

Herefordshire County Council

## **PART 6 MOVING TRAFFIC BUSINESS CASE**

Reference: 1000008179

Date: June 2022

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Rev	V01	V02	
Reason	First draft	Second draft	
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Date	9 <sup>th</sup> May 2022	8 <sup>th</sup> June 2022	

**File path: G:\Project Centre\Project-BST\100008179 - Herefordshire Part 6\2  
Project Delivery\5 Design & WIP\Business Case**

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**1. PURPOSE OF REPORT**

- 1.1 This report sets out the business case for introducing CCTV enforcement of moving traffic contraventions by Herefordshire Council (HC).
- 1.2 The Traffic Management Act (TMA) 2004 introduced the civil enforcement of traffic offences in England and Wales. Part 6 of the Act allows councils outside of London to enforce moving traffic offences, such as banned turns, exceeding weight limits and stopping in yellow box junctions. Despite the 2004 Act now being 17 years old, this secondary legislation has never been introduced and moving traffic offences can only be enforced by the police under criminal law. For the powers to be operational, the Department for Transport (DfT) is required to pass secondary legislation. To be granted the necessary enforcement powers, local highway authorities are required to submit an application for a Designation Order for the Civil Enforcement of Moving Traffic Contraventions to the DfT. As part of these regulations, CCTV devices will be available for use by councils to enforce certain traffic restrictions. These devices can be operated automatically with a Civil Enforcement Officer actually determining the contravention.
- 1.3 Project Centre (PCL) have been commissioned to undertake surveys at six junctions in Hereford to determine the number of contraventions that are currently taking place at these junctions. Surveys undertaken at these junctions will determine the current level of contravention of traffic regulations. The six junctions are identified in Table 1.

Location	Type of restriction	Co-ordinates and Map link
Commercial Square, Hereford	Yellow Box	52.057679, -2.712337 <a href="#">Google Maps - Link 1</a>
Junction of A465 Commercial Road / Union Walk, Hereford	Yellow Box	52.058553, -2.710284 <a href="#">Google Maps - Link 2</a>
A438 Blueschool Street junction with Maylords service road, Hereford	Yellow Box	52.058236, -2.715331 <a href="#">Google Maps - Link 3</a>
East Street Junction with Broad Street, Hereford	No entry except for access	52.055960, -2.717460 <a href="#">Google Maps - Link 4</a>
Station Approach / Widemarsh Street Junction, Hereford	Banned turns	52.062157, -2.714800 <a href="#">Google Maps - Link 5</a>

Widemarsh Street junction with Blueschool Street Hereford	No entry except access	52.058270, -2.715836 <a href="#">Google Maps – Link 6</a>
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Table 1. Six survey locations

- 1.4 The report is intended to help the internal decision-making process within HC, providing:
- An understanding of what CCTV enforcement looks like in other authorities;
  - What CCTV enforcement could look like in Herefordshire;
  - The options available for delivering a service; and
  - The preferred option to take forward.
- 1.5 Engagement has been undertaken at a total of 23 identified sites and school keep clear markings. This engagement data has been used in this report to help develop the options available and to model the scenarios.
- 1.6 The report will include details that can be used to support the HC Business Case to adopt moving traffic enforcement powers.
- 1.7 There are 4 strategic objectives that the decision will be based on.
- Reduce congestion;
  - Improve air quality;
  - Improved bus service reliability; and
  - Improving the Active travel modes (i.e., walking and cycling routes).<sup>1</sup>

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**2. SCOPE**

2.1 The Project scope is divided into two separate elements:

1. Delivery of surveys for the six identified sites; and
2. A report to support the HC Business Case that details the financial implications of taking up the moving traffic enforcement powers.

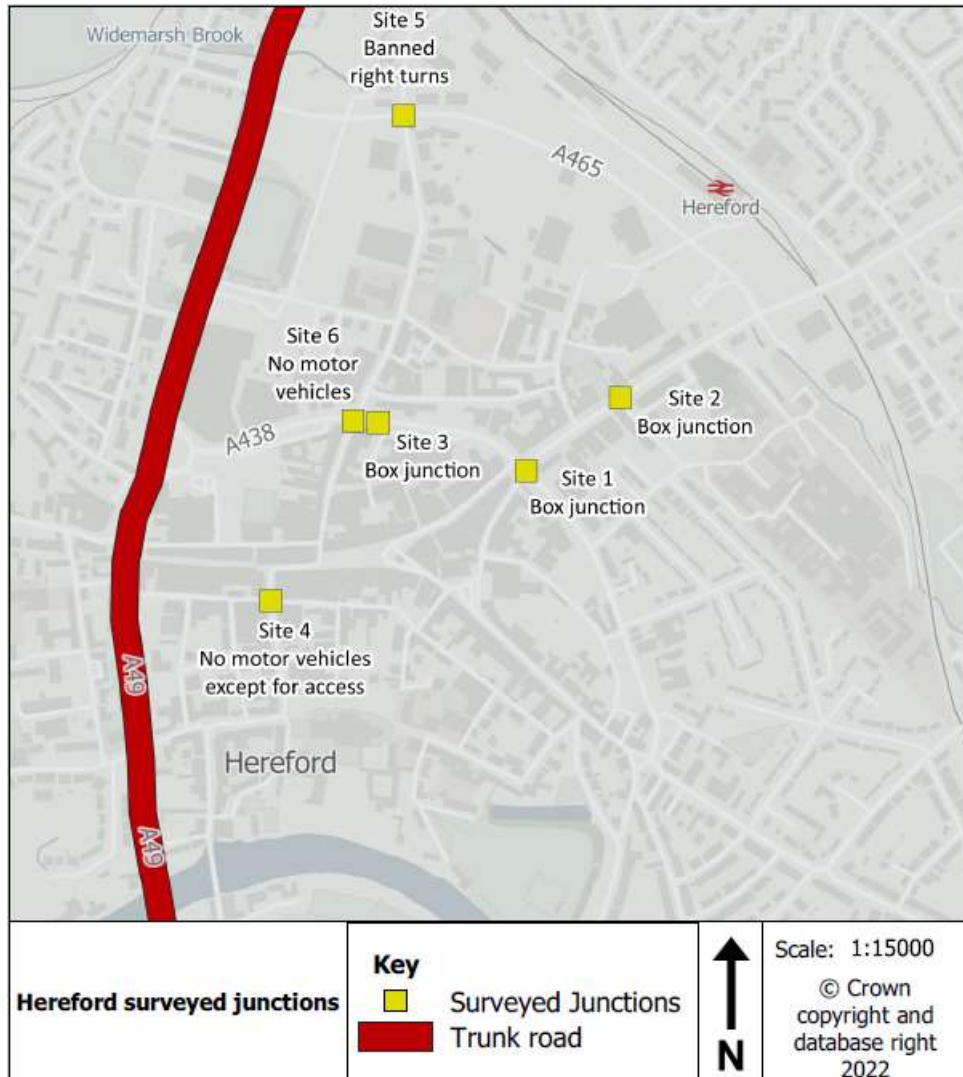


Figure 1. Study area - six survey sites

2.2 The surveys were undertaken for a one-week period commencing on 30<sup>th</sup> March 2022. Data was automatically generated from the video footage through the creation of zones in which vehicles were recorded.

2.3 The data has been captured on an hourly basis from 7am to 7pm and for all vehicle types.

2.4 The report is supported by a financial model that is based on the survey data results to determine revenue, costs and income to create an annual profit and loss model for set-up, the first operational year and future years of operation.

2.5 The report confirms:

- The total number of contraventions for all six survey sites;
- The annualised number of offences per year, per site;
- An indicative payment rate for each restriction type;
- The potential level of income from the six sites to off-set operating costs;
- The camera hardware and annual software maintenance costs for each site; and
- The financial impact on the full-time adoption of a camera enforcement system when operating costs are assessed against income.

2.6 Based on the data derived from the survey results and benchmarked data from local authorities, a series of scenarios have been created to test the financial implication of each scenario:

Scenario 1: The six surveyed sites;

Scenario 2: £100k capital in Year 1;

Scenario 3: All sites advertised as part of engagement;

Scenario 4: All advertised sites except Trunk Road locations;

Scenario 5: Sites with support from engagement;

2.7 Sensitivity testing of the data has been carried out so that an understanding of the impact of Penalty Charge Notice (PNC) issue on financial viability can be better understood.

### 3. **BACKGROUND TO THE POWERS**

3.1 The Road Traffic Regulations Act (RTRA 1984) allows Local Authorities to implement parking and traffic restrictions on their network. These restrictions can be introduced and enforced by way of a traffic order or prescribed under part 36 of the regulations.

3.2 Currently, local authorities are only able to enforce a limited number of the moving traffic restrictions and rely on the Police to enforce these restrictions. This can lead to poor compliance in a number of situations. Authorities outside London can currently only enforce bus lanes/gates, cycle lanes and 'School Keep Clear' markings via an approved CCTV device. Should the powers be granted to HC to enforce TMA Part 6, the Police will still be able to enforce these restrictions.

3.3 The introduction of the Traffic Management Act Part 6 by the Department for Transport (DfT) will allow authorities to enforce a wider variety of moving traffic contraventions via approved CCTV devices.

3.4 The enactment of Part 6 will allow the highway network to be more effectively managed at a local level as well as maintaining national standards. Enforcement is currently carried out by the Police, and it will allow them to direct their limited resources elsewhere.

3.5 Starting in June 2022, Part 6 of the TMA will allow moving traffic contraventions to become enforceable by local highway authorities outside of London. This will allow enforcement of some of the most common moving traffic contraventions including:

- Banned Turns;
- Box junctions;
- Weight restrictions;
- No entry and one-way restrictions;
- Vehicle prohibitions;
- Mandatory turns;
- School Streets and Keep Clear Markings;
- Bus Gate and Bus Route restrictions; and
- Pedestrian and Cycle zones (such as school streets).

3.6 Once a local authority has adopted the powers they will need to issue warning notices to all motorists for a period of 6 months. Should a motorist repeat offend within this 6-month period then they will be issued with a Penalty Charge Notice (PCN). The issuing of PCNs then commences after this initial 6 month warning notice period.



**4. NATIONAL CONTEXT AND BENCHMARKING**

4.1 This section provides national context and details on other local authorities, confirming what they consider to be important to enforce, the number of PCNs they issue, how this varies by restriction type, setup cost and the number of cameras used.

4.2 There is national evidence to suggest that the enforcement of moving traffic offences is important to local authorities. Research by the Local Government Association in 2019 asked authorities outside London which of the moving traffic contraventions would be a priority of the authority.

Of the possible traffic offences that your local authority could enforce for, which are most important for your local authority area?	
Box junction	68%
Goods vehicles weight limit	54%
No right/left turn for vehicular traffic	53%
Entry to and waiting in a pedestrian zone restricted	39%
Route for use by buses, pedal cycles and taxis only	36%
One way traffic	34%
No entry for vehicular traffic	31%
No U-turns for vehicular traffic	31%
Motor vehicles prohibited	27%
Entry to and waiting in a pedestrian and cycle zone restricted	17%
Vehicular traffic must proceed in the direction indicated by the arrow	17%
All vehicles prohibited	12%
Route for use by pedal cycles only	8%
Must comply with paragraph 3 of Part 4 of Schedule 3	7%
Must turn ahead in the direction indicated by the arrow	5%
Buses prohibited	3%
Route for use by pedal cycles and by pedestrians only	3%
With-flow cycle lane	3%
Priority must be given to vehicles from the opposite direction	2%
Route comprising two ways, for use by pedal cycles and pedestrians	2%
Other	10%

Table 2: Contravention importance based on authority feedback (LGA 2019)

4.2.1 The research identified that yellow box junctions are the most important restriction to enforce, with the other top restrictions being weight limits, banned turns and no entry to restricted zones.

4.2.2 Moving traffic offences are already enforced using cameras in London and data is published annually to confirm the number of Penalty Charge Notices (PCNs) that are issued.

Enforcing Authority	Total Parking PCNs	Moving Traffic PCNs	% MTC/Parking PCNS
Barking & Dagenham	54042	38654	72%
Barnet	129,667	101,741	78%
Bexley	45,755	11,751	26%
Brent	118,352	62,890	53%
Bromley	56,460	17,673	31%
Camden	183,924	32,574	18%
City of London	53,098	150,253	283%
Croydon	105,243	70,834	67%
Ealing	100,134	84,990	85%
Enfield	68,195	26,942	40%
Greenwich	42,400		0%
Hackney	86,784	65,453	75%
Hammersmith & Fulham	148,806	61,747	41%
Haringey	153,320	33,287	22%
Harrow	104,547	66,935	64%
Havering	62,553	52,460	84%
Hillingdon	55,025	27,087	49%
Hounslow	100,916	39,942	40%
Islington	163,004	87,884	54%
Kensington & Chelsea	200,004		0%
Kingston	69,271	39,786	57%
Lambeth	123,544	40,055	32%
Lewisham	54,664	19,327	35%
Merton	68,525	63,132	92%
Newham	145,910	67,577	46%
Redbridge	118,388	56,892	48%
Richmond	67,343	25,586	38%
Southwark	88,306	24,694	28%
Sutton	29,230	6,514	22%
Tower Hamlets	93,547	21,945	23%
Transport for London	425,803	207,103	49%
Waltham Forest	100,273	98,204	98%
Wandsworth	128,330	33,918	26%
Westminster	258,980	49,727	19%
TOTAL	3,804,343	1,769,884	47%
Average			<b>53%</b>

Table 3: Enforcement Activity – London 2018-2019<sup>2</sup>

4.2.3 Not all local authorities in London enforce moving traffic contraventions. For those that do, with the exception of the City of London, all issue fewer

<sup>2</sup> [Parking enforcement and appeals statistics | London Councils](#)

moving traffic PCNS than parking PCNs. The lowest percentage is 19% and the average across all London authorities is 53% of Parking PCNs.

4.2.4 These numbers offer a guide to the level of PCN issue for local authorities that currently carry out parking enforcement. HC currently issue 22,500 parking PCNs. Based on the London average of 53%, HC would issue 11,925 moving traffic PCNs.

4.2.5 Data is also available by type of restriction enforced. There are variances in the average number of contraventions captured on video clips and the rate at which this video evidence is converted to PCNs.

London Borough 1			
Camera Deployment	Clips/Year	% Accepted	PCNs Annually
School Street	900	67%	603
Weight Restriction	900	80%	720
Box Junction	16,000	58%	9280
LTN / No Motor Vehicles	5,000	67%	3350
Other MTC	4,500	72%	3240
Bus Lane	12,000	80%	9600
<b>Total</b>	<b>39,300</b>		<b>26,793</b>

London Borough 2			
Camera Deployment	Clips/Year	% Accepted	PCNs Annually
Box Junction	4070	58%	2351
Banned Turn L	1552	91%	1420
Banned Turn R	660	52%	343
No Motor vehicles	1230	67%	828
No Entry	595	67%	399
Blue Arrow	1849	67%	1239
<b>Total</b>	<b>9956</b>		<b>6580</b>

Table 4: The number of PCNs issued by type of restriction for two London authorities

4.2.6 The restriction that has the highest level of video clips captured by automatic cameras is box junctions. The PCN issue rate, as a result, is well above any other restriction type with an average above 4,000 clips per site per year (77 a week). The restriction that generates the least number of clips are no entry, banned right turns and school streets that average as low as 600 clips a year per site (12 a week).

4.2.7 This indicates that Yellow Box Junctions attract a higher level of contravention due to their strategically important placement on a highway network, where there are intended to keep busy junctions flowing freely. Other banned movements tend to appear is less trafficked routes and attract fewer contraventions. The inclusion of box junctions for enforcement

will therefore be a key consideration in order for the overall objectives of the scheme to be met.

- 4.2.8 Box junctions have the lowest acceptance rate of clips, which means that more are rejected. The level of rejection is around 58%. The restriction that is most accepted is banned left turns that have an acceptance rate of above 90%. This reflects the fact that all incidences are interpreted by a trained Civil Enforcement Officer, so ensuring that the driver did commit a contravention.
- 4.2.9 The clip issue level varies considerably between these two London examples and is an indication of how difficult it is to rely on existing clip rates to estimate the level of issue within HC. A lower level of 400 clips for a given site rising to 4,000 per site for box junctions is a reasonable guide for the level of clips that may be generated per site.
- 4.2.10 Based on an acceptance level between 58% and 90%, a PCN issue rate of between 360 for banned left turns and 2,320 for box junctions is a reasonable guide for the level of PCNs that may be generated per site.
- 4.2.11 Data has been gathered from Local authorities that currently enforce moving traffic contraventions to understand the key metrics of their operations. A summary of the responses is provided below.

	London Borough 1	London Borough 2	London Borough 3	Midland Council	Northern Council
Initial Investment	£286k	£703k	£173k	£98k	£377k
Estimated Payback Period	15 months	12 months	30 months	9 months	5 years
Gross Income Generation	£1.25k/day	£1.9k/day	£0.5k/day	£0.35k/day	£0.2k/day
Number of Cameras	22	40	25	4	29
PCNs/day (average)	35	73	18	15	8

Table 5: Benchmarked figures for authorities currently enforcing MTC

- 4.2.12 The sample data indicates that local authorities spend between £98k and £703k on implementing moving traffic enforcement. All of the schemes are financially viable, generating an annual surplus which can be used to re-invest into highway improvements.
- 4.2.13 The pay-back period varies considerably from only 9 months to up to 5 years. None of these sample local authorities had to issue warning notices for 6 months. Including this would increase the payback to between 15 months and 3 years (from the first day of enforcement).

- 4.2.14 It is significant that the estimated payback period does not relate to the number of cameras used for enforcement, indicating that commencing with a small number of cameras is financially as feasible as using a large number and that there are no economies of scale for operational delivery.
- 4.2.15 The number of cameras used for enforcement varies from 4 to 40 and the issue rate of PCNs from less than one per camera per day to up to 3.75.
- 4.2.16 Comparing this to the average PCN issue from table 4, this represents between 263 and 1,369 PCNs per location per year.

**5. SURVEY DATA**

5.1.1 Surveys were undertaken at six locations across Hereford at sites identified by HC:

- Site 1: Box junction at Commercial Road, Union Street, Bath Street and Blueschool Street;
- Site 2: Box junction at Commercial Road Union Walk junction;
- Site 3: Box junction at Blueschool Street and Maylord Street junction;
- Site 4: No motor vehicles except for access on East Street;
- Site 5: Banned right turns on Station Approach at Widemarsh Street; and
- Site 6: No motor vehicles on Widemarsh Street.

Refer to figure 1 (section 2) for location plan.

5.1.2 For the purposes of the survey, a contravention was defined as any manoeuvre that is prohibited by the signs and road markings at that location. There is no tolerance level in the data and it does not reflect the level of warning notices that would be issued which would be based on an acceptable level for the type of restriction, for example a vehicle in a box junction stopping for a defined length of time.

5.1.3 The total number of contraventions recorded in the week for all the survey sites is 17,470.

Site	Contraventions / week
Site 1 – Commercial Rd Box	5,851
Site 2 – Union Walk Box	86
Site 3 – Maylord St Box	1,660
Site 4 – East St No Access	9,778
Site 5 – Station Approach Banned Left (x2)	73
Site 6 – Widemarsh No Vehicles	22
Total	17,470

Table 6: Survey results summary

5.1.4 The annualised figures of contraventions that are occurring for the six survey sites totals 908,440 offences.

	Weekly Contraventions	Annual Contraventions
Site 1 – Commercial Rd Box	5,851	304,252
Site 2 – Union Walk Box	86	4,472
Site 3 – Maylord St Box	1,660	86,320
Site 4 – East St No Access	9,778	508,456
Site 5 – Station Approach Banned Left (x2)	73	3,796
Site 6 – Widemarsh No Vehicles	22	1,144
<b>Total</b>	<b>17,470</b>	<b>908,440</b>

Table 7: Survey results by site

- 5.1.5 This is an average of 2,488 offences a day. The single biggest contravention location was Site 4, the East Street 'no motor vehicles except for access and taxis', with over 508,000 offences a year (56% of all offences). Just over 33% of offences occurred at the Commercial Road box junction, with 43% of all contraventions taking place at the three box junctions.
- 5.1.6 The no vehicles restriction at site 6 is currently enforced with a bollard which is why the number of contraventions is so low. The numbers of vehicles are significant once the bollard is lowered
- 5.1.7 The total number of contraventions by type of restriction is summarised in Table 8.

	Weekly	Annual	%
Box junction	7,597	395,044	43.5%
No motor vehicles except for access	9,778	508,456	56.0%
Banned right	73	3,796	0.4%
Pedestrian zone	22	1,144	0.1%
<b>Total</b>	<b>17,470</b>	<b>908,440</b>	<b>100%</b>

Table 8: Contraventions by restriction type

- 5.1.8 The table of contraventions by restriction type shows a significant variation between the number of contraventions for box junctions / no motor vehicles restrictions and the banned right turn / pedestrian zone.

5.1.9 The levels of contravention for the box junctions and no motor vehicles (sites 1-4) are significantly higher than would be expected. This indicates that the level of issue is likely to significantly reduce with enforcement as driver behaviour changes, and that this reduction needs to be factored into the future levels of PCN issue and success of the scheme.

5.1.10 An assessment of the types of vehicles shows that there is a normal distribution of vehicle by types that are contravening restrictions. Of note is the number of buses, the majority of which are at Site 1 (Commercial Road), suggests that there are bus journey delays at the junction, which is significant given the Country Bus Station that operates from Commercial Road:

	Weekly	Annual	%
Bus	135	7,020	0.8%
Cars	15,098	785,096	86.4%
Coach	24	1,248	0.1%
LGV	1,890	8,280	10.8%
MCL	183	9,516	1.0%
OGV 1	65	3,380	0.4%
OGV 2	16	832	0.1%
Taxi	59	3,068	0.3%
<b>Total</b>	<b>17,470</b>	<b>908,440</b>	<b>100%</b>

Table 9: Contraventions by vehicle type

5.1.11 Details for each site are provided in Appendix A and layout plan in Appendix B.



## **6. DATA ANALYSIS**

### **6.1 Model Overview**

6.1.1 The survey data has been used to create a cost model that indicates the potential revenue and cost of camera enforcement. The purpose of this exercise is to indicate whether the adoption of moving traffic camera enforcement powers will be self-funding or whether financial support will be needed.

6.1.2 The cost model has been developed using the following process:

1. The raw survey data has been imported and verified.
2. The surveys have been expanded from one week to 52 weeks to give an annual figure.
3. The contraventions recorded (or clips) have been converted to a number of Penalty Charge Notices (PCNs) issued using a combination of benchmarked data from other local authorities and HC parking data.
4. The PCN numbers have been converted to an average income per PCN.
5. The average income level per PCN has been applied to the annualised contraventions to generate an annual revenue for camera enforcement.
6. Costs for the provision of the service have been calculated for set-up and ongoing management.
7. The revenue (income) figures have been combined with the service costs to indicate a yearly profit/loss, including an initial 6-month warning notice period.
8. The process has been modelled for three periods:
  - a. Setup, the period prior to start data;
  - b. First year of operation for a 12 month period that assumes 6 months of warning notices being issued; and
  - c. Second full year of operation that assumes PCN issue every month.

### **6.2 Income Level**

6.2.1 The PCN level is £70 for all movement contraventions for all types of vehicles. The average value of each contravention (clip) is dependent on a combination of how many contraventions are turned into PCNs and at what stage the motorist pays the PCN.

6.2.2 HC is currently averaging £30.68 per parking PCN issued (the range for local authorities outside London is usually between £28-£35 per PCN), suggesting it is in line with other local authorities. This average has been applied to each PCN to calculate revenue.

6.2.3 For the purposes of calculating revenue, the following percentages have been applied to each type of restriction and combined with the average PCN income to generate an average income per clip for each type of restriction:

- A percentage of clips accepted, based on the type of restriction, that varies from 57% to 67% for a correct read of vehicle registrations; and
- A percentage of PCNs reduction of 10% based on the current HC code of practice.

This results in a combined percentage of between 47% and 57% of clips (contraventions).

Restriction	Clips Accepted (%)	Income per clip (£)
One-way streets	57%	£ 17.49
Banned turns	47%	£ 14.42
Pedestrian Zones	57%	£ 17.49
No entry except access	57%	£ 17.49
Yellow box junctions	48%	£ 14.73
Cycle and bus routes	57%	£ 17.49
Restricted access / weight limits	57%	£ 17.49
School Keep Clear markings	57%	£ 17.49

Table 10: Average income per clip by restriction type

6.2.4 As evidenced in Section 4, the clip rates at some sites are well in excess of the benchmarked sites. The following constraints have been applied to the model to account for this:

- The clip rate is reduced by 50% to account for increased compliance and a change in driver behaviour;
- For box junctions, clips are only generated for vehicles that are stationary for more than 5 seconds; and
- For the East Street 'no motor vehicles' restriction, the level of issue is reduced to just 2% of current contraventions to reflect the local and repeat nature of existing detected contraventions.

## 6.3 Operating Costs

6.3.1 The operation costs have been split into set-up capital costs and annual maintenance (revenue).

6.3.2 The largest element of the set-up costs is the installation of fixed cameras. These costs have been calculated on a site-by-site basis for the six survey sites. Plans and details of the sites are included in Appendix C.

Location	Enforcement Type	Supply, Installation & Year 1 Support	Year 2 Support & Maintenance
Commercial Square, Hereford	Yellow Box Junction	£42,613	£11,888
Commercial Road, Hereford,	Yellow Box Junction	£18,671	£5,596
A438 Blueschool Street, Hereford – Westbound only	Yellow Box Junction	£30,732	£8,742
East Street, Hereford	Vehicles Prohibited-Except Buses	£18,671	£5,596
City Link Road, Hereford	Banned Turns	£30,732	£8,742
Widemarsh Street, Hereford	Vehicles Prohibited Except for Access	£18,671	£5,596
TOTAL		£160,090	£46,160

Table 11: Setup and maintenance cost

6.3.3 The cost per additional fixed camera site is around £18,000 for installation and £6,000 a year for maintenance (including the packaging of clips).

6.3.4 A 20% contingency has been added to the costs.

## 7. PREFERRED OPTION, OTHER SCENARIOS AND SENSITIVITY TESTING

### 7.1 Options

7.1.1 The financial modelling has been run for five scenarios:

Scenario 1: The six surveyed sites;

Scenario 2: Delivery based on £100k of capital investment, followed by a scaled up scheme;

Scenario 3: The advertised sites;

Scenario 4: The advertised sites excluding trunk road locations; and

Scenario 5: The advertised sites that respondents confirmed they experienced most issues at.

7.1.2 For each scenario the modelling has been based on a set number of locations for each type of restriction:

Restriction	Scenario				
	1	2	3	4	5
	Survey only	£100k capital	All advertised	Advertised, no Trunk	Engagement
One-way streets	0	1	3	2	0
Banned turns	2	0	2	2	1
No entry except access	1	0	6	4	0
Yellow box junctions	3	1	9	6	6
Restricted access / weight limits	1	0	3	3	0
Stopping on school keep clear	0	0	1	1	1
<b>TOTAL</b>	<b>7</b>	<b>2</b>	<b>24</b>	<b>18</b>	<b>8</b>

Table 12: Number of restriction types by scenario

7.1.3 For Scenario 2, £100k capital, sites have been selected from only the survey sites keeping the costs below this capital available.

7.1.4 For Scenario 4, the trunk road junctions have been removed based on the experience of undertaking parking enforcement on behalf of National Highways. It is anticipated that the approval process will not make it possible to include them as sites for year 1.

7.1.5 For Scenario 5, engagement, the sites have been based on the junctions where more than 30% of respondents have said they experience problems.

This is an indicative figure based on the engagement responses that includes the top third of sites advertised.

## 7.2 Scenario 1: All surveyed sites

7.2.1 The summary of projected income for all the survey sites is as detailed in table 13 below.

	Weekly contraventions	Annual contraventions	Annual PCNs	Annual Income
Site 1 – Commercial Rd Box	213	11,050	5,304	£ 162,732
Site 2 – Union Walk Box	27	1,404	674	£ 20,677
Site 3 – Maylord St Box	222	11,544	5,541	£ 170,007
Site 4 – East St No Access	98	5,096	2,905	£ 89,120
Site 5 – Station Approach Banned Left (x2)	37	1,898	892	£ 27,369
Site 6 – Widemarsh No Vehicles	11	572	326	£ 10,003
<b>TOTAL</b>	<b>608</b>	<b>31,564</b>	<b>15,642</b>	<b>£ 479,908</b>

Table 13: Scenario 1 income summary

7.2.2 The results indicate that sites 1 and 3 generate the most contraventions and therefore PCNs, giving them each a revenue potential of over £160,000. The survey sites, if operated as a scheme, would generate 15,642 PCNs annually that would result in a revenue of £479,908.

7.2.3 Reviewing this figure against the average London local authorities' level of 53% of parking PCN income indicates that it is above this average. If this rule were applied as a guide to HC, which has a parking PCN income of £700k then the income from moving traffic offences would be £371k.

### OPERATING COSTS

7.2.4 The operation costs have been split into the elements of set-up capital cost, and annual revenue costs for year 1 and 2.

7.2.5 The total set-up costs are estimated at £244,426. The largest element of the set-up costs is the installation of fixed cameras at £160,090. These costs have been calculated on a site-by-site basis for the six survey sites. Plans and details of the sites are included in Appendix C.

Element	Set up Capital Cost	Year 1 Revenue Cost	Year 2 Revenue Cost
Signs/lines	£ 4,500	£ 3,000	£ 3,000
Fixed cameras	£ 160,090	£ -	£ 46,160
DVLA Lookup	£ -	£ 1,641	£ 3,156
Staff - Parking	£ -	£ 85,841	£ 165,080
Training	£ -	£ 1,500	£ 1,500
PATROL / TPT	£ -	£ 4,924	£ 9,469
Fuel / travel charges	£ -	£ -	£ -
Sundries /postage	£ -	£ 8,207	£ 15,782
Statutory advertising	£ -	£ 1,000	£ 1,000
TEC	£ -	£ 11,194	£ 21,527
Back office system	£ 10,000	£ 5,000	£ 5,000
Capital repayment	£ -	£ 29,331	£ 29,331
sub-total	£ 174,590	£ 151,638	£ 301,005
Contingency	20%	0	0
OB and risk	20%	20%	20%
Total	£ 244,426	£ 181,966	£ 361,206

Table 14: Scenario 1 setup and maintenance cost

7.2.6 A 40% contingency and optimisation bias has been allowed for set-up costs. No allowance has been made for traffic orders that have been updated and consolidated already.

### ANNUAL PROFIT AND LOSS

7.2.7 When the annual revenue and cost figures are combined the outcome is a set-up cost of £244,426, followed by an initial year surplus of £42,391 and a subsequent full year surplus of £118,702:

	Setup	Year 1	Year 2
Income	-	224,357	479,908
Expenditure	244,426	£ 181,966	£ 361,206

TOTAL	-244,426	42,391	118,702
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Table 15: Scenario 1 annual net income of camera enforcement

- 7.2.8 The headline finding is that for HC, based on a scenario of enforcement at the six survey sites, the service will require capital funding of around £245k to account for the revenue income in the first year. It would then run at a profit from year 1 onwards.
- 7.2.9 The surplus in year 1 is not more than the setup costs. Based on the fact that only £100k of capital funding is available, it is not a viable option for HC.
- 7.2.10 It should be noted that this financial modelling is based on a full year from ‘go-live’ and not a local authority financial year. Therefore, should the go-live date commence at a later date than 1 April, then the effective Year 1 income would reduce as there would be fewer months of income generation within the financial calendar year.
- 7.2.11 The staffing costs are calculated based on the PCN issue rate, meaning that the costs increase and decrease proportionately to the number of PCNs issued.

**7.3 Scenario 2: £100k Capital Investment**

- 7.3.1 If a setup cost of only £100k is available then it would not be possible to purchase all the fixed survey site cameras, meaning that either the number of sites would need to be reduced, enforced by a mobile camera or a lease option explored.
- 7.3.2 Once the back-office systems are set up and enforcement is taking place at a small number of sites, it is possible to add on additional sites for enforcement. This would require the same 6 month warning notice period to be adhered to before new sites could come into operation.
- 7.3.3 The most economically advantageous sites to progress would be sites 1 and 3, the box junctions at Commercial Road and Maylord Street. Based on the level of contravention, it is proposed that the East Street ‘No Entry Except for Access’ is one of the sites proposed and that the second is the Commercial Road box junction. These two sites have a combined annual PCN issue of 8,209 and a potential income of £251,852.

	Weekly contraventions	Annual contraventions	Annual PCNs	Annual Income
Site 1 – Commercial Rd Box	213	11,050	5,304	£ 162,732

Site 4 – East St No Access	98	5,096	2,905	£ 89,120
<b>TOTAL</b>	<b>311</b>	<b>16,146</b>	<b>8,209</b>	<b>£ 251,852</b>

Table 16: Scenario 2 income summary

7.3.4 In the initial year with 6 months of warning notices being issues this reduces to a total of 4,186 PCNs at a predicted income of £117,741.

### OPERATING COSTS

7.3.5 The operation has a base cost of £73,784 before adding the contingency and optimisation bias that increases the total to £103,298.

Element	Set up Capital Cost	Year 1 Revenue Cost	Year 2 Revenue Cost
Signs/lines	£ 2,500	£ 1,000	£ 1,000
Fixed cameras	£ 61,284	£ -	£ 17,484
DVLA Lookup	£ -	£ 840	£ 1,615
Staff - Parking	£ -	£ 43,911	£ 84,444
Training	£ -	£ 1,500	£ 1,500
PATROL / TPT	£ -	£ 2,519	£ 4,844
Fuel / travel charges	£ -	£ -	£ -
Sundries /postage	£ -	£ 4,198	£ 8,073
Statutory advertising	£ -	£ 1,000	£ 1,000
TEC	£ -	£ 5,726	£ 11,012
Back office system	£ 10,000	£ 5,000	£ 5,000
Capital repayment	£ -	£ 12,396	£ 12,396
sub-total	£ 73,784	£ 78,0890	£ 148,368
Contingency	20	0	0
OB and risk	20	20	20
<b>Total</b>	<b>£ 103,298</b>	<b>£ 93,708</b>	<b>£ 178,040</b>

Table 17: Scenario 2 setup and maintenance cost

7.3.6 The year 1 revenue cost is £93,708, increasing to £178,040 for year 2. The majority of this cost is staffing, accounting for just over half the total costs.



**ANNUAL PROFIT AND LOSS**

7.3.7 When the year 1 revenue cost and income are combined then the result is a surplus of £24,035 in the first year. In the second year of operation with full income a surplus of £73,812 is generated.

	Setup	Year 1	Year 2
Income	-	117,741	251,852
Expenditure	103,298	93,706	178,040
<b>TOTAL</b>	<b>- 103,298</b>	<b>24,035</b>	<b>73,812</b>

Table 18: Scenario 2 annual net income of camera enforcement

7.3.8 These figures emphasise the importance of staffing cost on the net surplus for the service.

7.3.9 One option to address this is to outsource the roles prior to the appeals process. This option would have the benefit of the cost being relative to the clip review and would reduce the cost for a small operation. It would also de-risk the issue of leave, recruitment and long-term sickness that can have a significant impact on the operation of the service.

**ALTERNATIVE YEAR 2 SCENARIO**

7.3.10 One alternative would be to include additional sites for the second year of operation. This could be any combination of the surveyed or advertised sites.

7.3.11 Applying the costs from the model, each additional site costs on average £35,000 (£25,000 excluding contingency and optimisation bias). This means the four remaining surveyed locations and two additional sites could be added in year 2 at a capital setup cost of £221,000.

7.3.12 In addition to fixed cameras, there is the option to use a mobile camera (attached to a vehicle), that potentially allows for any site to be enforced. This costs on average £70,000 for purchase and £10,000 in annual maintenance.

7.3.13 Six additional fixed cameras and a mobile camera could be added for year 2 at a capital setup cost of £291,000 (this includes a 40% optimisation bias and contingency).

7.3.14 If the average of the income of the remaining surveyed sites is applied to these new sites (revenue per site of £27,000 in the first year and £57,000 in the second year), this would mean a first year additional revenue of £189,000 and a year 2 additional revenue of £399,000.

7.3.15 The ability of the service to be self-sustaining after being expanded is dependent upon the mix of restrictions and sites chosen. It has been evidenced that the HC box junctions are extensively contravened and therefore generate the largest income. One or more box junctions would therefore need to form part of an expanded scheme.

7.3.16 It is recommended that more analysis is done for all the advertised sites in the first year of operation to determine which sites to add. This should include analysis of the four stated objectives in addition to the scheme being financially sustainable.

#### **7.4 Scenarios 3, 4 and 5:**

7.4.1 Further modelling has been carried out for sites where survey data is not available. This means that it is based on benchmarked data only and to provide an indication of the service viability.

7.4.2 A high-level summary of the setup, annual income and revenue cost is included below.

	Setup	Year 1	Year 2
Scenario 3: All advertised	- 699,696	165,082	389,777
Scenario 4: Advertised, no Trunk	- 539,080	116,116	287,997
Scenario 5: Engagement	- 273,906	74,288	201,553

Table 19: Scenario 3, 4 and 5 summary

7.4.3 All three scenarios have set up costs well in excess of the £100k capital available and are also higher than the estimated setup cost for scenario 1. The Engagement scenario is comparable to the six survey sites, with a setup cost of £273,906. The advertised scenarios are both more than double this setup cost.

7.4.4 All three scenarios show a profit in the first year. The comparison of the scenarios shows that scenario 3 and 4 are both viable based on a large setup cost and that they do generate a surplus, but that this is less per site than the Engagement scenario. This does suggest that operating a very large scheme with multiple sites would be less economically viable than a smaller scheme. Consideration should therefore be given to understanding these sites better before including the majority of them in any operation.

#### **7.5 Other Service Considerations**

7.5.1 Research with local authorities that currently enforce moving traffic, shows that most clients will opt for the end-to-end solution that allows the CCTV cameras to send clips for review and then manage the PCN process in one place.

- 7.5.2 Chipside is used in HC, other options include Taranto that is currently used in Barnet and Waltham Forest and Imperial that is used in Royal Greenwich. Where councils link an outsourced enforcement operation to include CCTV cameras, the back-office system can be part of that procurement process and a particular software supplier can either be specified by the Council or open to enforcement companies.
- 7.5.3 The smoothest current back-office product for user experience is probably Imperial's 3sixty software which is known to communicate very effectively with enforcement cameras. There are other emerging products on the market such as Freedom software product so depending on the timing of the procurement exercise, specifying that the supplier also links to a back office provider is recommended.
- 7.5.4 If the cameras are managed directly by the Local Authority, typically a period of 24-36 months is contracted for the capital purchase and initial maintenance. However, in instances where there is a wider outsourced parking and enforcement contract, CCTV is often included within scope, allowing for more of an 'end to end' approach with contractors required to manage links between video capture, the enforcement of PCNs and responding to appeals. Contract periods in these situations are longer, and five year (plus two years extension) and four year (plus four year extension) contracts are typically used.
- 7.5.5 Contract lengths and procurement routes vary significantly. The recently released Transport Technology & Associated Services (TTAS) Framework by the Crown Commercial Services offers authorities the opportunity to run mini competitions or direct award from a Framework with many of the market's main suppliers. The transport and technology market is mature and well established so a Framework (such as TTAS) may offer HC an efficient procurement route.

## **7.6 Sensitivity testing**

- 7.6.1 The key factor in deliverability is the income generated from PCN issue. It is possible to indicate the level of PCN issue that is required for the scheme to be self-funding.
- 7.6.2 For scenario 2 (£100k capital), a reduction of the PCN issue rate to 70.7% of the modelled level results in the income being equal to the service costs in year 2.

	PCNs	Income	PCN reduced	Income Reduced
Site 1	5,304	162,732	3,750	£ 115,052

Site 4	2,905	89,120	2,054	£ 63,008
TOTAL	8,209	£ 251,852	5,804	£ 178,060
Avg. PCN per day	22.49		15.90	

Table 20: Sensitivity test of PCN issue rate

- 7.6.3 The level of PCN issue for the scheme to be self-funding is 5,804 per annum (16 PCNs a day).
- 7.6.4 For the base scenario to make a £75,000 surplus per year the PCN issue rate needs to be 101% of the predicted level. This results in 8,250 PCNs being issued per annum.
- 7.6.5 A second measure of sensitivity is the average PCN income. This is currently set at £30.68. For the service to be self-funding this would mean that an average PCN income of £21.69 would need to be achieved.

**8. DELIVERY OF PART 6**

8.1.1 There are several actions which local authorities should consider undertaking now to ensure they are fully prepared to enforce moving traffic contraventions once the legislation is passed:

Action to be taken by Herefordshire Council	Completed
Register interest with DfT prior to Wednesday 15th September 2022 by emailing <a href="mailto:Parking.queries@dft.gov.uk">Parking.queries@dft.gov.uk</a>	Yes
Update KADOE agreements, email <a href="mailto:kadoe-interest@dvla.gov.uk">kadoe-interest@dvla.gov.uk</a> to add moving traffic offences to list of authorisations	Yes
Variation letter to countersign and send back to <a href="mailto:DataContractsTeam@dvla.gov.uk">DataContractsTeam@dvla.gov.uk</a>	No
Early engagement with the Vehicle Certification Agency also suggested: <a href="mailto:civil-enforcement@vca.gov.uk">civil-enforcement@vca.gov.uk</a>	No
Early engagement with local chief of police to discuss plans for MTE, if known	No
Review/Update TROs	Yes
Ensure signs and lines of any locations are TSRGD compliant	No
Look to update (PCNs) letter templates	No
Business rules/ cancellation policies	No
Apply for any new MID's required to split any moving traffic enforcement income	No
Submit change interface between PCN back-office software and camera solution software	No
If possible, pre-order camera equipment following surveys to avoid order backlogs	No
Liaise with neighbouring local authorities to discuss MTE plans	No

Table 21: Delivery checklist

8.1.2 It is important for the initial and ongoing success of any MTE in HC that the authority strives for a 'right first time' approach on its rollout. Getting it right first time would include:

- ensuring scheme designs and traffic orders are correct;
- that some baseline data on traffic and/ or air quality is collected before enforcement commences;
- that all legal processes are navigated correctly; and

- that the engagement with the local stakeholders and residents is thorough and effective.

## PROGRAMME

- 8.1.3 HC are to apply for powers in the second batch of applications. The anticipated date for this is December 2022 and the key milestone for delivery is the acceptance of the application by the DfT.
- 8.1.4 Any capital expenditure before the signing of the designation order will be at risk and this forms the critical path for the delivery programme.
- 8.1.5 The order of camera equipment will take a minimum of 8 weeks, which means that assuming the designation order is received by 1 Jan 2023, a go-live date of 1 April 2023 is achievable.

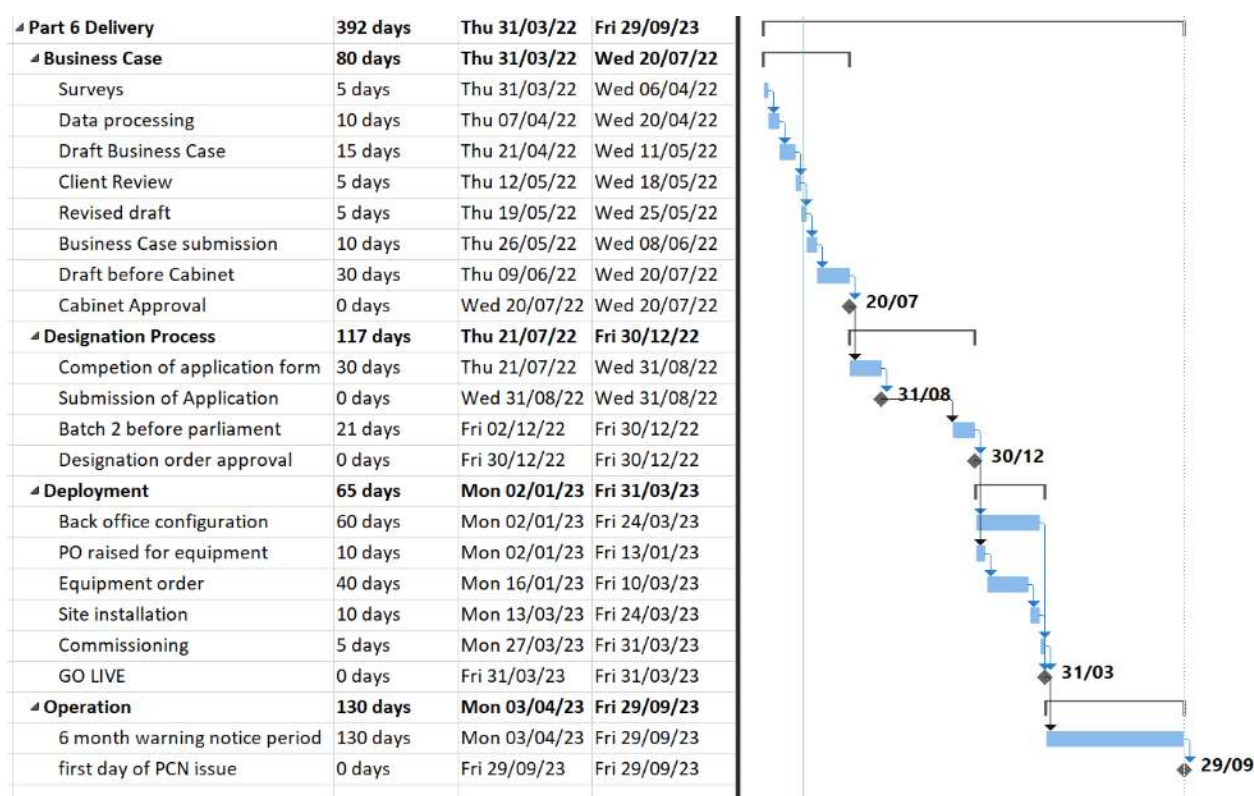


Figure 2: Programme

**RISK REGISTER**

REF.	Nature of Risk	Implications	Mitigation	Action to be Taken
R1	Road space	Utilities works already booked for duration required.	Early notification of window of surveys to Network Management Team.	Raise at inception meeting and reserve windows for delivery.
R2	Mounting of cameras	Posts not available to mount cameras meaning data cannot be captured as intended.	Need to capture existing post and lamp column locations as part of tender process.	Conduct site visit as part of proposal delivery; Early liaison with street lighting team to ensure mounting can be achieved.
R3	Camera availability	Delay of programme to meet supply of camera equipment.	Project team to confirm dates and availability as part of tender process.	Confirm camera availability and liaise directly with supplier.
R4	Contravention level	Significant reduction in contraventions means that scheme is not financially sustainable.	Review contravention numbers throughout warning notice period and update base model.	Identify alternative locations for delivery and ensure that sites can be amended based on data.
R5	Camera data quality	Reduction in the number of clips generated.	Ensure siting of cameras allows for clear read of vehicle number plates.	Confirm equipment layout plans and refine as required through warning notice period.
R6	Determining background costs	Delivery costs are higher than estimated, making the scheme unsustainable.	Engage with service providers to understand costs.	Programme meeting with service providers.
R7	Reputational risk	Public opinion is not in favour of approach.	Consideration of appropriate communications strategy for the surveys and presentation of results.	Publish MTE charter to ensure clear guidelines for enforcement.
R8	Compliance	Camera enforcement leads to increased compliance, reducing revenue.	Ensure model factors in evidence of existing client experience and compliance response.	Factor compliance into operational model through sensitivity testing.
R9	Business Case objectives	The BC needs to outline the wider benefits of camera enforcement.	Capture background network and safety issues at sites; ensure consideration is given to the wider benefits for the area.	Review four objectives for enforcement sites to evaluate success.

**9. CONCLUSION**

- 9.1.1 The survey data and financial model confirm that HC could operate Moving Traffic Enforcement by camera as a self-funded service.
- 9.1.2 The survey data for the six sites identified a total of 17,470 contraventions and this converts to an annual figure of 15,642 PCNs.
- 9.1.3 HC could choose to run a self-funded operation with any number of the advertised locations, but the limiting factor is the amount of capital available for the purchase of camera equipment.
- 9.1.4 The preferred option is for a scheme based on two sites (Commercial Road box junction and East Street no entry except for access), that is deliverable in year 1 for a capital expenditure of £100k. This option would deliver a surplus of £24,034 in the first year and £73,812 in a full year of operation.
- 9.1.5 A scheme involving only two locations will have limited success in achieving the four stated objectives and consideration should therefore be given to expanding the scheme in its second year. A further six locations and a mobile camera could be added for a capital cost of £260k.
- 9.1.6 Box junctions generate the largest number of PCNs and need to form part of the chosen future locations. However, the number and mix of restrictions should be chosen based on the four stated objectives and take account of the engagement results.
- 9.1.7 The sensitivity testing shows that the PCN issue level would need to drop to 70.7% of that modelled for the service to cost more than it generates. Alternatively, this would mean a reduction in average PCN income to just £21.69.
- 9.1.8 The programme indicates that a scheme could be live for 1 April 2023 based on the designation order being received by 1 January 2023. This is only achievable if procurement is delivered through an existing contract mechanism such as the Transport Technology & Associated Services (TTAS) Framework by the Crown Commercial Services.
- 9.1.9 The following next steps are proposed:
- The approval of this report;
  - The completion of the TMA checklist (Appendix C) to allow HC to apply for moving traffic enforcement powers in December 2022;
  - The allocation of capital expenditure for the 2023 budget for the expansion of the scheme;
  - Engagement with the current back office system provider, Chipside, to fully understand the delivery requirements to incorporate moving traffic



enforcement into the current notice processing software;

- Early engagement with an equipment supplier to detail the delivery steps at a local level to achieve the stated go live date; and
- Post operation in year 1, to undertake a further evaluation to confirm the sites to take forward for an expanded scheme in year 2.

**APPENDIX A – SURVEY RESULTS**

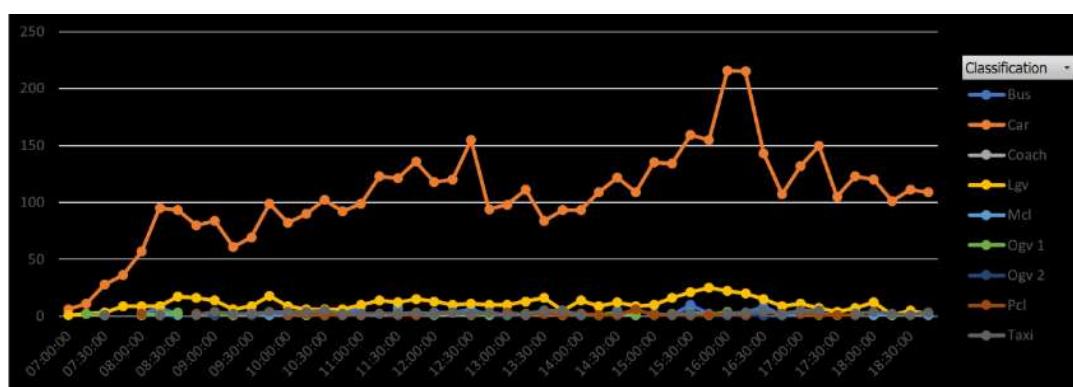
**Site 1 - Box junction at Commercial Road, Union Street, Bath Street and Blue School Street**

The Commercial Square box junction had the second largest number of contraventions of the six sites with 5,954 (including pedal cycles).

Hours	Bus	Car	Coach	Lgv	Mcl	Ogv 1	Ogv 2	Pcl	Taxi	Grand Total
07-08		81		15		3		1	1	101
08-09	11	325	3	51	3	6		4	2	405
09-10	7	313		47	2	2	2		12	385
10-11	11	366	1	27	3	2	1	5	15	431
11-12	14	479		51	5	3		5	9	566
12-13	13	487		44	7	6		1	10	568
13-14	8	386		44	7	6		7	13	471
14-15	7	433		44	4	6		10	4	508
15-16	15	583	2	72	4	3	1	4	4	688
16-17	14	681	1	66	3	4	3	3	11	786
17-18	6	510	3	29	3	1		5	12	569
18-19	1	441		20	3	1			10	476
<b>Grand Total</b>	<b>107</b>	<b>5085</b>	<b>10</b>	<b>510</b>	<b>44</b>	<b>43</b>	<b>7</b>	<b>45</b>	<b>103</b>	<b>5954</b>

Site 1 - Survey results by hour and vehicle type

Looking at the average across the week, contraventions increase at 8am in the morning, showing a small peak at 12:30pm and then peaking at 4pm with 786 contraventions.



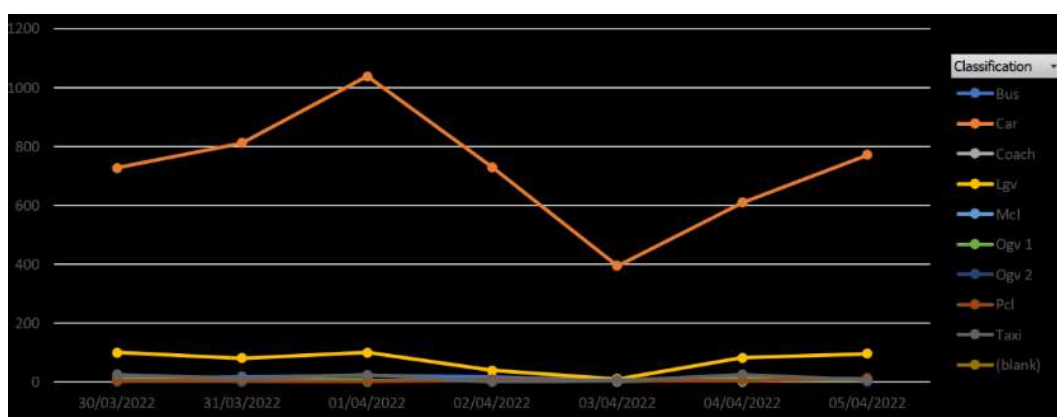
Site 1 - Graph of contraventions by time and vehicle type

On a daily basis, at Site 1 the number of contraventions is highest on Friday with 1,206 and lowest on Sunday with 429, with there still being 800 contraventions on a

Saturday.

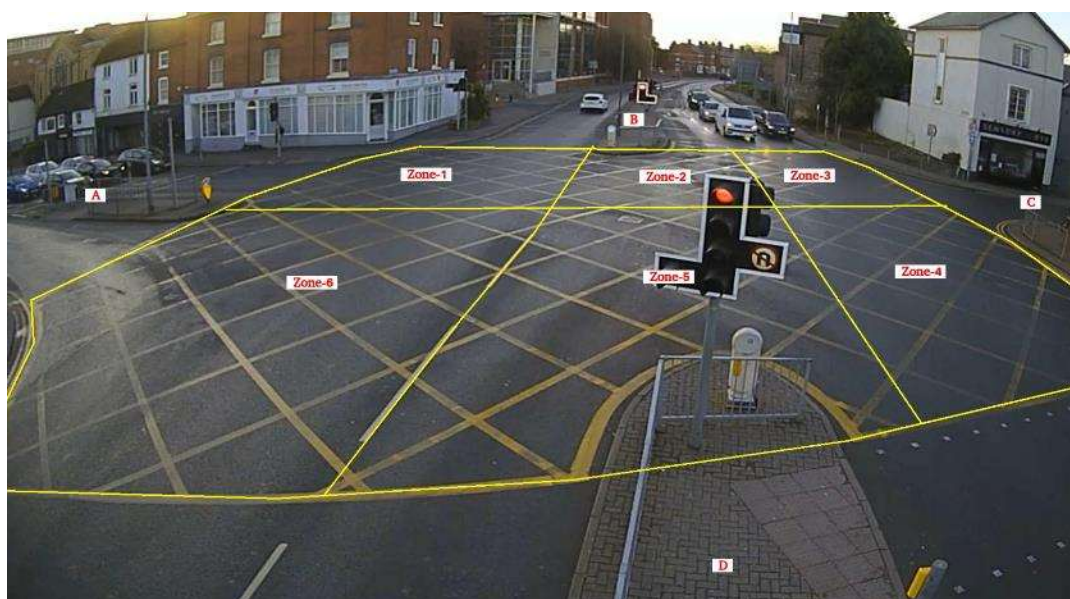
Date	Bus	Car	Coach	Lgv	Mcl	Ogv 1	Ogv 2	Pcl	Taxi	Grand Total
Wed 30 Mar 2022	13	727	7	100	8	8	1	5	26	895
Thur 31 Mar 2022	18	812	1	81	3	7	2	6	13	943
Fri 01 Apr 2022	23	1039	1	100	5	8	3	3	24	1206
Sat 02 Apr 2022	17	730		39	5			8	1	800
Sun 03 Apr 2022	4	395		10	7	2		5	6	429
Mon 04 Apr 2022	21	610	1	83	7	11		5	26	764
Tues 05 Apr 2022	11	772		97	9	7	1	13	7	917
Grand Total	107	5085	10	510	44	43	7	45	103	5954

Site 1 - Survey results by day and vehicle type



Site 1 - Graph of contraventions per day by vehicle type

The Commercial Square box junction was split into six separate boxes and four entry points to capture the different movements taking place.



Site 1 – image of capture zones

Zones 2 and 5 are in the centre of the box junction and stationary vehicles at these locations could have a clear exit, meaning that a contravention is not taking place. The total of these is 2,146 events for Zone 2 and 3,274 events for Zone 5.

Zone	B-A	D-B	D-C	D-A	B-D	D-D	B-B	A-D	C-A	B-C	A-C	A-B	Total
1	2	3						13			5	1	24
2	2009		106		16		3	8	1		3		2146
3	3		3	1	26					2	1		36
4			3		150			50					203
5	7	4	3201	21		12		28	1				3274
6	46	4	5	216									271
<b>Total</b>	<b>2067</b>	<b>11</b>	<b>3318</b>	<b>238</b>	<b>192</b>	<b>12</b>	<b>3</b>	<b>99</b>	<b>2</b>	<b>2</b>	<b>9</b>	<b>1</b>	<b>5954</b>

Site 1 – vehicle count by zone and direction of entry

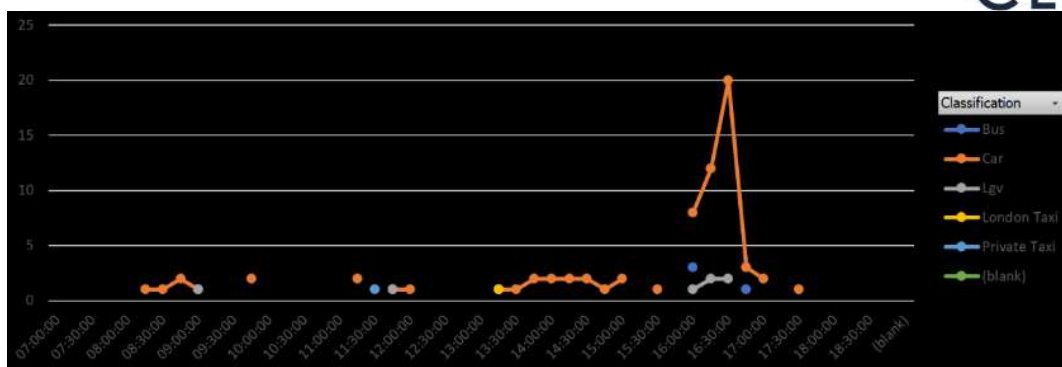
### Site 2: Box junction at Commercial Road Union Walk junction

The Union Walk box junction had 86 contraventions, the lowest of the three box-junctions surveyed.

Hours	Bus	Car	Lgv	London Taxi	Private Taxi	Grand Total
07-08						
08-09		4				4
09-10	1	3	1			5
10-11						
11-12		3	1		1	5
12-13		1				1
13-14		4	1	1		6
14-15		7				7
15-16		3				3
16-17	4	43	5			52
17-18		3				3
18-19						
<b>Grand Total</b>	<b>5</b>	<b>71</b>	<b>8</b>	<b>1</b>	<b>1</b>	<b>86</b>

Site 2 survey results by hour and vehicle type

The results show that there are low numbers of contraventions other than between 4pm and 5pm in the evening.

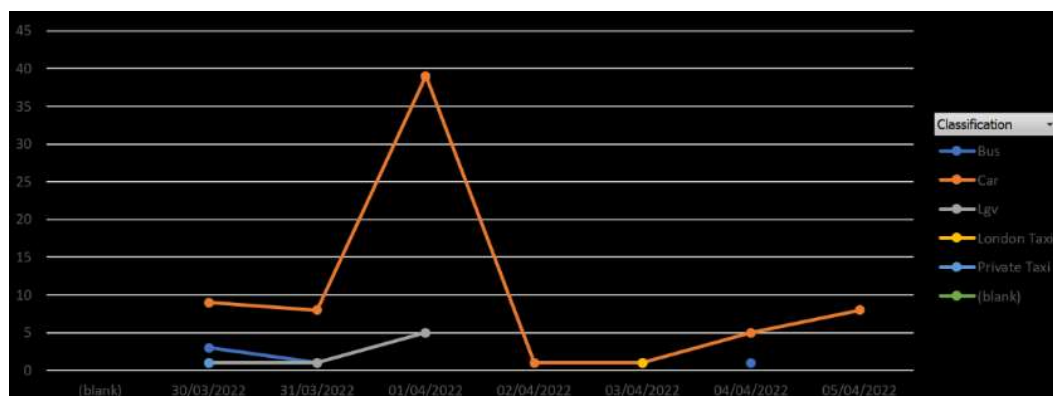


Site 2 - Graph of contraventions by time and vehicle type

Looking at each day of the week, more than half the contraventions take place on Friday. There are only a total of four contraventions on Saturday and Sunday.

Date	Bus	Car	Lgv	London Taxi	Private Taxi	Grand Total
Wed 30 Mar 2022	3	9	1		1	14
Thur 31 Mar 2022	1	8	1			10
Fri 01 Apr 2022		39	5			44
Sat 02 Apr 2022		1				1
Sun 03 Apr 2022		1	1	1		3
Mon 04 Apr 2022	1	5				6
Tues 05 Apr 2022		8				8
Grand Total	5	71	8	1	1	86

Site 2 - Survey results by day and vehicle type



Site 2 - Graph of contraventions per day by vehicle type

### Site 3: Box junction at Blue School Street and Maylord Street junction

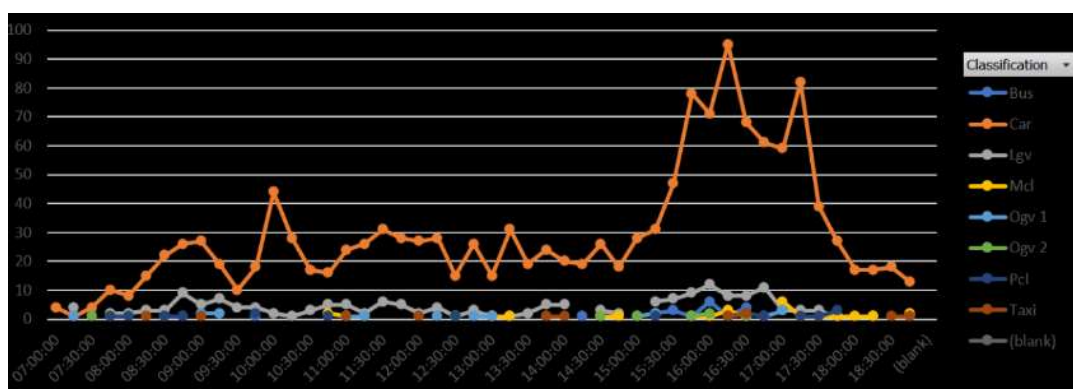
The Maylord Street box junction had a total of 1,679 contraventions for the week. These were all recorded within the right turn lane on Blue School Street.

Hours	Bus	Car	Lgv	Mcl	Ogv 1	Ogv 2	Pcl	Taxi	Grand Total
07-08		19	6	1	1	1	1		29
08-09	1	71	17	1	1		3	1	95
09-10	1	74	20		4		2	1	102
10-11		105	11	2			1		119
11-12		109	18	2	2			1	132
12-13		96	10	1	2	1	1	1	112
13-14	1	89	9	2	1		1	1	104
14-15	1	83	10	2		1		1	98
15-16	6	184	22	1	3	2	1		219
16-17	11	295	39	5	1	3	4	3	361
17-18	1	207	10	9	3		5		235
18-19		65	2	4				2	73
Grand Total	22	1397	174	30	18	8	19	11	1679

### Site 3 - Survey results by hour and vehicle type

The results show that there are offences across the whole 12-hour survey period.

There is a small peak at 10am in the morning with a main peak from 4pm until 5:30pm when there are up to 109 vehicles in a 15-minute period.



Site 3 - Graph of contraventions by time and vehicle type

The offences occur across all seven days of the week, but are quite consistent across Monday to Friday, showing a less noticeable increase on Friday than the other box junctions.

Date	Bus	Car	Lgv	Mcl	Ogv 1	Ogv 2	Pcl	Taxi	Grand Total
Wed 30 Mar 2022	5	266	41	3	6				321
Thur 31 Mar 2022	5	234	34	4	3	1	1		282
Fri 01 Apr 2022	5	288	35	6	5	4	1		344
Sat 02 Apr 2022		155	7	3			6		171
Sun 03 Apr 2022	1	63	4	2			3		73
Mon 04 Apr 2022	5	194	24	6	3	1	2	9	244
Tues 05 Apr 2022	1	197	29	6	1	2	6	2	244

Grand Total	22	1397	174	30	18	8	19	11	1679
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Site 3 - Survey results by day and vehicle type

What is noticeable from the data is the length of time that the offences are committed for, with 803 offences over 30 seconds and 125 above sixty seconds. This suggests that the delays are linked to the signals ahead of the box junction.



Site 3 - Graph of contraventions per day by vehicle type

**Site 4: No motor vehicles except for access and taxis on East Street**

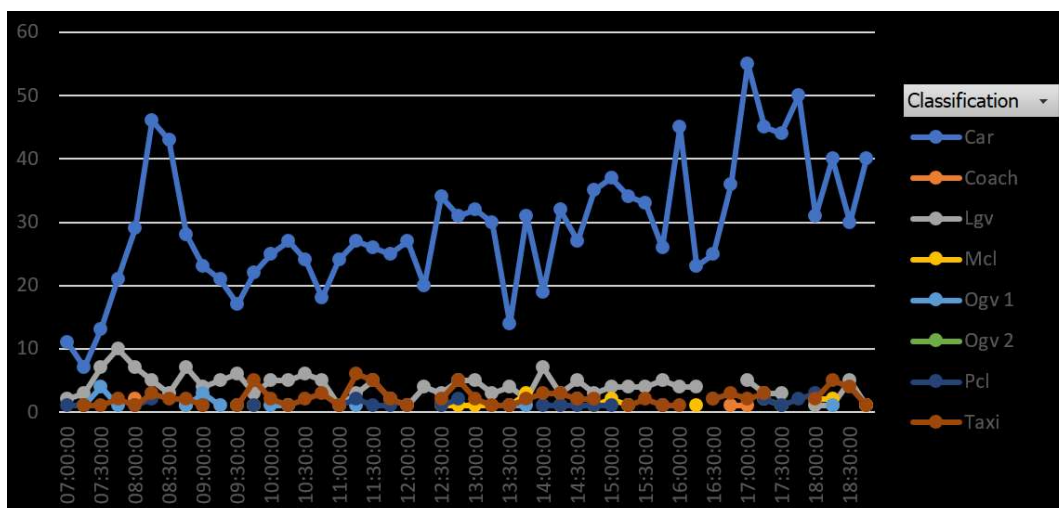
The East Street 'no motor vehicles except for access' restrictions were recorded using two cameras. The results showed a total of 10,637 vehicles exiting the area. Of these, 9,889 were not exempt (taxis and pedal cycles).

Hours	Car	Coach	Lgv	Mcl	Ogv 1	Ogv 2	Pcl	Taxi	Total
07-08	339	1	108	2	21	4	12	37	524
08-09	824	8	135	4	17	1	13	33	1035
09-10	606		119	5	12	1	11	54	808
10-11	590		131	9	12		13	53	808
11-12	665		65	10	3	1	13	53	810
12-13	672		84	9	1		25	45	836
13-14	690		84	18	9		17	54	872
14-15	722		108	12	4	2	26	63	937
15-16	741		95	12	9	1	8	38	904
16-17	835	2	103	5	5		21	42	1013
17-18	1023	3	89	9	5		21	31	1181
18-19	779		51	11	3		10	55	909
<b>Total</b>	<b>8486</b>	<b>14</b>	<b>1172</b>	<b>106</b>	<b>101</b>	<b>10</b>	<b>190</b>	<b>558</b>	<b>10637</b>

Site 4 - Survey results by hour and vehicle type

The results show that vehicles use the route consistently throughout the day, with

there being a peak at 8am in the morning and a similar peak from 4-6pm in the evening. This is different to the results for the box junctions, with their being consistent use throughout the day when traffic levels are lower.



Site 4 - Graph of contraventions by time and vehicle type

Looking at each day of the week, the numbers are also very consistent. There is a maximum of 1,764 contraventions on a Friday and still 1,118 on Sunday.

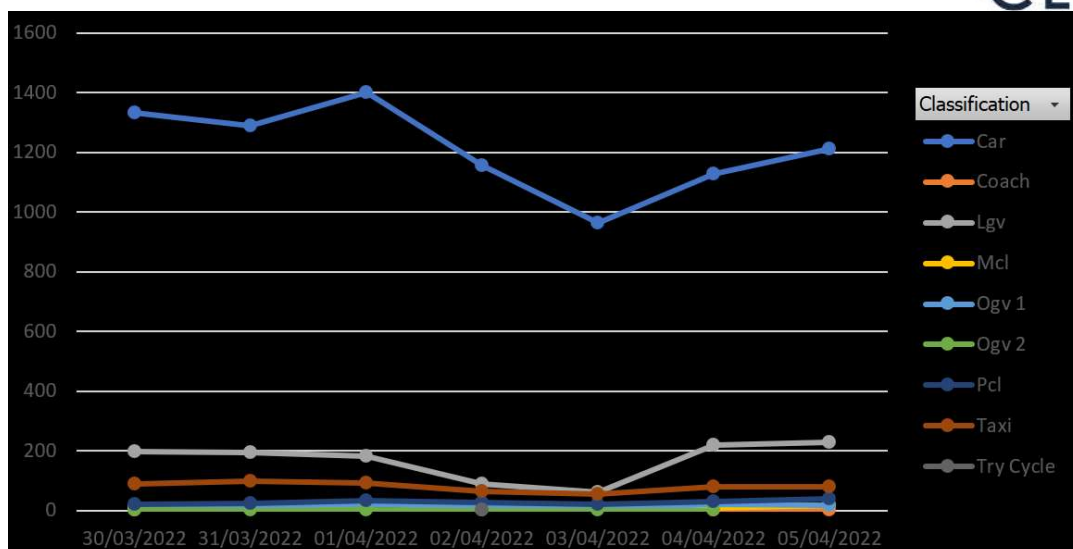
Date	Car	Coach	Lgv	Mcl	Ogv 1	Ogv 2	Pcl	Taxi	Grand Total
Wed 30 Mar 2022	1332	3	197	12	11	3	20	90	1668
Thur 31 Mar 2022	1291	5	194	16	15	1	23	97	1642
Fri 01 Apr 2022	1403	4	183	26	21	3	32	92	1764
Sat 02 Apr 2022	1156		90	12	11	1	27	65	1362
Sun 03 Apr 2022	963		61	13	4	1	20	56	1118
Mon 04 Apr 2022	1128	1	218	9	21	1	30	79	1487
Tues 05 Apr 2022	1213	1	229	18	18		38	79	1596
<b>Grand Total</b>	<b>8486</b>	<b>14</b>	<b>1172</b>	<b>106</b>	<b>101</b>	<b>10</b>	<b>189</b>	<b>558</b>	<b>10637</b>

Site 4 - Survey results by day and vehicle type

The results suggest that the contravention takes place independently of congestion and is probably undertaken by local drivers on a continual basis. It is therefore likely that compliance levels for this restriction will increase more than at other locations based on fewer drivers needing to change their habit.

It is also notable that there are 189 bicycles using this route and that it is clearly a significant part of the local network for cyclists.





Site 4 - Graph of contraventions per day by vehicle type

**Site 5: Banned right turns on Station Approach at Widemarsh Street**

The Station Approach banned right turns are represented in separate tables and graphs. The first represents the movement from north to west and the second from west to south.

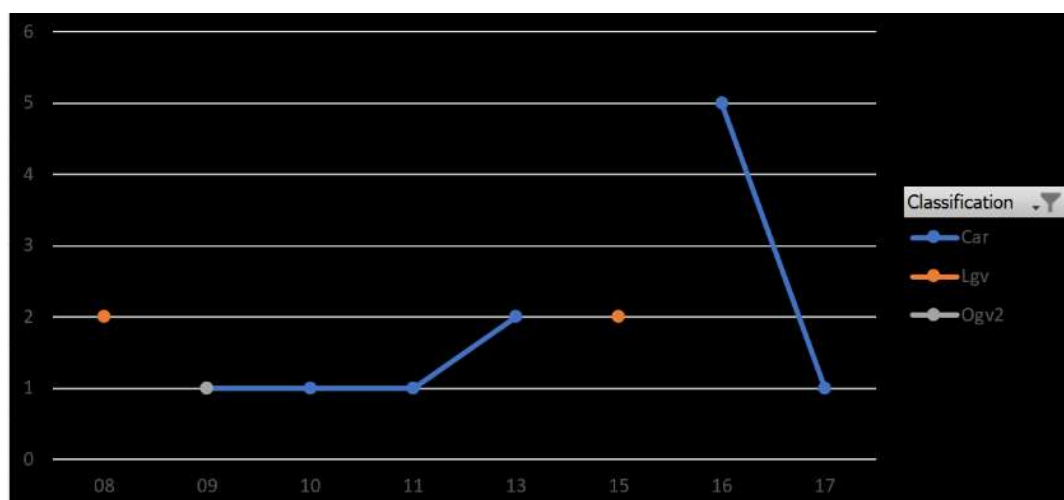
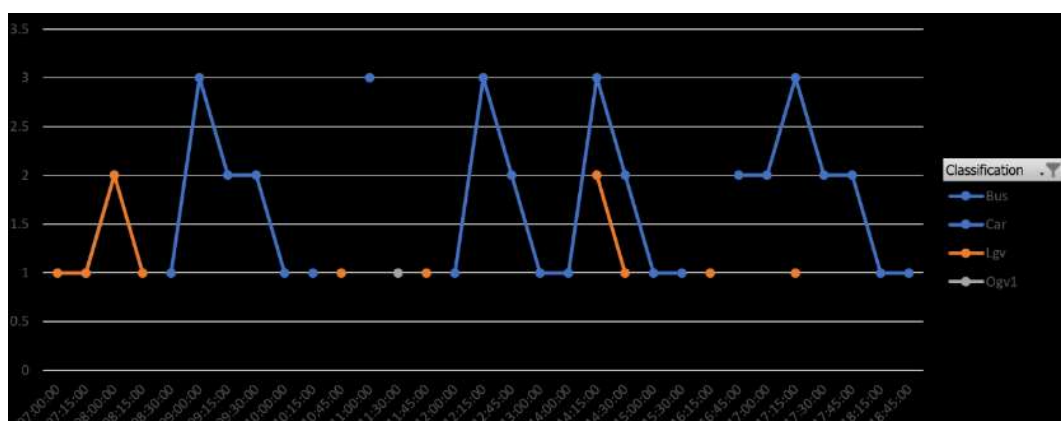
A total of 57 contraventions were recorded from north to west and 16 from west to south. This is a relatively low number and they occurred consistently throughout the survey period with there being a peak at 4pm for the west to south movement and from 5pm for the north to west movement.

Hours	Bus	Car	Lgv	Ogv1	Grand Total
07-08		1	2		3
08-09		3	3		6
09-10		7			7
10-11	1	1	1		3
11-12		3	1	1	5
12-13		6			6
13-14		1			1
14-15		6	3		9
15-16		2			2
16-17		2	1		3
17-18		9	1		10
18-19		2			2
<b>Grand Total</b>	<b>1</b>	<b>43</b>	<b>12</b>	<b>1</b>	<b>57</b>

Hours	Car	Lgv	Ogv2	Grand Total
07-08				
08-09		2		2
09-10	1		1	2
10-11	1			1
11-12	1			1
12-13				
13-14	2			2
14-15				
15-16		2		2
16-17	5			5
17-18	1			1
18-19				
Grand Total	11	4	1	16

Site 5a and 5b - Survey results by hour and vehicle type

The results do indicate a higher number of light goods vehicles as a percentage than for any other location. This suggests that it is local drivers familiar with the area who are undertaking this manoeuvre throughout the day.



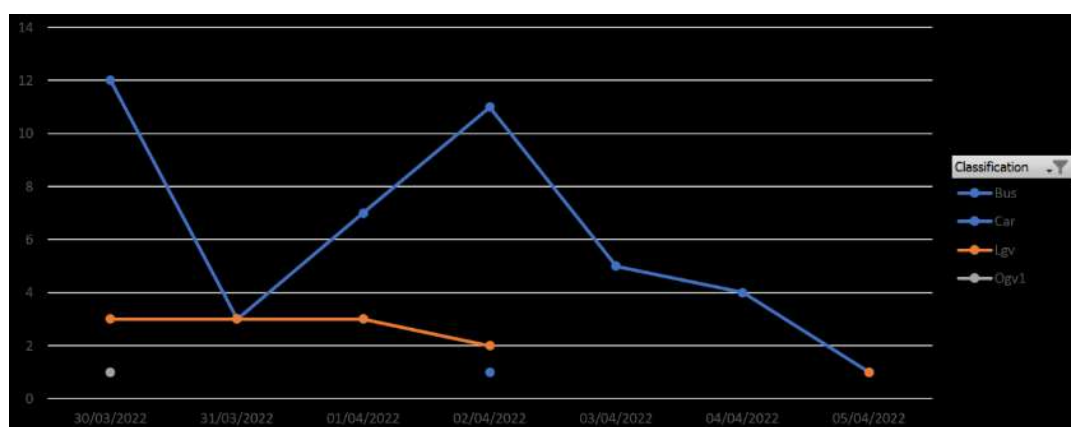
Site 5a and 5b - Graph of contraventions by time and vehicle type

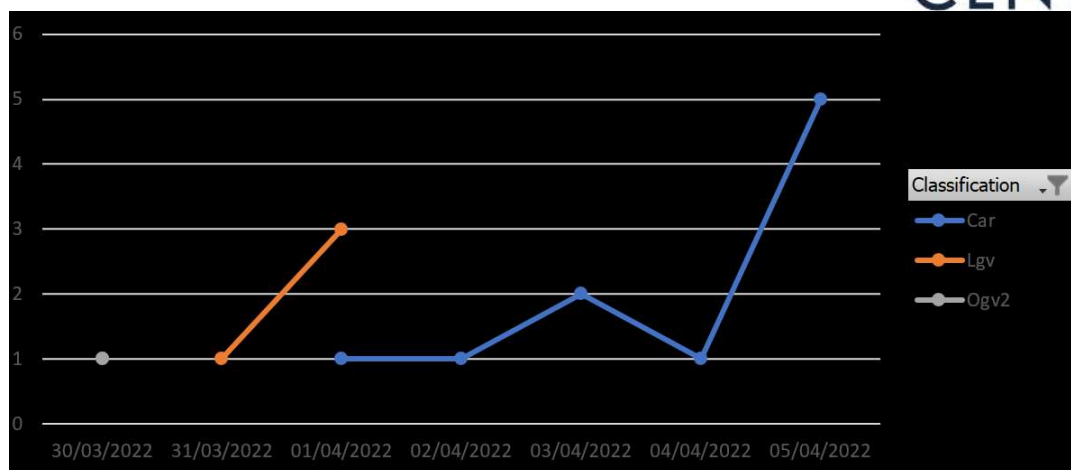
Looking at each day of the week, the most contraventions take place on a Monday followed by Saturday. The Saturday numbers are higher than other locations and suggests that this is linked to drivers avoiding certain parts of the network on Saturday that is not an issue through the week.

Date	Bus	Car	Lgv	Ogv1	Grand Total
Wed 30 Mar 2022		12	3	1	16
Thur 31 Mar 2022		3	3		6
Fri 01 Apr 2022		7	3		10
Sat 02 Apr 2022	1	11	2		14
Sun 03 Apr 2022		5			5
Mon 04 Apr 2022		4			4
Tues 05 Apr 2022		1	1		2
Grand Total	1	43	12	1	57

Date	Car	Lgv	Ogv2	Grand Total
Wed 30 Mar 2022		1	1	2
Thur 31 Mar 2022			1	1
Fri 01 Apr 2022		1	3	4
Sat 02 Apr 2022		1		1
Sun 03 Apr 2022		2		2
Mon 04 Apr 2022		1		1
Tues 05 Apr 2022		5		5
Grand Total		11	4	16

Site 5a and 5b - Survey results by day and vehicle type





Site 5a and 5b - Graph of contraventions per day by vehicle type

**Site 6: No motor vehicles on Widemarsh Street**

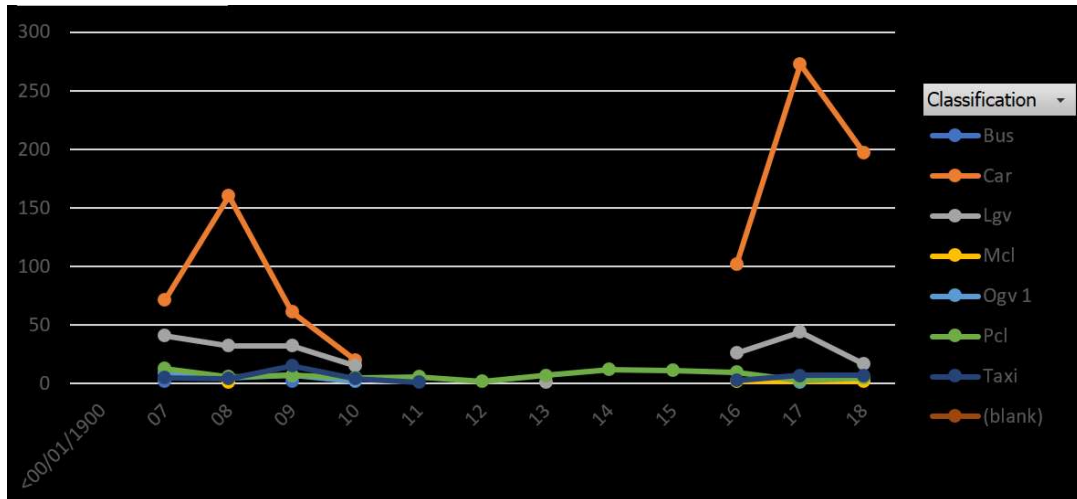
The Widemarsh Street ‘no motor vehicles restriction’ has 9,955 contraventions, of which 22 were between 10am and 4:30pm when bicycles are excluded.

Hours	Bus	Car	Coach	Lgv	Mcl	Ogv 1	Pcl	Taxi	Grand Total
07	6	467	5	168	2	40	58	36	782
08	1	972		185	8	17	54	55	1292
09	2	510	2	162	4	32	41	79	832
10	1	152		60	6	9	42	26	296
11							38	1	39
12							32		32
13				6		1	50		57
14		1			1		48		51
15		1		1		2	60		64
16		560		128	13	4	74	18	797
17	4	1222	1	148	31	5	58	41	1510
18		1012		82	23	1	54	31	1203
Grand Total	14	4897	8	940	88	111	609	287	6955

Site 6 - Survey results by hour and vehicle type

There was a noticeable increase in the number of light goods vehicles at 1pm. The fact that the restriction is currently physically enforced by a bollard is the reason that the level of compliance is so high.

The high level of use after the bollard is lowered at 4:30pm, with 1,222 cars from 5pm, indicates that there would be a higher level of contravention should the bollard be removed and the restriction just enforced using a camera.

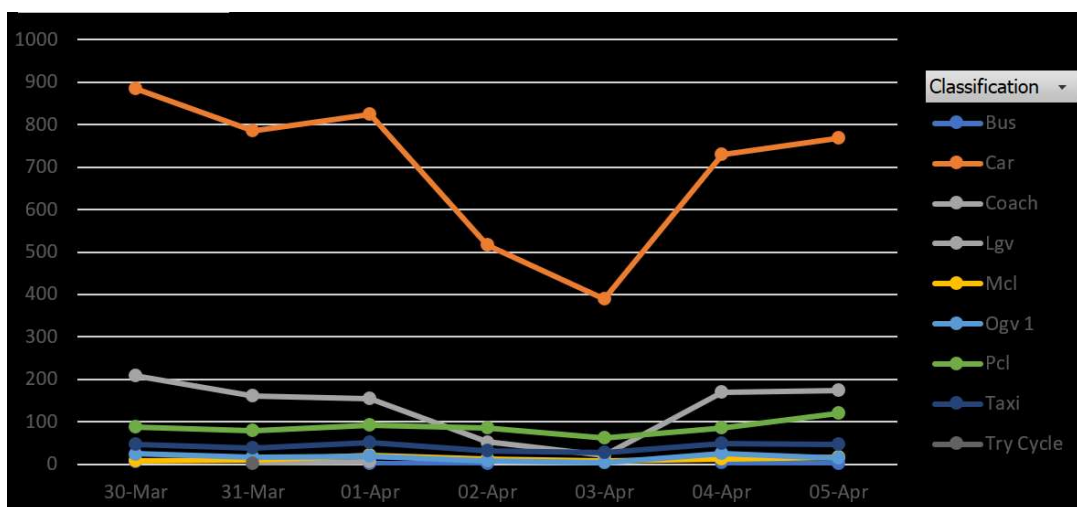


Site 6 - Graph of contraventions by time and vehicle type

The weekday numbers are consistent at between 1,074 and 1,262 vehicles. It is noticeable that the numbers on Saturday are lower and not much greater than on Sunday, with 509 vehicles.

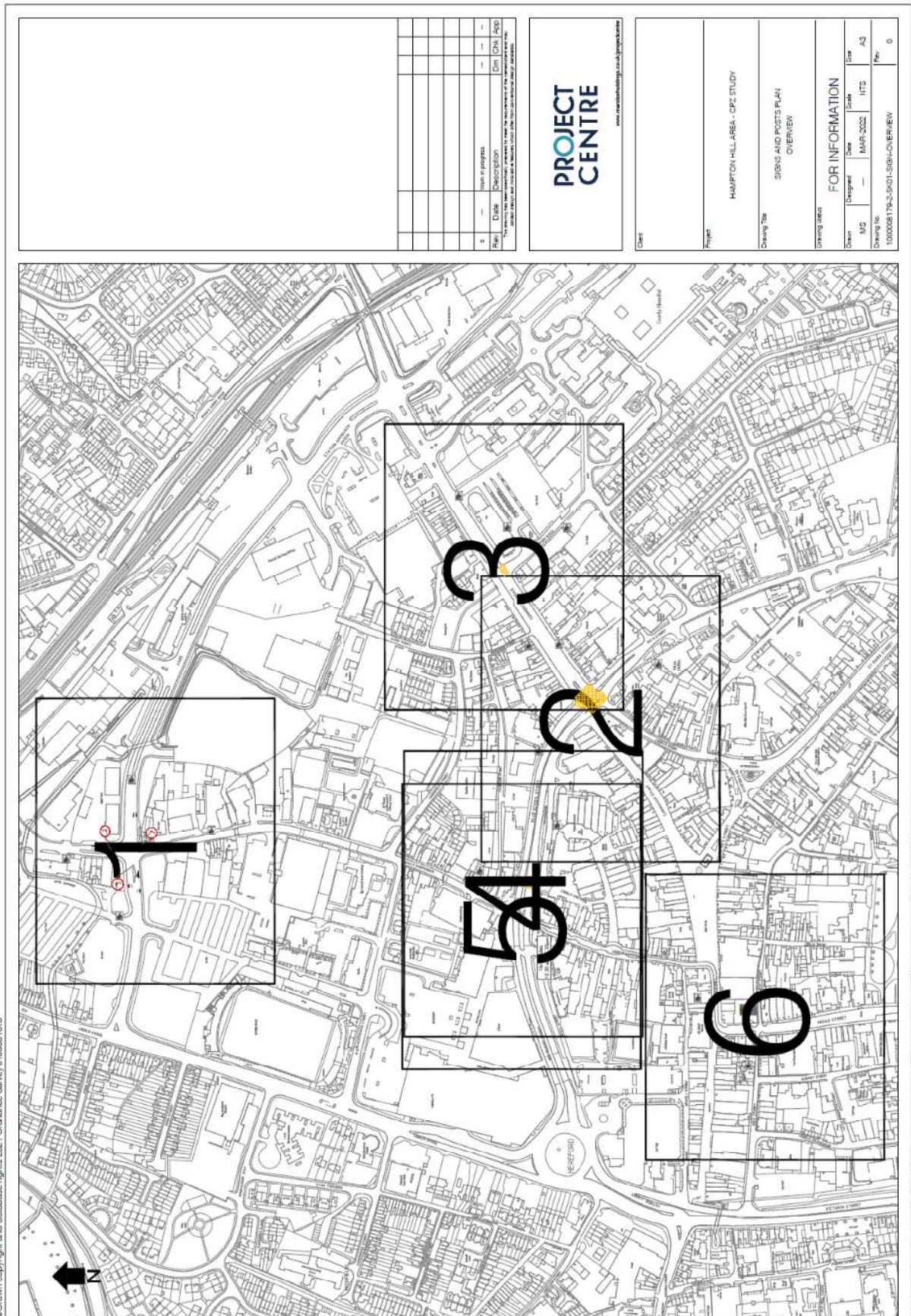
Date	Bus	Car	Coach	Lgv	Mcl	Ogv 1	Pcl	Taxi	Grand Total
Wed 30 Mar 2022	6	884		208	7	24	87	46	1262
Thur 31 Mar 2022		785	3	161	10	17	79	38	1094
Fri 01 Apr 2022	1	824	5	155	21	19	91	50	1166
Sat 02 Apr 2022	1	516		52	12	8	86	31	706
Sun 03 Apr 2022		389		21	8	3	61	27	509
Mon 04 Apr 2022	4	730		170	13	25	85	49	1076
Tues 05 Apr 2022	2	769		173	17	15	120	46	1142
Grand Total	14	4897	8	940	88	111	609	287	6955

Site 6 - Survey results by day and vehicle type



Site 6 - Graph of contraventions per day by vehicle type

## APPENDIX B – LAYOUT PLANS



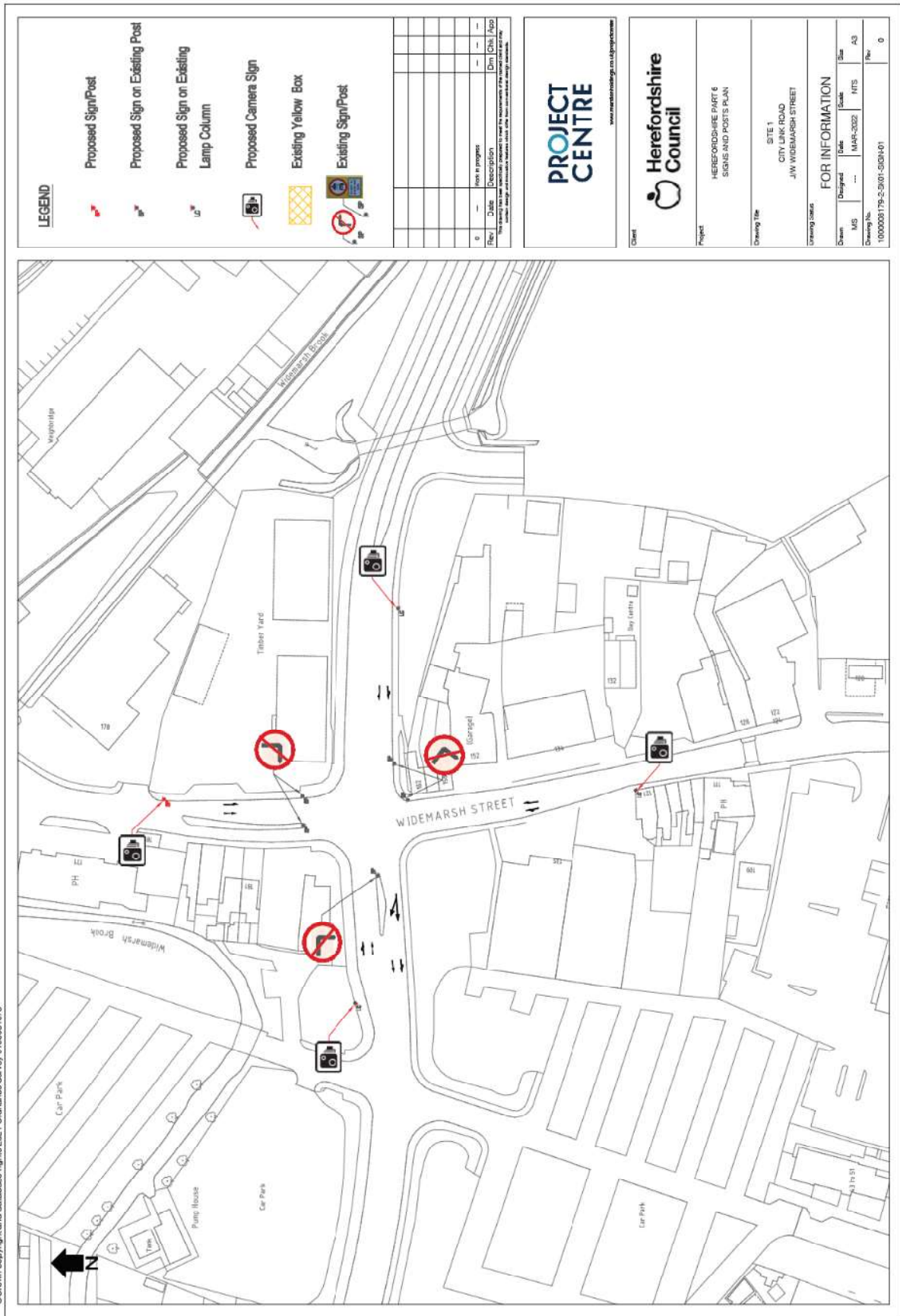
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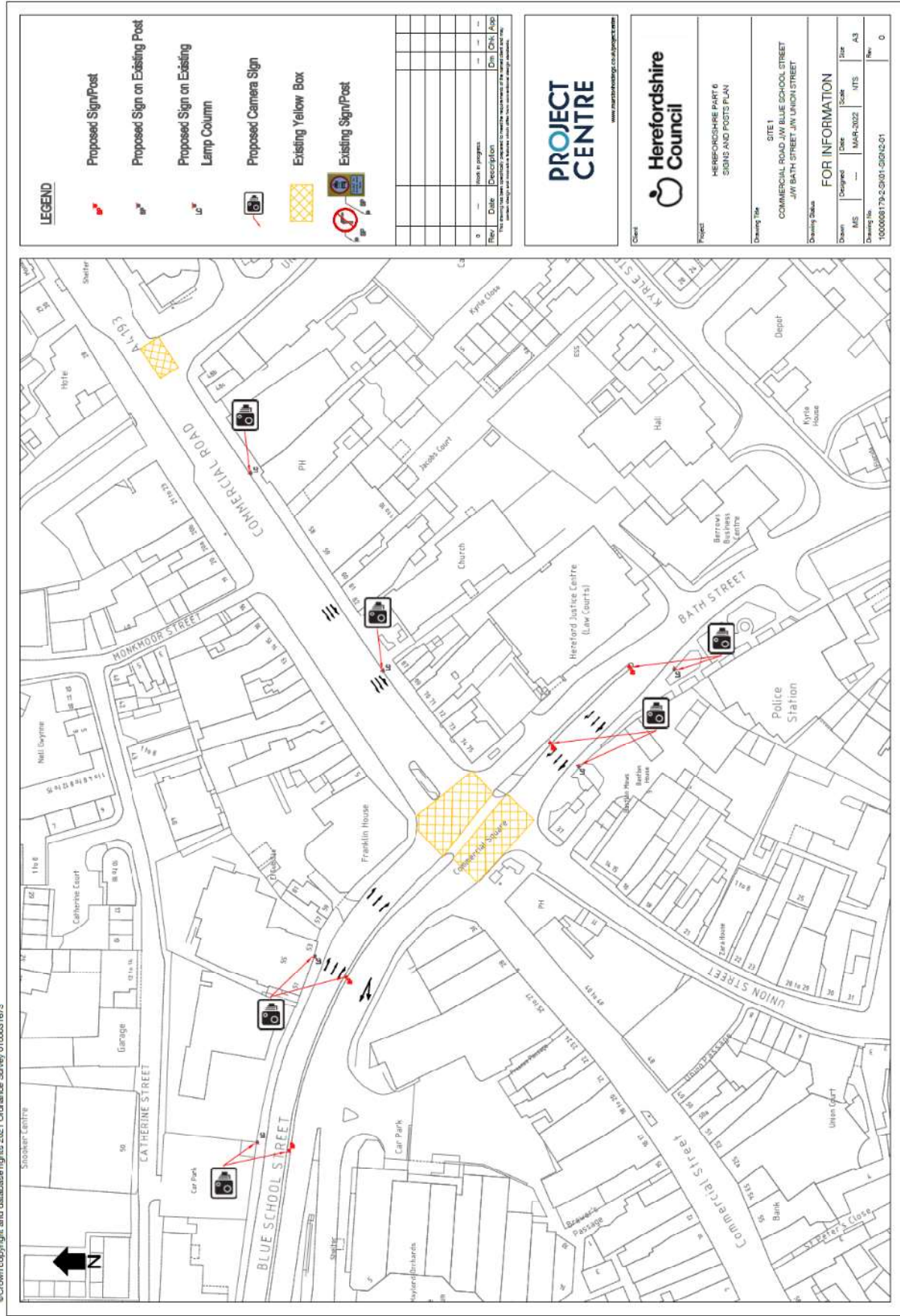
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Rev	Date	Description	By	CHK	APP
1		Issue in progress			
2		Issue in progress			
3		Issue in progress			
4		Issue in progress			
5		Issue in progress			
6		Issue in progress			
7		Issue in progress			
8		Issue in progress			
9		Issue in progress			
10		Issue in progress			

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Client	
Project	HAMPTON HILL AREA - CPC STUDY
Drawing title	SIGN AND POSTS PLAN OVERVIEW
Drawing area	FOR INFORMATION
Drawn	MG
Designed	---
Date	MAR-2022
Scale	1:10
Size	A3
Drawn No	1000008179-2-SIGN-SIGN-OVERVIEW
File	0

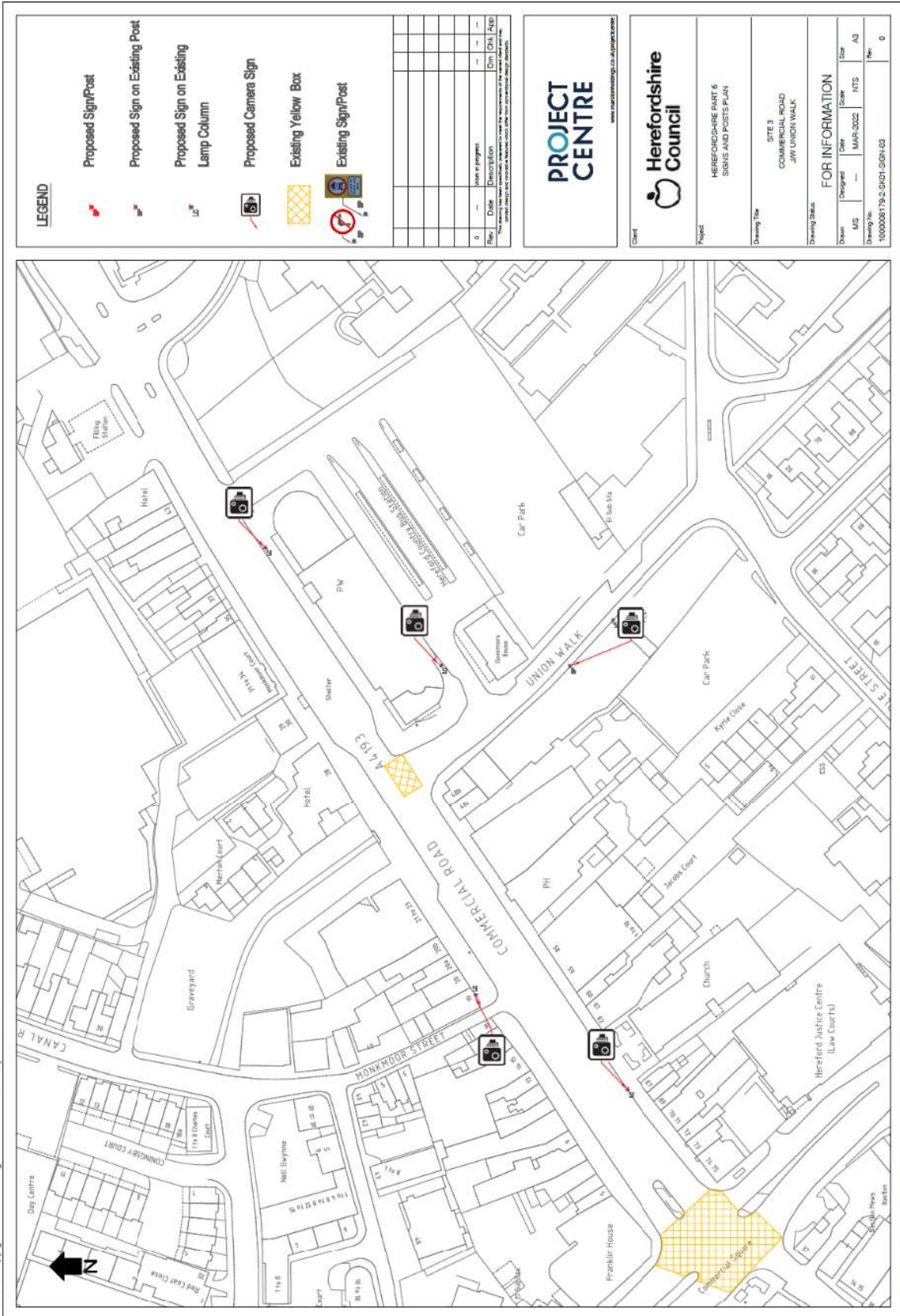




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**LEGEND**

- Proposed Sign/Post
- Proposed Sign on Existing Post
- Proposed Sign on Existing Lamp Column
- Proposed Camera Sign
- Existing Yellow Box
- Existing Sign/Post

Rev	Date	Description	Dim	Chk	App
0		Work in progress			

This drawing has been produced in accordance with the requirements of the current British Standards. It is the responsibility of the client to ensure that the drawing is used for the intended purpose.

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Herefordshire Council

Client: HEREFORDSHIRE PART 6 SIGNS AND POSTS PLAN

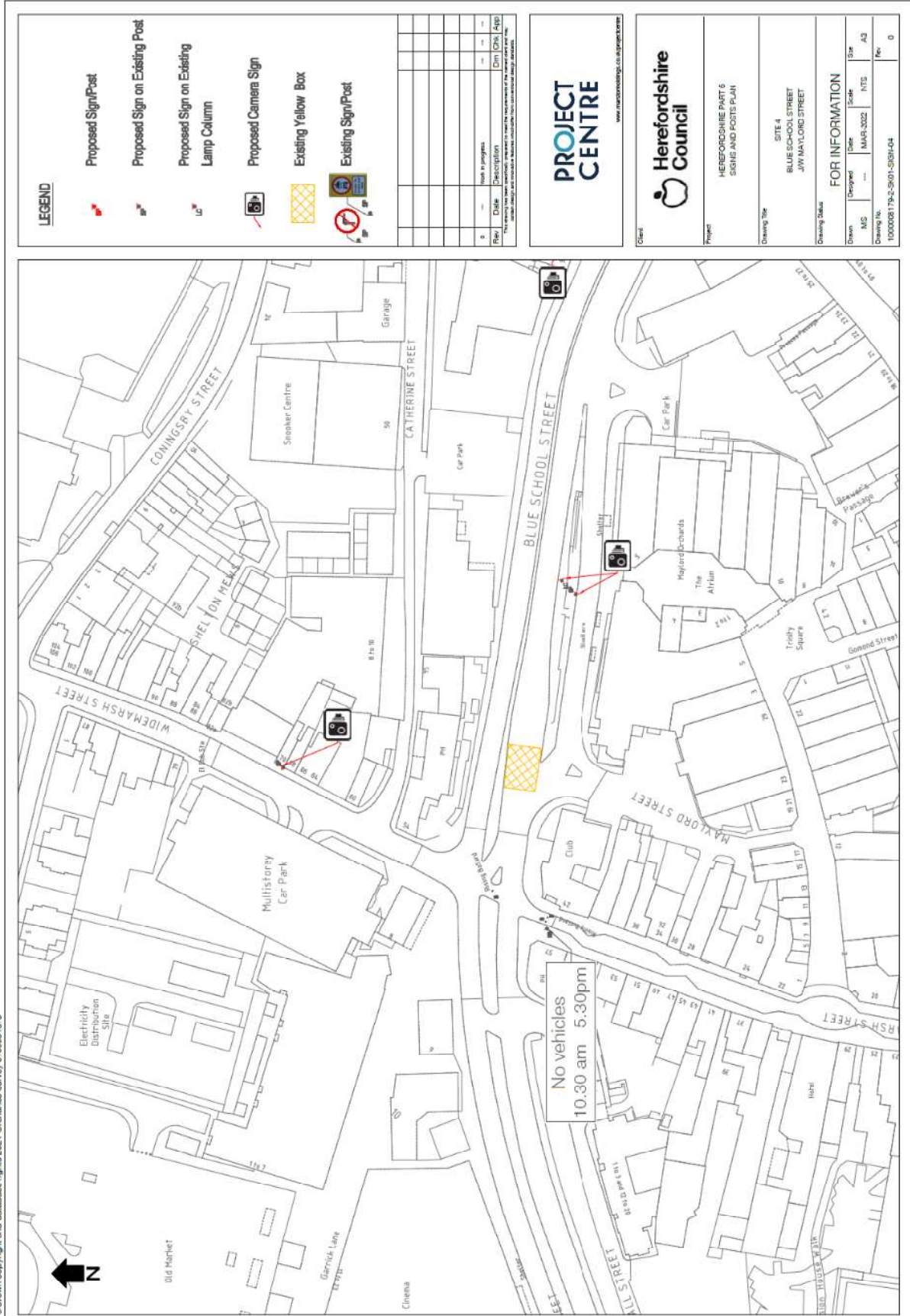
Project: SITE 4  
BLUE SCHOOL STREET  
JUNCTION ROAD STREET

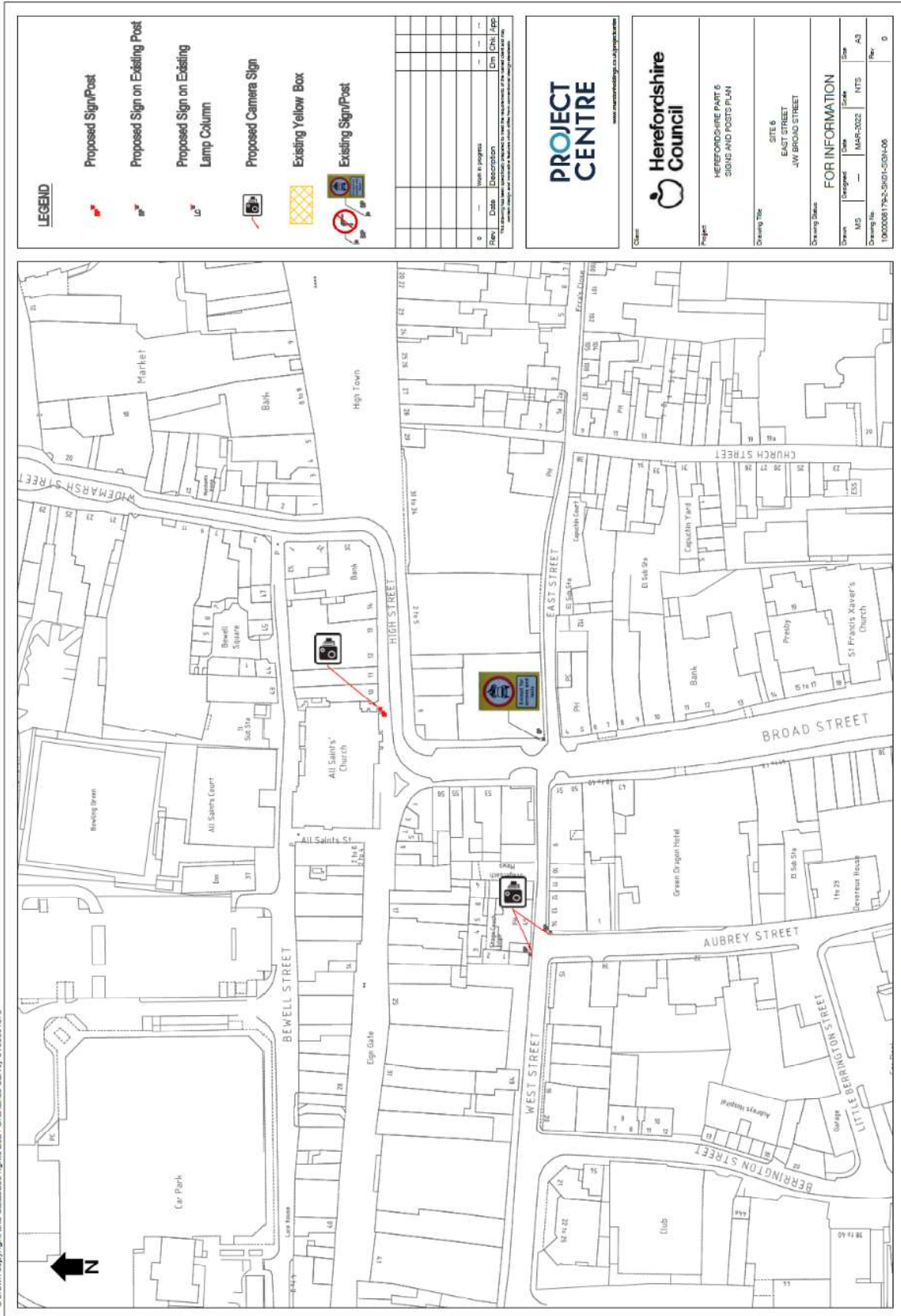
Drawing Title: FOR INFORMATION

Drawn	Checked	Scale	Size
MC	---	MAR, 2022	NTS A3

Drawing No: 1000008179-2-SIGN-SIGN-04

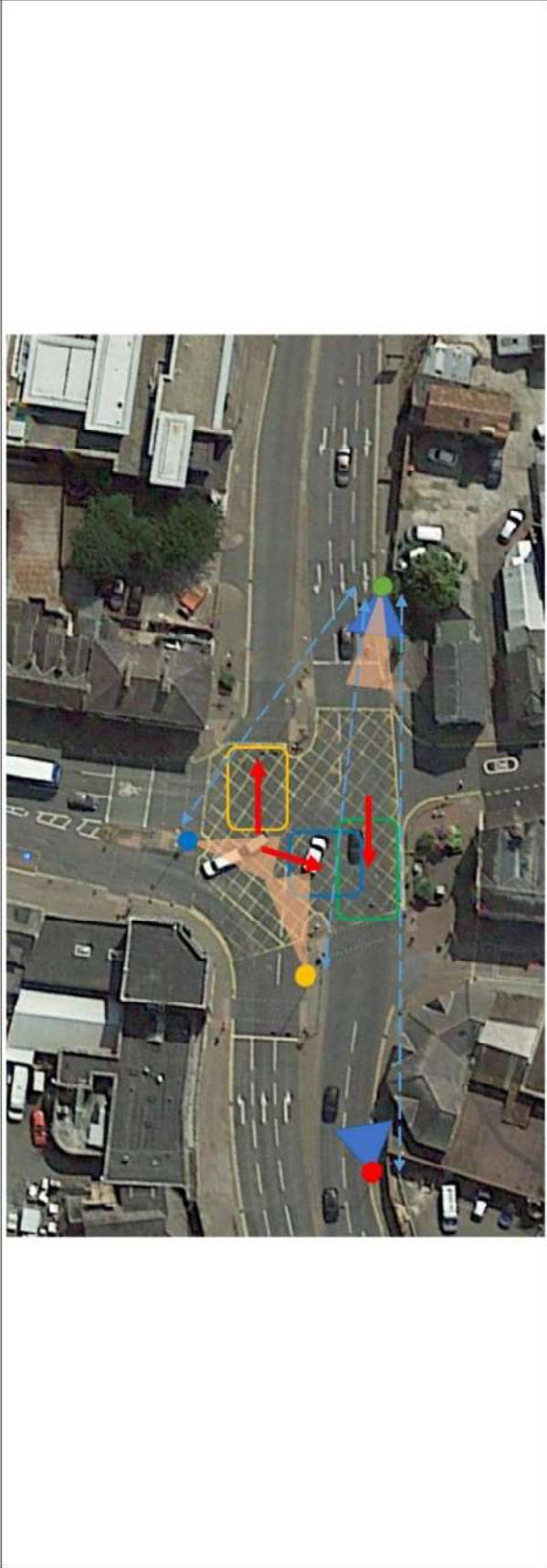

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APPENDIX C – CAMERA EQUIPMENT PLANS

Herefordshire – Commercial Rd/Blueschool St/Bath St/Union St      Yellow Box Junction      Position: HR1 2BT / 52.057676, -2.712336

	<p><b>Location Notes:</b>                  Existing lighting column #6394 at the Green Marker position                  Existing lighting column #31 at the Yellow Marker position                  Existing unmarked lighting column at the Blue Marker position                  Existing lighting column #30 at the Red Marker position</p> <p><b>Notes: Install CV at red marker high</b></p> <p><b>Equipment Required:</b>  <b>Green Marker:</b> 1 x RDS Unit, 1 x PoE4, 1 x Siklu Base, 1 x AXIS P33 CV Camera, 1 x AXIS Q17 CUV Camera  <b>Yellow Marker:</b> 1 x PoE Injector, 1 x Siklu Terminal, 1 x AXIS Q17 CUV Camera  <b>Blue Marker:</b> 1 x PoE Injector, 1 x Siklu Terminal, 1 x AXIS Q17 CUV Camera  <b>Red Marker:</b> 1 x PoE Injector, 1 x Siklu Terminal, 1 x AXIS Q17 CV Camera</p>	<p>Date Created      08-02-2022      Created By      J. Derrett      Approved By      SChappell 09-03-2022</p>
		



**Location Notes:**

New column required at the Green Marker position to enforce tl Junction

**Notes:**

There is a suitable existing lighting column #85 at the Red Mark would require the adjacent tree to be trimmed back

**Equipment Required:**

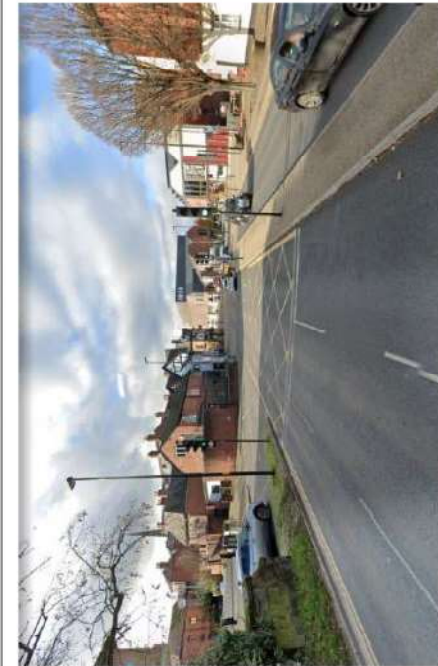
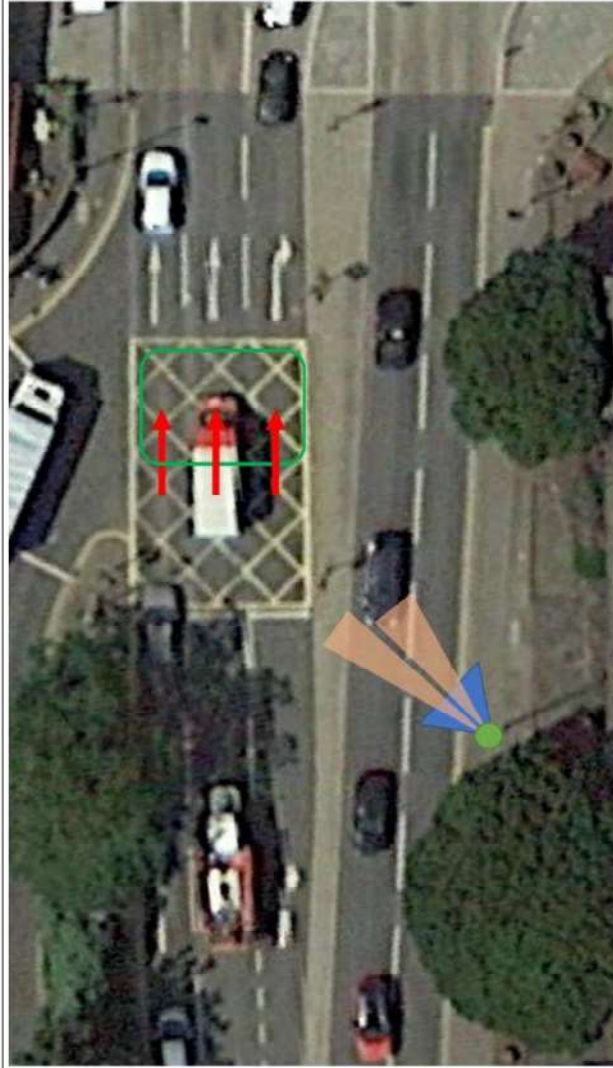
- 1 x RDS Unit
- 1 x POE4
- 1 x AVIC 200 0V C...



Herefordshire – Blue School St/Maylord St

Yellow Box Junction

Position: HR1 2DU / 52.058250, -2.715252



**Location Notes:**

Existing lighting column #20 at the Green Marker position is suitable to enforce the Yellow Box Junction

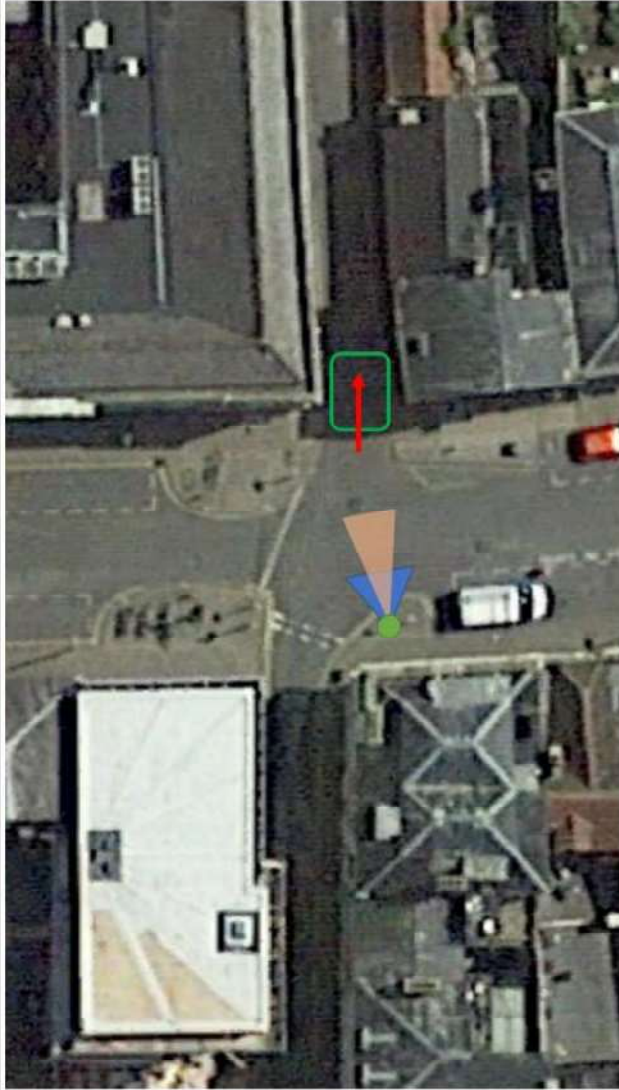
**Notes:**

**Equipment Required:**

- 1 x RDS Unit
- 1 x POE4
- 1 x AXIS P33 CV Camera
- 2 x AXIS Q17 CUV Camera

Date Created	08-02-2022	Created By	J. Derrett	Approved By	SChappell 15-02-2022
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Herefordshire – East Street / Broad Street      Prohibited Vehicle      Position: HR4 9BH / 52.055969, -2.717447



**Location Notes:**

New column required at the Green Marker position to enforce the Prohibited Vehicle into East Street

**Notes:**

One of the small columns with the No Entry signs could be replaced by this new column

**Equipment Required:**

- 1 x RDS Unit
- 1 x POE4
- 1 x AXIS P33 CV Camera
- 1 x AXIS Q17 CUV Camera

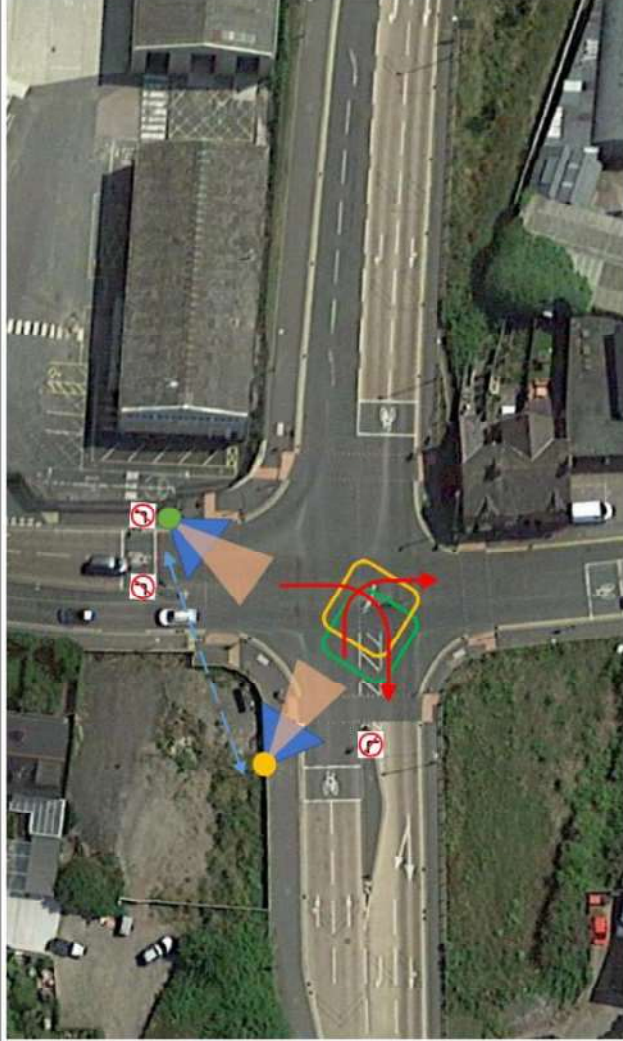
Date Created	08-02-2022	Created By	J. Derrett	Approved By	SChappell 15-02-2022
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Herefordshire – City Link Rd / Widemarsh St

Banned Turns

Position: HR4 9HE / 52.062212, -2.714791



**Location Notes:**

Existing unmarked lighting column at the Green Marker position O/S Gibbs & Dandy  
 Existing unmarked lighting column at the Yellow Marker position  
 Are suitable to enforce the two Banned Right turns

**Notes:**

**Equipment Required:**

**Green Marker:**

1 x RDS Unit, 1 x POE4, 1 x Siklu Base, 1 x AXIS P33 CV Camera, 1 x AXIS Q17 CUV Camera

**Yellow Marker:**

1 x POE Injector, 1 x Siklu Terminal, 1 x AXIS P33 CV Camera, 1 x AXIS Q17 CUV Camera



Date Created

08-02-2022



Created By

J. Derrett

Approved By

SChappell 15-02-2022

Herefordshire – Widemarsh Street / Blueschool Street      Prohibited Vehicle      Position: HR4 9EA / 52.058227, -2.7158941

	<p><b>Location Notes:</b> Existing lighting column #15 at the Green Marker position is suitable to enforce the Prohibited Vehicles</p> <p><b>Notes:</b> CUV camera needs to be mounted as high as possible to clear tall vehicles</p> <p><b>Equipment Required:</b> 1 x RDS Unit 1 x POE4 1 x AXIS P33 CV Camera 1 x AXIS Q17 CUV Camera</p>
	<p>Date Created      08-02-2022      Created By</p>
<p>Approved By      J. Derrett      SChappell 15-02-2022</p>	

**APPENDIX D – TMA PART 6 CHECKLIST**

Before having the Chief Executive Officer sign a letter requesting the authority to enforce from the DfT, can Herefordshire County Council answer 'Yes' to each of the following:

	Yes	No
Consulted the Chief Officer of West Mercia Police		
Carried out six weeks public consultation on the details including the types of restrictions and the specific locations.  <i>Note - Attention should be given to accessibility to information and any potential equalities impacts when consulting</i>	Y	
Considered all objections raised and taken reasonable steps to resolve those objections		
Carried out effective public communication and engagement (as much as HC considers appropriate). E.g., local press and social media.  <i>Note - The letter that is signed by the CE will also need to confirm that the engagement will continue up to the start of enforcement and potentially beyond.</i>	Y	
Ensured all relevant traffic orders are accurate and up to date, with matching lawful signs and road markings  <i>Note - Accurate TROs are key to the enforceability of any restriction</i>	Y	
Ensured all relevant equipment has VCA certification for enforcing moving traffic offences.  <i>Note - This can be specified within the procurement process that all potential suppliers must have that accreditation. If in doubt, accreditation can be checked with <a href="mailto:civil-enforcement@vca.gov.uk">civil-enforcement@vca.gov.uk</a></i>		

## QUALITY

It is the policy of Project Centre to supply services that meet or exceed our clients' expectations of quality and service. To this end, the company's quality management system (QMS) has been structured to encompass all aspects of the company's activities including such areas as sales, design and client service.

By adopting our QMS on all aspects of the company, Project Centre aims to achieve the following objectives:

- Ensure a clear understanding of customer requirements.
- Ensure projects are completed to programme and within budget.
- Improve productivity by having consistent procedures.
- Increase flexibility of staff and systems through the adoption of a common approach to staff appraisal and training.
- Continually improve the standard of service we provide internally and externally.
- Achieve continuous and appropriate improvement in all aspects of the company.

Our quality management manual is supported by detailed operational documentation. These relate to codes of practice, technical specifications, work instructions, Key performance indicators, and other relevant documentation to form a working set of documents governing the required work practices throughout the company.

All employees are trained to understand and discharge their individual responsibilities to ensure the effective operation of the quality management system.



## Award Winning



## Certifications



## Accreditations



## Memberships



## Contact

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