Appendix 14.2

Methodology for the agricultural and soil resources assessment

Determining Significance

1.1 As described the Institute of Environmental Management and Assessment's (IEMA) EIA Guidelines (2004)[1] , '…the assessment of significance is based on the characteristics (or magnitude) of the impact and the sensitivity of the receptor…'

Magnitude of Effect: Agricultural Land Quality

1.2 The magnitude of the predicted impact on agricultural land quality is assessed as 'Very High', 'High', 'Medium', 'Low' or 'Very Low' following the criteria given below.

Impact Magnitude for Agricultural Land	
Impact Magnitude	**Definition**
Very High	Gives rise to an irreversible and permanent (>25 year) long term loss of more than 20 ha agricultural land of that grade or predicted long term reduction in ALC grade on more than 20 ha agricultural land of that grade (see Note 1).
High	Gives rise to an irreversible and permanent (>25 year) long term loss of between 5 and 20 ha of agricultural land of that grade, or predicted long term reduction in ALC grade on between 5 and 20 ha of agricultural land of that grade.
Medium	Development is 5 ha or more and temporary (< 25 years), or potentially 'reversible' such as soft uses that could be returned relatively easily back to agricultural land. Some adverse on-site impacts anticipated e.g. reduced

[1] Institute of Environmental Management and Assessment (IEMA') (2004) 'Guidelines for Environmental Impact Assessment'

Impact Magnitude for Agricultural Land	
	yields, increased management inputs but recovery predicted in the short to medium term (within 5-10 years, see Note 2) following end of use without permanent reduction in ALC grade provided appropriate mitigation is in place.
Low	Affects < 5ha of agricultural land or with short term effects with no material reduction in ALC grade of development site.
Very Low	Non-agricultural land
Note 1: Magnitude assessments reflect the national agricultural interest embodied in the BMV consultation threshold under the Town and Country Planning (Development Management Procedure) (England) Order 2015 (20ha); and at the lower magnitude (5ha) follows the applicable thresholds and criteria of EIA Regulations 2017, Schedule 2 (10)(b). and threshold for agricultural permitted development rights.	
Note 2: Based on 5 year aftercare period for minerals development, to allow soil structure to develop post soil disturbance.	

Magnitude of Effect: Soil Resources

1.3 The magnitude of the predicted impact on soil resources may be assessed as 'High', 'Medium', 'Low' or 'Very Low' following the criteria given below.

Magnitude of Impact - Soil Resources	
Impact Magnitude	**Soil Resources**
High	The soil displaced by the Proposed Development is unable to fulfil one or more of its primary functions
Medium	The soil displaced by the Proposed Development mostly fulfils the primary functions off-site, or has a reduced capacity to fulfil one or more of its primary functions on-site
Low	The soil displaced by the Proposed Development mostly fulfils one or more of its primary functions on-site
Very Low	The soil retains its pre-existing functions on-site

Sensitivity of Receptors: Agricultural Land Quality

1.4 For the purpose of this assessment, the sensitivity of agricultural land is assessed as Very high', 'High', 'Medium', 'Low' or 'Very low' following the criteria given below.

Receptor Sensitivity - Agricultural Land Quality	
Value	**Receptors**
Very high	Grade 1 and Grade 2 agricultural land
High	Subgrade 3a agricultural land
Medium	ALC Subgrade 3b agricultural land
Low	Grade 4 or 5 agricultural land
Very low	Previously developed land formerly in hard uses, with little potential to return to agriculture

Sensitivity of Receptors: Soil

1.5 For the purpose of this assessment, the sensitivity of soil is assessed as 'High', 'Medium', 'Low' or 'Very Low' following the criteria given below.

Receptor Sensitivity - Soil	
Value (Sensitivity)	**Descriptor**
High	Soil types with low resilience to structural damage when being handled: heavy soils with >27% clay content: heavy silty clay loam (HZCL), heavy clay loam (HCL), sandy clay (SC), silty clay (ZC), clay (C); where average annual rainfall is 700mm or greater.
Medium	Soil types with moderate resilience to structural damage when being handled: - Light textured soils: sand (S), loamy sand (LS), sandy loam (SL), sandy silt loam (SZL); where average annual rainfall is more than 1000mm; - Medium textured soils with <27% clay content: silt loam, medium silty clay loam (MZCL), medium clay loam (MCL), sandy clay loam (SCL); where average annual rainfall is 1000mm or greater;

Receptor Sensitivity - Soil	
	- Heavy soils with >27% clay content: heavy silty clay loam (HZCL), heavy clay loam (HCL), sandy clay (SC), silty clay (ZC), clay (C); where average annual rainfall is less than 700mm.
Low	Soil types with high resilience to structural damage when being handled: Light textured soils: sand (S), loamy sand (LS), sandy loam (SL), sandy silt loam (SZL); where average annual rainfall is less than 1000mm.
Very Low	Soil types unsuitable for reuse in restoring agricultural land, reuse in residential gardens, reuse in landscaping schemes, or reuse in ecological schemes, etc. For example, Made Ground/contaminated land.

Significance Matrix

1.6 The significance of the predicted impacts, which may be beneficial (positive) or adverse (negative), agricultural land quality and soil resources can be assessed as either 'Major', 'Moderate', 'Minor' or 'Negligible' according to the magnitude of the effect and sensitivity of the receptor, as set out in the Impact Assessment Matrix (IAM) given below.

Impact Assessment Matrix – Agricultural Land Quality and Soil Resources					
Magnitude of Impact	**Sensitivity of Receptor**				
	Very High	**High**	**Medium**	**Low**	**Very Low**
Very High	Major – Significant	Major - Significant	Moderate-Significant	Minor - Not Significant	Negligible - Not Significant
High	Major*/ Moderate – Significant	Major*/ Moderate - Significant	Minor - Not Significant	Minor - Not Significant	Negligible - Not Significant
Medium	Moderate – Significant	Moderate - Significant	Minor - Not Significant	Minor - Not Significant	Negligible - Not Significant

Low	Minor - Not Significant	Minor - Not Significant	Minor - Not Significant	Negligible - Not Significant	Negligible - Not Significant
Very Low	Negligible - Not Significant	Negligible - Not Significant	Negligible - Not Significant	Negligible - Not Significant	Negligible - Not Significant
*Where the total of Grades 1, 2 and 3a is 20 ha or more.					