
CLEA Software Version 1.071

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Report title Northenden Resi Soil Vapour GAC, Sand Soil, 0.5m depth

Created by Tim Rolfe at



RESULTS



Environment Agency										Apply Top 2 Approach to Produce Group							
		Assessment Criterion (mg kg ⁻¹)			Ratio of ADE to HCV			Saturation Limit (mg kg ⁻¹)	50% rule?		Top Two applied?	Green vegetables	Root vegetables	Tuber vegetables	Herbaceous fruit	Shrub fruit	Tree fruit
		oral	inhalation	combined	oral	inhalation	combined		Oral	Inhal							
1	Vinyl Chloride (Chloroethene) (202)	NR	9.88E-03	9.88E-03	0.00	1.00	1.00	2.68E+03 (sol)	No	No	Yes	No	Yes	No	No	No	Yes
2	1,1-Dichloroethene	NR	3.75E-01	3.75E-01	0.00	1.00	1.00	7.90E+03 (vap)	No	No	Yes	0	0	0	0	0	0
3	1,2-Dichloroethene (cis)	1.73E-01	NR	NR	1.00	NR	NR	1.24E+04 (sol)	No	No	Yes	0	0	0	0	0	0
4	Trichloroethene (TCE) (2021)	1.38E-02	5.11E-02	NR	1.00	0.27	NR	7.07E+03 (vap)	No	No	Yes	No	Yes	No	No	No	Yes
5	Tetrachloroethene (PCE)	NR	2.73E-01	2.73E-01	0.00	1.00	1.00	2.17E+03 (sol)	No	Yes	Yes	0	0	0	0	0	0
6	Chloromethane	NR	6.16E-03	NR	NR	1.00	NR	2.74E+03 (sol)	No	Yes	Yes	0	0	0	0	0	0
7	Chloroform (Trichloromethane)	NR	1.29E+00	1.29E+00	0.00	1.00	1.00	1.76E+04 (sol)	Yes	No	Yes	0	0	0	0	0	0
8	1,1,1-Trichloroethane (TCA)	NR	1.22E+01	1.22E+01	0.00	1.00	1.00	6.34E+03 (vap)	No	No	Yes	0	0	0	0	0	0
9	1,2-Dichloropropane	NR	3.58E-02	3.58E-02	0.00	1.00	1.00	4.11E+03 (sol)	No	No	Yes	0	0	0	0	0	0
10	Benzene (C4SL child)	NR	1.08E+00	1.08E+00	0.00	1.00	1.00	4.60E+03 (sol)	No	No	Yes	No	Yes	No	No	No	Yes
11	Toluene	NR	1.36E+03	1.36E+03	0.00	1.00	1.00	4.32E+03 (vap)	No	No	Yes	No	No	No	No	No	No
12	Ethylbenzene	NR	3.93E+02	3.93E+02	0.00	1.00	1.00	2.83E+03 (vap)	No	No	Yes	No	No	No	No	No	No
13	Xylene, m-	NR	1.30E+02	1.30E+02	0.00	1.00	1.00	3.45E+03 (vap)	No	No	Yes	No	No	No	No	No	No
14	Xylene, o-	NR	1.38E+02	1.38E+02	0.00	1.00	1.00	2.61E+03 (sol)	No	No	Yes	No	No	No	No	No	No
15	Xylene, p-	NR	1.24E+02	1.24E+02	0.00	1.00	1.00	3.16E+03 (sol)	No	No	Yes	No	No	No	No	No	No
16	n-Hexane	NR	4.45E+00	4.45E+00	0.00	1.00	1.00	1.21E+03 (sol)	No	No	Yes	0	0	0	0	0	0
17	Styrene	NR	8.33E+01	8.33E+01	0.00	1.00	1.00	3.33E+03 (sol)	No	No	Yes	0	0	0	0	0	0
18	TPH Aliphatic EC5-EC6	NR	5.59E+01	5.59E+01	0.00	1.00	1.00	1.21E+03 (sol)	Yes	Yes	Yes	0	0	0	0	0	0
19	TPH Aromatic >EC8-EC10	NR	9.12E+01	9.12E+01	0.00	1.00	1.00	3.57E+03 (vap)	Yes	Yes	Yes	0	0	0	0	0	0
20	Carbon disulphide	NR	2.06E-01	2.06E-01	0.00	1.00	1.00	9.04E+03 (sol)	Yes	Yes	Yes	0	0	0	0	0	0

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		Soil Distribution				Media Concentrations													
		Sorbed	Dissolved	Vapour	Total	Soil	Soil gas	Indoor Dust	Outdoor dust at 0.8m	Outdoor dust at 1.6m	Indoor Vapour	Outdoor vapour at 0.8m	Outdoor vapour at 1.6m	Green vegetables	Root vegetables	Tuber vegetables	Herbaceous fruit	Shrub fruit	Tree fruit
		%	%	%	%	mg kg ⁻¹	mg m ⁻³	mg kg ⁻¹	mg m ⁻³	mg m ⁻³	mg m ⁻³	mg m ⁻³	mg m ⁻³	mg kg ⁻¹ FW	mg kg ⁻¹ FW	mg kg ⁻¹ FW	mg kg ⁻¹ FW	mg kg ⁻¹ FW	mg kg ⁻¹ FW
1	Vinyl Chloride (Chloroethene) (2021) Child	59.5	20.9	19.6	100.0	9.88E-03	7.60E+00	NA	NA	NA	8.79E-03	2.68E-07	0.00E+00	NA	NA	NA	NA	NA	NA
2	1,1-Dichloroethene	86.9	7.5	5.6	100.0	3.75E-01	8.21E+01	NA	NA	NA	8.77E-02	4.92E-06	0.00E+00	NA	NA	NA	NA	NA	NA
3	1,2-Dichloroethene (cis)	86.4	12.4	1.2	100.0	1.73E-01	7.85E+00	NA	NA	NA	8.33E-03	1.02E-06	0.00E+00	NA	NA	NA	NA	NA	NA
4	Trichloroethene (TCE) (2021)	95.1	3.9	0.9	100.0	1.38E-02	4.98E-01	NA	NA	NA	4.97E-04	6.82E-08	0.00E+00	NA	NA	NA	NA	NA	NA
5	Tetrachloroethene (PCE)	97.1	2.1	0.8	100.0	2.73E-01	8.94E+00	NA	NA	NA	8.47E-03	1.22E-06	0.00E+00	NA	NA	NA	NA	NA	NA
6	Chloromethane	46.9	39.6	13.4	100.0	6.16E-03	3.25E+00	NA	NA	NA	3.96E-03	1.48E-07	0.00E+00	NA	NA	NA	NA	NA	NA
7	Chloroform (Trichloromethane)	88.7	10.3	1.0	100.0	1.29E+00	5.03E+01	NA	NA	NA	5.22E-02	6.93E-06	0.00E+00	NA	NA	NA	NA	NA	NA
8	1,1,1-Trichloroethane (TCA)	94.0	4.2	1.9	100.0	1.22E+01	9.03E+02	NA	NA	NA	8.93E-01	8.57E-05	0.00E+00	NA	NA	NA	NA	NA	NA
9	1,2-Dichloropropane	89.0	10.1	0.9	100.0	3.58E-02	1.28E+00	NA	NA	NA	1.27E-03	1.75E-07	0.00E+00	NA	NA	NA	NA	NA	NA
10	Benzene (C4SL child)	91.0	7.9	1.1	100.0	1.08E+00	4.85E+01	NA	NA	NA	5.08E-03	6.28E-06	0.00E+00	NA	NA	NA	NA	NA	NA
11	Toluene	96.8	2.8	0.4	100.0	1.36E+03	2.13E+04	NA	NA	NA	2.11E+00	4.39E-03	0.00E+00	NA	NA	NA	NA	NA	NA
12	Ethylbenzene	98.5	1.3	0.2	100.0	3.93E+02	3.46E+03	NA	NA	NA	3.26E-01	9.06E-04	0.00E+00	NA	NA	NA	NA	NA	NA
13	Xylene, m-	98.7	1.2	0.2	100.0	1.30E+02	8.41E+02	NA	NA	NA	7.93E-02	2.56E-04	0.00E+00	NA	NA	NA	NA	NA	NA
14	Xylene, o-	98.5	1.3	0.2	100.0	1.38E+02	8.42E+02	NA	NA	NA	7.93E-02	2.64E-04	0.00E+00	NA	NA	NA	NA	NA	NA
15	Xylene, p-	98.5	1.3	0.2	100.0	1.24E+02	8.40E+02	NA	NA	NA	7.93E-02	2.51E-04	0.00E+00	NA	NA	NA	NA	NA	NA
16	n-Hexane	83.6	0.6	15.8	100.0	4.45E+00	2.76E+03	NA	NA	NA	3.06E-01	1.03E-04	0.00E+00	NA	NA	NA	NA	NA	NA
17	Styrene	98.1	1.8	0.1	100.0	8.33E+01	3.87E+02	NA	NA	NA	3.69E-01	1.41E-04	0.00E+00	NA	NA	NA	NA	NA	NA
18	TPH Aliphatic EC5-EC6	83.6	0.6	15.8	100.0	5.59E+01	3.47E+04	NA	NA	NA	3.85E+00	1.29E-03	0.00E+00	NA	NA	NA	NA	NA	NA
19	TPH Aromatic >EC8-EC10	99.5	0.4	0.1	100.0	9.12E+01	4.17E+02	NA	NA	NA	4.62E-02	1.81E-04	0.00E+00	NA	NA	NA	NA	NA	NA
20	Carbon disulphide	92.9	4.7	2.4	100.0	2.06E-01	1.95E+01	NA	NA	NA	2.20E-02	1.90E-06	0.00E+00	NA	NA	NA	NA	NA	NA

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		Average Daily Exposure (mg kg ⁻¹ bw day ⁻¹)						Distribution by Pathway (%)								
		Direct soil ingestion	Consumption of homegrown produce and attached soil	Dermal contact with soil and dust	Inhalation of dust	Inhalation of vapour	Background (oral)	Background (inhalation)	Direct soil ingestion	Consumption of homegrown produce and attached soil	Dermal contact with soil and dust	Inhalation of dust	Inhalation of vapour (indoor)	Inhalation of vapour (outdoor)	Background (oral)	Background (inhalation)
1	Vinyl Chloride (Chloroethene) (2021) Child Re	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.71E-03	5.63E-05	3.73E-04	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00
2	1,1-Dichloroethene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.70E-02	3.38E-04	2.42E-05	0.00	0.00	0.00	0.00	99.96	0.00	0.00	0.04
3	1,2-Dichloroethene (cis)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.41E-03	2.25E-04	3.64E-04	0.00	0.00	0.00	0.00	90.19	0.00	3.75	6.06
4	Trichloroethene (TCE) (2021)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.23E-04	8.66E-05	1.21E-03	0.00	0.00	0.00	0.00	50.00	0.00	3.34	46.66
5	Tetrachloroethene (PCE)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.50E-03	4.73E-04	1.21E-02	0.00	0.00	0.00	0.00	50.00	0.00	0.00	50.00
6	Chloromethane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.57E-03	0.00E+00	1.29E-02	0.00	0.00	0.00	0.00	50.00	0.00	0.00	50.00
7	Chloroform (Trichloromethane)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.39E-02	5.63E-03	6.06E-03	0.00	0.00	0.00	0.00	84.85	0.00	0.00	15.15
8	1,1,1-Trichloroethane (TCA)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.80E-01	1.13E-05	2.00E-02	0.00	0.00	0.00	0.00	96.67	0.00	0.00	3.33
9	1,2-Dichloropropane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.25E-04	2.14E-03	3.15E-04	0.00	0.00	0.00	0.00	72.35	0.00	0.00	27.65
10	Benzene (C4SL child)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.30E-03	0.00E+00	0.00E+00	0.00	0.00	0.00	0.00	99.99	0.01	0.00	0.00
11	Toluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.37E+00	5.63E-04	3.15E-02	0.00	0.00	0.00	0.00	97.74	0.01	0.00	2.25
12	Ethylbenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.12E-01	2.81E-04	7.88E-03	0.00	0.00	0.00	0.00	96.41	0.01	0.00	3.58
13	Xylene, m-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.15E-02	6.19E-04	8.49E-03	0.00	0.00	0.00	0.00	85.84	0.01	0.00	14.14
14	Xylene, o-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.15E-02	6.19E-04	8.49E-03	0.00	0.00	0.00	0.00	85.84	0.01	0.00	14.14
15	Xylene, p-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.15E-02	6.19E-04	8.49E-03	0.00	0.00	0.00	0.00	85.84	0.01	0.00	14.14
16	n-Hexane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.99E-01	0.00E+00	9.46E-04	0.00	0.00	0.00	0.00	99.53	0.00	0.00	0.47
17	Styrene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-01	5.63E-05	3.39E-04	0.00	0.00	0.00	0.00	99.86	0.00	0.00	0.14
18	TPH Aliphatic EC5-EC6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E+00	5.62E+95	6.06E+95	0.00	0.00	0.00	0.00	50.00	0.00	0.00	50.00
19	TPH Aromatic >EC8-EC10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.00E-02	5.62E+95	6.06E+95	0.00	0.00	0.00	0.00	49.99	0.01	0.00	50.00
20	Carbon disulphide	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.43E-02	1.97E-01	6.07E-02	0.00	0.00	0.00	0.00	50.00	0.00	0.00	50.00

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		Oral Health Criteria Value ($\mu\text{g kg}^{-1}$ BW day ⁻¹)	Inhalation Health Criteria Value ($\mu\text{g kg}^{-1}$ BW day ⁻¹)	Oral Mean Daily Intake ($\mu\text{g day}^{-1}$)	Inhalation Mean Daily Intake ($\mu\text{g day}^{-1}$)	Air-water partition coefficient (K_{aw}) ($\text{cm}^3 \text{cm}^{-3}$)	Coefficient of Diffusion in Air ($\text{m}^2 \text{s}^{-1}$)	Coefficient of Diffusion in Water ($\text{m}^2 \text{s}^{-1}$)	$\log K_{oc}$ ($\text{cm}^2 \text{g}^{-1}$)	$\log K_{ow}$ (dimensionless)	Dermal Absorption Fraction (dimensionless)	Soil-to-dust transport factor (g g^{-1} DW)	Sub-surface soil to indoor air correction factor (dimensionless)	Relative bioavailability via soil ingestion (unitless)	Relative bioavailability via dust inhalation (unitless)
1 Vinyl Chloride (Chloroethene) (2021) Child R	ID	0.0376	ID	5.71	1	6.16	7.47E-01	1.11E-05	8.34E-10	1.22	1.38	0.1	0.5	1	1
2 1,1-Dichloroethene	TDI	46	TDI	57	6	0.4	5.93E-01	9.18E-06	7.08E-10	1.83	2.13	0.1	0.5	1	1
3 1,2-Dichloroethene (cis)	TDI	6	NR	0	4	6	7.46E-02	9.02E-06	7.08E-10	1.61	1.86	0.1	0.5	1	1
4 Trichloroethene (TCE) (2021)	TDI	0.646	ID	1.2	1.54	20	1.87E-01	7.91E-06	6.23E-10	2.15	2.53	0.1	0.5	1	1
5 Tetrachloroethene (PCE)	TDI	6	TDI	11	8.4	200	3.16E-01	7.10E-06	5.61E-10	2.43	2.88	0.1	0.5	1	1
6 Chloromethane	NR	0	TDI	5.14	0	212	2.71E-01	1.28E-05	9.70E-10	0.84	0.91	0.1	0.5	1	1
7 Chloroform (Trichloromethane)	TDI	13.7	TDI	40	100	100	7.65E-02	8.60E-06	6.80E-10	1.7	1.97	0.1	0.5	1	1
8 1,1,1-Trichloroethane (TCA)	TDI	600	TDI	600	0.2	330	3.60E-01	7.75E-06	5.99E-10	2.12	2.49	0.1	0.5	1	1
9 1,2-Dichloropropane	TDI	14	TDI	1.14	38	5.2	7.19E-02	7.74E-06	5.95E-10	1.71	1.99	0.1	0.5	1	1
10 Benzene (C4SL child)	ID	0.57	ID	3.3	NR	NR	1.16E-01	8.77E-06	6.64E-10	1.83	2.13	0.1	0.5	10	1
11 Toluene	TDI	223	TDI	1400	10	520	1.15E-01	7.78E-06	5.88E-10	2.31	2.73	0.1	0.5	10	1
12 Ethylbenzene	TDI	100	TDI	220	5	130	1.39E-01	7.04E-06	5.31E-10	2.65	3.15	0.1	0.5	10	1
13 Xylene, m-	TDI	180	TDI	60	11	140	1.12E-01	7.03E-06	5.31E-10	2.69	3.2	0.1	0.5	10	1
14 Xylene, o-	TDI	180	TDI	60	11	140	9.20E-02	7.01E-06	5.31E-10	2.63	3.12	0.1	0.5	10	1
15 Xylene, p-	TDI	180	TDI	60	11	140	1.07E-01	7.04E-06	5.31E-10	2.65	3.15	0.1	0.5	10	1
16 n-Hexane	TDI	60	TDI	200	0	15.6	2.10E+01	1.00E-05	1.00E-09	2.91	3.31	0.1	0.5	10	1
17 Styrene	TDI	12	TDI	240	1	5.6	5.33E-02	7.19E-06	5.48E-10	2.51	2.98	0.1	0.5	1	1
18 TPH Aliphatic EC5-EC6	TDI	5000	TDI	5000	9.99E+99	9.99E+99	2.10E+01	1.00E-05	1.00E-09	2.91	3.31	0.1	0.5	10	1
19 TPH Aromatic >EC8-EC10	TDI	40	TDI	60	9.99E+99	9.99E+99	2.53E-01	1.00E-05	1.00E-09	3.2	3.69	0.1	0.5	10	1
20 Carbon disulphide	TDI	100	TDI	28.6	3500	1001	4.08E-01	1.04E-05	8.28E-10	2.06	2	0.1	0.5	1	1

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		Soil-to-water partition coefficient (cm ³ g ⁻¹)	Vapour pressure (Pa)	Water solubility (mg L ⁻¹)	Soil-to-plant concentration factor for green vegetables (mg g ⁻¹ plant DW or FW basis over mg g ⁻¹ DW soil)	Soil-to-plant concentration factor for root vegetables (mg g ⁻¹ plant DW or FW basis over mg g ⁻¹ DW soil)	Soil-to-plant concentration factor for tuber vegetables (mg g ⁻¹ plant DW or FW basis over mg g ⁻¹ DW soil)	Soil-to-plant concentration factor for herbaceous fruit (mg g ⁻¹ plant DW or FW basis over mg g ⁻¹ DW soil)	Soil-to-plant concentration factor for shrub fruit (mg g ⁻¹ plant DW or FW basis over mg g ⁻¹ DW soil)	Soil-to-plant concentration factor for tree fruit (mg g ⁻¹ plant DW or FW basis over mg g ⁻¹ DW soil)
1	Vinyl Chloride (Chloroethene) (2021) Child	5.78E-01	2.20E+05	2.76E+03	model	model	model	model	model	model
2	1,1-Dichloroethene	2.35E+00	4.20E+04	3.10E+03	Model	Model	Model	Model	Model	Model
3	1,2-Dichloroethene (cis)	1.42E+00	1.37E+04	7.55E+03	Model	Model	Model	Model	Model	Model
4	Trichloroethene (TCE) (2021)	4.92E+00	4.58E+03	1.37E+03	model	model	model	model	model	model
5	Tetrachloroethene (PCE)	9.37E+00	1.01E+03	2.25E+02	model	model	model	model	model	model
6	Chloromethane	2.41E-01	3.31E+05	5.35E+03	Model	Model	Model	Model	Model	Model
7	Chloroform (Trichloromethane)	1.74E+00	1.35E+04	8.95E+03	model	model	model	model	model	model
8	1,1,1-Trichloroethane (TCA)	4.59E+00	8.25E+03	1.30E+03	model	model	model	model	model	model
9	1,2-Dichloropropane	1.78E+00	3.07E+03	2.05E+03	Model	Model	Model	Model	Model	Model
10	Benzene (C4SL child)	2.35E+00	6.24E+03	1.78E+03	model	model	model	0.00E+00	0.00E+00	model
11	Toluene	7.11E+00	1.73E+03	5.90E+02	model	model	model	0.00E+00	0.00E+00	model
12	Ethylbenzene	1.55E+01	5.53E+02	1.80E+02	model	model	model	0.00E+00	0.00E+00	model
13	Xylene, m-	1.70E+01	4.95E+02	2.00E+02	model	model	model	0.00E+00	0.00E+00	model
14	Xylene, o-	1.48E+01	3.86E+02	1.73E+02	model	model	model	0.00E+00	0.00E+00	model
15	Xylene, p-	1.55E+01	4.75E+02	2.00E+02	model	model	model	0.00E+00	0.00E+00	model
16	n-Hexane	2.83E+01	2.19E+04	3.59E+01	model	model	model	model	model	model
17	Styrene	1.13E+01	3.50E+02	2.90E+02	Model	Model	Model	Model	Model	Model
18	TPH Aliphatic EC5-EC6	2.83E+01	2.19E+04	3.59E+01	model	model	model	model	model	model
19	TPH Aromatic >EC8-EC10	5.52E+01	3.20E+02	6.46E+01	model	model	model	model	model	model
20	Carbon disulphide	4.00E+00	2.65E+04	2.10E+03	model	model	model	model	model	model

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Report generated 03/01/2024

Report title Northenden Resi Soil Vapour GAC, Sand Soil, 0.5m depth



Created by Tim Rolfe at

BASIC SETTINGS

Land Use Residential without produce (C4SL)

Building Small terraced house

Receptor Female (res C4SL)

Start age class 1

End age class 6

Exposure Duration 6 years

Soil Sand

Exposure Pathways

Direct soil and dust ingestion



Dermal contact with indoor dust



Inhalation of indoor dust



Consumption of homegrown produce



Dermal contact with soil



Inhalation of soil dust



Soil attached to homegrown produce



Inhalation of indoor vapour



Inhalation of outdoor vapour





Land Use Residential without produce (C4SL)

Receptor

Female (res C4SL)

Age Class	Exposure Frequencies (days yr ⁻¹)						Occupation Periods (hr day ⁻¹)		Soil to skin adherence factors (mg cm ²)		Direct soil ingestion rate (g day ⁻¹)	Body weight (kg)	Body height (m)	Inhalation rate (m ³ day ⁻¹)	Max exposed skin factor		Total skin area (m ²)
	Direct soil ingestion	Consumption of homegrown produce	Dermal contact with indoor dust	Dermal contact with soil	Inhalation of dust and vapour, indoor	Inhalation of dust and vapour, outdoor	Indoors	Outdoors	Indoor	Outdoor					Indoor (m ² m ⁻²)	Outdoor (m ² m ⁻²)	
1	180	0	180	170	365	365	23.0	1.0	0.06	0.10	0.10	5.60	0.7	5.4	0.32	0.26	3.43E-01
2	365	0	365	170	365	365	23.0	1.0	0.06	0.10	0.10	9.80	0.8	8.0	0.33	0.26	4.84E-01
3	365	0	365	170	365	365	23.0	1.0	0.06	0.10	0.10	12.70	0.9	8.9	0.32	0.25	5.82E-01
4	365	0	365	170	365	365	23.0	1.0	0.06	0.10	0.10	15.10	0.9	10.1	0.35	0.28	6.36E-01
5	365	0	365	170	365	365	19.0	1.0	0.06	0.10	0.10	16.90	1.0	10.1	0.35	0.28	7.04E-01
6	365	0	365	170	365	365	19.0	1.0	0.06	0.10	0.10	19.70	1.1	10.1	0.33	0.26	7.94E-01
7	0	0	0	0	0	0	0.0	0.0	0.00	0.00	0.00	22.10	1.2	12.0	0.22	0.15	8.73E-01
8	0	0	0	0	0	0	0.0	0.0	0.00	0.00	0.00	25.30	1.2	12.0	0.22	0.15	9.36E-01
9	0	0	0	0	0	0	0.0	0.0	0.00	0.00	0.00	27.50	1.3	12.0	0.22	0.15	1.01E+00
10	0	0	0	0	0	0	0.0	0.0	0.00	0.00	0.00	31.40	1.3	12.0	0.22	0.15	1.08E+00
11	0	0	0	0	0	0	0.0	0.0	0.00	0.00	0.00	35.70	1.4	12.0	0.22	0.14	1.19E+00
12	0	0	0	0	0	0	0.0	0.0	0.00	0.00	0.00	41.30	1.4	15.2	0.22	0.14	1.29E+00
13	0	0	0	0	0	0	0.0	0.0	0.00	0.00	0.00	47.20	1.5	15.2	0.22	0.14	1.42E+00
14	0	0	0	0	0	0	0.0	0.0	0.00	0.00	0.00	51.20	1.6	15.2	0.22	0.14	1.52E+00
15	0	0	0	0	0	0	0.0	0.0	0.00	0.00	0.00	56.70	1.6	15.2	0.21	0.14	1.60E+00
16	0	0	0	0	0	0	0.0	0.0	0.00	0.00	0.00	59.00	1.6	15.2	0.21	0.14	1.63E+00
17	0	0	0	0	0	0	0.0	0.0	0.00	0.00	0.00	70.00	1.6	15.7	0.33	0.27	1.78E+00
18	0	0	0	0	0	0	0.0	0.0	0.00	0.00	0.00	70.90	1.6	13.6	0.33	0.27	1.80E+00

Consumption Rates



Age Class	Consumption rates (a FW ka ⁻¹ bodyweight dav ⁻¹) by Produce Group											
	MEAN RATES						90TH PERCENTILE RATES					
	Green veg	Root veg	Tuber veg	Herb. Fruit	Shrub fruit	Tree fruit	Green veg	Root veg	Tuber veg	Herb. Fruit	Shrub fruit	Tree fruit
1	3.47E+00	5.22E+00	9.22E+00	8.90E-01	1.07E+00	1.87E+00	7.12E+00	1.07E+01	1.60E+01	1.83E+00	2.23E+00	3.82E+00
2	3.34E+00	1.61E+00	3.14E+00	1.93E+00	2.60E-01	5.84E+00	5.87E+00	2.83E+00	6.60E+00	3.39E+00	4.60E-01	1.03E+01
3	3.34E+00	1.61E+00	3.14E+00	1.93E+00	2.60E-01	5.84E+00	5.87E+00	2.83E+00	6.60E+00	3.39E+00	4.60E-01	1.03E+01
4	3.34E+00	1.61E+00	3.14E+00	1.93E+00	2.60E-01	5.84E+00	5.87E+00	2.83E+00	6.60E+00	3.39E+00	4.60E-01	1.03E+01
5	2.54E+00	1.20E+00	2.65E+00	1.25E+00	1.10E-01	2.89E+00	4.53E+00	2.14E+00	4.95E+00	2.24E+00	1.90E-01	5.16E+00
6	2.54E+00	1.20E+00	2.65E+00	1.25E+00	1.10E-01	2.89E+00	4.53E+00	2.14E+00	4.95E+00	2.24E+00	1.90E-01	5.16E+00
7	2.54E+00	1.20E+00	2.65E+00	1.25E+00	1.10E-01	2.89E+00	4.53E+00	2.14E+00	4.95E+00	2.24E+00	1.90E-01	5.16E+00
8	2.54E+00	1.20E+00	2.65E+00	1.25E+00	1.10E-01	2.89E+00	4.53E+00	2.14E+00	4.95E+00	2.24E+00	1.90E-01	5.16E+00
9	2.54E+00	1.20E+00	2.65E+00	1.25E+00	1.10E-01	2.89E+00	4.53E+00	2.14E+00	4.95E+00	2.24E+00	1.90E-01	5.16E+00
10	2.54E+00	1.20E+00	2.65E+00	1.25E+00	1.10E-01	2.89E+00	4.53E+00	2.14E+00	4.95E+00	2.24E+00	1.90E-01	5.16E+00
11	2.54E+00	1.20E+00	2.65E+00	1.25E+00	1.10E-01	2.89E+00	4.53E+00	2.14E+00	4.95E+00	2.24E+00	1.90E-01	5.16E+00
12	1.03E+00	4.90E-01	1.60E+00	5.10E-01	4.00E-02	1.18E+00	1.87E+00	8.90E-01	3.05E+00	9.30E-01	8.00E-02	2.13E+00
13	1.03E+00	4.90E-01	1.60E+00	5.10E-01	4.00E-02	1.18E+00	1.87E+00	8.90E-01	3.05E+00	9.30E-01	8.00E-02	2.13E+00
14	1.03E+00	4.90E-01	1.60E+00	5.10E-01	4.00E-02	1.18E+00	1.87E+00	8.90E-01	3.05E+00	9.30E-01	8.00E-02	2.13E+00
15	1.03E+00	4.90E-01	1.60E+00	5.10E-01	4.00E-02	1.18E+00	1.87E+00	8.90E-01	3.05E+00	9.30E-01	8.00E-02	2.13E+00
16	1.03E+00	4.90E-01	1.60E+00	5.10E-01	4.00E-02	1.18E+00	1.87E+00	8.90E-01	3.05E+00	9.30E-01	8.00E-02	2.13E+00
17	1.26E+00	6.00E-01	1.18E+00	6.90E-01	9.00E-02	1.27E+00	2.36E+00	1.12E+00	2.35E+00	1.29E+00	1.80E-01	2.38E+00
18	1.35E+00	6.40E-01	1.25E+00	7.40E-01	1.00E-01	1.36E+00	2.34E+00	1.12E+00	2.36E+00	1.28E+00	1.80E-01	2.37E+00

Top 2 applied? Yes

Where top 2 method is applied, two produce categories use 90th percentile rates, while the remainder use the mean. Produce categories vary on a chemical-by-chemical basis. Where top 2 method is not used, all produce categories for all chemicals assume 90th percentile rates.

Building Small terraced house**Soil** Sand

Building footprint (m ²)	2.80E+01
Living space air exchange rate (hr ⁻¹)	5.00E-01
Living space height (above ground, m)	4.80E+00
Living space height (below ground, m)	0.00E+00
Pressure difference (soil to enclosed space, Pa)	3.10E+00
Foundation thickness (m)	1.50E-01
Floor crack area (cm ²)	4.23E+02
Dust loading factor (µg m ⁻³)	5.00E+01

Porosity, Total (cm ³ cm ⁻³)	5.40E-01
Porosity, Air-Filled (cm ³ cm ⁻³)	3.00E-01
Porosity, Water-Filled (cm ³ cm ⁻³)	2.40E-01
Residual soil water content (cm ³ cm ⁻³)	7.00E-02
Saturated hydraulic conductivity (cm s ⁻¹)	7.36E-03
van Genuchten shape parameter <i>m</i> (dimensionless)	3.51E-01
Bulk density (g cm ⁻³)	1.18E+00
Threshold value of wind speed at 10m (m s ⁻¹)	7.20E+00
Empirical function (F _x) for dust model (dimensionless)	1.22E+00
Ambient soil temperature (K)	2.83E+02
Soil pH	7.00E+00
Soil Organic Matter content (%)	6.00E+00
Fraction of organic carbon (g g ⁻¹)	3.48E-02
Effective total fluid saturation (unitless)	3.62E-01
Intrinsic soil permeability (cm ²)	9.83E-08
Relative soil air permeability (unitless)	7.68E-01
Effective air permeability (cm ²)	7.54E-08

Soil - Vapour Model

Depth to top of source (no building) (cm)	0
Depth to top of source (beneath building) (cm)	50
Default soil gas ingress rate?	No
Soil gas ingress rate ($\text{cm}^3 \text{s}^{-1}$)	3.54E+01
Building ventilation rate ($\text{cm}^3 \text{s}^{-1}$)	1.87E+04
Averaging time surface emissions (yr)	6
Finite vapour source model?	No
Thickness of contaminated layer (cm)	200

Air Dispersion Model

Mean annual windspeed at 10m (m s^{-1})	5.00
Air dispersion factor at height of 0.8m *	2400.00
Air dispersion factor at height of 1.6m *	0.00
Fraction of site cover ($\text{m}^2 \text{m}^{-2}$)	0.75

* Air dispersion factor in $\text{g m}^{-2} \text{s}^{-1}$ per kg m^{-3}

Soil - Plant Model

	Dry weight conversion factor	Homegrown fraction		Soil loading factor	Preparation correction factor
	g DW g^{-1} FW	Average	High		
		dimensionless		g g^{-1} DW	dimensionless
Green vegetables	0.096	0.05	0.33	1.00E-03	2.00E-01
Root vegetables	0.103	0.06	0.40	1.00E-03	1.00E+00
Tuber vegetables	0.210	0.02	0.13	1.00E-03	1.00E+00
Herbaceous fruit	0.058	0.06	0.40	1.00E-03	6.00E-01
Shrub fruit	0.166	0.09	0.60	1.00E-03	6.00E-01
Tree fruit	0.157	0.04	0.27	1.00E-03	6.00E-01

Gardener type None

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Report title Northenden Resi Soil Vapour GAC, Sand Soil, 3.0m depth

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RESULTS



Environment Agency											Apply Top 2 Approach to Produce Group						
		Assessment Criterion (mg kg ⁻¹)			Ratio of ADE to HCV			Saturation Limit (mg kg ⁻¹)	50% rule?		Top Two applied?	Green vegetables	Root vegetables	Tuber vegetables	Herbaceous fruit	Shrub fruit	Tree fruit
		oral	inhalation	combined	oral	inhalation	combined		Oral	Inhal							
1	Vinyl Chloride (Chloroethene) (2021)	NR	3.74E-02	3.74E-02	0.00	1.00	1.00	2.68E+03 (sol)	No	No	Yes	No	Yes	No	No	No	Yes
2	1,1-Dichloroethene	NR	1.54E+00	1.54E+00	0.00	1.00	1.00	7.90E+03 (vap)	No	No	Yes	0	0	0	0	0	0
3	1,2-Dichloroethene (cis)	7.16E-01	NR	NR	1.00	NR	NR	1.24E+04 (sol)	No	No	Yes	0	0	0	0	0	0
4	Trichloroethene (TCE) (2021)	6.02E-02	2.24E-01	NR	1.00	0.27	NR	7.07E+03 (vap)	No	No	Yes	No	Yes	No	No	No	Yes
5	Tetrachloroethene (PCE)	NR	1.25E+00	1.25E+00	0.00	1.00	1.00	2.17E+03 (sol)	No	Yes	Yes	0	0	0	0	0	0
6	Chloromethane	NR	2.19E-02	NR	NR	1.00	NR	2.74E+03 (sol)	No	Yes	Yes	0	0	0	0	0	0
7	Chloroform (Trichloromethane)	NR	5.47E+00	5.47E+00	0.00	1.00	1.00	1.76E+04 (sol)	Yes	No	Yes	0	0	0	0	0	0
8	1,1,1-Trichloroethane (TCA)	NR	5.41E+01	5.41E+01	0.00	1.00	1.00	6.34E+03 (vap)	No	No	Yes	0	0	0	0	0	0
9	1,2-Dichloropropane	NR	1.58E-01	1.58E-01	0.00	1.00	1.00	4.11E+03 (sol)	No	No	Yes	0	0	0	0	0	0
10	Benzene (C4SL child)	NR	4.54E+00	4.54E+00	0.00	1.00	1.00	4.60E+03 (sol)	No	No	Yes	No	Yes	No	No	No	Yes
11	Toluene	NR	5.98E+03	5.98E+03	0.00	1.00	1.00	4.32E+03 (vap)	No	No	Yes	No	No	No	No	No	No
12	Ethylbenzene	NR	1.80E+03	1.80E+03	0.00	1.00	1.00	2.83E+03 (vap)	No	No	Yes	No	No	No	No	No	No
13	Xylene, m-	NR	5.95E+02	5.95E+02	0.00	1.00	1.00	3.45E+03 (vap)	No	No	Yes	No	No	No	No	No	No
14	Xylene, o-	NR	6.34E+02	6.34E+02	0.00	1.00	1.00	2.61E+03 (sol)	No	No	Yes	No	No	No	No	No	No
15	Xylene, p-	NR	5.68E+02	5.68E+02	0.00	1.00	1.00	3.16E+03 (sol)	No	No	Yes	No	No	No	No	No	No
16	n-Hexane	NR	1.77E+01	1.77E+01	0.00	1.00	1.00	1.21E+03 (sol)	No	No	Yes	0	0	0	0	0	0
17	Styrene	NR	3.79E+02	3.79E+02	0.00	1.00	1.00	3.33E+03 (sol)	No	No	Yes	0	0	0	0	0	0
18	TPH Aliphatic EC5-EC6	NR	2.22E+02	2.22E+02	0.00	1.00	1.00	1.21E+03 (sol)	Yes	Yes	Yes	0	0	0	0	0	0
19	TPH Aromatic >EC8-EC10	NR	3.62E+02	3.62E+02	0.00	1.00	1.00	3.57E+03 (vap)	Yes	Yes	Yes	0	0	0	0	0	0
20	Carbon disulphide	NR	8.04E-01	8.04E-01	0.00	1.00	1.00	9.04E+03 (sol)	Yes	Yes	Yes	0	0	0	0	0	0

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		Soil Distribution				Media Concentrations													
		Sorbed	Dissolved	Vapour	Total	Soil	Soil gas	Indoor Dust	Outdoor dust at 0.8m	Outdoor dust at 1.6m	Indoor Vapour	Outdoor vapour at 0.8m	Outdoor vapour at 1.6m	Green vegetables	Root vegetables	Tuber vegetables	Herbaceous fruit	Shrub fruit	Tree fruit
		%	%	%	%	mg kg ⁻¹	mg m ⁻³	mg kg ⁻¹	mg m ⁻³	mg m ⁻³	mg m ⁻³	mg m ⁻³	mg m ⁻³	mg kg ⁻¹ FW	mg kg ⁻¹ FW	mg kg ⁻¹ FW	mg kg ⁻¹ FW	mg kg ⁻¹ FW	mg kg ⁻¹ FW
1	Vinyl Chloride (Chloroethene) (2021) Child	59.5	20.9	19.6	100.0	3.74E-02	2.88E+01	NA	NA	NA	8.79E-03	1.01E-06	0.00E+00	NA	NA	NA	NA	NA	NA
2	1,1-Dichloroethene	86.9	7.5	5.6	100.0	1.54E+00	3.38E+02	NA	NA	NA	8.77E-02	2.03E-05	0.00E+00	NA	NA	NA	NA	NA	NA
3	1,2-Dichloroethene (cis)	86.4	12.4	1.2	100.0	7.16E-01	3.26E+01	NA	NA	NA	8.33E-03	4.25E-06	0.00E+00	NA	NA	NA	NA	NA	NA
4	Trichloroethene (TCE) (2021)	95.1	3.9	0.9	100.0	6.02E-02	2.18E+00	NA	NA	NA	4.97E-04	2.99E-07	0.00E+00	NA	NA	NA	NA	NA	NA
5	Tetrachloroethene (PCE)	97.1	2.1	0.8	100.0	1.25E+00	4.09E+01	NA	NA	NA	8.47E-03	5.58E-06	0.00E+00	NA	NA	NA	NA	NA	NA
6	Chloromethane	46.9	39.6	13.4	100.0	2.19E-02	1.16E+01	NA	NA	NA	3.96E-03	5.26E-07	0.00E+00	NA	NA	NA	NA	NA	NA
7	Chloroform (Trichloromethane)	88.7	10.3	1.0	100.0	5.47E+00	2.13E+02	NA	NA	NA	5.22E-02	2.93E-05	0.00E+00	NA	NA	NA	NA	NA	NA
8	1,1,1-Trichloroethane (TCA)	94.0	4.2	1.9	100.0	5.41E+01	3.99E+03	NA	NA	NA	8.93E-01	3.79E-04	0.00E+00	NA	NA	NA	NA	NA	NA
9	1,2-Dichloropropane	89.0	10.1	0.9	100.0	1.58E-01	5.67E+00	NA	NA	NA	1.27E-03	7.73E-07	0.00E+00	NA	NA	NA	NA	NA	NA
10	Benzene (C4SL child)	91.0	7.9	1.1	100.0	4.54E+00	2.04E+02	NA	NA	NA	5.08E-03	2.64E-05	0.00E+00	NA	NA	NA	NA	NA	NA
11	Toluene	96.8	2.8	0.4	100.0	5.98E+03	9.37E+04	NA	NA	NA	2.11E+00	1.93E-02	0.00E+00	NA	NA	NA	NA	NA	NA
12	Ethylbenzene	98.5	1.3	0.2	100.0	1.80E+03	1.59E+04	NA	NA	NA	3.26E-01	4.16E-03	0.00E+00	NA	NA	NA	NA	NA	NA
13	Xylene, m-	98.7	1.2	0.2	100.0	5.95E+02	3.86E+03	NA	NA	NA	7.92E-02	1.18E-03	0.00E+00	NA	NA	NA	NA	NA	NA
14	Xylene, o-	98.5	1.3	0.2	100.0	6.34E+02	3.87E+03	NA	NA	NA	7.92E-02	1.21E-03	0.00E+00	NA	NA	NA	NA	NA	NA
15	Xylene, p-	98.5	1.3	0.2	100.0	5.68E+02	3.85E+03	NA	NA	NA	7.92E-02	1.15E-03	0.00E+00	NA	NA	NA	NA	NA	NA
16	n-Hexane	83.6	0.6	15.8	100.0	1.77E+01	1.10E+04	NA	NA	NA	3.06E-01	4.08E-04	0.00E+00	NA	NA	NA	NA	NA	NA
17	Styrene	98.1	1.8	0.1	100.0	3.79E+02	1.76E+03	NA	NA	NA	3.69E-01	6.42E-04	0.00E+00	NA	NA	NA	NA	NA	NA
18	TPH Aliphatic EC5-EC6	83.6	0.6	15.8	100.0	2.22E+02	1.38E+05	NA	NA	NA	3.85E+00	5.12E-03	0.00E+00	NA	NA	NA	NA	NA	NA
19	TPH Aromatic >EC8-EC10	99.5	0.4	0.1	100.0	3.62E+02	1.65E+03	NA	NA	NA	4.61E-02	7.16E-04	0.00E+00	NA	NA	NA	NA	NA	NA
20	Carbon disulphide	92.9	4.7	2.4	100.0	8.04E-01	7.62E+01	NA	NA	NA	2.20E-02	7.40E-06	0.00E+00	NA	NA	NA	NA	NA	NA

[illegible]

		Average Daily Exposure (mg kg ⁻¹ bw day ⁻¹)						Distribution by Pathway (%)								
		Direct soil ingestion	Consumption of homegrown produce and attached soil	Dermal contact with soil and dust	Inhalation of dust	Inhalation of vapour	Background (oral)	Background (inhalation)	Direct soil ingestion	Consumption of homegrown produce and attached soil	Dermal contact with soil and dust	Inhalation of dust	Inhalation of vapour (indoor)	Inhalation of vapour (outdoor)	Background (oral)	Background (inhalation)
1	Vinyl Chloride (Chloroethene) (2021) Child Re	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.71E-03	5.63E-05	3.73E-04	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00
2	1,1-Dichloroethene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.70E-02	3.38E-04	2.42E-05	0.00	0.00	0.00	0.00	99.96	0.00	0.00	0.04
3	1,2-Dichloroethene (cis)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.41E-03	2.25E-04	3.64E-04	0.00	0.00	0.00	0.00	90.19	0.00	3.75	6.06
4	Trichloroethene (TCE) (2021)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.23E-04	8.66E-05	1.21E-03	0.00	0.00	0.00	0.00	50.00	0.00	3.34	46.66
5	Tetrachloroethene (PCE)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.50E-03	4.73E-04	1.21E-02	0.00	0.00	0.00	0.00	50.00	0.00	0.00	50.00
6	Chloromethane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.57E-03	0.00E+00	1.29E-02	0.00	0.00	0.00	0.00	50.00	0.00	0.00	50.00
7	Chloroform (Trichloromethane)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.39E-02	5.63E-03	6.06E-03	0.00	0.00	0.00	0.00	84.84	0.00	0.00	15.15
8	1,1,1-Trichloroethane (TCA)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.80E-01	1.13E-05	2.00E-02	0.00	0.00	0.00	0.00	96.66	0.00	0.00	3.33
9	1,2-Dichloropropane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.25E-04	2.14E-03	3.15E-04	0.00	0.00	0.00	0.00	72.35	0.00	0.00	27.65
10	Benzene (C4SL child)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.30E-03	0.00E+00	0.00E+00	0.00	0.00	0.00	0.00	99.98	0.02	0.00	0.00
11	Toluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.37E+00	5.63E-04	3.15E-02	0.00	0.00	0.00	0.00	97.71	0.04	0.00	2.25
12	Ethylbenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.12E-01	2.81E-04	7.88E-03	0.00	0.00	0.00	0.00	96.36	0.06	0.00	3.58
13	Xylene, m-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.15E-02	6.19E-04	8.49E-03	0.00	0.00	0.00	0.00	85.80	0.06	0.00	14.14
14	Xylene, o-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.15E-02	6.19E-04	8.49E-03	0.00	0.00	0.00	0.00	85.80	0.06	0.00	14.14
15	Xylene, p-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.15E-02	6.19E-04	8.49E-03	0.00	0.00	0.00	0.00	85.80	0.06	0.00	14.14
16	n-Hexane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.99E-01	0.00E+00	9.46E-04	0.00	0.00	0.00	0.00	99.52	0.01	0.00	0.47
17	Styrene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-01	5.63E-05	3.39E-04	0.00	0.00	0.00	0.00	99.85	0.01	0.00	0.14
18	TPH Aliphatic EC5-EC6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E+00	5.62E+95	6.06E+95	0.00	0.00	0.00	0.00	50.00	0.00	0.00	50.00
19	TPH Aromatic >EC8-EC10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.00E-02	5.62E+95	6.06E+95	0.00	0.00	0.00	0.00	49.96	0.04	0.00	50.00
20	Carbon disulphide	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.43E-02	1.97E-01	6.07E-02	0.00	0.00	0.00	0.00	50.00	0.00	0.00	50.00



	Average Daily Exposure ($\text{mg kg}^{-1} \text{ bw day}^{-1}$)	Distribution by Pathway (%)
	Direct soil ingestion Consumption of homegrown produce and attached soil Dermal contact with soil and dust Inhalation of dust Inhalation of vapour Background (oral) Background (inhalation)	Direct soil ingestion Consumption of homegrown produce Dermal contact with soil and dust Inhalation of dust Inhalation of vapour (indoor) Inhalation of vapour (outdoor) Background (oral) Background (inhalation)
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		



		Oral Health Criteria Value ($\mu\text{g kg}^{-1}$ BW day ⁻¹)	Inhalation Health Criteria Value ($\mu\text{g kg}^{-1}$ BW day ⁻¹)	Oral Mean Daily Intake ($\mu\text{g day}^{-1}$)	Inhalation Mean Daily Intake ($\mu\text{g day}^{-1}$)	Air-water partition coefficient (K_{aw}) ($\text{cm}^3 \text{cm}^{-3}$)	Coefficient of Diffusion in Air ($\text{m}^2 \text{s}^{-1}$)	Coefficient of Diffusion in Water ($\text{m}^2 \text{s}^{-1}$)	$\log K_{oc}$ ($\text{cm}^2 \text{g}^{-1}$)	$\log K_{ow}$ (dimensionless)	Dermal Absorption Fraction (dimensionless)	Soil-to-dust transport factor (g g^{-1} DW)	Sub-surface soil to indoor air correction factor (dimensionless)	Relative bioavailability via soil ingestion (unitless)	Relative bioavailability via dust inhalation (unitless)
1 Vinyl Chloride (Chloroethene) (2021) Child R	ID	0.0376	ID	5.71	1	6.16	7.47E-01	1.11E-05	8.34E-10	1.22	1.38	0.1	0.5	1	1
2 1,1-Dichloroethene	TDI	46	TDI	57	6	0.4	5.93E-01	9.18E-06	7.08E-10	1.83	2.13	0.1	0.5	1	1
3 1,2-Dichloroethene (cis)	TDI	6	NR	0	4	6	7.46E-02	9.02E-06	7.08E-10	1.61	1.86	0.1	0.5	1	1
4 Trichloroethene (TCE) (2021)	TDI	0.646	ID	1.2	1.54	20	1.87E-01	7.91E-06	6.23E-10	2.15	2.53	0.1	0.5	1	1
5 Tetrachloroethene (PCE)	TDI	6	TDI	11	8.4	200	3.16E-01	7.10E-06	5.61E-10	2.43	2.88	0.1	0.5	1	1
6 Chloromethane	NR	0	TDI	5.14	0	212	2.71E-01	1.28E-05	9.70E-10	0.84	0.91	0.1	0.5	1	1
7 Chloroform (Trichloromethane)	TDI	13.7	TDI	40	100	100	7.65E-02	8.60E-06	6.80E-10	1.7	1.97	0.1	0.5	1	1
8 1,1,1-Trichloroethane (TCA)	TDI	600	TDI	600	0.2	330	3.60E-01	7.75E-06	5.99E-10	2.12	2.49	0.1	0.5	1	1
9 1,2-Dichloropropane	TDI	14	TDI	1.14	38	5.2	7.19E-02	7.74E-06	5.95E-10	1.71	1.99	0.1	0.5	1	1
10 Benzene (C4SL child)	ID	0.57	ID	3.3	NR	NR	1.16E-01	8.77E-06	6.64E-10	1.83	2.13	0.1	0.5	10	1
11 Toluene	TDI	223	TDI	1400	10	520	1.15E-01	7.78E-06	5.88E-10	2.31	2.73	0.1	0.5	10	1
12 Ethylbenzene	TDI	100	TDI	220	5	130	1.39E-01	7.04E-06	5.31E-10	2.65	3.15	0.1	0.5	10	1
13 Xylene, m-	TDI	180	TDI	60	11	140	1.12E-01	7.03E-06	5.31E-10	2.69	3.2	0.1	0.5	10	1
14 Xylene, o-	TDI	180	TDI	60	11	140	9.20E-02	7.01E-06	5.31E-10	2.63	3.12	0.1	0.5	10	1
15 Xylene, p-	TDI	180	TDI	60	11	140	1.07E-01	7.04E-06	5.31E-10	2.65	3.15	0.1	0.5	10	1
16 n-Hexane	TDI	60	TDI	200	0	15.6	2.10E+01	1.00E-05	1.00E-09	2.91	3.31	0.1	0.5	10	1
17 Styrene	TDI	12	TDI	240	1	5.6	5.33E-02	7.19E-06	5.48E-10	2.51	2.98	0.1	0.5	1	1
18 TPH Aliphatic EC5-EC6	TDI	5000	TDI	5000	9.99E+99	9.99E+99	2.10E+01	1.00E-05	1.00E-09	2.91	3.31	0.1	0.5	10	1
19 TPH Aromatic >EC8-EC10	TDI	40	TDI	60	9.99E+99	9.99E+99	2.53E-01	1.00E-05	1.00E-09	3.2	3.69	0.1	0.5	10	1
20 Carbon disulphide	TDI	100	TDI	28.6	3500	1001	4.08E-01	1.04E-05	8.28E-10	2.06	2	0.1	0.5	1	1

[illegible]



		Soil-to-water partition coefficient (cm ³ g ⁻¹)	Vapour pressure (Pa)	Water solubility (mg L ⁻¹)	Soil-to-plant concentration factor for green vegetables (mg g ⁻¹ plant DW or FW basis over mg g ⁻¹ DW soil)	Soil-to-plant concentration factor for root vegetables (mg g ⁻¹ plant DW or FW basis over mg g ⁻¹ DW soil)	Soil-to-plant concentration factor for tuber vegetables (mg g ⁻¹ plant DW or FW basis over mg g ⁻¹ DW soil)	Soil-to-plant concentration factor for herbaceous fruit (mg g ⁻¹ plant DW or FW basis over mg g ⁻¹ DW soil)	Soil-to-plant concentration factor for shrub fruit (mg g ⁻¹ plant DW or FW basis over mg g ⁻¹ DW soil)	Soil-to-plant concentration factor for tree fruit (mg g ⁻¹ plant DW or FW basis over mg g ⁻¹ DW soil)
1	Vinyl Chloride (Chloroethene) (2021) Child	5.78E-01	2.20E+05	2.76E+03	model	model	model	model	model	model
2	1,1-Dichloroethene	2.35E+00	4.20E+04	3.10E+03	Model	Model	Model	Model	Model	Model
3	1,2-Dichloroethene (cis)	1.42E+00	1.37E+04	7.55E+03	Model	Model	Model	Model	Model	Model
4	Trichloroethene (TCE) (2021)	4.92E+00	4.58E+03	1.37E+03	model	model	model	model	model	model
5	Tetrachloroethene (PCE)	9.37E+00	1.01E+03	2.25E+02	model	model	model	model	model	model
6	Chloromethane	2.41E-01	3.31E+05	5.35E+03	Model	Model	Model	Model	Model	Model
7	Chloroform (Trichloromethane)	1.74E+00	1.35E+04	8.95E+03	model	model	model	model	model	model
8	1,1,1-Trichloroethane (TCA)	4.59E+00	8.25E+03	1.30E+03	model	model	model	model	model	model
9	1,2-Dichloropropane	1.78E+00	3.07E+03	2.05E+03	Model	Model	Model	Model	Model	Model
10	Benzene (C4SL child)	2.35E+00	6.24E+03	1.78E+03	model	model	model	0.00E+00	0.00E+00	model
11	Toluene	7.11E+00	1.73E+03	5.90E+02	model	model	model	0.00E+00	0.00E+00	model
12	Ethylbenzene	1.55E+01	5.53E+02	1.80E+02	model	model	model	0.00E+00	0.00E+00	model
13	Xylene, m-	1.70E+01	4.95E+02	2.00E+02	model	model	model	0.00E+00	0.00E+00	model
14	Xylene, o-	1.48E+01	3.86E+02	1.73E+02	model	model	model	0.00E+00	0.00E+00	model
15	Xylene, p-	1.55E+01	4.75E+02	2.00E+02	model	model	model	0.00E+00	0.00E+00	model
16	n-Hexane	2.83E+01	2.19E+04	3.59E+01	model	model	model	model	model	model
17	Styrene	1.13E+01	3.50E+02	2.90E+02	Model	Model	Model	Model	Model	Model
18	TPH Aliphatic EC5-EC6	2.83E+01	2.19E+04	3.59E+01	model	model	model	model	model	model
19	TPH Aromatic >EC8-EC10	5.52E+01	3.20E+02	6.46E+01	model	model	model	model	model	model
20	Carbon disulphide	4.00E+00	2.65E+04	2.10E+03	model	model	model	model	model	model

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CLEA Software Version 1.071

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Report generated 03/01/2024

Report title Northenden Resi Soil Vapour GAC, Sand Soil, 3.0m depth



Created by Tim Rolfe at

BASIC SETTINGS

Land Use Residential without produce (C4SL)

Building Small terraced house

Receptor Female (res C4SL)

Start age class 1

End age class 6

Exposure Duration 6 years

Soil Sand

Exposure Pathways

Direct soil and dust ingestion



Dermal contact with indoor dust



Inhalation of indoor dust



Consumption of homegrown produce



Dermal contact with soil



Inhalation of soil dust



Soil attached to homegrown produce



Inhalation of indoor vapour



Inhalation of outdoor vapour





Land Use Residential without produce (C4SL)

Receptor Female (res C4SL)

Age Class	Exposure Frequencies (days yr ⁻¹)						Occupation Periods (hr day ⁻¹)		Soil to skin adherence factors (mg cm ²)		Direct soil ingestion rate (g day ⁻¹)	Body weight (kg)	Body height (m)	Inhalation rate (m ³ day ⁻¹)	Max exposed skin factor		Total skin area (m ²)
	Direct soil ingestion	Consumption of homegrown produce	Dermal contact with indoor dust	Dermal contact with soil	Inhalation of dust and vapour, indoor	Inhalation of dust and vapour, outdoor	Indoors	Outdoors	Indoor	Outdoor					Indoor (m ² m ⁻²)	Outdoor (m ² m ⁻²)	
1	180	0	180	170	365	365	23.0	1.0	0.06	0.10	0.10	5.60	0.7	5.4	0.32	0.26	3.43E-01
2	365	0	365	170	365	365	23.0	1.0	0.06	0.10	0.10	9.80	0.8	8.0	0.33	0.26	4.84E-01
3	365	0	365	170	365	365	23.0	1.0	0.06	0.10	0.10	12.70	0.9	8.9	0.32	0.25	5.82E-01
4	365	0	365	170	365	365	23.0	1.0	0.06	0.10	0.10	15.10	0.9	10.1	0.35	0.28	6.36E-01
5	365	0	365	170	365	365	19.0	1.0	0.06	0.10	0.10	16.90	1.0	10.1	0.35	0.28	7.04E-01
6	365	0	365	170	365	365	19.0	1.0	0.06	0.10	0.10	19.70	1.1	10.1	0.33	0.26	7.94E-01
7	0	0	0	0	0	0	0.0	0.0	0.00	0.00	0.00	22.10	1.2	12.0	0.22	0.15	8.73E-01
8	0	0	0	0	0	0	0.0	0.0	0.00	0.00	0.00	25.30	1.2	12.0	0.22	0.15	9.36E-01
9	0	0	0	0	0	0	0.0	0.0	0.00	0.00	0.00	27.50	1.3	12.0	0.22	0.15	1.01E+00
10	0	0	0	0	0	0	0.0	0.0	0.00	0.00	0.00	31.40	1.3	12.0	0.22	0.15	1.08E+00
11	0	0	0	0	0	0	0.0	0.0	0.00	0.00	0.00	35.70	1.4	12.0	0.22	0.14	1.19E+00
12	0	0	0	0	0	0	0.0	0.0	0.00	0.00	0.00	41.30	1.4	15.2	0.22	0.14	1.29E+00
13	0	0	0	0	0	0	0.0	0.0	0.00	0.00	0.00	47.20	1.5	15.2	0.22	0.14	1.42E+00
14	0	0	0	0	0	0	0.0	0.0	0.00	0.00	0.00	51.20	1.6	15.2	0.22	0.14	1.52E+00
15	0	0	0	0	0	0	0.0	0.0	0.00	0.00	0.00	56.70	1.6	15.2	0.21	0.14	1.60E+00
16	0	0	0	0	0	0	0.0	0.0	0.00	0.00	0.00	59.00	1.6	15.2	0.21	0.14	1.63E+00
17	0	0	0	0	0	0	0.0	0.0	0.00	0.00	0.00	70.00	1.6	15.7	0.33	0.27	1.78E+00
18	0	0	0	0	0	0	0.0	0.0	0.00	0.00	0.00	70.90	1.6	13.6	0.33	0.27	1.80E+00

Consumption Rates



Age Class	Consumption rates (a FW ka ⁻¹ bodyweight dav ⁻¹) by Produce Group											
	MEAN RATES						90TH PERCENTILE RATES					
	Green veg	Root veg	Tuber veg	Herb. Fruit	Shrub fruit	Tree fruit	Green veg	Root veg	Tuber veg	Herb. Fruit	Shrub fruit	Tree fruit
1	3.47E+00	5.22E+00	9.22E+00	8.90E-01	1.07E+00	1.87E+00	7.12E+00	1.07E+01	1.60E+01	1.83E+00	2.23E+00	3.82E+00
2	3.34E+00	1.61E+00	3.14E+00	1.93E+00	2.60E-01	5.84E+00	5.87E+00	2.83E+00	6.60E+00	3.39E+00	4.60E-01	1.03E+01
3	3.34E+00	1.61E+00	3.14E+00	1.93E+00	2.60E-01	5.84E+00	5.87E+00	2.83E+00	6.60E+00	3.39E+00	4.60E-01	1.03E+01
4	3.34E+00	1.61E+00	3.14E+00	1.93E+00	2.60E-01	5.84E+00	5.87E+00	2.83E+00	6.60E+00	3.39E+00	4.60E-01	1.03E+01
5	2.54E+00	1.20E+00	2.65E+00	1.25E+00	1.10E-01	2.89E+00	4.53E+00	2.14E+00	4.95E+00	2.24E+00	1.90E-01	5.16E+00
6	2.54E+00	1.20E+00	2.65E+00	1.25E+00	1.10E-01	2.89E+00	4.53E+00	2.14E+00	4.95E+00	2.24E+00	1.90E-01	5.16E+00
7	2.54E+00	1.20E+00	2.65E+00	1.25E+00	1.10E-01	2.89E+00	4.53E+00	2.14E+00	4.95E+00	2.24E+00	1.90E-01	5.16E+00
8	2.54E+00	1.20E+00	2.65E+00	1.25E+00	1.10E-01	2.89E+00	4.53E+00	2.14E+00	4.95E+00	2.24E+00	1.90E-01	5.16E+00
9	2.54E+00	1.20E+00	2.65E+00	1.25E+00	1.10E-01	2.89E+00	4.53E+00	2.14E+00	4.95E+00	2.24E+00	1.90E-01	5.16E+00
10	2.54E+00	1.20E+00	2.65E+00	1.25E+00	1.10E-01	2.89E+00	4.53E+00	2.14E+00	4.95E+00	2.24E+00	1.90E-01	5.16E+00
11	2.54E+00	1.20E+00	2.65E+00	1.25E+00	1.10E-01	2.89E+00	4.53E+00	2.14E+00	4.95E+00	2.24E+00	1.90E-01	5.16E+00
12	1.03E+00	4.90E-01	1.60E+00	5.10E-01	4.00E-02	1.18E+00	1.87E+00	8.90E-01	3.05E+00	9.30E-01	8.00E-02	2.13E+00
13	1.03E+00	4.90E-01	1.60E+00	5.10E-01	4.00E-02	1.18E+00	1.87E+00	8.90E-01	3.05E+00	9.30E-01	8.00E-02	2.13E+00
14	1.03E+00	4.90E-01	1.60E+00	5.10E-01	4.00E-02	1.18E+00	1.87E+00	8.90E-01	3.05E+00	9.30E-01	8.00E-02	2.13E+00
15	1.03E+00	4.90E-01	1.60E+00	5.10E-01	4.00E-02	1.18E+00	1.87E+00	8.90E-01	3.05E+00	9.30E-01	8.00E-02	2.13E+00
16	1.03E+00	4.90E-01	1.60E+00	5.10E-01	4.00E-02	1.18E+00	1.87E+00	8.90E-01	3.05E+00	9.30E-01	8.00E-02	2.13E+00
17	1.26E+00	6.00E-01	1.18E+00	6.90E-01	9.00E-02	1.27E+00	2.36E+00	1.12E+00	2.35E+00	1.29E+00	1.80E-01	2.38E+00
18	1.35E+00	6.40E-01	1.25E+00	7.40E-01	1.00E-01	1.36E+00	2.34E+00	1.12E+00	2.36E+00	1.28E+00	1.80E-01	2.37E+00

Top 2 applied? Yes

Where top 2 method is applied, two produce categories use 90th percentile rates, while the remainder use the mean. Produce categories vary on a chemical-by-chemical basis. Where top 2 method is not used, all produce categories for all chemicals assume 90th percentile rates.

Building Small terraced house**Soil** Sand

Building footprint (m ²)	2.80E+01
Living space air exchange rate (hr ⁻¹)	5.00E-01
Living space height (above ground, m)	4.80E+00
Living space height (below ground, m)	0.00E+00
Pressure difference (soil to enclosed space, Pa)	3.10E+00
Foundation thickness (m)	1.50E-01
Floor crack area (cm ²)	4.23E+02
Dust loading factor (µg m ⁻³)	5.00E+01

Porosity, Total (cm ³ cm ⁻³)	5.40E-01
Porosity, Air-Filled (cm ³ cm ⁻³)	3.00E-01
Porosity, Water-Filled (cm ³ cm ⁻³)	2.40E-01
Residual soil water content (cm ³ cm ⁻³)	7.00E-02
Saturated hydraulic conductivity (cm s ⁻¹)	7.36E-03
van Genuchten shape parameter <i>m</i> (dimensionless)	3.51E-01
Bulk density (g cm ⁻³)	1.18E+00
Threshold value of wind speed at 10m (m s ⁻¹)	7.20E+00
Empirical function (F _x) for dust model (dimensionless)	1.22E+00
Ambient soil temperature (K)	2.83E+02
Soil pH	7.00E+00
Soil Organic Matter content (%)	6.00E+00
Fraction of organic carbon (g g ⁻¹)	3.48E-02
Effective total fluid saturation (unitless)	3.62E-01
Intrinsic soil permeability (cm ²)	9.83E-08
Relative soil air permeability (unitless)	7.68E-01
Effective air permeability (cm ²)	7.54E-08

Soil - Vapour Model

Depth to top of source (no building) (cm)	0
Depth to top of source (beneath building) (cm)	300
Default soil gas ingress rate?	No
Soil gas ingress rate ($\text{cm}^3 \text{s}^{-1}$)	3.54E+01
Building ventilation rate ($\text{cm}^3 \text{s}^{-1}$)	1.87E+04
Averaging time surface emissions (yr)	6
Finite vapour source model?	No
Thickness of contaminated layer (cm)	200

Air Dispersion Model

Mean annual windspeed at 10m (m s^{-1})	5.00
Air dispersion factor at height of 0.8m *	2400.00
Air dispersion factor at height of 1.6m *	0.00
Fraction of site cover ($\text{m}^2 \text{m}^{-2}$)	0.75

* Air dispersion factor in $\text{g m}^{-2} \text{s}^{-1}$ per kg m^{-3}

Soil - Plant Model

	Dry weight conversion factor	Homegrown fraction		Soil loading factor	Preparation correction factor
	g DW g^{-1} FW	Average	High		
		dimensionless		g g^{-1} DW	dimensionless
Green vegetables	0.096	0.05	0.33	1.00E-03	2.00E-01
Root vegetables	0.103	0.06	0.40	1.00E-03	1.00E+00
Tuber vegetables	0.210	0.02	0.13	1.00E-03	1.00E+00
Herbaceous fruit	0.058	0.06	0.40	1.00E-03	6.00E-01
Shrub fruit	0.166	0.09	0.60	1.00E-03	6.00E-01
Tree fruit	0.157	0.04	0.27	1.00E-03	6.00E-01

Gardener type None

CLEA Software Version 1.071

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Report generated 03-Jan-24

Report title Northenden Resi Soil Vapour GAC, Sand Soil, 6.0m depth

Created by Tim Rolfe at



RESULTS



Environment Agency											Apply Top 2 Approach to Produce Group							
		Assessment Criterion (mg kg ⁻¹)			Ratio of ADE to HCV			Saturation Limit (mg kg ⁻¹)	50% rule?		Top Two applied?	Green vegetables	Root vegetables	Tuber vegetables	Herbaceous fruit	Shrub fruit	Tree fruit	
		oral	inhalation	combined	oral	inhalation	combined		Oral	Inhal								
1	Vinyl Chloride (Chloroethene) (202)	NR	7.05E-02	7.05E-02	0.00	1.00	1.00	2.68E+03 (sol)	No	No	Yes	No	Yes	No	No	No	Yes	
2	1,1-Dichloroethene	NR	2.94E+00	2.94E+00	0.00	1.00	1.00	7.90E+03 (vap)	No	No	Yes	0	0	0	0	0	0	
3	1,2-Dichloroethene (cis)	1.37E+00	NR	NR	1.00	NR	NR	1.24E+04 (sol)	No	No	Yes	0	0	0	0	0	0	
4	Trichloroethene (TCE) (2021)	1.16E-01	4.31E-01	NR	1.00	0.27	NR	7.07E+03 (vap)	No	No	Yes	No	Yes	No	No	No	Yes	
5	Tetrachloroethene (PCE)	NR	2.42E+00	2.42E+00	0.00	1.00	1.00	2.17E+03 (sol)	No	Yes	Yes	0	0	0	0	0	0	
6	Chloromethane	NR	4.08E-02	NR	NR	1.00	NR	2.74E+03 (sol)	No	Yes	Yes	0	0	0	0	0	0	
7	Chloroform (Trichloromethane)	NR	1.05E+01	1.05E+01	0.00	1.00	1.00	1.76E+04 (sol)	Yes	No	Yes	0	0	0	0	0	0	
8	1,1,1-Trichloroethane (TCA)	NR	1.04E+02	1.04E+02	0.00	1.00	1.00	6.34E+03 (vap)	No	No	Yes	0	0	0	0	0	0	
9	1,2-Dichloropropane	NR	3.05E-01	3.05E-01	0.00	1.00	1.00	4.11E+03 (sol)	No	No	Yes	0	0	0	0	0	0	
10	Benzene (C4SL child)	NR	8.68E+00	8.68E+00	0.00	1.00	1.00	4.60E+03 (sol)	No	No	Yes	No	Yes	No	No	No	Yes	
11	Toluene	NR	1.15E+04	1.15E+04	0.00	1.00	1.00	4.32E+03 (vap)	No	No	Yes	No	No	No	No	No	No	
12	Ethylbenzene	NR	3.49E+03	3.49E+03	0.00	1.00	1.00	2.83E+03 (vap)	No	No	Yes	No	No	No	No	No	No	
13	Xylene, m-	NR	1.15E+03	1.15E+03	0.00	1.00	1.00	3.45E+03 (vap)	No	No	Yes	No	No	No	No	No	No	
14	Xylene, o-	NR	1.23E+03	1.23E+03	0.00	1.00	1.00	2.61E+03 (sol)	No	No	Yes	No	No	No	No	No	No	
15	Xylene, p-	NR	1.10E+03	1.10E+03	0.00	1.00	1.00	3.16E+03 (sol)	No	No	Yes	No	No	No	No	No	No	
16	n-Hexane	NR	3.35E+01	3.35E+01	0.00	1.00	1.00	1.21E+03 (sol)	No	No	Yes	0	0	0	0	0	0	
17	Styrene	NR	7.34E+02	7.34E+02	0.00	1.00	1.00	3.33E+03 (sol)	No	No	Yes	0	0	0	0	0	0	
18	TPH Aliphatic EC5-EC6	NR	4.21E+02	4.21E+02	0.00	1.00	1.00	1.21E+03 (sol)	Yes	Yes	Yes	0	0	0	0	0	0	
19	TPH Aromatic >EC8-EC10	NR	6.86E+02	6.86E+02	0.00	1.00	1.00	3.57E+03 (vap)	Yes	Yes	Yes	0	0	0	0	0	0	
20	Carbon disulphide	NR	1.52E+00	1.52E+00	0.00	1.00	1.00	9.04E+03 (sol)	Yes	Yes	Yes	0	0	0	0	0	0	

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		Soil Distribution				Media Concentrations													
		Sorbed	Dissolved	Vapour	Total	Soil	Soil gas	Indoor Dust	Outdoor dust at 0.8m	Outdoor dust at 1.6m	Indoor Vapour	Outdoor vapour at 0.8m	Outdoor vapour at 1.6m	Green vegetables	Root vegetables	Tuber vegetables	Herbaceous fruit	Shrub fruit	Tree fruit
		%	%	%	%	mg kg ⁻¹	mg m ⁻³	mg kg ⁻¹	mg m ⁻³	mg m ⁻³	mg m ⁻³	mg m ⁻³	mg m ⁻³	mg kg ⁻¹ FW	mg kg ⁻¹ FW	mg kg ⁻¹ FW	mg kg ⁻¹ FW	mg kg ⁻¹ FW	mg kg ⁻¹ FW
1	Vinyl Chloride (Chloroethene) (2021) Child	59.5	20.9	19.6	100.0	7.05E-02	5.43E+01	NA	NA	NA	8.79E-03	1.91E-06	0.00E+00	NA	NA	NA	NA	NA	NA
2	1,1-Dichloroethene	86.9	7.5	5.6	100.0	2.94E+00	6.45E+02	NA	NA	NA	8.77E-02	3.87E-05	0.00E+00	NA	NA	NA	NA	NA	NA
3	1,2-Dichloroethene (cis)	86.4	12.4	1.2	100.0	1.37E+00	6.22E+01	NA	NA	NA	8.33E-03	8.12E-06	0.00E+00	NA	NA	NA	NA	NA	NA
4	Trichloroethene (TCE) (2021)	95.1	3.9	0.9	100.0	1.16E-01	4.20E+00	NA	NA	NA	4.97E-04	5.75E-07	0.00E+00	NA	NA	NA	NA	NA	NA
5	Tetrachloroethene (PCE)	97.1	2.1	0.8	100.0	2.42E+00	7.92E+01	NA	NA	NA	8.47E-03	1.08E-05	0.00E+00	NA	NA	NA	NA	NA	NA
6	Chloromethane	46.9	39.6	13.4	100.0	4.08E-02	2.15E+01	NA	NA	NA	3.96E-03	9.80E-07	0.00E+00	NA	NA	NA	NA	NA	NA
7	Chloroform (Trichloromethane)	88.7	10.3	1.0	100.0	1.05E+01	4.08E+02	NA	NA	NA	5.22E-02	5.62E-05	0.00E+00	NA	NA	NA	NA	NA	NA
8	1,1,1-Trichloroethane (TCA)	94.0	4.2	1.9	100.0	1.04E+02	7.69E+03	NA	NA	NA	8.93E-01	7.30E-04	0.00E+00	NA	NA	NA	NA	NA	NA
9	1,2-Dichloropropane	89.0	10.1	0.9	100.0	3.05E-01	1.09E+01	NA	NA	NA	1.27E-03	1.49E-06	0.00E+00	NA	NA	NA	NA	NA	NA
10	Benzene (C4SL child)	91.0	7.9	1.1	100.0	8.68E+00	3.89E+02	NA	NA	NA	5.08E-03	5.04E-05	0.00E+00	NA	NA	NA	NA	NA	NA
11	Toluene	96.8	2.8	0.4	100.0	1.15E+04	1.81E+05	NA	NA	NA	2.10E+00	3.73E-02	0.00E+00	NA	NA	NA	NA	NA	NA
12	Ethylbenzene	98.5	1.3	0.2	100.0	3.49E+03	3.07E+04	NA	NA	NA	3.26E-01	8.05E-03	0.00E+00	NA	NA	NA	NA	NA	NA
13	Xylene, m-	98.7	1.2	0.2	100.0	1.15E+03	7.47E+03	NA	NA	NA	7.92E-02	2.28E-03	0.00E+00	NA	NA	NA	NA	NA	NA
14	Xylene, o-	98.5	1.3	0.2	100.0	1.23E+03	7.49E+03	NA	NA	NA	7.92E-02	2.35E-03	0.00E+00	NA	NA	NA	NA	NA	NA
15	Xylene, p-	98.5	1.3	0.2	100.0	1.10E+03	7.46E+03	NA	NA	NA	7.92E-02	2.23E-03	0.00E+00	NA	NA	NA	NA	NA	NA
16	n-Hexane	83.6	0.6	15.8	100.0	3.35E+01	2.08E+04	NA	NA	NA	3.06E-01	7.74E-04	0.00E+00	NA	NA	NA	NA	NA	NA
17	Styrene	98.1	1.8	0.1	100.0	7.34E+02	3.41E+03	NA	NA	NA	3.69E-01	1.24E-03	0.00E+00	NA	NA	NA	NA	NA	NA
18	TPH Aliphatic EC5-EC6	83.6	0.6	15.8	100.0	4.21E+02	2.61E+05	NA	NA	NA	3.85E+00	9.72E-03	0.00E+00	NA	NA	NA	NA	NA	NA
19	TPH Aromatic >EC8-EC10	99.5	0.4	0.1	100.0	6.86E+02	3.13E+03	NA	NA	NA	4.61E-02	1.36E-03	0.00E+00	NA	NA	NA	NA	NA	NA
20	Carbon disulphide	92.9	4.7	2.4	100.0	1.52E+00	1.44E+02	NA	NA	NA	2.20E-02	1.40E-05	0.00E+00	NA	NA	NA	NA	NA	NA

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		Average Daily Exposure (mg kg ⁻¹ bw day ⁻¹)						Distribution by Pathway (%)								
		Direct soil ingestion	Consumption of homegrown produce and attached soil	Dermal contact with soil and dust	Inhalation of dust	Inhalation of vapour	Background (oral)	Background (inhalation)	Direct soil ingestion	Consumption of homegrown produce and attached soil	Dermal contact with soil and dust	Inhalation of dust	Inhalation of vapour (indoor)	Inhalation of vapour (outdoor)	Background (oral)	Background (inhalation)
1	Vinyl Chloride (Chloroethene) (2021) Child Re	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.71E-03	5.63E-05	3.73E-04	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00
2	1,1-Dichloroethene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.70E-02	3.38E-04	2.42E-05	0.00	0.00	0.00	0.00	99.96	0.00	0.00	0.04
3	1,2-Dichloroethene (cis)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.41E-03	2.25E-04	3.64E-04	0.00	0.00	0.00	0.00	90.18	0.00	3.75	6.06
4	Trichloroethene (TCE) (2021)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.23E-04	8.66E-05	1.21E-03	0.00	0.00	0.00	0.00	50.00	0.00	3.34	46.66
5	Tetrachloroethene (PCE)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.50E-03	4.73E-04	1.21E-02	0.00	0.00	0.00	0.00	50.00	0.00	0.00	50.00
6	Chloromethane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.57E-03	0.00E+00	1.29E-02	0.00	0.00	0.00	0.00	50.00	0.00	0.00	50.00
7	Chloroform (Trichloromethane)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.39E-02	5.63E-03	6.06E-03	0.00	0.00	0.00	0.00	84.84	0.00	0.00	15.15
8	1,1,1-Trichloroethane (TCA)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.80E-01	1.13E-05	2.00E-02	0.00	0.00	0.00	0.00	96.66	0.00	0.00	3.33
9	1,2-Dichloropropane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.25E-04	2.14E-03	3.15E-04	0.00	0.00	0.00	0.00	72.35	0.00	0.00	27.65
10	Benzene (C4SL child)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.30E-03	0.00E+00	0.00E+00	0.00	0.00	0.00	0.00	99.95	0.05	0.00	0.00
11	Toluene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.37E+00	5.63E-04	3.15E-02	0.00	0.00	0.00	0.00	97.67	0.08	0.00	2.25
12	Ethylbenzene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.12E-01	2.81E-04	7.88E-03	0.00	0.00	0.00	0.00	96.31	0.11	0.00	3.58
13	Xylene, m-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.15E-02	6.19E-04	8.49E-03	0.00	0.00	0.00	0.00	85.74	0.11	0.00	14.14
14	Xylene, o-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.15E-02	6.19E-04	8.49E-03	0.00	0.00	0.00	0.00	85.74	0.12	0.00	14.14
15	Xylene, p-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.15E-02	6.19E-04	8.49E-03	0.00	0.00	0.00	0.00	85.75	0.11	0.00	14.14
16	n-Hexane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.99E-01	0.00E+00	9.46E-04	0.00	0.00	0.00	0.00	99.52	0.01	0.00	0.47
17	Styrene	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-01	5.63E-05	3.39E-04	0.00	0.00	0.00	0.00	99.84	0.02	0.00	0.14
18	TPH Aliphatic EC5-EC6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E+00	5.62E+95	6.06E+95	0.00	0.00	0.00	0.00	49.99	0.01	0.00	50.00
19	TPH Aromatic >EC8-EC10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.00E-02	5.62E+95	6.06E+95	0.00	0.00	0.00	0.00	49.93	0.07	0.00	50.00
20	Carbon disulphide	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.43E-02	1.97E-01	6.07E-02	0.00	0.00	0.00	0.00	50.00	0.00	0.00	50.00



	Average Daily Exposure ($\text{mg kg}^{-1} \text{ bw day}^{-1}$)	Distribution by Pathway (%)
	Direct soil ingestion Consumption of homegrown produce and attached soil Dermal contact with soil and dust Inhalation of dust Inhalation of vapour Background (oral) Background (inhalation)	Direct soil ingestion Consumption of homegrown produce Dermal contact with soil and dust Inhalation of dust Inhalation of vapour (indoor) Inhalation of vapour (outdoor) Background (oral) Background (inhalation)
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		



		Oral Health Criteria Value ($\mu\text{g kg}^{-1}$ BW day ⁻¹)	Inhalation Health Criteria Value ($\mu\text{g kg}^{-1}$ BW day ⁻¹)	Oral Mean Daily Intake ($\mu\text{g day}^{-1}$)	Inhalation Mean Daily Intake ($\mu\text{g day}^{-1}$)	Air-water partition coefficient (K_{aw}) ($\text{cm}^3 \text{cm}^{-3}$)	Coefficient of Diffusion in Air ($\text{m}^2 \text{s}^{-1}$)	Coefficient of Diffusion in Water ($\text{m}^2 \text{s}^{-1}$)	$\log K_{oc}$ ($\text{cm}^2 \text{g}^{-1}$)	$\log K_{ow}$ (dimensionless)	Dermal Absorption Fraction (dimensionless)	Soil-to-dust transport factor (g g^{-1} DW)	Sub-surface soil to indoor air correction factor (dimensionless)	Relative bioavailability via soil ingestion (unitless)	Relative bioavailability via dust inhalation (unitless)
1	Vinyl Chloride (Chloroethene) (2021) Child R	ID	0.0376	ID	5.71	1	6.16	7.47E-01	1.11E-05	8.34E-10	1.22	1.38	0.1	0.5	1
2	1,1-Dichloroethene	TDI	46	TDI	57	6	0.4	5.93E-01	9.18E-06	7.08E-10	1.83	2.13	0.1	0.5	1
3	1,2-Dichloroethene (cis)	TDI	6	NR	0	4	6	7.46E-02	9.02E-06	7.08E-10	1.61	1.86	0.1	0.5	1
4	Trichloroethene (TCE) (2021)	TDI	0.646	ID	1.2	1.54	20	1.87E-01	7.91E-06	6.23E-10	2.15	2.53	0.1	0.5	1
5	Tetrachloroethene (PCE)	TDI	6	TDI	11	8.4	200	3.16E-01	7.10E-06	5.61E-10	2.43	2.88	0.1	0.5	1
6	Chloromethane	NR	0	TDI	5.14	0	212	2.71E-01	1.28E-05	9.70E-10	0.84	0.91	0.1	0.5	1
7	Chloroform (Trichloromethane)	TDI	13.7	TDI	40	100	100	7.65E-02	8.60E-06	6.80E-10	1.7	1.97	0.1	0.5	1
8	1,1,1-Trichloroethane (TCA)	TDI	600	TDI	600	0.2	330	3.60E-01	7.75E-06	5.99E-10	2.12	2.49	0.1	0.5	1
9	1,2-Dichloropropane	TDI	14	TDI	1.14	38	5.2	7.19E-02	7.74E-06	5.95E-10	1.71	1.99	0.1	0.5	1
10	Benzene (C4SL child)	ID	0.57	ID	3.3	NR	NR	1.16E-01	8.77E-06	6.64E-10	1.83	2.13	0.1	0.5	10
11	Toluene	TDI	223	TDI	1400	10	520	1.15E-01	7.78E-06	5.88E-10	2.31	2.73	0.1	0.5	10
12	Ethylbenzene	TDI	100	TDI	220	5	130	1.39E-01	7.04E-06	5.31E-10	2.65	3.15	0.1	0.5	10
13	Xylene, m-	TDI	180	TDI	60	11	140	1.12E-01	7.03E-06	5.31E-10	2.69	3.2	0.1	0.5	10
14	Xylene, o-	TDI	180	TDI	60	11	140	9.20E-02	7.01E-06	5.31E-10	2.63	3.12	0.1	0.5	10
15	Xylene, p-	TDI	180	TDI	60	11	140	1.07E-01	7.04E-06	5.31E-10	2.65	3.15	0.1	0.5	10
16	n-Hexane	TDI	60	TDI	200	0	15.6	2.10E+01	1.00E-05	1.00E-09	2.91	3.31	0.1	0.5	10
17	Styrene	TDI	12	TDI	240	1	5.6	5.33E-02	7.19E-06	5.48E-10	2.51	2.98	0.1	0.5	1
18	TPH Aliphatic EC5-EC6	TDI	5000	TDI	5000	9.99E+99	9.99E+99	2.10E+01	1.00E-05	1.00E-09	2.91	3.31	0.1	0.5	10
19	TPH Aromatic >EC8-EC10	TDI	40	TDI	60	9.99E+99	9.99E+99	2.53E-01	1.00E-05	1.00E-09	3.2	3.69	0.1	0.5	10
20	Carbon disulphide	TDI	100	TDI	28.6	3500	1001	4.08E-01	1.04E-05	8.28E-10	2.06	2	0.1	0.5	1

[illegible]



		Soil-to-water partition coefficient (cm ³ g ⁻¹)	Vapour pressure (Pa)	Water solubility (mg L ⁻¹)	Soil-to-plant concentration factor for green vegetables (mg g ⁻¹ plant DW or FW basis over mg g ⁻¹ DW soil)	Soil-to-plant concentration factor for root vegetables (mg g ⁻¹ plant DW or FW basis over mg g ⁻¹ DW soil)	Soil-to-plant concentration factor for tuber vegetables (mg g ⁻¹ plant DW or FW basis over mg g ⁻¹ DW soil)	Soil-to-plant concentration factor for herbaceous fruit (mg g ⁻¹ plant DW or FW basis over mg g ⁻¹ DW soil)	Soil-to-plant concentration factor for shrub fruit (mg g ⁻¹ plant DW or FW basis over mg g ⁻¹ DW soil)	Soil-to-plant concentration factor for tree fruit (mg g ⁻¹ plant DW or FW basis over mg g ⁻¹ DW soil)
1	Vinyl Chloride (Chloroethene) (2021) Child	5.78E-01	2.20E+05	2.76E+03	model	model	model	model	model	model
2	1,1-Dichloroethene	2.35E+00	4.20E+04	3.10E+03	Model	Model	Model	Model	Model	Model
3	1,2-Dichloroethene (cis)	1.42E+00	1.37E+04	7.55E+03	Model	Model	Model	Model	Model	Model
4	Trichloroethene (TCE) (2021)	4.92E+00	4.58E+03	1.37E+03	model	model	model	model	model	model
5	Tetrachloroethene (PCE)	9.37E+00	1.01E+03	2.25E+02	model	model	model	model	model	model
6	Chloromethane	2.41E-01	3.31E+05	5.35E+03	Model	Model	Model	Model	Model	Model
7	Chloroform (Trichloromethane)	1.74E+00	1.35E+04	8.95E+03	model	model	model	model	model	model
8	1,1,1-Trichloroethane (TCA)	4.59E+00	8.25E+03	1.30E+03	model	model	model	model	model	model
9	1,2-Dichloropropane	1.78E+00	3.07E+03	2.05E+03	Model	Model	Model	Model	Model	Model
10	Benzene (C4SL child)	2.35E+00	6.24E+03	1.78E+03	model	model	model	0.00E+00	0.00E+00	model
11	Toluene	7.11E+00	1.73E+03	5.90E+02	model	model	model	0.00E+00	0.00E+00	model
12	Ethylbenzene	1.55E+01	5.53E+02	1.80E+02	model	model	model	0.00E+00	0.00E+00	model
13	Xylene, m-	1.70E+01	4.95E+02	2.00E+02	model	model	model	0.00E+00	0.00E+00	model
14	Xylene, o-	1.48E+01	3.86E+02	1.73E+02	model	model	model	0.00E+00	0.00E+00	model
15	Xylene, p-	1.55E+01	4.75E+02	2.00E+02	model	model	model	0.00E+00	0.00E+00	model
16	n-Hexane	2.83E+01	2.19E+04	3.59E+01	model	model	model	model	model	model
17	Styrene	1.13E+01	3.50E+02	2.90E+02	Model	Model	Model	Model	Model	Model
18	TPH Aliphatic EC5-EC6	2.83E+01	2.19E+04	3.59E+01	model	model	model	model	model	model
19	TPH Aromatic >EC8-EC10	5.52E+01	3.20E+02	6.46E+01	model	model	model	model	model	model
20	Carbon disulphide	4.00E+00	2.65E+04	2.10E+03	model	model	model	model	model	model

[illegible]

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Report generated 03/01/2024

Report title Northenden Resi Soil Vapour GAC, Sand Soil, 6.0m depth



Created by Tim Rolfe at

BASIC SETTINGS

Land Use Residential without produce (C4SL)

Building Small terraced house

Receptor Female (res C4SL)

Start age class 1

End age class 6

Exposure Duration 6 years

Soil Sand

Exposure Pathways

Direct soil and dust ingestion	☒
Consumption of homegrown produce	☒
Soil attached to homegrown produce	☒

Dermal contact with indoor dust	☒
Dermal contact with soil	☒

Inhalation of indoor dust	☒
Inhalation of soil dust	☒
Inhalation of indoor vapour	☒
Inhalation of outdoor vapour	☒



Land Use Residential without produce (C4SL)

Receptor

Female (res C4SL)

Age Class	Exposure Frequencies (days yr ⁻¹)						Occupation Periods (hr day ⁻¹)		Soil to skin adherence factors (mg cm ²)		Direct soil ingestion rate (g day ⁻¹)	Body weight (kg)	Body height (m)	Inhalation rate (m ³ day ⁻¹)	Max exposed skin factor		Total skin area (m ²)
	Direct soil ingestion	Consumption of homegrown produce	Dermal contact with indoor dust	Dermal contact with soil	Inhalation of dust and vapour, indoor	Inhalation of dust and vapour, outdoor	Indoors	Outdoors	Indoor	Outdoor					Indoor (m ² m ⁻²)	Outdoor (m ² m ⁻²)	
1	180	0	180	170	365	365	23.0	1.0	0.06	0.10	0.10	5.60	0.7	5.4	0.32	0.26	3.43E-01
2	365	0	365	170	365	365	23.0	1.0	0.06	0.10	0.10	9.80	0.8	8.0	0.33	0.26	4.84E-01
3	365	0	365	170	365	365	23.0	1.0	0.06	0.10	0.10	12.70	0.9	8.9	0.32	0.25	5.82E-01
4	365	0	365	170	365	365	23.0	1.0	0.06	0.10	0.10	15.10	0.9	10.1	0.35	0.28	6.36E-01
5	365	0	365	170	365	365	19.0	1.0	0.06	0.10	0.10	16.90	1.0	10.1	0.35	0.28	7.04E-01
6	365	0	365	170	365	365	19.0	1.0	0.06	0.10	0.10	19.70	1.1	10.1	0.33	0.26	7.94E-01
7	0	0	0	0	0	0	0.0	0.0	0.00	0.00	0.00	22.10	1.2	12.0	0.22	0.15	8.73E-01
8	0	0	0	0	0	0	0.0	0.0	0.00	0.00	0.00	25.30	1.2	12.0	0.22	0.15	9.36E-01
9	0	0	0	0	0	0	0.0	0.0	0.00	0.00	0.00	27.50	1.3	12.0	0.22	0.15	1.01E+00
10	0	0	0	0	0	0	0.0	0.0	0.00	0.00	0.00	31.40	1.3	12.0	0.22	0.15	1.08E+00
11	0	0	0	0	0	0	0.0	0.0	0.00	0.00	0.00	35.70	1.4	12.0	0.22	0.14	1.19E+00
12	0	0	0	0	0	0	0.0	0.0	0.00	0.00	0.00	41.30	1.4	15.2	0.22	0.14	1.29E+00
13	0	0	0	0	0	0	0.0	0.0	0.00	0.00	0.00	47.20	1.5	15.2	0.22	0.14	1.42E+00
14	0	0	0	0	0	0	0.0	0.0	0.00	0.00	0.00	51.20	1.6	15.2	0.22	0.14	1.52E+00
15	0	0	0	0	0	0	0.0	0.0	0.00	0.00	0.00	56.70	1.6	15.2	0.21	0.14	1.60E+00
16	0	0	0	0	0	0	0.0	0.0	0.00	0.00	0.00	59.00	1.6	15.2	0.21	0.14	1.63E+00
17	0	0	0	0	0	0	0.0	0.0	0.00	0.00	0.00	70.00	1.6	15.7	0.33	0.27	1.78E+00
18	0	0	0	0	0	0	0.0	0.0	0.00	0.00	0.00	70.90	1.6	13.6	0.33	0.27	1.80E+00

Consumption Rates



Age Class	Consumption rates (a FW ka ⁻¹ bodyweight dav ⁻¹) by Produce Group											
	MEAN RATES						90TH PERCENTILE RATES					
	Green veg	Root veg	Tuber veg	Herb. Fruit	Shrub fruit	Tree fruit	Green veg	Root veg	Tuber veg	Herb. Fruit	Shrub fruit	Tree fruit
1	3.47E+00	5.22E+00	9.22E+00	8.90E-01	1.07E+00	1.87E+00	7.12E+00	1.07E+01	1.60E+01	1.83E+00	2.23E+00	3.82E+00
2	3.34E+00	1.61E+00	3.14E+00	1.93E+00	2.60E-01	5.84E+00	5.87E+00	2.83E+00	6.60E+00	3.39E+00	4.60E-01	1.03E+01
3	3.34E+00	1.61E+00	3.14E+00	1.93E+00	2.60E-01	5.84E+00	5.87E+00	2.83E+00	6.60E+00	3.39E+00	4.60E-01	1.03E+01
4	3.34E+00	1.61E+00	3.14E+00	1.93E+00	2.60E-01	5.84E+00	5.87E+00	2.83E+00	6.60E+00	3.39E+00	4.60E-01	1.03E+01
5	2.54E+00	1.20E+00	2.65E+00	1.25E+00	1.10E-01	2.89E+00	4.53E+00	2.14E+00	4.95E+00	2.24E+00	1.90E-01	5.16E+00
6	2.54E+00	1.20E+00	2.65E+00	1.25E+00	1.10E-01	2.89E+00	4.53E+00	2.14E+00	4.95E+00	2.24E+00	1.90E-01	5.16E+00
7	2.54E+00	1.20E+00	2.65E+00	1.25E+00	1.10E-01	2.89E+00	4.53E+00	2.14E+00	4.95E+00	2.24E+00	1.90E-01	5.16E+00
8	2.54E+00	1.20E+00	2.65E+00	1.25E+00	1.10E-01	2.89E+00	4.53E+00	2.14E+00	4.95E+00	2.24E+00	1.90E-01	5.16E+00
9	2.54E+00	1.20E+00	2.65E+00	1.25E+00	1.10E-01	2.89E+00	4.53E+00	2.14E+00	4.95E+00	2.24E+00	1.90E-01	5.16E+00
10	2.54E+00	1.20E+00	2.65E+00	1.25E+00	1.10E-01	2.89E+00	4.53E+00	2.14E+00	4.95E+00	2.24E+00	1.90E-01	5.16E+00
11	2.54E+00	1.20E+00	2.65E+00	1.25E+00	1.10E-01	2.89E+00	4.53E+00	2.14E+00	4.95E+00	2.24E+00	1.90E-01	5.16E+00
12	1.03E+00	4.90E-01	1.60E+00	5.10E-01	4.00E-02	1.18E+00	1.87E+00	8.90E-01	3.05E+00	9.30E-01	8.00E-02	2.13E+00
13	1.03E+00	4.90E-01	1.60E+00	5.10E-01	4.00E-02	1.18E+00	1.87E+00	8.90E-01	3.05E+00	9.30E-01	8.00E-02	2.13E+00
14	1.03E+00	4.90E-01	1.60E+00	5.10E-01	4.00E-02	1.18E+00	1.87E+00	8.90E-01	3.05E+00	9.30E-01	8.00E-02	2.13E+00
15	1.03E+00	4.90E-01	1.60E+00	5.10E-01	4.00E-02	1.18E+00	1.87E+00	8.90E-01	3.05E+00	9.30E-01	8.00E-02	2.13E+00
16	1.03E+00	4.90E-01	1.60E+00	5.10E-01	4.00E-02	1.18E+00	1.87E+00	8.90E-01	3.05E+00	9.30E-01	8.00E-02	2.13E+00
17	1.26E+00	6.00E-01	1.18E+00	6.90E-01	9.00E-02	1.27E+00	2.36E+00	1.12E+00	2.35E+00	1.29E+00	1.80E-01	2.38E+00
18	1.35E+00	6.40E-01	1.25E+00	7.40E-01	1.00E-01	1.36E+00	2.34E+00	1.12E+00	2.36E+00	1.28E+00	1.80E-01	2.37E+00

Top 2 applied? Yes

Where top 2 method is applied, two produce categories use 90th percentile rates, while the remainder use the mean. Produce categories vary on a chemical-by-chemical basis. Where top 2 method is not used, all produce categories for all chemicals assume 90th percentile rates.

Building Small terraced house**Soil** Sand

Building footprint (m ²)	2.80E+01
Living space air exchange rate (hr ⁻¹)	5.00E-01
Living space height (above ground, m)	4.80E+00
Living space height (below ground, m)	0.00E+00
Pressure difference (soil to enclosed space, Pa)	3.10E+00
Foundation thickness (m)	1.50E-01
Floor crack area (cm ²)	4.23E+02
Dust loading factor (µg m ⁻³)	5.00E+01

Porosity, Total (cm ³ cm ⁻³)	5.40E-01
Porosity, Air-Filled (cm ³ cm ⁻³)	3.00E-01
Porosity, Water-Filled (cm ³ cm ⁻³)	2.40E-01
Residual soil water content (cm ³ cm ⁻³)	7.00E-02
Saturated hydraulic conductivity (cm s ⁻¹)	7.36E-03
van Genuchten shape parameter <i>m</i> (dimensionless)	3.51E-01
Bulk density (g cm ⁻³)	1.18E+00
Threshold value of wind speed at 10m (m s ⁻¹)	7.20E+00
Empirical function (F _x) for dust model (dimensionless)	1.22E+00
Ambient soil temperature (K)	2.83E+02
Soil pH	7.00E+00
Soil Organic Matter content (%)	6.00E+00
Fraction of organic carbon (g g ⁻¹)	3.48E-02
Effective total fluid saturation (unitless)	3.62E-01
Intrinsic soil permeability (cm ²)	9.83E-08
Relative soil air permeability (unitless)	7.68E-01
Effective air permeability (cm ²)	7.54E-08

Soil - Vapour Model

Depth to top of source (no building) (cm)	0
Depth to top of source (beneath building) (cm)	600
Default soil gas ingress rate?	No
Soil gas ingress rate ($\text{cm}^3 \text{s}^{-1}$)	3.54E+01
Building ventilation rate ($\text{cm}^3 \text{s}^{-1}$)	1.87E+04
Averaging time surface emissions (yr)	6
Finite vapour source model?	No
Thickness of contaminated layer (cm)	200

Air Dispersion Model

Mean annual windspeed at 10m (m s^{-1})	5.00
Air dispersion factor at height of 0.8m *	2400.00
Air dispersion factor at height of 1.6m *	0.00
Fraction of site cover ($\text{m}^2 \text{m}^{-2}$)	0.75

* Air dispersion factor in $\text{g m}^{-2} \text{s}^{-1}$ per kg m^{-3}

Soil - Plant Model

	Dry weight conversion factor	Homegrown fraction		Soil loading factor	Preparation correction factor
	g DW g^{-1} FW	Average	High		
		dimensionless		g g^{-1} DW	dimensionless
Green vegetables	0.096	0.05	0.33	1.00E-03	2.00E-01
Root vegetables	0.103	0.06	0.40	1.00E-03	1.00E+00
Tuber vegetables	0.210	0.02	0.13	1.00E-03	1.00E+00
Herbaceous fruit	0.058	0.06	0.40	1.00E-03	6.00E-01
Shrub fruit	0.166	0.09	0.60	1.00E-03	6.00E-01
Tree fruit	0.157	0.04	0.27	1.00E-03	6.00E-01

Gardener type None