Recycling/**Plant.**

Will Beament

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We live in a tremendously fragile eco-system. We consume masses of resources and pollute whilst doing so - **destroying our planet** and harming the vast number of **species** that inhabit it.

Two striking effects have arisen from our lifestyle and are clearly visible around the majority of London; an abundance of **litter** and extremely **poor biodiversity of species**. Westminster is of no exception.

The rate at which litter is dropped has dramatically increased by a colossal 500% in the UK since the 1960's. London, being a densely populated city, sees a noticable change in accordance to this statistic. The city is in dire need of a **contemporary solution to a growing litter problem.**

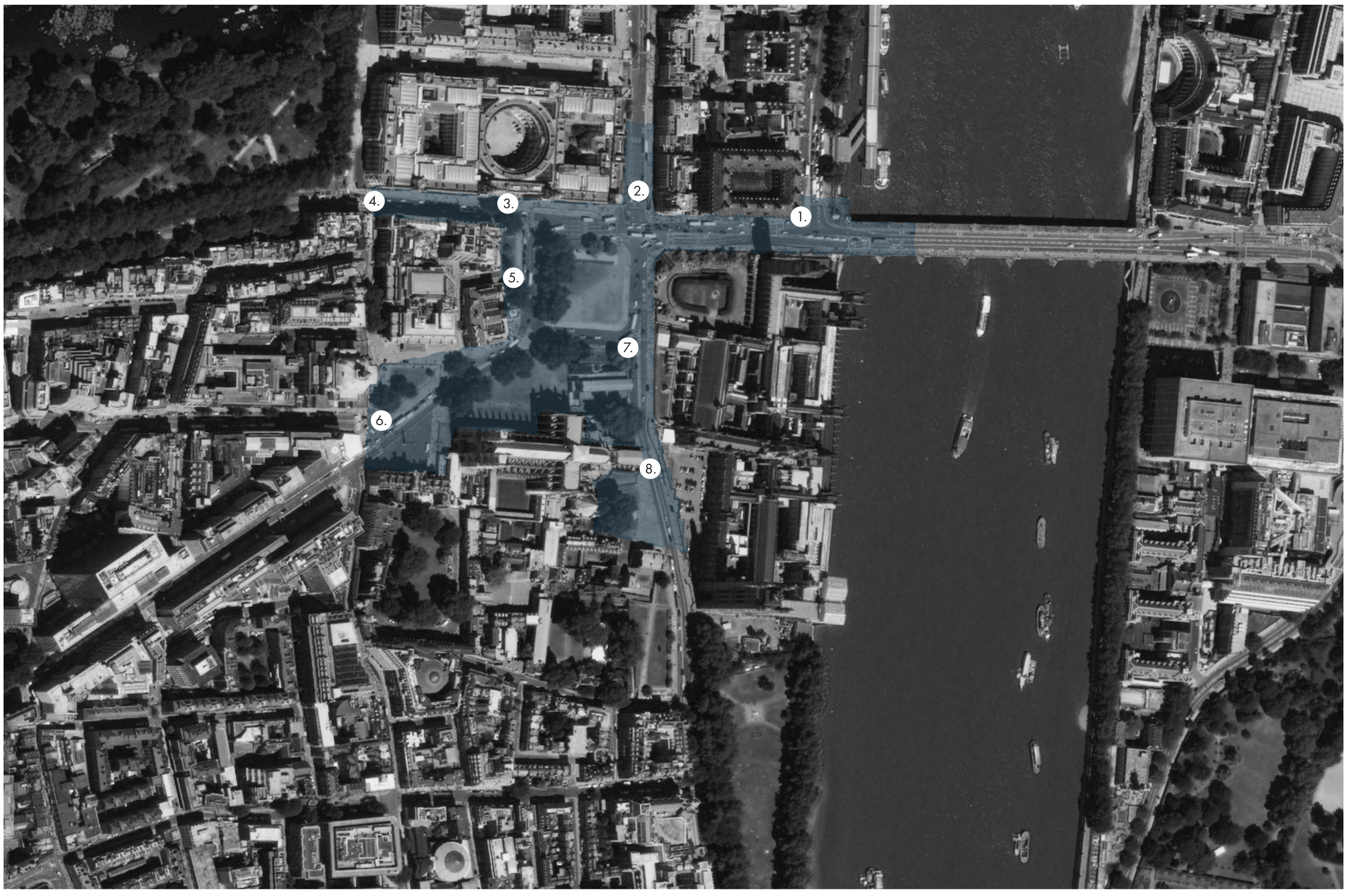
In parallel to this, the city has a striking **lack of diversity in native tree species** in certain areas - especially around the area parliament square (in stark contrast to St James' park)- all to the detriment of local ecology.

We must take action.

My aims for this site will include:

- Creating a innovative, local solution to tackle a growing litter problem
- Reducing homogeneity in tree species
- Forming a design framework that can recreated in any urban area

As a result, my proposal will include the complete forestation of parliament square and a solution to a growing litter problem in hopes that the governing body will reflect this change with progressive, green policy and use the site as precedent for other areas in need.



1. East of site adjacent to Westminster station.

2. Parliament Street north of site.

3. Great George Street north-west of site.

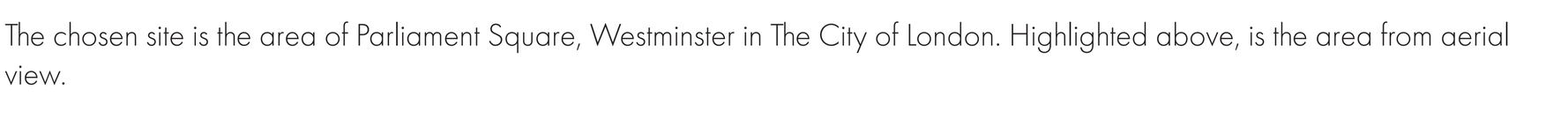
4. Great George Street west of site.

5. Little George Street adjacent to Supreme Court.

6. Victoria Street south-west of site.

7. South-east corner of Parliament Square.

8. Abingdon Street south-east of site.



The chosen site is the area of Parliament Square, Westminster in The City of London. Highlighted above, is the area from aerial view.

Site analysis

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Litter mapping

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This plan depicts the distribution of litter and the material they consist of throughout the area of parliament square. Abundance of litter is a huge problem in London and will be used as a prime example of a 'gini' inequality.

- Paper
- Plastic
- Metal
- Rubber
- Glass

ICON	IMAGE	DESCRIPTION	LOCATION	TYPE	SUB-TYPE	VOLUME (mm^3)	POSSIBLE ORIGIN (Top 3)	TIME TO DEGRADE (Average est.)
A								
		HAIRBAND	(X=56) , (Y=2)	RUBBER	NATURAL RUBBER	100mm x 3mm x 1mm = 300mm^3	THAILAND, INDONESIA, VIETNAM	50-80 YEARS
		LOLLYSTICK	(X=56) , (Y=3)	PAPER	-	70mm x 3mm x 3mm = 630mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS
		FOIL	(X=55) , (Y=3)	METAL	ALUMINIUM	20mm x 10mm x 5mm = 1000mm^3	CHINA, GERMANY, ITALY	80-100 YEARS
		LOLLYSTICK	(X=56) , (Y=4)	PAPER	-	70mm x 3mm x 3mm = 630mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS
		MACDONALDS BAG	(X=55) , (Y=5)	PAPER	-	200mm x 150mm x 0.5mm = 15000mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS
		STICKER	(X=54) , (Y=6)	PAPER	-	π x 20mm ^2 x 0.5mm = 628mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS
		PAPER BAG	(X=54) , (Y=8)	PAPER	-	200mm x 200mm x 0.5mm = 20000mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS
		STICKER	(X=55) , (Y=11)	PAPER	-	π x 20mm ^2 x 0.5mm = 628mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS
		ELASTIC BAND	(X=54) , (Y=12)	RUBBER	NATURAL RUBBER	100mm x 3mm x 1mm = 300mm^3	THAILAND, INDONESIA, VIETNAM	50-80 YEARS
		CIGARETTE PACKET	(X=54) , (Y=13)	PAPER	-	90mm x 60mm x 1mm = 5400mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS
		FANTA CAN	(X=53) , (Y=14)	METAL	ALUMINIUM	(π x 30mm ^2 x 90mm) - (π x 29.5mm ^2 x 89mm) = 11146mm^3	CHINA, RUSSIA, INDIA	80-100 YEARS
		PLASTIC BOTTLE	(X=52) , (Y=15)	PLASTIC	PET	(π x 40mm ^2 x 150mm) - (π x 39.5mm ^2 x 149mm) = 23633mm^3	CHINA, USA, GERMANY	500 YEARS+
		FOIL	(X=53) , (Y=16)	METAL	ALUMINIUM	20mm x 10mm x 3mm = 600mm^3	CHINA, GERMANY, ITALY	80-100 YEARS
		PLASTER	(X=53) , (Y=17)	PLASTIC	PVC	40mm x 40mm x 0.5mm = 800mm^3	CHINA, USA, GERMANY	500 YEARS+
		COKE CAN	(X=52) , (Y=18)	METAL	ALUMINIUM	(π x 30mm ^2 x 90mm) - (π x 29.5mm ^2 x 89mm) = 11146mm^3	CHINA, RUSSIA, INDIA	80-100 YEARS
		GUM WRAPPER	(X=51) , (Y=18)	PAPER	-	60mm x 20mm x 0.5mm = 600mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS
		PLASTIC BOTTLE CAP	(X=50) , (Y=15)	PLASTIC	PET	(π x 15mm ^2 x 15mm) - (π x 13mm ^2 x 14mm) = 3170mm^3	CHINA, USA, GERMANY	500 YEARS+
		TISSUE	(X=52) , (Y=12)	PAPER	-	150mm x 150mm x 0.5mm = 11250mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS
		STICKER	(X=50) , (Y=12)	PAPER	-	π x 20mm ^2 x 0.5mm = 628mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS
		WESTMINSTER ABBEY TICKET	(X=51) , (Y=9)	PAPER	-	100mm x 50mm x 0.5mm = 2500mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS
		TWIX WRAPPER	(X=51) , (Y=5)	PLASTIC	PP	100mm x 35mm x 0.5mm = 1750mm^3	CHINA, USA, GERMANY	500 YEARS+
		STICKER	(X=51) , (Y=4)	PAPER	-	π x 20mm ^2 x 0.5mm = 628mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS
		TISSUE	(X=52) , (Y=2)	PAPER	-	150mm x 150mm x 0.5mm = 11250mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS
		MINT WRAPPER	(X=51) , (Y=1)	METAL	ALUMINIUM	110mm x 20mm x 0.5mm = 1100mm^3	CHINA, GERMANY, ITALY	80-100 YEARS
		TISSUE	(X=51) , (Y=0)	PAPER	-	150mm x 150mm x 0.5mm = 11250mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS
B								
		TISSUE	(X=52) , (Y=21)	PAPER	-	150mm x 150mm x 0.5mm = 11250mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS
		LEAFLET	(X=53) , (Y=23)	PAPER	-	148mm x 210mm x 0.5mm = 15540mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS
		PEN LID	(X=53) , (Y=26)	PLASTIC	PS	40mm x 3mm x 4mm = 480mm^3	CHINA, USA, GERMANY	500 YEARS+
		PLASTIC SPOON	(X=52) , (Y=26)	PLASTIC	PS	100mm x 10mm x 1mm = 1000mm^3	CHINA, USA, GERMANY	500 YEARS+
		CLOTHES TAG	(X=53) , (Y=29)	PAPER	-	40mm x 40mm x 1mm = 1600mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS
		GUM WRAPPER	(X=50) , (Y=28)	PAPER	-	60mm x 20mm x 0.5mm = 600mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS
		CABLE TIE	(X=52) , (Y=33)	PLASTIC	NYLON	150mm x 3mm x 1.5mm = 675mm^3	CHINA, USA, GERMANY	500 YEARS+
		CABLE TIE	(X=53) , (Y=34)	PLASTIC	NYLON	150mm x 3mm x 1.5mm = 675mm^3	CHINA, USA, GERMANY	500 YEARS+
		GUM WRAPPER	(X=48) , (Y=21)	PAPER	-	60mm x 20mm x 0.5mm = 600mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS
		STICKER	(X=48) , (Y=22)	PLASTIC	PVC	50mm x 30mm x 0.5mm = 750mm^3	CHINA, USA, GERMANY	500 YEARS+
		BUTTON	(X=45) , (Y=26)	PLASTIC	POLYESTER	π x 10mm ^2 x 2mm = 628mm^3	CHINA, USA, GERMANY	500 YEARS+
		FOIL	(X=43) , (Y=27)	METAL	ALUMINIUM	20mm x 20mm x 3mm = 1200mm^3	CHINA, GERMANY, ITALY	80-100 YEARS
		NEWSPAPER	(X=42) , (Y=30)	PAPER	-	350mm x 600mm x 10mm = 2100000mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS
		LEAFLET	(X=46) , (Y=30)	PAPER	-	148mm x 210mm x 0.5mm = 15540mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS
		WESTMINSTER ABBEY TICKET	(X=48) , (Y=31)	PAPER	-	100mm x 50mm x 0.5mm = 2500mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS
		LEAFLET	(X=48) , (Y=33)	PAPER	-	148mm x 210mm x 0.5mm = 15540mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS
		FIVE GUYS CUP	(X=49) , (Y=33)	PAPER	-	(π x 35mm ^2 x 150mm) - (π x 34mm ^2 x 149mm) = 36147mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS
		PLASTIC BAG	(X=49) , (Y=33)	PLASTIC	POLYETHYLENE	200mm x 200mm x 0.5mm = 20000mm^3	CHINA, USA, GERMANY	500 YEARS+
		PAPER SHEET	(X=49) , (Y=34)	PAPER	-	210mm x 297mm x 0.5mm = 31185mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS
		MACDONALDS RECIEPT	(X=49) , (Y=35)	PAPER	-	140mm x 80mm x 0.25mm = 2800mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS
		COFFEE CUP LID	(X=49) , (Y=36)	PLASTIC	PS	(π x 35mm ^2 x 15mm) - (π x 34mm ^2 x 14mm) = 6883mm^3	CHINA, USA, GERMANY	500 YEARS+
		GUM WRAPPER	(X=49) , (Y=37)	PAPER	-	60mm x 20mm x 0.5mm = 600mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS
		ELASTIC BAND	(X=49) , (Y=38)	RUBBER	NATURAL RUBBER	100mm x 3mm x 1mm = 300mm^3	THAILAND, INDONESIA, VIETNAM	50-80 YEARS
		PLASTIC WRAPPER	(X=50) , (Y=38)	PLASTIC	POLYETHYLENE	30mm x 80mm x 0.5mm = 1200mm^3	CHINA, USA, GERMANY	500 YEARS+
		FADED STICKER	(X=49) , (Y=39)	PAPER	-	π x 20mm ^2 x 0.5mm = 628mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS

Provided throughout are the tables of data formed after gathering information from litter on site. These data sets provide information on: material (as represented consistently throughout using colour and symbol), specific item usage, coordinates in relation to the map, specific material, rough dimensions, likely areas of origin,and finally, estimated degradation time.

Data sheet 1

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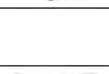
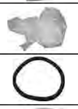
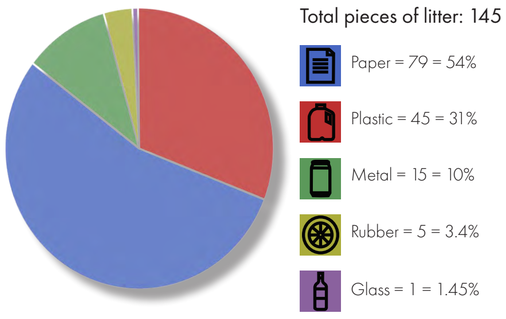
ICON	IMAGE	DESCRIPTION	LOCATION	TYPE	SUB-TYPE	VOLUME (mm^3)	ORIGIN	TIME TO DEGRADE (Average est.)
C								
		GUM WRAPPER	(X=54) , (Y=41)	PAPER	-	60mm x 20mm x 0.5mm = 600mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS
		LEAFLET	(X=54) , (Y=42)	PAPER	-	148mm x 210mm x 0.5mm = 15540mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS
		COFFEE CUP LID	(X=47) , (Y=41)	PLASTIC	PS	(π x 35mm ^2 x 15mm) - (π x 34mm ^2 x 14mm) = 6883mm^3	CHINA, USA, GERMANY	500 YEARS+
		NEWSPAPER	(X=44) , (Y=43)	PAPER	-	350mm x 600mm x 10mm = 2100000mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS
		FOIL	(X=48) , (Y=43)	METAL	ALUMINIUM	20mm x 10mm x 5mm = 1000mm^3	CHINA, GERMANY, ITALY	80-100 YEARS
		NAPKIN	(X=44) , (Y=49)	PAPER	-	120mm x 120mm x 0.5mm = 7200mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS
		PLASTIC BAG	(X=53) , (Y=50)	PLASTIC	POLYETHYLENE	200mm x 200mm x 0.5mm = 20000mm^3	CHINA, USA, GERMANY	500 YEARS+
		CRISP PACKET	(X=46) , (Y=54)	PLASTIC	PP	110mm x 150mm x 0.5mm = 8250mm^3	CHINA, USA, GERMANY	500 YEARS+
		HAIRBAND	(X=54) , (Y=56)	RUBBER	NATURAL RUBBER	100mm x 3mm x 1mm = 300mm^3	THAILAND, INDONESIA, VIETNAM	50-80 YEARS
		TISSUE	(X=57) , (Y=53)	PAPER	-	150mm x 150mm x 0.5mm = 11250mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS
D								
		NEWSPAPER	(X=63) , (Y=44)	PAPER	-	350mm x 600mm x 10mm = 2100000mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS
		RECIEPT	(X=64) , (Y=45)	PAPER	-	70mm x 120mm x 0.25mm = 2100mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS
		TWIX WRAPPER	(X=66) , (Y=44)	PLASTIC	PP	30mm x 80mm x 0.5mm = 1200mm^3	CHINA, USA, GERMANY	500 YEARS+
		SWEET WRAPPER	(X=66) , (Y=45)	PLASTIC	PP	50mm x 40mm x 0.5mm = 1000mm^3	CHINA, USA, GERMANY	500 YEARS+
		NEWSPAPER	(X=63) , (Y=46)	PAPER	-	350mm x 600mm x 10mm = 2100000mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS
		RECIEPT	(X=64) , (Y=49)	PAPER	-	70mm x 120mm x 0.25mm = 2100mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS
		NEWSPAPER	(X=66) , (Y=49)	PAPER	-	350mm x 600mm x 10mm = 2100000mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS
		COKE CAN	(X=68) , (Y=44)	METAL	ALUMINIUM	(π x 30mm ^2 x 90mm) - (π x 29.5mm ^2 x 89mm) = 11146mm^3	CHINA, RUSSIA, INDIA	80-100 YEARS
		FOIL	(X=69) , (Y=44)	METAL	ALUMINIUM	10mm x 10mm x 5mm = 500mm^3	CHINA, GERMANY, ITALY	80-100 YEARS
		LEAFLET	(X=71) , (Y=45)	PAPER	-	148mm x 210mm x 0.5mm = 15540mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS
		FANTA CAN	(X=73) , (Y=44)	METAL	ALUMINIUM	(π x 30mm ^2 x 90mm) - (π x 29.5mm ^2 x 89mm) = 11146mm^3	CHINA, RUSSIA, INDIA	80-100 YEARS
		GUM WRAPPER	(X=76) , (Y=44)	PAPER	-	60mm x 20mm x 0.5mm = 600mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS
		FOIL	(X=77) , (Y=44)	METAL	ALUMINIUM	10mm x 20mm x 5mm = 1000mm^3	CHINA, GERMANY, ITALY	80-100 YEARS
		NEWSPAPER	(X=74) , (Y=48)	PAPER	-	350mm x 600mm x 10mm = 2100000mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS
		NAPKIN	(X=73) , (Y=49)	PAPER	-	120mm x 120mm x 0.5mm = 7200mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS
		WATER BOTTLE	(X=74) , (Y=49)	PLASTIC	PET	(π x 40mm ^2 x 150mm) - (π x 39.5mm ^2 x 149mm) = 23633mm^3	CHINA, USA, GERMANY	500 YEARS+
		LIGHTER	(X=75) , (Y=49)	PLASTIC	POM	60mm x 15mm x 6mm = 5400mm^3	CHINA, USA, GERMANY	500 YEARS+
E								
		STICKER	(X=39) , (Y=50)	PAPER	-	π x 20mm ^2 x 0.5mm = 628mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS
		STICKER	(X=36) , (Y=45)	PAPER	-	π x 20mm ^2 x 0.5mm = 628mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS
		S. PELLENGRINO CAN	(X=35) , (Y=44)	METAL	ALUMINIUM	(π x 30mm ^2 x 90mm) - (π x 29.5mm ^2 x 88mm) = 11146mm^3	CHINA, RUSSIA, INDIA	80-100 YEARS
		PRET WRAPPER	(X=33) , (Y=45)	PAPER	-	150mm x 150mm x 0.5mm = 11250mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS
		LEAFLET	(X=33) , (Y=50)	PAPER	-	148mm x 210mm x 0.5mm = 15540mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS
		NAPKIN	(X=28) , (Y=51)	PAPER	-	120mm x 120mm x 0.5mm = 7200mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS
		POLYSTYRENE	(X=24) , (Y=52)	PLASTIC	POLYSTYRENE	300mm x 300mm x 30mm = 2700000mm^3	CHINA, USA, GERMANY	500 YEARS+
F								
		RECIEPT	(X=18) , (Y=52)	PAPER	-	70mm x 100mm x 0.25mm = 1750mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS
		COFFEE CUP	(X=12) , (Y=53)	PAPER	-	(π x 30mm ^2 x 110mm) - (π x 29.5mm ^2 x 109mm) = 13015mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS
		STICKER	(X=11) , (Y=50)	PAPER	-	π x 20mm ^2 x 0.5mm = 628mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS
		RECIEPT	(X=8) , (Y=53)	PAPER	-	70mm x 110mm x 0.25mm = 1925mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS
		CRISP PACKET	(X=1) , (Y=51)	PLASTIC	PP	110mm x 150mm x 0.5mm = 8250mm^3	CHINA, USA, GERMANY	500 YEARS+
G								
		HEINZ MAYO PACKET	(X=38) , (Y=27)	PLASTIC	PP	(30mm x 30mm x 15mm) - (29.5mm x 29.5mm x 14.5) = 881mm^3	CHINA, USA, GERMANY	500 YEARS+
		GORDON'S GIN CAN	(X=37) , (Y=27)	METAL	ALUMINIUM	(π x 20mm ^2 x 120mm) - (π x 19.5mm ^2 x 119mm) = 8640mm^3	CHINA, RUSSIA, INDIA	80-100 YEARS
		RECIEPT	(X=35) , (Y=26)	PAPER	-	70mm x 110mm x 0.25mm = 1925mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS
		TISSUE	(X=29) , (Y=25)	PAPER	-	150mm x 150mm x 0.5mm = 11250mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS
		BISCUIT WRAPPER	(X=26) , (Y=24)	PLASTIC	POLYETHYLENE	40mm x 60mm x 0.5mm = 1200mm^3	CHINA, USA, GERMANY	500 YEARS+
		LINDT CHOC WRAPPER	(X=31) , (Y=28)	PLASTIC	PP	50mm x 40mm x 0.5mm = 1000mm^3	CHINA, USA, GERMANY	500 YEARS+
		STICKER	(X=37) , (Y=30)	PAPER	-	π x 20mm ^2 x 0.5mm = 628mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS
		STICKER	(X=38) , (Y=31)	PAPER	-	π x 20mm ^2 x 0.5mm = 628mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS
		FOIL	(X=36) , (Y=32)	METAL	ALUMINIUM	20mm x 20mm x 3mm = 1200mm^3	CHINA, GERMANY, ITALY	80-100 YEARS
		PENGUIN BAR WRAPPER	(X=34) , (Y=35)	PLASTIC	PP	30mm x 70mm x 0.5mm = 1050mm^3	CHINA, USA, GERMANY	500 YEARS+
		PLASTIC BAG	(X=32) , (Y=35)	PLASTIC	POLYETHYLENE	200mm x 200mm x 0.5mm = 20000mm^3	CHINA, USA, GERMANY	500 YEARS+
		BROKEN GLASS	(X=27) , (Y=31)	GLASS	-	30mm x 20mm x 3mm = 1800mm^3	CHINA, USA, GERMANY	1 MILLION YEARS

Data sheet 2

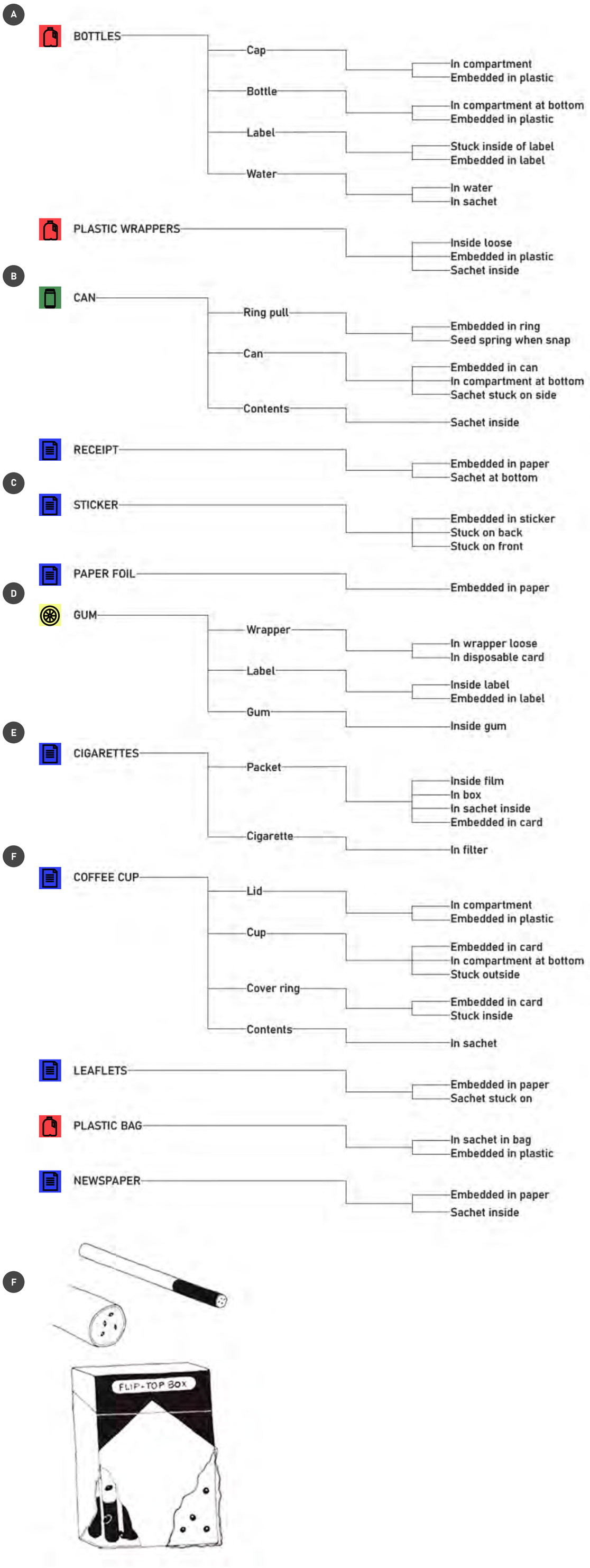
Recycling/**Plant**

ICON	IMAGE	DESCRIPTION	LOCATION	TYPE	SUB-TYPE	VOLUME (mm^3)	ORIGIN	TIME TO DEGRADE (Average est.)
H								
		STICKER	(X=11) , (Y=20)	PAPER	-	π x 20mm ^2 x 0.5mm = 628mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS
		SWAN FILTER PACK	(X=11) , (Y=19)	PAPER	-	(80mm x 40mm x 15mm) - (79mm x 39mm x 14mm) = 4866mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS
		STICKER	(X=13) , (Y=19)	PAPER	-	π x 20mm ^2 x 0.5mm = 628mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS
		STARBUCKS BAG	(X=12) , (Y=18)	PAPER	-	150mm x 150mm x 0.5mm = 11250mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS
		PLASTIC WRAPPER	(X=10) , (Y=18)	PLASTIC	POLYETHYLENE	30mm x 80mm x 0.5mm = 1200mm^3	CHINA, USA, GERMANY	500 YEARS+
		WINGNUT	(X=9) , (Y=18)	METAL	STAINLESS STEEL	20mm x 20mm x 20mm = 8000mm^3	CHINA, GERMANY, ITALY	50 YEARS
		PLASTIC FORK	(X=8) , (Y=19)	PLASTIC	PS	100mm x 10mm x 1mm = 1000mm^3	CHINA, USA, GERMANY	500 YEARS+
		BOTTLE CAP	(X=7) , (Y=18)	PLASTIC	PET	(π x 15mm ^2 x 15mm) - (π x 13mm ^2 x 14mm) = 3170mm^3	CHINA, USA, GERMANY	500 YEARS+
		PLASTIC WRAPPER	(X=7) , (Y=17)	PLASTIC	POLYETHYLENE	40mm x 70mm x 0.5mm = 1400mm^3	CHINA, USA, GERMANY	500 YEARS+
		EAR PLUG	(X=6) , (Y=17)	PLASTIC	SILICONE	π x 5mm ^2 x 20mm = 1571mm^3	CHINA, USA, GERMANY	500 YEARS+
		AMBER LEAF TOBACCO POUCH	(X=5) , (Y=17)	PLASTIC	POLYETHYLENE	130mm x 70mm x 1mm = 9100mm^3	CHINA, USA, GERMANY	500 YEARS+
		SHOPPING LIST	(X=3) , (Y=16)	PAPER	-	150mm x 100mm x 0.5mm = 7500mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS
		PRET NAPKIN	(X=4) , (Y=16)	PAPER	-	120mm x 120mm x 0.5mm = 7200mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS
		BADGE	(X=5) , (Y=16)	PLASTIC	PS	π x 20mm ^2 x 3mm = 3770mm^3	CHINA, USA, GERMANY	500 YEARS+
		STICKER	(X=7) , (Y=16)	PAPER	-	π x 20mm ^2 x 0.5mm = 628mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS
		STICKER	(X=10) , (Y=16)	PAPER	-	π x 20mm ^2 x 0.5mm = 628mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS
		FOOD BAG	(X=12) , (Y=16)	PAPER	-	150mm x 150mm x 0.5mm = 11250mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS
		LEAFLET	(X=14) , (Y=16)	PAPER	-	148mm x 210mm x 0.5mm = 15540mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS
		PLASTIC WRAPPER	(X=3) , (Y=15)	PLASTIC	POLYETHYLENE	30mm x 70mm x 0.5mm = 1050mm^3	CHINA, USA, GERMANY	500 YEARS+
		HAIRBAND	(X=4) , (Y=15)	RUBBER	NATURAL RUBBER	100mm x 3mm x 1mm = 300mm^3	THAILAND, INDONESIA, VIETNAM	50-80 YEARS
		BOTTLE CAP	(X=6) , (Y=15)	PLASTIC	PET	(π x 15mm ^2 x 15mm) - (π x 13mm ^2 x 14mm) = 3170mm^3	CHINA, USA, GERMANY	500 YEARS+
		TEA LABEL	(X=10) , (Y=15)	PAPER	-	20mm x 20mm x 1mm = 400mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS
		COFFEE CUP LID	(X=2) , (Y=14)	PLASTIC	PS	(π x 35mm ^2 x 15mm) - (π x 34mm ^2 x 14mm) = 6883mm^3	CHINA, USA, GERMANY	500 YEARS+
		PLASTIC WRAPPER	(X=8) , (Y=14)	PLASTIC	POLYETHYLENE	110mm x 30mm x 0.5mm = 1650mm^3	CHINA, USA, GERMANY	500 YEARS+
		TEA LABEL	(X=9) , (Y=14)	PAPER	-	20mm x 20mm x 1mm = 400mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS
		EAR PLUG	(X=11) , (Y=14)	PLASTIC	SILICONE	π x 5mm ^2 x 20mm = 1571mm^3	CHINA, USA, GERMANY	500 YEARS+
		TITAN BAR WRAPPER	(X=3) , (Y=13)	PLASTIC	PP	30mm x 80mm x 0.5mm = 1200mm^3	CHINA, USA, GERMANY	500 YEARS+
		STICKER	(X=6) , (Y=13)	PAPER	-	π x 20mm ^2 x 0.5mm = 628mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS
		WRISTBAND	(X=9) , (Y=13)	PLASTIC	NYLON	15mm x 120mm x 1mm = 1800mm^3	CHINA, USA, GERMANY	500 YEARS+
		LEAFLET	(X=10) , (Y=13)	PAPER	-	148mm x 210mm x 0.5mm = 15540mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS
		STICKER	(X=9) , (Y=12)	PAPER	-	π x 20mm ^2 x 0.5mm = 628mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS
		STICKER	(X=10) , (Y=12)	PAPER	-	π x 20mm ^2 x 0.5mm = 628mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS
		STICKER	(X=4) , (Y=11)	PAPER	-	π x 20mm ^2 x 0.5mm = 628mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS
		STICKER	(X=7) , (Y=11)	PAPER	-	π x 20mm ^2 x 0.5mm = 628mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS
		COFFEE CUP LID	(X=8) , (Y=11)	PLASTIC	PS	(π x 35mm ^2 x 15mm) - (π x 34mm ^2 x 14mm) = 6883mm^3	CHINA, USA, GERMANY	500 YEARS+
		STICKER	(X=11) , (Y=11)	PAPER	-	π x 20mm ^2 x 0.5mm = 628mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS
		RECIEPT	(X=14) , (Y=11)	PAPER	-	70mm x 120mm x 0.25mm = 2100mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS
		RECIEPT	(X=2) , (Y=10)	PAPER	-	70mm x 100mm x 0.25mm = 1750mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS
		SWEET WRAPPER	(X=5) , (Y=10)	PLASTIC	PP	50mm x 40mm x 0.5mm = 1000mm^3	CHINA, USA, GERMANY	500 YEARS+
		TOBACCO POUCH	(X=12) , (Y=10)	PLASTIC	PP	130mm x 70mm x 1mm = 9100mm^3	CHINA, USA, GERMANY	500 YEARS+
		RECIEPT	(X=2) , (Y=8)	PAPER	-	70mm x 120mm x 0.25mm = 2100mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS
		PLASTIC FORK	(X=4) , (Y=7)	PLASTIC	PS	100mm x 10mm x 1mm = 1000mm^3	CHINA, USA, GERMANY	500 YEARS+
		LEAFLET	(X=7) , (Y=8)	PAPER	-	148mm x 210mm x 0.5mm = 15540mm^3	JAPAN, GERMANY, BRAZIL	2-5 MONTHS
		RING PULL	(X=9) , (Y=8)	PLASTIC	NYLON	π x 10mm ^2 x 2mm = 628mm^3	CHINA, USA, GERMANY	500 YEARS+



Data sheet 3

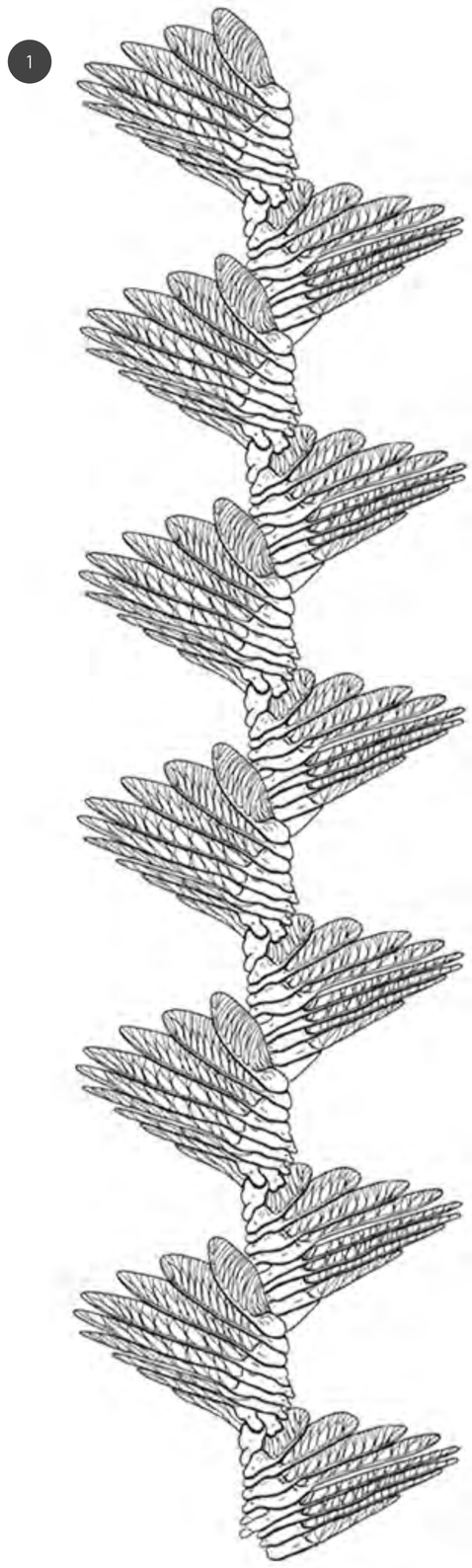
Recycling/**Plant**

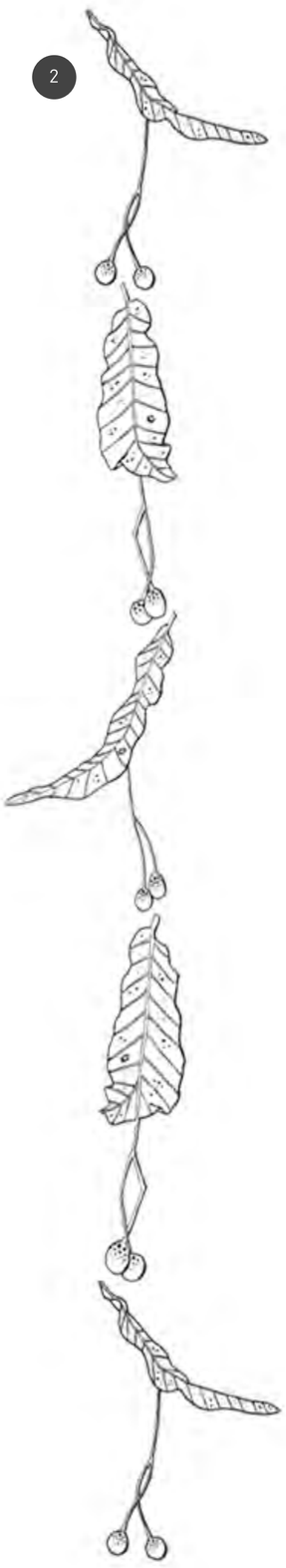


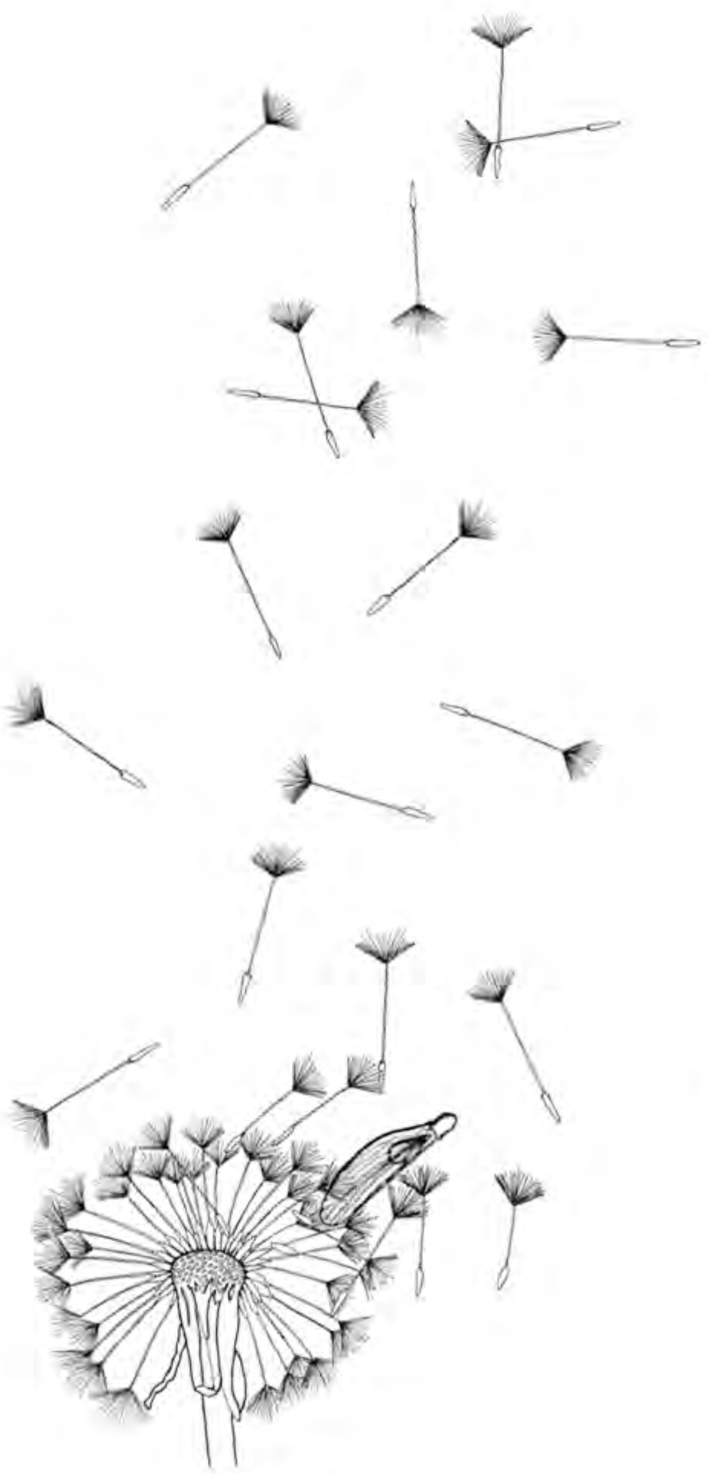
Relating back to the manifesto, not only is the goal to provide a local solution to tackling a growing litter problem litter, but also to find a way in which one could decrease plant homogeneity and forest an area. We already have a map of Parliament square with relevant points of interest - the litter - so what if this litter were to have a seed within it?... What would the site eventually look like if they all were to grow?... How could one integrate seeds withing the most common types of litter found on site?...

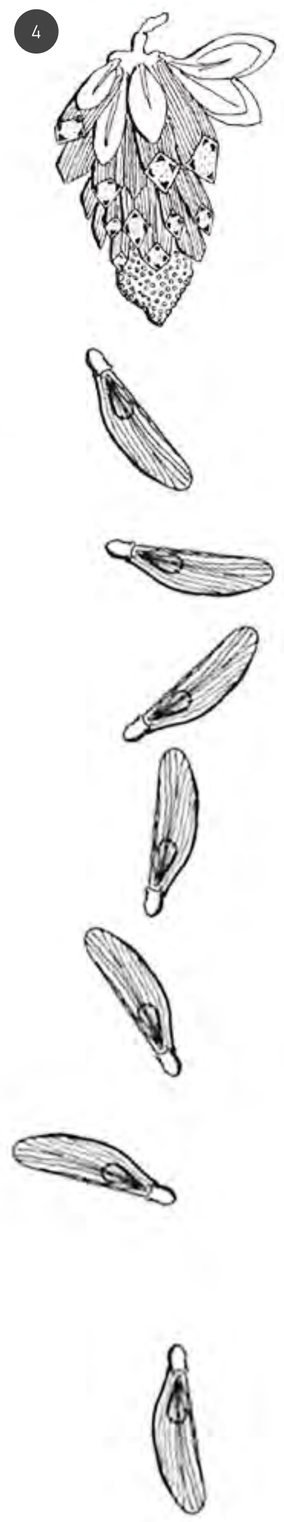
Litter intervention

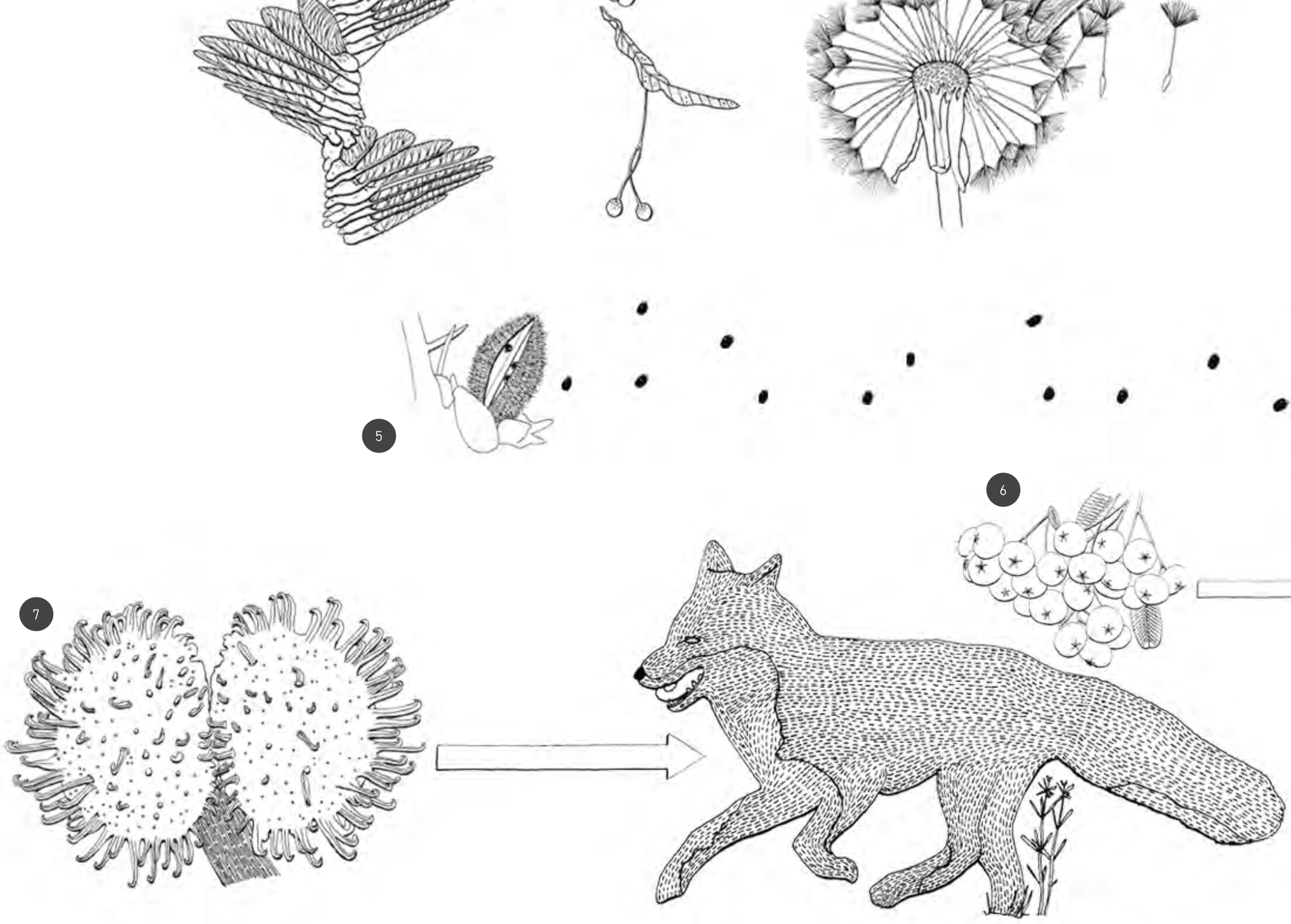
Recycling/**Plant**











1. Acer pseudoplatanus - wind dispersial
2. Tilia x europaea - wind dispersial
3. Taraxacum officinale - wind dispersial
4. Pinus sylvestris - wind dispersial
5. Ulex europaeus - projectile dispersial
6. Pyracantha coccinea - bird dispersial
7. Galium aparine - fur dispersial
8. Taxus baccata - bird dispersial

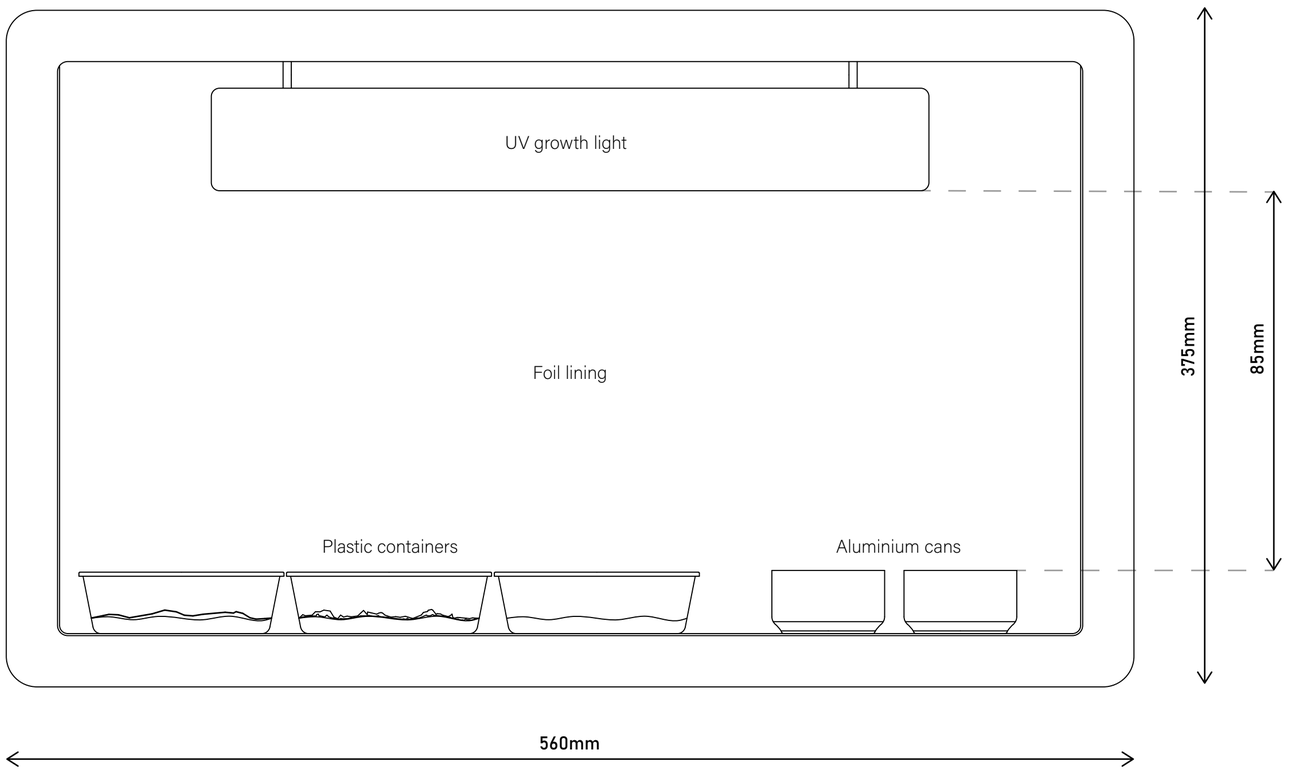
If we are considering what a site would be like if seeds were to mature and grow over several decades, what happens? They are most definitely not static - having other factors playing a role such as dispersal. Dispersal can occur in a variety of ways and patterns depending on the species and the conditions around it. Dispersal is how plants spread naturally - so why would our scenario be any different?

Seed dispersal

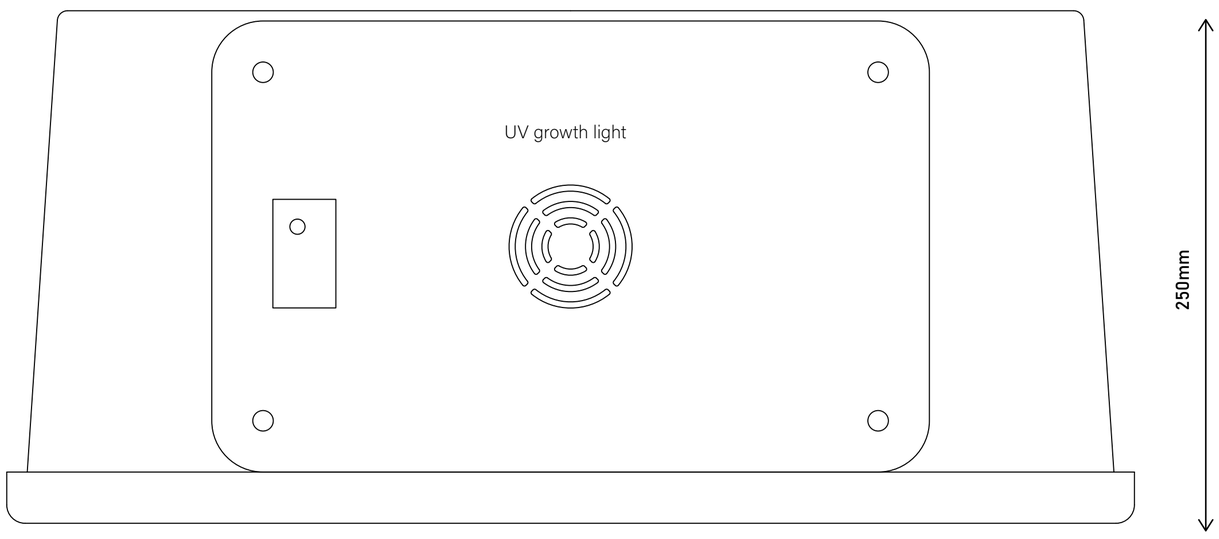
Recycling/**Plant**

Scale 1:20

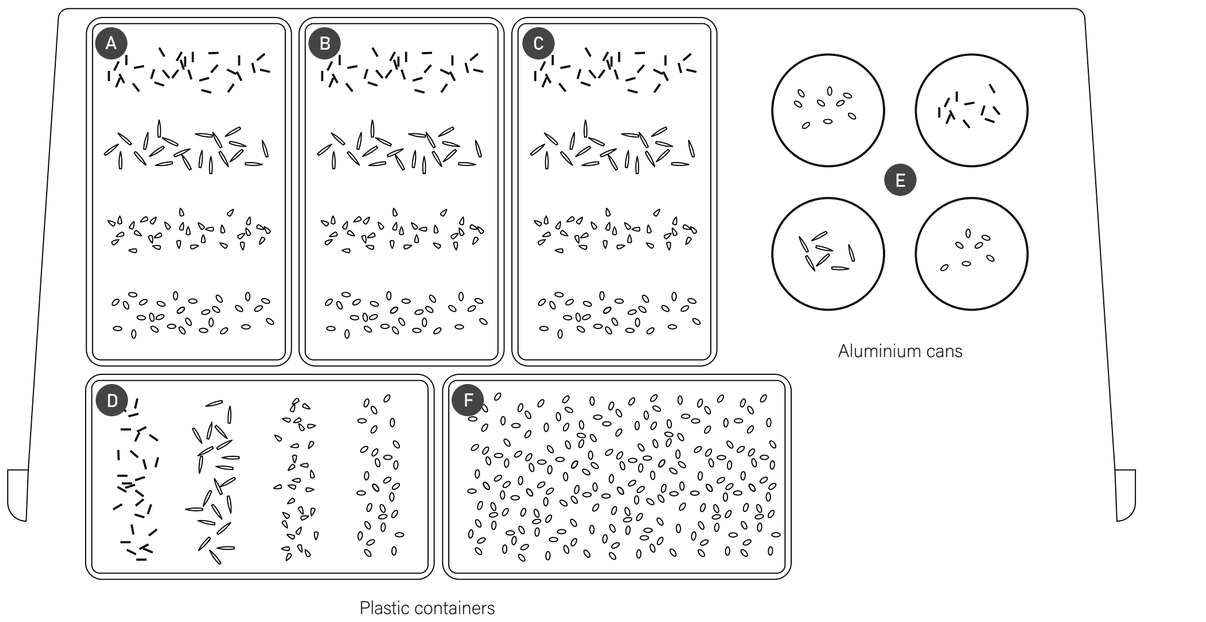
Front

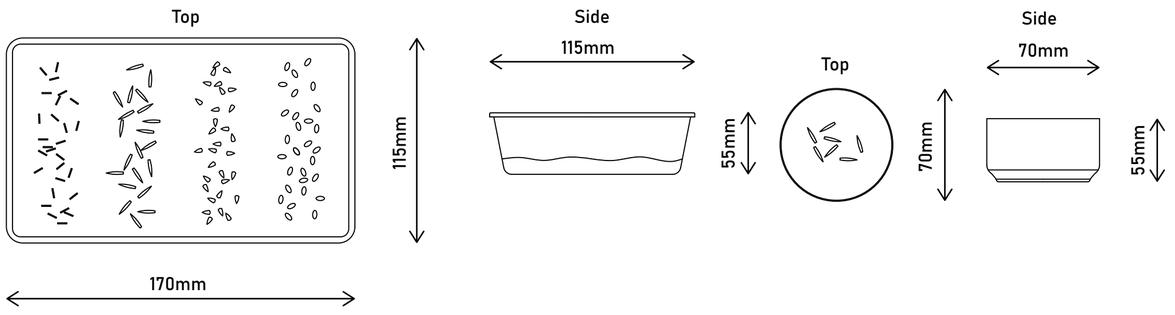


Top



Top (inside)





Plastic container used in experiment

Aluminium can container

The aim of this experiment is to test a variety of materials that could potentially facilitate the growth of seeds through litter. Above and illustrated to the left is the setup that I have put together in the hopes of testing these materials. The experiment consists of an ultra-violet growth light hung from a plastic box lined with aluminium foil to reflect the light. The seeds are laid underneath the growth light in a series of plastic tubs - each containing a different material.

1. Watercress
2. Cornflower
3. Cosmos
4. Tagetes

These seeds have mainly been chosen for their ability to germinate at a relatively fast rate in order to gain results as fast as possible. Moreover, they are simple to look after all requiring a similar amount of heat, light, and water.

- A **Paper**
- B **Plastic wrapper**
- C **Cotton wool (control)**
- D **Sticker paper**
- E **Aluminium can**
- F **Cotton wool with water cress (control 2)**

Above are the materials chosen for use in the experiment - chosen due to the frequency found of these materials on site.

RESULTS

Week 1

The paper was overall unsuccessful - possibly due to its tendency to retain water often drowning the seed. All seeds showed signs of minimal sprouting.

The plastic was by far the least successful being completely hydrophobic and not absorbing any water. No sprouting occured.

The cotton wool control was relatively successful with little growth but some-what successful sprouting from all seeds.

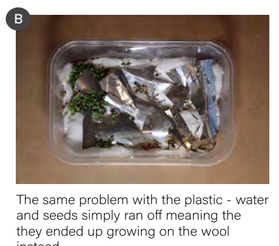
The sticker surface was fairly successful. Water was retained effectively without showing signs of over-saturation. The cress showed signs of growth and with more time, the other seeds would probably succeed also.

The cans were rather difficult to read. Perhaps if left longer there would have been signs of growth seeing as sprouting had began to occur underneath, in the holes.

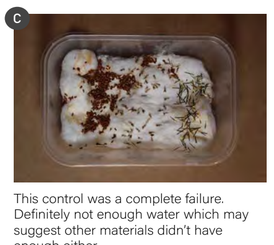
Again the wool showed signs that water and light levels were near optimum and allowed the cress to grow effectively.

Week 2

Again, the same problem occured with the paper. Simply too much water - it is incredibly difficult to give it a suitable amount of water.



The same problem with the plastic - water and seeds simply ran off meaning the they ended up growing on the wool instead.



This control was a complete failure. Definitely not enough water which may suggest other materials didn't have enough either.

The sticker surface was a relative success again. Progression would have been great if left for another week.

The cans were way too dry this time - to the point that one seed sample had to be thrown away due to it being completely dried out.

Control was working efficiently, however, still fairly dry. I would say this whole batch required more water (apart from the paper).

To conclude, I would definitely say that, apart from the wool, the sticker was the most effective material. However, I would say that the paper and cans would have been fairly effective too if I had given more attention to the water levels. The plastic, on the other hand, was a complete failure and I would be certain that it could never work.

If one were to integrate seeds into litter, how effective would it be? Perhaps not very...

Seed experimentation

Recycling/**Plant**

1

2040

2

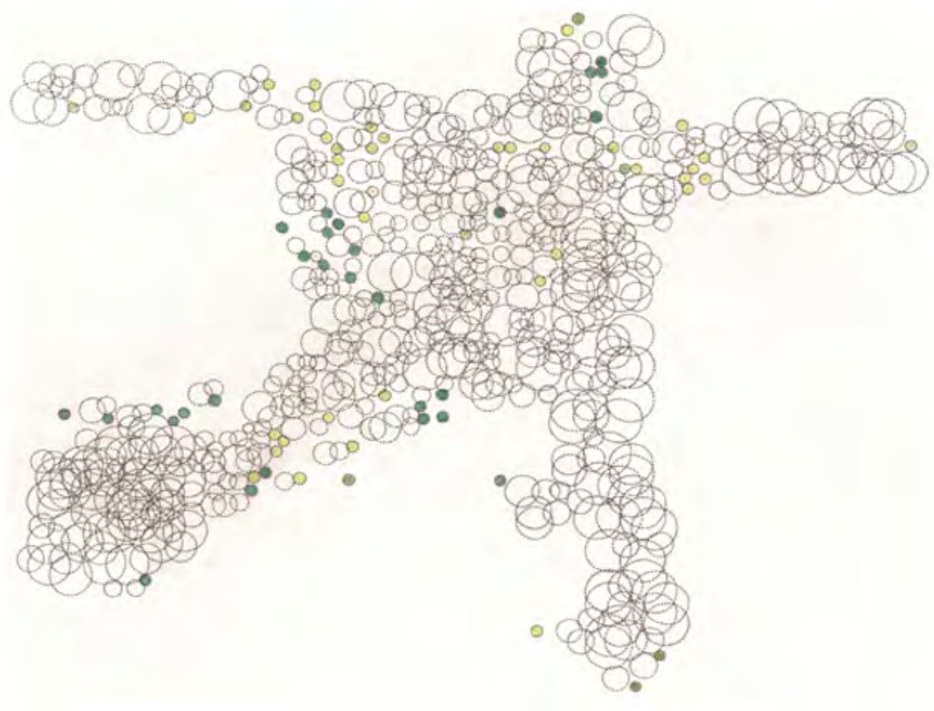
2060

3

2080

4

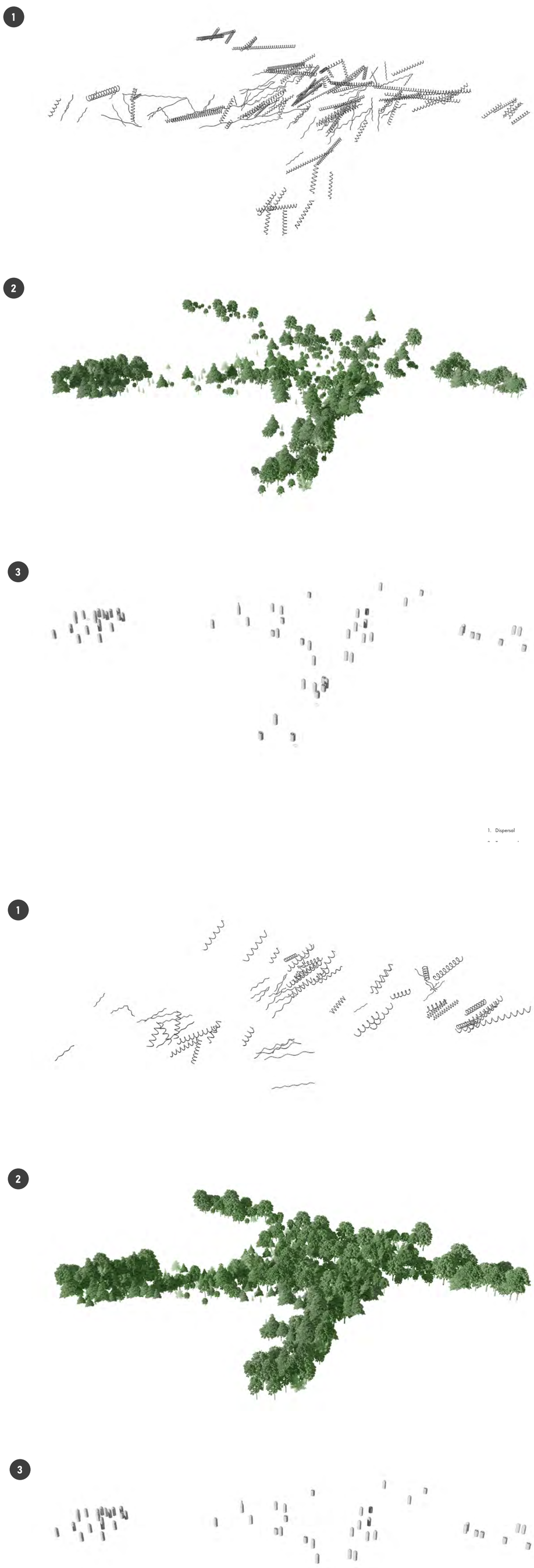
2100

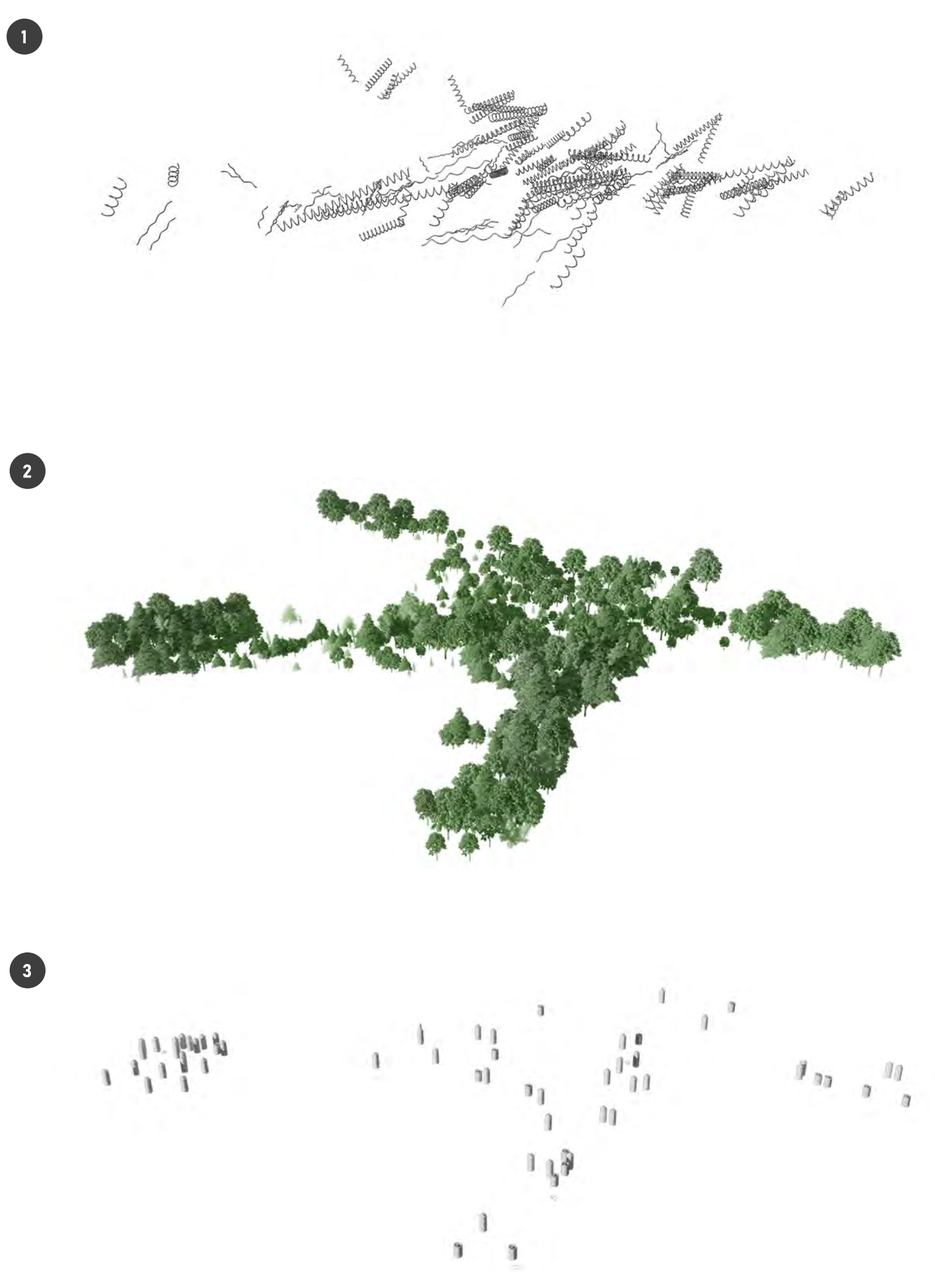


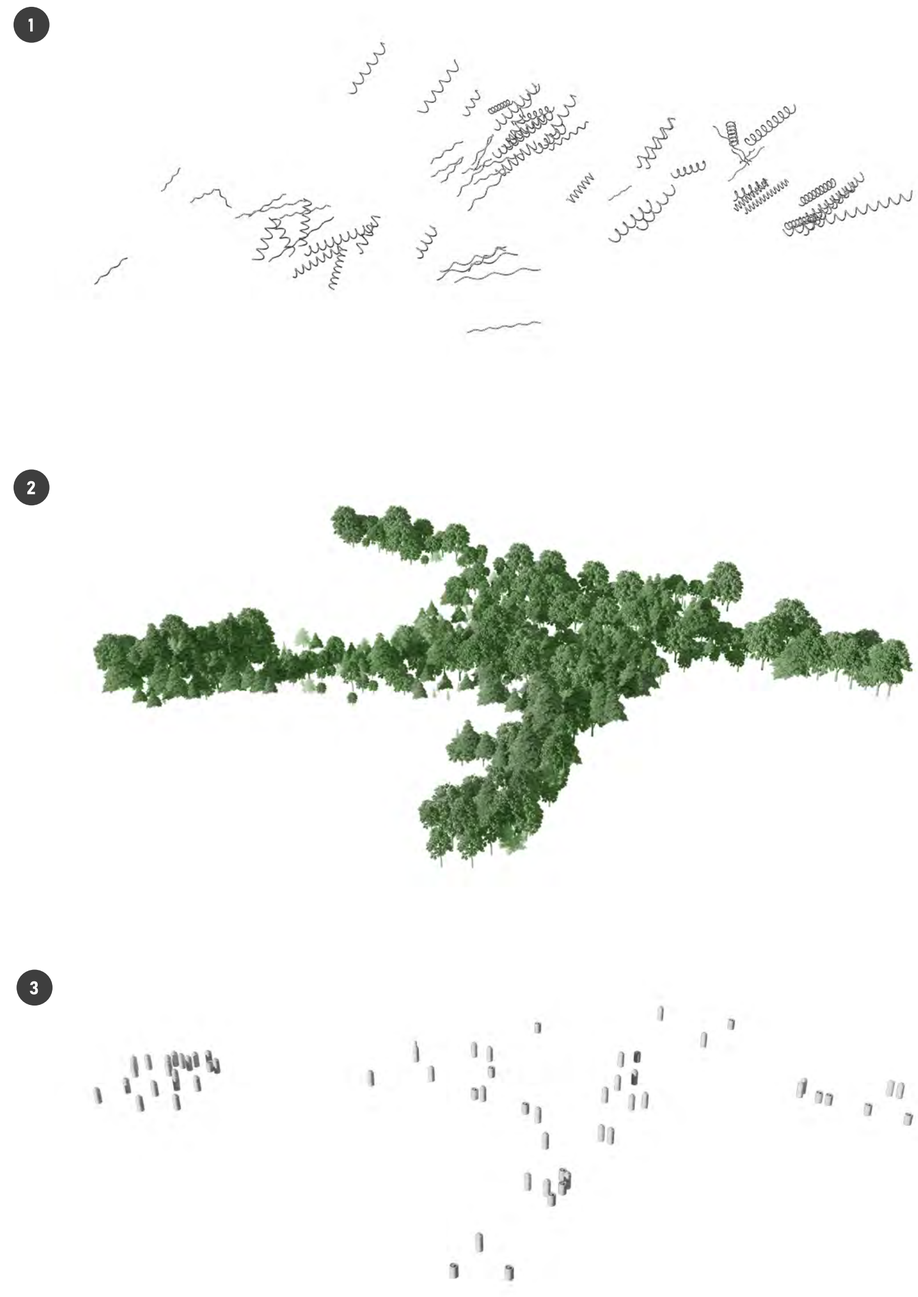
This series of images depicts what a site could look like every 2 decades until the year 2100. Each 2 decades shows both progression of growth of five basic species through the original pieces of litter mapped and also additional, theoretical, dispersion.

Spread and growth through the decades

Recycling/**Plant**







Again, these layers represent what a site could look like every 2 decades until the year 2100 accounting for dispersion. The top layer depicts dispersion patterns, the middle layer depicts tree growth, and the bottom depicts the original litter with consideration for degradation.

The site through the decades

Recycling/**Plant**

1

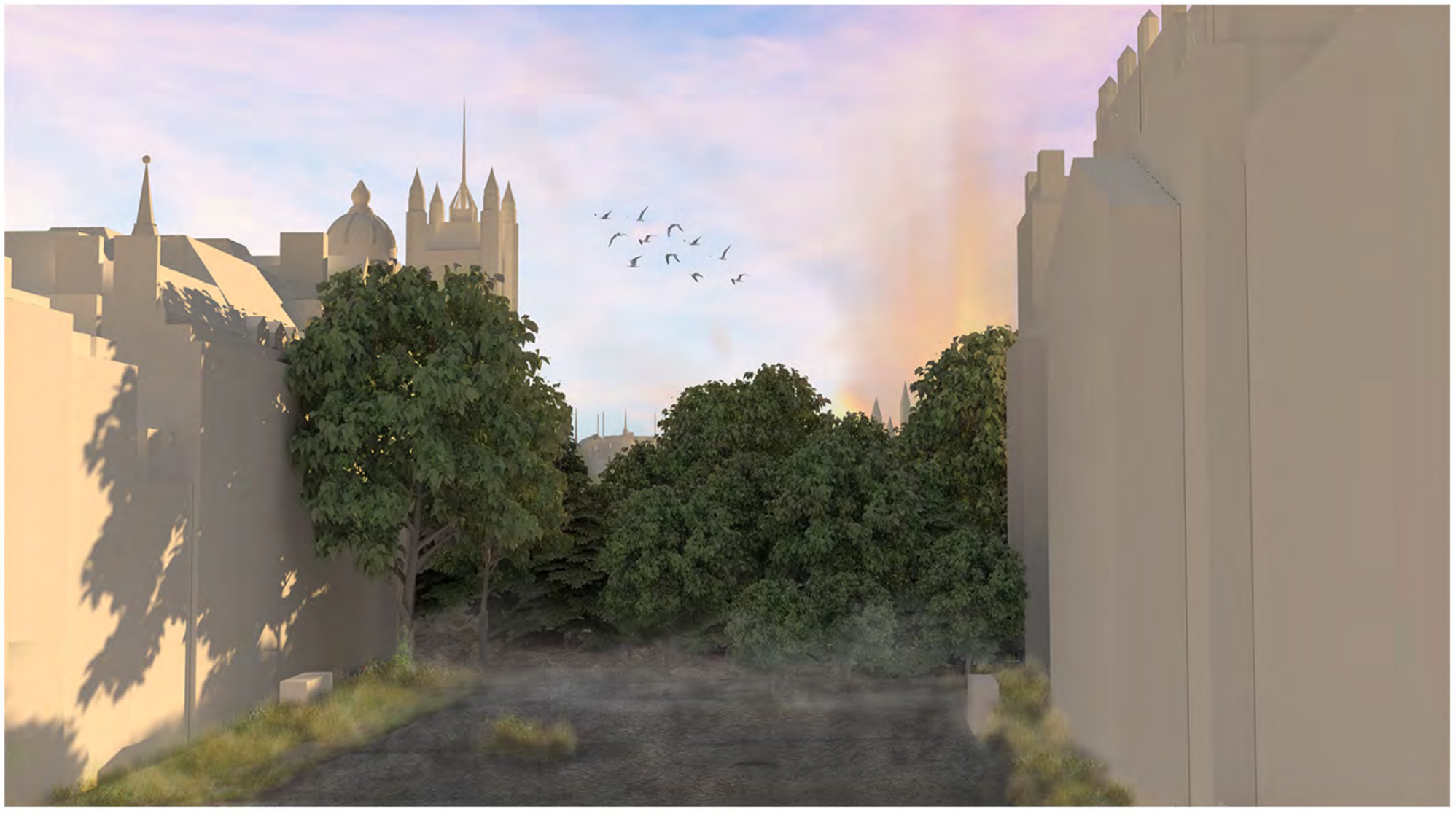
A view as parliament square as a whole. As can be seen, the roads have become unusable and access to parliament has radically changed.

2

Due to the vast number of plant species and the cover they provide, there is now potential for a plethora of wildife to thrive in the area.

3

The ‘feeling’ of the space has also radically changed - from being this huge open and populated space, to this far more enclosed area.



Potential in 2100

Recycling/**Plant**

Final Proposal

Recycling/**Plant**

If implementing seeds within litter is not very effective in reality, why not come up with a repeatable model to create a site and use the existing data to plant them ourselves?

Walkway

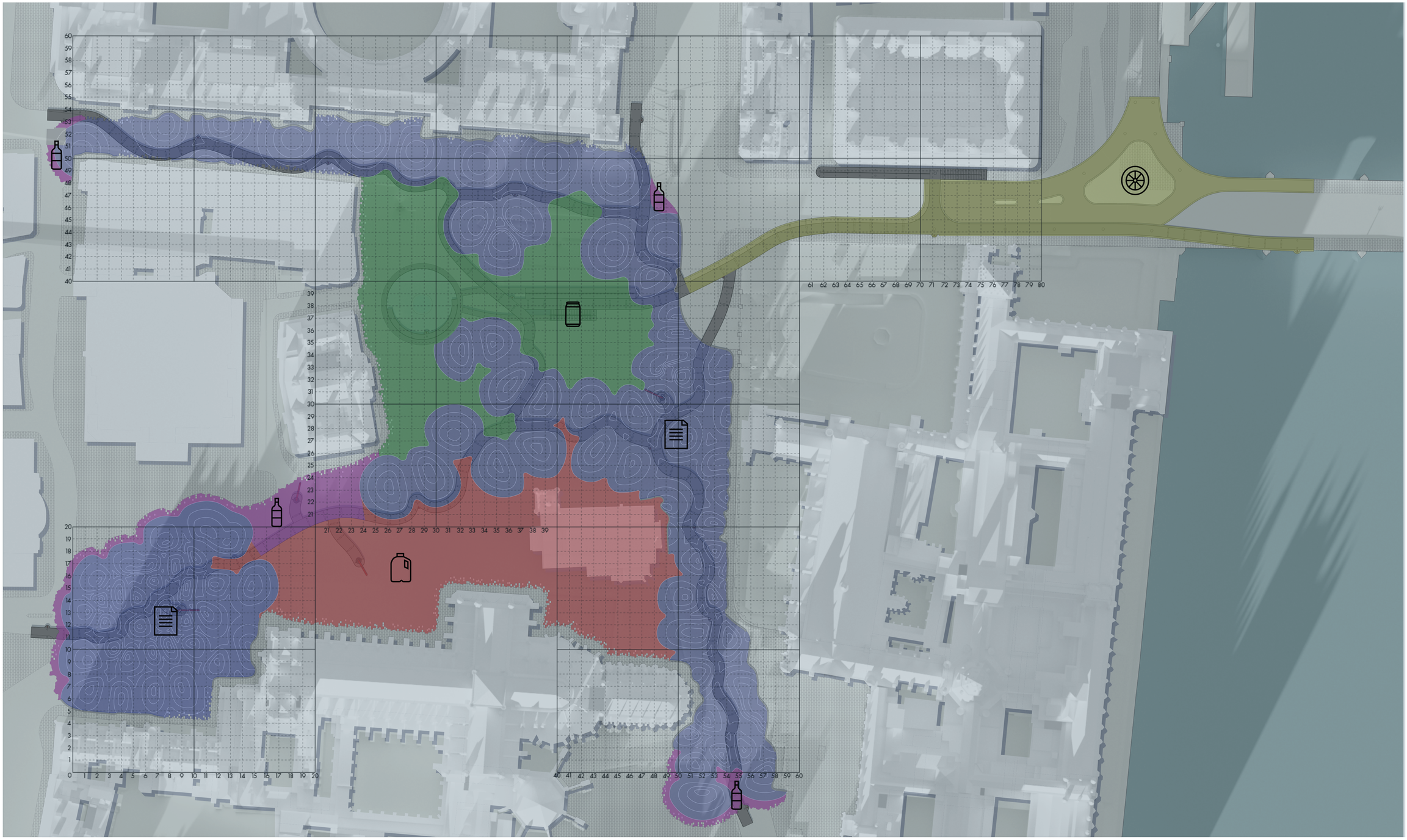
1 Educational/viewing area

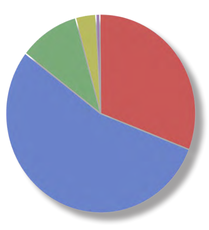
2 Raised overpass

3 Camera obscura (repeated throughout site)

4 Site entrance (repeated throughout site)

Scale 1:600 @A1





Total site surface area = 49,000 m^2

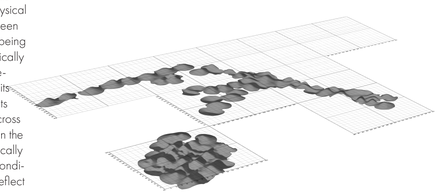
- Paper = 54% = 26460 m^2
- Plastic = 31% =15190 m^2
- Metal = 10% = 4900 m^2
- Rubber = 3.4% =1666 m^2
- Glass = 1% = 490 m^2

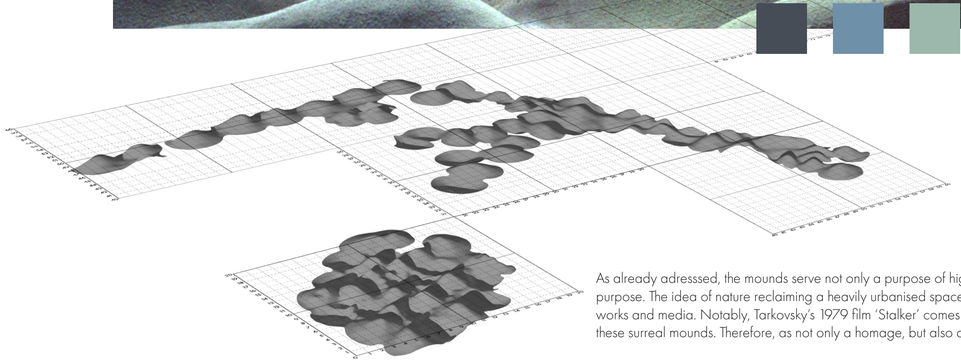
Breaking up the site

Recycling/**Plant**

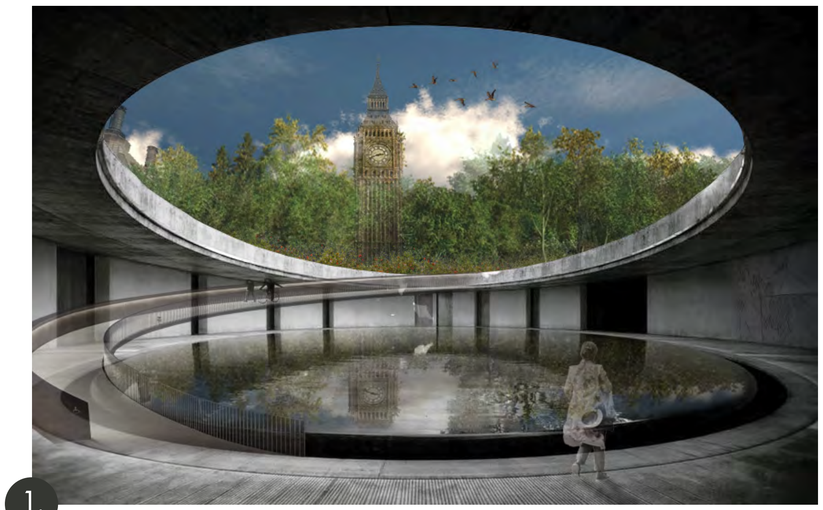
This plan reflects the percentage of each litter material found on site, gathered through the data bank. The entire surface area of the site has been calculated and roughly broken down in the corresponding percentages. Simultaneously, every piece of litter within this area (surface road area on the north-east of the site excluded for practicality/accesibility sake) has been formed into a 3m x 3m mound/dip (right) to highlight and bring to the forefront the litter element of the site as well as an aethetic choice which will be explained further on. A rough 50:50 ratio has been chosen for the dips and mounds with paper (roughly 50%) being allocated the mounds and the remainder to the dips. As you can see, the topographical lines also provide a way where one can break the site into various parts.

Using a combination of the percentage data and the newly formed topography, a plan such as this can be created. To see this breakdown as a physical manifestation, different types of planting have been allocated to to each area - paper and plastic, being the largest percentages, are allocated the physically largest plants, broadleaf and conifer, respectively. Rubber has been allocated as shrubs due to its unique position in the north-east of the site and its potential to connect with other green spaces across the river. Metal has been assigned a meadow in the centre of site as it seems aesthetically and physically appropriate. Finally, glass which is the border condition of site and has been allocated as ferns to reflect the idea of this being an 'natural' forest.



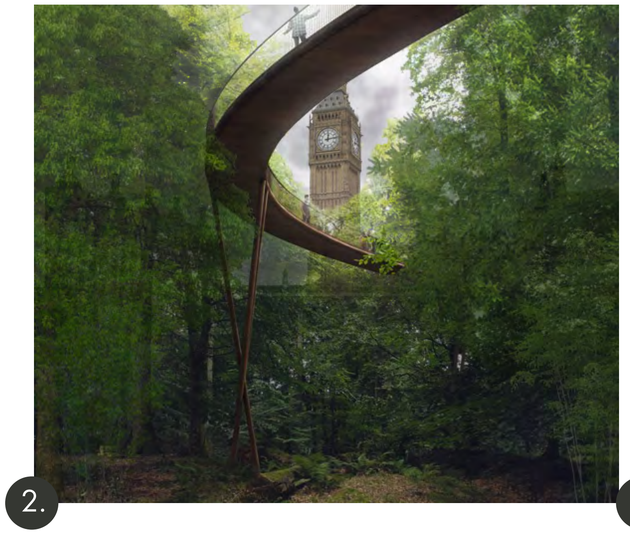


As already adresssed, the mounds serve not only a purpose of highlighting the points where litter was originally found on site, but also has an aesthetic purpose. The idea of nature reclaiming a heavily urbanised space such as this site is a profound concept and is represented heavily in many great literary works and media. Notably, Tarkovsky's 1979 film 'Stalker' comes to mind. The cinematography is iconic - particularly a very specific scene that portrays these surreal mounds. Therefore, as not only a homage, but also as a visual boost to the site, my interpretation of these are an addition to the site.



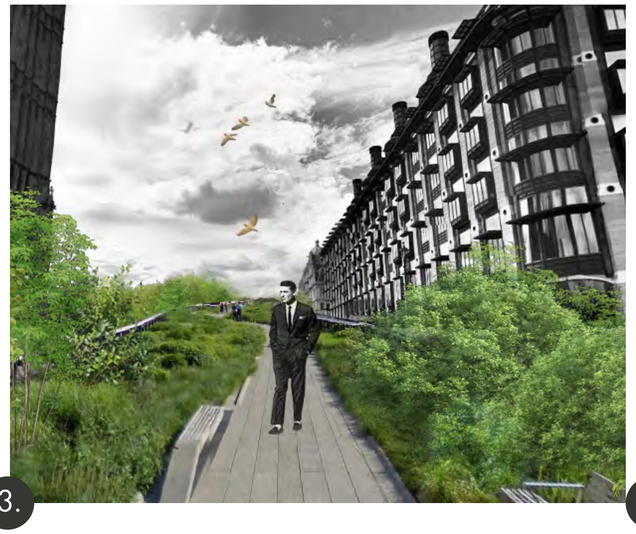
1.

Having an area to spread awareness of the purpose of the site and the various processes involved is extremely important. This educational area provides a place where one could hold a variety of talks on sustainability and show off the recycling process.



2.

Like a number of existing sites, the proposal includes a canopy walk consisting of a raised walkway that stretches across the site.

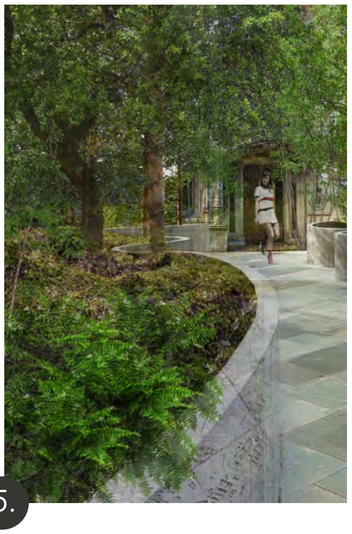


3.

Road accessibility to the bridge and parliament will need to be maintained meaning that a 'highline-esque' solution will need to be implemented.

4.

Seamless transitions will take place at the site borders.

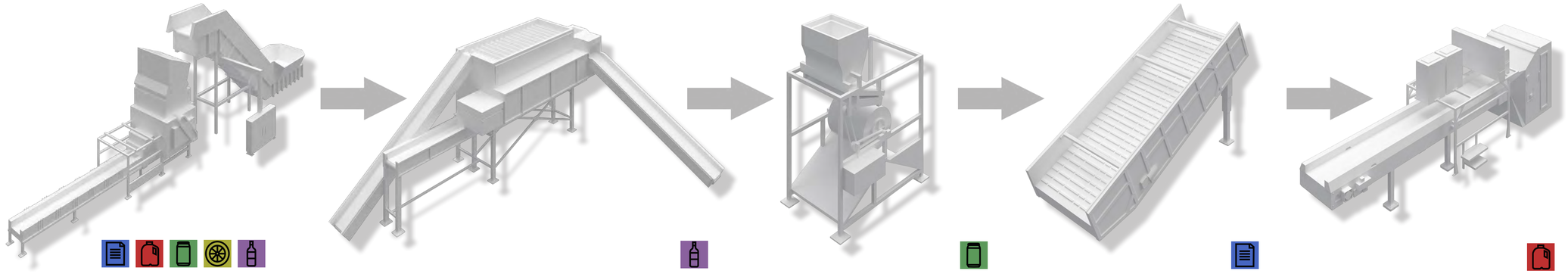


5.

Retaining walls will also tackle the complex topography along the site boundaries.

Inspiration and concepts

Recycling/**Plant**



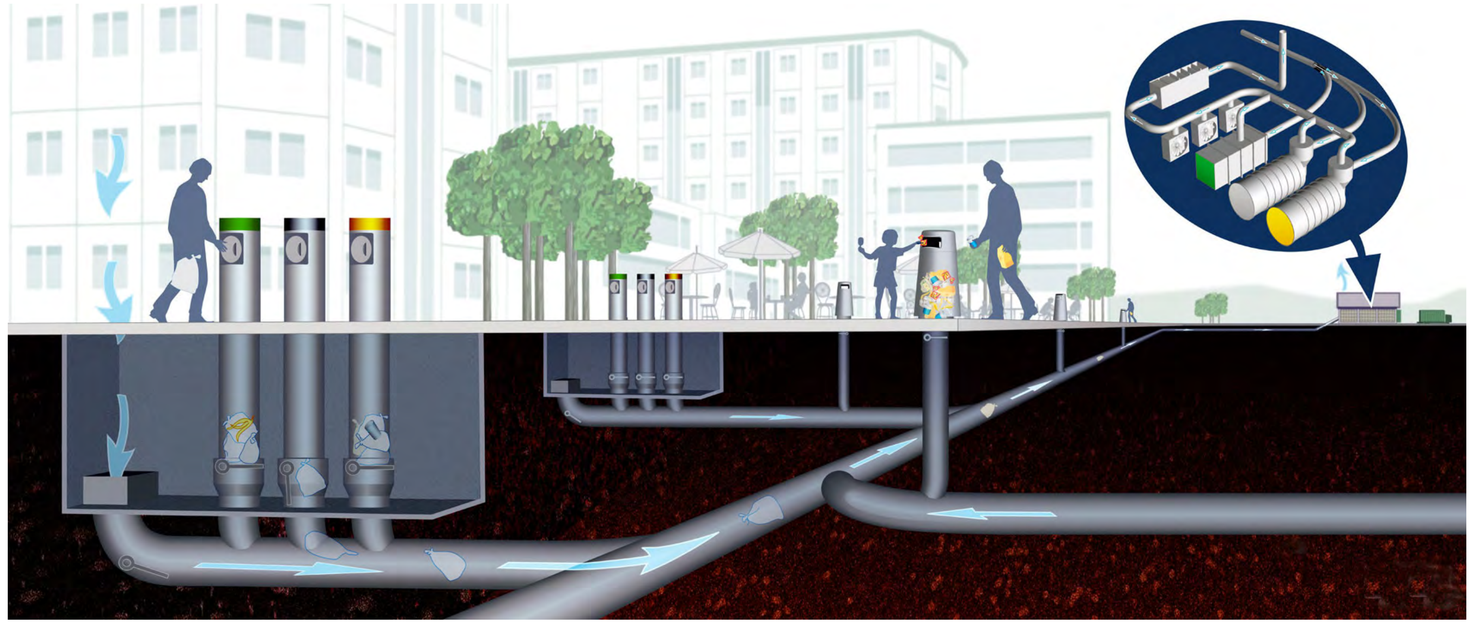
1. **Shredding -** this is the first process of filtering and processing recyclables. The litter is broken down into manageable chunks. Non-recyclables can be filtered out here.

2. **Glass filtration -** secondly, glass can be seperated using a graded screw-like system.

3. **Magnetic drum -** next a large drum seperates ferrous objects by using a powerful electromagnet. A secondary manual process can sort non-ferrous items.

4. **Ballistic seperation -** paper is then seperated using a ballistic seperator which filters out the lighter, flat objects.

5. **Scanner -** finally, the remaining waste is put under a scanner to seperate plastics and other un-sorted waste.



The idea of integrating a recycling plant underground is fairly straight-forward, however, the troublesome part of waste management on-site is finding a system that is not only efficient, but also allows for easy transportation of waste throughout a site with somewhat limited-accesibility. My inspiration therefore is the 'Envac' system integrated in a number of urbanised areas in Sweden. The system utilises a series of pipework which is put under a partial vacuum allowing for quick, efficient and consistent flow of waste to the first stage of the recycling plant.

Waste management

Recycling/**Plant**

1. Robin (Erithacus rubecula) - Eats fruit, seeds, insects. Nests in hollows/ hedgebanks.

2. Dunnock (Prunella Modularis) - Eats fruit, seeds, insects. Nests in dense shrubbery.

3. Blackbird (Turdus merula) - Eats fruit, seeds, insects. Nests in trees, shrubs, climbers.

4. Song Thrush (Turdus philomelos) - Eats fruit, seeds, insects. Nests in trees or shrubs.

5. Starling (Sturnus vulgaris) - Eats fruit, seeds, insects. Nests in small hole or cavities.

6. Blackcap (Sylvia atricapilla) - Eats fruit, seeds, insects. Nests in dense shrubbery.

7. Chaffinch (Fringilla coelebs) - Eats fruit, seeds, insects. Nests in trees, shrubs, climbers.

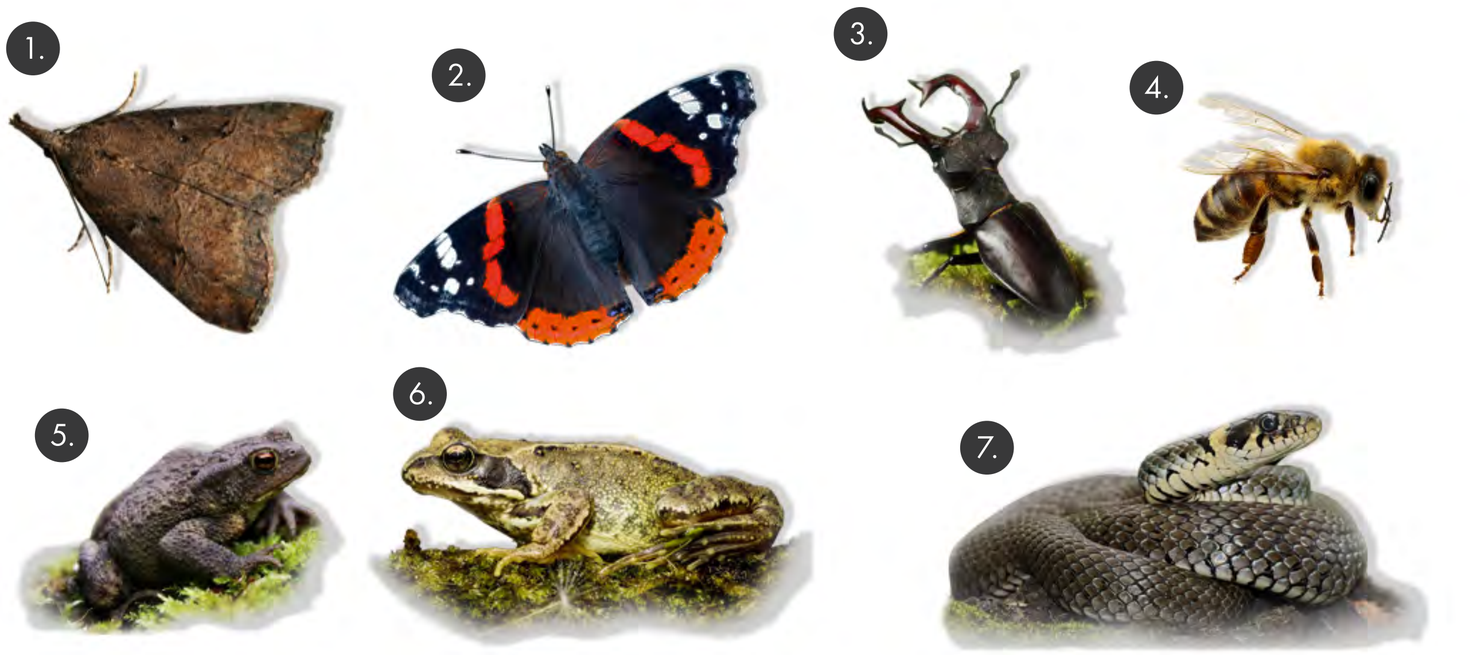
8. Coal Tit (Periparus ater) - Eats fruit, seeds, insects. Nests in holes/crevaces especially in trees.

9. Goldfinch (Carduelis carduelis) - Eats fruit, seeds, insects. Nest in trees and bushes.

10. House Sparrow (Carduelis carduelis) - Eats fruit, seeds, insects. Nest in building crevaces and thick flora.

11. Tawny Owl (Strix aluco) - Eats small mammals, birds, amphibians, bats and insects. Nest in tree cavities and buildings.

12. Spotted Woodpecker (Dendrocopos major) - Eats fruit, seeds, insects. Nest in tree cavities.



1. Buttoned snout moth (Sphingidae) - Eats leaves (specifically garden hops). Nests on leaves in trees and hedgerows. (Other species named a priority on top of this due to the important role they play).

2. Red Admiral butterfly (Vanessa atalanta) - Eats leaves, Nests on leaves in trees and hedgerows. (Other species named a priority on top of this due to the important role they play).

3. Stag beetle (Lucanus cervus) - Eats rotting wood and fruit. Nest in wood.

4. Honey Bee (Apis mellifera) - Eats nectar produced by flowers. (Other species named a priority on top of this due to the important role they play).

5. Common Toad (Bufo bufo) - Eats insects. Nests in shallow burrows.

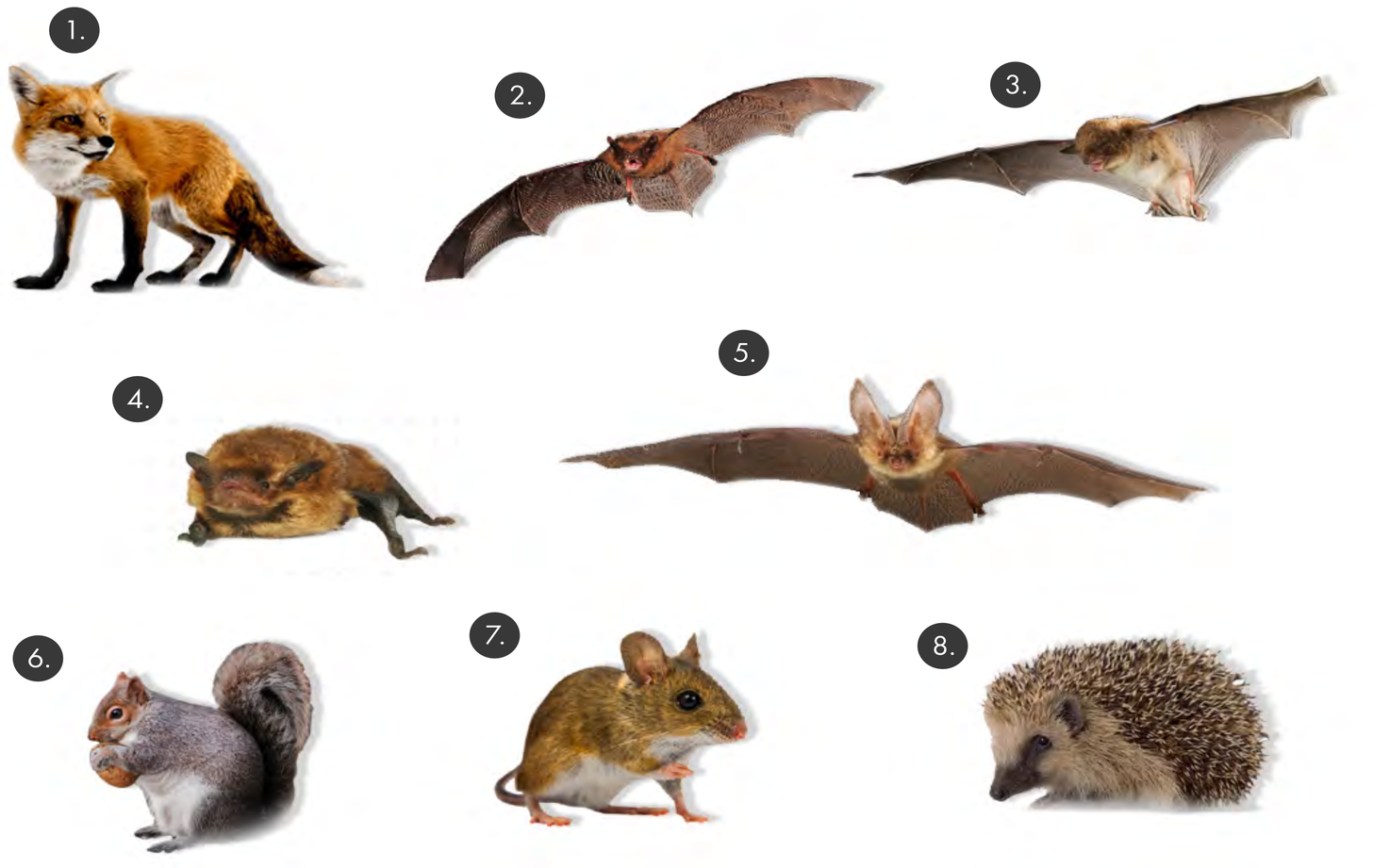
6. Common frog (Rana temporaria) - Eats insects. Nest under moist areas such as rocks or compost heaps.

7. Grass snake (Natrix natrix) - Eats insects, small mammals, and occasionally other reptiles . Nests under leaf piles and tree roots.

8. Great crested newt (Triturus cristatus) - Eats insects and small crustaceans. Nest in bodies of water.

9. Smooth newt (Lissotriton vulgaris) - Eats insects and small crustaceans. Nest in bodies of water.

10. Slow worm (Anguis fragilis) - Eats insects. Nests under leaf piles and tree roots.



1. Fox (Vulpes vulpes) - Eats small birds and mammals, grasses and fruits. Nest in warrens.

2. Pipistrelle bat (Pipistrellus pipistrellus) - Eats insects. Nest in tree holes and buildings.

3. Dauberton's bat (Myotis daubentonii) - Eats insects. Nest in tree holes and buildings

4. Noctule bat (Nyctalus noctula) - Eats insects. Nest in tree holes and buildings.

5. Brown long-eared bat (Plecotus auritus) - Eats insects. Nest in tree holes and buildings.

6. Squirrel (Sciurus carolinensis) - Eats berries, fungi, seeds, nuts, fruits and insects. Nest in tree holes and burrows.

7. Field mouse (Apodemus sylvaticus) - Eats berries, fungi, seeds, nuts, fruits and insects. Nest in thick flora.

8. Hedgehog (Erinaceus europaeus) - Eats insects, small amphibians, fallen bird eggs, fallen fruit. Nest in thick flora.

Local ecology is hugely important to consider for this project as one of the main aims is to increase bio-diversity. Above are a list of every species mentioned in Westminster's local council report - these animals will determine the species of plant that is selected.

Site ecology

Recycling/**Plant**

Cornus sanguinea (Dogwood) - Autumn fruit, Full/partial sun, Well drained soil, 1.5-2.5m ultimate spread and height.

Spr. Sum. Aut. Win.

Rosa canina (Dog rose) - Autumn fruit, Full sun, Well drained soil, 2.5-4m ultimate height, 1.5-2.5m ultimate spread.

Spr. Sum. Aut. Win.

Viburnum lantana (Way faring tree) - Autumn fruit, Full/partial sun, Well drained soil, 2.4-4m ultimate height and spread.

Spr. Sum. Aut. Win.

Sambucus nigra (Elder) - Autumn fruit, Full/partial sun, Well drained soil, 4-8m height, 2.5-4m ultimate spread.

Spr. Sum. Aut. Win.

Rhamnus cathartica (Buckthorn) - Autumn fruit, Full/partial sun, Well drained soil, 4-8m ultimate height, 2.5-4m ultimate spread.

Spr. Sum. Aut. Win.

Euonymus europaeus (Spindle) - Autumn fruit, Full/partial sun, Well drained soil, 2.5-4m ultimate height and spread.

Spr. Sum. Aut. Win.

Rosa caesia (Hairy dog rose) - Autumn fruit, Full sun, Well drained soil, 2.5-4m ultimate height, 1.5-2.5m ultimate spread.

Spr. Sum. Aut. Win.

Salix purpurea (Purple willow) - Full sun, Moist/Poorly drained soil, 4-8m ultimate height, 2.5-4m ultimate spread.

Spr. Sum. Aut. Win.

Sorbus Anglica (English whitebeam) - Endangered, Well drained soil, 2m ultimate height and spread.

Spr. Sum. Aut. Win.

Ruscus aculeatus (Butcher's broom) - Autumn/summer fruit, Full/partial sun, Well drained soil, 0.5-1m ultimate height and spread.

Spr. Sum. Aut. Win.

Ulex europaeus (Gorse) - Spring/Summer fruit, Full sun, Well drained soil, 1.5-2.5m ultimate height and spread.

Spr. Sum. Aut. Win.

Viburnum opulus (Guelder rose) - Full/partial sun, Well drained soil, 2.5-4m ultimate height, 2.5-4m ultimate spread.

Spr. Sum. Aut. Win.

= Beneficial to

(Pollinators, Butterflies/ Moths, Birds, Mammals)

Table: Top row - Flower, Middle row - Fruit, Bottom row - Foliage.

Alnus glutinosa (Alder) - Autumn fruit, Full sun, Moist soil, 12m ultimate height, 4-8m ultimate spread.

Spr. Sum. Aut. Win.

Betula pendula (Silver birch) - Summer fruit, Full/partial sun, Well drained soil, 12m ultimate height, 8+m ultimate spread.

Spr. Sum. Aut. Win.

Carpinus betulus (Hornbeam) - Autumn fruit, Full/partial sun, Well drained soil, 12m ultimate height, 4-8m ultimate spread.

Spr. Sum. Aut. Win.

Fagus sylvatica (Beech) - Full sun, Full/partial sun, Well drained soil, 12m ultimate height, 8m ultimate spread.

Spr. Sum. Aut. Win.

Ilex aquifolium (Holly) - Autumn/winter fruit, Full/partial sun, Well drained soil, 12m ultimate height, 4-8m ultimate spread.

Spr. Sum. Aut. Win.

Salix alba (White willow) - Full sun, Moist soil, 12m ultimate height, 8m ultimate spread.

Spr. Sum. Aut. Win.

Salix fragilis (Crack willow) - Full sun, Moist soil, 20m ultimate height, 15m ultimate spread.

Spr. Sum. Aut. Win.

Crataegus monogyna (Hawthorn) - Autumn fruit, Full/partial sun, Well drained soil, 4-8m ultimate height and spread.

Spr. Sum. Aut. Win.

Prunus avium (Wild cherry) - Autumn fruit, Full sun, Well drained soil, 12+m ultimate height, 8+m ultimate spread.

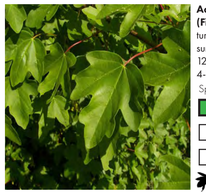
Spr. Sum. Aut. Win.

Prunus padus (Bird cherry) - Summer fruit, Full sun, Well drained soil, 12+m ultimate height, 8+m ultimate spread.

Spr. Sum. Aut. Win.

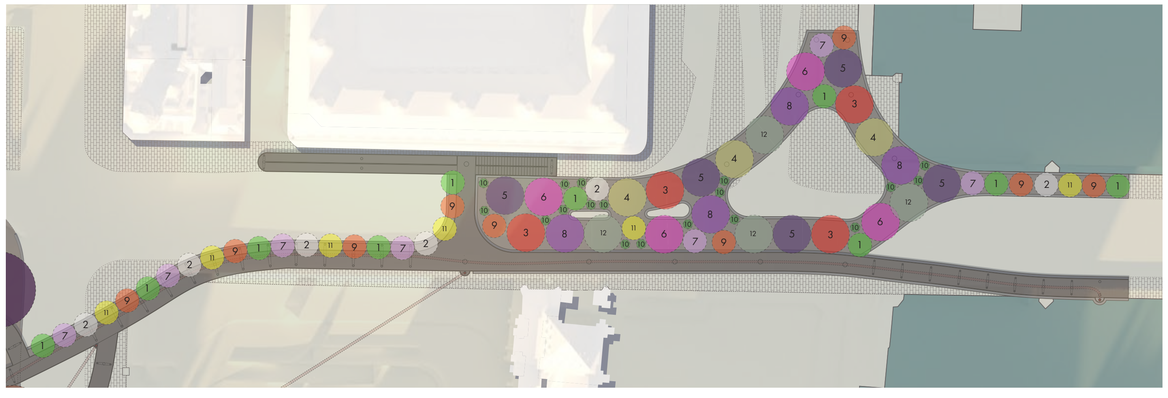
Sorbus aucuparia (Rowan) - Autumn fruit, Full/partial sun, Well drained soil, 12+m ultimate height, 4-8m ultimate spread.

Spr. Sum. Aut. Win.



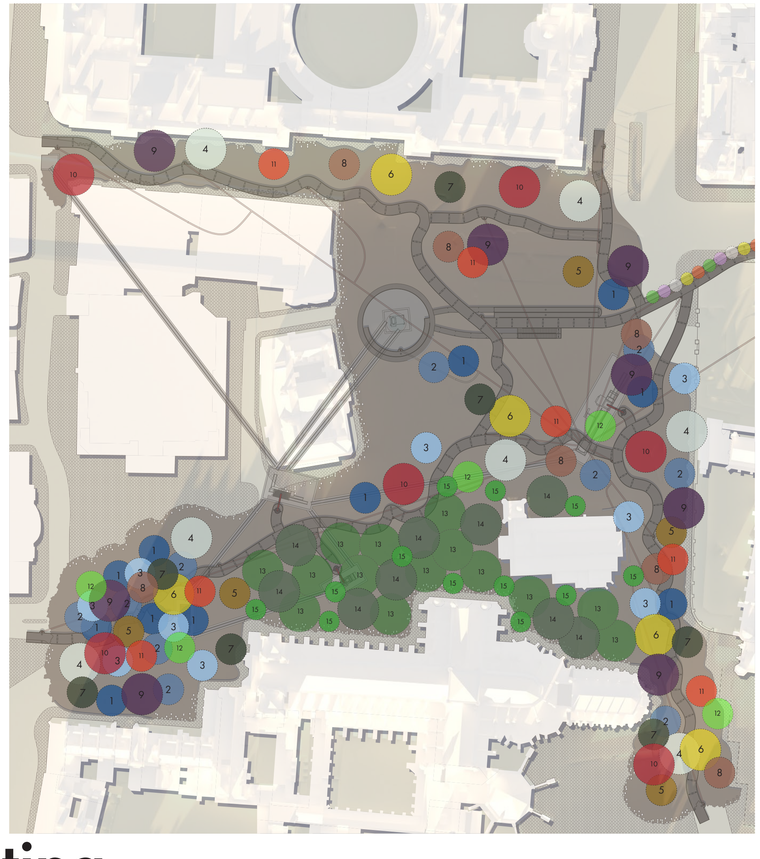
Acer campastre (Field maple) - Autumn fruit, Full/partial sun, Well drained soil, 12+m ultimate height, 4-8m ultimate spread.

Spr. Sum. Aut. Win.



1. Cornus sanguinea (Dogwood) - 155m sq.
2. Rosa canina (Dog rose) - 48m sq.
3. Viburnum Lantana (Way faring tree) - 200m sq.
4. Sambucus nigra (Elder) - 150m sq.
5. Rhamnus cathartica (Buckthorn) - 250m sq.
6. Euonymus europaeus (Spindle) - 200m sq.
7. Rosa caesia (Hairy dog rose) - 88m sq.
8. Salix purpurea (Purple willow) - 200m sq.
9. Sorbus Anglica (English whitebeam) - 128m sq.
10. Ruscus aculeatus (Butcher's broom) - 54m sq.
11. Ulex europaeus (Gorse) - 68m sq.
12. Viburnum opulus (Guelder rose) - 200m sq.

Note: Diameter represents area of planting.



1. Alnus glutinosa (Alder)
2. Betula pendula (Silver birch)
3. Carpinus betulus (Hornbeam)
4. Fagus sylvatica (Beech)
5. Ilex aquifolium (Holly)
6. Salix alba (White willow)
7. Salix fragilis (Crack willow)
8. Crataegus monogyna (Hawthorn)
9. Prunus avium (Wild cherry)
10. Prunus padus (Bird cherry)
11. Sorbus aucuparia (Rowan)
12. Acer campastre (Field maple)
13. Pinus sylvestris (Scots pine)
14. Taxus baccata (English Yew)
15. Juniperus communis (Juniper)

Note: Diameter represents singular tree which will mature into final diameter.

Planting

Recycling/**Plant**

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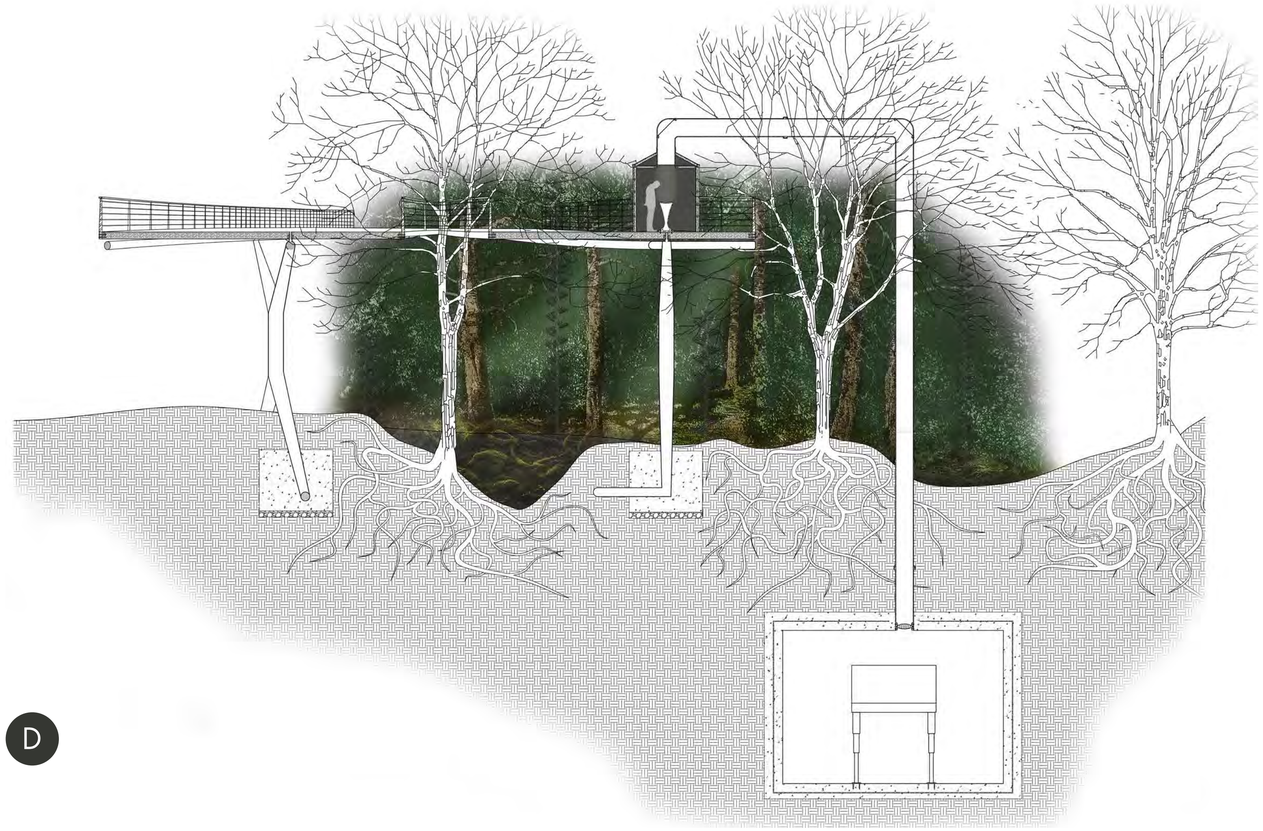

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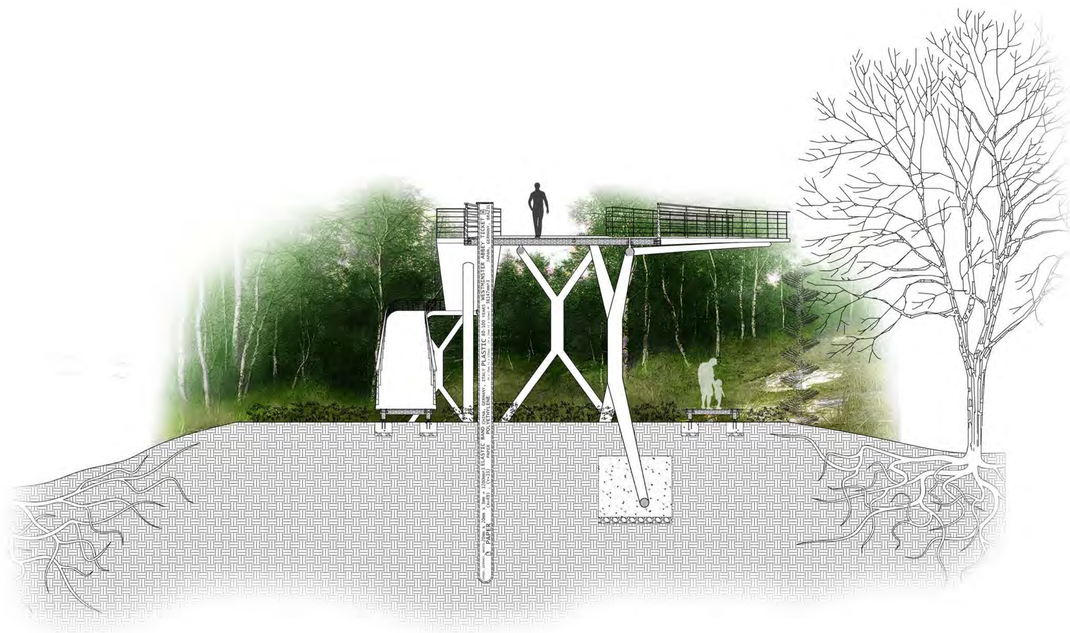

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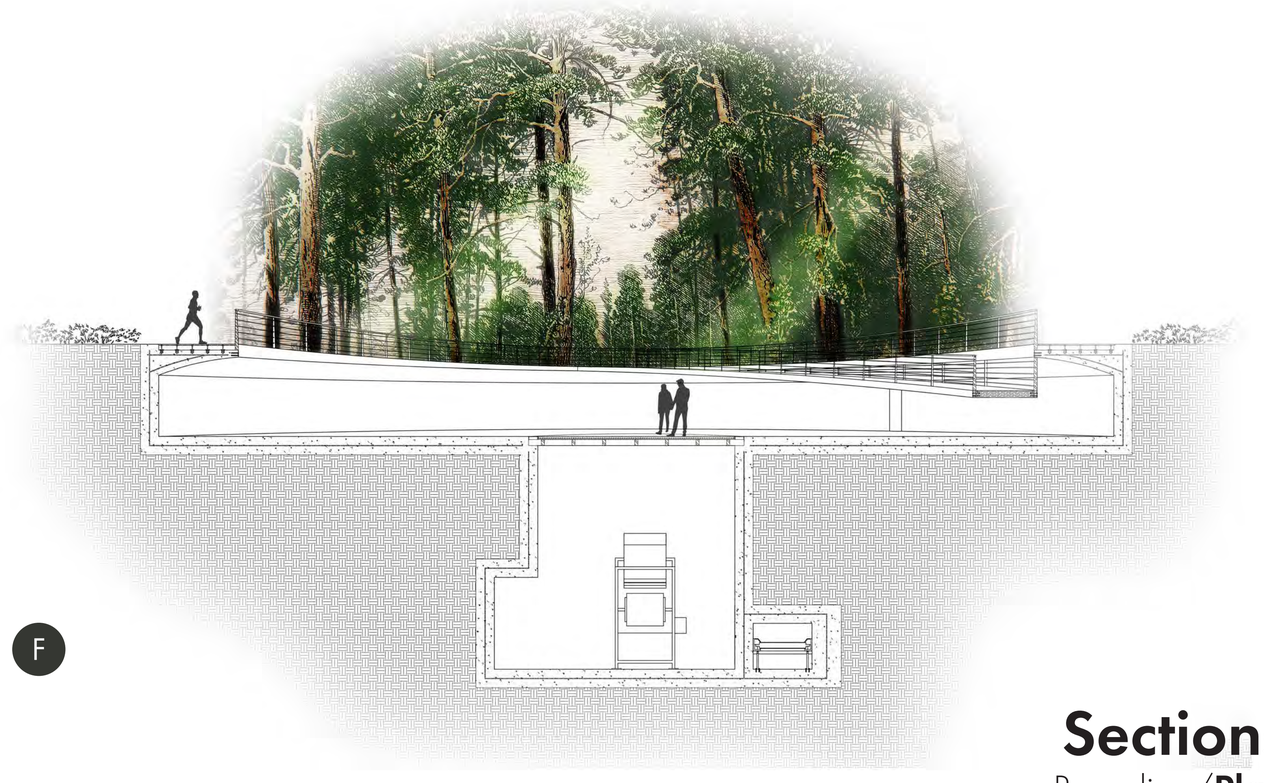


F

A North-east bridge entrance

B Westminster station entrance from the overpass

C Typical section of the canopy walk showing waste disposal solution

D Camera obscura from canopy level to looking down onto machinery below

E Ramp from canopy walk to the educational area

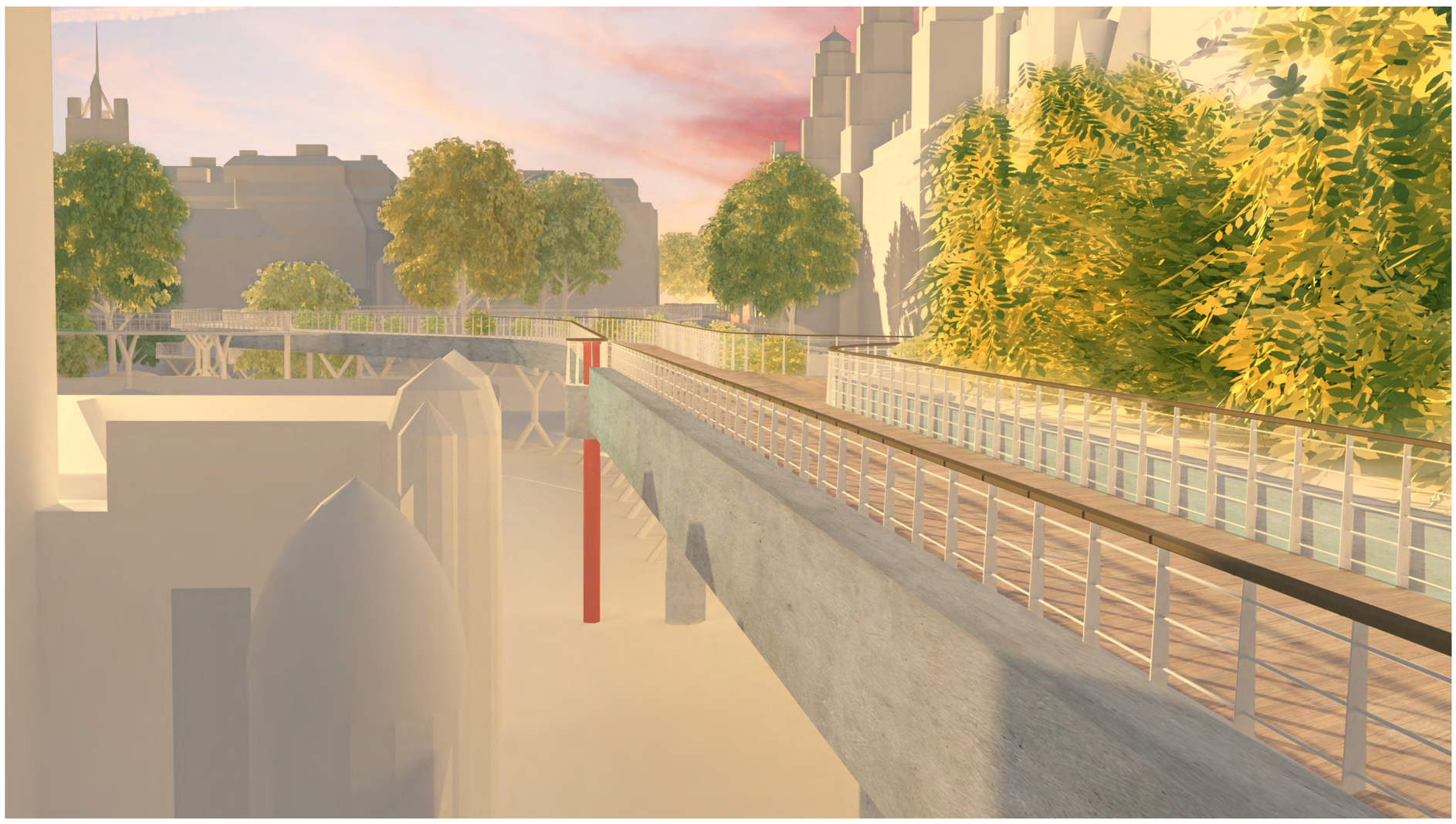
F Educational area

Sections

Recycling/**Plant**

1 South-east of site on the border of coniferous planting

2 North-east view of the overpass



3 South etrance

Views

Recycling/**Plant**

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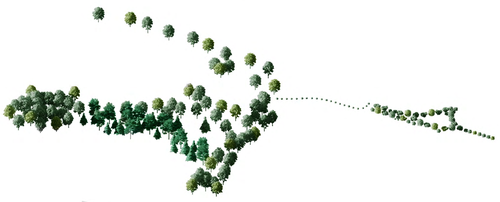

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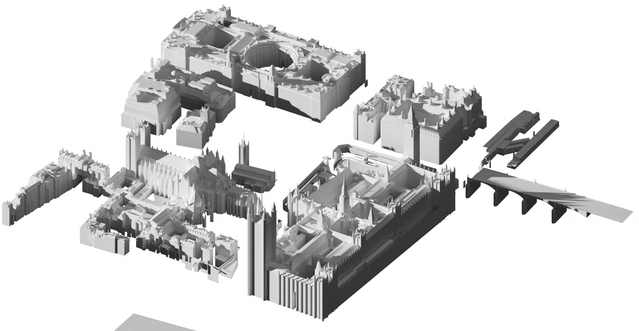

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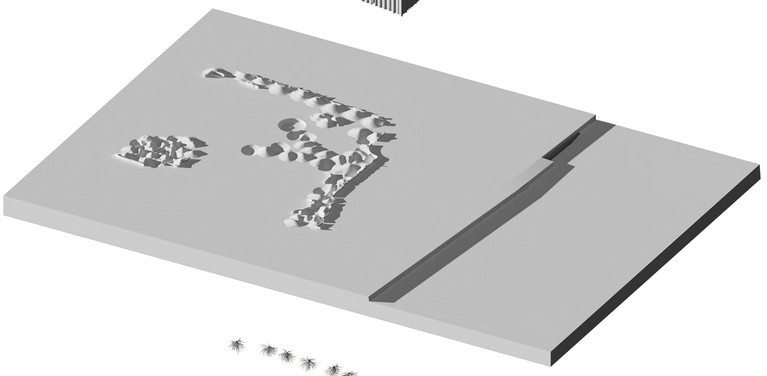

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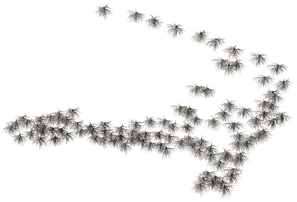

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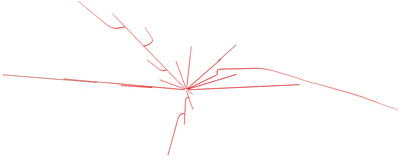

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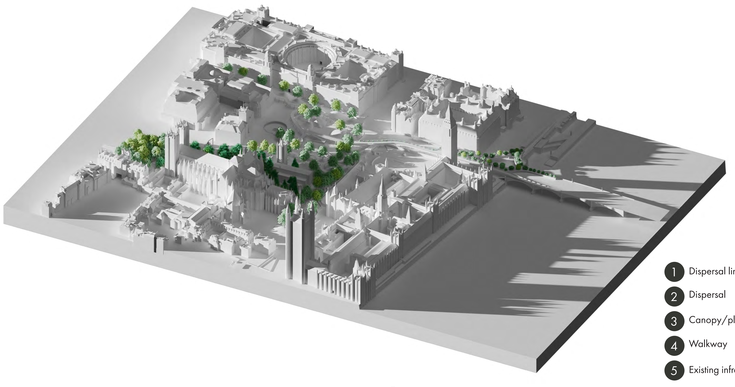

1 Dispersal lines
2 Dispersal
3 Canopy/planting
4 Walkway
5 Existing infrastructure
6 Ground level/topography
7 Root systems
8 Recycling machines
9 Envac system
10 Combined layers

Site layers

Recycling/**Plant**

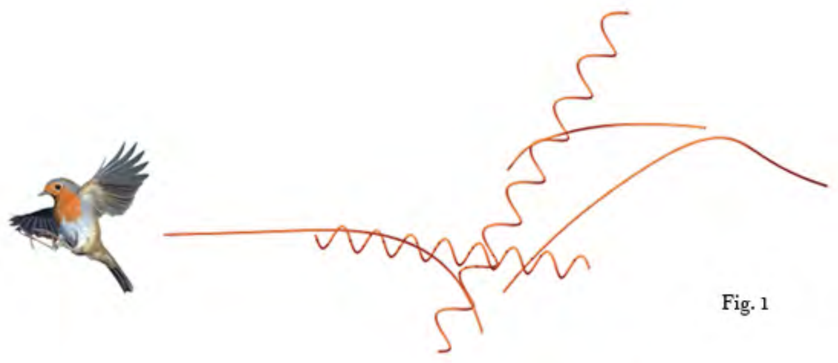

Fig. 1

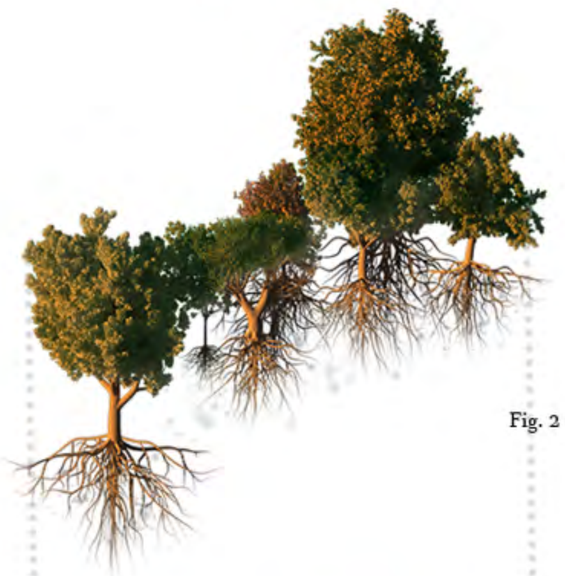

Fig. 2

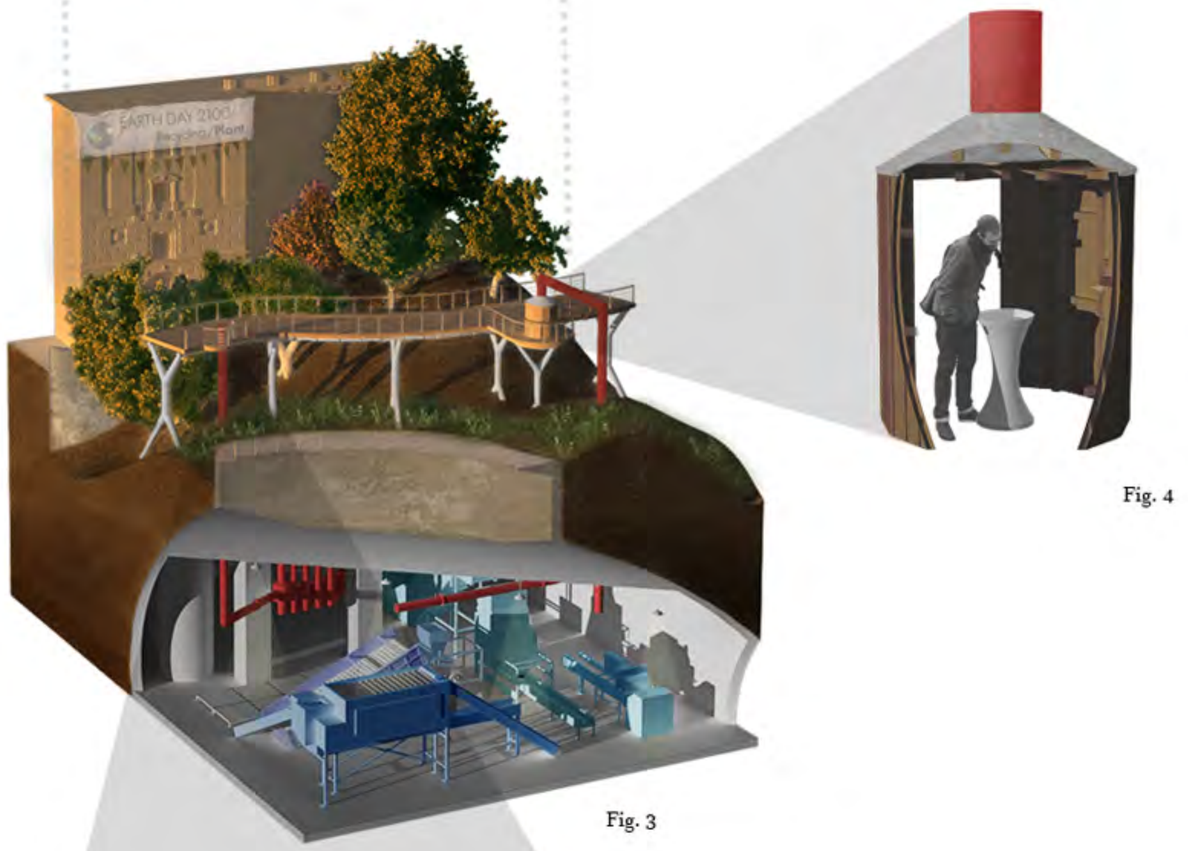

Fig. 4

Fig. 3

Fig. 6

Fig. 5

1. Bird dispersal
2. 80 year mature trees
3. 'Earth Day 2100'
4. Camera Obscura
5. Throwing away waste
6. Waste removal

Earth Day 2100

Recycling/**Plant**

Will Beament