

Guidance for completion	
1	In the Project Info page insert the info required in the cells that are white (Project name, start date, end date, value etc.
2	In the Project Info page you can update the values in the light grey cells if you have accurate date for the cost of a kwh of electricity or the m3 of water.
3	Where the Project has BREEAM or Code for Sustainable Homes, please complete this tab with the credits being targeted.
4	When there is a bill of quants in place 3. Predicted Waste should be updated with the values. Values should only be added in Column e and this will then project the waste streams.
5	With the Environment Manager go through 4. Waste Management Options and 4b. Reuse and select what will be undertaken on the site.
6	Any time a new waste carrier is brought on site then 5. Waste Carriers must be updated to reflect this.
7	The info on the tower cranes should be completed if you have any dates or information as this will help us when looking at the energy usage to see where the energy usage has increased etc.
8	On a monthly basis 1. Usage Info should be updated with any meter readings for water/electricity/diesel/delivery information and the financial value of the project for the month.
9	Once the waste reports are in from the Waste Carrier (which are filed on ECM under the relevant month) 6. Waste Info should be completed with the number of skips, weight and volume of waste should be updated and the % diversion from landfill. Where subcontractors are responsible for their own skips this information should be populated for any skips they have had removed too. Only input into the white areas, anything shaded grey does not need manual figures inputting as this will automatically calculate.
10	From the waste reports from the skip company update 7. Actual Waste v Predicted with the waste generated in each of the waste streams.
11	This document will be reviewed at regular intervals by the Environment Manager with the site team.
12	Once project is completed review 7. Actual Waste v Predicted and 1. Usage Info to see how the project performed against projected and against targets so that lessons learned and best practice can be fed back into the business.
13	The Dashboard info tab gives you all the info you need for the Project Dashboards as collated by Natalie Page. This sheet is locked as you do not need to add any info to this as it will all populate from the rest of the spreadsheet being completed.

Tab Number/Name	Completed When/Frequency
Guidance for Completion	Not required - for info
Project Info	At start
BREEAM	At start
Dashboard Date	No input required, this populates once the monthly usage info is completed.
1. Usage Info	Monthly
2. Carbon Tst Conversions	Not required - for info
3. Predicted Waste	At start
4. Waste Mgmt Opts	At start
4b. Reuse & Initiatives	At start and if targets are being missed then look at other things that can be done to meet targets.
5. Waste Carriers	At start and as new waste carriers come to site.
6. Waste Info	Monthly
7. Actual Waste v Predicted	Monthly
Emissions Chart	For info - printed monthly
Water Usage Chart	For info - printed monthly
Waste Chart	For info - printed monthly
Number of Skips	For info - printed monthly
Legal	Not required - for info

# Waste Resource Efficiency Tracker

Site Name:	Boston Road
Site Code:	C2377
Person in Charge of Project & For Ensuring Implementation of This Document:	Jason Ludlow
Start Date:	01/09/2020
Projected End Date:	
Gross Internal Floor Area (GIFA) m2:	29,048
Number of Units	333
Contract Value (£):	£84,000,000.00
Prelims Info:	
Amount for energy:	£199,800.00
Cost per kWh of elec avg:	£0.10781
Approx kWh purchased:	1,853,260.37
EKPI Target for Elec - KG CO2 per £100k:	1,090.47
Amount for water:	£24,600.00
Cost per m3 of water (approx):	£2.0494
Approx kWh purchased:	12,003.51
EKPI Target for Water - m3 per £100k:	14.29
Amount for waste:	£118,650.00
Approx cost per 8yd mixed waste skip:	198.00
Approx no of skips:	599.24
Approx m3 of waste	35,954.55
EKPI Target for Waste - m3 per £100k:	42.80
Tower Crane 1	TBS
Tower Crane 2	TBS
Tower Crane 3	
	From To
Tower Crane 4	
	From To

Phase 1

Phase 2

16086	12962
183	150
£49,200,000	£34,800,000

171300 For cranes  
28500 For site

34826

60390 Additional amount for s/c skips

Reviewed by whom:	Date:	Comments
Julie Brooks	Mar-20	Initial Set Up

## BREEAM Credits Targetted

### MAN02 - Responsible Construction Practices

Credits Available	Details	Yes/No	Support
1	Score 25 - 34 (Minimum of 5 in each category)		Speak to the Environmental Manager
2	Score 35 to 39 (Minimum of 7 in each category)	Yes	Speak to the Environmental Manager
Exemplar	40 or above (7 or above to be achieved in each category)		Speak to the Environmental Manager

### MAN03 - Construction Site Impacts

Credits Available	Details	Yes/No	Evidence
1	Monitor and record energy consumption from the usage of plant, equipment and site accommodation. Report energy consumption (kWh per £100k and CO2 emissions in kg per £100k)	Yes	1. Usage Info
1	Monitor and record potable water consumption from the use of construction plant, equipment and site accommodation.	Yes	1. Usage Info
1	Monitor and record data on transport resulting from the delivery of the major construction materials to site and construction waste from site. Use this data to report total fuel consumption and total CO2 emissions, plus total distance travelled for materials and waste.		
1	Confirmation that all site and project timber is procured in accordance with the UK Government's Timber Procurement Policy	Yes	Responsible Sourcing Policy
1	The Principal Contractor must operate an Environmental Management System and implements best practice pollution prevention policies.	Yes	Responsible Sourcing Policy

### WST01 - Construction Waste Management

Credits Available	Volume - m3	Weight - Tonnes	Yes/No	Yes/No
1	<13.3	<11.1		6. Waste Info
2	<7.5	<6.5	Yes	6. Waste Info
3	<3.4	<3.2		6. Waste Info
Exemplary	<1.6	<3.2		6. Waste Info
1	70% Non Demo 80% Demo	80% Non Demo 90% Demo	Yes	6. Waste Info and Waste Reports
Exemplary	85% Non Demo 85% Demo	90% Non Demo 95% Demo		6. Waste Info and Waste Reports

Month	skip waste m3	Cart away waste m3	% Waste recycled (skips)	Water m3	Emissions from Diesel kgCO2	Emissions from Electricty kgCO2	Total Emissions kgCO2	Waste per £100k m3	Emissions from Energy kgCO2 per £100k	Water m3 per £100k	Total KWH Per Month	Tonnes of Waste Per Month	Avg Number of People per Day	KWH Per Person	M3 Water Per Person	Tonnes of Waste Per Person
Sep 2020	0	689	#DIV/0!	0	0.00	0.00	0.00	#DIV/0!	#DIV/0!	#DIV/0!	0	0	40	0.00	#DIV/0!	0.00
Oct 2020	30.55	715	0.99	0	0.00	0.00	0.00	#DIV/0!	#DIV/0!	#DIV/0!	0	9.6	50	0.00	0.00	0.19
Nov 2020	76.375	832	0.99	0	0.00	0.00	0.00	#DIV/0!	#DIV/0!	#DIV/0!	0	28.8	60	0.00	0.00	0.48
Dec 2020	30.55	754	0.99	0	0.00	0.00	0.00	#DIV/0!	#DIV/0!	#DIV/0!	0	9.6	60	0.00	0.00	0.16
Jan 2021	116.09	1014	0.99	0	0.00	0.00	0.00	#DIV/0!	#DIV/0!	#DIV/0!	0	36.48	70	0.00	0.00	0.52
Feb 2021	42.77	429	0.99	0	0.00	0.00	0.00	#DIV/0!	#DIV/0!	#DIV/0!	0	13.44	70	0.00	0.00	0.19
Mar 2021	128.31	494	0.99	0	0.00	0.00	0.00	#DIV/0!	#DIV/0!	#DIV/0!	0	40.32	80	0.00	0.00	0.50
Apr 2021	73.32	65	0.99	0	0.00	0.00	0.00	#DIV/0!	#DIV/0!	#DIV/0!	0	23.04	80	0.00	0.00	0.29
May 2021	97.76	0	0.99	0	0.00	0.00	0.00	#DIV/0!	#DIV/0!	#DIV/0!	0	30.72	90	0.00	0.00	0.34
Jun 2021	36.66	0	99.00%	0	0.00	0.00	0.00	#DIV/0!	#DIV/0!	#DIV/0!	0	11.52	100	0.00	0.00	0.12
Jul 2021	0	0	#DIV/0!	0	0.00	0.00	0.00	#DIV/0!	#DIV/0!	#DIV/0!	0	0	110	0.00	#DIV/0!	0.00
Aug 2021	41.2425	0	100.00%	0	0.00	0.00	0.00	#DIV/0!	#DIV/0!	#DIV/0!	0	12.96	120	0.00	0.00	0.11
Sep 2021	73.32	13	1	0	0.00	0.00	0.00	#DIV/0!	#DIV/0!	#DIV/0!	0	23.04	120	0.00	0.00	0.19
Oct 2021	128.31	0	1	0	0.00	0.00	0.00	#DIV/0!	#DIV/0!	#DIV/0!	0	40.32	120	0.00	0.00	0.34
Nov 2021	274.95	0	1	0	0.00	0.00	0.00	#DIV/0!	#DIV/0!	#DIV/0!	0	0		#DIV/0!	#DIV/0!	#DIV/0!
Dec 2021	183.3	0	1	0	0.00	0.00	0.00	#DIV/0!	#DIV/0!	#DIV/0!	0	57.6		#DIV/0!	0.00	#DIV/0!
Jan 2022	219.96	0	1	0	0.00	0.00	0.00	#DIV/0!	#DIV/0!	#DIV/0!	0	69.12		#DIV/0!	0.00	#DIV/0!
Feb 2022	238.29	0	1	0	0.00	0.00	0.00	#DIV/0!	#DIV/0!	#DIV/0!	0	74.88		#DIV/0!	0.00	#DIV/0!
Mar 2022	174.135	0	1	0	0.00	0.00	0.00	#DIV/0!	#DIV/0!	#DIV/0!	0	54.72		#DIV/0!	0.00	#DIV/0!

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Energy conversion factors

Fuel	Number of units	Conversion factor	Units	KgCO2e	KgCO <sub>2</sub> e
Grid electricity	716846	0.49426	kWh	354308	354308
Natural gas		0.184973	kWh	0	
		5.42102	therms		
LPG		0.214508	kWh	0	
		6.28660	therms		
		1.50225	litres		
Gas oil		3423.15	tonnes	0	
		0.272123	kWh		
		2.92577	litres		
Fuel oil		3242.68	tonnes	0	
		0.269499	kWh		
Burning oil		3164.85	tonnes	0	
		0.246675	kWh		
Diesel		3117.4	tonnes	0	
		0.24615	kWh		
		2.6024	litres		
Petrol		2985.7	tonnes	0	
		0.23277	kWh		
Industrial coal		2.1914	litres	0	
		2356.62	tonnes		
Wood pellets		0.315905	kWh	0	
		55.9032	tonnes		
		0.011838	kWh	0	
Total kgCO <sub>2</sub> e				354308	354308



2014 Figures

Passenger transport conversion factors

Car size	Distance	Conversion factor	Units	KgCO <sub>2</sub> e	
Small up to 1.4 litre petrol	25	0.16061	km	4.01525	4.01525
		0.25848	miles		
Medium 1.4-2 litre petrol		0.20088	km	0	
		0.32329	miles		
Large, over 2.0 litre petrol		0.29014	km	0	
		0.46694	miles		
Average petrol car		0.19388	km	0	
		0.31202	miles		
Small, up to 1.7 litre diesel		0.14701	km	0	
		0.23659	miles		
Medium, 1.7-2.0 litre diesel		0.1772	km	0	
		0.28518	miles		
Large, over 2 litre diesel		0.23049	km	0	
		0.37094	miles		
Average diesel car		0.18546	km	0	
		0.29847	miles		
Total kgCO <sub>2</sub> e				4.0153	4.0153
Articulated Lorry	25	2.68	km	67	67
		4.31212	miles		

Miles to KM	1.609
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Passenger transport conversion

Mode of transport	Distance	Conversion factor	Units
Regular taxi		0.24857	vkm
Average bus		0.10155	pkm
Coach		0.02932	pkm
International rail (Eurostar)		0.01212	pkm
National rail		0.04738	pkm
Light rail and tram		0.06168	pkm
Underground		0.06312	pkm
Long haul international flight		0.11116	pkm
Short haul international flight		0.0879	pkm
Domestic flight		0.15504	pkm
Total kgCO <sub>2</sub> e			

Vehicle type	Kg CO2 per litre
Small petrol car 1.4 litre engine	0.17/km
Medium car (1.4 – 2.1 litres)	0.22/km
Large car	0.27/km
Average petrol car	0.20/km
Small diesel car (>2 litres)	0.12/km
Large car	0.14/km
Average diesel car	0.12/km
Articulated lorry, diesel engine	2.68/km (0.35litres fuel per km)
Rail	0.06 per person per km
Air, short haul ( 500km)	0.18 per person per km
Air, long haul	0.11
Shipping	0.01 per tonne per km

## PREDICTED WASTE STREAMS

COMPLETED BY :

Element	Material	Guidance	AREA / VOLUME	UNIT	WASTE ALLOWANCE (%)	CERAMICS / BRICKS (m³)	CONCRETE (m³)	INERT (m³)	INSULATION (m³)	METALS (m³)	OFFICE / CANTEEN (m³)	PACKAGING (m³)	PLASTER / CEMENT (m³)	PLASTICS (m³)	TIMBER (m³)	LIQUIDS & OILS (m³)	OTHER HAZARDOUS (m³)	Total Quantity (m³)
Prelims		Calculate Manually																0.0
Enabling Works	e.g. Vegetation	Calculate Manually		m3	10.0%		0.00											0.0
Demolition	Brickwork / concrete	Volume of Building		m3	20.0%	0.00	0.00		0.00	0.00			0.00		0.00			0.0
	Other (e.g. from Pre-Demolition Audit)	Calculate Manually																0.0
Substructure (Cart away)	Inert	From BOQ		m3	100.0%			0.00										0.0
	Hazardous	From BOQ		m3	100.0%												0.00	0.0
Substructure	Piling Spoil	From BOQ		m3	100.0%			0.00										0.0
	Piling Waste	Volume of Piles		m3	5.0%		0.00											0.0
	Foundations	From BOQ		m3	1.0%		0.00											0.0
	Other Substructure (e.g. Drainage)	Calculate Manually																0.0
Frame & Upper Floors	Concrete	From BOQ		m3	1.0%		0.00			0.00								0.0
	Steel (reinforcement)	From BOQ		T	0.1%					0.0000								0.0
	Timber(block C Roof)	From BOQ		m3	10.0%										0.00			0.0
	Other (e.g. Formwork)	Calculate Manually																0.0
Roof Structure	Concrete (incl above)	From BOQ		m3	1.0%		0.00			0.00								0.0
	Steel (reinforcement incl above)	From BOQ		T	1.0%					0.00								0.0
	Timber (incl above)	From BOQ		m3	10.0%										0.00			0.0
	Other	Calculate Manually																0.0
Roof Covering	Tiled	From BOQ		m2	5.0%		0.00			0.00		0.00						0.0
	Cladding	From BOQ		m2	5.0%				0.00	0.00		0.00						0.0
	Felt/Single Membrane (roof,podium, balconies)	From BOQ		m2	10.0%				0.00			0.00		0.00		0.00		0.0
	Other	Calculate Manually																0.0
External Walls	Curtain Walling	From BOQ		m2	1.0%			0.00		0.00		0.00						0.0
	Metal Cladding	From BOQ		m2	5.0%				0.00	0.00		0.00						0.0
	Timber	From BOQ		m3	10.0%										0.00			0.0
	Rainscreen	From BOQ		m2	10.0%	0.00				0.00		0.00						0.0
	Traditional Masonry	From BOQ		m2	10.0%	0.00			0.00			0.00	0.00		0.00			0.0



## PREDICTED WASTE STREAMS

**COMPLETED BY:**

[illegible]

## PREDICTED WASTE STREAMS

COMPLETED BY:

[illegible]

Projected on Project		Comparison on 8yd Skips	Saving
Prelims for Waste	£118,650.00	£0.00	-£118,650.00
Number of Units	599	599	
Number of Skips Per Unit	0	0	
Size of Skip Planned		8yd	
Projected No Skips	0	0	0
Project Number of Yds	0	0	

							Projected Skip Usage					Actual Skips Used						Projected Costs if all 12yd Mised Used					
Skip Size	Yds	Type of Waste	Cost Per Yd	Cost	Transport	Tonnage	Number Projected	Yds Anticipated	Projected Tonnage	Projected Cost	Tonnage Cost	Actually Used	Actual Yd	Actual Tonnage	Actual Cost	Tonnage Cost	Difference	12yds Used	Total Yds	Tonnage	Cost	Tonnage Cost	Difference
6 Yard	6	Mixed Waste	£28.00	£168				0	0	£0			0	0	£0		£0		0	0	£0		£0
8 Yard	8	Mixed Waste	£23.75	£190			266	2128	0	£50,540		154	1232	0	£29,260		£21,280		0	0	£0		£0
8 Yard Enclosed	8	Mixed Waste	£25.00	£200				0	0	£0			0	0	£0		£0		0	0	£0		£0
8 Yard Crane Test	8	Mixed Waste	£25.00	£200			125	1000	0	£25,000		8	64	0	£1,600		£23,400		0	0	£0		£0
12 Yard	12	Mixed Waste	£18.17	£218				0	0	£0			0	0	£0		£0	372	4464	0	£81,096		-£81,096
12 Yard Enclosed	12	Mixed Waste	£19.00	£228				0	0	£0			0	0	£0		£0		0	0	£0		£0
20 Yard RORO	20	Mixed Waste			£125	£105		0	0	£0	£0.00		0	0	£0	£0.00	£0		0	0	£0	£0.00	£0
40 Yard RORO	40	Mixed Waste			£125	£105		0	0	£0	£0.00		0	0	£0	£0.00	£0		0	0	£0	£0.00	£0
8 Yard Enclosed	8	Mixed Plastic	£20.00	£160				0	0	£0			0	0					0	0	£0		£0
12 Yard Enclosed	12	Mixed Plastic	£15.00	£180				0	0	£0									0	0	£0		£0
6 Yard	6	Plasterboard	£41.67	£250		£75		0	0	£0	£0.00		0	0	£0		£0		0	0	£0		£0
8 Yard	8	Plasterboard	£31.25	£250		£75		0	0	£0			0	0	£0		£0		0	0	£0		£0
20 Yard RORO	20	Plasterboard			£125	£75		0	0	£0	£0.00		0	0	£0		£0		0	0	£0		£0
40 Yard RORO	40	Plasterboard			£125	£75		0	0	£0	£0.00		0	0	£0		£0		0	0	£0		£0
8 Yard	8	Hardcore/Concrete	£20.00	£160				0	0	£0			0	0	£0		£0		0	0	£0		£0
20 Yard RORO	20	Hardcore/Concrete	£18.40	£368				0	0	£0			0	0	£0		£0		0	0	£0		£0
12 Yard	12	Metal	£6.25	£75				0	0	£0			0	0	£0		£0		0	0	£0		£0
20 Yard RORO	20	Metal	£5.00	£100				0	0	£0			0	0	£0		£0		0	0	£0		£0
40 Yard RORO	40	Metal	£2.50	£100				0	0	£0			0	0	£0		£0		0	0	£0		£0
6 Yard	6	Soil	£28.00	£168		£55	36	216	0	£6,048			0	0	£0		£6,048		0	0	£0		£0
20 Yard RORO	20	Soil	£0.00		£125	£100		0	0	£0			0	0	£0		£0		0	0	£0		£0
12 Yard	12	Wood (Clean wood only)	£14.17	£170			55	660	0	£9,350		33	396	0	£5,610		£3,740		0	0	£0		£0
20 Yard RORO	20	Wood (Clean wood only)	£18.40	£368				0	0	£0			0	0	£0		£0		0	0	£0		£0
40 Yard RORO	40	Wood (Clean wood only)	£11.25	£450				0	0	£0			0	0	£0		£0		0	0	£0		£0
Pallet Lorry		Timber Up to 400 Pallets		£300					0	£0			0	0	£0		£0		0	0	£0		£0
							No of Skips	Yds	Tonnes	Cost		No of Skips	Yds		Cost	Variance		No of Skips	Yds	Tonnes	Cost	Variance	
Total							482	4004	0	£90,938		195	1692		£36,470	£54,468		372	4464	0	£81,096	-£9,842	

## WASTE MANAGEMENT OPTIONS

Demolition Waste			
Waste Type	Volume (m³)	Waste Management	✓ = P ✗ = O
CERAMICS / BRICKS	0.0	Investigate opportunities to re-use material on-site. Alternatively segregate at source for recycling	✓
CONCRETE	0.0	Investigate opportunities to re-use material on-site. Alternatively segregate at source for recycling	✓
INERT	0.0	Investigate opportunities to re-use material on-site. Alternatively segregate at source for recycling	
INSULATION	0.0		
METALS	0.0	Demolition contractor to segregate at source for recycling	✓
OFFICE / CANTEEN	0.0		
PACKAGING	0.0		
PLASTER / CEMENT	0.0	Demolition contractor to segregate at source for recycling	✓
PLASTICS	0.0	Demolition contractor to segregate for recycling at waste transfer station	
TIMBER	0.0	Demolition contractor to segregate at source for recycling	✓
VEGETATION	0.0		
LIQUIDS & OILS	0.0	Demolition contractor to investigate methods for treatment	
OTHER HAZARDOUS	0.0	Demolition contractor to investigate possible methods for remediation, and safe method for disposal	
Total Quantity	0.0		

Excavation/Enabling Waste			
Volume (m³)	Waste Management	✓ = P ✗ = O	
0.0			
0.0	Investigate opportunities to re-use material on-site. Alternatively segregate at source for recycling	✓	
0.0	Investigate opportunities to re-use material on-site. Alternatively segregate at source for recycling	✓	
0.0			
0.0			
0.0			
0.0			
0.0			
0.0			
0.0			
0.0			
0.0			
0.0	Demolition contractor to investigate possible methods for remediation, and safe method for disposal	✓	
0.0			

Construction Waste				
Volume (m³)	Reduce	✓ = P ✗ = O	Reuse	✓ = P ✗ = O
0.0	Just in time delivery if applicable to project and suitable storage.	✓	Crushed on-site and beneficially reuse as hardcore or as feedstock for new concrete. Reuse offcuts and part-damaged bricks and tiles where possible.	✗
0.0	Just in time delivery if applicable to project, suitable storage and design sizes to be pre-cut.	✓	Crushed on-site and beneficially reuse as hardcore or as feedstock for new concrete. Reuse offcuts and part-damaged bricks and tiles where possible.	✓
0.0			Segregate soils from stones using screener. Crush stones on-site and beneficially reuse as hardcore or as feedstock for new concrete.	✓
0.0	Just in time delivery if applicable to project, suitable storage and design sizes to be pre-cut.	✓	Insulation boards or rolls can be recovered for reuse, where they are of suitable quality and where there is a market demand.	
0.0	Just in time delivery if applicable to project, suitable storage and design sizes to be pre-cut.	✓	Segregate reusable items for collection by companies for reuse.	
0.0				
0.0	Liaise with supply chain to reduce packaging on-site and agree take back scheme where possible.	✓	Return or reuse on-site where possible.	
0.0	Just in time delivery if applicable to project, suitable storage and design sizes to be pre-cut. Repair rather than replace if possible - see www.gpda.com ('technical tips' section) for guidance on when it is safe to repair/reuse plasterboard.	✓	Segregate and reuse unused boards and offcuts off-site. Use a segregated skip (often provided by management companies) or employ a bag based take-back scheme managed by the plasterboard manufacturers. These reduce contamination and so increase the amount that can be reused/recycled.	✓
0.0	Just in time delivery if applicable to project, suitable storage and design sizes to be pre-cut.	✓	Segregate at source where there is a demand for collection and reuse off-site.	
0.0	Just in time delivery if applicable to project, suitable storage and design sizes to be pre-cut.	✓	Segregate for reuse on-site where dimensional timbers are of suitable quality. Consider wood-chipping on-site for landscaping or compost. Otherwise source companies for reuse. Be alert to treatments and preservatives that contain dangerous substances.	✓
0.0				
0.0				
0.0			Reuse only after being pre-treated and where the dangerous substances have been eliminated or are in low concentration.	
0.0				

### NOTES:

Space permitting, Higgins endeavour to segregate on site whenever possible, and when generated waste volumes make this a feasible option.

As a minimum, mixed waste skips will be transferred to a permitted waste management company for pre-treatment (including physical segregation), and onward recycling.

Waste Type	Recycle ✓ = P ✗ = O	Recover ✓ = P ✗ = O	Dispose ✓ = P ✗ = O
CERAMICS / BRICKS	Crushed off-site and recycled as hardcore or feedstock for new concrete.		Dispose in an inert landfill site, or exempt site for ground cover. ✗
CONCRETE	Crushed off-site and recycled as feedstock for new concrete.		Dispose in an inert landfill site, or exempt site for ground cover. ✗
INERT	Segregate soils from stones using screener. Crush stones off-site and recycled		Dispose in an inert landfill site, or exempt site for ground cover. ✗
INSULATION	Source company for stripping and recycling of insulation. Be alert to loose fibres.		Dispose in a non-hazardous landfill. ✗
METALS	Segregate at source for collection by companies for remanufacturing or recycling. ✓		Dispose in a non-hazardous landfill. ✗
OFFICE / CANTEEN	Source companies for recycling or composting.		Dispose in a non-hazardous landfill site. ✗
PACKAGING	Source companies for recycling or composting. Be alert to any preservatives or treatments that contain dangerous substances.	Segregate cardboard for energy recovery through an incinerator or CH Power. Be alert to any preservatives or treatments that contain dangerous substances.	Dispose in a non-hazardous landfill site. ✗
PLASTER / CEMENT	Segregate plasterboard sheets for pre-treatment and recycling off-site. ✓		Ensure that the concentration of sulphate bearing waste is below than 10%. If greater, dispose in a hazardous landfill or a single cell in non-hazardous landfill. Investigate opportunities for size reduction before disposal. ✗
PLASTICS	Segregate at source where there is a demand for collection and recycling off-site.		Dispose in a non-hazardous landfill site. ✗
TIMBER	Segregate timber at source for collection by companies for remanufacturing, recycling or composting. Be alert to treatments and preservatives that contain dangerous substances. ✓	Segregate for energy recovery through an incinerator or CHP plant. Be alert to any preservatives or treatments that contain dangerous substances. ✗	Dispose in a non-hazardous landfill site. ✗
VEGETATION			
LIQUIDS & OILS			
OTHER HAZARDOUS	Recycle only after being pre-treated and where the dangerous substances have been eliminated or are in low concentration.		Dispose in a hazardous landfill, single cell in non-hazardous. Investigate opportunities for size reduction before disposal. ✗
Total Quantity			

All Waste
Total Waste Volume (m³)
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0
0.0

**NOTES:**  
 Space permitting, Higgins endeavour to segregate  
 As a minimum, mixed waste skips will be transfer

## Initiatives to Reduce Resource Usage

### Waste Initiatives

List any proposed actions, initiatives and technologies that will be used to reduce the quantities of waste produced on site:

Action/Initiative/Technology	Required Resources	Benefit to project	Complete (Y)
Material Off Cut Area			
Community Wood Recycling Scheme			
Material Take Back Scheme			

### Energy Initiatives

List any proposed actions, initiatives and technologies that will be used to reduce carbon emissions (electricity, gas, diesel) on site:

Action/Initiative/Technology	Required Resources	Benefit to project	Complete (Y)
Eco cabins			
Connection to grid within 6 weeks			
Use of Bio fuel for generators			

### Water Initiatives

List any proposed actions, initiatives and technologies that will be used to reduce water usage on site:

Action/Initiative/Technology	Required Resources	Benefit to project	Complete (Y)
Dry ramp instead of water wheel wash			
Rainwater harvesting			
Fan mist system for demo dust suppression			

## Pre-Demolition Audits

Pre-Demolition Audits present a quantification of a range of materials and products expected to be generated in the course of demolition works. It aims to identify the key waste products, their potential for reuse, reclamation or recycling, their economic potential and environmental rewards. Higgins requires its demolition contractors to provide information on the various material types and quantities.

## Material Exchange/Reuse Networks

Many unwanted items and materials commonly discarded can be re-used for their original purpose, without undergoing re-processing or recycling, thus saving the energy and resources of manufacture as well as the costs of disposal. There are numerous materials exchange initiatives and reuse organisations providing national coverage. Speak to the Environmental Manager for more information on these.

## Demolition and Excavation Materials Reuse

In order to have more control over schedule and cost, Higgins encourage the use of a self-regulatory approach for the reuse of demolition and excavated material. In this approach evidence is required to prove that materials reused on site are actually products that meet construction specifications and so can be reused on site.

	Procedure
<b>EXCAVATED MATERIAL</b>	
<b>Greenfield Sites</b>	Summary statement confirming compliance
<b>Brownfield Sites</b>	
Less than 1000 tonnes	DICoP (CL:AIRE) or Waste Exemption
More than 1000 tonnes	DICoP
Transfer of material between sites	DICoP
<b>Crushed Demolition Material</b>	
Less than 5000 tonnes	WRAP Quality Protocol or Waste Exemption
More than 5000 tonnes	WRAP Quality Protocol
Transfer of material between sites	WRAP Quality Protocol
NOTE: Records of material treatment, stockpiling and final destination must be kept throughout DICoP and WRAP Quality Protocol. All	

## Take Back Schemes

Many material suppliers will provide take back schemes on their products (off cuts and uncontaminated used material). The materials taken back are generally returned to the manufacturing process, therefore reducing the quantities of new raw materials required. Speak to your Environmental Manager to discuss the use of takeback schemes.

Waste Carrier Name	Higgins/Sub Contractor	Waste Carrier Reg No.	Expiry Date	Copy On File	Destination Sites	Distance from Site to Waste Transfer Station (miles)	Waste Management Licence/Permit/Exemptions
GBN Services Ltd	Higgins	CBDU 90075			Uxbridge		EPR/CB3709XH
Dafcon Haulage Ltd	Carey London Ltd	CBDU 137488			Brett Hithermoor		WIF/67605
					I V Denham		WIF/1668D
Quattro (UK) Ltd	J Ffrench	CBDU 145950			AABC		
Glynn's (X-Bert Haulage T/A Glynn's Skips)	Carey London Ltd	CBDU140814			IN Neasden Transfer Stn		EPR/ZP3497NS/V002
JRL Environmental	Carey London Ltd	CBDU86520			Acton Aggregates Industries		
PB Donohue (Construction Ltd)	T Lott	CBDU194183	21.09.2023		Waste Management Facilities Ltd		1848478
GS Doyle	Carey London Ltd	CBDU365677					
	Callaghan (Oakmere)						



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Plastering Contractor	T Lott																								
	Number of Skips	0	0	0	0	0	0	0	0	0	0	0	0	9	16	21	30	20	24	26	19				
0 Total Yds		0	0	0	0	0	0	0	0	0	0	0	0	54	96	168	360	240	288	312	228				
0 Total Tonnes		0	0	0	0	0	0	0	0	0	0	0	0	12.96	23.04	40.32		57.6	69.12	74.88	54.72	0	0	0	0
0 Convert to M3		0	0	0	0	0	0	0	0	0	0	0	0	41.2425	73.32	128.31	274.95	183.3	219.96	238.29	174.135	0	0	0	0
0 % Diversion from Landfill		100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%		
0 M3 Diverted from Landfill		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	41.24	73.32	128.31	274.95	183.30	219.96	238.29	174.14	0.00	0.00	0.00	0.00

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	Sep 20	Oct 20	Nov 20	Dec 20	Jan 21	Feb 21	Mar 21	Apr 21	May 21	Jun 21	Jul 21	Aug 21	Sep 21	Oct 21	Nov 21	Dec 21	Jan 22	Feb 22	Mar 22	Apr 22	May 22	Jun 22	Jul 22
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Waste Target m3/£100k	42.80
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Excavtion	Number of Muckaway Lorris in the Month	53	55	64	58	78	33	38	5					1									
Excavtion	M3 (assume 8 wheeler = 13)	689	715	832	754	1014	429	494	65	0	0	0	0	13	0	0	0	0	0	0	0	0	0
Excavtion	Tonnes (8 wheeler = approx 18)	954	990	1152	1044	1404	594	684	90	0	0	0	0	18	0	0	0	0	0	0	0	0	0
Excavtion	% Diversion from Landfill	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
	Cumulative Muckaway Volume M3	689	1404	2236	2990	4004	4433	4927	4992	4992	4992	4992	4992	5005	5005	5005	5005	5005	5005	5005	5005	5005	5005

Demolition	Number of Lorries in the Month																						
Demolition	M3 (assume 8 wheeler = 13)																					0	0
Demolition	Tonnes (8 wheeler = approx 18)																					0	0
Demolition	% Diversion from Landfill	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
	Cumulative Muckaway Volume M3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	Hazardous Waste Movements in the Month	0	0	0	0	0	0	0	0														
	0 Weight kg																						
	0 % Diversion from Landfill	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	Cumulative Haz Waste - KG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

BREEAM	Cumulative Waste M3 Per 100m2 GIFA	0.00	0.11	0.37	0.47	0.87	1.02	1.46	1.71	2.05	2.18	2.18	2.32	2.57	3.01	3.96	4.59	5.35	6.17	6.77	6.77	6.77	16.43	16.43
BREEAM	Cumulative Waste Tonnes Per 100m2 GIFA	0.00	0.03	0.13	0.17	0.29	0.34	0.48	0.56	0.66	0.70	0.70	0.75	0.82	0.96	0.96	1.16	1.40	1.66	1.85	1.85	1.85	3.03	3.03

Conversions

Conversion yd to m3	0.76375
yds to tonnes	0.24

BREEAM	M3
Lower	Upper
7.51	13.3 1 Credit
3.41	7.5 2 Credits
1.61	3.4 3 Credits
0	1.6 Exemplary

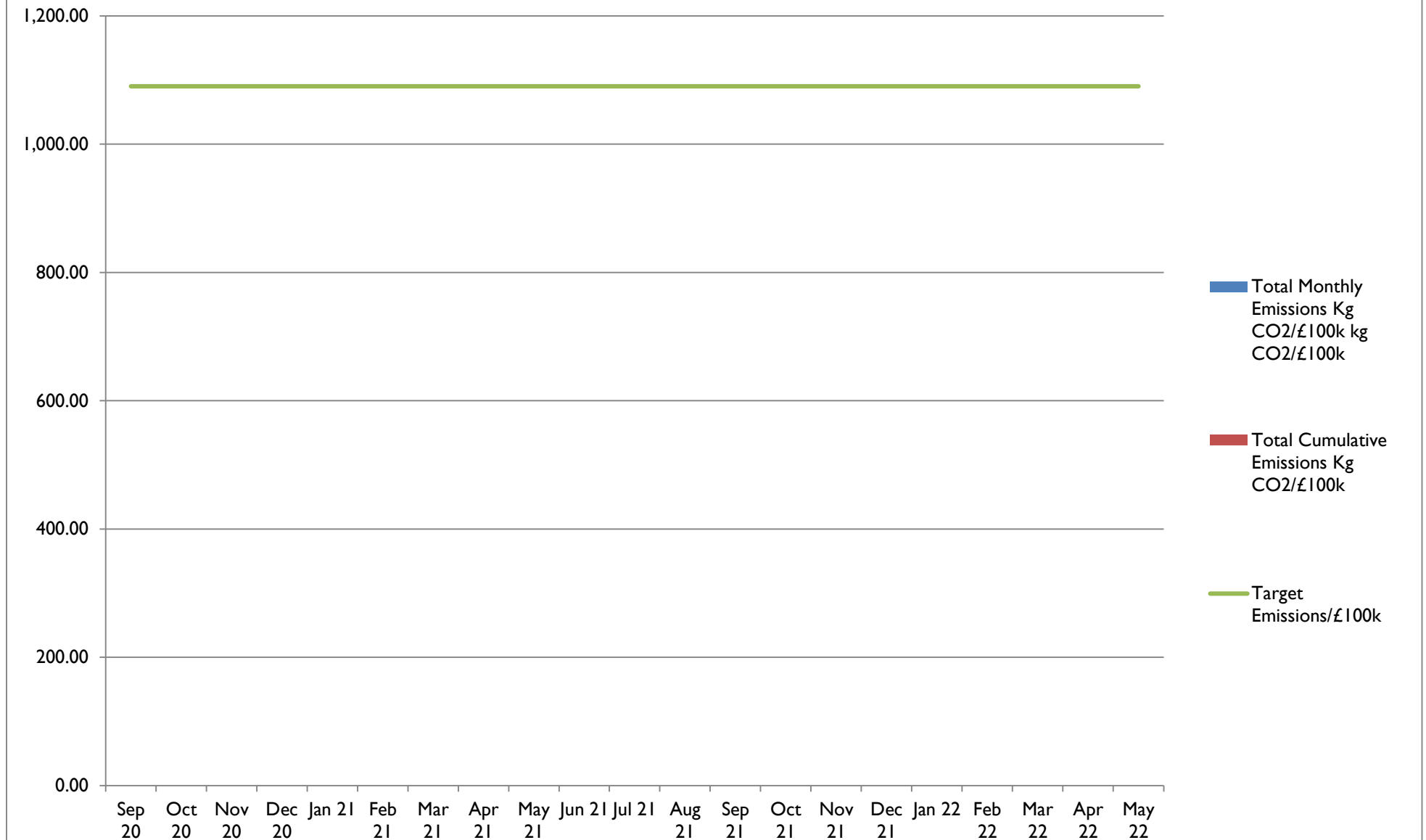
BREEAM	Tonnes
Lower	Upper
6.51	11.1 1 Credit
3.21	6.5 2 Credits
1.91	3.2 3 Credits
0	1.9 Exemplary

13	16.6
9.2	12.9
0	9.2

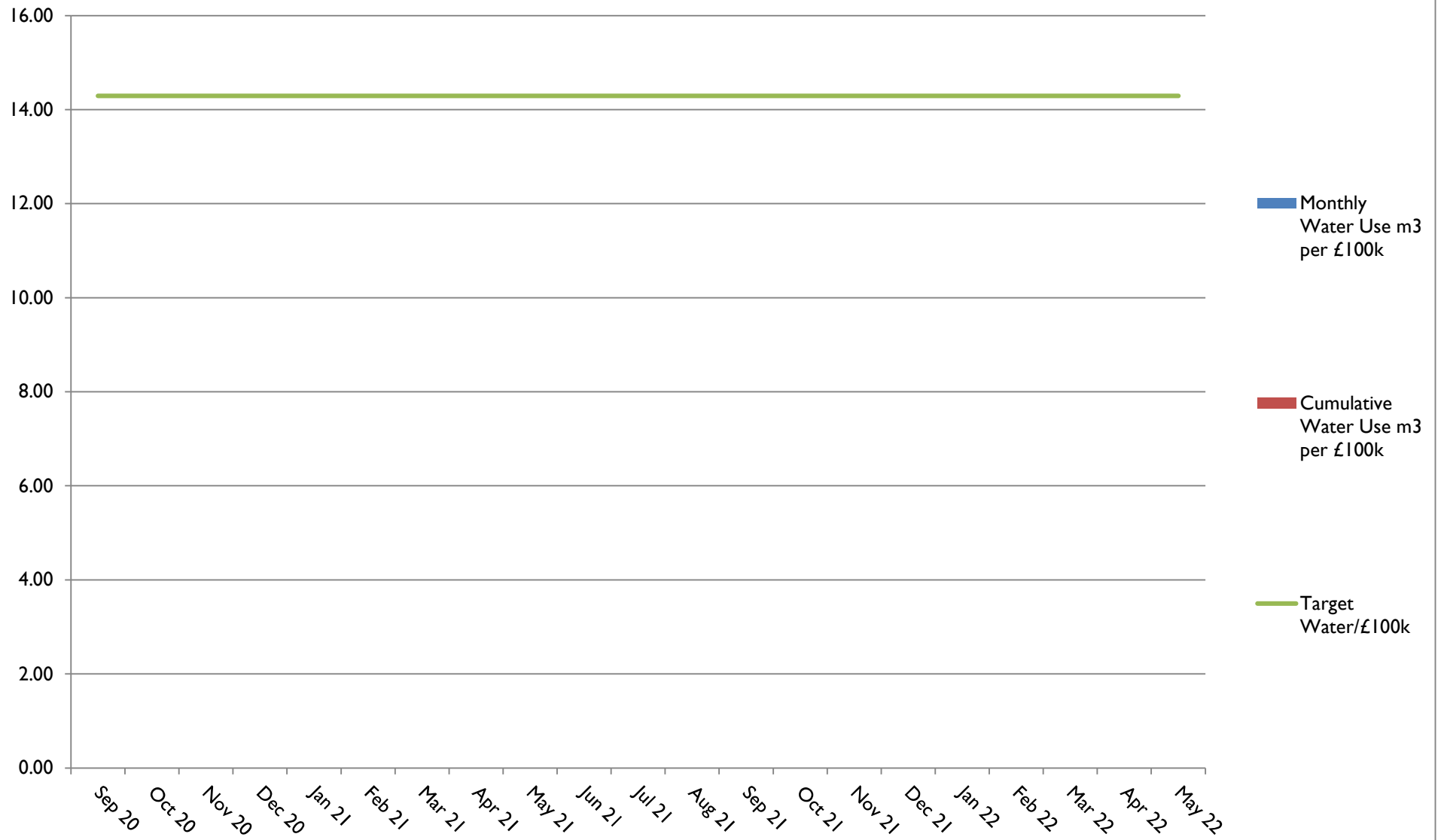
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		Aug 22	Sep 22	Oct 22	Nov 22	Dec 22	Jan 23	Feb 23	Mar 23	Apr 23	May 23	Jun 23	Jul 23	Aug 23	Sep 23	Oct 23	Nov 23	Dec 23	Jan 24	Feb 24	
Waste Target m3/£100k																					
Excavtion	Number of Muckaway Lorris in the Month																				
Excavtion	M3 (assume 8 wheeler = 13)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Excavtion	Tonnes (8 wheeler = approx 18)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Excavtion	% Diversion from Landfill	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	
	Cumulative Muckaway Volume M3	5005	5005	5005	5005	5005	5005	5005	5005	5005	5005	5005	5005	5005	5005	5005	5005	5005	5005	5005	
Demolition	Number of Lorries in the Month																				
Demolition	M3 (assume 8 wheeler = 13)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Demolition	Tonnes (8 wheeler = approx 18)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Demolition	% Diversion from Landfill	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	
	Cumulative Muckaway Volume M3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hazardous Waste Movements in the Month																					
0 Weight kg																					
0 % Diversion from Landfill		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Cumulative Haz Waste - KG		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
BREEAM	Cumulative Waste M3 Per 100m2 GIFA	16.43	16.43	16.43	16.43	16.43	16.43	16.43	16.43	16.43	16.43	16.43	16.43	16.43	16.43	16.43	16.43	16.43	16.43	16.43	
BREEAM	Cumulative Waste Tonnes Per 100m2 GIFA	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	
Conversions																					
Conversion yd to m3		0.76375																			
yds to tonnes		0.24																			
BREEAM M3																					
Lower	Upper																				
	7.51	13.3																			
	3.41	7.5																			
	1.61	3.4																			
	0	1.6																			
BREEAM Tonnes																					
Lower	Upper																				
	6.51	11.1																			
	3.21	6.5																			
	1.91	3.2																			
	0	1.9																			
BREEAM																					
	13	16.6																			
	9.2	12.9																			
	0	9.2																			

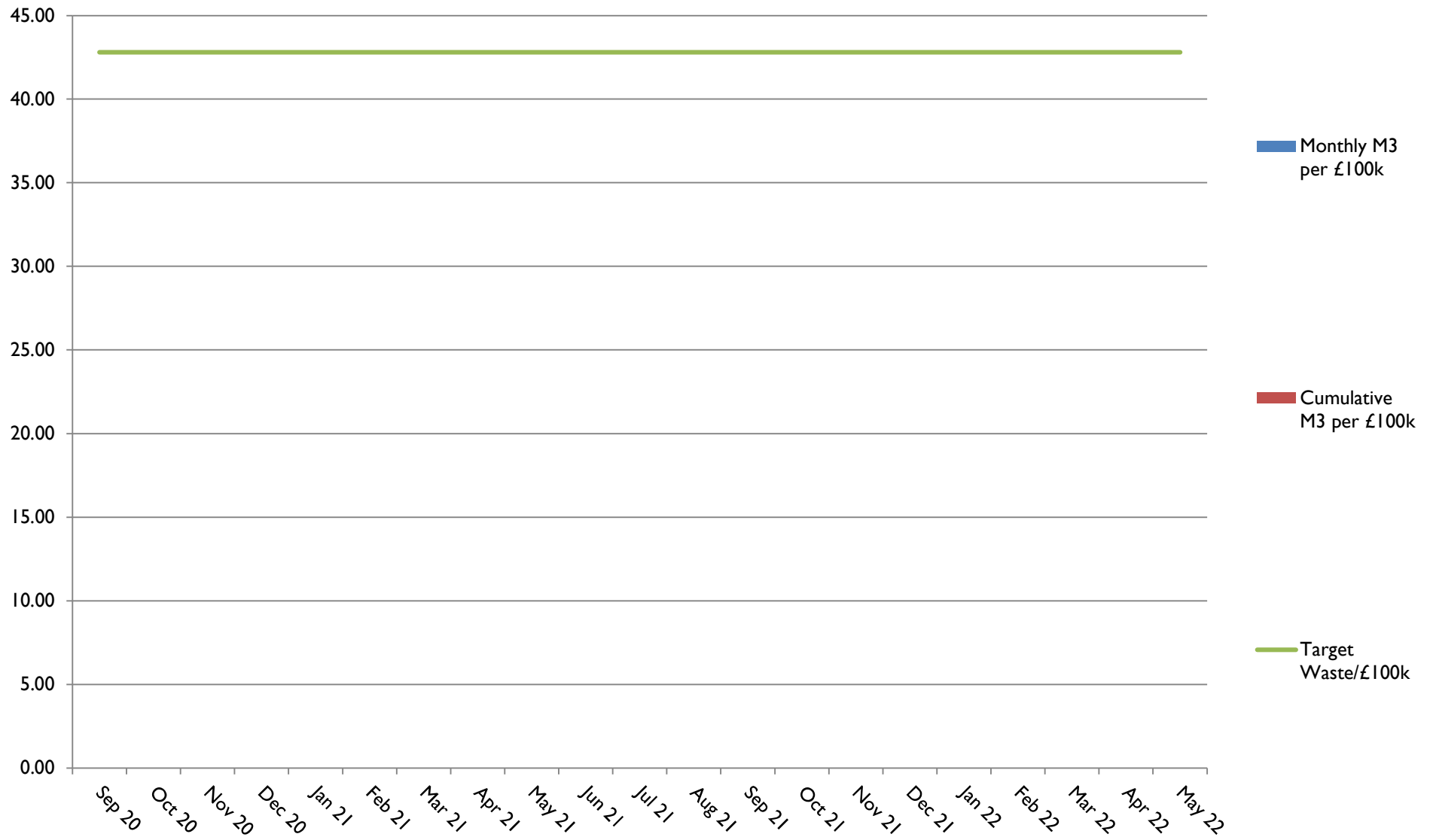
## Emissions - kg CO2 per £100k



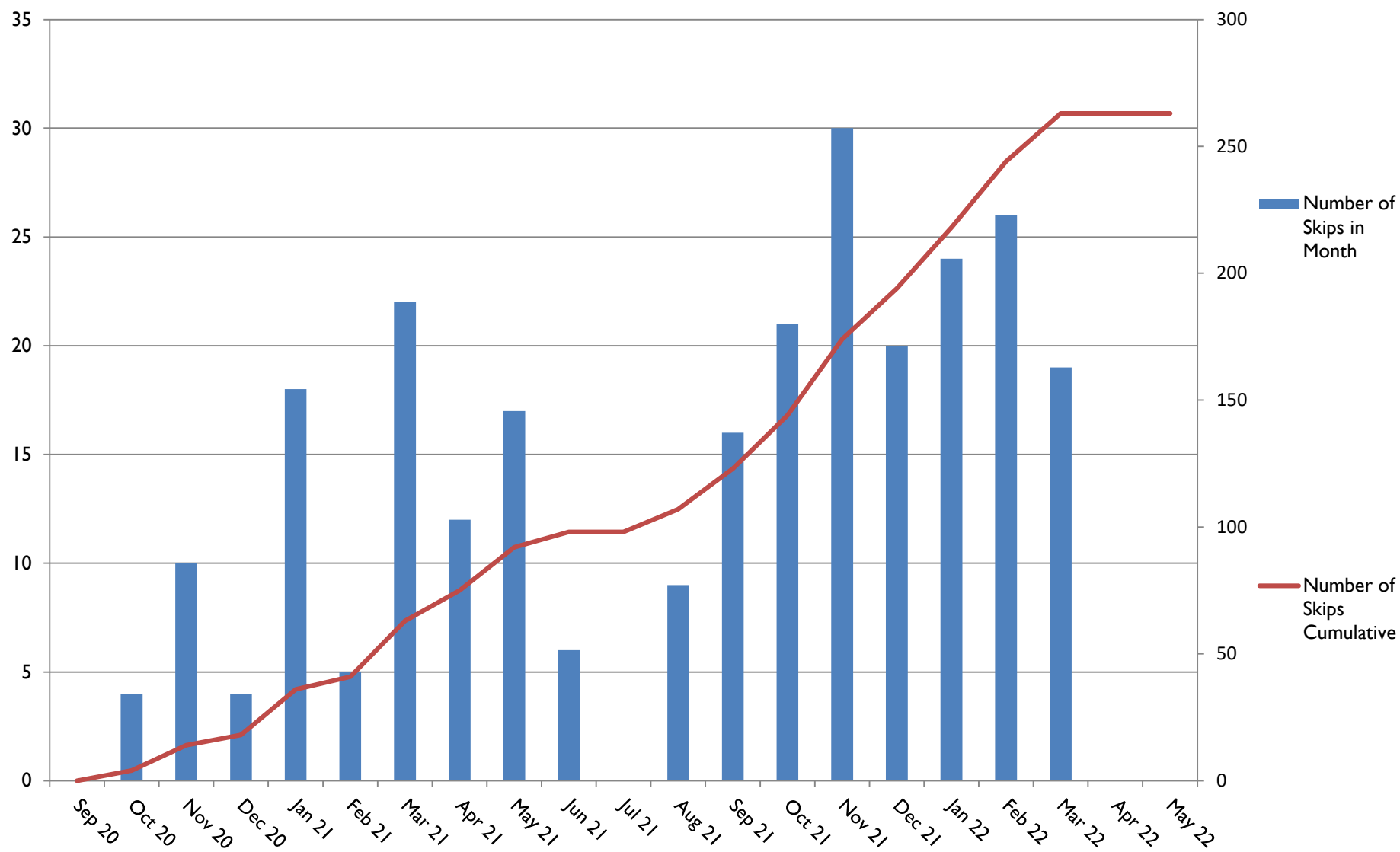
## Water Usage m3 Per £100k



## Waste m3 Per £100k



## Number of Skips





There are two types of documentation controlling the transfer of wastes from our sites. They are **Waste Transfer Notes** (for non-hazardous wastes) and **Hazardous Waste Consignment Notes** (for hazardous wastes).

Waste Transfer Documents show carriers who handle our waste what they are dealing with so that they can manage it safely and legally. No waste should ever leave our sites without either document in place.

NOTE: Copies of all Waste Transfer Notes must be kept for at least two years and Hazardous Waste Consignment Notes for three years. They should be readily available upon demand for inspection by the Environment Agency or Local Authority.