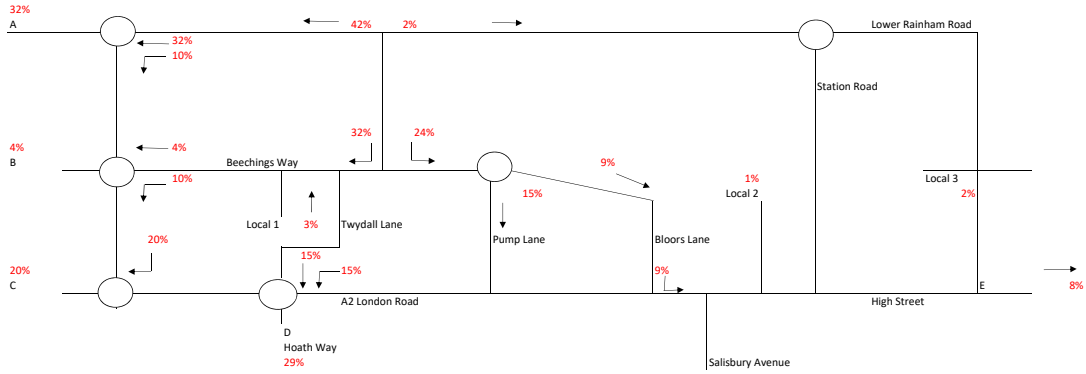


1.6km walking catchment from existing and proposed local centres

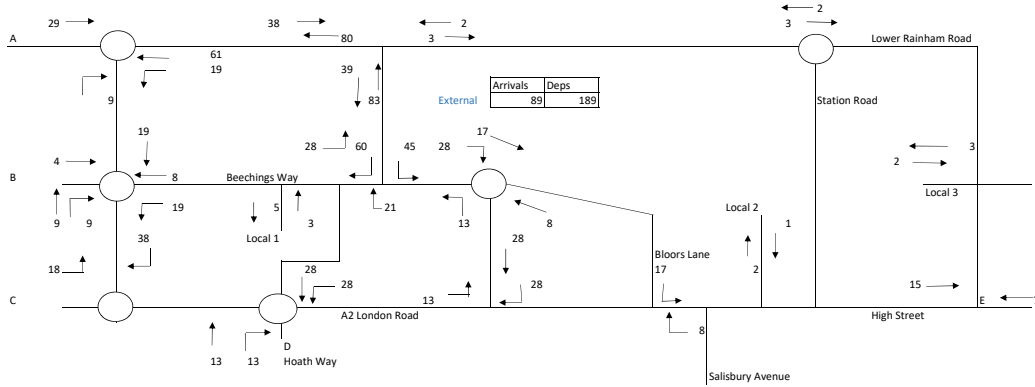


Appendix G

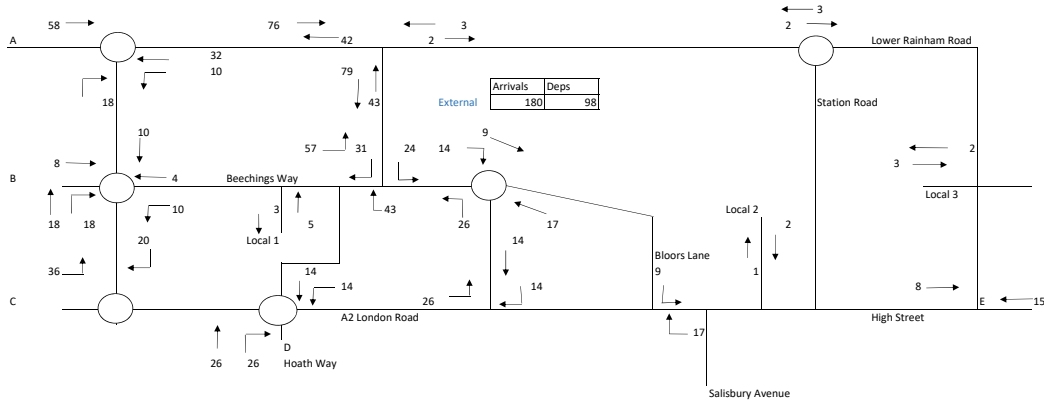
Commuting and Business and Primary School Pupils/Staff Trips
Distribution



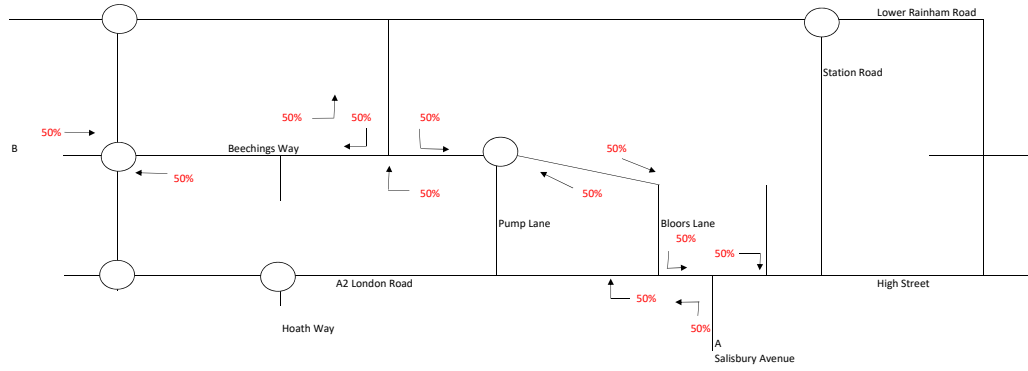
Traffic Flows - AM Peak



Traffic Flows - PM Peak

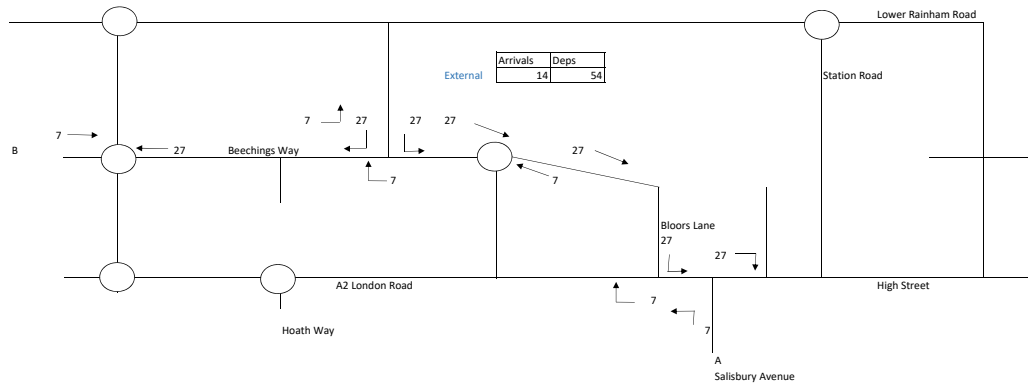


Secondary School Trips
Distribution

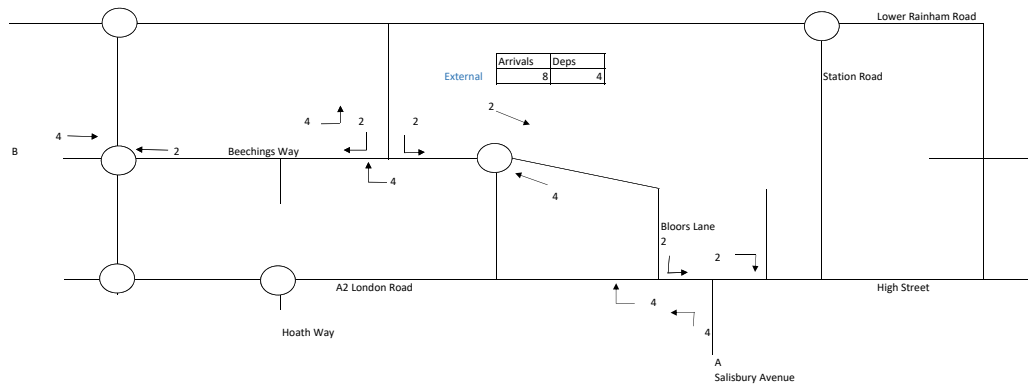


- A Howard School/Rainham Girls School 50%
- B Robert Napier School 50%

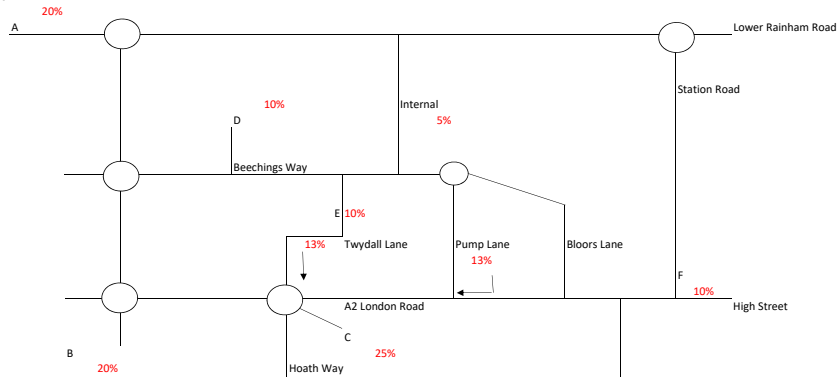
Traffic Flows - AM Peak



Traffic Flows - PM Peak

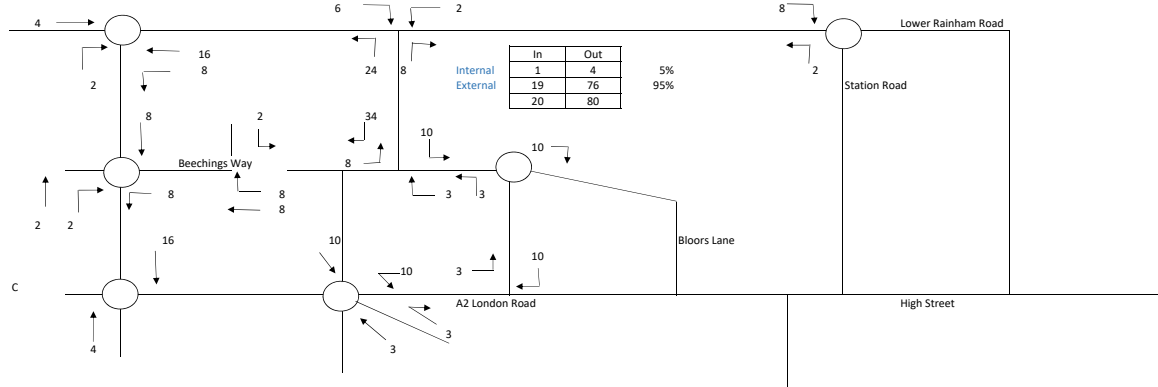


Shopping and Personal Business Trips
Distribution

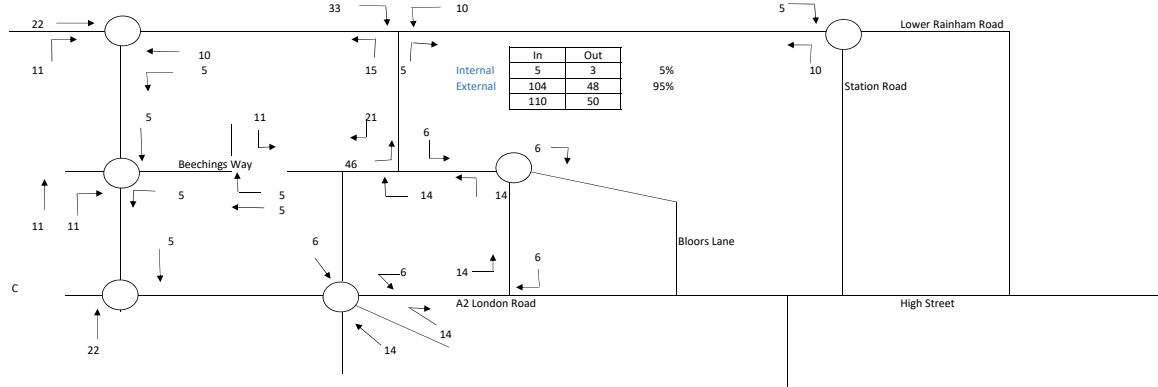


- A Asda Gillingham 20%
- B Gillingham Business Park 20%
- C Tesco Extra Gillingham 25%
- D Mcdonalds/co op 10%
- E Twydall local centre 10%
- F Rainham High Street 10%
- Internal Internal 5%

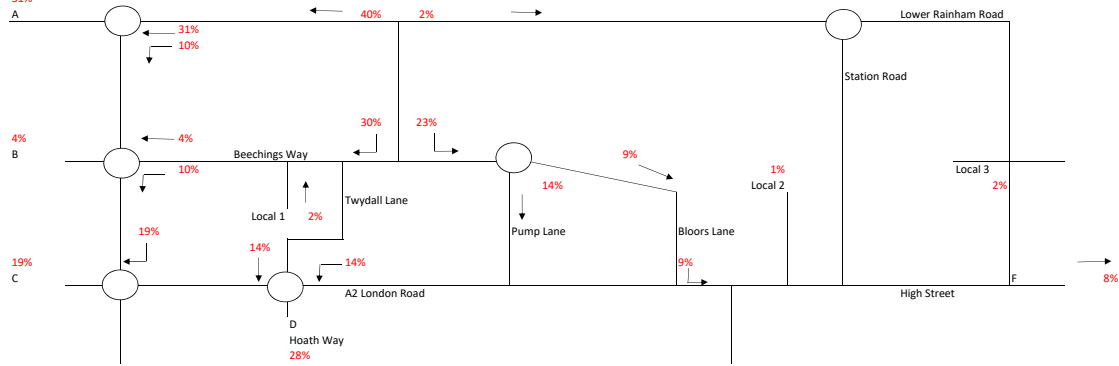
Traffic Flows - AM Peak



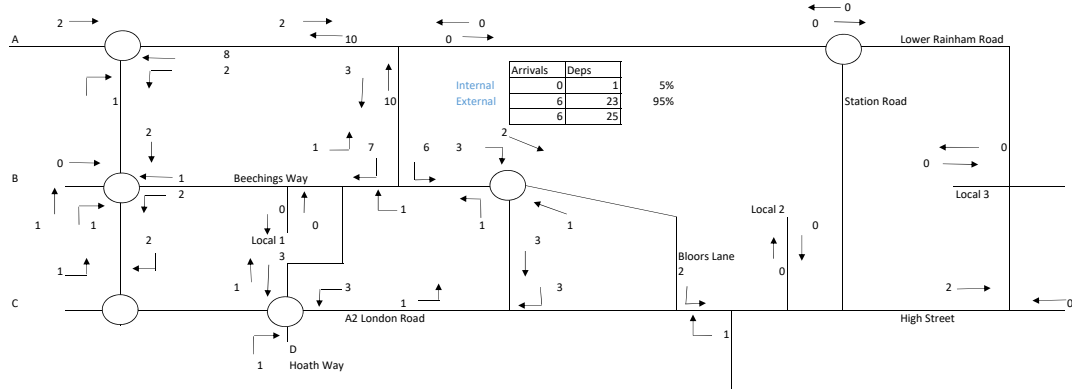
Traffic Flows - PM Peak



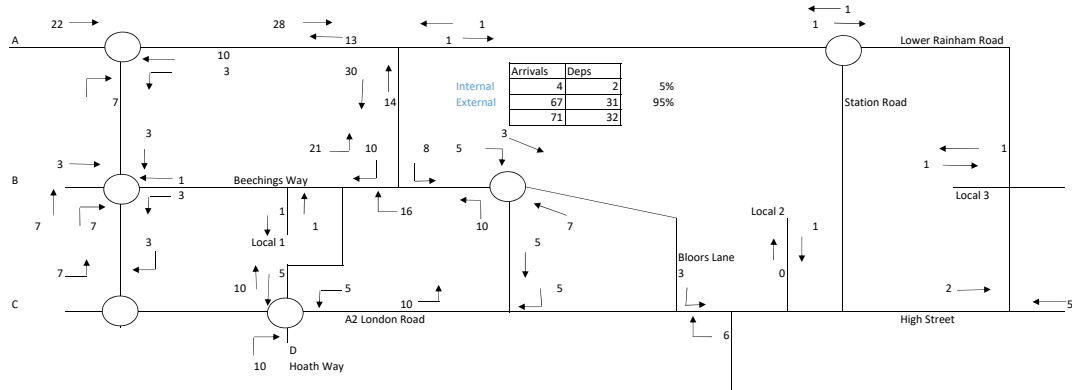
Leisure Trips Distribution
31%



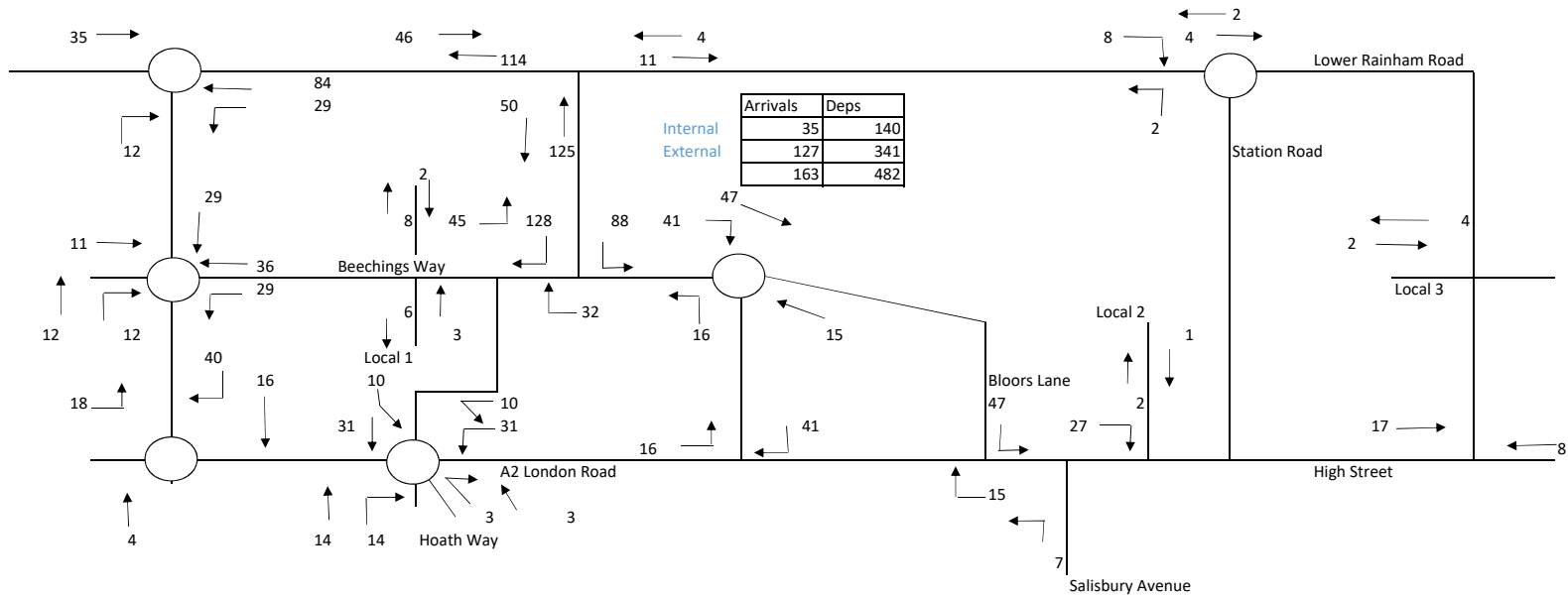
Traffic Flows - AM Peak



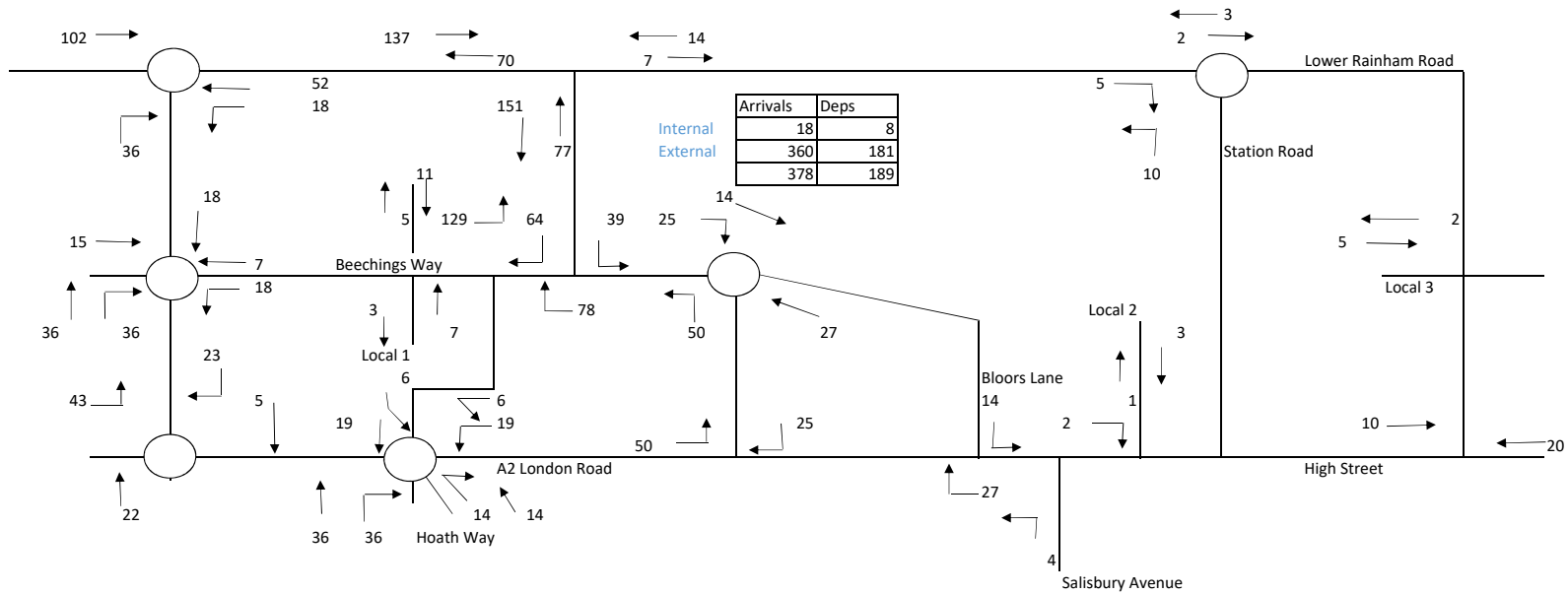
Traffic Flows - PM Peak



Total Residential Trips
Traffic Flows - AM Peak



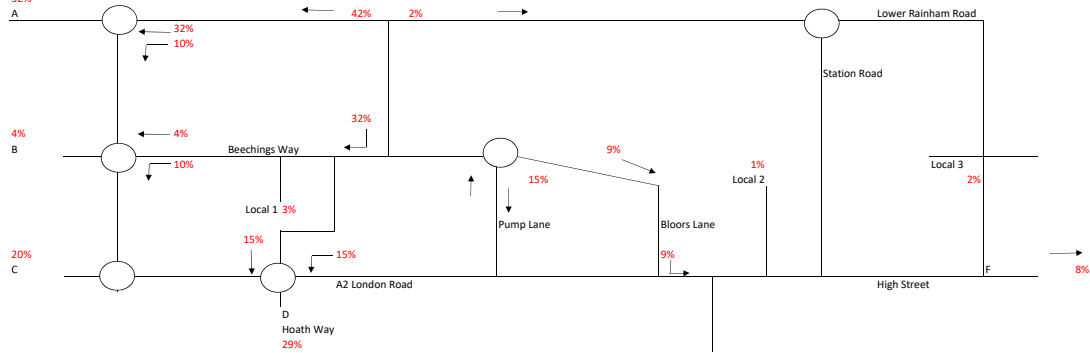
Traffic Flows - PM Peak



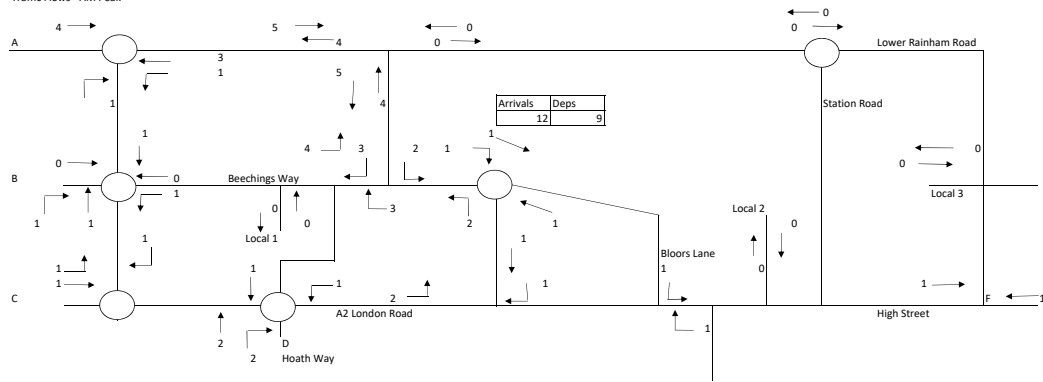
Care Home Trips

Distribution

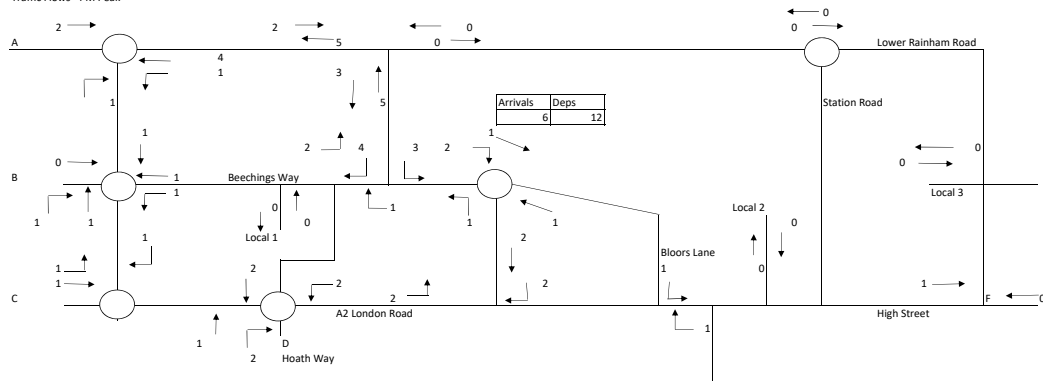
32%



Traffic Flows - AM Peak

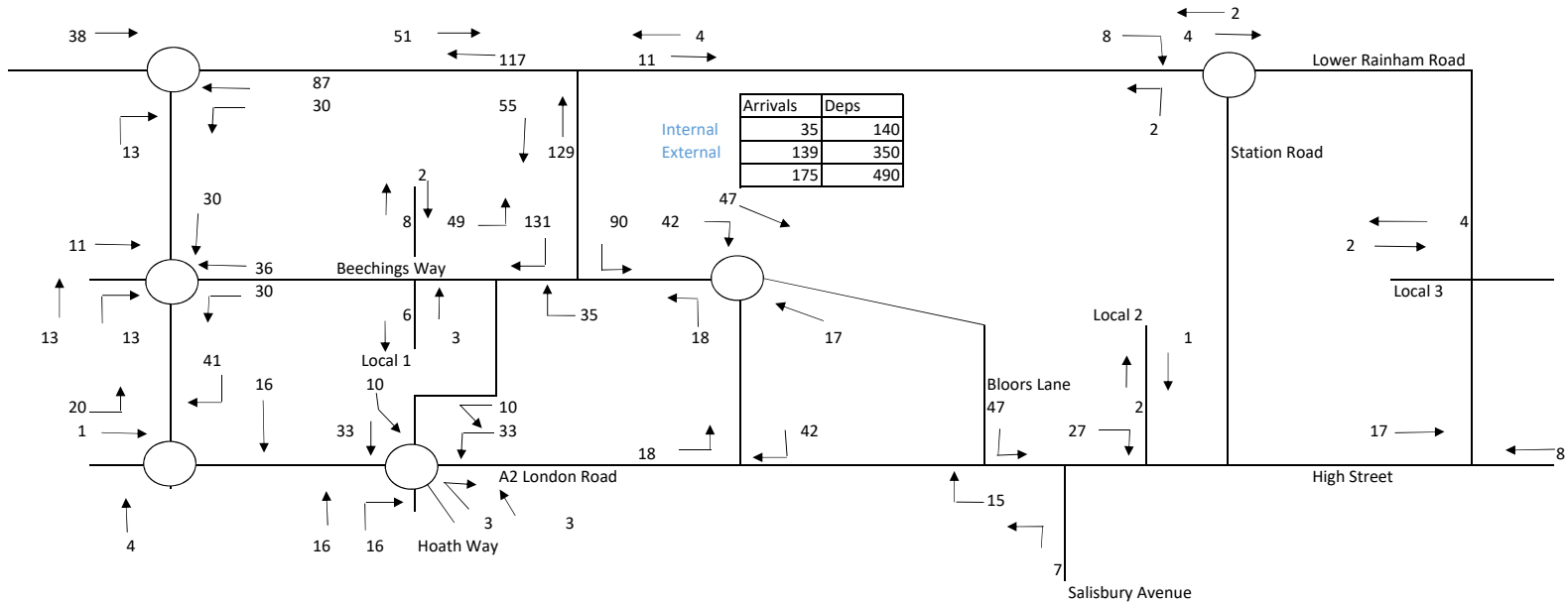


Traffic Flows - PM Peak

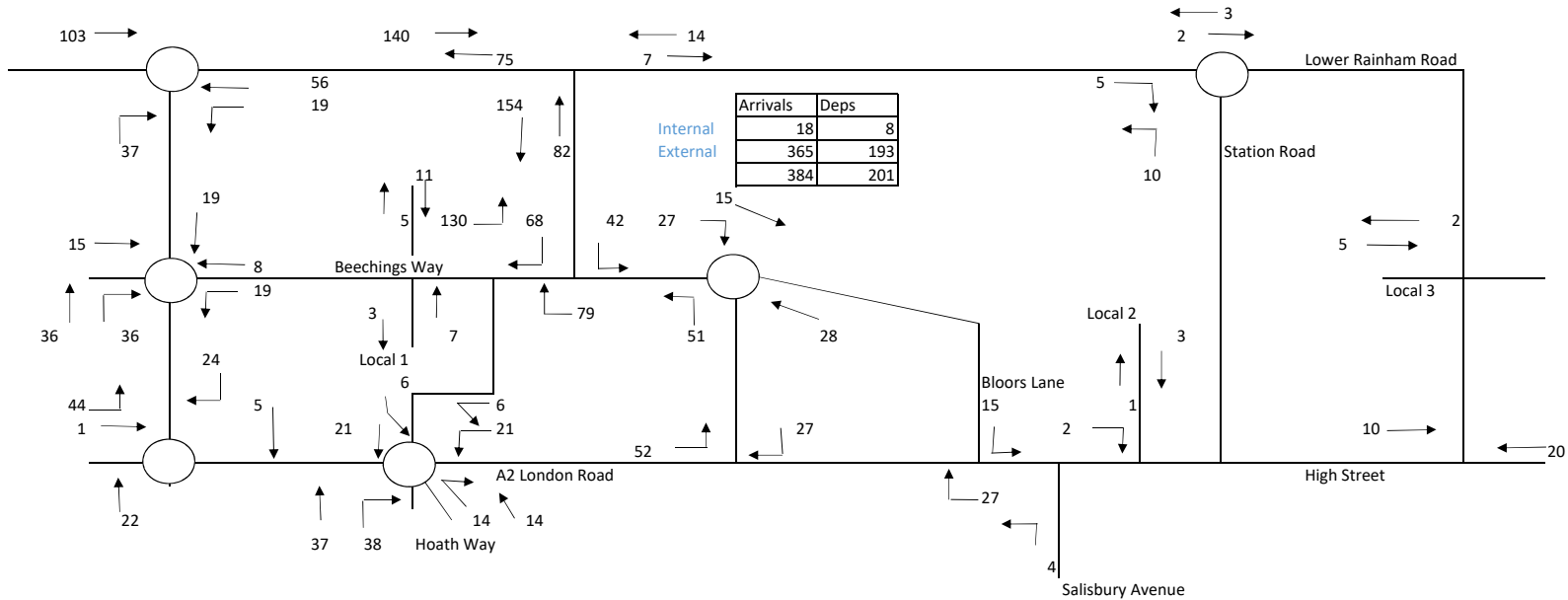


Total Trips

Traffic Flows - AM Peak



Traffic Flows - PM Peak





Appendix H

Pump Lane, Lower Rainham

Road Safety Audit
Stage 1

26 September 2019

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Pump Lane, Lower Rainham

Road Safety Audit Stage 1

26 September 2019

Issue and Revision Record

Revision	Date	Originator	Checker	Approver	Description
A	26/09/2019	J Man	M S Ring	T J Blaney	First Issue
					

Information class: Standard

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1 Introduction

This report describes a Stage 1 Road Safety Audit carried out on the proposed highway modifications in the vicinity of Pump Lane, Lower Rainham.

The audit was carried out at the request of David Tucker Associates.

The audit took place at the Croydon office of Mott MacDonald and consisted of a detailed examination of the submitted documentation and drawings listed in **Appendix A**.

It is confirmed that this is a Stage 1 Road Safety Audit and that the audit was undertaken upon completion of the preliminary design work.

The Road Safety Audit Team as approved by the client's Project Sponsor, Simon Tucker, consisted of:

Matthew Ring	BSc (Hons), MCIHT, MSoRSA (Certificate of Competency in Road Safety Audit, April 2016) Audit Team Leader, Mott MacDonald
--------------	--

Jeffrey Man	MEng, MCIHT, MSoRSA Audit Team Member, Mott MacDonald
-------------	--

The Audit Team visited the site of the proposed works together on Friday 20th September 2019 at 14:00hrs. During this visit the weather was fine, and the road surface dry. Traffic conditions were light. No pedestrian or cycle activity were observed in the vicinity.

This Road Safety Audit was carried out in accordance with Highways England's Departmental Standard GG119. The Road Safety Audit Team has examined and reported only on the road safety implications of the scheme as presented and has not examined or verified the compliance of the designs to any other criteria.

The comments and suggestions for road safety improvements made in this report seek to address matters that might have an adverse effect on road safety in the context of the chosen design. No attempt has been made to comment on the justification of the scheme. Consequently, the auditors accept no responsibility for the design or construction of the scheme.

All the issues raised in this report are considered to be required for action. The comments contained in the report are based on safety related concerns and as such the design engineer will need to consider carefully how to respond to each of the issues. The Audit Response Report to the audit should be completed by the Design Team and kept on file for future reference.

A Key Plan indicating the location of any identified safety related issues is provided in **Appendix B**.

Scheme Description

The scheme consists of three areas where improvements are proposed:

Pump Lane, Lower Rainham – A signal controlled alternate one-way working system is proposed at the southern end of Pump Lane, Lower Rainham at the railway underbridge. Furthermore, a 2.5m shared footway / cycleway is proposed on the eastern side of Pump Lane.

Lower Rainham Road, Lower Rainham – The main site access consists of a priority T-junction on Lower Rainham Road. The carriageway is proposed to be widened to accommodate a right-turn lane.

Yokosuka Way – Lower Rainham Road, Gillingham – The approach to the roundabout on the eastern arm of the existing roundabout is proposed to be widened to accommodate two lanes, with kerb realignments on the southern side of Lower Rainham Road and amendments to the central splitter island to facilitate this.

2 Items Raised at this Stage 1 Audit

This section describes road safety related issues identified by the Audit Team that are associated with the scheme as presented in **Appendix A**. A reference key plan is shown in **Appendix B**.

2.1 Pump Lane, Lower Rainham

2.1.1 Problem 2.1.1

Location: Pump Lane, south of railway underbridge.

Summary: Proximity of stop line to single lane shuttle working section, south of the railway underbridge.

Alternate one-way working signal system is proposed at the railway underbridge and the carriageway is proposed to be reduced under the bridge to 3.0m to provide a 2.5m wide shared footway / cycleway.

On the southern side of the railway underbridge, the stop line is proposed approximately 10m south from the single lane section, with a short taper in the eastern footway provided. Swept paths have not been provided for vehicles travelling southbound. The audit team is concerned the short manoeuvring distance could increase the risk of head-on collisions and / or kerb strikes leading to loss of control type collisions.

Figure 1: Proposed alternate one-way working.



Source: David Tucker Associates

Recommendation

It is recommended that swept path analysis is undertaken for vehicles travelling southbound. Should the movement be unfeasible, it is recommended the stop line south of the underbridge is set further back from the junction.

2.1.2 Problem 2.1.2

Location: Pump Lane, south of railway underbridge.

Summary: On street parking leading to vehicles on approach to signal stop line not being in a position to see nearside signals.

The audit team observed a number of vehicles parked on street on the section of Pump Lane south of the railway underbridge. The proposed stop line is located in a section where vehicles were observed to be parked. The audit team is concerned that the presence of parked vehicles requires drivers to use the centre of Pump Lane on approach to the railway underbridge which could reduce the visibility of the nearside traffic signals.

This could increase the risk of late braking, leading to shunt-type collisions, or vehicles proceeding on a red signal, leading to head-on collisions.

Furthermore, drivers in the centre of Pump Lane travelling northbound waiting at a red traffic signal are likely to obstruct southbound vehicles increasing the risk of late braking shunt type collisions.

Figure 2: Existing on-street parking on Pump Lane.



Source: Mott MacDonald

Recommendation

It is recommended that parking restrictions are considered to provide a clear approach to the signals. Furthermore, it is recommended that offside signals are proposed in addition to any nearside signals.

2.1.3 Problem 2.1.3

Location: Pump Lane, south of railway underbridge.

Summary: Signal equipment potentially impeding access to properties.

The location of traffic signal equipment has not been provided for the proposed alternate one-way working signal system. The driveway for No. 185 Pump Lane is located between the stop line and the railway underbridge. Should signal equipment be located in the vicinity of the vehicular crossover, this could increase the risk of vehicles striking the signal equipment.

Recommendation

It is recommended that care is taken to locate the signal equipment south of the railway underbridge, such that it would not impede access to the existing driveway.

2.1.4 Problem 2.1.4

Location: Pump Lane, south of railway underbridge.

Summary: Vegetation present on corner north of No. 204 Pump Lane reducing visibility at potential pinch point.

A buildout is proposed to facilitate the provision of the 2.5m wide shared footway / cycleway. The proposed shared footway / cycleway re-joins the existing footway by a sharp taper, which potentially creates a pinch point where the width of the footway / cycleway reduces. Vegetation is present immediately east of this location, which would reduce the inter-visibility of pedestrians and cyclists from the railway underbridge, and other pedestrians and cyclists south of the pinch point, as well as vehicles egressing from the driveway of No. 204 Pump Lane. This could result in an increased risk of collisions between different users of the shared users of the shared footway / cycleway facility.

Recommendation

It is recommended the vegetation is cut back at the corner of north of No.204 Pump Lane. Furthermore, it is recommended that a shallower taper is provided where the proposed footway / cycleway re-joins the existing footway.

2.2 Lower Rainham Road, Lower Rainham

2.2.1 Problem 2.2.1

Location: Lower Rainham Road, east of proposed site access.

Summary: The posted change in speed limit in close proximity to the new access.

On Lower Rainham Road immediately east of the proposed site access, the posted mandatory traffic speed limit changes from 40mph to 30mph. The audit team is concerned that eastbound motorists may accelerate due to the change in speed limit at the same location motorists will be slowing to turn into the proposed site access, leading to an increased risk of rear-end shunt type collisions.

Furthermore, drivers waiting to egress the proposed new access may fail to fully appreciate the approach speed of vehicles slowing down or accelerating for the change in speed limit increasing the risk of turning vehicle collisions.

Figure 3: Existing 30mph / 40mph speed transition.



Source: Mott MacDonald

Recommendation

It is recommended that, in conjunction with the Highway Authority, the position of the 30mph / 40mph speed limit transition is reviewed and relocated away from the new site access.

2.2.2 Problem 2.2.2

Location: Lower Rainham Road, east of proposed site access.

Summary: Lack of crossing facility across Lower Rainham Road.

A footway is proposed on the east side of the site access road providing pedestrian access between the site westwards towards Lower Rainham Road. A footway is currently provided on the south side of Lower Rainham Road towards Pump Lane but terminates at Pump Lane and no dropped kerb facility is provided. A footway is provided on the northern side of Lower Rainham Road providing eastbound access towards Grange.

It is not proposed to provide a pedestrian crossing facility on Lower Rainham Road linking the site access with the northern footway. The lack of a formal crossing facility could lead to pedestrians using the existing traffic islands that are not designed for this purpose. This increases the risk of collisions between pedestrians travelling to and from the site, and passing vehicles, and also slips, trips and falls as no dropped kerb facilities are provided.

Recommendation

It is recommended that a formal pedestrian crossing facility with a central refuge island is provided to allow pedestrians to cross Lower Rainham Road.

2.3 Yokosuka Way – Lower Rainham Road, Gillingham

2.3.1 Problem 2.3.1

Location: Yokosuka Way – Lower Rainham Road, Eastern Arm.

Summary: Kerb alignment on approach to roundabout directs vehicles from the nearside lane into the offside lane.

On the eastern arm of the roundabout between Lower Rainham Road and Yokosuka Way, the approach to the roundabout is proposed to be widened to increase the number of approach lanes from one to two. Realignment of the southern kerblines and the central splitter island is proposed to facilitate this.

Approximately 15m east of the roundabout the proposed southern kerblines appear to 'kink' which could deflect drivers in the nearside lane towards the offside lane. This could increase the risk of side-swipe type collisions.

Recommendation

It is recommended that the proposed kerb realignment is revised to provide a continuous alignment.

3 Audit Team Statement

We certify that this audit has been carried out in accordance with Highways England's Departmental Standard GG119

Road Safety Audit Team Leader

M S Ring BSc (Hons) MCIHT, MSoRSA
(Certificate of Competency in Road Safety Audit, April 2016)

Signed:



Date: 26th September 2019

Projects Principal
Mott MacDonald House
8-10 Sydenham Road
Croydon
CR0 2EE

J Man MEng MCIHT MSoRSA

Signed:



Date: 26th September 2019

Traffic Engineer
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Croydon
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Appendices

A.	List of Drawings & Documents Examined	10
B.	Key Plan – Pump Lane, Lower Rainham	11
C.	Key Plan – Lower Rainham Road, Lower Rainham	12
D.	Key Plan – Yokosuka Way – Lower Rainham Road, Gillingham	13

A. List of Drawings & Documents Examined

The following drawings and documents were examined as part of this Road Safety Audit.

Table 1: Drawings

Drawing Number	Revision	Drawing Title
20230-05	A	Proposed Pump Lane Railway Bridge Improvements
20230-05-02	-	Proposed Right Turn Lane, Lower Rainham Road
20230-10	A	Proposed Improvements, Yokosuka Way – Lower Rainham Road, Lower Rainham Road East Arm

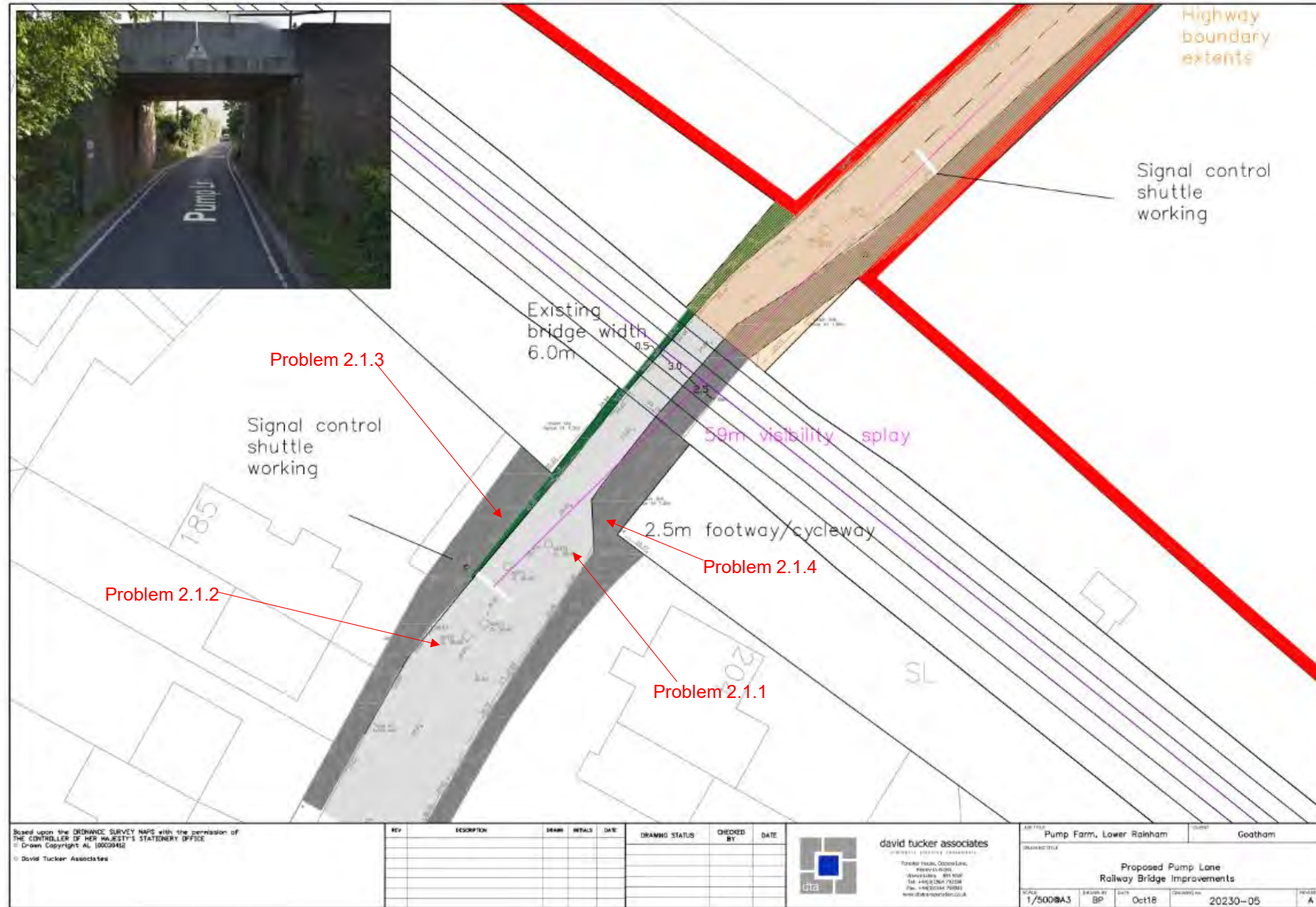
Source: David Tucker Associates

Table 2: Documents

Document Number	Revision	Document Title
-	-	Road Safety Audit Brief
20230-03	-	Transport Assessment

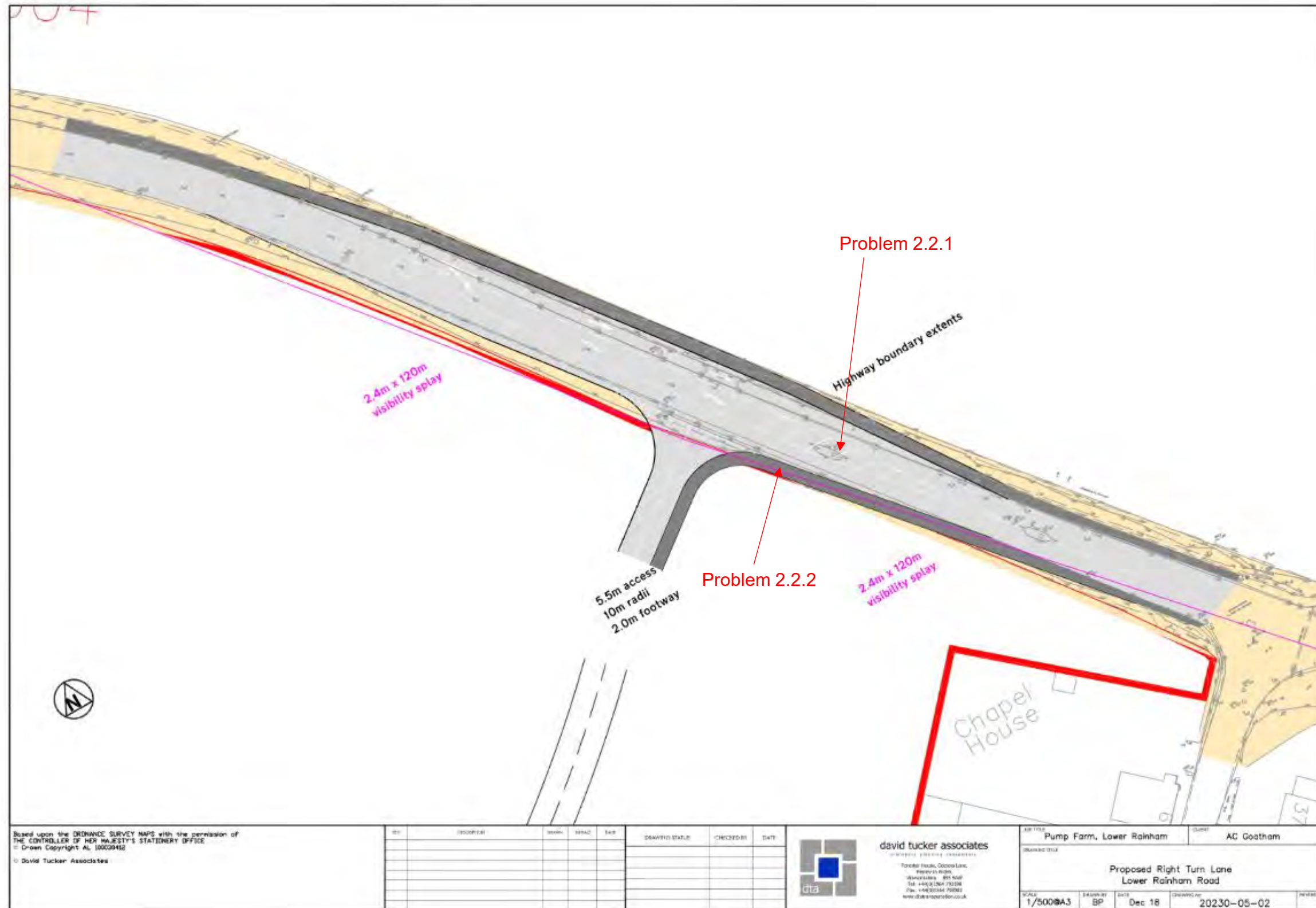
Source: David Tucker Associates

B. Key Plan – Pump Lane, Lower Rainham



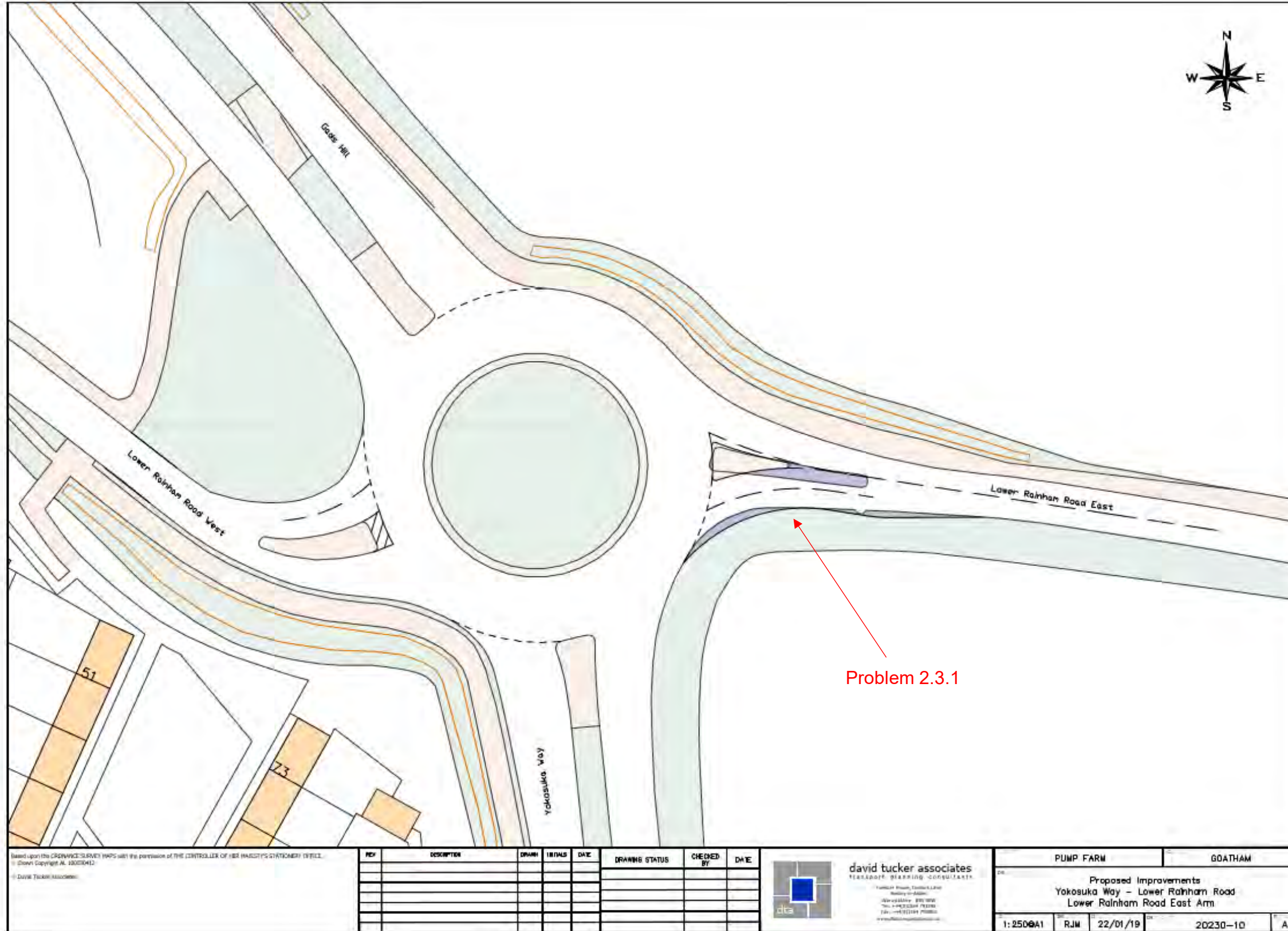
Not to Scale

C. Key Plan – Lower Rainham Road, Lower Rainham



Not to Scale

D. Key Plan – Yokosuka Way – Lower Rainham Road, Gillingham



Not to Scale

Based upon the CRENSANCE SURVEY (NPS) with the permission of THE CONTROLLER OF HER MAJESTY'S STATUTORY INSTRUMENTS.
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REV	DESCRIPTION	DRAWN	INITIALS	DATE	DRAWING STATUS	CHECKED BY	DATE

david tucker associates
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 CONSULTANTS

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 Kent ME8 2JG
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 Fax: 01843 850001
 www.dta.co.uk

PUMP FARM	GOATHAM
Proposed Improvements Yokosuka Way – Lower Rainham Road Lower Rainham Road East Arm	
1:2500A1	RJM 22/01/19 20230-10 A



Appendix I

1.0 INTRODUCTION

- 1.1 This report sets out the design office response to the results of a Stage 1 Road Safety Audits (RSAs) carried out by Mott Macdonald in relation to the access proposals associated with the development of land off Pump Lane, Lower Rainham. The RSA reports is attached at the end of this note.

2.0 ITEMS RAISED

Problem 2.1.1

Location: *Pump Lane, South of Railway Underbridge*

Summary: *Proximity of stop line to single lane shuttle working section, south of the railway underbridge.*

Recommendation

- 2.1 It is recommended that swept path analysis is undertaken for vehicles travelling southbound. Should the movement be unfeasible, it is recommended the stop line south of the bridge is set further back from the junction.

Designer's Response

- 2.2 The auditor's recommendation is accepted. Swept path analysis has been undertaken on the junction and is shown on **Drawing 20230-05d** attached to this note. The southern stop line has been moved south, whilst still not impacting the access to dwelling 185. The eastern kerb for the footway/cycleway has been smoothed to allow vehicles better transition.

Problem 2.1.2

Location: *Pump Lane, South of Railway Underbridge.*

Summary: *On street parking leading to vehicles on approach to signal stop line not being in a position to see nearside signals.*

Recommendation

- 2.3 It is recommended that parking restrictions are considered to provide a clear approach to the signals. Furthermore, it is recommended that offside signals are proposed in addition to any nearside signals.

Designer's Response

- 2.4 The auditor's recommendation is noted. A TRO will be considered to address on street parking issues within the vicinity of the signal junction.

Problem 2.1.3

Location: *Pump Lane, South of Railway Underbridge.*

Summary: *Signal equipment potentially impeding access to properties.*

Recommendation

- 2.5 It is recommended that care is taken to locate the signal equipment south of the railway underbridge, such that it would not impede access to the existing driveway.

Designer's Response

- 2.6 The auditor's recommendation is accepted and this will be addressed at the detailed design stage.

Problem 2.1.4

Location: *Pump Lane, South of Railway Underbridge*

Summary: *Vegetation present on corner north of No. 204 Pump Lane reducing visibility at potential pinch point.*

Recommendation

- 2.7 It is recommended the vegetation is cut back at the corner of north No. 204 Pump Lane. Furthermore, it is recommended that a shallower taper is provided where the proposed footway / Cycleway re-joins the existing footway.

Designer's Response

- 2.8 The auditor's recommendation is accepted and this will be addressed at the detailed design stage.

Problem 2.2.1

Location: *Lower Rainham Road, East of proposed site access.*

Summary: *The posted change in speed limit in close proximity to the new access.*

Recommendation

- 2.9 It is recommended that, in conjunction with the Highway Authority, the position of the 30mph/40mph speed limit transition is reviewed and relocated away from the new site access.

Designer's Response

- 2.10 The auditor's recommendation is accepted. **Drawing 20230-05d-2** shows the proposed relocated 30mph/40mph location to the west of the site access right turn lane.

Problem 2.2.2

Location: *Lower Rainham Road, East of proposed site access.*

Summary: *Lack of crossing facility across Lower Rainham Road.*

Recommendation

- 2.11 It is recommended that a formal pedestrian crossing facility with a central refuge island is provided to allow pedestrians to cross Lower Rainham Road.

Designer's Response

- 2.12 The auditor's recommendation is accepted and a proposed pedestrian crossing is shown on **Drawing 20230-05d-2**. This is located to the east of the access, where the relocated speed limit change will be moved from.

Problem 2.3.1

Location: *Yokosuka Way – Lower Rainham Road, Eastern Arm.*



Summary: *Kerb alignment on approach to roundabout directs vehicles from the nearside lane into the offside lane.*

Recommendation

- 2.13 It is recommended that the proposed kerb alignment is revised to provide a continuous alignment.

Designer's Response

- 2.14 The auditor's recommendation is accepted and a proposed kerb has been realigned to provide better alignment. This is show on **Drawing 20230-05d-3**.



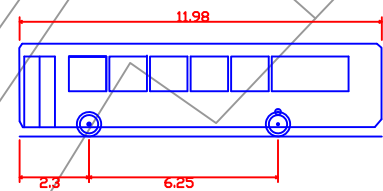
Highway boundary extents

Signal control shuttle working

Existing bridge width 6.0m

59m visibility splay

2.5m footway/cycleway



Signal control shuttle working

Single Deck Bus
 Overall Length 11.980m
 Overall Width 2.322m
 Overall Body Height 3.070m
 Min Body Ground Clearance 0.306m
 Track Width 2.322m
 Lock to lock time 6.00s
 Kerb to Kerb Turning Radius 10.368m

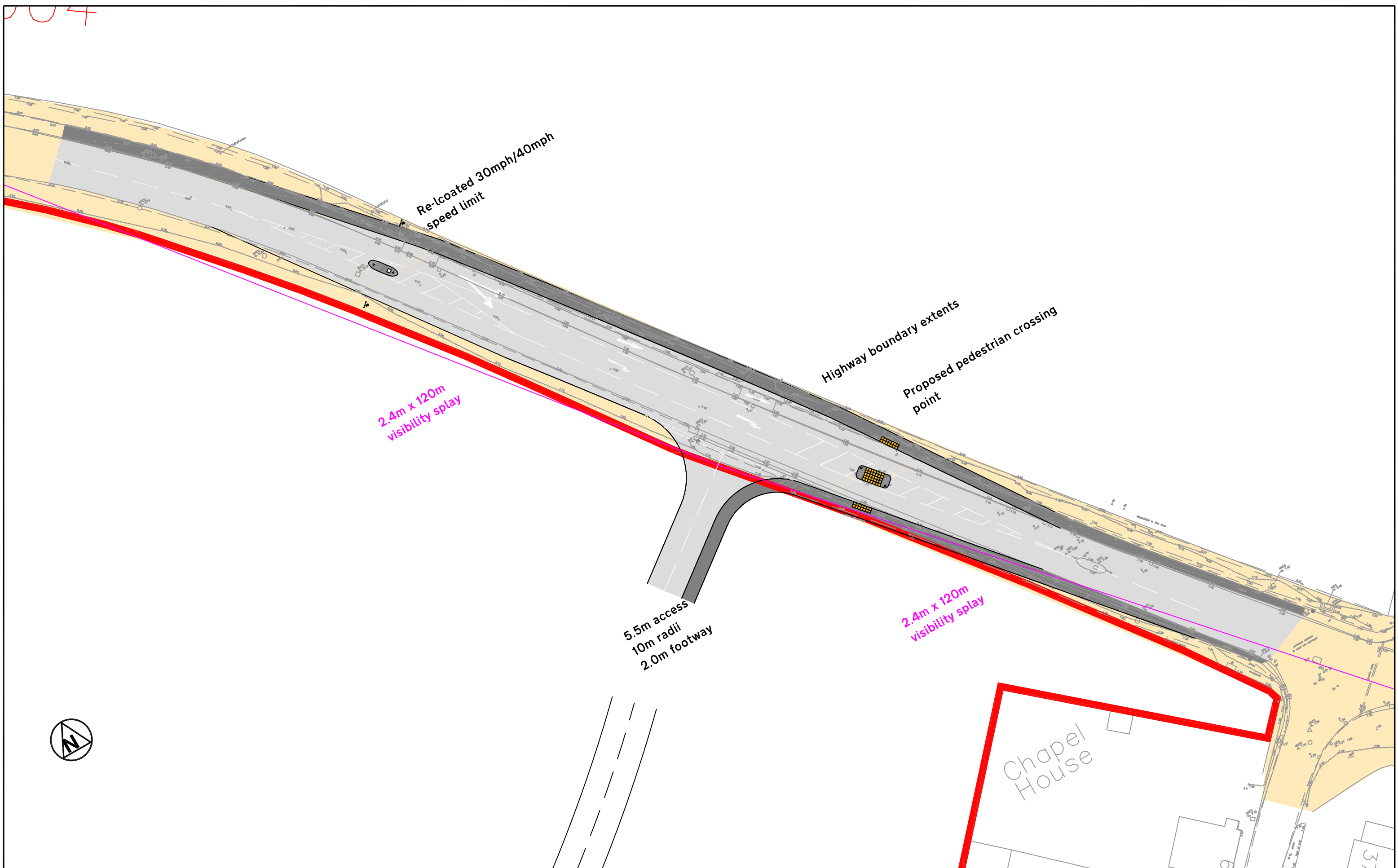
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REV	DESCRIPTION	DRAWN	INITIALS	DATE	DRAWING STATUS	CHECKED BY	DATE



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JOB TITLE Pump Farm, Lower Rainham		CLIENT Goatham	
DRAWING TITLE Proposed Pump Lane Railway Bridge Improvements			
SCALE 1/500@A3	DRAWN BY BP	DATE Oct19	DRAWING No 20230-05
			REVISION d



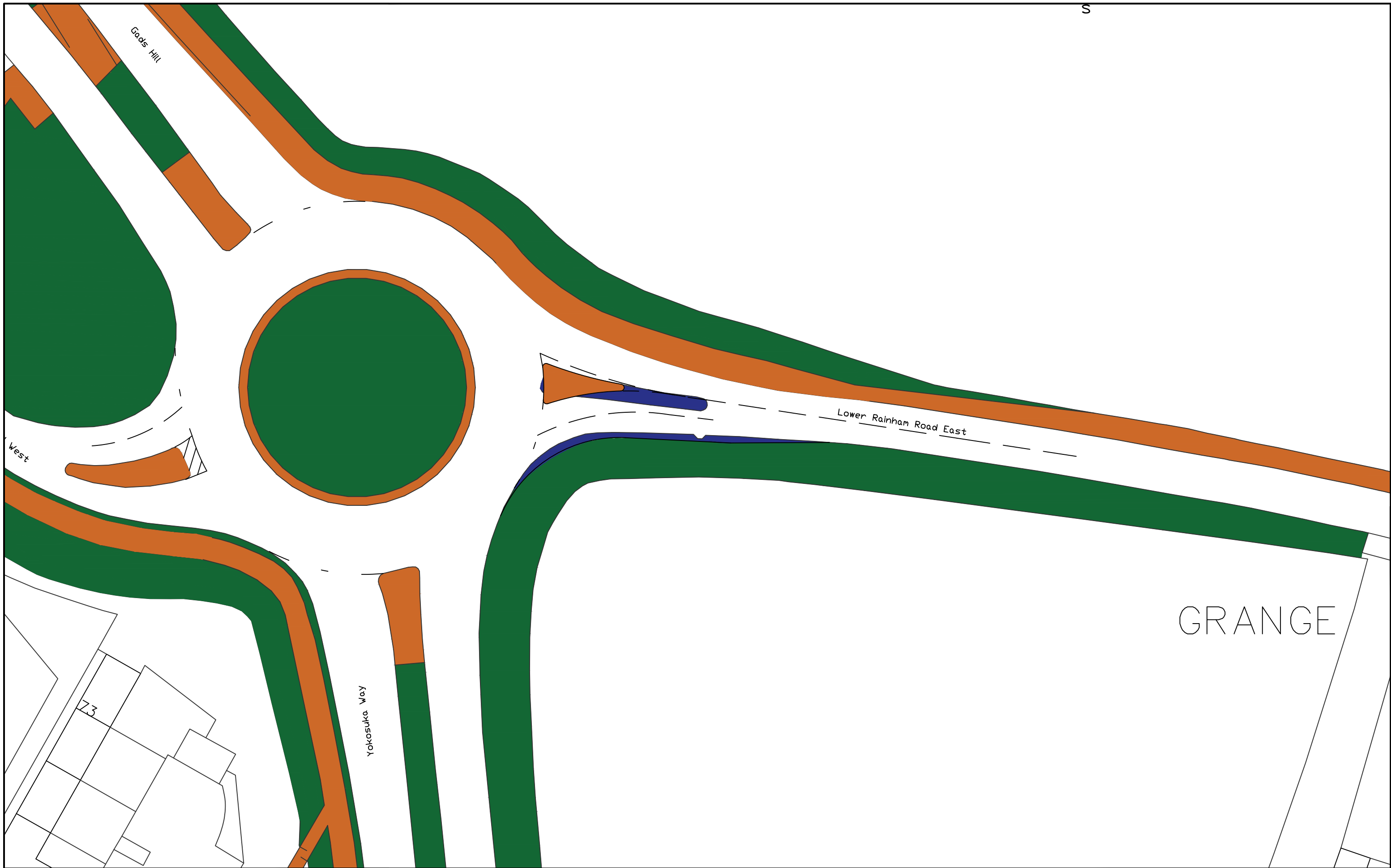
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JOB TITLE Pump Farm, Lower Rainham		CLIENT AC Goatham	
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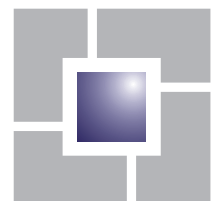
JOB TITLE Pump Farm, Lower Rainham		CLIENT AC Goatham	
DRAWING TITLE Proposed Improvements Yokosuka Way – Lower Rainham Road Lower Rainham Road East Arm			
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Appendix J

Land at Pump Farm, Lower Rainham

*Walking, Cycling & Horse-Riding Assessment and
Review*



1. SCHEME DESCRIPTION AND BACKGROUND

Background

The proposals are for 1,250 residential dwellings, a local centre, 80 bed care home, 60 bed extra care facility and 2 form entry primary school. It is requested by the Local Highway Authority that a Non-Motorised User Audit be provided to establish suitable walking and cycling routes from the site to key facilities.

Guidance for Non-Motorised User Audit was previously set out in HD 42/05. This has since been replaced with HD 42/17 Walking, Cycling and Horse-Riding Assessment and Review and this guidance has therefore been used as a basis for preparing this document.

Study area

The key local facilities are shown in Figure 1 which outlines the location of primary, secondary schools, local retail, health centre, bus stops and train station. The assessment therefore considers walking and cycling routes to these key facilities from the site.

2. WALKING, CYCLING & HORSE-RIDING ASSESSMENT

This Chapter summarises the findings of the assessment as set out in Chapter 4 of HD 42/17. The findings under each topic area are summarised in an individual table and any potential opportunities for improvements are noted in each table and then summarised in Chapter 3.

2-1 Review of walking, cycling & horse-riding policies and strategies

Relevant non-motorised user policies include:

Kent County Council Local Transport Plan 4

Outcome 3) Safer Travel: Provide a safer road, footway and cycleway network to reduce the likelihood of casualties, and encourage other transport providers to improve safety on their networks.

2-2 Collision data

A detailed assessment of PIC data recorded within the area over the most recent 5-year period has been undertaken, the data has been obtained from the Medway District Council. The area which has been assessed and the location of the PICs recorded is shown in **Figure 1** below. A summary of the incidents is shown at **Table 1**.

Figure 1 – Location of accidents

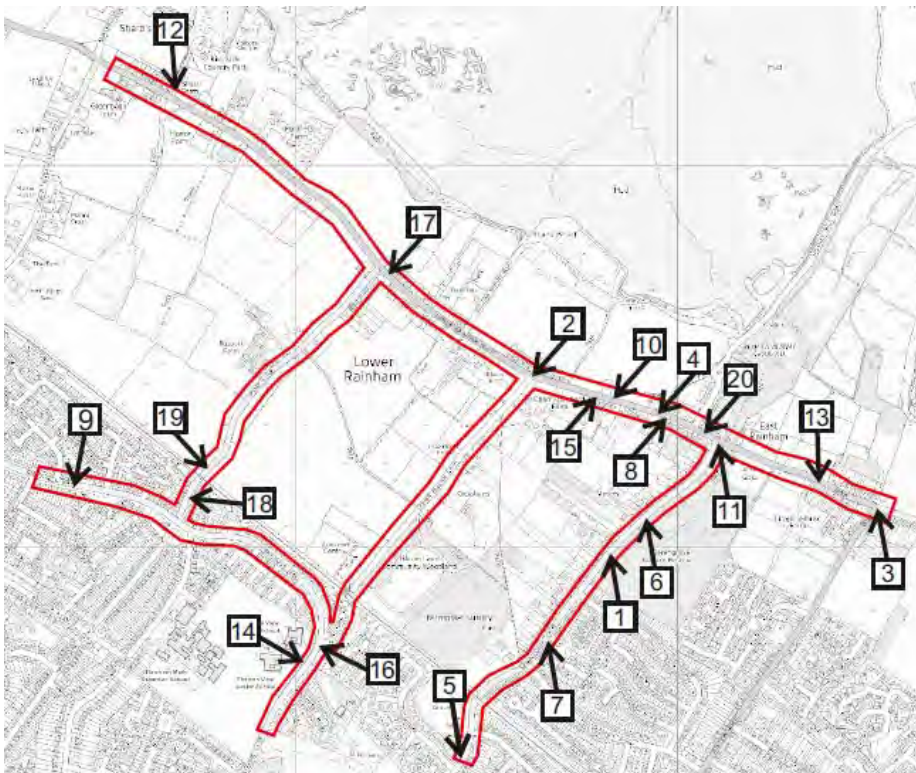


Table 1 – Summary of Recorded Accidents

PIC	Severity	No. Casualties	No. Vehicles	Vehicles			
				1	2	3	4
1	Fatal	2	2	Motorcycle	Car		
2	Serious	1	2	Motorcycle	Car		
3	Serious	1	2	Pedal cycle	Car		
4	Slight	1	2	Car	Car		
5	Slight	1	2	Pedal cycle	Car		
6	Serious	1	2	Car	Motorcycle		
7	Slight	1	2	Car	Car		
8	Slight	3	2	Van/Goods	Car		
9	Slight	1	2	Car	Car		
10	Slight	1	2	Car	Car		
11	Slight	1	2	Car	Motorcycle		
12	Serious	2	3	Motorcycle	Motorcycle	Car	
13	Serious	2	2	Motorcycle	Car		
14	Slight	1	2	Car	Car		
15	Slight	3	2	Car	Car		
16	Slight	1	1	Car			
17	Slight	4	2	Van/Goods	Car		
18	Slight	1	4	Car	Car	Car	Car
19	Serious	1	1	Motorcycle			
20	Slight	2	2	Car	Car		

Between 01/06/2013 and the 31/05/2018 there have been 20 recorded PIC incidents within the surveyed area, of these 20 PICs 1 was recorded as 'fatal' in severity, another 6 as 'serious' in severity and all others were recorded as 'slight' incidents.

The fatal PIC occurred on 04/06/2013 at location 'Berengrave Lane O/S no 123, Rainham' and is identified as number '1' on **Figure 3** above. This PIC involved a car and motorcycle colliding head on and the motorcyclist sustaining head injuries and whose vehicle caught fire during the incident.

The first serious PIC occurred on 21/11/2013 at location 'Lower Rainham Road junction with Lower Bloors Lane, Rainham' and is identified as number '2' on **Figure 3** above. This PIC involved the collision of a car with a motorcycle as it was pulling out of a junction and into a queue of stationary traffic.

The second serious PIC occurred on 18/11/2013 at location 'Lower Rainham Road Jw Station Road, Rainham' and is identified as number '3' on **Figure 3** above. This PIC involved a car turning left from Station Road onto Lower Rainham Road and colliding with a pedal cycle.

The third serious PIC occurred on 10/06/2015 at location 'outside No. 135 Berengrave Lane, Rainham' and is identified as number '6' on **Figure 3** above. This PIC involved a car colliding with a motorcycle as it pulled away from a nearside lay-by.

The fourth serious PIC occurred on 08/04/2017 at location 'B2004 Lower Rainham Road at junction with entrance to Riverside Country Park, Gillingham' and is identified as number '12' on **Figure 3** above. This PIC involved a car driving into the back of two slowed motorcycles passing the Riverside Country Park entrance.

The fifth serious PIC occurred on 15/04/2017 at location 'o/s 728 Lower Rainham Road, Gillingham' and is identified as number '13' on **Figure 3** above. This PIC involved a collision between a motorcycle and a car which resulted from the motorcycle overtaking and in doing so passing into the right-hand lane, an oncoming car could not stop in time to avoid the motorbike.

The sixth and final serious collision occurred on 10/05/2016 at location 'Pump Lane, Gillingham, Kent' and is identified as number '19' on **Figure 3** above. This PIC involved a motorcyclist which lost control of their vehicle under wet slippery conditions and came off their bike and impacted with a tree.

Two accidents involved pedestrians both of which were classed as slight. These occurred at locations 9 and 16.

2-3 Public transport services and interchange information

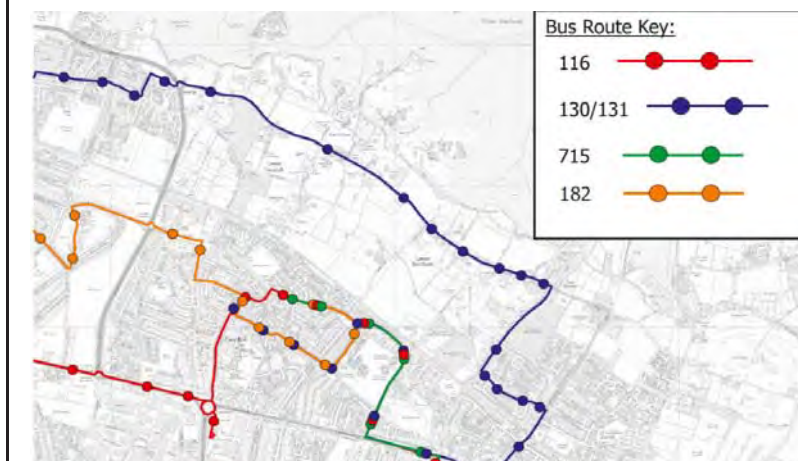
There are a number of bus stops located within the vicinity of the site. The closest of which is located on Beechings Way approximately 600m south of the centre of the proposed development site, the second of which is located on Lower Rainham Road which runs along the site frontage and can be accessed approximately 600m north of the proposed development site. Regular services run to and from these stops routing through Lower Rainham and providing links to towns and cities further-a-field.

The buses servicing these stops including their route and frequency are summarised in **Table 2** below.

Table 2 – Bus routes, times and frequency

Service	Operator	Stop	Route	Frequency		
				Mon-Fri	Sat	Sun
130/131	NU-Venture	Truro Close	Medway Maritime Hospital - Twydall - Hempstead Valley - Penenden Heath - Maidstone	Every 1-2 hours 06:27 - 17:45)	Every 2 hours (07:53 - 16:48)	N/A
715	The Kings Ferry	Truro Close	Twydall - Rainham - Hempstead Valley - Wigmore - London	06:18 (Out) 19:19 (Out)	N/A	N/A
116	Arriva Kent & Surrey	Truro Close	Chatham - Universities - Gillingham - Twydall - Parkwood - Hempstead Valley	Every 20 mins (08:23 - 19:14)	Every 20 mins (08:25 - 18:55)	N/A
182	Arriva Kent & Surrey	Beechings Green	Chatham – Twydall	Every 10 mins	Every 10 mins	Every 20 mins

The route and various stops for each service is summarised in **Figure 2** below.



2-4 Trip Generators

The existing site is used as a fruit orchard and as such does not generate significant vehicular trips or walking, cycling or horse-riding trips.

The trip generation for the proposed development is based on a number of parameters taking into account various journey purpose and journey mode. This is set out in detail in the Transport Assessment. The overall external trip generation is set out in **Table 3**.

Table 3 – Forecast Trip Generation

Total	In	Out	Total
AM peak	115	315	430
PM peak	320	160	480

2-5 Site Visit

A site visit was undertaken in September 2019. This includes a detailed review of the cycling routes to the local facilities and schools as requested by Medway Council.

Route to Secondary Schools

Robert Napier School

Good cycle links are available to The Rober Napier School. Beechings Way benefits from a segregated off-road cycle track on the southern side of the road set back behind a verge. This is shown in **Image 1**.

Image 1 – Off-Road Cycleway on Beechings Way



On approach to the Cornwallis Roundabout the segregated route continues over a bridge across the Ito Way arm of the junction. The route is shown in **Image 2**.

Image 2 – Segregated Footway/Cycleway at Cornwallis Roundabout



The route ends on Cornwallis Avenue, however a lightly trafficked route is available via Beatty Avenue linking with Second Avenue. Cyclists may need to discount for this short stretch until Second Avenue where a signed cycle route is provided to the rear of the school grounds. This is shown in **Image 3**.

Image 3 – Signed Cycle Route to the rear of Robert Napier School



The Howard School/ Rainham School for Girls

Cycle access is via Beechings Way, London Road and Maidstone Road. As set out above Beechings Way benefits from a designated cycle route on the southern side and this continues onto Bloors Lane on the western side. This is shown in **Image 4** below.

Image 4 – Cycle Route on western side of Bloors Lane



At the junction of Bloors Lane with London Road the cycle route continues on the northern side of the road. No cycle route is provided on the southern side of London Road or on Salisbury Avenue which would allow continuous cycle access to these schools.

Route to Local Facilities

Rainham itself provides a local centre on the High Street. Cycle access from the site is via Beechings Way, Bloors Lane and London Road. A designated off-road cycle route is provided on the southern side of Beechings Way as shown in **Image 1**.

As set out above Beechings Way benefits from a designated cycle route on the southern side and this continues onto Bloors Lane on the western side. At the junction of Bloors Lane with London Road the cycle route continues on the northern side of the road as shown in **Image 4**.

Image 4 – Off Road Cycle Route on London Road



This provides a continuous off-road cycle route to the Kia Motor Garage on London Road where London Road meets High Street.

Local facilities serving the Twydall residential area to the south west of the site can be accessed via the footway/cycleway on the southern side of Beechings Way with pedestrian only access provided for a short stretch of Goudhurst Road which is relatively lightly trafficked.

2-6 Consultation with key stakeholders

Discussions have been undertaken with various officers at Medway Council and Highways England. This report has been prepared in response to initial comments received from Medway Council.

2-7 Existing pedestrian, cyclist and equestrian facilities within the local area

The following pedestrian, cyclist and equestrian facilities within the scheme extents have been identified:

Pedestrian Facilities

- a) Existing walking and cycling facilities within the immediate vicinity of the site are limited especially regarding Pump Lane which runs through the centre of the site. Pump Lane is a narrow single lane which does not currently have the capacity to accommodate for cyclists or any footway provision.
- b) The walking and cycling provisions existing along Lower Rainham Road are variable. There are no designated cycle lanes along the carriageway meaning that cyclists are required to share the carriageway with motor vehicles. From approximately 1.1km west of the proposed sites north western boundary the speed limit of Lower Rainham Road changes to 40mph which compromises cyclist safety especially under shared use. Where Pump Lane meets Lower Rainham Road the carriageway narrows to a single lane where passage of vehicles is controlled by filter lights, this continues for approximately 200m and is not appropriate for cyclist use.
- c) West of the site there is a smooth tarmac footway provided on one side of the carriageway (either southside or northside) at any one point. Where Pump Lane meets Lower Rainham Road this footway provision increases to existing on both sides of the carriageway. These footways are approximately 2.0m wide in compliance with Manual for Streets. The footway reduces significantly to the east of Pump Lane. However, this is not a desire line from the development.
- d) To the south of the site upon passage under the rail line, footways are established on both sides of the carriageway as Pump Lane widens and becomes a two-way carriageway. The footway provisions existing throughout Lower Rainham are more than adequate, footways are wide commonly with large grass verges between the roadside and footway. Signalised crossings are implemented regularly throughout the local highway network and dropped tactile paving where pedestrians have to cross roads in order to ensure safe crossing.

Cyclist Facilities

- a) This NR 1 is located approximately 1km east from the sites northern boundary allowing easy access to this off-road traffic free National Route. National Cycle Route (NR) 1 runs into Lower Rainham

from the east, routing north along Berengrave Lane where it meets the Medway River path. There are no designated cycle lanes on-road throughout the town.

Equestrian Facilities

- a) A bridleway dissects the eastern portion of the site linking Pump Lane with Lower Bloors Lane.

2-8 Existing pedestrian, cyclist and equestrian facilities beyond scheme extents and links to County /strategic networks

The following pedestrian, cyclist and equestrian facilities outside the immediate scheme extents, but within the study area, have been identified:

Pedestrian and Cyclist Facilities

- a) NCN Route 1

Equestrian Facilities

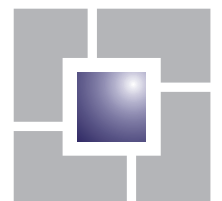
- a) There are no dedicated equestrian facilities.



Appendix K

**Land at Pump Farm and Bloors Farm,
Lower Rainham**

Framework Travel Plan



david tucker associates
transport planning consultants



Land at Pump Farm and Bloors Farm,
Lower Rainham

Framework Travel Plan

13th September 2019
SJT/JA/AK 20230-04b Framework Travel Plan

Prepared by:

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1.0 INTRODUCTION

1.1 This Travel Plan (TP) has been prepared on behalf of AC Goatham by David Tucker Associates (DTA) in respect of the proposed development of around 96 Acres of land at Pump Farm and Bloors Farm, Lower Rainham to provide up to 1250 private dwellings, a primary school, local centre and elderly care home. It is accompanied by a Transport Assessment (TA) report.

1.2 This Framework Travel Plan focuses on the residential development, however a number of measures are also considered for implementation for the staff employed on site. In respect of the primary school, the School Travel Plan Champion will liaise separately with Medway Council School Travel Plan team.

1.3 A TP is a term used for a package of measures aimed at promoting sustainable transport, with the main aim of reducing travel by single occupancy vehicles. TPs are site specific and are dependent upon not only the location of the site but the size and type of development located there. They also require continuous monitoring and refinement in order to be successful.

1.4 This TP sets out the various travel-related measures and strategies that will be implemented to encourage residents to consider the use of a range of travel modes. The key objectives of the TP are to:

- Deliver a long-term and sustained commitment to changing and widening travel choice;
- Address the access needs of residents by enabling walking, cycling, public transport and car sharing;
- Promote healthy lifestyles and raise awareness about the benefits of utilising sustainable travel opportunities; and
- Build upon good urban design principles that open up the permeability of the development encouraging walking and cycling as the first choice for local trips.

1.5 The TP includes:

- A strategy for setting target modal share for access to the site;

- A strategy for achieving the target;
- A process for monitoring progress towards achieving the target;
- Public transport initiatives;
- Cycling incentives and facilities; and
- Walking incentives.

1.6 In producing the residential TP, reference has been made to 'Making residential travel plans work: good practice guidelines' published by the Department for Transport (DfT) in September 2005 and the DfT's 'Good Practice Guidelines: Delivering Travel Plans through the Planning Process' (2009). This document considers the TP as a 'pyramid of measures and actions' as shown diagrammatically below:



1.7 At the base of the pyramid is the choice of location. **Section 2.0** of the TP considers the site location in detail including all aspects of accessibility of the site and its proximity to existing facilities and services. The next level of the pyramid comprises the fundamental characteristics that need to be incorporated into the design of the site from an early stage. Details of design measures incorporated into the development masterplan are also considered in **Section 2.0**.

1.8 **Section 3.0** details the resources required to facilitate and develop the measures featuring in the final levels of the pyramid. **Section 4.0** describes the individual measures designed to build upon the advantages of the location in order to encourage more sustainable travel. **Sections 5.0** and **6.0** detail the targets and monitoring of the TP.

2.0 RELEVANT POLICY

2.1 National Planning Policy Framework

2.1.1 In February 2019, the Government published a revised National Planning Policy Framework (NPPF).

2.1.2 Within this context, the NPPF identifies in Paragraph 110 that applications for development should:

"a) give priority first to pedestrian and cycle movements, both within the scheme and with neighbouring areas; and second – so far as possible – to facilitating access to high quality public transport, with layouts that maximise the catchment area for bus or other public transport services, and appropriate facilities that encourage public transport use;

b) address the needs of people with disabilities and reduced mobility in relation to all modes of transport;

c) create places that are safe, secure and attractive – which minimise the scope for conflicts between pedestrians, cyclists and vehicles, avoid unnecessary street clutter, and respond to local character and design standards;

d) allow for the efficient delivery of goods, and access by service and emergency vehicles; and

e) be designed to enable charging of plug-in and other ultra-low emission vehicles in safe, accessible and convenient locations."

2.1.3 Paragraph 111 of the NPPF goes on to state that: *"All developments that will generate significant amounts of movement should be required to provide a travel plan, and the application should be supported by a transport statement or transport assessment so that the likely impacts of the proposal can be assessed"*.



2.1.4 In reinforcing the principle of supporting sustainable development, paragraph 10 stipulates that at the heart of the Framework is *"...a presumption in favour of sustainable development"*.

2.2 **Medway's Car Parking Standards**

2.2.1 The development is submitted in outline, however car parking provision will be provided in accordance with the relevant residential car parking standards for Medway Council at the reserved matters stage.



3.0 SUSTAINABLE ACCESS AND MOVEMENT STRATEGY

3.1 Introduction

3.1.1 The overall Access and Movement Strategy for the proposed development is based on the principle of reducing the quantum of single occupancy car use associated with the site by maximising the potential for pedestrian and cycle movements, the use of existing public transport services, and the opportunities for car sharing.

3.2 Pedestrian and Cycle Access

3.2.1 The walking and cycling strategy for the site promotes these travel modes to reduce use of the private car. Given the proximity of the site to local centres, walking and cycling have the potential to be attractive alternatives to the private car. There are associated health and lifestyle as well as community benefits that would also come about from this goal.

3.2.2 An established network of footways and crossing points throughout the local area provides direct and convenient access to a range of facilities and public transport connections. With regard to the latter, bus stops served by frequent services operate in close proximity to the sites southern boundary and rail services are accessible within walking/ cycling distance of the site. Measures to delivering enhanced connectivity between the proposed development and local services are identified below.

3.2.3 In terms of existing local pedestrian crossing facilities, dropped kerbs and tactile paving is provided along Lower Rainham Road, north of the site and Beechings Way, south of the site. There are also several clearly marked zebra crossing facilities along Beechings Way.

3.2.4 Key to promoting walking and cycling is the design of the development – specifically that the environment addresses actual and perceived safety issues. Underlying this is an emphasis on place making with a user hierarchy which places pedestrians at the top reflecting the ethos extolled by Manual for Streets (MfS).

3.2.5 It is important that the site is integrated into the existing built-up area both to ensure that there is a coherent network of routes, and to ensure that there are not external

issues that would undermine the efforts to encourage walking and cycling within and to/from the site. This is achieved by identifying gaps in the provision for pedestrians and cyclists on the local road network.

3.2.6 Foot/ cycle access to the proposed development would be achieved through a number of connection points, including:

- Via the proposed vehicle access from Lower Rainham Road; and
- Via a series of footpath links to the site including from Lower Rainham Road (north), Lower Bloors Lane (east), and Lower Twydall Lane to the (west)

3.2.7 These connections to the north, east, south and west will provide a good level of connectivity to the local area and nearby facilities as discussed within the TA. Furthermore, the footway and cycleway links proposed within the site itself is extensive.

3.2.8 With regards to cycling, the National Cycle Route 1 runs into Lower Rainham from the east, routing north along Berengrave Lane where it meets the Medway River path. This National Route 1 is located approximately 1km (at its closest point) east from the sites northern boundary allowing easy access to this off-road traffic free route.

3.2.9 With regard to the development site, it would be designed to facilitate foot and cycle movements along desire lines through the development, linking to the external access points. This will include the provision of the following where appropriate in line with the DfT's MfS and MfS2:

- A good level of street and path lighting;
- Warning signs prior to junctions;
- On-site roads will be designed to 20mph;
- Tactile and coloured surfacing;
- Safety kerbing;
- Reduced junction mouth widths to promote slower vehicle speed where appropriate; and
- Signage to direct pedestrians and cyclists to key facilities and places of interest, including distances.



3.2.10 A mix of cycle parking facilities will be provided at the development to comply with local standards and will be designed and tailored to the likely needs of future occupants. Cycle parking will be provided within the confines of a dwelling/ garage, or alternatively provided in secure, well lit, covered cycle storage facilities.

3.2.11 In terms of off-site improvements, the following measures are proposed:

- The Railway Bridge at Pump Lane (south) (**Drawing 20230-05** within the TA):
 - A shuttle working scheme through the bridge which will provide a 2.5m wide combined footway/ cycleway and a 3m wide running carriageway.

3.3 **Bus Service Provision**

3.3.1 The site is ideally located within 600m of existing bus services operating within Lower Rainham, a bus route map is attached at **Appendix A**. Bus stops located on Beechings Way and Pump Lane, to the south of the site, benefit from regular bus services. A summary these of local bus services is provided in **Table 1** below. The location of the bus stops in relation to the site are shown on the bus stop isochrone plan included in **Figure 1**. This shows the stops are within 800m of the vast majority of the site boundary.

Table 1 – Summary of local bus services

Service	Operator	Stop	Route	Frequency		
				Mon-Fri	Sat	Sun
130/131	NU-Venture	Beechings Way (Truro Close)	Medway Maritime Hospital - Twydall - Hempstead Valley - Penenden Heath - Maidstone	Every 1-2 hours 06:27 - 17:45	Every 2 hours (07:53 - 16:48)	N/A
715	The Kings Ferry	Beechings Way (Truro Close)	Twydall - Rainham - Hempstead Valley - Wigmore - London	06:18 (out) 19:19 (In)	N/A	N/A
116	Arriva Kent & Surrey	Beechings Way (Truro Close)	Chatham - Universities - Gillingham - Twydall - Parkwood - Hempstead Valley	Every 20 mins (08:23 - 19:14)	Every 20 mins (08:25 - 18:55)	N/A
182	Arriva Kent & Surrey	Beechings Green	Chatham - Twydall	Every 10 mins	Every 10 mins	Every 20 mins

3.3.2 Pedestrian routes through the development site to the local bus stops will be designed to be direct, convenient and safe in order to encourage the use of public transport.



Improvements to pedestrian facilities along the site frontage as set out in **Section 2.2** would also be provided in the form of new crossings and footway improvements.

3.3.3 In terms of off-site measures, improvements to existing bus stops located within the vicinity of the site would be provided as part of the development proposals. These measures could include, but are not limited to providing:

- Bus shelters and seating;
- Raised kerbing;
- Information pole/ totem; and
- Real-time information.

3.3.4 A contribution towards these improvements would be secured through the Section 106 agreement.

3.4 **Rail Service Provision**

3.4.1 Rainham train station is located within walking/ cycling distance of the site, approximately 2.5km south east. The station can be readily accessed via Pump Lane and Lower Rainham Road to the north or Pump Lane and Beechings Way/ Tufton Road to the south. The station is operated by Southeastern Rail. In terms of facilities, cycle parking stands are provided with space for 64 bikes, as well as 233 car parking spaces (4 of which are accessible spaces). The number 783 and 131 bus services operate within the vicinity of the site, stopping at the station access.

3.4.2 There are a number of regular services operating from Rainham Station which enable travel to local and national destinations. These services are summarised in **Table 2** below.



Table 2 – Summary of train services from Rainham Railway Station

Destination	Frequency [1], trains/hour		Inter-Peak	Typical Journey Time (minutes)
	Peak [2]			
	To	From		
London (Stations)	5	3	3	1hr 3mins
Dover Priory	3	2	2.5	46mins - 1hr 32mins
Ramsgate	2	2	2	56mins - 1hr
Faversham	4	5	2	16mins
1. Includes both direct trains and departures with a change of train				
2. To-destination based on AM; From-destination based on PM				

3.4.3 A contribution towards improved cycle parking provision at Rainham Railway Station could be provided, thus enhancing travel to/ from the site by sustainable modes. This would be secured as part of the Section 106 agreement.

3.5 **Summary**

3.5.1 The site is well located in terms of public transport with bus stops to regular bus services located within easy walking distance from the centre of the site. These provide frequent connections to local destinations.

3.5.2 Pedestrian access to the proposed development would be provided to at a number of locations linking the wider network, thus delivering a good degree of permeability through the site and facilitating movements along pedestrian desire lines. The development proposals include measures to link in with existing foot/ cycle facilities and provide enhancements to existing provision where appropriate.



4.0 TRAVEL PLAN MANAGEMENT

4.1 Introduction

4.1.1 A principal aim of the TP is to achieve more sustainable travel from the outset in preference to cutting car use incrementally once residents are in occupation. Therefore, the initiatives implemented from the onset will be funded by and instigated by the Developer via the marketing organisation and the maintenance company.

4.2 Sustainable Travel Strategy – Overall Management

4.2.1 A Lead Travel Plan Coordinator (TPC) will be appointed and funded by the Developer to oversee the implementation and continued development of the initiatives set out within the TP. At this stage, it is envisaged that an external specialist company experienced in such work will provide the Lead TPC role.

4.2.2 The Lead TPC will be appointed by the Developer prior to commencement of development to ensure that the TP is established and engrained into the development from the start. This will include overall management responsibility for the site and will also include the role of co-ordinating the TP.

4.2.3 The Lead TPC will also be responsible for monitoring the progress of the TP and disseminating information to residents. Full details of the TPC's responsibilities are set out in **Table 4** below.

4.2.4 The Developer will fund the position of the Lead TPC for a minimum of two years following the completion of the development. Based on expected build-out rates, the Lead TPC role could therefore cover a period of 12 years – although this will be affected by demand and prevailing economic conditions.

4.2.5 At the end of this period the position will be reviewed following which consideration will be given to the role being funded through the ring-fencing of funds generated by the sustainable travel ventures. In particular, if the TP targets are not being met, consideration will be given to how this role could be continued and enhanced to bring about the required improvements in its effectiveness.



4.2.6 Where appropriate, the Lead TPC would prepare a business case to secure any additional funding which is deemed to be necessary for the TP development. This would be targeted at responding to any identified deficiencies in the effectiveness of the overall TP measures where targets are not being met and impairing the effectiveness of their implementation. The additional funding would be targeted at improving the effectiveness of such measures and hence increasing the success of the TP and seeking to reduce off-site mitigation liabilities such as off-site highway improvement works.

4.2.7 The following table details the key roles of the Lead TPC.

Table 3 – Lead TPC Roles

Overall Management
<ul style="list-style-type: none"> - Managing and implementing the TP; - Setting up the TP Steering Group and local working group; - Informing the local authority of the progress of the residential development and first occupation; - Being the first point of contact for all users of the site, providing overall advice to the residents; - Communication and engagement with all parties/stakeholders.
Site Wide Initiatives
<ul style="list-style-type: none"> - Liaising with the Developer on the funding and delivery of site-wide infrastructure (external and internal); - Setting up a sustainable travel website for the whole site; - Setting up a car share database for the whole site using Medway’s Liftshare website; www.liftshare.com/uk/community/medway - Setting up user group meetings where appropriate; - Liaising with operators and negotiating over desired public transport service changes; - Promoting the TP to the outside community through public meetings where appropriate; - Implementing promotional days and events; and - Organising the site wide travel audit.
Community Website



<p>Establishing a community website to incorporate the following:</p> <ul style="list-style-type: none"> - Information on development progress; - Information on public transport services (bus and train); - Real-time public transport information where possible; - Links to public transport and journey planner websites; - Local walking and cycling information (including walking and cycling route maps); and - News updates including information on travel strategy progress and upcoming events.
<p>Review of Data</p>
<ul style="list-style-type: none"> - Analysing the annual travel survey and presenting the results externally; - Gathering bus patronage information; - Collection of car-share registration information; - Gathering and collating the results of the travel surveys; and - Preparing an Annual Performance Review report for submission to the local authority.
<p>Implementation of Additional Measures</p>
<ul style="list-style-type: none"> - Liaising with the local authority to identify additional sustainable travel measures should they be required
<p>Initiatives</p>
<ul style="list-style-type: none"> - Promoting and monitoring car share uptake on the site; - Preparing and distributing home welcome packs to new residents; - Collating feedback from questionnaires included within the welcome packs; and - Initiating and organising personalised travel planning sessions.
<p>Marketing</p>
<ul style="list-style-type: none"> - Explaining and marketing the TP to new residents (supported by strong TP branding); - Producing questionnaires, promotional and informative material; - Collating data on existing bus routes and disseminating to new residents; - Organising development/community travel events; and - Promoting initiatives.



4.3 **Travel Plan Steering Group**

4.3.1 The mechanism proposed for the delivery of the car shift targets and any ongoing mitigation/ intervention is the establishment of a TP Steering Group (TPSG). The primary role of the TPSG would be to:

- Make the high-level decisions on the direction of the TP;
- Appoint an independent organisation to monitor the impact of the TP in meeting the targets set;
- Debate the effectiveness of the TP;
- Provide a forum for airing ideas on how the effectiveness of the TP could be improved; and
- Provide guidance and support to the Lead TPC.

4.3.2 It is anticipated that the TPSG would comprise the following key stakeholders:

- The Lead TPC;
- Medway District Council as the local authority; and
- Representatives from the development.

4.3.3 Public transport operators would also be invited to attend meetings where appropriate.

4.3.4 The results/ minutes of the TPSG meetings will be widely communicated to interested parties associated with the development.

5.0 TRAVEL PLAN INITIATIVES

5.1 Introduction

5.1.1 In order to meet the aims and objectives for sustainable travel set out in this TP, a number of measures will be implemented. The proposed measures to be provided as part of the development and TP are split into the following categories:

- Measures to Promote and Encourage Walking and Cycling;
- Measures to Promote and Encourage Public Transport Use;
- Measures to Promote and Encourage Car Sharing; and
- Measures to Reduce the Need to Travel.

5.1.2 The vast majority of measures will be aimed at promoting and encouraging the use of existing travel facilities in the area (walking, cycling and public transport), but also car sharing where appropriate. Measures to promote and encourage each form of sustainable travel mode are outlined below.

5.2 Measures to Promote and Encourage Walking and Cycling

5.2.1 The following measures are to be implemented to promote and encourage residents to walk and cycle to and from the proposed development:

- Local maps showing walking routes, which will be disseminated through the marketing regime;
- Information on local and national walking events, such as Walk to Work Week, which will be disseminated through the marketing regime;
- Website links to the Council's sustainable information, and links to national websites such as Sustrans, will be disseminated through the marketing regime;
- Information on Bicycle User Groups that may be operating within the local area would be provided to residents will be disseminated through the marketing regime;
- Information on cycling events such as 'National Bike Week' will be disseminated through the marketing regime; and
- Information on the economic, social, environmental and health benefits of cycling will be disseminated through the marketing regime.



5.3 **Measures to Promote and Encourage Public Transport Use**

5.3.1 The following measures are to be implemented to promote and encourage residents to use public transport when travelling to and from the proposed development:

- Links to journey planning websites such as Traveline will be disseminated through the marketing regime;
- Providing information on a new online resource – www.nextbuses.mobi – which enables residents to obtain timetables, route details and bus stop locations across the UK by entering a town or postcode, downloaded directly to smartphone / mobile phone;
- Bus route maps and timetables will be provided through the marketing regime; and
- Information on the benefits of public transport use will be disseminated through the marketing regime.
- A residential travel voucher will be offered to each household costing around £50 per household. The final cost and nature of the voucher will be agreed via a S106 Agreement.

5.4 **Measures to Promote and Encourage Car Sharing**

5.4.1 Car sharing can be an effective means of easing traffic congestion and facilitating the achievement of sustainable travel objectives. For residents that live in close proximity to one another and have common journey requirements, car sharing can represent an effective mechanism for reducing the volume of trips to and from work, school, and/or recreational activities.

5.4.2 The following measures are to be implemented to promote and encourage residents to car share when travelling to and from the proposed development:

- The Lead TPC would set up a car share database for the site as a whole using Medway's Liftshare website; www.liftshare.com/uk/community/medway
- Information on car sharing opportunities at the site would be provided to residents through the marketing regime;
- Information on what car sharing is and its potential benefits would be disseminated to residents; and

- Information on 'car sharing' events such as Liftshare week would be publicised.

5.4.3 The nature of the Car Share database will be for final determination by the Lead TPC. This could be done via the implementation of a bespoke Community Car Share Scheme database created with access provided through the Community website (see below).

5.5 **Measures to Reduce the Need to Travel**

5.5.1 Home Working is another effective manner of reducing traffic congestion and facilitating the achievement of sustainable travel objectives. The following measures are to be implemented to promote and encourage residents of the proposed development to work from home:

- Infrastructure for broadband access will be provided to facilitate remote home working;
- Information on what home working is and its potential benefits, disseminated through the marketing regime; and
- Similar measures could also be introduced to reduce unnecessary non-work travel, for example, home shopping, home learning and home entertainment opportunities.

5.6 **Marketing and Promotion of the Travel Plan Measures**

5.6.1 In order to deliver the behavioural change required to meet the targets, there will need to be a sustained and long-term commitment to communicating and marketing the TP objective to the residents of the proposed development. The main responsibility of marketing and promotion of the measures will lie with the Lead TPC.

5.6.2 The promotional methods utilised to increase awareness and prompt people to think about their travel choices are set out below.

Household Welcome Packs

5.6.3 Household Welcome Packs will be given to all new residents and these packs will include the following:

- Details of the TP and its purpose;
- Contact details of the Lead TPC;



- Information leaflets on the benefits of adopting more sustainable travel practices;
- Local walking and cycling route maps;
- A map showing key local facilities and amenities;
- Information on local Bicycle User Groups that may be operating in the local area;
- Information on public transport services including schedules, maps and www.nextbuses.mobi;
- Information on key sustainable travel events such as 'National Bike Week' and 'Liftshare Week';
- Information and marketing material on car sharing;
- Information on the economic, social, environmental and health benefits of travelling by sustainable modes;
- Promotion of free health/ exercise apps for mobile phones'
- Information on home delivery services;
- Information on working at home and its potential benefits;
- Website links to, for example, the Council's sustainable travel page and national websites such as Sustrans; and
- Feedback survey forms.

5.6.4 The Lead TPC will agree the content of the Household Welcome Packs with the local authority.

Community Website

5.6.5 A website/ webpage advertising and providing information on the development would be created by the Developer. It is proposed that this would provide information on a range of issues, such as:

- Local/proposed amenities, including schools, shopping facilities, leisure and so on;
- The development and sustainable travel opportunities, including information on the TP;
- Upcoming community events and activities such as walk to work/school days; and
- Up-to-date news/ press releases on the development.



Promotional Travel Leaflets

5.6.6 As part of the ongoing marketing regime, promotional leaflets advertising upcoming community events and relevant travel information will be distributed to residents by the Lead TPC as and when appropriate.

5.6.7 The TPC will also use social media to promote the Travel Plan and disseminate sustainable travel information if any appropriate method is available.

5.7 **Measures for Employment Uses on Site**

5.7.1 The following measures will be considered for the employment units on the site. This may apply to the staff at the extra care and care home facilities.

- Showers and locks on site;
- Pool umbrellas for staff; and
- Use of Social Media to promote and disseminate sustainable travel information.

6.0 TRAVEL PLAN TARGETS AND INDICATORS

6.1 Introduction

6.1.1 The overall TP objective for the development is to reduce the percentage of occupants travelling by car and this chapter provides an indication as to the overall impact travel planning could have on reducing car trips.

6.2 Outcomes

6.2.1 The Good Practice Guidelines identifies that good practice has evolved from previous guidance into a single main approach to TPs. It states that:

"The 'outcomes' approach, specifies outcomes linked to specific targets that can also be strengthened with sanctions if these are not met. This approach is distinct from that which focuses wholly on the establishment of a list of measures, e.g. the provision of a shuttle bus or cycle shelter. Many, if not the majority of, travel plans combine the two approaches, depending upon the type of travel plan and what it is designed to achieve. However, the establishment of outcomes is important."

6.2.2 With the outcomes approach, the focus is placed on ensuring the performance of the TP – for example, meeting modal shift targets. The applicant/ developer is then required to commit to meeting these targets, and agrees to a monitoring and review process. Should the targets not be met within the timescales stated, then it may be appropriate to implement remedial measures (see **Section 6.4**).

6.2.3 It is identified in the Good Practice Guidelines that, for new developments in particular, outcome targets should be expressed in terms of a maximum end level of car use. This figure should be lower than what would be expected should the development not have a TP.

6.3 Preliminary Baseline Mode Share

6.3.1 In order to estimate a preliminary baseline mode share for the proposed development, reference has been made to the existing journey to work mode share for the Middle

Super Output Area (MSOA) of Medway 018. This information is summarised in **Table 5**. The baseline position would be reviewed following completion of the first travel survey.

Table 4 – Preliminary Baseline Mode Share (Medway 018)

Method of Travel to Work	Base Mode Share
Driving a car or van	67.0%
On foot	11.5%
Passenger in a car or van	6.8%
Bicycle	2.2%
Bus, minibus, coach, or Train	10.7%
Motorcycle, scooter or moped	1.2%
Underground/ Metro/ Light Rail	0.1%
Other	0.3%
Total	100.0%

6.4 Mode Shift

6.4.1 The Access and Movement Strategy outlined in **Chapter 2** has been designed to reduce the number of private car trips by promoting more sustainable modes of travel to and from the site. Given the measures proposed, an initial 10% mode shift reduction target for car use has been identified for the development site. This target was estimated based on predicted mode shifts by sustainable travel modes, as set out in **Table 6** below.

Table 5 – Target Mode Shift Calculations

Method of Travel to Work	Year 1 (Baseline)	Mode Shift	Year 3	Year 5
Driving a car or van	67.0%	-10%	63.5%	60%
On foot	11.5%	+20%	12.5%	13.5%
Passenger in a car or van	6.8%	+20%	7.4%	8%
Bicycle	2.2%	+10%	2.85%	3.5%
Bus, minibus, coach, or Train	10.7%	+10%	11.8%	13%
Motorcycle, scooter or moped	1.2%	-	1.2%	1.2%
Underground, metro, light rail	0.1%	-	0.1%	0.1%
Other	0.3%	-	0.3%	0.3%
Total	100.0%	-	100%	100.0%

6.4.2 The predicted shifts by sustainable travel modes identified in **Table 6** are not fixed, but are intended to give an indication of how the 10% reduction in car driver mode share could be achieved. The assumptions behind the predicted shifts in sustainable travel modes are outlined below:

- **Walking and Cycling** – Delivering permeability, connectivity and initiatives to encourage travel by pedestrians and cyclists form part of the accessibility strategy for the proposed development. Furthermore, a number of key local facilities, including schools, are located within reasonable walking and cycling distances. It is therefore reasonable to assume that there would be some increase in travel by active modes from the base situation. A mode shift of 20% by foot and 10% by bicycle is considered achievable for the development;
- **Car Passenger** – Given that car sharing will be promoted through the dissemination of marketing material, sustainable travel events, and by directing residents to the site car share scheme, some increase in car passenger mode share is likely. A mode shift increase of 20% travelling as a car passenger is therefore considered achievable; and
- **Public Transport** – The proposed development is located in close proximity to bus stops served by frequent services and to Rainham Railway Station. Measures to promote travel by public transport will be implemented at the proposed development. A mode shift of 10% by public transport is therefore considered to be achievable.

6.4.3 The base mode share for the site and associated car driver target will be reviewed within three months of occupation of the 50th dwelling. The targets will be measured on a proportional basis against the total number of occupied dwellings at relevant intervals (See **Chapter 6**).

6.5 **Indicators**

6.5.1 The Good Practice Guidelines highlights the importance of distinguishing between outcome targets and indicators. Whereas the target for the proposed development is focussed on reducing the number of car trips, the indicators are used to monitor how the site is being accessed and how effectively different modes are meeting travel needs. This information can subsequently be used to identify where the greatest potential for



mode shift may lie and to inform the implementation strategy for the TP over the coming year.

6.5.2 A number of indicators will be measured at the proposed development. The responsibility for measuring these indicators lies with the Lead TPC, and will include the following:

- % of residents walking;
- % of residents cycling;
- % of residents using public transport; and
- % of residents that are car sharing and/ or registered car share users.

7.0 MONITORING STRATEGY

7.1 Introduction

7.1.1 As stated within the DfT's Good Practice Guidelines, TPs are living documents that need to be updated regularly and implementing a TP involves "*a continuous process for improving, monitoring, reviewing and adjusting the measures in the plan to reflect changing circumstances*".

7.1.2 Monitoring the TP is essential in gauging the success of the measures adopted at meeting the targets set. It would commence following occupation of the 50th dwelling and would continue for a minimum of 5 years following full occupation of the development. After this time, it is envisaged that the TP would become a voluntary initiative, monitored on a voluntary basis by the site's residents.

7.2 Data Collection

7.2.1 In order to understand how the site is being accessed and how effectively residents' travel needs are being met, a number of multi-modal indicators will be monitored as part of the monitoring regime (including travel by foot, cycle, public transport and car share). This information will be collected through residential travel surveys using questionnaires, which will be undertaken by the Lead TPC. These surveys would also be used to obtain feedback from residents on the TP measures implemented and to identify where the greatest potential for modal shift lies.

7.2.2 The questionnaire surveys would be used to review the base mode share for the site and associated car trip target. This reflects an approach in which the monitoring regime is an iterative process, aiming for continual improvement throughout the implementation period. In line with this approach, there will be a biennial process of review following the collation and analysis of data obtained through the monitoring regime.

7.3 Data Reporting

7.3.1 The Lead TPC will be responsible for the preparation of performance reports setting out the findings of the data collection process and the implications in terms of the ongoing operation of the TP.



- 7.3.2 The monitoring reports should include a summary of measures enacted over the previous year, and the resources expended on the Travel Plan over the same period.
- 7.3.3 A minimum of 35% response rate must be obtained in order for the travel questionnaire surveys to be considered statistically significant. If this cannot be achieved, discussions will be had with Integrated Transport regarding carrying out TRICS SAM or ATC surveys.
- 7.3.4 Consideration will be given to offer of entry into a prize draw for residents or members of staff following completion of the surveys. This should not be travel related.
- 7.3.5 The results of the monitoring for the TP would be submitted by the Lead TPC to the TPSG and local authority within 3 months of the survey being completed, and this process would continue for the duration of the monitoring regime.
- 7.3.6 In addition, the findings will be reported back to the residents via appropriate forms and dissemination methods, such as community e-newsletters.

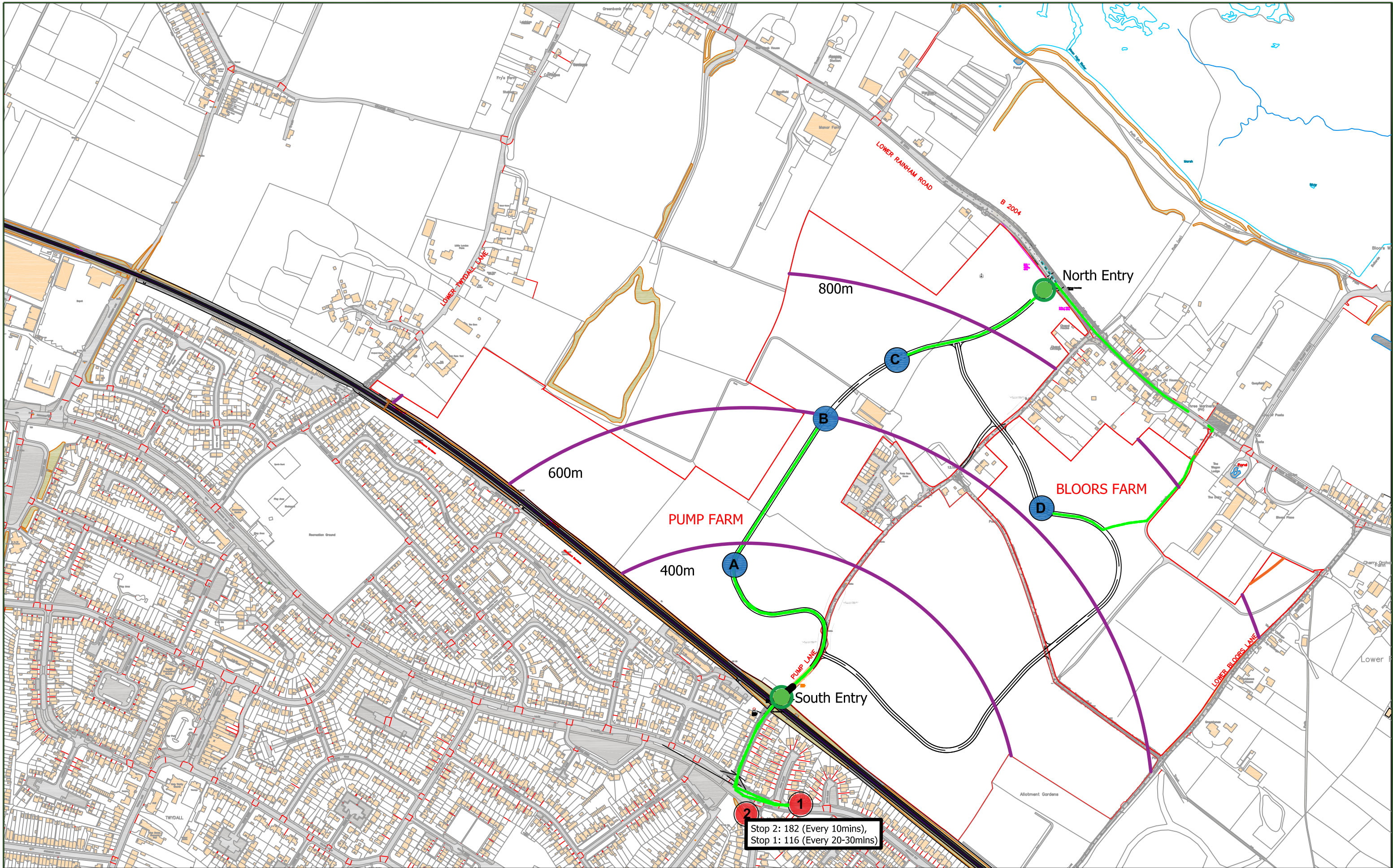
7.4 **Remedial Measures**

- 7.4.1 Should the monitoring and review process reveal no change, further remedial measures will be considered for implementation. The monitoring and review process should highlight areas where measures would best be focused in order to achieve the overall 10% mode shift reduction in car use.
- 7.4.2 These measures are likely to include the ramping up of marketing measures targeted at encouraging a greater shift towards sustainable mode of travel, and could comprise:
- The provision of bus/ cycle vouchers to encourage uptake;
 - The introduction of personal travel planning; and
 - Targeted campaigns.
- 7.4.3 Should remedial action be required, the Lead TPC and the local authority will agree a strategy for implementing appropriate measures.



7.5 **Ownership and Handover**

- 7.5.1 In the short term, the ownership of the TP lies with the Lead TPC and the Developer until the end of the formal implementation period, although this will depend on the attainment of the targets during this time. In the long term, the ownership of the TP will ultimately rest with the future residents. An appropriate handover mechanism will be agreed between the developer and the local authority.
- 7.5.2 It is anticipated that during the last year, the Lead TPC will adopt a more passive role in monitoring and reviewing the TP, providing a supervisory service to the residents during this period. This would include facilitating the formation of a suitable residents' group to take on this role if appropriate. Whilst the responsibility to ensure that the TP is reviewed and monitored during this period will remain with the Lead TPC and Developer, the residents will be encouraged gradually to take on more responsibility in order to facilitate the handover process.



Stop 2: 182 (Every 10mins),
 Stop 1: 116 (Every 20-30mins)

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REV	DESCRIPTION	DRAWN	INITIALS	DATE	DRAWING STATUS	CHECKED BY	DATE



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 Tel: +44(0)1564 793598
 Fax: +44(0)1564 793983
 www.dtatransportation.co.uk

JOB TITLE Pump Farm, Lower Rainham		CLIENT	
DRAWING TITLE Bus Stop Proximity to Site (400m, 600m, 800m) Distance from Southern Entry Points Stop 1: Beechings Way, Stop 2: Pump Lane Roundabout			
SCALE 1/5000@A3	DRAWN BY AK	DATE 08/11/18	DRAWING No 20230-07
REVISION			



Appendix A

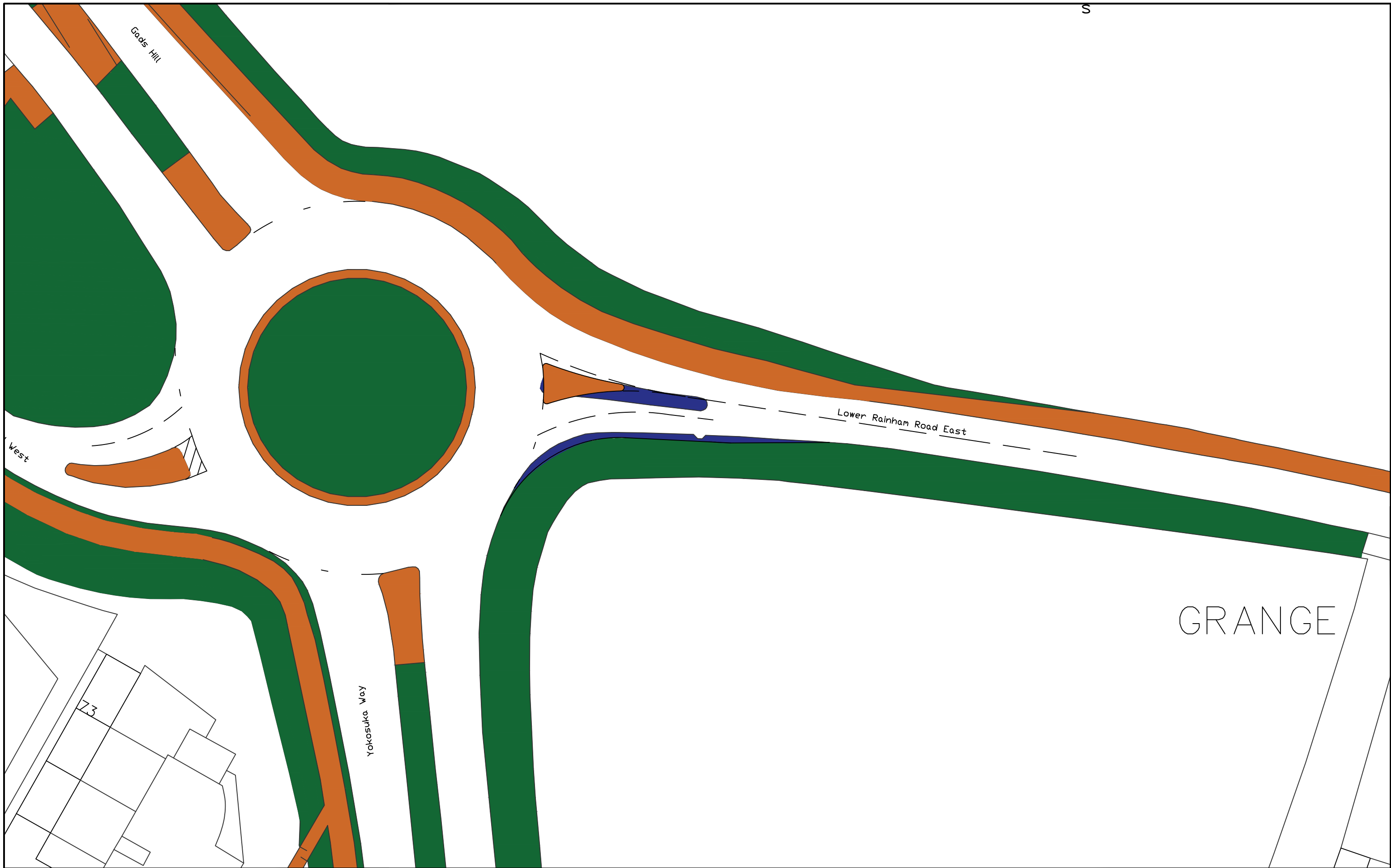


- Medway Ticket Zone boundary
- Railway Station
- Hospital
- School/college/university

- 101 Evenings only
- 116 Morning & afternoon peak times only
- 132 Sundays only
- 151 Evenings only
- 176 Morning & afternoon peak times only
- 177 Morning & afternoon peak times only
- 190 Sundays only



Appendix L



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REV	DESCRIPTION	DRAWN	INITIALS	DATE	DRAWING STATUS	CHECKED BY	DATE



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JOB TITLE Pump Farm, Lower Rainham		CLIENT AC Goatham	
DRAWING TITLE Proposed Improvements Yokosuka Way – Lower Rainham Road Lower Rainham Road East Arm			
SCALE 1/500@A3	DRAWN BY BP	DATE Oct19	DRAWING No 20230-05-03
			REVISION d



Appendix M



FAO: Mr S Tucker
DTA Transportation Ltd
Forrester House
Doctors's Lane
HENLEY-IN-ARDEN
Warwickshire
B95 5AW

Dear Mr Tucker,

Pump Farm and Bloor Farm, Rainham: residential development site.

Thank you for the information about the proposed residential development 'Pump Farm and Bloor Farm' on the site between the Chatham - Sittingbourne railway line and Lower Rainham Road. Arriva is grateful for your engagement at this early stage and the opportunity to shape how public transport solutions are planned for this development.

From the drawing 'Land Use Plan' emailed to me on 23rd July and the information emailed to us previously on 14th December 2018 I note that it will be possible for pedestrians, and vehicles up to 14'3" high, to access/egress the development using Pump Lane to connect with Beechings Way. This will allow residents to access our existing frequent-interval 182 service at stops on Beechings Way, as well as our service 116 and the other operators' services 130/1 and 715. While the bus travel market and our services can change over time, and present we have no plans to substantially change service 182 and I fully expect that Arriva will continue to serve Twydall estate with frequent services for the foreseeable future. These services currently have some spare capacity but if the new development generated substantial patronage we would look to use double-deck vehicles on more journeys or increase the service frequency, or a combination of both if commercially viable to do so.

If it was necessary to improve the service at certain times of day to meet the needs of your development, we would be happy to discuss this and plan how the enhanced service could become commercially viable.

If you do need to extend a service into the development, we suggest that consideration is given to our service 1. The service currently terminates at Gillingham Strand and could be extended along Lower Rainham Road to access the proposed development from the north. The service would require a road loop or turning head with a layover point within the development. This would require a developer contribution to facilitate the service to serve the site.

Arriva Southern Counties
Invicta House
Armstrong Road
Maidstone
Kent
ME15 6TX

www.arrivabus.co.uk



Regarding the Residential Travel Plan, Arriva is experienced in working with developers and we can offer a range of support, e.g. printed service information and discounted ticketing. We would expect there to be a developer contribution towards the cost of these promotional activities and will be pleased to develop proposals with your travel plan coordinator.

We consider this to be a sensible and appropriate location for substantial residential development in the vicinity of Chatham and Gillingham, in terms of being well suited to having good access to bus services to those towns. Thank you again for involving Arriva in the bus service planning for this development - we look forward to working with you as the development progresses through the planning process.

Yours sincerely

A handwritten signature in blue ink, appearing to read 'M. Jennings', written over a faint circular stamp.

M Jennings
Area Head of Commercial
Arriva Southern Counties