

TECHNICAL NOTE

DATE:	17 May 2022	CONFIDENTIALITY:	Internal
SUBJECT:	Highways Specification Appendix A		
PROJECT:	Windy Arbor	AUTHOR:	Neil Balderstone
CHECKED:		APPROVED:	

APPENDIX A: LIMITING VALUES FOR HARM TO HUMAN HEALTH AND THE ENVIRONMENT

This Appendix 6/15 sets out the Limiting Values that shall be referenced in the assessment of site won subsoil / topsoil or imported subsoil / topsoil soil that has the potential to cause harm to human health.

The re-use of material shall be undertaken in accordance with an Environment Agency U1 exemption or other method as agreed with the Overseeing Organisation and the Regulators.

Imported fills shall not be affected by contamination. The Contractor shall name the soil source and produce recent chemical testing data to demonstrate that this is the case.

Imported fills shall comply with any restrictions on chemical properties as set out in this Specification.

The soil limit values for site won material are based on WSP Generic Assessment Criteria¹ (GAC) for a parks public open space end use. Materials exceeding these values may be acceptable subject to further risk assessment.

The soil limit values for imported material are based on WSP GAC for a residential end use. Materials exceeding these values may be acceptable following further risk assessment to prove no risk to human health. However, this is subject to written confirmation from the Overseeing Organisation and the Regulators.

Any material which exhibits visual or olfactory evidence of contamination (e.g. visible/odour evidence of hydrocarbons such as free product or asbestos containing materials) is unacceptable.

The following limits apply to materials subjected to soil chemical testing:

Table 6/15: Limits to materials subjected to soil tests

Contaminant	SITE WON MATERIAL¹ Limit Value (mg/kg)	IMPORT MATERIAL² Limit Value (mg/kg)
Arsenic	168	32
Cadmium	555	12
Chromium (VI)	69	4.5
Copper	44,400	2,490
Lead	808	134
Mercury	242	39

¹ WSP has derived a set of minimal risk GAC using the approach provided within Environment Agency guidance documents SR2, SR3, SP1010, CLEA Workbook v1.071 and SR4.

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Contaminant	SITE WON MATERIAL ¹ Limit Value (mg/kg)	IMPORT MATERIAL ² Limit Value (mg/kg)
Nickel	804	126
Selenium	1,850	258
Zinc	173,000	3,860
Benzo[a]pyrene	11	1.6
Naphthalene	1,240	2.3
Aromatic C ₅ -C ₇	76,200	72
Aromatic C ₇ -C ₈	86,800	130
Aromatic C ₈ -C ₁₀	7,220	34
Aromatic C ₁₀ -C ₁₂	9,240	74
Aromatic C ₁₂ -C ₁₆	10,200	141
Aromatic C ₂₁ -C ₃₅	7,880	873
Aromatic C ₃₅ -C ₄₄	7,880	873
Aliphatic C ₅ -C ₆	94,700	42
Aliphatic C ₆ -C ₈	146,000	103
Aliphatic C ₈ -C ₁₀	14,300	27
Aliphatic C ₁₀ -C ₁₂	20,900	132
Aliphatic C ₁₂ -C ₁₆	24,700	1,030
Aliphatic C ₁₆ -C ₃₅	525,000	88,400
Aliphatic C ₃₅ -C ₄₄	525,000	88,400
TPH Hazard Index	1	1
pH	5-10	5-10
Asbestos	Not Detected	Not Detected

¹ WSP GAC for a public open space (parks) end use

² WSP GAC for a residential end use.