

M25 junction 10/A3 Wisley interchange

TR010030

6.5 Environmental Statement:

Appendix 15.2 Highways England carbon tool

Regulation 5(2)(a)
Planning Act 2008

Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009



Infrastructure Planning

Planning Act 2008

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 (as amended)

M25 junction 10/A3 Wisley interchange

The M25 junction 10/A3 Wisley interchange Development Consent Order 202[x]

6.5 ENVIRONMENTAL STATEMENT:

APPENDIX 15.2 HIGHWAYS ENGLAND CARBON TOOL

Regulation Number:	Regulation 5(2)(a)
Planning Inspectorate Scheme Reference	TR010030
Application Document Reference	TR010030/APP/6.5
Author:	M25 junction 10/A3 Wisley interchange project team, Highways England

Version	Date	Status of Version
Rev 0	June 2019	Development Consent Order application

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Appendix 15.2: Highways England Carbon Tool

15.1 Highways England Carbon Tool

Add new row:

Converter:		
Miles	=	km
1.00	=	1.61

Assign % of total quantity to categories					
Not Allocated %	Fencing %	Drainage %	Road Pavements %	Civils Structures %	Waste %
0.00%	1.00%	99.00%			
0.00%				100.00%	
0.00%			84.00%	16.00%	
0.00%				100.00%	
0.00%				100.00%	
0.00%			100.00%		
0.00%				100.00%	
0.00%				100.00%	
100.00%					

Transport				Forecast Next Return Quantity Forecast
Transport mode	Transport distance value (km)	Carbon Factor (tCO ₂ e/t.km)	This Return tCO2e	
HGV	50.0	0.0001095	111.667	
HGV	50.0	0.0001095	5.017	
HGV	50.0	0.0001095	48.124	
HGV	200.0	0.0001095	1809.055	
HGV	200.0	0.0001095	39.315	
HGV	200.0	0.0001095	6360.158	
HGV	200.0	0.0001095	19379.365	



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2018 Oct - Dec - Business and Employee Transport

(excluding bulk materials)

☐ Mark page as complete

Add new row:

Total CO2e	1.897	Tonnes
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Converter:

Miles	=	km
1.00	=	1.61

Material / Product							
Item	Type	Unit	This Return Quantity	Carbon Factor Value	Carbon Factor Unit	Conversion Factor	This Return tCO2e
Employee commuting	Private vehicle (any type)	km	10000.0	0.190	kgCO2e/km	0.001	1.897

Transport			
Transport mode	Transport distance value (km)	Carbon Factor (tCO ₂ e/t.km)	This Return tCO2e



2018 Oct - Dec - Drainage

☐ Mark page as complete

Add new row:

(excluding bulk materials)

Total CO ₂ e	922.392	Tonnes
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Converter:

Miles	=	km
1.00	=	1.61

Bulk Materials

Material / Product							
Item	Type	Unit	This Return Quantity	Carbon Factor Value	Carbon Factor Unit	Conversion Factor	This Return tCO ₂ e
Ready mix concrete	C25/30	m3	4208.5	0.113	tCO ₂ e/t	2.400	1141.342
Plastic pipework (PVC)	300mm diameter	metres	16746.0	3.230	tCO ₂ e/t	0.010	544.312
Petrol interceptor	Plastic (Polyethylene)	no.	3.0	2.540	tCO ₂ e/t	0.500	3.810
Precast concrete inspection chambers	600mm diameter, up to 1.2m depth	no.	167.0	0.282	tCO ₂ e/t	0.364	17.121
Plastic pipework (PVC)	150mm diameter	metres	33492.0	3.230	tCO ₂ e/t	0.003	342.404

Transport			
Transport mode	Transport distance value (km)	Carbon Factor (tCO ₂ e/t.km)	This Return tCO ₂ e
HGV	50.0	0.0001095	110.550
HGV	200.0	0.0001095	7.378
HGV	200.0	0.0001095	0.066
HGV	200.0	0.0001095	2.661
HGV	200.0	0.0001095	4.641



2018 Oct - Dec - Earthworks

(excluding bulk materials)

☐ Mark page as complete

Add new row:

Total CO2e	17.515	Tonnes
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Converter:

Miles	=	km
1.00	=	1.61

Material / Product							
Item	Type	Unit	This Return Quantity	Carbon Factor Value	Carbon Factor Unit	Conversion Factor	This Return tCO2e
Geotextiles	Polypropylene geotextile / matting	m2	5330.0	3.430	tCO2e/t	0.001	17.295

Transport			
Transport mode	Transport distance value (km)	Carbon Factor (tCO ₂ e/t.km)	This Return tCO2e
HGV	200.0	0.0001095	0.221



1

2018 Oct - Dec - Fencing, Barriers & Road Restraint Systems

☐ Mark page as complete

Add new row:

(excluding bulk materials)		
Total CO2e	3,755.212	Tonnes

Converter:		
Miles	=	km
1.00	=	1.61

Bulk Materials

Material / Product							
Item	Type	Unit	This Return Quantity	Carbon Factor Value	Carbon Factor Unit	Conversion Factor	This Return tCO2e
Ready mix concrete	C25/30	m3	42.5	0.113	tCO2e/t	2.400	11.529
Noise Barriers	Timber barrier 2m	metres	2500.0	0.965	tCO2e/t	0.116	279.850
Road Restraint System/ Safety Barrier	Steel RRS barrier single sided	metres	11000.0	1.540	tCO2e/t	0.022	377.593
Road Restraint System/ Safety Barrier	Pre-cast concrete step barrier	metres	11000.0	0.199	tCO2e/t	1.150	2520.513

Transport			
Transport mode	Transport distance value (km)	Carbon Factor (tCO ₂ e/t.km)	This Return tCO2e
HGV	50.0	0.0001095	1.117
HGV	200.0	0.0001095	12.696
HGV	200.0	0.0001095	10.735
HGV	200.0	0.0001095	553.826



1

2018 Oct - Dec - Fuel, Energy & Water

☐ Mark page as complete

Add new row:

(excluding bulk materials)		
Total CO2e	35,147.729	Tonnes

Converter:		
Miles	=	km
1.00	=	1.61

Material / Product							
Item	Type	Unit	This Return Quantity	Carbon Factor Value	Carbon Factor Unit	Conversion Factor	This Return tCO2e
Site offices, site vehicles and plant energy	Diesel	Litres	#####	3.802	kgCO2e/kg	0.001	34125.660
Site offices, site vehicles and plant energy	Petrol	Litres	31699.0	3.640	kgCO2e/kg	0.001	84.332
Site offices, site vehicles and plant energy	Electricity	kWh	1050000.0	0.494	kgCO2e/kWh	0.001	518.973
Water	Mains	Litres	#####	0.000	kgCO2e/l	0.001	24.735

Transport			
Transport mode	Transport distance value (km)	Carbon Factor (tCO2e/t.km)	This Return tCO2e
HGV	200.0	0.0001095	393.014
HGV	200.0	0.0001095	1.014



2018 Oct - Dec - Street Furniture & Electrical Equipment

(excluding bulk materials)

☐ Mark page as complete

Add new row:

Total CO2e	1,238.428	Tonnes
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Converter:

Miles	=	km
1.00	=	1.61

Material / Product							
Item	Type	Unit	This Return Quantity	Carbon Factor Value	Carbon Factor Unit	Conversion Factor	This Return tCO2e
Road Studs	Any type	no.	79.0	3.310	tCO2e/unit	0.000	0.013
Road lighting and columns	LED light	no.	615.0	9.160	tCO2e/t	0.012	67.601
Road lighting and columns	Steel columns 8m	no.	20.0	1.540	tCO2e/t	0.132	4.066
Road lighting and columns	Steel columns 12m	no.	595.0	1.540	tCO2e/t	0.288	263.894
Plastic cable ducting	50mm diameter	metres	193.0	2.520	tCO2e/t	0.000	0.195
Plastic cable ducting	150mm diameter	metres	147768.0	2.520	tCO2e/t	0.002	879.436

Transport			
Transport mode	Transport distance value (km)	Carbon Factor (tCO ₂ e/t.km)	This Return tCO2e
HGV	200.0	0.0001095	0.000
HGV	200.0	0.0001095	0.323
HGV	200.0	0.0001095	0.116
HGV	200.0	0.0001095	7.502
HGV	200.0	0.0001095	0.003
HGV	200.0	0.0001095	15.279



2018 Oct - Dec - Road Pavements

☐ Mark page as complete

Add new row:

(excluding bulk materials)

Total CO2e	826.948	Tonnes
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Converter:

Miles	=	km
1.00	=	1.61

Material / Product							
Item	Type	Unit	This Return Quantity	Carbon Factor Value	Carbon Factor Unit	Conversion Factor	This Return tCO2e
Bulk Materials Asphalt	General Asphalt	tonnes	145273.0	0.076	tCO2e/t	1.000	11040.748
Bulk Materials Ready mix concrete	C32/40	m3	1538.9	0.132	tCO2e/t	2.400	487.517
Kerb	Pre-cast concrete 125x255mm	metres	50309.0	0.180	tCO2e/t	0.073	663.777
Road markings	Thermoplastic road marking	tonnes	0.3	5.700	tCO2e/t	1.000	1.710

Transport			
Transport mode	Transport distance value (km)	Carbon Factor (tCO2e/t.km)	This Return tCO2e
HGV	200.0	0.0001095	6360.158
HGV	50.0	0.0001095	40.424
HGV	200.0	0.0001095	161.448
HGV	200.0	0.0001095	0.013



1

2018 Oct - Dec - Waste

☐ Mark page as complete

Add new row:

(excluding bulk materials)		
Total CO2e	458.594	Tonnes

Converter:		
Miles	=	km
1.00	=	1.61

Material / Product							
Item	Type	Unit	This Return Quantity	Carbon Factor Value	Carbon Factor Unit	Conversion Factor	This Return tCO2e
Mixed construction & demolition waste	Recycled	tonnes	37889.0	0.001	tCO2e/t	1.000	37.889
Mixed metals	Recycled	tonnes	70.0	0.021	tCO2e/t	1.000	1.470
Hazardous waste	Landfill	tonnes	291.0	0.002	tCO2e/t	1.000	0.582

Transport			
Transport mode	Transport distance value (km)	Carbon Factor (tCO2e/t.km)	This Return tCO2e
HGV	50.0	0.0001095	414.702
HGV	50.0	0.0001095	0.766
HGV	50.0	0.0001095	3.185

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