

LEVEL CROSSINGS

The Need to Remove Level Crossings – Responses to General Submissions

• Level Crossing Statistics

Almost 300 people die at level crossings across Europe every year and level crossing accidents account for 1% of road deaths in Europe but 31% of all rail fatalities.

	Total	917	6000
Length of Passenger Track (km)	2033	16000	
Length of Track per Level Crossing (km)	2.2	2.6	

CRR Railway Safety Performance in Ireland 2020 Network Rail: Enhancing Level Crossing Safety 2019 to 2029

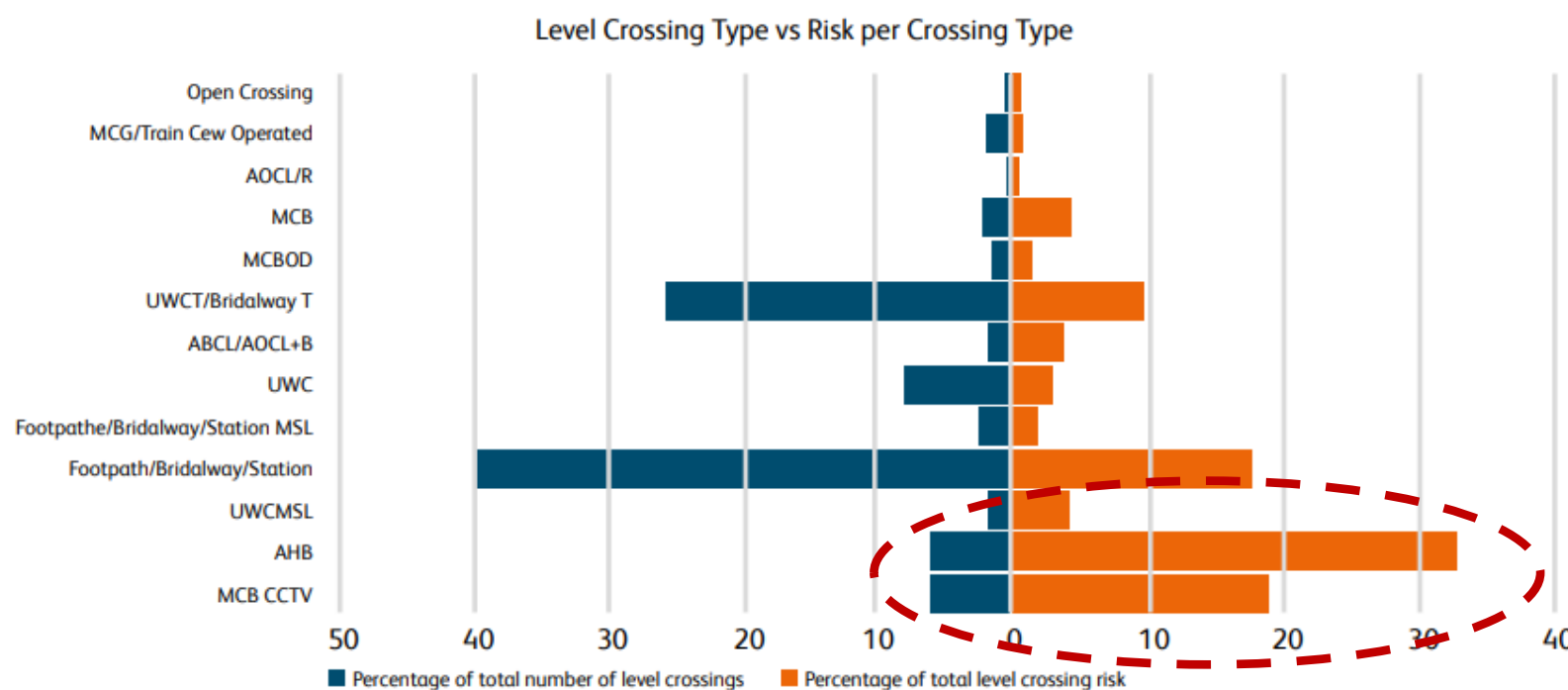
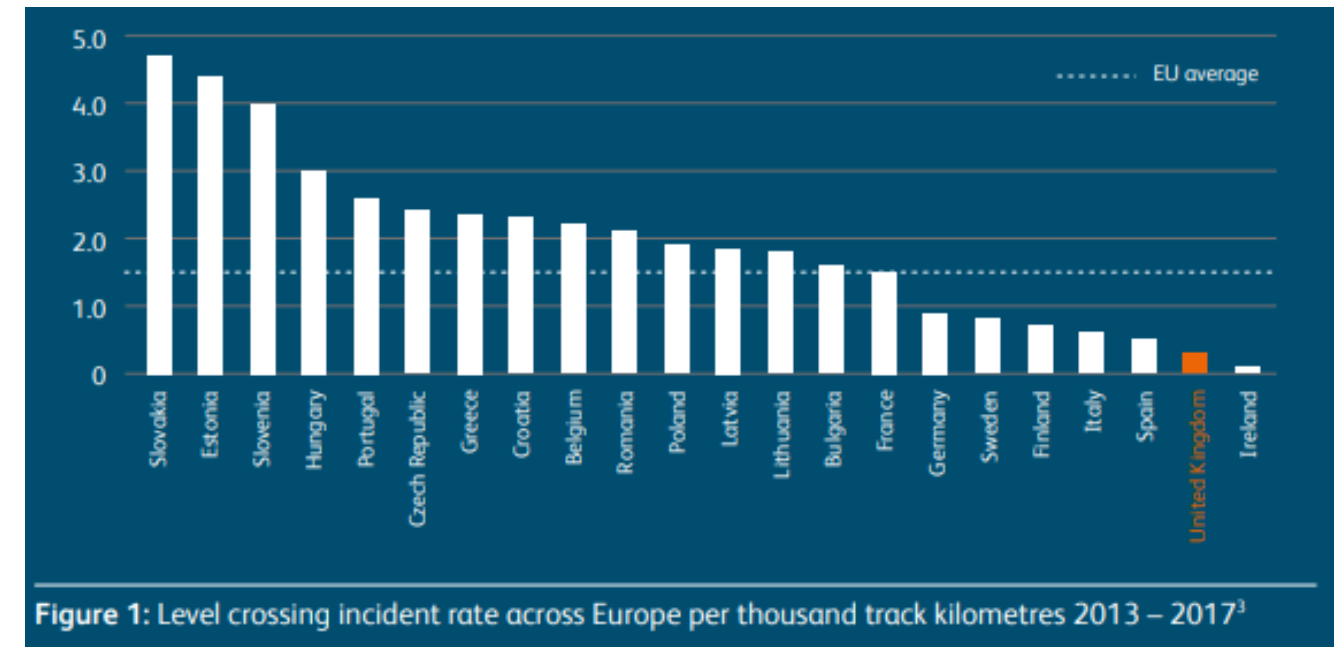


Figure 13
Level crossing by
type in Ireland

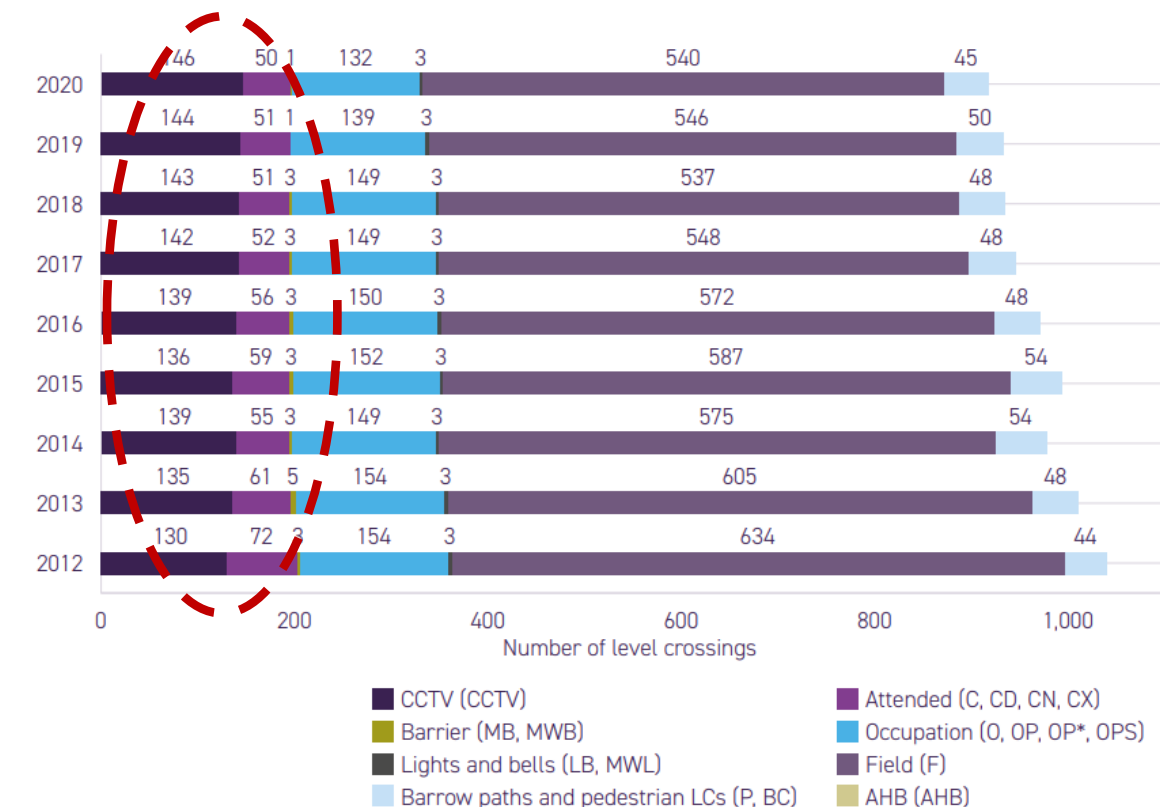


Figure 4: Level Crossing Type vs Risk per Crossing Type

LEVEL CROSSINGS

The Need to Remove Level Crossings – Responses to General Submissions

Barrier Operation (Core time 28-34sec)

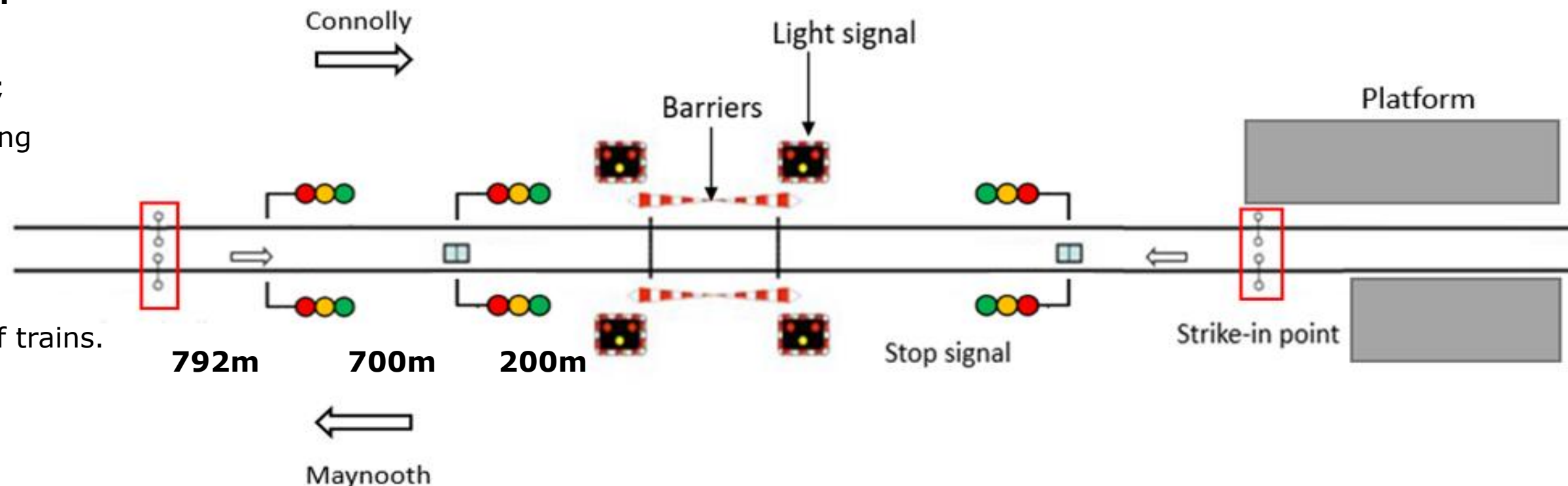
- Strike-in Signal activated by train;
- Lights Flash, Audible Alarm (12-13sec);
- Entry Barriers Lowered (6-8sec);
- Level Crossing Box Cleared (5sec+);
- Exit Barriers Lowered (6-8sec);
- Stop Signal Changed from Red to Green;
- Train Proceeds through Level Crossing;
- Barriers Lifted and vehicular movements resume.

Issues affecting Individual Cycle Times (at Station)

- The number of trains passing – typically between 1 and 3;
- The gap between the trains <90s single cycle;
- The direction of travel; West 1692m, East 95m – e.g. Coolmine Optimised;
- Express trains vs commuter trains;
- The presence of a train station immediately adjacent to the crossing;
- The proximity of adjacent level crossings;
- The dwell time in a station – 30sec to 60sec typ;
- Train acceleration – 13sec min (Coolmine);
- Traffic conditions at the level crossing which may delay the barrier closures;
- Total Min Cycle Time (1 Train) 73-79 secs EW;
- Total Min Cycle Time (1 train) 2min 32sec to 2min 38secs WE;

Issues affecting Scope for Improvement

- Location of Strike Signal;
- Stopping and non-stopping trains through Station;
- The line speed;
- The track gradient; and
- Braking characteristics of trains.



LEVEL CROSSINGS

The Need to Remove Level Crossings – Responses to General Submissions

Existing Cycle time range

- 2mins 15 secs - 8 mins 10 secs;

Line Speeds

- Ashtown 70mph
 - Coolmine 60mph
 - Porterstown 70mph
 - Clonsilla 60mph
 - Barberstown 70mph
 - Blakestown 40mph
-
- Max permitted running speed 60mph

Table 2-3 AM Peak Railway Stats for the Level Crossings

Level Crossing	Station Adjacent	Current Trains Passing (No.)	Planned Trains Passing (No.)	Uplift (%)	Current Closures (No.)	Projected Closures (No.)	Current Average Closure Duration	Current Total Closure Duration per Hour	Projected Total Closure Duration*
Ashtown (attended)	Yes	13	24	84	6	12	06:07	36:42	73:24
Coolmine (CCTV)	Yes	12	24	100	9	18	04:37	41:35	83:06
Porterstown (CCTV)	No	12	24	100	7	14	04:41	32:46	65:34
Clonsilla (attended)	Yes	12	24	100	7	14	04:25	30:58	61:50
Barberstown (CCTV)	No	9	16	78	6	11	04:21	26:03	47:51
Blakestown (CCTV)	No	7	16	128	5	11	04:46	23:48	52:26

Note: All Durations are presented in minutes and seconds per hour. Where cumulative durations in excess of 60minutes are reported this indicates the level crossing is effectively closed for the full hour.

* Projection based on average closure timed without optimisation

Table 2-5 Vehicular Road Traffic Counts for Level Crossings

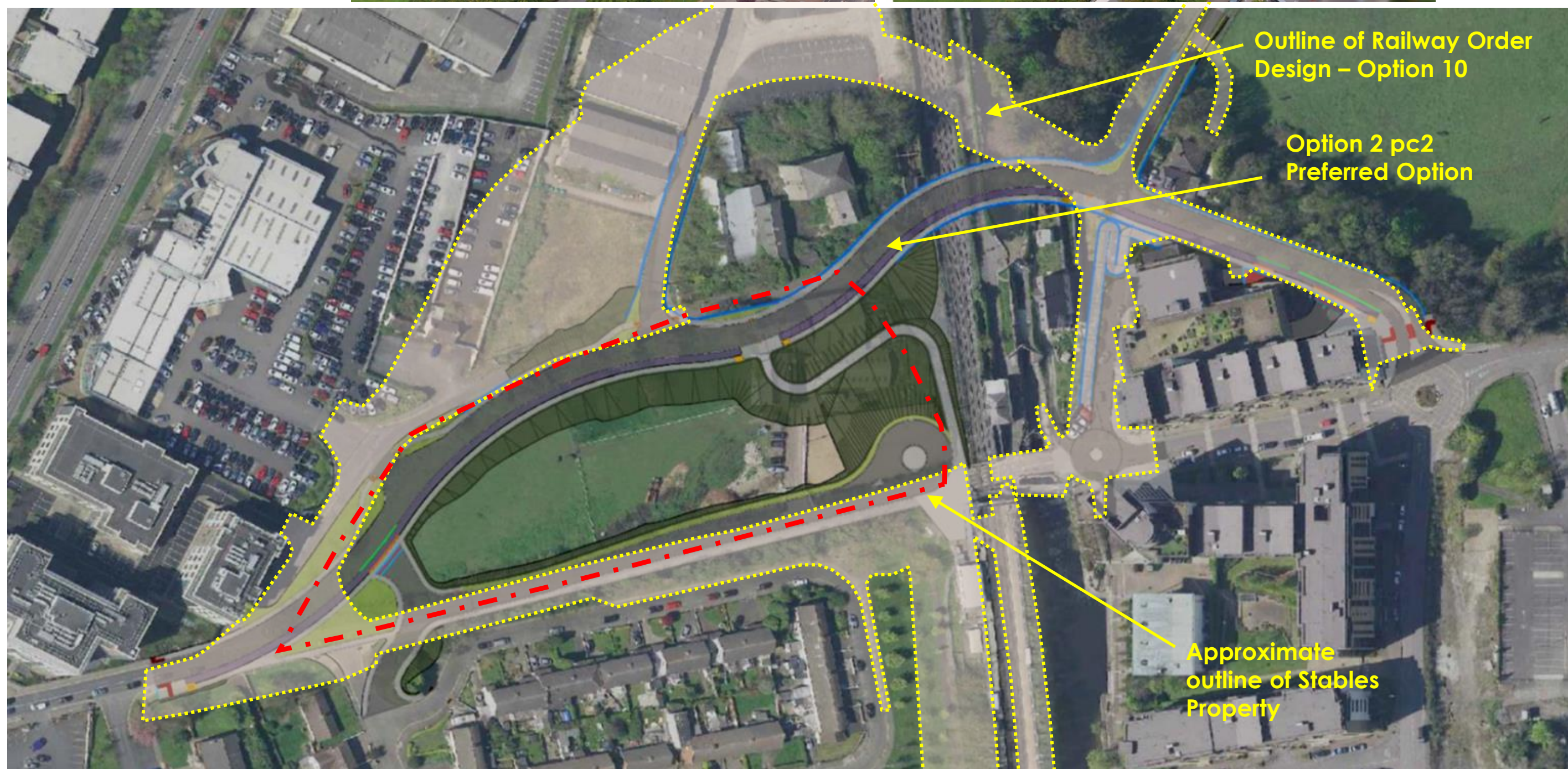
Level Crossing	Station Adjacent	2019 AM SB Peak Veh/hr	2019 AM NB Peak Veh/hr	2019 PM SB Peak Veh/hr	2019 PM NB Peak Veh/hr
Ashtown (attended)	Yes	334	120	228	143
Coolmine (CCTV)	Yes	221	297	241	206
Porterstown (CCTV)	No	91	26	36	23
Clonsilla (attended)	Yes	202	143	116	215
Barberstown (CCTV)	No	73	20	28	43
Blakestown (CCTV)	No	3	9	9	4

LEVEL CROSSINGS

Ashtown LC - Responses



Area (ha)	Total(Ha)	%		
0.0426	1.21	3.5%		Perm Ag
0.0211	1.21	1.7%	5.3%	Temp Ag
0.1049	1.21	8.7%	13.9%	Roadbase



LEVEL CROSSINGS

Ashtown LC - Responses



LEVEL CROSSINGS

Ashtown LC - Responses



3D image of Proposed Ashtown Road Alterations, Reinstatement of the Martin Savage Pk Treeline and Retained Stables