

Date: 6th August 2024
Reference: 15-065

SPOIL MANAGEMENT PLAN

Project Name:	Lickers Lane, Hainsead
Project Number:	15-065
Client:	Vistry Partnerships
Date:	6 th August 2024
Project Manager:	Rob Horseman

E3P has prepared this spoil management plan as a guide to the efficient handling of soil materials, with respect to the anticipated volumes of spoil that will be generated by the general cut / fill of the site to Enabling Works Levels (EWL) and from civil engineering works. In the preparation of this SMP, E3P has undertaken a 3D volumetric assessment of the proposed cut / fill operations using the original topographical survey as a base point and working to the assumed formation levels (as outlined below).

E3P has also undertaken a volumetric assessment of the soil that will arise as part of the construction of the highways, drainage infrastructure and plot foundations. For the purposes of this assessment and in consideration of the standard construction requirements, E3P has produced a cut / fill volumetric assessment to achieve the following Enabling Works Levels (EWL):

-  Building footprint– 450mm below FFL
-  Private driveways – 330mm below FFL
-  Residential Gardens – 300mm below FFL
-  Roadways - 750mm below FFL
-  Public Open Space – 300mm below FFL
-  Car Park – 420mm below FFL

The proposed earthworks operations as outlined below are for indicative purposes and have been prepared in due consideration of the anticipated materials volumes and likely construction phasing. The assessment of foundation spoil has been made in due consideration of the proposed depths to founding stratum.

The Isopachyte Cut / Fill drawing details the depths of cut / fill to achieve the Enabling Works Levels (EWL) prescribed above (Drawing 15-065-023). This assessment has been prepared in due consideration of the proposed development with an overarching assessment of Cut / Fill works included within E3P Drawing (15-065-022).

The reuse of materials has been calculated from the external works drawings taking the length and width of excavations into consideration. Soils excavated should be managed on site to ensure that the material does not become saturated or of poor quality for future use on site.





SPOIL MANAGEMENT NO.	DESCRIPTION	CUT/FILL	BALANCE
SM1	Excavate Topsoil from Entire Site & Stockpile. Current soft standing equates to a total volume of circa 10,220m³ over an area of 34,066m². This is based on an average depth of 300mm across the site.	10,220m³ (Cut)	10,220m³ Excess Re-use 1939m³ in Garden Areas (SM8) Re-use 1309m³ in POS Areas (SM9) 6972m³ Excess
SM2	Cut and fill Driveways to 330mm Below FFL. A total Cut of 293m³ will be generated from cutting private driveways to 330mm below FFL. A total Fill of 1054m³ is required to achieve 330mm below FFL. A Shortfall of 761m³ has been estimated.	293m³ (Cut) & 761m³ (Fill)	761m³ Shortfall Re-use 761m³ from Roads (SM5)
SM3	Cut & Fill Plots to 450mm below FFL. A total Cut of 1276m³ will be generated from excavations to plots to achieve 450mm below plot FFL. A total Fill of 3734m³ is required to achieve 450mm below plot FFL. A Shortfall of 2458m³ has been estimated.	1276m³ (Cut) & 3734m³ (Fill)	2458m³ Shortfall Re-use 2458m³ from Drainage Arisings (SM10)
SM4	Cut & Fill Gardens to 300mm below FFL. A total Cut of 1097m³ will be generated by reducing gardens to 300mm below FFL. A total Fill of 2346m³ is required to achieve 300mm below garden FFL. A Shortfall of 1249m³ has been estimated.	1097m³ (Cut) & 2346m³ (Fill)	1249m³ Shortfall Re-use 1249m³ from Drainage Arisings (SM10)
SM5	Cut & Fill Roads to 750mm below FFL. A total Cut of 2219m³ will be generated from cutting roads to 750mm below FFL. A total Fill of 260m³ of material is required to fill roads to a minimum level of 750mm below FFL. An Excess of 1959m³ has been estimated.	2219m³ (Cut) & 260m³ (Fill)	1959m³ Excess Re-use 761m³ in Driveways (SM2) 1198m³ Excess



SPOIL MANAGEMENT NO.	DESCRIPTION	CUT/FILL	BALANCE
SM6	Cut & Fill Car Park to 420mm below FFL. A total Cut of 105m³ will be generated from cutting car park to 420mm below FFL. A total Fill of 36m³ of material is required to fill car park to a minimum level of 420mm below FFL. An Excess of 69m³ has been estimated.	105m³ (Cut) & 36m³ (Fill)	69m³ Excess
SM7	Cut & Fill Public Open Space to 300mm below FFL. A total Cut of 242m³ will be generated from cutting public open space areas to 300mm below FFL. A total Fill of 429m³ of material is required to fill public open space areas to a minimum level of 300mm below FFL. A Shortfall of 187m³ has been estimated.	242m³ (Cut) & 429m³ (Fill)	187m³ Shortfall Re-use 187m³ from Drainage Arisings (SM10)
SM8	Re-use Clean Topsoil in Gardens for Cover System Residential garden areas have been measured at 6463m². It considered that 300mm topsoil will be installed within garden areas to provide a growing medium. Therefore, 1939m³ is required.	1939m³ Fill	Re-use 1939m³ Topsoil from Topsoil Strip (SM1)
SM9	Re-use Clean Topsoil in Public Open Space for Cover System. Public Open Space areas have been measured at 4362m². It considered that the maximum topsoil thickness should not exceed 300mm to limit the potential for long term total settlement within garden areas with 300mm coming from re-use of site won topsoil. Therefore, 1309m³ is required.	1309m³ Fill	Re-use 1309m³ Topsoil from Topsoil Strip (SM1)
SM10	Foul & Sewer, Manhole and Plot Drainage Excavation Arisings It is estimated that circa 12,234m³ of spoil will be generated from the development associated with the construction of Foul & Sewer, Manhole and Plot Drainage excavations. This is based on figures from United Utilities Specification. This total is derived from the following: Manhole Excavation Arisings: 1852m³ Foul and Sewer Excavation Arisings: 6662m³ Plot Sewer Excavation Arisings: 3720m³	12,234m³ (Cut)	12,234m³ Excess Re-use 2458m³ in Plots (SM3) Re-use 1249m³ in Gardens (SM4) Re-use 187m³ in POS (SM7) 8340m³ Excess



SPOIL MANAGEMENT NO.	DESCRIPTION	CUT/FILL	BALANCE
SM11	Foundation Excavation Arising's E3P has estimated the proposed depth of the structural foundation below EWL to inform an assessment of the spoil arising from excavation works. This total is derived from the following: Total length: 3229m Width of Footings: 600mm Depth of Footings: 500mm	968m ³ (Cut)	968m ³ Excess
SM12	General Bulking of Cut Material. Where material is cut, it will generally bulk to 110% of the original volume and as such an additional 1843m³ of material will be generated from site operations.	1843m ³ (Cut)	1843m ³ Excess



SUMMARY OF MATERIAL MOVEMENT

SHORTFALL

Spoil Shortfall	0m ³
Total Topsoil Shortfall	0m ³
Total Subsoil Shortfall	0m ³
Total Site Shortfall	0m ³

Excess

Spoil Excess	12,418m ³
Topsoil Excess	6972m ³
Total Site Excess	19,390m ³

GENERAL GEOTECHNICAL NOTES

All material that is to be replaced (filled) must be placed in strict accordance with the E3P Materials Management Specification and the MCHW 600. Where any uncertainty remains regarding the material type classification, clarification should be sought from E3P to confirm compaction specification requirements.

E3P would note that additional excess clay soils could be generated through disturbance of the shallow formation layers by the roads and sewer contractor and as such their works should be monitored closely.