

Road & Traffic Report Design Choices

Phase 1 Former Magee Barracks Kildare Town

July 2019





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Description of change	Originator	Rev	Approval	Date
Initial Release	JN	1st	KR	15/03/2018
2019 Application	CR	А	CR	25/07/2019



1. INTRODUCTION

1.1 Site description

The Phase 1 development proposal will be served by an entrance off Hospital Street, while the subsequent Phase 2 development will provide for vehicle permeability from Phase 1 through to Melitta Road and Ruanbeg Crescent. Links will also be provided between the Phase 1 development and the separate concurrent applications on Hospital Street for the provision of an anchor retail unit and Cancer Treatment Clinic. The Cancer Treatment Clinic site will provide for an additional quantum of open space and a strong link with the park to be developed opposite the subject site off Hospital Street.

This report is to be read in conjunction with all drawings attached to this application, but for an overview of the site description as outlined above we would like to draw your attention to the following drawings:

- R1831-1004 Road Layout
- R1831-1024 Hospital Street Signs & Markings

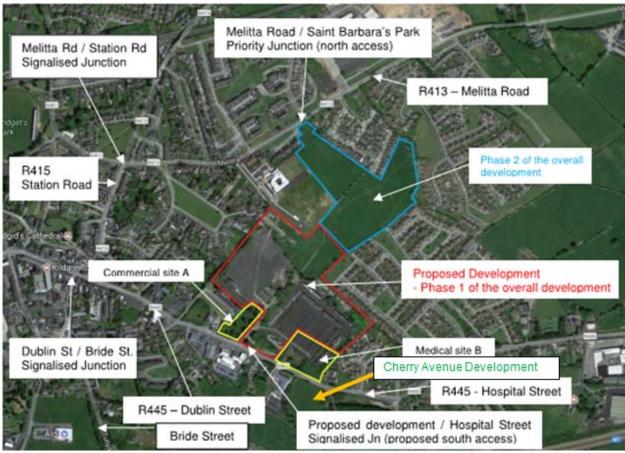


Figure 1: Aerial Site layout of the proposed development



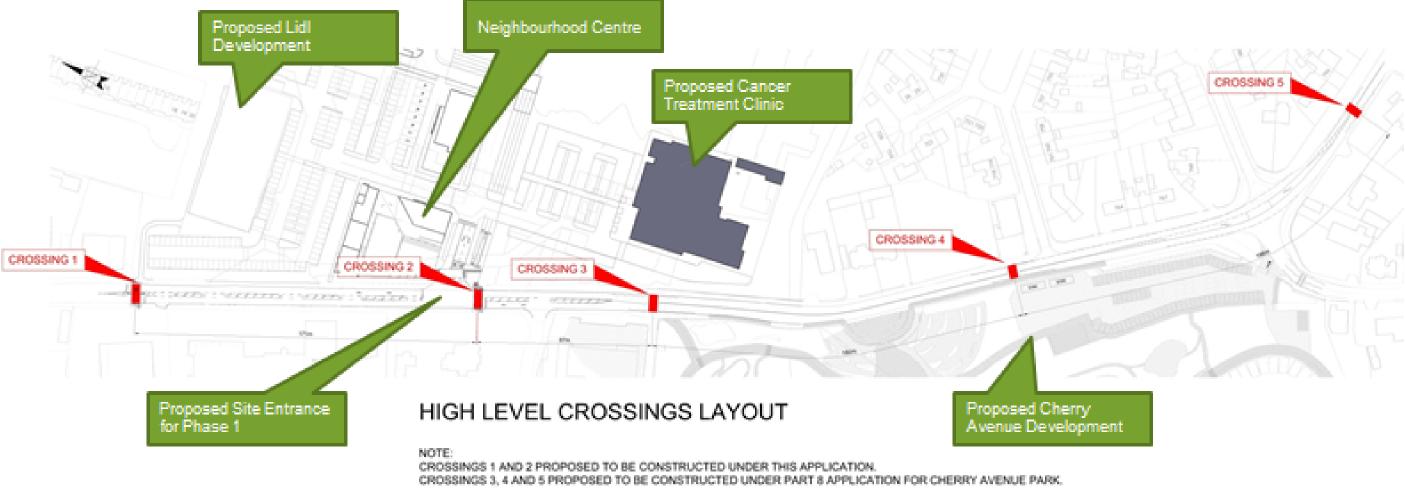


Figure 2 above shows the proposed five crossing points along Hospital Street and the relations between the proposed developments and pedestrian crossings.

RKD BSM JSA Jsa Design Metec Roadplan KCC Part 8

1.2 Multi-disciplinary design team and process

The design has been conducted in accordance with the Design Manual for Urban Roads and Streets (referred to as DMURS after thus). Each discipline faced their own challenge on this not least the Architectural design which required the achievement higher residential densities.

The following is supported by the following main documents of:

Mobility Management Plan- prepared by Roadplan Consulting

Traffic Impact Assessment- prepared by Roadplan Consulting

Quality Audit- prepared by Roadplan Consulting

1.3 Interaction with Proposed Separate Developments

1.3.1. Cancer Treatment Clinic

The Cancer Treatment Clinic was prepared by the same design team and therefore the design was controlled and fully integration into this application. The linkage between the residential element of the Phase 1 development and the Cancer Treatment Clinic has been developed to provide pedestrian linkage to the Hospital Street footpath and the proposed Cherry Avenue Development located south of this proposed development.

Please note the drawings for the Cherry Avenue Development have been included in Appendix A of this application.

1.3.2. Cherry Avenue Development

GARLAND liaised with PUNCH Consulting Engineers and Kildare County Council (referred to hereafter as KCC) in considering the proposed Cherry Avenue development. Figure 2 above shows all five crossing points along Hospital Street (please refer to drawing R1831-1035 Co-ordination with Cherry Avenue Park for a greater level of detail).

Traffic calming works are also proposed to be installed on Hospital Street as part of the Cherry Avenue Park development. KCC will seek approval under a Part 8 application for this project. GARLAND liaised with PUNCH Consulting Engineers (project design engineers for KCC) and KCC in considering the proposed Cherry Avenue development. With permissions from KCC, PUNCH Consulting Engineers provided drawings to GARLAND for the consideration in the design of the Hospital Street layout (see Appendix A for drawings). The design for this application, the proposed Lidl site and the Cancer Treatment Clinic site were all informed by the proposals for the Part 8 application proposals for Cherry Avenue development. The design decisions are discussed in greater detail in Section 3 below.

1.3.3. Lidl Retail Site

CS Consulting are the design engineers on this development and have provided us with their design drawings. The design team have worked closely with the Lidl design team to co-ordinate the entrance / exits and pedestrian crossings. The pedestrian crossing to the south east of the corner of the Lidl site is common to both applications and is a permanent solution for crossing and traffic calming for the street.

The Lidl site is providing a temporary vehicle access to the development which will be removed if constructed before the 'main access' junction proposed under this application.

This crossing is provided as a traffic calming measure and crossing for the Lidl site until such time as the main junction is constructed. On the construction of the signalised junction on Hospital Street (complete with toucan crossing, serving the main residential site, Cancer Treatment Clinic and Lidl developments), the crossing proposed under the Lidl application will be removed.

2. POLICY BACKGROUND

National planning and transport strategy seeks to achieve a hierarchy of towns, linked by efficient transport networks, underpinned by economic activity and investment. It also aims to minimise overall travel demand, reduce carbon emissions and reliance on fossil fuels. Central to this is the alignment of spatial planning and transport policy to contain suburban sprawl, linking employment to transport and encouraging modal shift to more sustainable modes of travel. To support these objectives, street layouts in cities, towns and villages will be interconnected to encourage walking and cycling and offer easy access to public transport. Compact, denser, more interconnected layouts, particularly where served by good quality bus or rail services, will help to consolidate cities, towns and villages making them viable for reliable public transport. These objectives should be underpinned by Local Area Plans, Strategic Development Zone Planning Schemes and Land Use and Transportation Strategies. The importance of retro fitting existing streets and communities is also emphasised. A further aim is to ensure compact, connected neighbourhoods based on street patterns and forms of development that will make walking and cycling, especially for local trips, more attractive.

3. DESIGN

The study methodology of traffic is outlined in the attached Traffic Impact Assessment prepared by Roadplan and attached with this application.

Studies conducted were outlined as follows:

- A topographical survey was conducted by Lenmar Surveys in May 2016.
- Traffic Counts were undertaken by Tracsis on Thursday 19th January 2017 during a 12 hour period (07:00 to 19:00). Count information was obtained at the existing Melitta Road / Saint Barbara's Park priority junction and Hospital Street two-way flow. These are discussed further in the Traffic Impact Assessment submitted with application. The locations for the counts were agreed with KCC in advance.
- Following consultation with KCC, a speed analysis survey of Hospital Street was conducted between the 17th October 2017 and 26th October 2017.
- A Quality Audit was conducted, which required the input from the design team to work through issues.
- A Traffic Impact Assessment was prepared with the objective to examine the traffic implications of the proposed development in terms of how it can integrate with existing traffic in the area.
- A Mobility Management Plan was prepared to act as a transport demand management mechanism; that seeks to provide for the transportation needs of people and goods.
- Street lighting for Hospital Street and the internal public areas is designed and detailed by Metec and accompanies this application.

3.1. Traffic Calming on Hospital Street

The Part 8 application proposals for Cherry Avenue development informed the design of the traffic calming measures proposed under this application. The drawings provided by the design engineers PUNCH are found in Appendix A. The proposals provide for three pedestrian crossings along Hospital Street at approximately 200m intervals in accordance with the requests of KCC. One of the pedestrian crossings is provided outside the Cancer Treatment Clinic which links across to the Cherry Avenue development. In the design of Hospital Street we have extrapolated the crossings and provided a Toucan Pedestrian Crossing at the main entrance with a further pedestrian crossing to the west at an approximate distance of 142m. We have followed the design philosophy of the Part 8 application and propose to narrow the carriageway of Hospital Street by providing carriageway markings and a right hand turning lane into the proposed development. This philosophy follows through the Part 8 application by keeping the existing line of kerbing, so as not to disturb the road drainage or entrances/exits which are outside the control of this application.

Under further correspondence received from Kildare County Council, we are proposing to provide a Toucan Crossing at the main access to the development in accordance with KCC Toucan Crossing Layout Standard Details Drg. No. 002 contained in Appendix C for ease of reference.

A MOVA system is to be provided on Hospital Street with the details to be agreed with KCC and their approved Traffic Lighting Contractor - Traffic Solutions Ltd. MOVA is designed to cater for the full range of traffic conditions, from very low flows through to a

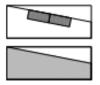


junction that is overloaded. For the major part of the range - before congestion occurs, MOVA operates in a delay minimising mode; if any approach becomes overloaded, the system switches to a capacity maximising procedure. MOVA is also able to operate at a wide range of junctions, from the very simple 'shuttle-working', to large, multi-phase multi-lane sites The proposals include for ducting to be provided between the proposed pedestrian crossing to the west of the site, the Toucan Crossing outside the main entrance and the proposed Cherry Avenue crossing point (please see drawing R1831-1024 Hospital Street Road Marking and Signs drawing for details).

We have also provided a topographical survey of Hospital Street and the site at large for reference.

3.2. Internal Layout

'The material, texture and colour of the carriageway are important tools for informing drivers of driving conditions. Research has found that the use of robust surface materials (such as block paving) can reduce vehicle speeds by 4-7 km/h alone.' --DMURS



Permeable Pavers to Parking Road There is a mix of street surface materials used throughout the proposed development Permeable pavers are provided to car parking spaces which delineate the car space from the main carriageway while providing rapid infiltration of rain water.

Material palate of trafficked surfaces shown above





Extract 1: Priority of road users

This application is for the construction of Phase 1 only, but considers the implications and interactions of a planned Phase 2 application. The layout of the development will connect directly to the future Phase 2 development to the north of the Phase 1 site.

KCC roads department requested that a frontage free main boulevard be provided through the Phase 1 and Phase 2 developments. The design team felt that this is totally contrary to the DMURS principles and as such, all streets have dwellings fronting onto the streets.

'The Guidelines also include recommendations in relation to streets, 'Frontage-free streets (such as distributor roads) are not recommended, as they can be unsafe for pedestrians (especially after dark) and can result in a hostile environment.'

Extract from DMURS manual

3.2.1 User Priority

In accordance with DMURS, the design encourages more sustainable travel patterns and safer streets; we placed pedestrians at the top of the user hierarchy. A Mobility Management Plan accompanies this document. We have considered the options laid out in the ABP report and have chosen to keep the option of a 6.5m main carriageway with 4m two-way cycle path and separate pedestrian footpath through the main boulevard of the development.

Footpaths are wide enough to accommodate a high number of pedestrians.

The proposed development incorporates design principles such as shared surfaces and raised table junctions to reduce traffic speeds on streets with housing and to prioritise walking and cycling.

3.2.2 Mobility Management Plan

A MMP accompanies this application and the design has informed into and by this document. The site is well-served by existing public transport links with two bus-stops located within walking distance and the Kildare train station within 17 minutes' walk from the furthest part of the proposed development.

Currently if you were to walk from Ruanbeg Cresent to the railway station it would take approximately 29 minutes; when the permeation through the proposed Magee barracks development is constructed it will cut the travel time to 18 minutes. Similar saving can be made by car due to the increased permeability.



3.2.3 Internal Design Speed

Perception may be that more permeable street layouts will result in a higher rate of collisions. However, research referenced in DMURS has shown that there is no significant difference in the collision risk attributable to more permeable street layouts in urban areas and that more frequent and less busy junctions need not lead to higher numbers of accidents. As stated in the User Priority section above the pedestrian is given the dominant priority in this application.

When considering the context of the proposal, we consider this to be a neighbourhood type development with the function to be considered as local. Our design decisions have been informed into the matrix input into the Extract table 4.1 matrix below to inform into the design speed.

KCC have requested a design speed of 30km/h for the main boulevard route. We believe this to be total inconsistent with the overarching principles of DMURS. We have designed for a speed of 30km/h with three number bends which limit the speed to 20km/h. The design speed is based on design of a local road through a neighbourhood in accordance with Extract 2 of the DMURS Manual below.

In design the '**self-regulating street**' we also consulted with the Adamstown Street Design Guide. We have taken an extract from the Adamstown Street Design Guide below given our design response to the same on a separate column. To encourage 'self-regulation', there is a variety of surfaces used throughout the development.

It is proposed to provide a *'Slow Zone'* sign within the proposed development, given the high permeability of pedestrians using the 'Neighbourhood Park' and 'Local Park' and up to the school.

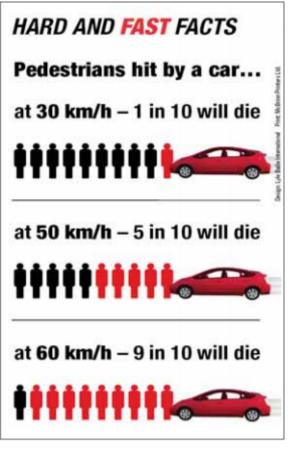


Figure 4.2: Illustration from the Road Safety Authority showing the impact of vehicle speeds on pedestrian fatalities. This is of primary consideration when considering appropriate speeds and levels of pedestrian activity.

		PEDESTR	IAN PRIORITY	VEHI	CLE PRIORITY	
FUNCTION	ARTERIAL	30-40 KM/H	40-50 KM/H	40-50 KM/H	50-60 KM/H	60-80 KM/H
	UNK	30 KM/H	30-50 KM/H	30-50 KM/H	50-60 KM/H	60-80 KM/H
	LOCAL	10-30 KM/H	10-30 KM/H	10-30 KM/H	30-50 KM/H	60 KM/H
		CENTRE	NHOOD	SUBURBAN	BUSINESS/ INDUSTRIAL	RURAL

Extract table 4.1 Design Speed Selection Matrix of the DMURS Manual

RLA

Concepts Realised

GA



Extract from the Adamstown Street Design Guide as referenced in DMURS

Close Proximity of Buildings (left)

Continuous Street Wall (right)



Active Ground Floor Uses (left)

Pedestrian Activity (right)



Frequent Crossing Points and Junctions (left)

Horizontal and Vertical Deflections (right)



Designers Response

The project Architects, RKD, have designed layouts to have active street frontage in close proximity to the road layouts. Duel aspect dwelling are provided on street corners.

The dwellings are fronting onto all roads providing approximately 75% solid enclosure giving a moderate sense of enclosure. Supplementary street trees are provided through-out the development.

The dwellings and the commercial/ neighbour centre all have active ground floor use.

The Architects, RKD and Landscape Architects, BSM have designed areas to encourage pedestrian activity; most notably between the Local Park and Neighbourhood Park, which are located in the heart of the development.

Permeable layouts provide more frequent junctions which have a traffic-calming effect as drivers slow and show greater levels of caution.

Vertical deflections are provided throughout the development to slow traffic and highlight crossing points.



Extract from the Adamstown Street Design Guide as referenced in DMURS

Narrow Carriageways (left)

Minimising signage and road markings (right)





Designers Response

With the exception of the main boulevard; the streets serving the residential units are 5m in width. All residential units have designated car parking either parallel to the road or perpendicular.

We have minimised signage and road markings; please see drawing R1831-1005 Road Signage and Markings.

Reduced Visibility Splays (left)

On-Street Parking (right)



The boulevards are tree lined, however visibility splays suitable to the design speed are provided in accordance with Forward Sight Distance and the Stopping Sight Distance requirements of DMURS.

On-street parking is provided along all residential streets.

The corner radii have been designed to minimise speed.

3.3. Swept Path Analysis

Swept Path Analysis has been conducted for:

- Fire tender and refuse truck entering and exiting from Tus Nua Resource Centre on Hospital Street- Drawing R1831-1025;
- Refuse truck negotiating the development- Drawing R1831-1007;

3.4. Interactions with Existing Neighbouring Developments

The proposed Phase 1 development and the subsequent Phase 2 development will provide for a highly permeable new neighbourhood which links into the surrounding urban fabric, providing for pedestrian, cyclists and vehicular routes which will serve to considerably improve the levels of accessibility and permeability enjoyed by Kildare town as a whole.

The pedestrian and cycle connectivity for Phase 1 with the neighbouring existing developments are shown in detail on the drawing provided BSM and RKD.

They include the links to:

- Magee Terrace
- Educate Together School Site
- Proposed Lidl site
- Proposed Cancer Treatment Clinic
- Crossing points to the south of Hospital Street and onto the proposed Cherry Avenue development.
- Ruanbeg under the Phase 1 application
- Magee Terrace under the Phase 1 application



4. CONCLUSIONS & CLOSING STATEMENTS

- A Traffic and Impact Assessment has been conducted and it is attached with the application;
- A Mobility Management Plan has been submitted with the application;
- A Quality Audit has been prepared and is issued with the application;
- The road design of Hospital Street is designed to complement the proposed Part 8 application for Cherry Avenue Park, based on the information supplied by the KCC and their design engineers PUNCH;
- This proposed application delivers connectivity with Magee Terrace and the School Sites;
- Cross sectional details of all side roads have been provided of all side roads please refer to drawing R1831-1026 and 1027;
- On completion of the Phase 2 development (reference Master Plan site layout drawings) it is proposed that Hospital Street will connect to Ruanbeg and Melitta Road;
- Road and footpath details have been submitted with the application and co-ordinated with other design team members;
- Corner radii have been shown on layout drawing;
- Details of signage and road marking have been shown on site layout drawing;
- Cross sections are provided with the application on drawings R1831-1026 and 1027. These cross sections have been co-ordinated with other design team members and reflect the landscaping and boundary divides. The main carragieway is 6.5m wide with 2 way (4m wide) cycle track and 2m footpath on both sides, as set out in the An Bord Pleanala report. Please refer to section 2-2 on drawing R1831-1027 for details;
- Increasing access to neighbourhood cells will result in the more equitable distribution of traffic and the impacts of congestion as it is no longer concentrated on a few select junctions;
- Research has shown that there is no significant difference in the collision risk attributable to more permeable street layouts in urban areas and that more frequent and less busy junctions need not lead to higher numbers of accidents.-DMURS
- All crossings on Hospital Street are to be provided in accordance with KCC standards.
- Cross sectional details of all side roads have been provided of all side roads please refer to drawing R1831-1026 and 1027.
- Car-parking calculations have been provided please refer to attached TTA, the breakdown also includes for visitor car-parking.
- Connectivity is being made to the school site and details of connection, boundary treatments can be found under the BSM drawings.
- The design team have worked closely with the Lidl design team to co-ordinate the entrance/ exits and pedestrian crossings. The pedestrian crossing to the south east of the corner of the Lidl site is common to both applications and is permanent solution for crossing and traffic calming for the street.

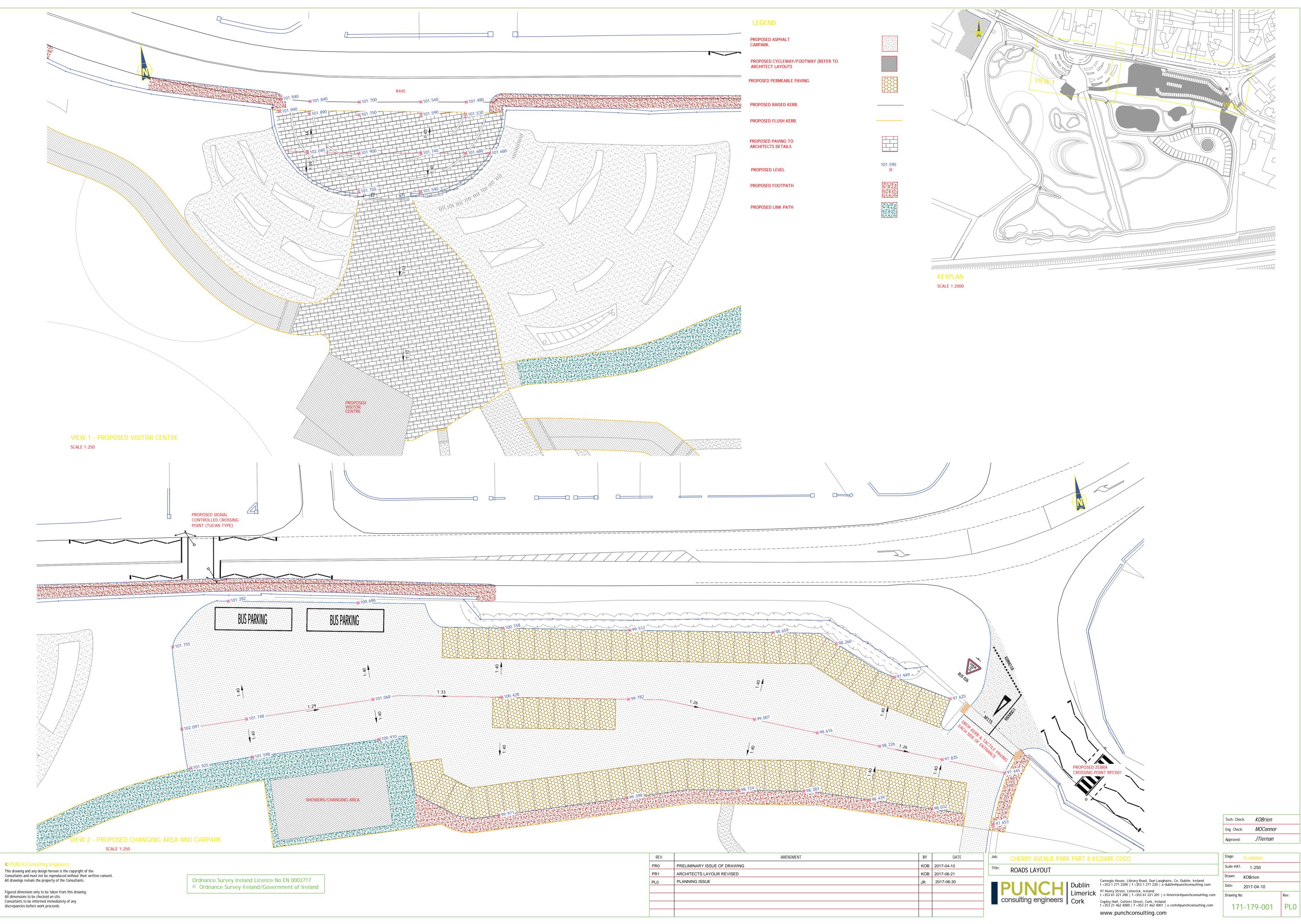


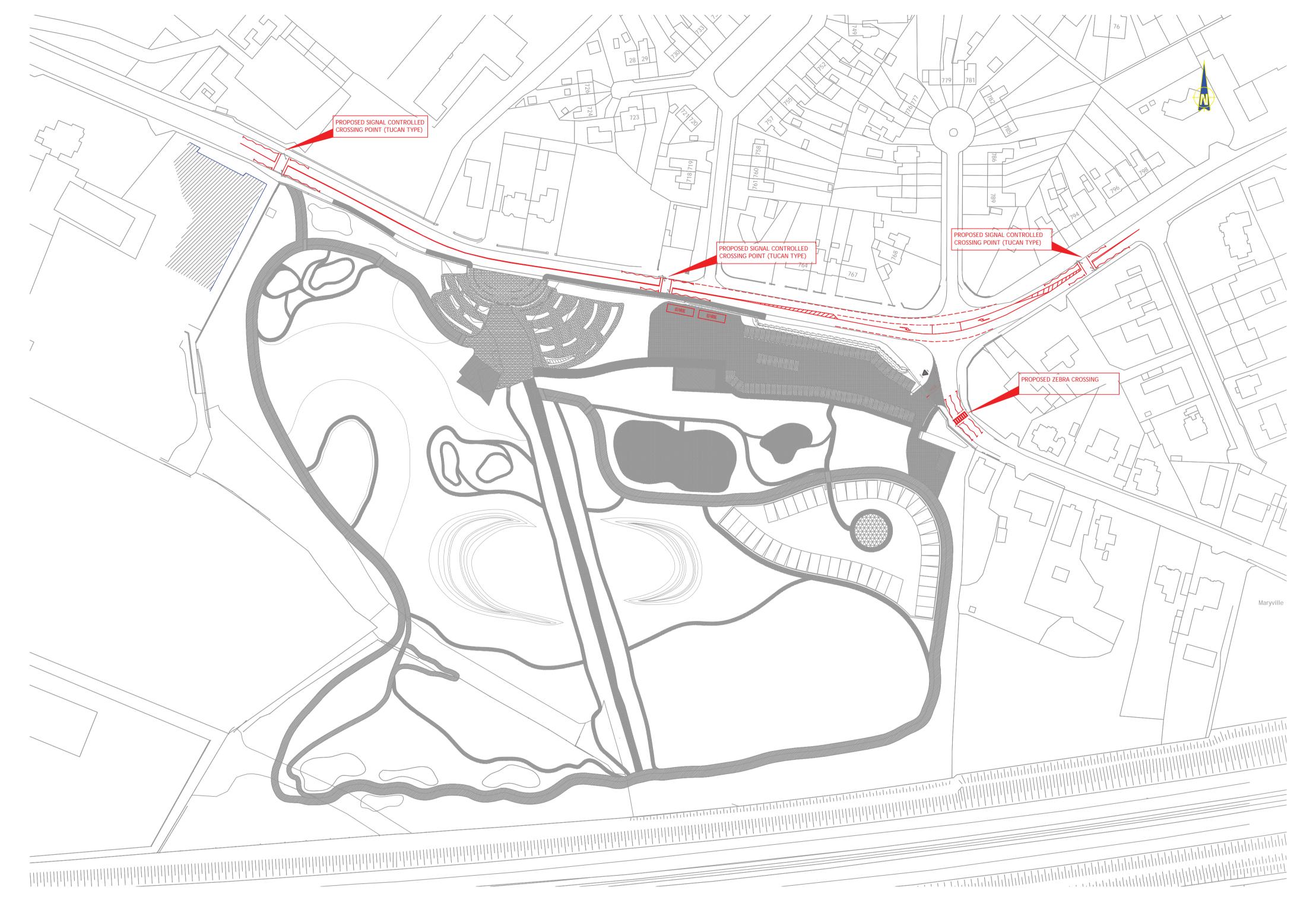
• The Lidl application proposes to create a temporary vehicle entrance / exit from their site on the south west corner. This entrance/ exit will be temporary until such time as the main signalised junction, submitted in this application, is in operation.



Appendix A

KCC Toucan Crossing Layout Standard Details Drg. No. 002





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Figured dimension only to be taken from this drawing. All dimensions to be checked on site. Consultants to be informed immediately of any discrepancies before work proceeds.

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REV.	AMENDMENT	BY	DATE	Job:
PR0	PRELIMINARY ISSUE OF DRAWING	ков	2017-06-22	Title:
PL0	PLANNING ISSUE	JR	2017-06-29	
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Tech. Check:	KOBrien
Eng. Check:	MOConnor
Approved:	JTiernan

Stage: PLANNING

Scale @A1: 1:1000

Job: CHERRY AVENUE PARK PART 8 KILDARE COCO

PEDESTRIAN ACCESS PLAN



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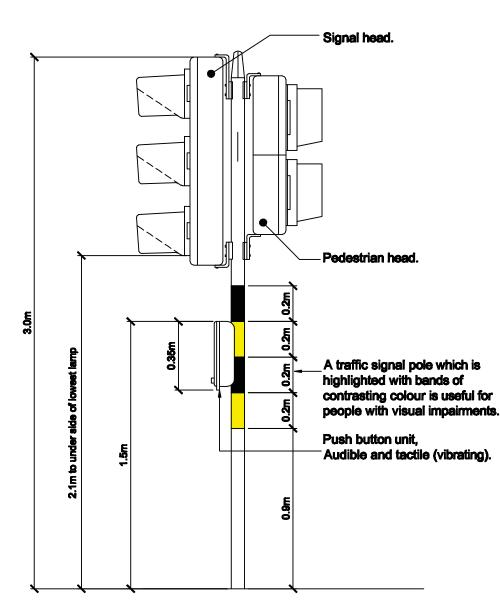
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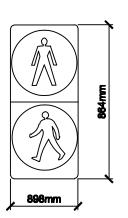


Appendix B

KCC Toucan Crossing Layout Standard Details Drg. No. 002



- **Elevation of Traffic Signal**
- Ref: Traffic Management Guidelines p.155. S.I. 181 (1997)-33.



Pedestrian Head Detail.

Traffic Signal Pole Notes:

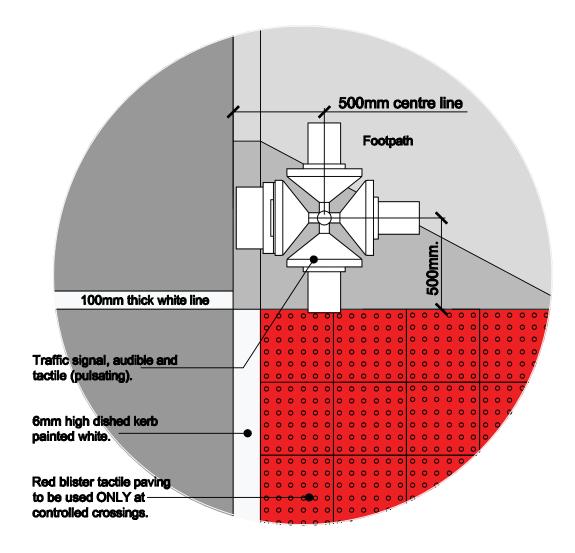
This detail refers to all controlled crossings.

All controlled traffic signals to be Audible, Tactile(Vibrating).

All services and gullies to be kept clear of crossing where possible.

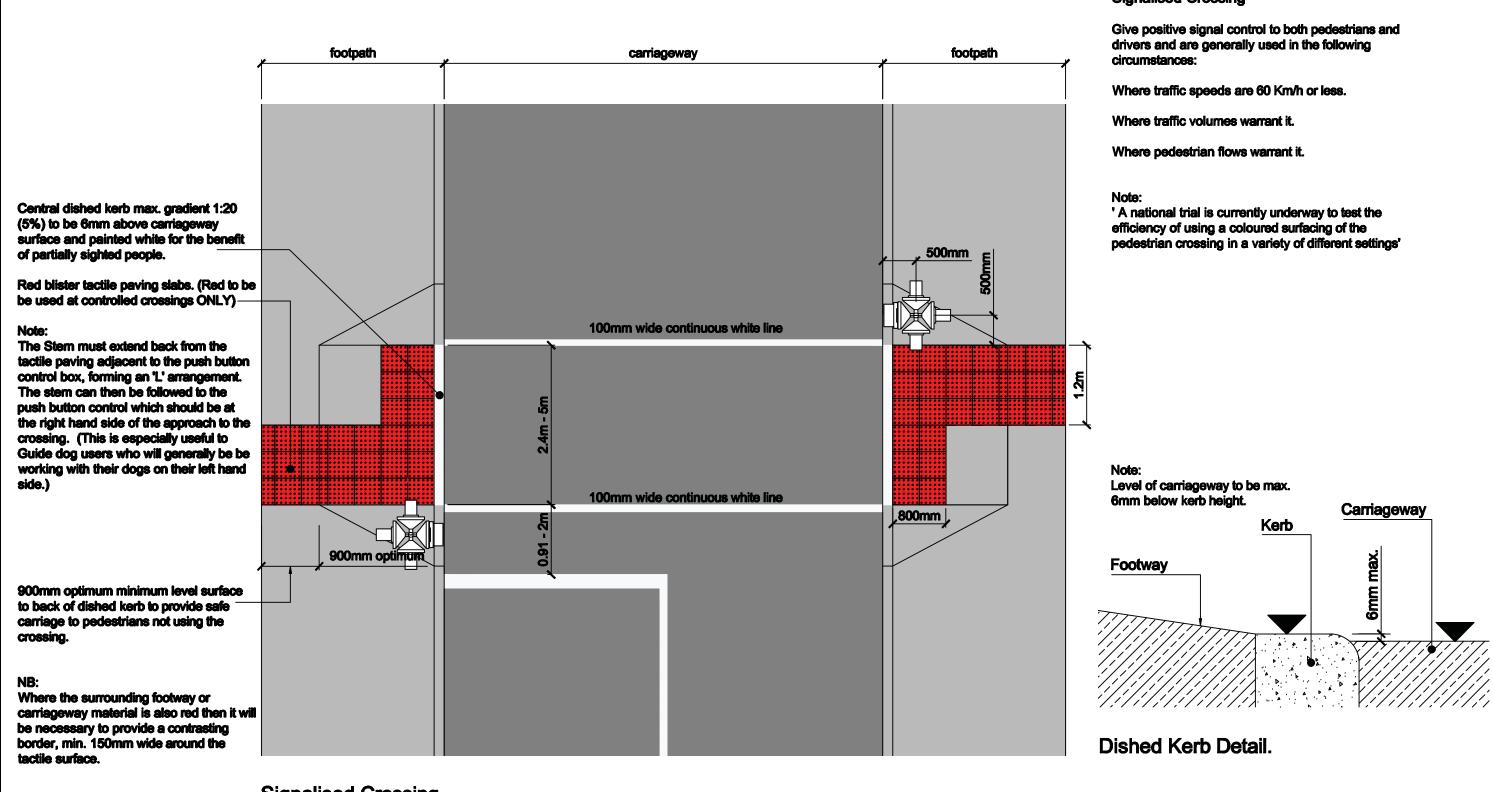
Position of pole to be located max. 500mm from tactile paving edge to centre line of pole, and 500mm from kerb edge to centre line of pole.

Refer to dished kerb detail.



Plan of Traffic Signal

Detail Drawing 4



Signalised Crossing

9

Signalised Crossing

Detail Drawing 6



Appendix C

SPEED ANALYSIS

Default

Globals

Report Id CustomList-134 **Descriptor** Default Created by MetroCount Traffic Executive Creation Time (UTC) 2017-10-30T09:54:44 Legal Copyright (c)1997 - 2015 MetroCount Graphic Language English **Country** Ireland Time UTC + 0 min Create Version 4.0.8.0 Metric Metric Speed Unit km/h Length Unit metre Mass Unit tonne Dataset Site Name Site 1 Site Attribute Kildare File Name C:\Users\cgormley\Documents\MetroCount\MTE 4.08\Data\Site 1 0 2017-1(File Type Plus Algorithm Factory default axle **Description** Site 1 Kildare Lane 2 **Direction** 6 Direction Text 6 - West bound A]B, East bound B]A. Layout Text Axle sensors - Paired (Class/Speed/Count) Setup Time 2017-10-16T10:19:25 Start Time 2017-10-16T10:19:25 Finish Time 2017-10-30T10:24:25 **Operator** CG Configuration 00000000 80 00 14 6a 6a 00 00 00 00 00 , Standard Profile Name Default Profile **Title MetroCount Traffic Executive Graphic Logo** Header Footer Percentile 1 85 Percentile 2 95 Pace 20 Filter Start 2017-10-16T10:20:00 Filter End 2017-10-30T10:24:25 Class Scheme DfT 2010 with COBA Aggregate (0 1 1 1 2 3 3 3 4 4 4 5 13) Low Speed 0 High Speed 160 Posted Limit 60 Speed Limits 60 60 60 60 60 60 60 60 60 60 60 Separation 0.000 Separation Type Headway **Direction** East **Encoded Direction 2**

ne (0000 - 2359)
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Time	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Mean	Vpp 85	
0000	0	0	0	0	0	0 -			
0100	0	0	0	0	0	0 -		•	
0200	0	0	0	0	0	0 -			
0300	0	0	0	0	0	0 -			
0400	0	0	0	0	0	0 -		•	
0500	0	0	0	0	0	0 -			
0600	0	0	0	0	0	0 -		•	
0700	0	0	0	0	0	0 -			
0800	0	0	0	0	0	0 -			
0900	0	0	0	0	0	0 -			
1000	0	0	0	0	0	0 -			
1100	0	0	0	0	0	0 -		•	
1200	0	0	0	0	0	0 -			
1300	0	0	0	0	0	0 -		•	
1400	0	0	0	0	0	0 -			
1500	0	0	0	0	0	0 -			
1600	0	0	0	0	0	0 -		•	
1700	0	0	0	0	0	0 -			
1800	0	0	0	0	0	0 -			
1900	0	0	0	0	0	0 -			
2000	115	109	5	0	1	0	44.1	57.6	
2100	85	70	11	2	1	1	54.9	63.4	
2200	58	54	3	0	0	1	55.8	64.3	
2300	39	33	2	2	1	1	58.2	65.7	
07-19	0	0	0	0	0	0 -			
06-22	200	179	16	2	2	1	48.7	62	
06-00	297	266	21	4	3	3	51.3	63.1	
00-00	297	266	21	4	3	3	51.3	63.1	

Time	Total	Cls 1	Cls 2	Cls 3	Cis 4	Cls 5	Mean	Vpp 85	
0000	29	23	4	0	1	1	59.3	71	
0100	17	14	1	1	0	1	59.4	74.4	
0200	5	3	0	1	0	1	57.7 -	•	
0300	8	6	0	1	0	1	63.8 -		
0400	8	7	0	0	0	1	57.8 -		
0500	54	44	4	4	1	1	60.6	74.3	
0600	141	128	7	3	2	1	55.5	65.6	
0700	216	178	24	10	1	3	55.4	64.5	
0800	400	349	31	14	2	4	50.5	61.2	
0900	359	325	20	8	3	3	49.9	59.8	
1000	264	216	26	12	8	2	49	59.3	
1100	288	250	23	10	3	2	49.6	58.8	
1200	278	235	28	7	3	5	52.9	61.2	
1300	342	304	22	13	2	1	51.1	59	
1400	354	310	32	7	3	2	47.9	59	
1500	324	279	32	8	4	1	48.1	57.8	
1600	339	295	26	8	7	3	50.3	58.9	
1700	319	286	23	5	3	2	52.9	60.8	
1800	305	276	23	4	0	2	52.3	59.6	
1900	236	213	17	3	1	2	52.1	62.5	
2000	169	147	20	1	1	0	55.5	65.2	
2100	94	87	4	1	1	1	56.6	66.7	
2200	64	56	6	1	0	1	55	63.3	
2300	30	23	2	4	0	1	50.8	62	
07-19	3788	3303	310	106	39	30	50.7	60.2	
06-22	4428	3878	358	114	44	34	51.2	60.8	
06-00	4522	3957	366	119	44	36	51.3	60.8	
00-00	4643	4054	375	126	46	42	51.5	61.1	

Time	Total	Cis 1	Cls 2	Cls 3	Cls 4	Cls 5	Mean	Vpp 85
0000	27	21	4	0	1	1	57.4	68.5
0100	10	7	2	0	0	1	64.8	-
0200	7	4	1	1	0	1	58.2	-
0300	2	1	0	0	0	1	42 -	-
0400	13	9	1	2	0	1	57.4	70.9
0500	57	48	5	1	2	1	56.1	70.6
0600	171	158	6	3	2	2	56.3	67.2
0700	234	200	16	14	1	3	54.5	63.3
0800	367	320	25	18	2	2	51.1	61.7
0900	378	314	40	18	3	3	50.2	59.6
1000	272	232	27	5	5	3	51	60.5
1100	319	260	35	18	3	3	49.5	58.7
1200	338	286	30	15	3	4	50.4	59.2
1300	357	322	27	4	3	1	49.2	59.1
1400	372	330	28	10	3	1	50.9	60.1
1500	306	260	27	16	2	1	51.7	61.6
1600	356	315	32	8	1	0	52.1	60.9
1700	323	294	20	5	2	2	51.3	61.3
1800	325	295	26	1	0	3	54.2	60.9
1900	235	206	20	5	2	2	54.7	63.8
2000	195	181	10	2	1	1	55	63.6
2100	124	111	9	1	1	2	56.5	66.3
2200	84	74	5	3	0	2	55.2	65.4
2300	41	34	4	1	1	1	58.8	70.4
07-19	3947	3428	333	132	28	26	51.2	60.4
06-22	4672	4084	378	143	34	33	51.9	61
06-00	4797	4192	387	147	35	36	52	61.3
00-00	4913	4282	400	151	38	42	52.1	61.5

Time	Total	Cls	Cls	Cis 3	Cis	Cls	Mean	Vpp
		1	2	3	4	5		85
0000	19	15	1	0	2	1	61	74.7
0100	19	15	2	1	0	1	53.4	70
0200	7	3	3	0	0	1	63.4 -	-
0300	6	4	0	1	0	1	64.5 -	
0400	17	11	0	4	0	2	61.6	80.4
0500	46	38	5	1	1	1	56.9	70
0600	164	153	4	5	0	2	56	66.8
0700	213	175	19	15	0	4	55	66.6
0800	363	314	25	18	3	3	50.1	60.6
0900	348	290	35	16	4	3	50.7	60.9
1000	294	239	36	14	5	0	49.8	58.8
1100	271	232	28	9	0	2	50.2	60.5
1200	327	287	29	8	1	2	50.1	59.3
1300	392	341	36	10	4	1	49.3	59.6
1400	422	364	45	11	0	2	50.2	58.6
1500	358	310	34	8	4	2	49.6	57.7
1600	313	263	34	13	2	1	51.7	60.3
1700	342	307	26	8	0	1	53.1	61.7
1800	300	273	24	2	0	1	53.2	61.3
1900	234	206	22	4	1	1	54.4	63
2000	182	163	18	0	0	1	56.2	65.5
2100	140	120	16	1	2	1	56.6	66.2
2200	64	57	5	0	1	1	56	68
2300	50	41	8	0	0	1	54.6	64.7
07-19	3943	3395	371	132	23	22	50.9	60.4
06-22	4663	4037	431	142	26	27	51.6	61.3
06-00	4777	4135	444	142	27	29	51.7	61.4
00-00	4891	4221	455	149	30	36	51.9	61.6

Time	Total	Cis 1	Cls 2	Cls 3	Cls 4	Cls 5	Mean	Vpp 85	
0000	38	28	8	1	0	1	60.3	72.7	
0100	37	34	2	0	0	1	62	75.3	
0200	20	18	1	0	0	1	64.7	80.1	
0300	14	11	1	1	0	1	62.5	83	
0400	9	8	0	0	0	1	54.4	•	
0500	19	14	2	1	1	1	51.6	73.8	
0600	43	31	8	2	1	1	59.7	70.3	
0700	77	69	4	2	0	2	55.1	67.2	
0800	102	82	12	4	2	2	58	65.8	
0900	182	155	18	6	1	2	57.6	67.5	
1000	237	189	36	8	1	3	54.5	62.7	
1100	268	242	16	9	0	1	57.2	64.9	
1200	314	276	27	8	1	2	55	64.2	
1300	326	294	25	4	1	2	55.3	63.9	
1400	279	260	15	2	1	1	53.9	63	
1500	287	263	16	5	1	2	55.1	63.3	
1600	302	271	25	5	0	1	55.1	63.1	
1700	319	286	26	6	0	1	57.2	65.5	
1800	233	214	14	3	0	2	54.4	64.4	
1900	188	171	13	1	1	2	56.8	64.2	
2000	174	155	18	0	0	1	56.4	67	
2100	118	105	11	0	0	2	57.3	66.6	
2200	67	55	10	1	0	1	54.4	63.4	
2300	65	48	14	1	1		58.2	69.1	
07-19	2926	2601	234	62	8	21	55.6	64.4	
06-22	3449	3063	284	65	10	27	55.8	64.7	
06-00	3581	3166	308	67	11	29	55.8	64.7	
00-00	3718	3279	322	70	12	35	56	64.8	

Time	Total	Cls 1	Cis 2	Cis 3	Cls 4	Cls 5	Mean	Vpp 85	
0000	53	42	8	0	0	3	60.1	72.9	
0100	34	26	7	0	0	1	63.2	74.2	
0200	30	22	5	2	0	1	66.3	81.6	
0300	29	18	9	1	0	1	61.8	75.6	
0400	16	10	5	0	0	1	59	76.5	
0500	12	11	0	0	0	1	56.4	70.4	
0600	18	16	1	0	0	1	60.3	81.2	
0700	40	31	6	2	0	1	55.4	69.2	
0800	46	40	2	2	1	1	57.6	69.6	
0900	113	101	9	1	0	2	58.3	67.2	
1000	157	141	13	2	0	1	57.9	69.3	
1100	234	212	19	2	0	1	55.8	64.4	
1200	276	254	16	4	1	1	55.5	63.3	
1300	317	284	26	5	0	2	55.7	64.5	
1400	305	279	20	3	2	1	53.9	61.6	
1500	288	257	30	1	0	0	56.2	63.8	
1600	250	227	19	2	1_	1.	54.4	62.4	
1700	261	244	13	0	2	2	56.6	65.1	
1800	245	229	13	2	0	1	54.9	62.7	
1900	248	223	15	7	1	2	55.7	64.3	
2000	170	157	9	2	0	2	57.3	65.6	
2100	112	105	2	1	1	3	56.8	67.4	
2200	93	85	7	0	0	1	56.5	66.9	
2300	29	22	5	1	0	1	56.8	66.2	
07-19	2532	2299	186	26	7	14	55.7	64.1	
06-22	3080	2800	213	36	9	22	55.9	64.4	
06-00	3202	2907	225	37	9	24	55.9	64.5	
00-00	3376	3036	259	40	9	32	56.2	64.9	

Time	Total	Cls 1	Cis 2	Cls 3	Cls 4	Cls 5	Mean	Vpp 85
0000	30	27	2	0	0	1	59.2	76.8
0100	18	15	2	Ő	Ő	1	56.7	77.9
0200	8	7	0	õ	Õ	1	52.7 -	
0300	4	2	1	Ő	0	1	58.1	
0400	10	6	Ó	3	0	1	59.7	
0500	53	45	5	0	2	1	55.5	70.1
0600	138	120	11	4	1	2	56.5	67.9
0700	234	197	20	10	3	4	55.4	64
0800	394	341	35	12	4	2	50	62.4
0900	340	287	33	16	2	2	48.2	58.3
1000	281	228	32	14	4	3	49.6	58.6
1100	265	221	27	11	4	2	48.1	58.3
1200	286	248	25	7	2	4	52.1	60.7
1300	329	290	24	11	2	2	49.6	60.6
1400	377	325	32	16	1	3	49	58.4
1500	312	278	27	4	2	1	51.2	60.5
1600	336	302	25	7	1	1	51.2	60.1
1700	319	283	30	4	1	1	53.3	62.1
1800	290	263	19	3	3	2	54.1	61.6
1900	246	217	19	5	2	3	52.3	59.6
2000	152	134	13	1	2	2	56.6	67.1
2100	112	101	10	0	0	1	57.3	66.6
2200	64	59	2	1	1	1	54.7	62.4
2300	23	21	0		0	1	55	66.3
07-19	3763	3263	329	115	29	27	50.8	60.6
06-22	4411	3835	382	125	34	35	51.5	61.2
06-00	4498	3915	384	127	35	37	51.5	61.4
00-00	4621	4017	394	130	37	43	51.7	61.7

Time	Total	Cls 1	Cls 2	Cls 3	Cis 4	Cls 5	Mean	Vpp 85	
0000	22	14	4	2	1	1	55.4	71.3	
0100	10	6	2	0	1	1	59.2		
0200	11	6	1	3	0	1	68.9	86.3	
0300	2	1	0	0	0	1	64.1 ·		
0400	8	3	0	4	0	1	64.5 ·		
0500	51	43	6	1	0	1	59.3	71.5	
0600	161	149	8	2	0	2	58.8	69.8	
0700	212	167	23	17	0	5	55.5	64.5	
0800	369	318	28	16	5	2	49.1	58.6	
0900	334	285	28	13	6	2	49.7	58.6	
1000	280	231	29	14	3	3	50.5	60.6	
1100	251	209	24	11	6	1	50.3	60	
1200	293	244	25	17	4	3	49.3	59	
1300	300	270	18	6	4	2	50.4	59.2	
1400	331	281	34	12	2	2	49.6	59.1	
1500	328	286	33	8	1	0	52	59.7	
1600	336	290	33	10	1	2	52.7	62.4	
1700	342	300	34	5	1	2	53.1	61.7	
1800	278	245	23	6	2	2	51	60.4	
1900	258	237	14	3	1	3	54.1	62.8	
2000	185	161	20	2	0	2	55	65	
2100	129	113	11	1	2	2	55.3	64.5	
2200	69	59	8	1	0	1	54.4	64	
2300	33	28	3	1	0	1	58	68.7	
07-19	3654	3126	332	135	35	26	51	60.1	
06-22	4387	3786	385	143	38	35	51.8	61.2	
06-00	4489	3873	396	145	38	37	51.8	61.3	
00-00	4593	3946	409	155	40	43	52	61.5	

Time	Total	Cls 1	Cls 2	Cls 3	Cis 4	Cls 5	Mean	Vpp 85	
0000	21	12	5	1	2	1	57.4	70	
0100	14	10	1	1	1	1	51.2	64.4	
0200	11	7	3	0	0	1	61.8	90.3	
0300	3	2	0	0	0	1	61.3 -	•	
0400	6	4	1	0	0	1	56.1 -		
0500	51	40	7	3	0	1	57.6	74.7	
0600	176	153	13	5	3	2	56.2	67	
0700	214	174	20	14	3	3	54.1	64.4	
0800	376	320	33	18	1	4	51	60.6	
0900	346	297	29	13	4	3	48.8	59.8	
1000	245	195	33	10	2	5	50.8	60.9	
1100	312	259	36	7	6	4	48.6	59.6	
1200	291	235	35	14	1	6	50.8	61.1	
1300	316	283	22	7	1	3	51.6	61.3	
1400	370	322	34	10	2	2	48.3	58.1	
1500	294	262	26	5	0	1	50.5	61.3	
1600	375	336	33	3	2	1	51.3	59.3	
1700	343	299	34	7	2	1	52.5	61.3	
1800	300	270	24	3	0	3	53.9	62.4	
1900	249	220	24	1	3	1	54.8	63.1	
2000	212	184	18	4	4	2	54.4	62.8	
2100	126	117	6	1	1	1	57.4	66.8	
2200	90	82	6	1	0	1	57.3	69.7	
2300	50	45	2	1		1	54.9	67.8	
07-19	3782	3252	359	111	24	36	50.9	60.6	
06-22	4545	3926	420	122	35	42	51.7	61.2	
06-00	4685	4053	428	124	36	44	51.8	61.4	
00-00	4791	4128	445	129	39	50	51.9	61.8	

Time	Total	Cls 1	Cls 2	Cis 3	Cls 4	Cls 5	Mean	Vpp 85	
0000	25	21	1	1	1	1	53.2	65.3	
0100	12	8	2	0	1	1	52.1	66.7	
0200	8	7	0	0	0	1	58.5 -		
0300	5	2	2	0	0	1	60 ·	•	
0400	11	5	1	4	0	1	55.6	78.3	
0500	61	57	2	1	0	1	56.6	73.6	
0600	174	153	13	5	1	2	56.7	66.7	
0700	212	172	19	14	4	3	55.5	64.3	
0800	378	328	28	16	2	4	51.8	59.6	
0900	388	320	47	15	3	3	49.1	58.9	
1000	310	256	32	14	5	3	48.7	58.9	
1100	326	283	28	11	1	3	49.1	58	
1200	320	274	31	9	3	3	50.5	59.9	
1300	348	303	28	11	4	2	51.3	60.1	
1400	369	326	28	12	2	1	50.4	59.3	
1500	307	266	31	7	2	1	48.1	58.1	
1600	392	346	33	10	2	1	50.9	59.1	
1700	347	313	26	5	1	2	52.9	61.2	
1800	303	282	18	1	0	2	53	60.7	
1900	277	244	21	6	4	2	53.6	60.5	
2000	65	60	4	0	0	1	53.4	62.4	
2100	0	0	0	0	0	0		•	
2200	0	0	0	0	0	0			
2300	0	0	0	0	0	0			
07-19	4000	3469	349	125	29	28	50.8	59.9	
06-22	4516	3926	387	136	34	33	51.2	60.2	
06-00	4516	3926	387	136	34	33	51.2	60.2	
00-00	4638	4026	395	142	36	39	51.4	60.3	

2

Default

Globals

Report Id CustomList-133 **Descriptor** Default Created by MetroCount Traffic Executive Creation Time (UTC) 2017-10-30T09:50:31 Legal Copyright (c)1997 - 2015 MetroCount Graphic Language English **Country Ireland** Time UTC + 0 min Create Version 4.0.8.0 Metric Metric Speed Unit km/h Length Unit metre Mass Unit tonne Dataset Site Name Site 1 Site Attribute Kildare File Name C:\Users\cgormley\Documents\MetroCount\MTE 4.08\Data\Site 1 0 2017-1(File Type Plus Algorithm Factory default axle **Description** Site 1 Kildare Lane 2 **Direction** 6 Direction Text 6 - West bound A]B, East bound B]A. Layout Text Axle sensors - Paired (Class/Speed/Count) Setup Time 2017-10-16T10:19:25 Start Time 2017-10-16T10:19:25 Finish Time 2017-10-30T10:24:25 **Operator** CG Configuration 00000000 80 00 14 6a 6a 00 00 00 00 00 , Standard Profile Name Default Profile Title MetroCount Traffic Executive **Graphic Logo** Header Footer Percentile 1 85 Percentile 2 95 Pace 20 Filter Start 2017-10-16T10:20:00 Filter End 2017-10-30T10:24:25 Class Scheme DfT 2010 with COBA Aggregate (0 1 1 1 2 3 3 3 4 4 4 5 13) Low Speed 0 High Speed 160 Posted Limit 60 Speed Limits 60 60 60 60 60 60 60 60 60 60 60 Separation 0.000 Separation Type Headway **Direction** West **Encoded Direction 8**

Time	24-hour time (0000 - 2359)
Total	Number in time step
Cls 1 - Car, pedal, motor	Class totals
Cls 2 - Igv	Class totals
Cls 3 - OGV1	Class totals
Cls 4 - OGV2	Class totals
Cls 5 - Bus	Class totals
Mean	Average speed
Vpp 85	Percentile speed

Time	Total	Cls 1	Cls 2	Cls 3	Cis 4	Cis 5	Mean	Vpp 85	
0000	0	0	0	0	0	0 -			
0100	Ő	Ő	Ő	Ő	Ő	0 -	-		
0200	Ő	Ő	õ	Ő	ő	0 -	-		
0300	Ő	Ő	0	0	0	0 -	-		
0400	Ő	Ő	Ő	Ő	Õ	0 -	-		
0500	0	Õ	0	0	0	0 -	-		
0600	Ō	Ő	0	0	0	0 -	-		
0700	0	0	0	0	0	0 -	-		
0800	0	0	0	0	0	0 -	-		
0900	0	0	0	0	0	0 -	-		
1000	0	0	0	0	0	0 -	-		
1100	0	0	0	0	0	0 -	-		
1200	0	0	0	0	0	0 -	-		
1300	0	0	0	0	0	0 -	-		
1400	0	0	0	0	0	0 -	-		
1500	0	0	0	0	0	0 -	-		
1600	0	0	0	0	0	0 -	-		
1700	0	0	0	0	0	0 -	-		
1800	0	0	0	0	0	0 -	-		
1900	0	0	0	0	0	0 -	-		
2000	74	72	1	0	0	1	40.2	52.2	
2100	105	87	10	3	3	2	54.5	65.2	
2200	51	48	3	0	0	0	55.1	64.5	
2300	38	31	3	2	0	2	57.8	72.1	
07-19	0	0	0	0	0	0 -			
06-22	179	159	11	3	3	3	48.6	61.9	
06-00	268	238	17	5	3	5	51.1	63.8	
00-00	268	238	17	5	3	5	51.1	63.8	

Time	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Mean	Vpp 85	
0000	22	18	2	0	0	2	58.8	70.5	
0100	8	5	2	0	0	1	66.7	-	
0200	6	4	0	0	1	1	55.8	-	
0300	5	4	0	0	0	1	60.7	-	
0400	6	2	0	3	0	1	66.5	-	
0500	17	14	0	1	1	1	56.9	68	
0600	47	39	5	2	0	1	54	63.1	
0700	143	122	11	7	1	2	54.8	64	
0800	398	359	26	8	2	3	50.8	58.3	
0900	261	221	27	7	4	2	49.7	59.7	
1000	239	200	24	8	5	2	46.9	57.1	
1100	281	236	22	15	7	1	48.7	58.1	
1200	308	261	30	9	6	2	49.7	58.6	
1300	327	286	30	7	2	2	49.4	58.6	
1400	388	341	27	15	3	2	48.9	56.8	
1500	353	305	32	12	2	2	42.9	53.8	
1600	414	366	37	8	1	2	47	56.3	
1700	424	381	33	3	5	2	49.1	58	
1800	348	315	22	8	1	2	49.9	56.5	
1900	243	218	18	4	1	2	51.4	59.8	
2000	178	156	17	3	1	1	52.5	59.3	
2100	89	77	7	2	0	3	54	62.8	
2200	49	42	5	1	0	1	54.6	63.7	
2300	32	24	5	2	0	1	55.7	64.3	
07-19	3884	3393	321	107	39	24	48.7	57.6	
06-22	4441	3883	368	118	41	31	49.2	58.1	
06-00	4522	3949	378	121	41	33	49.3	58.2	
00-00	4586	3996	382	125	43	40	49.4	58.5	

Time	Total	Cls 1	Cis 2	Cls 3	Cls 4	Cls 5	Mean	Vpp 85	
0000	19	15	1	1	0	2	54	62.8	
0100	12	9	2	0	0	1	55.9	64.7	
0200	5	3	0	1	0	1	66	-	
0300	5	4	0	0	0	1	62.7	-	
0400	10	4	2	3	0	1	58.3	-	
0500	17	13	1	1	1	1	58	69.7	
0600	68	56	9	2	0	1	53.1	64.7	
0700	161	133	14	10	2	2	52.8	61.2	
0800	401	365	25	8	2	1	51.2	58.3	
0900	285	234	36	9	4	2	48.1	58.9	
1000	236	199	23	10	2	2	49.3	58.2	
1100	274	230	26	13	1	4	48.5	57.4	
1200	337	293	26	12	4	2	47.4	57.8	
1300	320	293	19	6	1	1	48.7	57.8	
1400	366	325	24	11	4	2	49.5	57.1	
1500	311	268	30	10	2	1	50.2	58.4	
1600	411	365	31	10	3	2	47.7	56.9	
1700	424	383	30	6	4	1	48.5	56.4	
1800	340	313	18	4	1	4	49.5	56.9	
1900	283	254	19	8	0	2	50.6	58	
2000	169	156	10	0	2	1	52.4	60.8	
2100	111	100	4	3	1	3	51.5	61.6	
2200	64	54	6	3	0	1	51.7	57.7	
2300	34	25	2	4	2	1	53.8	59.7	
07-19	3866	3401	302	109	30	24	49.1	57.8	
06-22	4497	3967	344	122	33	31	49.5	57.8	
06-00	4595	4046	352	129	35	33	49.5	57.9	
00-00	4663	4094	358	135	36	40	49.6	58	

Time	Total	Cls 1	Cls 2	Cls 3	Cis 4	Cis 5	Mean	Vpp 85	
0000	25	22	2	0	0	1	51.8	61.1	
0100	12	8	3	0	0	1	50.2	64.5	
0200	8	6	0	1	0	1	59.7		
0300	5	3	0	0	1	1	57.9		
0400	13	6	1	4	0	2	55.6	63.8	
0500	22	17	1	2	1	1	55.5	67.5	
0600	57	47	7	1	0	2	49.6	62.3	
0700	113	92	12	5	2	2	54.4	63.3	
0800	383	339	31	10	1	2	50.4	59.5	
0900	279	232	27	11	5	4	49.3	58.1	
1000	272	230	24	10	6	2	47.5	56.7	
1100	299	249	32	10	4	4	47.6	57.2	
1200	366	324	25	12	4	1	48	56.7	
1300	370	330	27	9	2	2	50.2	58.6	
1400	412	367	30	9	3	3	49.7	59	
1500	403	353	31	15	3	1	49.4	58.3	
1600	412	350	46	13	3	0	47.2	56.3	
1700	431	391	27	9	1	3	50.4	58.9	
1800	347	317	22	3	1	4	49.2	56.8	
1900	240	217	13	6	1	3	50.7	58.2	
2000	191	167	19	2	2	1	50.8	59.7	
2100	131	118	10	2	1	0	54.6	62.4	
2200	77	68	7	1	0	1	53.9	63.6	
2300	52	44	7	0	0	1	52.9	61.8	
07-19	4087	3574	334	116	35	28	49.2	58.1	
06-22	4706	4123	383	127	39	34	49.5	58.5	
06-00	4835	4235	397	128	39	36	49.6	58.4	
00-00	4920	4297	404	135	41	43	49.7	58.7	

Time	Total	Cis 1	Cls 2	Cls 3	Cls 4	Cls 5	Mean	Vpp 85	
0000	32	24	5	1	0	2	57.5	68.6	
0100	24	18	4	1	0	1	58.4	69.7	
0200	22	18	2	1	0	1	59.9	69.7	
0300	13	11	1	1	0	0	61.8	71.6	
0400	14	7	3	2	0	2	58.7	72.4	
0500	18	13	3	1	0	1	54	65.7	
0600	36	30	4	1	0	1	59.1	73.6	
0700	57	51	2	3	0	1	55	65.8	
0800	98	77	16	4	0	1	57.2	65	
0900	176	160	11	3	1	1	55.3	63.4	
1000	255	223	22	6	2	2	51.7	59.5	
1100	277	245	22	6	2	2	53.4	61.5	
1200	323	281	31	6	3	2	51.4	58	
1300	289	262	21	4	1	1	53.9	60.6	
1400	255	237	13	3	0	2	53.8	61.3	
1500	282	252	27	2	1	0	53.4	60.4	
1600	276	245	27	3	0	1	54.1	61.1	
1700	290	261	20	8	0	1	53.8	59.6	
1800	273	241	20	7	0	5	52.6	60.8	
1900	194	172	19	1	0	2	52.6	59.2	
2000	146	127	16	2	1	0	55	63.4	
2100	124	113	9	1	0	1	54.3	63	
2200	71	58	12	1	0	0	54.2	62.7	
2300	49	41	6	0	0	2	55.5	65.5	
07-19	2851	2535	232	55	10	19	53.4	60.9	
06-22	3351	2977	280	60	11	23	53.5	61.1	
06-00	3471	3076	298	61	11	25	53.6	61.1	
00-00	3594	3167	316	68	11	32	53.7	61.5	

Time	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Mean	Vpp 85	
0000	52	40	9	0	0	3	57.7	67.4	
0100	30	22	6	1	0	1	59.5	69.3	
0200	28	23	5	0	0	0	62.7	77	
0300	22	14	6	1	0	1	63	70.8	
0400	19	11	6	1	0	1	61.1	67.9	
0500	10	7	0	1	0	2	60.2	-	
0600	11	6	4	0	0	1	56.4	72.5	
0700	31	25	3	1	1	1	53.9	62.2	
0800	63	54	7	1	0	1	55.7	65.7	
0900	112	102	7	1	1	1	57.3	65	
1000	165	147	12	5	0	1	55.2	66.6	
1100	180	163	14	0	2	1	55.4	63.9	
1200	215	189	23	2	1	0	53.8	61.1	
1300	266	243	19	2	1	1	53.4	61.2	
1400	276	251	21	2	0	2	52.9	59.6	
1500	297	272	22	1	2	0	52.8	59.5	
1600	266	232	30	3	0	1	51.9	59	
1700	266	256	7	2	0	1	51.4	59.2	
1800	287	268	10	5	3	1	53.3	60.8	
1900	205	181	18	4	0	2	51.7	59.3	
2000	159	141	9	5	1	3	54.4	63.5	
2100	82	79	2	0	0	1	55.9	64	
2200	65	58	6	0	0	1	57.3	65.4	
2300	31	23	4	2	0	2	54.9	65.3	
07-19	2424	2202	175	25	11	11	53.4	60.9	
06-22	2881	2609	208	34	12	18	53.4	61.3	
06-00	2977	2690	218	36	12	21	53.5	61.3	
00-00	3138	2807	250	40	12	29	53.9	61.9	

Time	Total	Cis 1	Cis 2	Cls 3	Cls 4	Cis 5	Mean	Vpp 85	
0000	27	24	2	0	0	1	51.9	63	
0100	7	4	0	1	0	2	55.6	-	
0200	10	9	0	0	0	1	60.2	-	
0300	4	3	1	0	0	0	52.6	-	
0400	11	7	0	2	0	2	56.3	69.1	
0500	24	20	0	1	2	1	54.3	68.1	
0600	56	47	5	2	0	2	55.5	67.1	
0700	118	95	15	4	1	3	53.5	63.9	
0800	388	350	27	8	2	1	50.2	59	
0900	263	214	29	12	5	3	47.6	57.3	
1000	266	218	28	12	3	5	48.7	57.8	
1100	241	201	24	10	5	1	47.4	58.3	
1200	300	258	29	8	2	3	49.4	58.1	
1300	343	299	23	13	5	3	48.2	57.9	
1400	323	270	37	12	2	2	49.8	59	
1500	349	311	20	12	4	2	49.6	58.2	
1600	424	373	39	8	1	3	49.2	56.9	
1700	384	344	29	8	3	0	50.9	59.4	
1800	349	315	23	8	0	3	50	57.3	
1900	227	204	12	6	1	4	50.4	58.3	
2000	148	131	12	1	3	1	54.1	63.2	
2100	99	85	8	0	3	3	54.8	65	
2200	50	47	2	1	0	0	53.8	61.9	
2300	23	17	3	1	0	2	54.8	70.2	
07-19	3748	3248	323	115	33	29	49.4	58.3	
06-22	4278	3715	360	124	40	39	49.8	58.5	
06-00	4351	3779	365	126	40	41	49.9	58.7	
00-00	4434	3846	368	130	42	48	50	58.8	

Time	Total	Cls 1	Cls 2	Cls 3	Cis 4	Cls 5	Mean	Vpp 85
0000	15	10	4	0	0	1	52.6	66.3
0100	9	6	1	1	0	1	58.9	-
0200	9	5	1	2	0	1	55.1	
0300	5	3	1	0	0	1	54.5	
0400	8	5	0	2	0	1	53.9	-
0500	20	17	1	1	0	1	51.7	63.8
0600	53	46	3	1	2	1	57.4	68.2
0700	119	100	9	8	1	1	54.8	62.6
0800	390	354	29	5	1	1	51	57.7
0900	282	241	23	13	3	2	50.7	60.4
1000	218	179	22	12	2	3	48.2	57.6
1100	248	216	20	8	2	2	48.2	56.9
1200	287	247	20	11	6	3	47.9	58.2
1300	330	285	24	13	5	3	47.2	57.3
1400	317	286	17	11	1	2	49.3	58.8
1500	324	283	24	15	2	0	50.1	58.8
1600	386	348	22	10	4	2	50.3	58.1
1700	458	421	28	3	5	1	48.6	56.4
1800	355	305	35	11	2	2	48.6	56.6
1900	263	227	27	7	0	2	50.6	58.8
2000	166	141	19	3	1	2	52.6	62.1
2100	102	93	3	2	1	3	55.2	64.8
2200	58	50	7	1	0	0	55.6	67.9
2300	30	26	0	1	1	2	55.1	66.6
07-19	3714	3265	273	120	34	22	49.4	57.9
06-22	4298	3772	325	133	38	30	49.8	58.3
06-00	4386	3848	332	135	39	32	49.9	58.5
00-00	4452	3894	340	141	39	38	50	58.5

Time	Total	Cis 1	Cis 2	Cls 3	Cls 4	Cls 5	Mean	Vpp 85	
0000	22	17	4	0	0	1	57.5	67.8	
0100	14	12	0	0	1	1	57	67.3	
0200	6	3	2	0	0	1	52.8	-	
0300	4	3	0	0	0	1	52.3	-	
0400	6	4	0	1	0	1	51.5 ·	-	
0500	22	17	1	3	0	1	53	66	
0600	51	41	3	5	1	1	55.3	66.3	
0700	125	108	12	3	0	2	54.4	64.3	
0800	392	349	29	10	2	2	52.6	58.3	
0900	269	222	29	13	2	3	49.4	58.4	
1000	237	213	13	7	2	2	48.1	58.6	
1100	293	249	25	12	2	5	47.4	58.7	
1200	301	261	25	11	3	1	47.4	56.5	
1300	306	276	21	5	4	0	50.5	59.9	
1400	376	327	33	12	1	3	48.6	56.6	
1500	370	324	29	15	1	1	49.5	59.5	
1600	412	360	35	11	4	2	49.4	58.3	
1700	452	403	35	6	6	2	48.7	57.3	
1800	378	338	29	7	1	3	49.6	57.6	
1900	247	210	23	8	2	4	51.2	59.5	
2000	174	144	20	2	6	2	52.6	61.5	
2100	116	106	7	2	1	0	53.9	62.5	
2200	71	66	4	0	0	1	55.3	63.6	
2300	46	40	4	1	0	1.	54.3	67.8	
07-19	3911	3430	315	112	28	26	49.5	58.4	
06-22	4499	3931	368	129	38	33	49.9	58.5	
06-00	4616	4037	376	130	38	35	50	58.9	6
00-00	4690	4093	383	134	39	41	50.1	58.9	

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Time	Total	Cls 1	Cls 2	Cls 3	Cls 4	Cls 5	Mean	Vpp 85	
0000	20	16	1	1	1	1	52	61.1	
0100	12	9	2	0	0	1	58.9	67.9	
0200	9	7	0	0	1	1	56.8	-	
0300	4	1	2	0	0	1	55.4	-	
0400	11	6	0	4	0	1	57.9	71.9	
0500	23	21	2	0	0	0	57.1	76.7	
0600	60	48	4	5	1	2	56.4	66.8	
0700	152	127	12	9	2	2	53.3	62.1	
0800	413	366	29	10	5	3	51.4	59	
0900	308	254	35	11	6	2	48.8	57.2	
1000	234	198	23	9	2	2	47.9	56.9	
1100	324	279	25	15	2	3	44.9	53.7	
1200	344	295	29	15	4	1	46	54.8	
1300	307	267	29	7	2	2	50.6	58.1	
1400	349	306	26	14	1	2	49.6	58.8	
1500 -	377	326	34	12	5	0	49.1	57.8	
1600	394	351	24	11	5	3	47.2	55.4	
1700	467	432	27	4	2	2	49	57.7	
1800	372	337	26	5	2	2	48	55.4	
1900	289	256	20	8	1	4	50.1	56.3	
2000	61	54	1	2	1	3	54.7	61.8	
2100	0	0	0	0	0	0			
2200	0	0	0	0	0	0	• •		
2300	0	0	0	0	0	0 -			
07-19	4041	3538	319	122	38	24	48.7	57	
06-22	4451	3896	344	137	41	33	48.9	57.1	
06-00	4451	3896	344	137	41	33	48.9	57.1	
00-00	4530	3956	351	142	43	38	49.1	57.3	



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