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LIVELABS2
Decarbonising Local Roads

Year 3 Project Update

Karl Rourke
Project Manager
East Riding of Yorkshire Council





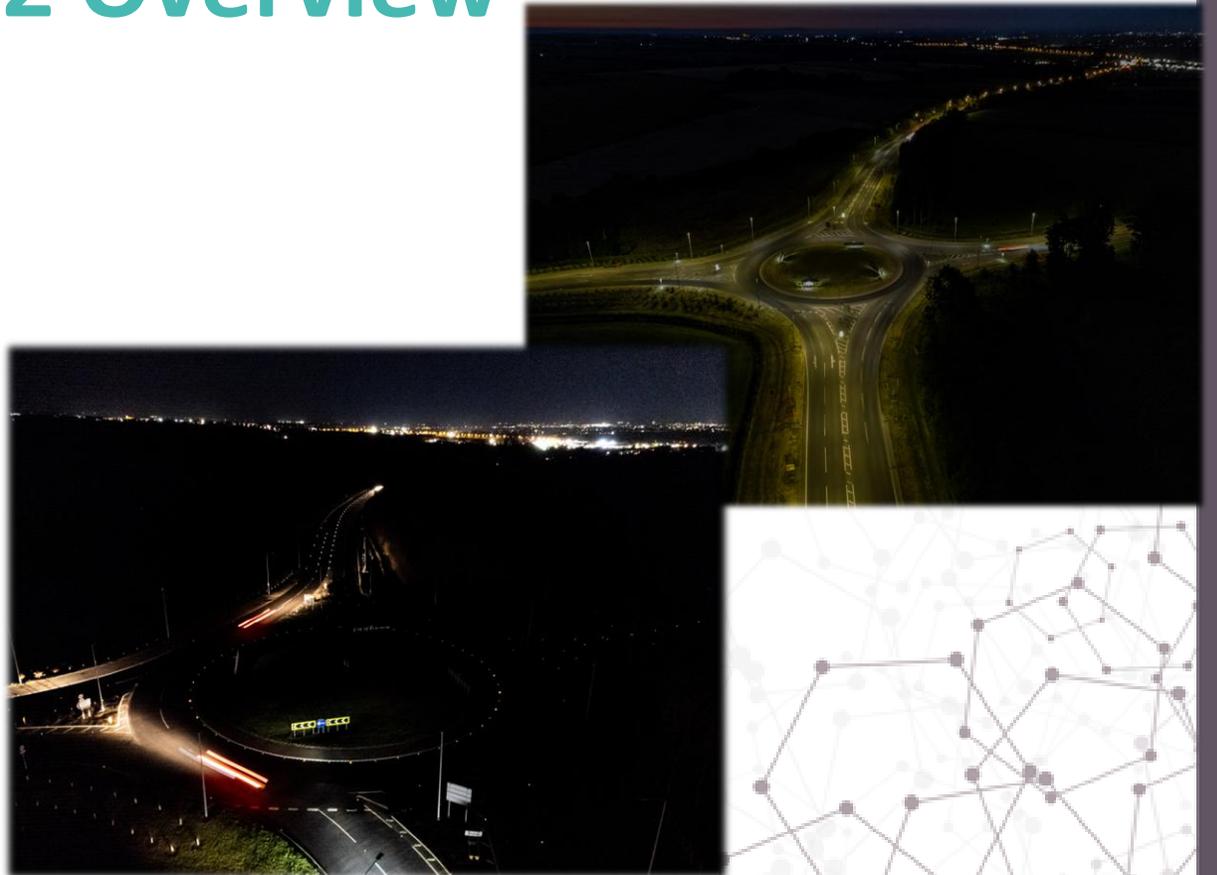
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LIVELABS2
Decarbonising Local Roads

Live Labs 2 Overview

- Decarbonising highway visual environment
- Focus on A-Road and bypass routes
- Conflict Zones
- New lighting for pedestrian use
- Use of alternative equipment instead of lighting
- 22 sites in East Riding / 7 confirmed partner sites





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Project Results

- Road Safety
- Carbon
- Cost
- Supporting Reports





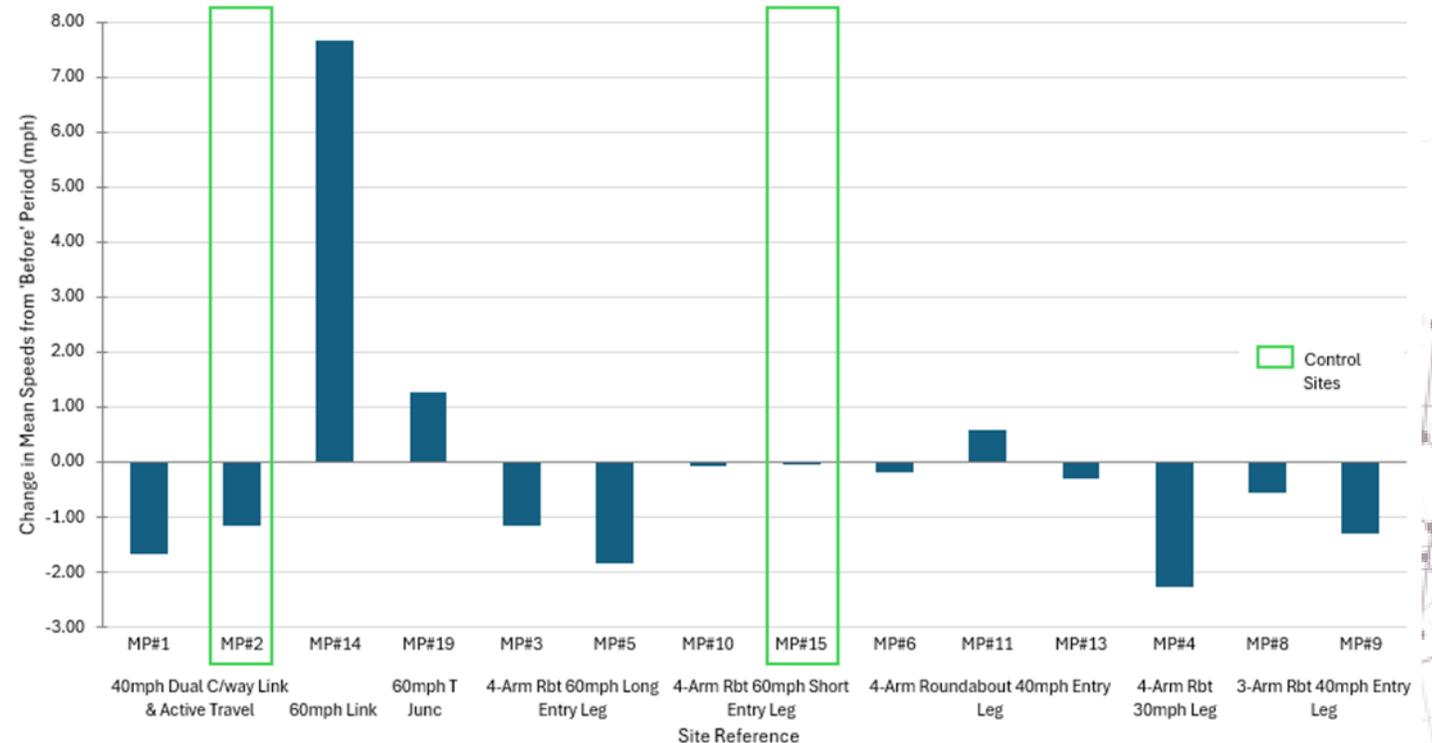
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- 9 of the 12 sites have seen a decrease in the mean speed during periods of darkness.
- A slightly lower 7 of the 12 sites have seen a decrease in the mean speed during periods of daylight.
- It should be noted that both the control sites have seen a decrease in mean dark speed during the 'switch off' period. These decreases are 0.05mph and 1.17mph, respectively.



Road Safety

Change in Mean Speeds Before vs After (Dark Period)





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Road Safety

- Roundabouts have seen the greatest reductions in speed, with almost all roundabout arms (except one) recording a reduction.
- In contrast, 60mph single carriageway roads have seen the greatest increase in speed, at 7.65mph and 1.26mph, respectively.

Typology	Sites	Change in Dark Mean Speeds (mph)		
		Before	After	Change
40mph Dual C/Way Link with Ped & Cycle use	A1033 Raich Carter Way - MP#1	34.14	32.47	-1.67
	A164 Green Lane CONTROL - MP#2	36.44	35.27	-1.17
60mph Single C/Way Link	A164 Humber Bridge Approach - MP#14	50.04	57.69	7.65
60mph Single C/Way T Junction	A1079 Cliffe Road - MP#19	40.21	41.47	1.26
4-Arm Roundabout 60mph Long Flared Entry Leg	A164 Riplingham Road Rbt - MP#3	22.41	21.25	-1.16
	A164 Riplingham Road Rbt - MP#5	20.57	18.74	-1.83
4-arm Roundabout 60mph Short Flared Entry Leg	A164 Swanland Rbt - MP#10	19.11	19.05	-0.06
	A1079 Market Weighton CONTROL - MP#15	18.44	18.39	-0.05
4-Arm Roundabout 40mph Entry Leg	A164 Riplingham Road Rbt - MP#6	22.53	22.33	-0.20
	A164 Swanland Rbt - MP#11	19.48	20.05	0.57
	A164 Swanland Rbt - MP#13	20.61	20.31	-0.30
4-Arm Roundabout 30mph Entry Leg	A164 Riplingham Road Rbt - MP#4	19.37	17.10	-2.27
3-Arm Roundabout 40mph Entry Leg	Swanland Dale Rbt - MP#8	19.51	18.94	-0.57
	Swanland Dale Rbt - MP#9	23.91	22.60	-1.31



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- There has been an overall decrease in ‘dark’ vehicle speeds of 4.89% on Raich Carter Way.
- Motorcycles have seen the greatest decrease in ‘dark’ period speeds of 10.42%.
- Every vehicle type has seen a decrease in speed.
- Whole day speeds have also reduced, but dark period speeds have generally reduced by a higher margin.

Camera	Monitoring Period	Articulated HGV		Bus		Car		Motorcycle		Total	
		Whole Day	Dark Periods	Whole Day	Dark Periods	Whole Day	Dark Periods	Whole Day	Dark Periods	Whole Day	Dark Periods
MP#1	Sep-24 (Before)	30.4	33.28	32.86	34.07	32.72	34.15	34.24	34.15	32.65	34.14
	Sep-25 (After)	27.76	31.4	31.95	32.49	32.21	32.49	31.65	30.59	32.12	32.47
	Change from Before	-8.86%	-5.65%	-2.77%	-7.75%	-1.56%	-4.86%	-7.56%	-10.42%	-1.62%	-4.89%



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- After' collision data is only available up to 7th January 2026, but a total of 12 collisions (2 in the dark) have occurred since the trial sites were de-illuminated.
- 16.7% of collisions have occurred during dark periods.
- Whilst only over a short 'after' period, there has been a slight reduction in the percentage of collisions in the dark compared to the 'before' period.

After	Location	Dark	Day	Total	
A164	Riplingham Roundabouts	1	2	3	6
	Riplingham to Swanland		1	1	
	Skidby to Castle Hill		1	1	
	Swanland Roundabout			0	
	Swanland to Humber Bridge Roundabout		1	1	
	Willerby Hill to Willerby			0	
	Willerby to Riplingham			0	
A1079	Raich Carter Way		1	1	6
	Feoffee Common Lane		2	2	
	Hayton		1	1	
	Market Weighton Bypass	1	1	2	
Total		2	10	12	

Before	A164	A1079
Daylight	79.7%	77.4%
Dark	20.3%	22.6%

After	A164	A1079
Daylight	83.3%	83.3%
Dark	16.7%	16.7%



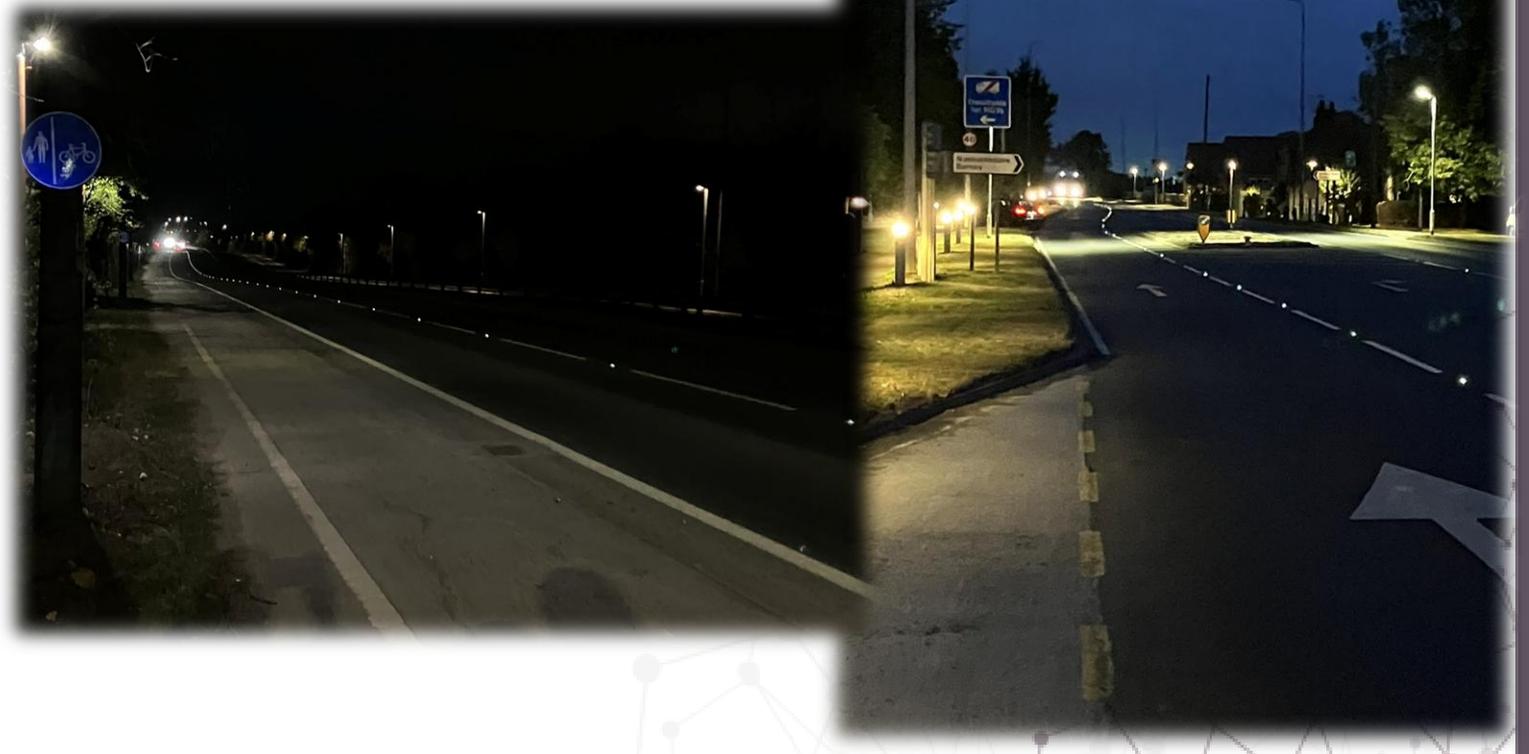
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Pedestrian Lighting

- Mounting heights from 1m to 5m
- Specifically designed to only light footway and kerb edge
- Positive resident feedback
- Bringing about behaviour change





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Cost Savings

- East Riding test sites show £1.6m saving over 40 years, £1.1m saving over first ten
- Various financing models available, project finance report detailing the models in final draft
- Wider rollout across East Riding – 2,500 columns with estimated £6m saving across revenue and capital

Scenario 2		
Existing Cost Total	Proposed Cost Total	Cost Saving
£291,173	£57,129	80%
£56,611	£19,561	65%
£98,996	£35,011	65%
£421,478	£135,499	68%
£325,365	£64,584	80%
£266,473	£69,386	74%
£230,660	£78,506	66%
£1,690,755	£459,675	73%

Solutions	Unit	Existing 10mtr Columns	Live Labs Replacement	% change of Live Labs Replacement, compared to Existing 10mtr Columns
Appraisal period	Years	40	40	
Total Cost of the appraisal period	£	£4,843,897	£1,528,166	-68%
Cost per year	£/Year	£121,097	£38,204	-68%



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Carbon Savings

- Decision support tool finalised and working
- East Riding Sites saved 160 tons CO₂ over the next ten years
- Exploring engineering options to take learning from test sites to improve carbon savings even further
- 810 proposed 10mtr columns to remove in East Riding will save 400 tons CO₂ over next ten years





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Biodiversity Monitoring

- Bat monitoring completed, estimated 5 million lines of data to evaluate
- Bird monitoring continues until 31st March, similar amount of data points expected
- Full assessment report anticipated August 2026





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Success



HEA Project of the Year 2025



**DFT Special Recognition
Award Net Zero Project of
the Year 2025**



**Highways Awards
Environmental Sustainability Award
2025**



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Thank you



Any Questions?

