

FST Carbon Management Plan 2018-19 to 2020-21

Summary

Year of plan	Cost £	Reduction CO _x kg	Cumulative reduction CO ₂ kg
1	0	972	
2	550 (one-off)	241.6	1,213.6
3	300 (recurring)	595.5	1,809.1

Year 1: 2018-19

Action: All catering vegetarian.

Impact

Diet per day medium meat: 25 kg CO₂

Diet per day vegetarian: 16 kg CO₂

[Source for data: CCS]

Assume lunches = 0.4 of daily diet

Assume reception = 0.2 of daily diet

Assume cost neutral

Assume impact continues beyond year of implementation

Event	Portions*	CO ₂ kg		
		Medium Meat	Vegetarian	Reduction
Members' meeting	120	(0.4 x 25) x 120 1,200	(0.4 x 16) x 120 768	432
Winter School	50	(0.4 x 25) x 50 500	(0.4 x 16) x 50 320	180
Ad-hoc working groups	50	(0.4 x 25) x 50 500	(0.4 x 16) x 50 320	180
Reception	100	(0.2 x 25) x 100 500	(0.2 x 16) x 100 320	180
TOTAL				972

*50% of totals, as half catering is already vegetarian

Year 2: 2019-20

Action: secondary glazing in FST office

Impact

Assume secondary glazing reduces emissions by 20%

Assume impact continues beyond year 1

Average emissions 100 kWh per M² [source: CCS]

FST office 34.35M² therefore estimated emissions for FST = 3,435 kWh

Kg of CO_x (equivalent) for 3,435 kWh = 1,208kg of CO₂

[source: <https://www.rensmart.com/Calculators/KWH-to-CO2>]

Total reduction in CO_x= 241.6 kg

Cost

Cost per M² of secondary glazing [source: www.magneglaze.co.uk] £100

M² windows in FST @ 4.5 M² £450

Plus estimated installation cost £100

Total cost £550

Year 3: 2020-21

Action: implement revised international transport policy

Assume at least one each European and long-haul flight per annum (likely to be an over-estimate esp for long-haul)

Assume impact continues beyond year of implementation

Illustrative examples, CO_x totals sourced from Claimexpenses.com

Travel	Reduced CO ₂ kg	Increased cost £
Replace one European flight with train travel Edinburgh – Brussels	Train: 89.3 Flight: 248.3 Reduction: 159	200 (£100 cost of train plus £100 additional cost for accommodation)
Ensure we use the most efficient carrier for one long-haul flight	2069.1 Assume 30 reduction by using most efficient flight Reduction: 620.7	100
Totals	595.5	300