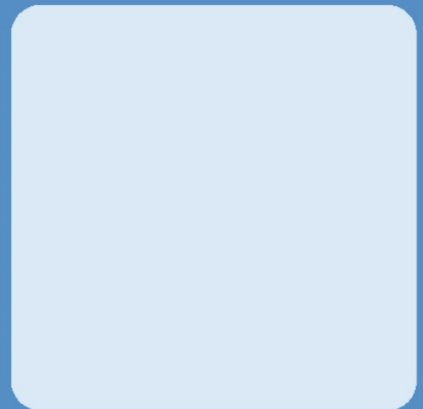
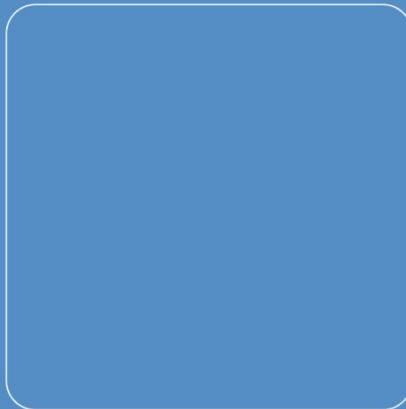


RPS

**SCRAPTOFT,
LEICESTERSHIRE**

**TRANSPORT
SCOPING REPORT**



SCRAPTOFT, LEICESTERSHIRE

TRANSPORT SCOPING REPORT

20 January 2017

Our Ref: MRA/sjs/JNY8843-02

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QUALITY MANAGEMENT

| | |
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| Date: | 20th January 2017 |
| Project Number/Document Reference: | JNY8843-02 |

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APPENDIX B – TRAFFIC FLOW RE-DISTRIBUTION

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1 INTRODUCTION

Report Brief

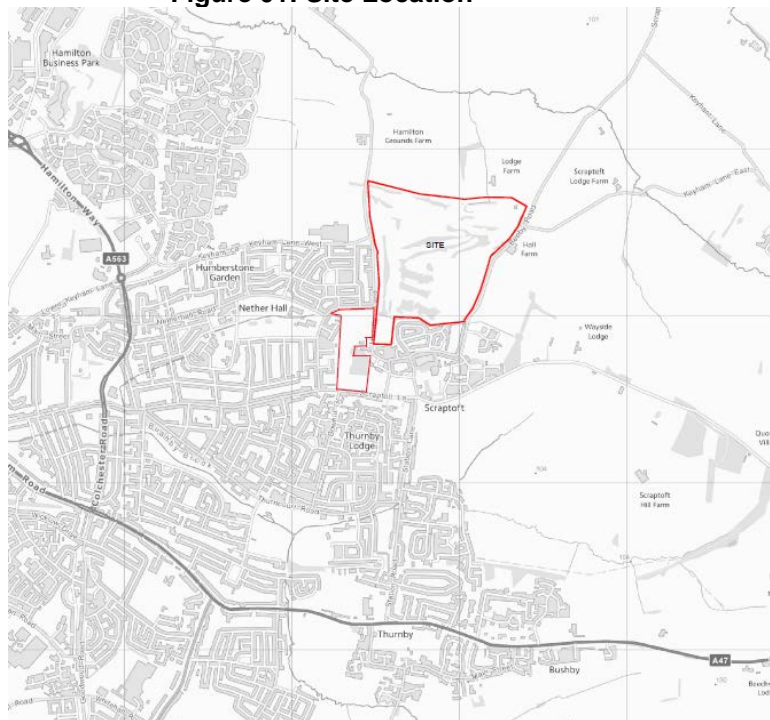
- 1.1 RPS has been commissioned by Parker Strategic Land Ltd, to provide a Scoping report to set out the key elements of a Transport Assessment to be submitted in support of a planning application for the site at Scraptoft, Leicestershire.
- 1.2 This Scoping report sets out the main chapters that will be provided within the Transport Assessment and a brief description of what information will be included in each chapter.
- 1.3 The proposed development will be primarily on the site of Scraptoft Golf Course and will be for residential use together with education use on the site.
- 1.4 This scoping report also includes information provided in the Transport Appraisal report issued to Leicestershire County council and Leicester City Council the site. The Transport Appraisal was previously submitted to the highway authorities and comments were received from both LCity and LCC. The purpose of this scoping is to agree the further assessment work to be carried out for the purpose of a planning application.
- 1.5 The TA associated with this site will be linked with a TA to be submitted for a site at Houghton on the Hill which deals with the proposed relocation of the golf course. The scope of that TA has been provided separately.
- 1.6 Following initial consultation with LCC, RPS will liaise with Highways England and Leicester City Council on the scope of the TA and the development proposals.

2 EXISTING SITE AND SURROUNDING HIGHWAY NETWORK

2.1 This Chapter will include;

- A review of the sites location and a description of the existing local highway network. The site is identified in Figure 01 below.
- A review of travel modes and work place destinations. The site is situated to the north of the village of Scraftoft and sits within the Thurnby & Houghton Ward, however the Humberstone & Hamilton Ward is very close to the site, as such a review of both wards will be used to ascertain the existing travel to work modes and destinations using the Census database. This data will be compared with the census data for the neighbouring areas and also the overall statistics for Leicestershire.
- Within the Transport Assessment a review of existing accidents in the local area will be undertaken. This will be based upon data to be obtained from Leicestershire County Council covering a 5 year period.

Figure 01: Site Location



2.2 The junctions that were surveyed in 2016 include;

- Hamilton Lane/ Keyham Lane
- Hamilton Lane/ New Romney Crescent
- New Romney Crescent / Scraftoft Lane

- Church Hill/ Covert Lane/ Station Lane/ Scraptoft Lane
- Station Road/ A47
- Maidenwell Avenue / Preston Rise/ Tesco filling Station
- Hamilton Way/ Maidenwell Avenue/ Hungarton Boulevard/ Lower Keyham Lane
- Hungerton Boulevard/ Scraptoft Lane/ Colchester Road

2.3 The main routes through the village of Scraptoft operate as a one-way system with traffic exiting the village to the south via Church Hill. There has been a high level of development around Scraptoft in the recent years, mainly to the east of the village and this has introduced additional traffic to the centre of Scraptoft, in addition to traffic using the mini roundabout to the south at the junction of Covert Lane, Church Lane, Station Lane and Scraptoft Lane.

2.4 Measures to improve the existing traffic flows within Scraptoft will be included as part of section 5 of the TA.

2.5 As part of the consideration of the existing transport network a review of the baseline traffic flows will be undertaken with reference to the LLITM model and / or the more localised modelling undertaken by Edwards and Edwards for the local authorities. This will reflect the committed developments and the proposed alterations affecting this area.

3 ACCESSIBILITY

3.1 This Chapter will review the sites existing accessibility and will include the following;

- A review of the existing walking and cycling routes within close proximity to the site including public rights of way/ bridleways etc.,
- A review of local facilities that are within close proximity to the site and the time to walk/cycle to these facilities.
- Details of the existing bus services that are within close proximity to the site and the closest railway station.

4 PLANNING POLICY

4.1 This Chapter will review the transport related policies that are pertinent to the development site. This will include the following;

- National Planning Policy Framework
- Leicestershire County Council's Local Transport Plan 3
- The 6 C's Design Guide
- Harborough Emerging Local Development Framework

5 DEVELOPMENT PROPOSAL AND ACCESS

- 5.1 This Chapter will provide details of the scheme proposals and will include the following;
- A description of the development proposal
 - Details of the proposed access to the site
 - Details of the proposed parking provision
 - Details of the internal road layout and pedestrian/cycle routes
 - Details of proposed accessibility to the site by modes other than the private car.
 - An overview of the Residential Travel Plan. A Residential Travel Plan will be submitted as a separate report.
 - Details of proposed off site highway improvement measures.
- 5.2 The proposals are for the development of circa 1,200 residential units and education facilities on land to the north of Scruptoft village. The proposals offer the first phase of a potentially greater development which could link to land to the south east of Scruptoft and then onto the A47, or provide a more modest extension to the east of Beeby Lane to a scale of around 400 additional dwellings. Consideration will be given to this as part of the assessment work.
- 5.3 A review of the phasing of development will be provided and the associated highway infrastructure required to deliver the number of houses in each phase.
- 5.4 In relation to access to the site, the opportunities exist to provide access from Hamilton Lane at two locations to tie into the westward links via Keyham Lane west and New Romney Crescent. By forming the accesses with these westward links, the opportunity is afforded to change the priority of traffic on Hamilton Lane and hence this north/ south traffic would give way to the traffic travelling east / west along the corridors connecting the accesses into the site, with both Keyham Lane West and New Romney Crescent.
- 5.5 Furthermore the alignment and north / south link of Hamilton Lane, could be diverted to discourage this route and connection to the Thurmaston area to the north. However, the volume of traffic currently using the link, which is in the order of 600 two-way movements, is not considered to be significant in the peak hours, and it would be for the Thurmaston scheme to ensure traffic was not rat-running from that scheme along Hamilton Lane.
- 5.6 The site also offers the opportunity to connect the development infrastructure to Beeby Lane. This provides in the longer term a link to connect to the east and around the north and east of Scruptoft and onto the A47.
- 5.7 However in the short term, it allows a better connection for that traffic associated with the more recent consented developments (accessed from Beeby Road), to access Leicester city and areas to the west rather than travelling through Scruptoft. This is a positive benefit to the residents of Scruptoft who will have experienced a growth in traffic within the centre of the village from the various developments that have taken place in recent years.

- 5.8 Such a link from Beeby Lane, through the site, also offers the potential for further development east of Beeby Lane, of potentially around 400 dwellings to be developed without significantly impacting on the routes through Scraftoft. Consideration of this would be seen as a further development beyond this application.
- 5.9 Therefore, the access proposals would be for 2 points of access on to Hamilton Lane and a single access on to Beeby Lane to the east. The details of these are shown indicatively on the plan attached at **Appendix A**.
- 5.10 Beyond these vehicular accesses, the development would provide pedestrian and cycle links to the south, as well as the provision of such measures alongside the proposed road infrastructure for pedestrians and cyclists.
- 5.11 The accesses to the site will be subject to an independent Stage 1 Road Safety Audit which will be included in the TA together with a Designers response.
- 5.12 Reference within this chapter will be made to the 6 C's Design guide, Manual for Streets and Design Manual for Roads and Bridges as appropriate.

Mitigation Measures

- 5.13 The site offers the opportunity for a number of mitigation measures within the vicinity of the site that will not only mitigate for the development traffic but also offer improvements for existing road users. These opportunities which are identified below and indicated on the attached plans at **Appendix A** (previously identified in the Transport Appraisal Report) will be the subject of more detailed assessment within the TA.
- 5.14 As previously identified the proposed site accesses provide the opportunity to change the priority of the junctions at Keyham Lane West and New Romney Crescent. Beyond these junctions both of these routes provide the potential to address current issues of car parking and road width.
- 5.15 In the context of Keyham Lane West, there is parking on the road that is relatively narrow in width at around 5.5m. The current parking causes delays to traffic using this route including bus services, and also damages the verge. Accordingly, the opportunity exists to formalise parking laybys along the route which are currently provided in part (shown in the photo below), but could be more extensive and allow the removal of the kerbside parking. These works would be revisited in the context of the proposed measures along Keyham Lane West associated with the consented residential development.
- 5.16 In addition, at the school entrance locations along this route, a tabled area could be provided to enhance the traffic calming and improve the environment for those accessing the school. Details of these proposals are shown on the plan attached at **Appendix A**.
- 5.17 New Romney Crescent is relatively wide with on street parking on both sides of the road. A similar arrangement could be provided here to that on Keyham Lane West, where the road is effectively narrowed and parking bays formed. In addition, at the location of the primary school, a tabled area could be provided to improve the accessibility for those using the school and to calm traffic along this route. Again, this is indicated on the plan attached at **Appendix A**.
- 5.18 Within Scraftoft, the provision of the link through the site, and the changes to the priority at the various junctions on Hamilton Lane, offers the opportunity to change the traffic patterns within

the centre of the village and limit traffic rat running through this village. This could include reversing the one-way system on part of Church Hill to allow exit only from the mini-roundabout junction with Station Lane. Traffic would then use Stocks Road and then Scraptoft Rise to access Scraptoft Lane.

- 5.19 Such changes in flow would allow alterations to the priorities within the village and hence deter traffic rat-running through this area. Details of these changes are shown on the plan attached at **Appendix B**. In addition, the deterrent to traffic rat-running through the village could be the introduction of priority working on the southern section of Hamilton Lane which would add further to the delays traffic using this route would face.
- 5.20 Effectively traffic would be signed to use the route via New Romney Crescent to access Scraptoft Lane. An alternative route to this could be delivered over the land between New Romney Crescent and Scraptoft Rise, however, this is considered an unnecessary addition to the road network given the existing low levels of traffic flow on New Romney Crescent.
- 5.21 It should be noted that the measures proposed to deter traffic passing through Scraptoft village, are proposed to address the current issues and the effect of the more recent developments within the area. It is not considered to be a requirement of the impact of the development traffic, but is a beneficial consequence of the proposed development.
- 5.22 Beyond the local area, other opportunities exist to enhance the following key junctions:
- Station Road / A47 signal junction.
 - Scraptoft Lane / Hungarton Boulevard.
 - Hamilton Way / Maidenwell Avenue (Tesco Junction)
 - Netherhall Road / Hungarton Boulevard.
- 5.23 Other junctions beyond these identified above would be considered following reviews of the modelling of the network.

6 TRIP GENERATION & DISTRIBUTION

- 6.1 This Chapter will review the predicted traffic movements to be generated by the development site and the distribution on the surrounding highway network.
- 6.2 The trip rates to be used for the various uses on the site will be based on those obtained from the TRICS database for similar site locations.

Table 6.1: Trip Rates: Mixed Private Housing (No. Dwellings)

| | Arrivals | Departures | Two-Way |
|----------------------------------|-----------|------------|------------|
| | Trip Rate | Trip Rates | Trip Rates |
| Weekday AM Peak (08:00-09:00) | 0.089 | 0.395 | 0.484 |
| Weekday PM Peak (17:00-18:00) | 0.372 | 0.175 | 0.547 |

Source: TRICS Database

Table 6.2: TRICS Data – Affordable Housing (No. Dwellings)

| | Arrivals | Departures | Two-Way |
|----------------------------------|-----------|------------|------------|
| | Trip Rate | Trip Rates | Trip Rates |
| Weekday AM Peak (08:00-09:00) | 0.126 | 0.196 | 0.322 |
| Weekday PM Peak (17:00-18:00) | 0.272 | 0.185 | 0.457 |

Source: TRICS Database

Table 6.3: TRICS Data – Primary School (2FE)/ (Number of pupils)

| | Arrivals | Departures | Two-Way |
|----------------------------------|-----------|------------|------------|
| | Trip Rate | Trip Rates | Trip Rates |
| Weekday AM Peak (08:00-09:00) | 0.228 | 0.171 | 0.399 |
| Weekday PM Peak (17:00-18:00) | 0.026 | 0.032 | 0.058 |

Source: TRICS Database

- 6.3 As part of the development proposals, the existing Golf Course will be re-located. The re-location of the golf course will be dealt with as part of a separate planning application and a separate TA; however the two reports will be linked to ensure a consistent approach is carried out.
- 6.4 To provide a robust assessment, the existing movements associated with the Golf Course during the network peak periods will not be removed from the local highway network.
- 6.5 As part of the predicted traffic movements an account will be taken of the traffic generated by the developments adjacent to Beeby Lane which are consented but which have not been developed.

Likewise, the assessment of the flows was made in the transport Appraisal report with an allowance for the re-routing of traffic through Scraptoft as a consequence of the new infrastructure and the changes proposed to the one way system within Scraptoft. Details of the re-routing of the traffic is shown on the diagrams attached at **Appendix B**.

Distribution

- 6.6 To establish the direction of travel residents are likely to use, the 2011 Census database will be used. The data from this database is in relation to ‘Work Related Trips’, whilst it is accepted that other trips are made during the peak periods, it is considered that the ‘work’ related trip is the primary trip purpose and as such is considered appropriate to use.
- 6.7 The Key work place destinations identified for existing residents within the Humberstone & Hamilton Ward are identified in the Table below;

Table 6.1: Key Work Place destinations for the Humberstone & Hamilton ward within Leicester

| Destination | % |
|---------------------------------|------------|
| Blaby | 6% |
| Charnwood | 8% |
| Harborough | 3% |
| Hinckley & Bosworth | 2% |
| Leicester | 67% |
| Melton | 1% |
| North West Leicester | 1% |
| Oadby & Wigston | 4% |
| Total | 92% |
| Other Locations include: | |
| Northamptonshire | 3% |
| Oxfordshire | 1% |
| Warwickshire | 2% |
| West Midlands | 2% |

Source: Census Database

- 6.8 The predicted traffic distribution is identified in **Appendix C**.
- 6.9 As part of the Transport Assessment work a review of Origin and destinations for the local area will be obtained from the LLITM model. This will provide a clearer understanding of where the key routes are and will inform the distribution of traffic movements in this area.

6.10 A review of internal trips associated with the school and local facilities will also be provided.

7 TRAFFIC IMPACT

- 7.1 This section of the reports will assess the developments impact on the surrounding highway network. The junctions to be assessed include;
- Hamilton Lane/ Keyham Lane
 - Hamilton Lane/ New Romney Crescent
 - New Romney Crescent / Scraftoft Lane
 - Church Hill/ Covert Lane/ Station Lane/ Scraftoft Lane
 - Station Road/ A47
 - Maidenwell Avenue / Preston Rise/ Tesco filling Station
 - Hamilton Way/ Maidenwell Avenue/ Hungarton Boulevard/ Lower Keyham Lane
 - Hungarton Boulevard/ Scraftoft Lane/ Colchester Road
- 7.2 In addition to the above the new access junctions proposed will be assessed.
- 7.3 This assessment will also include a review of the base 2026 LLITM traffic data obtained from LCC in August 2016. The assessment years will be as follows;
- 2017 Base (Observed Traffic Surveys)
 - 2026 – Future Year
- 7.4 The base traffic flows will have growth added to provide a 2026 base. The growth to be applied will be from TEMPRO Version 7. A review will be undertaken of the calculated base 2026 flows against the LLITM data to ensure a robust assessment is undertaken.
- 7.5 RPS would be happy to use the LLITM as part of this assessment work or the more localised model that is understood to have been prepared by Edwards and Edwards for the local authority.
- 7.6 The assessments included in the TA will include for phasing of the development and related highway infrastructure needed.
- 7.7 The Transport Appraisal report identified that the greatest impact will be on Keyham Lane West and New Romney Crescent. Whilst the increase in percentage terms is high, in relation to the total flow, the overall traffic flows will still be low for these types of roads, these being circa 600 vehicles two-way. This review was on the basis of assuming no changes to the baseline flows as a consequence of the development.
- 7.8 However, the development proposals are to down grade the use of Hamilton Lane and to discourage the rat-running of traffic through Scraftoft. To this end, the proposals are to amend the one-way system within Scraftoft to deter traffic. Accordingly, the net effect identified within the Transport Appraisal is identified to remove circa 45% of the through-movement from Scraftoft. As previously identified, this is not considered a requirement of the proposed

development, but an opportunity the development offers to the local highway network through the provision of mitigation measures. This initial work will be reviewed as part of the Transport Assessment work.

7.9 The junctions will be assessed using Junctions 9 software which is the industry standard software used for modelling the capacity of priority junctions and roundabouts and LINSIG for signalised junctions.

7.10 The Transport Appraisal report summarised the initial transport assessment work and states that it is considered that the effect of the development traffic can be mitigated by measures within the local highway network. These measures not only mitigate the development traffic, but also provide benefits to the local network rerouting traffic away from Scraftoft.

7.11 These improvement measures provide:-

- Formalised parking bays on key routes, including New Romney Crescent and Keyham Lane West;
- Create an appropriate level of carriageway width to maintain the flow of traffic on the key routes;
- Deter traffic using Hamilton Lane as an outer bypass route;
- Reduce the attractiveness for traffic travelling through Scraftoft and offer alternative routing to such traffic;
- Provide enhances areas around the school entrances to improve the safety of those accessing the schools;
- Provide a key link between Beeby Lane and Hamilton Lane to reroute traffic from the centre of Scraftoft; and
- Improve the operational capacity of the Covert lane / Station Lane mini roundabout.

7.12 Overall, it is considered that the residual cumulative impact of the development traffic will not be severe, and that the measures identified would provide a safe and suitable access to the development.

7.13 These measures will be reviewed in more detail within the Transport Assessment.

8 SUMMARY & CONCLUSION

- 8.1 This Section will provide a summary of the report's findings and provide a conclusion in terms of the sites impact.

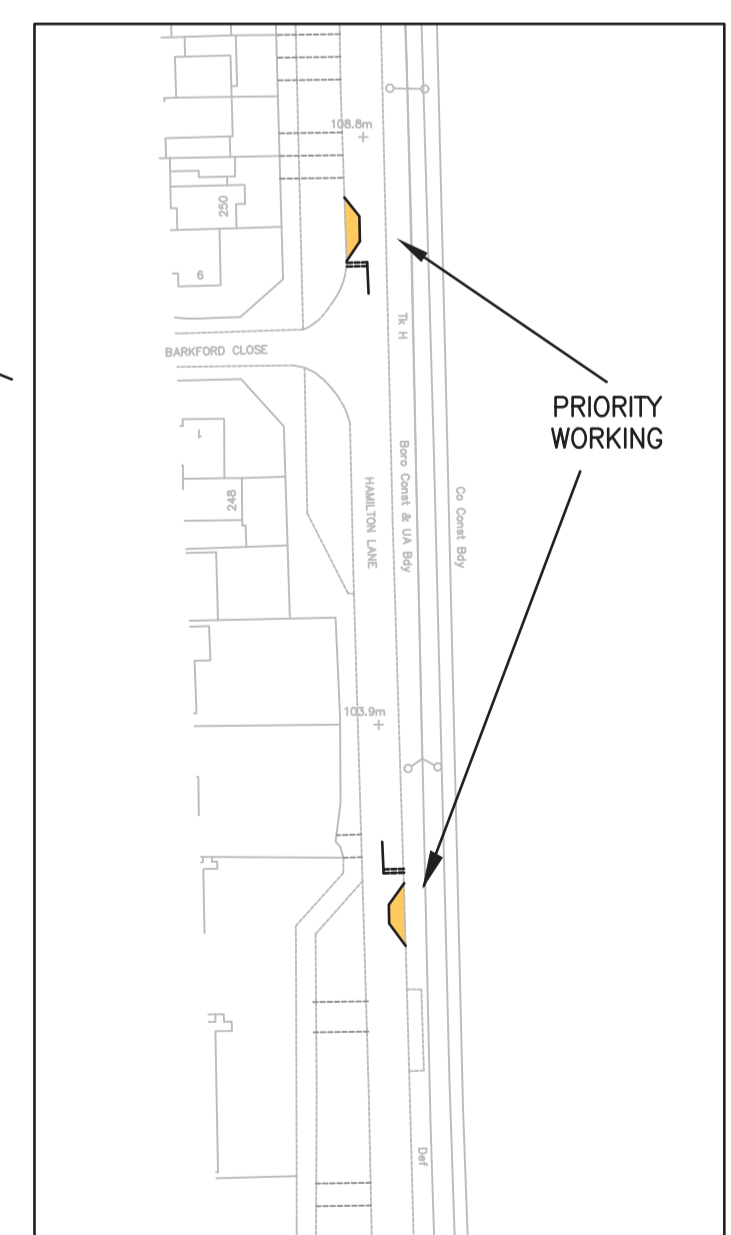
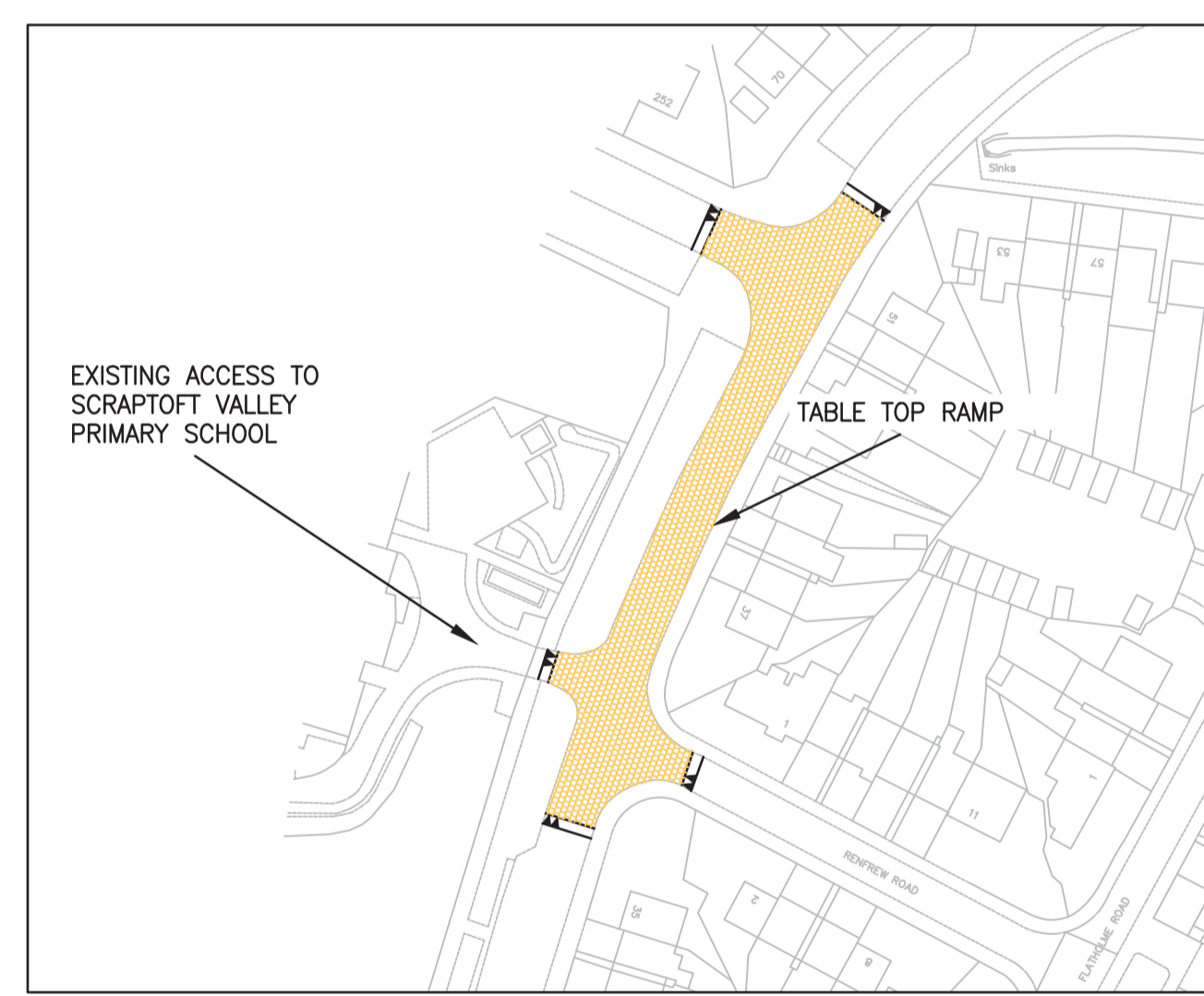
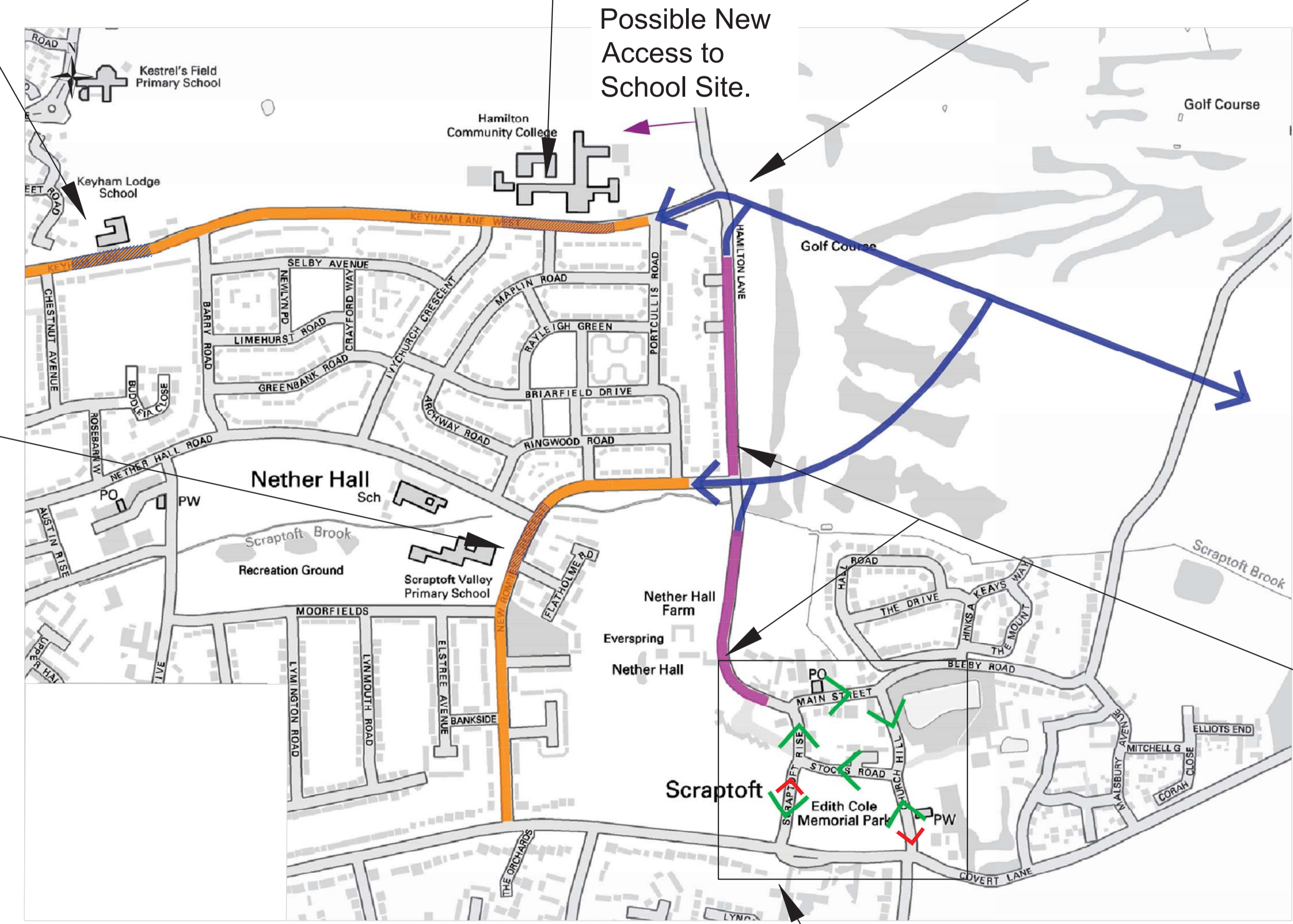
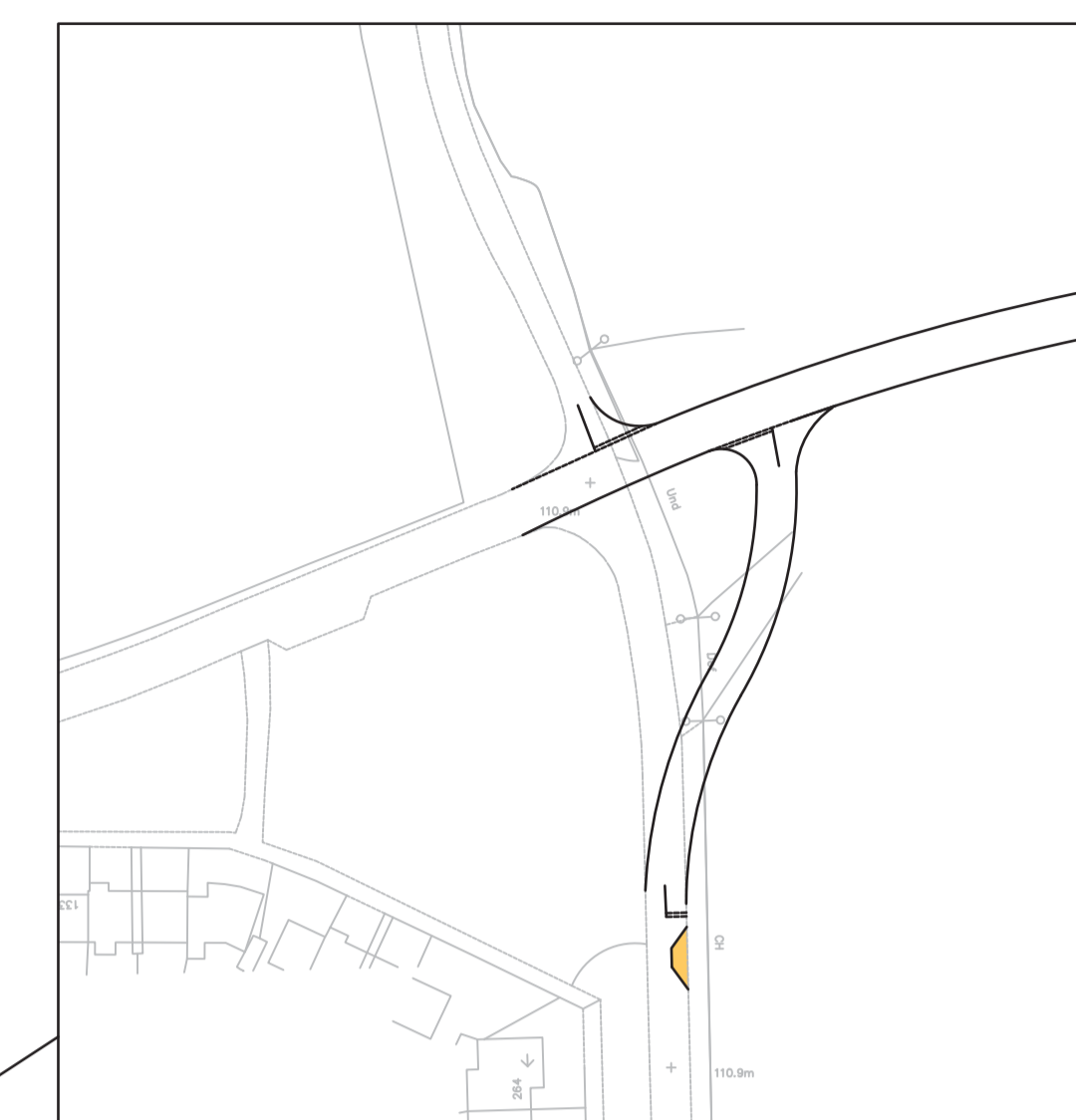
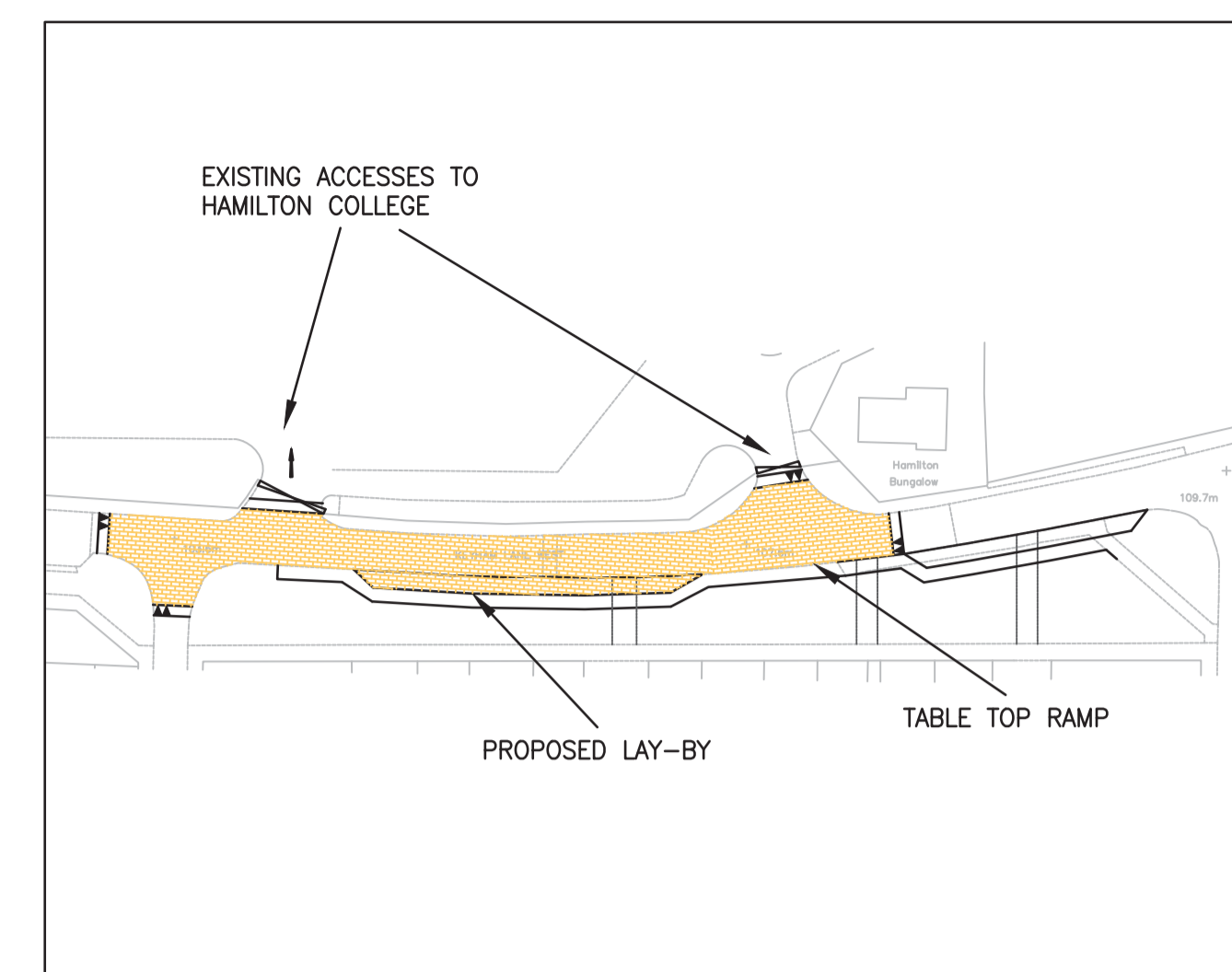
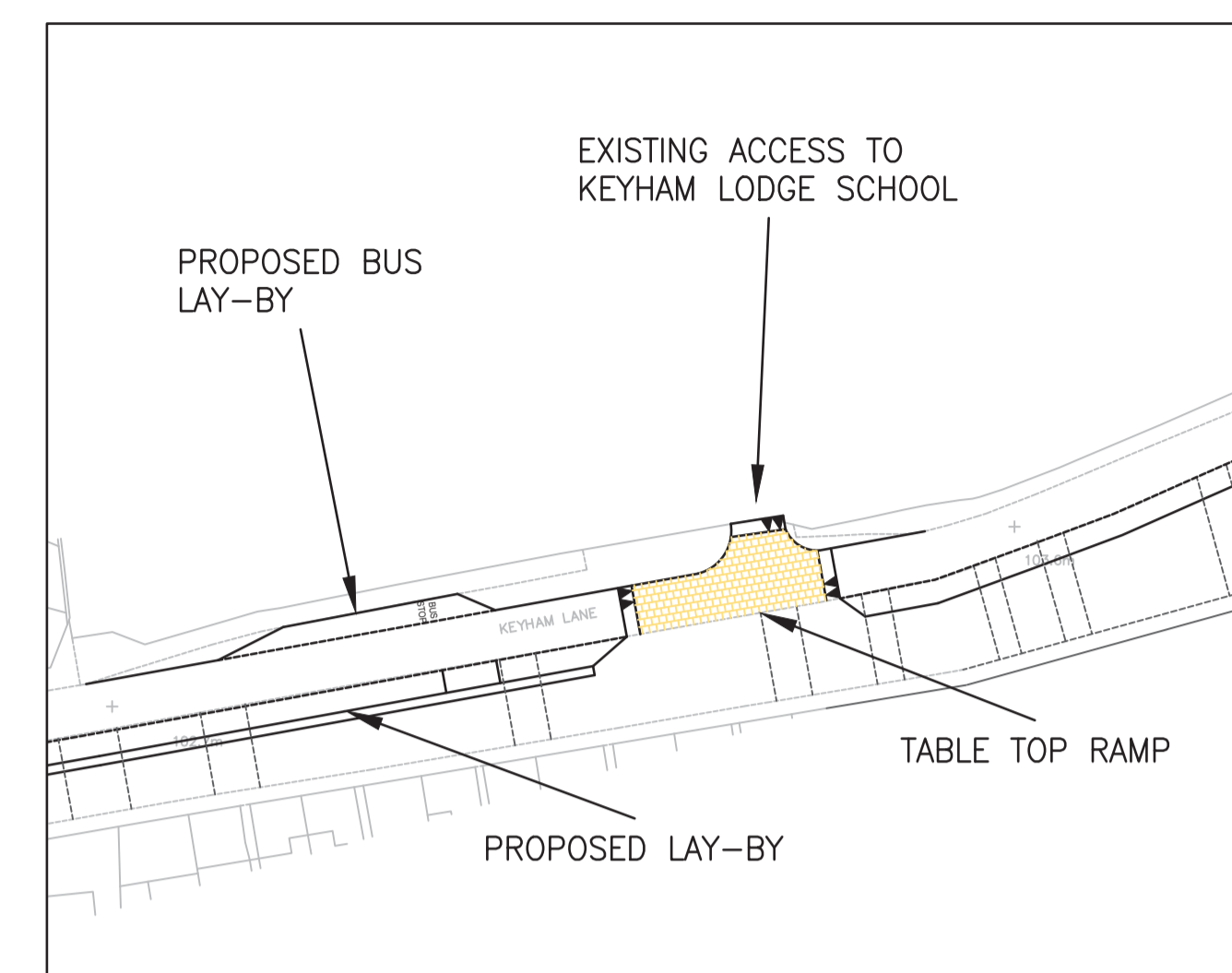
APPENDICES

APPENDIX A – INDICATIVE ACCESS ARRANGEMENTS & OFF SITE MEASURES

NOTES



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- Key:
- Proposed Highway improvements
 - Proposed Traffic Calming Measures
 - Potential Link to future development areas
 - Possible changes to one way system
 - Existing one-way system



Details of proposed changes to one-way system are provided on Drawing No. JNY8843 - 02

| Rev | Description | Date | Initial | Checked |
|-----|-------------|------|---------|---------|
| | | | | |

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Client Parkers of Leicester

Project Scraptoft

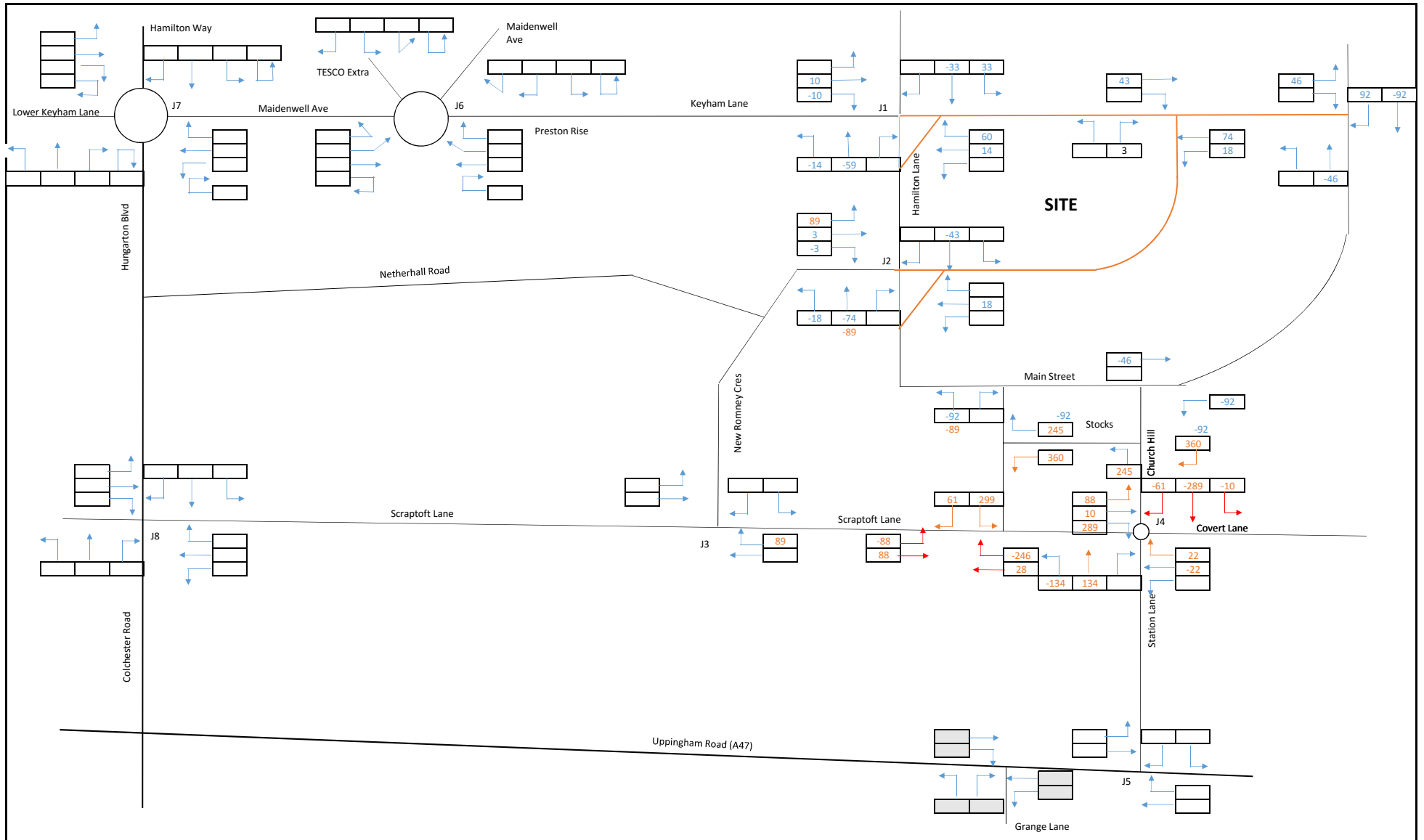
Title Proposed Access and off Site proposals

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|----------------|---------------------|--------------|
| Status | Drawn By | Checked by |
| Project Number | Scale @ A1 | Date Created |
| BRP | 1:1000 Insert plans | 20.05.16 |

Drawing Number JNY8843 - 01

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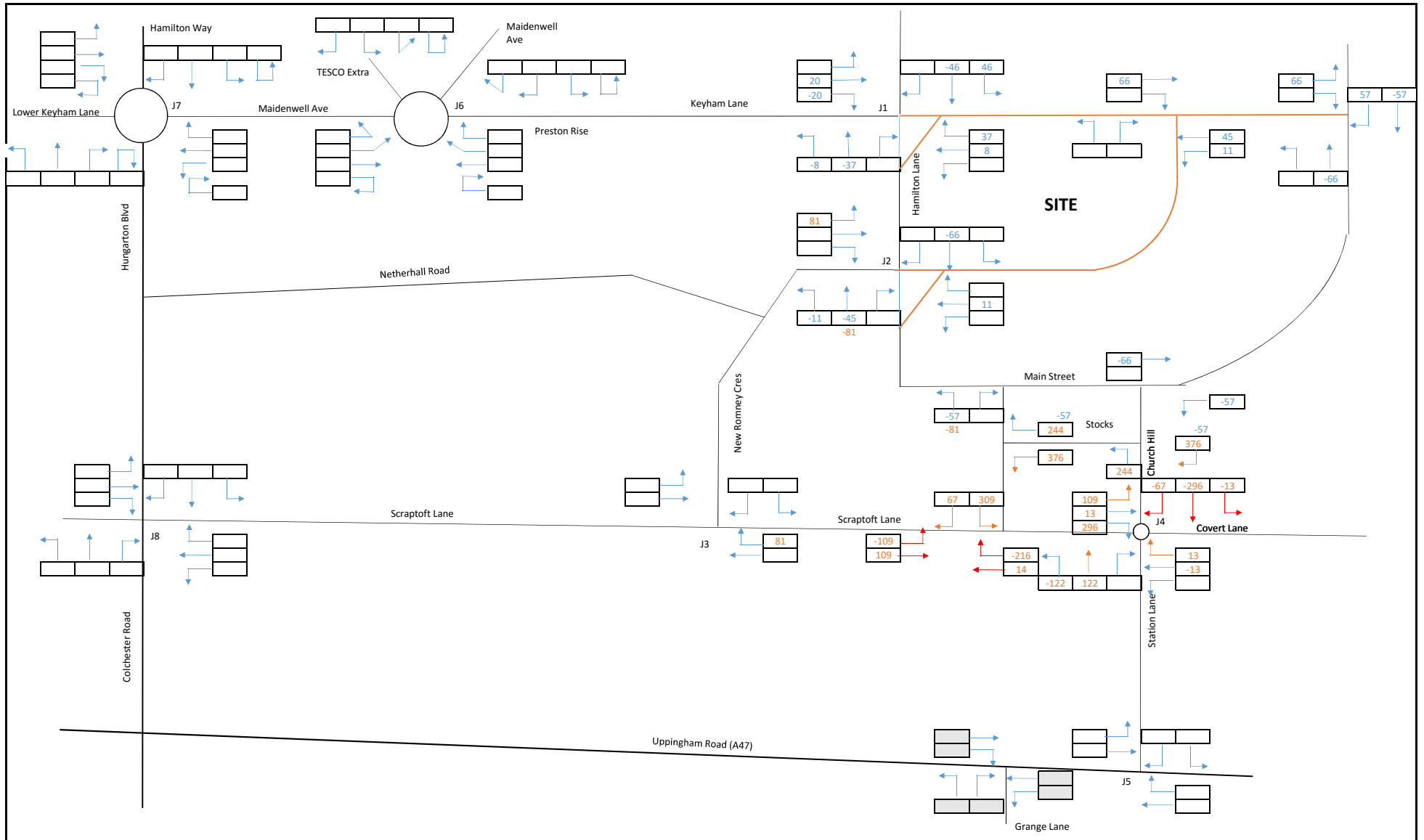
APPENDIX B – TRAFFIC FLOW RE-DISTRIBUTION



13th April 2016 Surveys
 WYG 2015 Traffic Flows

Project Name: Scraptoft
 Project Number: JNY8843

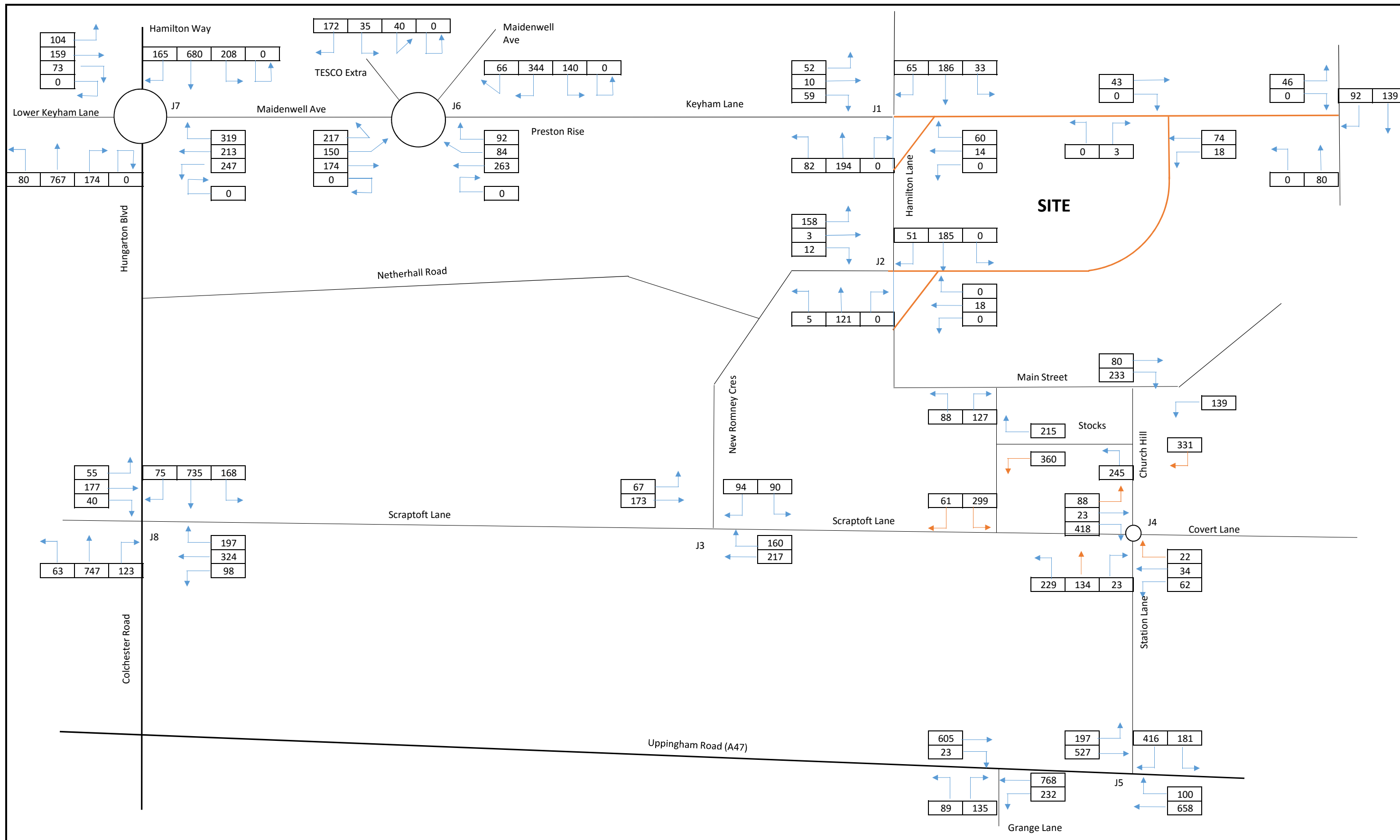
Redistributed Base Traffic Flows
AM PEAK (08:00 - 09:00)
All Vehicles
FIGURE 05



13th April 2016 Surveys
 WYG 2015 Traffic Flows

Project NPM: Scraftoft
 Project Number: JNY8843

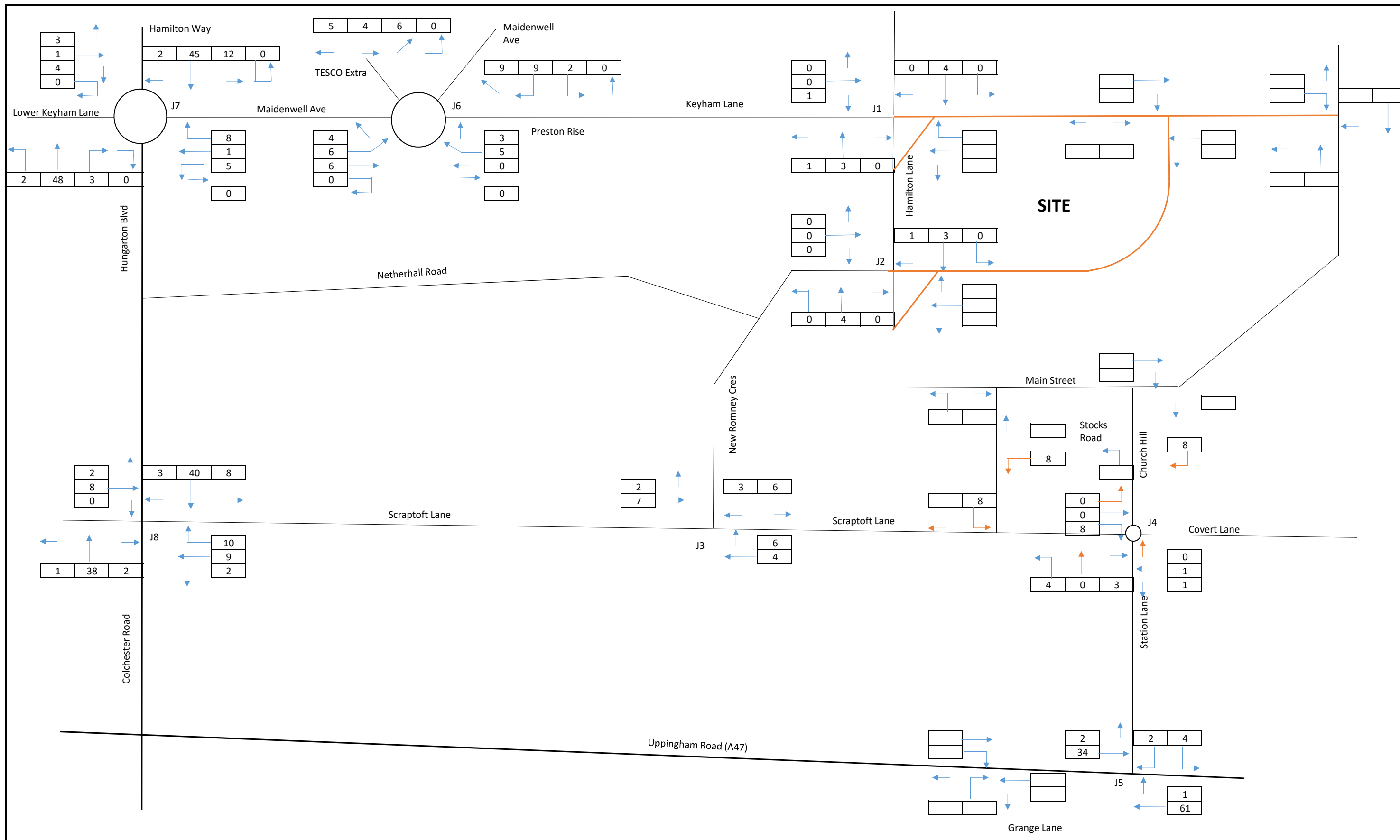
Redistributed Base Traffic Flows
PM PEAK (08:00 - 09:00)
All Vehicles
FIGURE 06



13th April 2016 Surveys
 WYG 2015 Traffic Flows

Project Name: Scraftoft
 Project Number: JNY8843

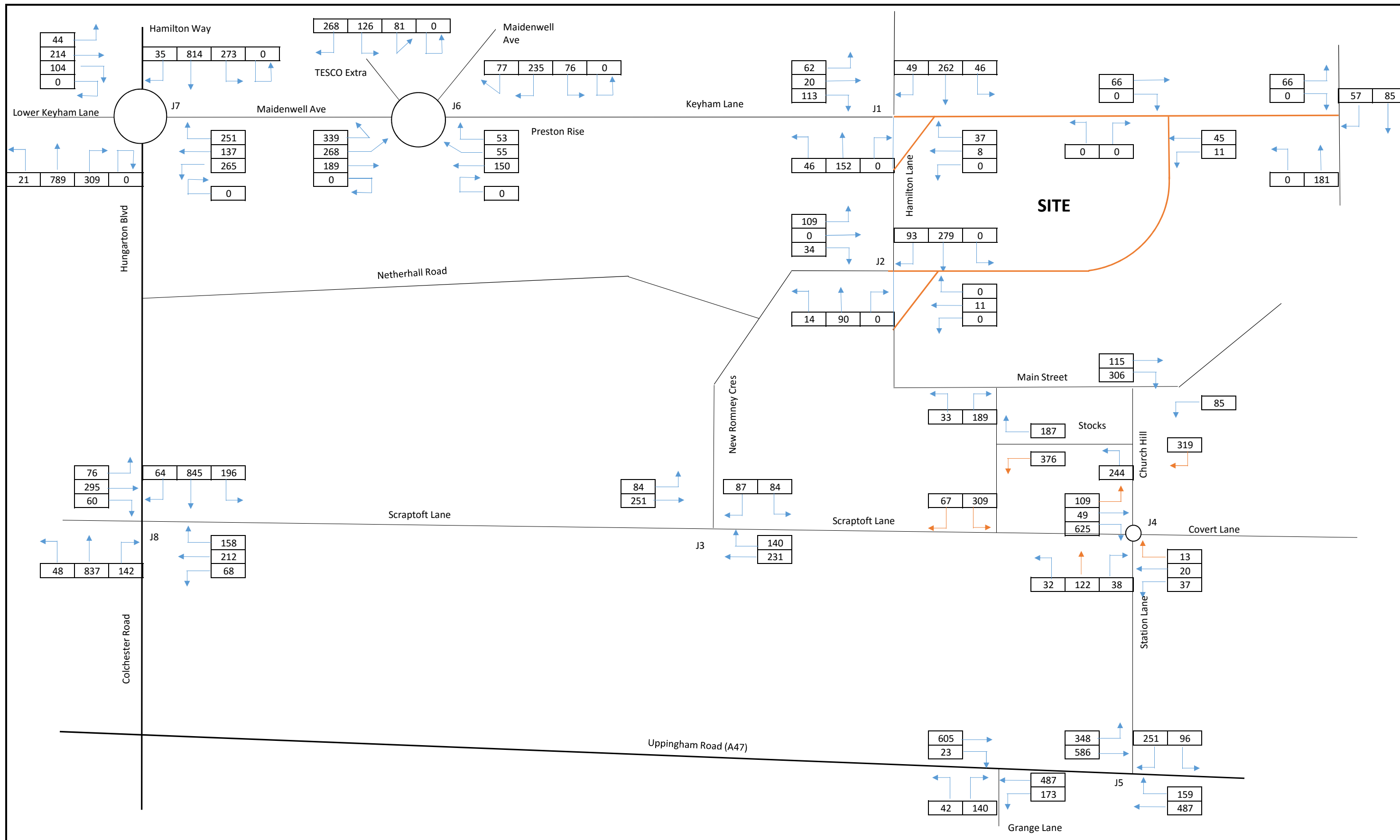
Re-Distributed Base Traffic Flows
AM PEAK (08:00 - 09:00)
All Vehicles
FIGURE 07



13th April 2016 Surveys
WYG 2015 Traffic Flows

Project Name: Scraftoft
Project Number: JNY8843

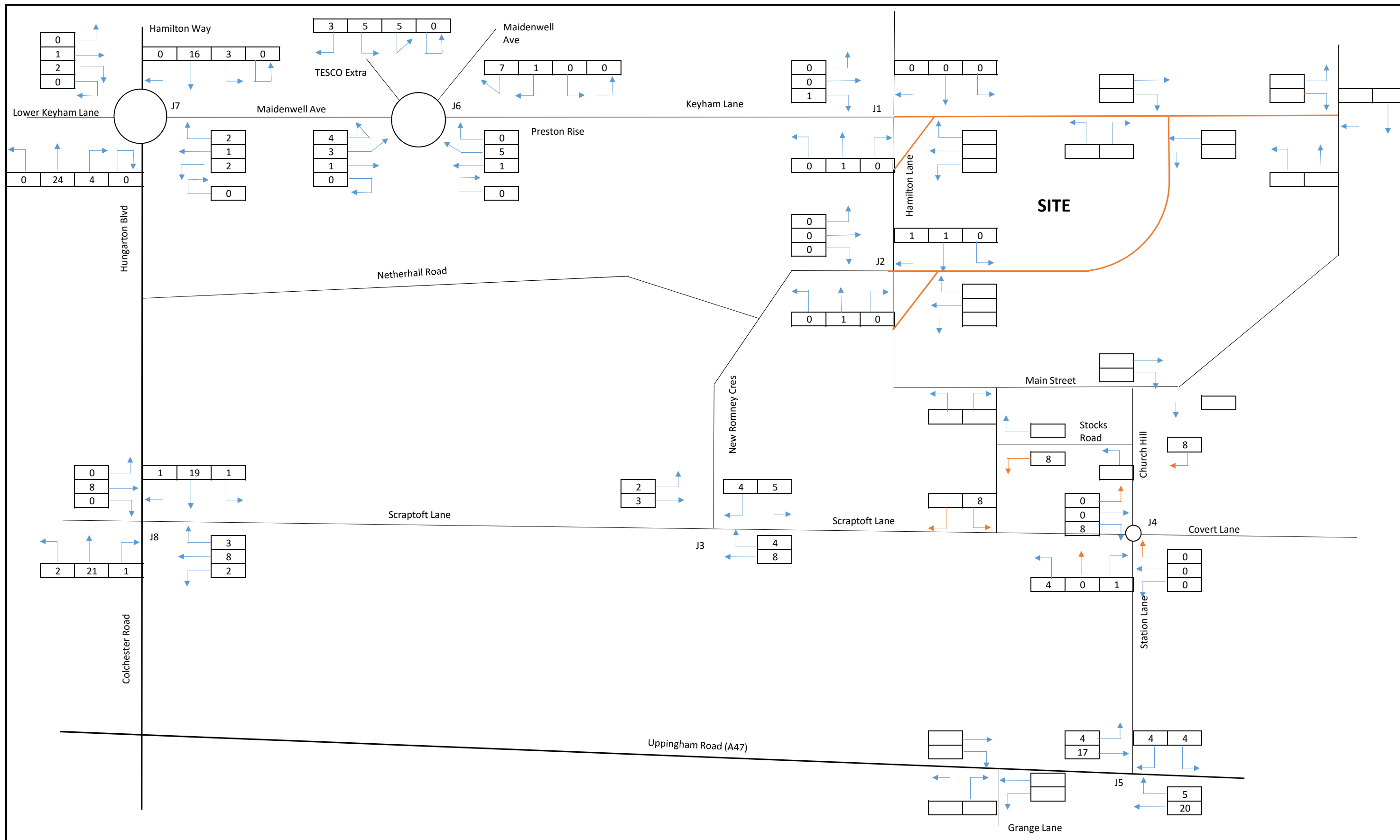
Re-Distributed Base Traffic Flows
AM PEAK (08:00 - 09:00)
HGV's & Buses
FIGURE 08



13th April 2016 Surveys
 WYG 2015 Traffic Flows

Project NPMe: Scraftoft
 Project Number: JNY8843

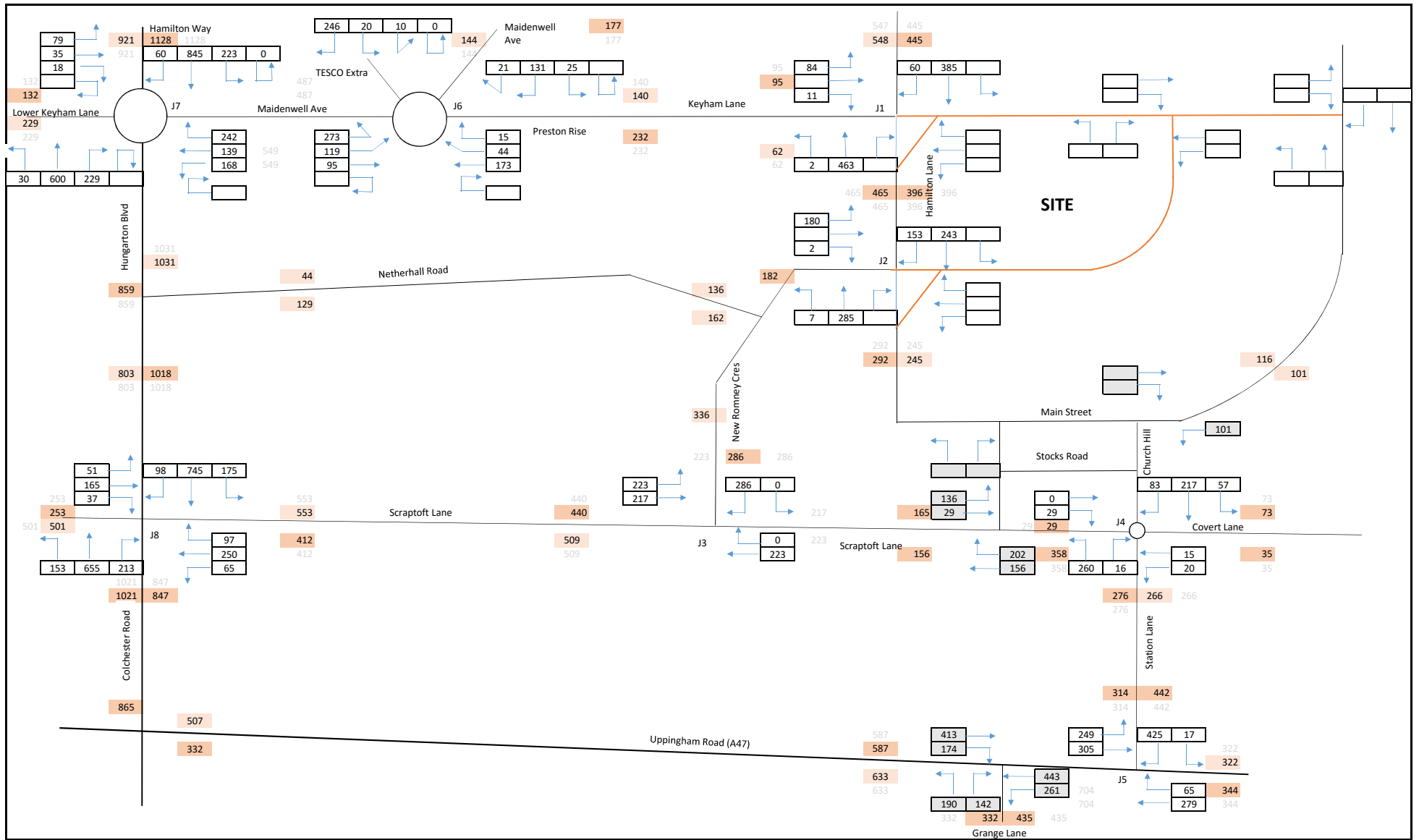
Re-Distributed Base Traffic Flows
PM PEAK (17:00 - 18:00)
All Vehicles
FIGURE 09



13th April 2016 Surveys
 WYG 2015 Traffic Flows

Project NPMe: Scraftoft
 Project Number: JNY8843

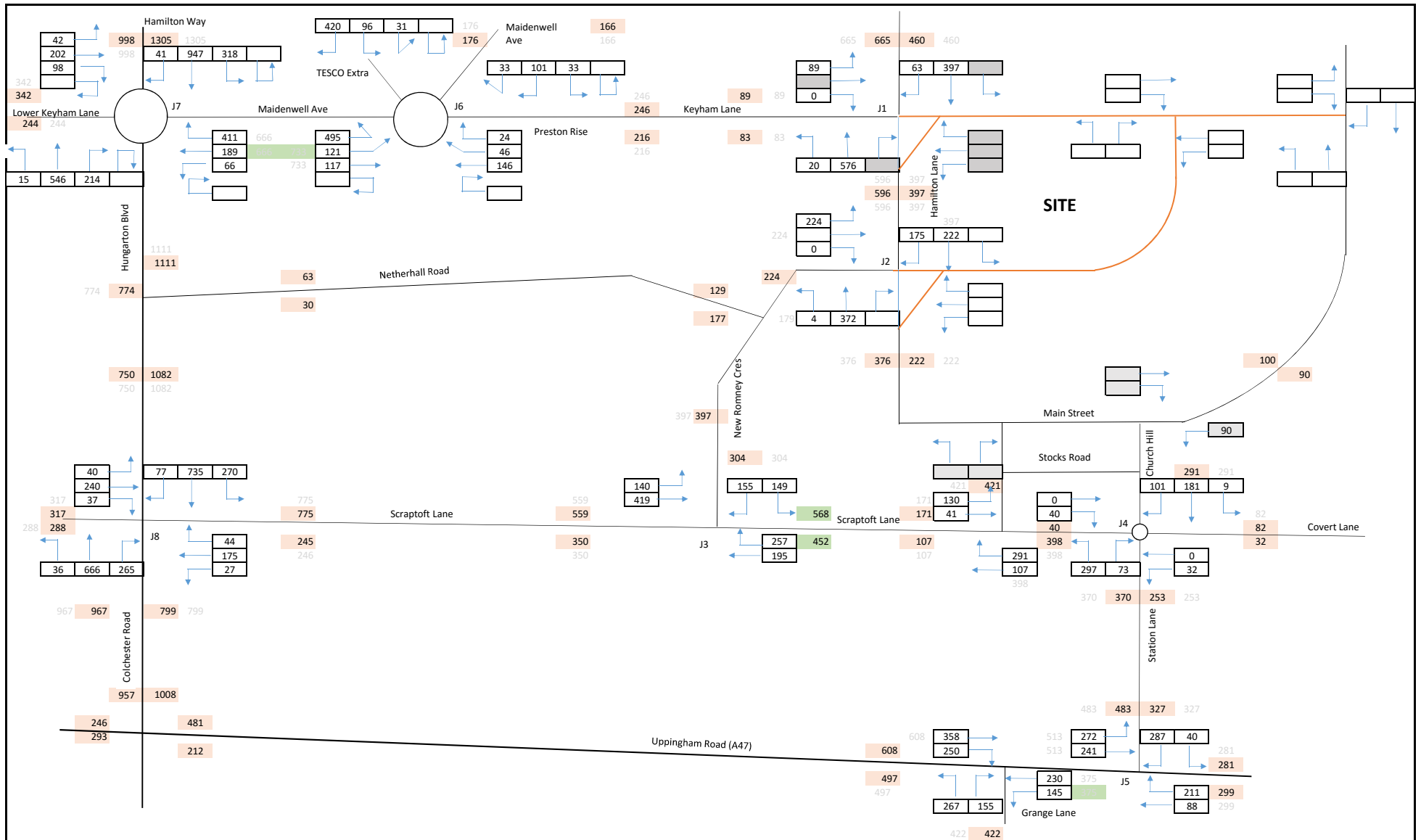
Re-Distributed Base Traffic Flows
PM PEAK (17:00 - 18:00)
HGV's & Buses
FIGURE 10



□ Data obtained from LLITM - turning proportions based on existing survey data

Project Name: Scraftoft
Project Number: JNY8843

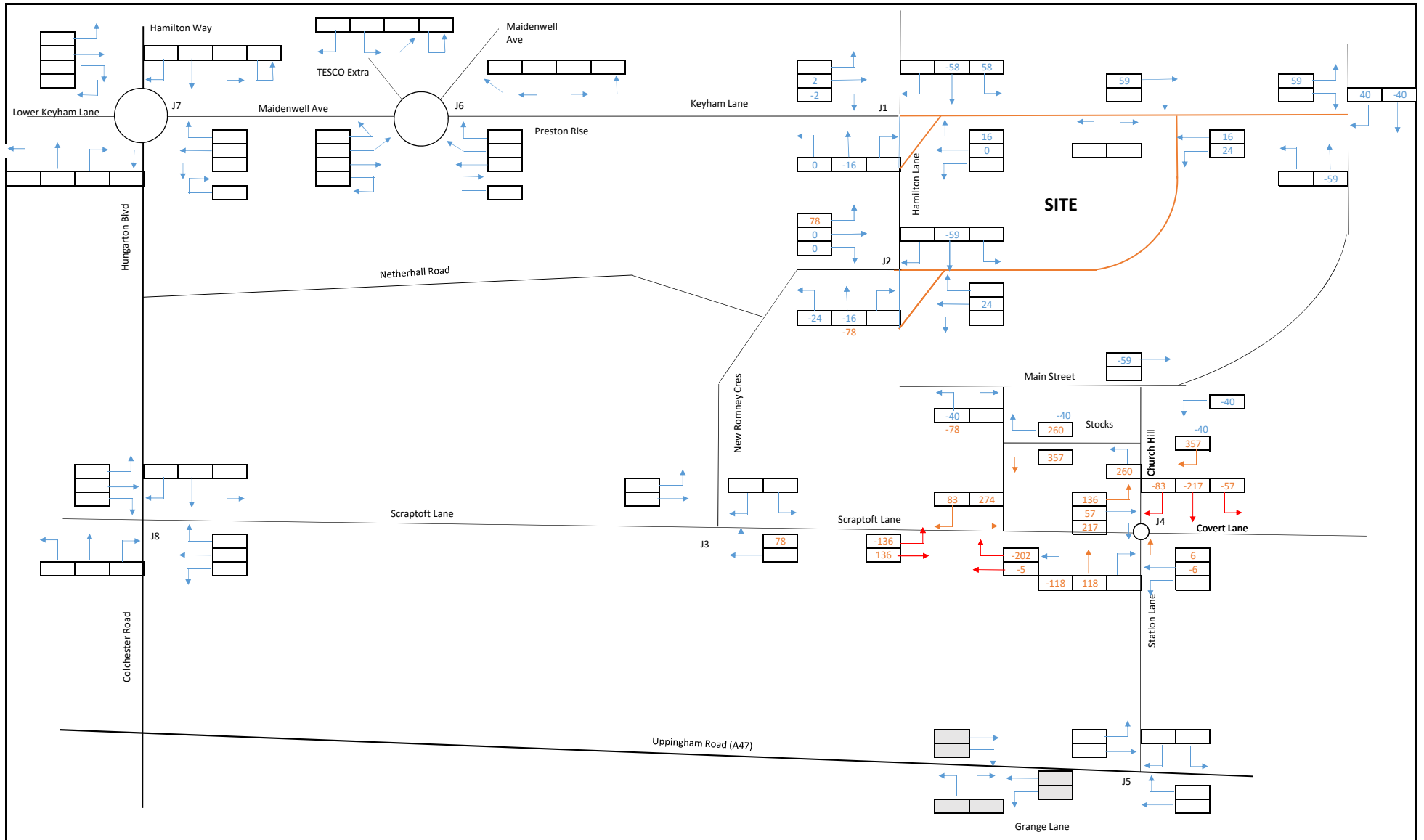
2026 LLITM Flows
AM PEAK (08:00 - 09:00)
PCU's
FIGURE 16



☐ Data obtained from LLITM - turning proportions based on existing survey data

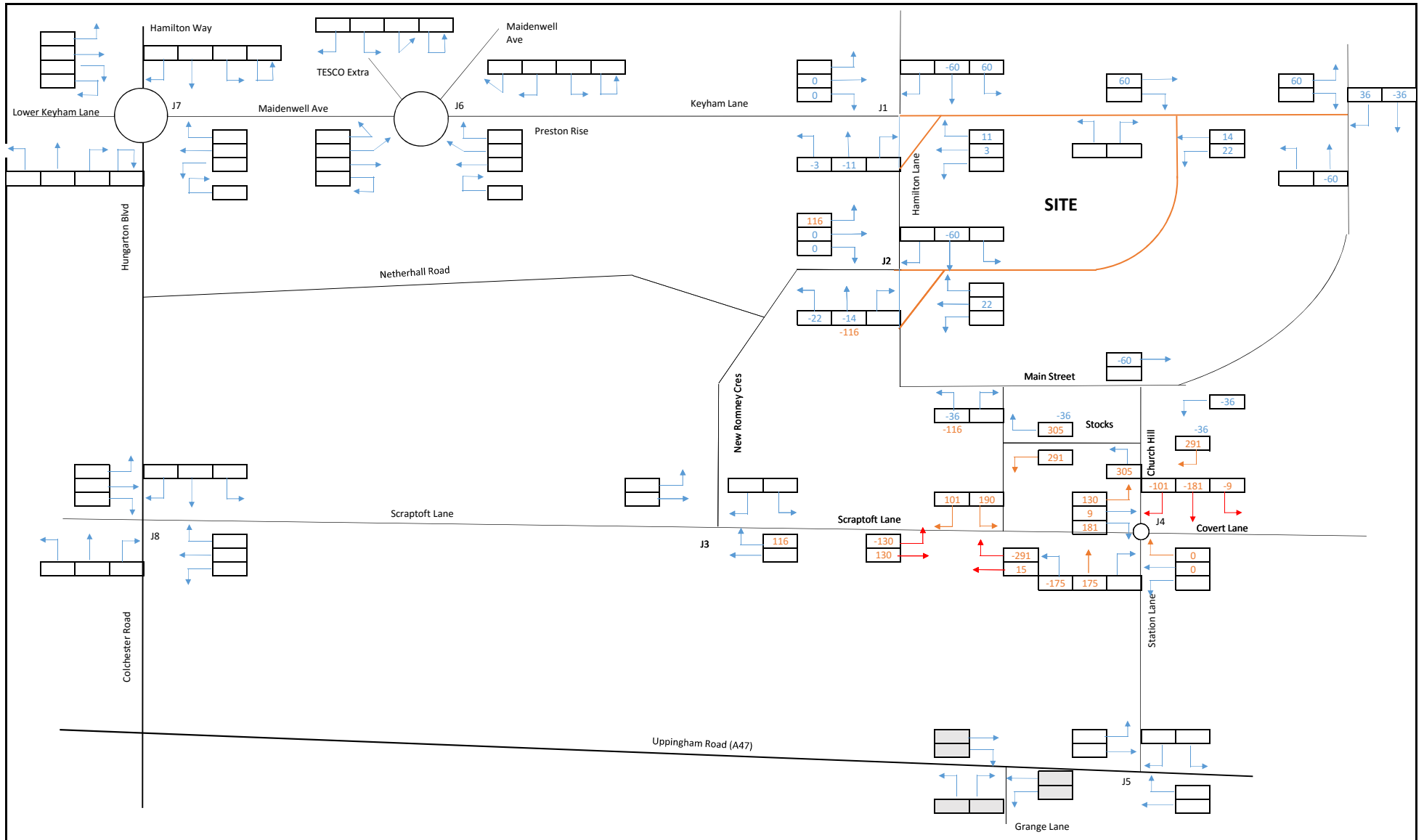
Project Name: Scraftoft
Project Number: JNY8843

2026 LLITM flows
PM PEAK (17:00 - 18:00)
PCU's
FIGURE 17



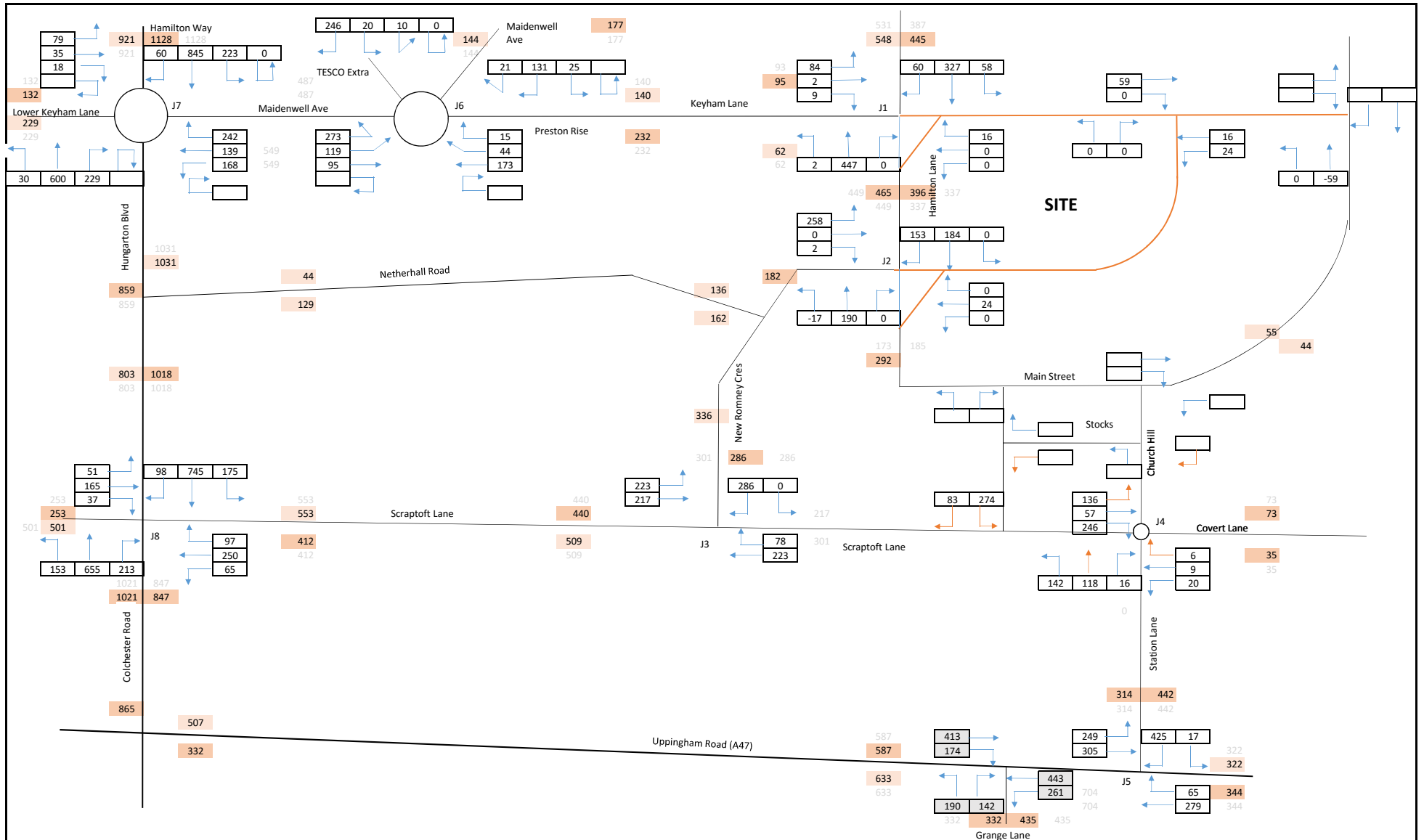
Project Name: Scraftoft
 Project Number: JNY8843

Redistribution of LLITM Traffic Flows
AM PEAK (08:00 - 09:00)
All Vehicles
FIGURE 18



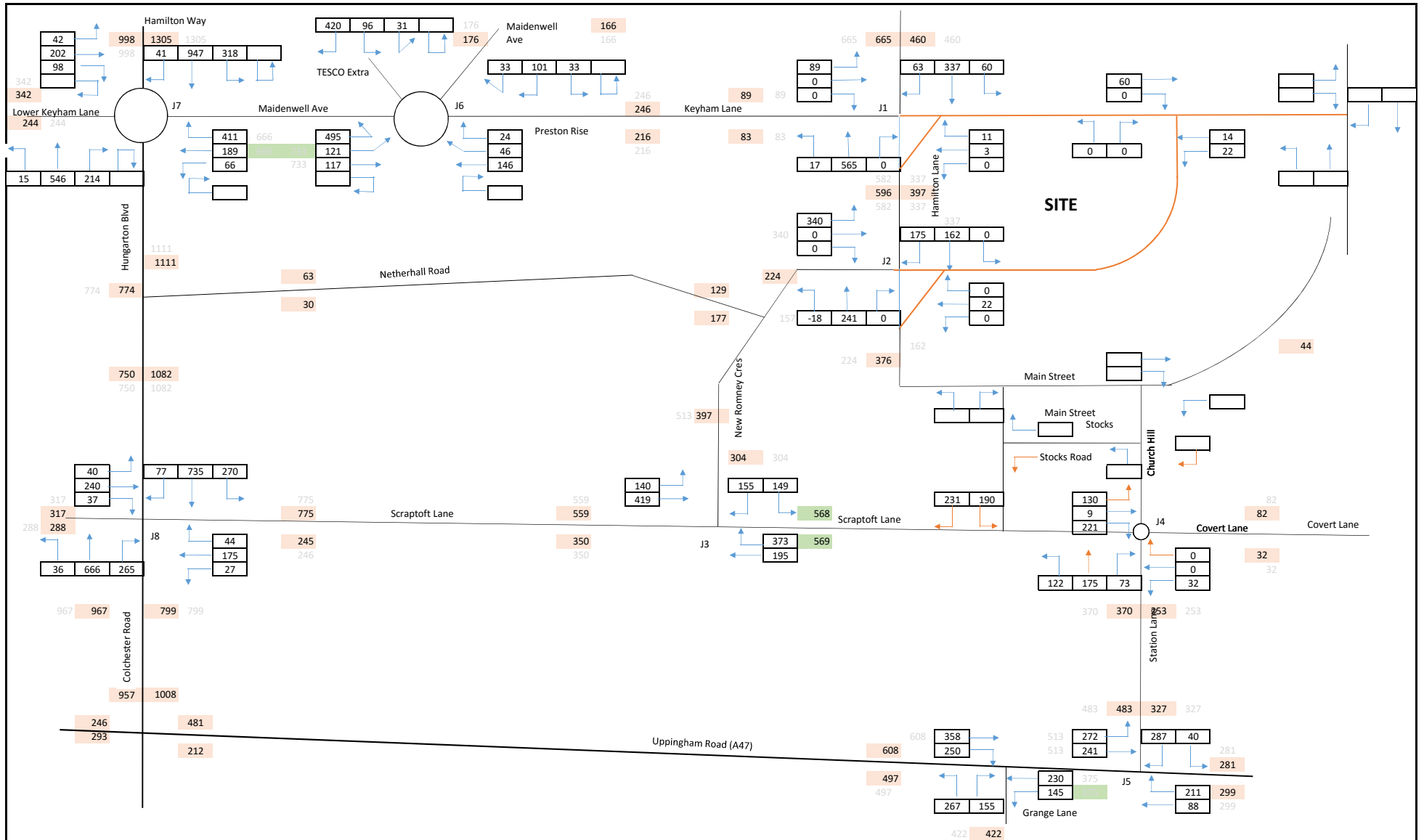
Project NPM: Scraftoft
 Project Number: JNY8843

Redistribution of LLITM Traffic Flows
PM PEAK (17:00 - 18:00)
All Vehicles
FIGURE 19



Project Name: Scraftoft
Project Number: JNY8843

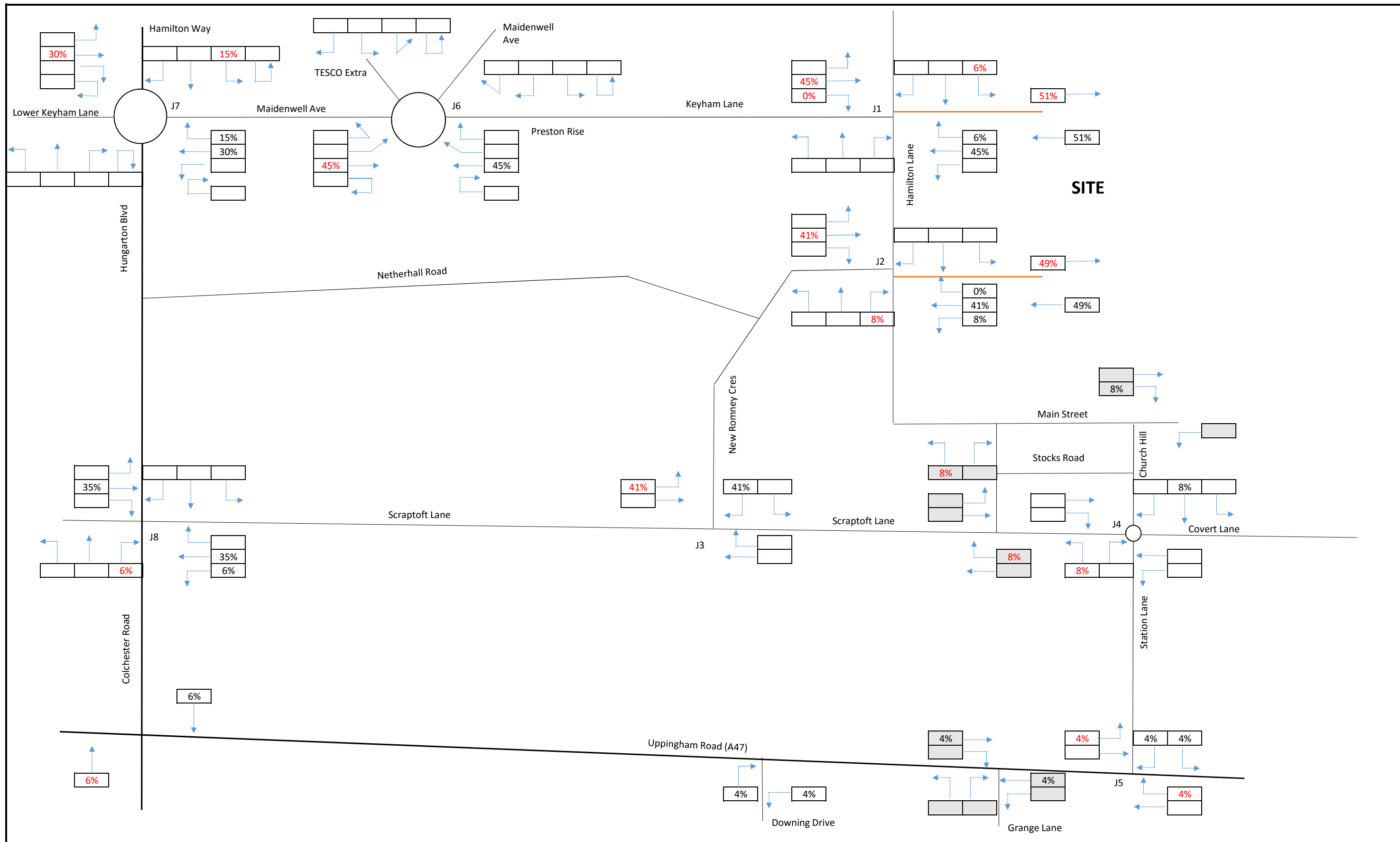
2026 LLITM Flows redistributed
AM PEAK (08:00 - 09:00)
PCU's
FIGURE 20



Project Name: Scraftoft
 Project Number: JNY8843

2026 LLITM Flows redistributed
 PM PEAK (17:00 - 18:00)
 PCU's
 FIGURE 21

APPENDIX C – PROPOSED TRAFFIC DISTRIBUTION



13th April 2016 Surveys
 WYG 2015 Traffic Flows

Project Name: Scraftoft
 Project Number: JNY8843

Proposed Dev Traffic Distribution

FIGURE 11