N

DENOTES AREAS OF CUT TO ARRIVE AT VOLUMETRIC FIGURES DETAILED ON DRAWING

DENOTES AREAS OF FILL TO ARRIVE AT VOLUMETRIC FIGURES DETAILED ON DRAWING

THIS DRAWING IS BASED ON PLANNING LAYOUT PROVIDED BY CLIENT
DRAWING NUMBER:- 2203-PL-03
REVISION:- G
CLIENT TO ENSURE THE ABOVE LAYOUT IS CURRENT BEFORE USING THIS DRAWING FOR CONSTRUCTION PURPOSES

SCALE IN METRES

0 5 10 20

CUT AND FILL VOLUMETRICS

FOR THE PURPOSE OF THIS VOLUMETRICS EXERCISE THE FOLLOWING PARAMETERS HAVE BEEN USED AS INSTRUCTED BY OAKTREE DEVELOPMENTS:-

1. THE GROUND PROFILE MODEL BASED UPON SURVEYENG DRAWING OD.TS.08 TOPOGRAPHICAL SURVEY, (MINUS 250mm RE USABLE TOPSOIL) HAS BEEN BUILT FOR THE FINAL PHASE AND USED AS THE BASE MODEL FOR THE VOLUMETRIC CALCULATIONS.

2. A FINISHED SURFACE MODEL HAS BEEN PREPARED USING LEVELS ON EXISTING SITE BOUNDARIES, PROPOSED GARDEN LEVELS, PROPOSED SLAB LEVELS AND PROPOSED ADOPTABLE ROADS AND FOOTWAYS LEVEL AS WELL AS THE PARAMETERS CHOSEN BY THE CLIENT.

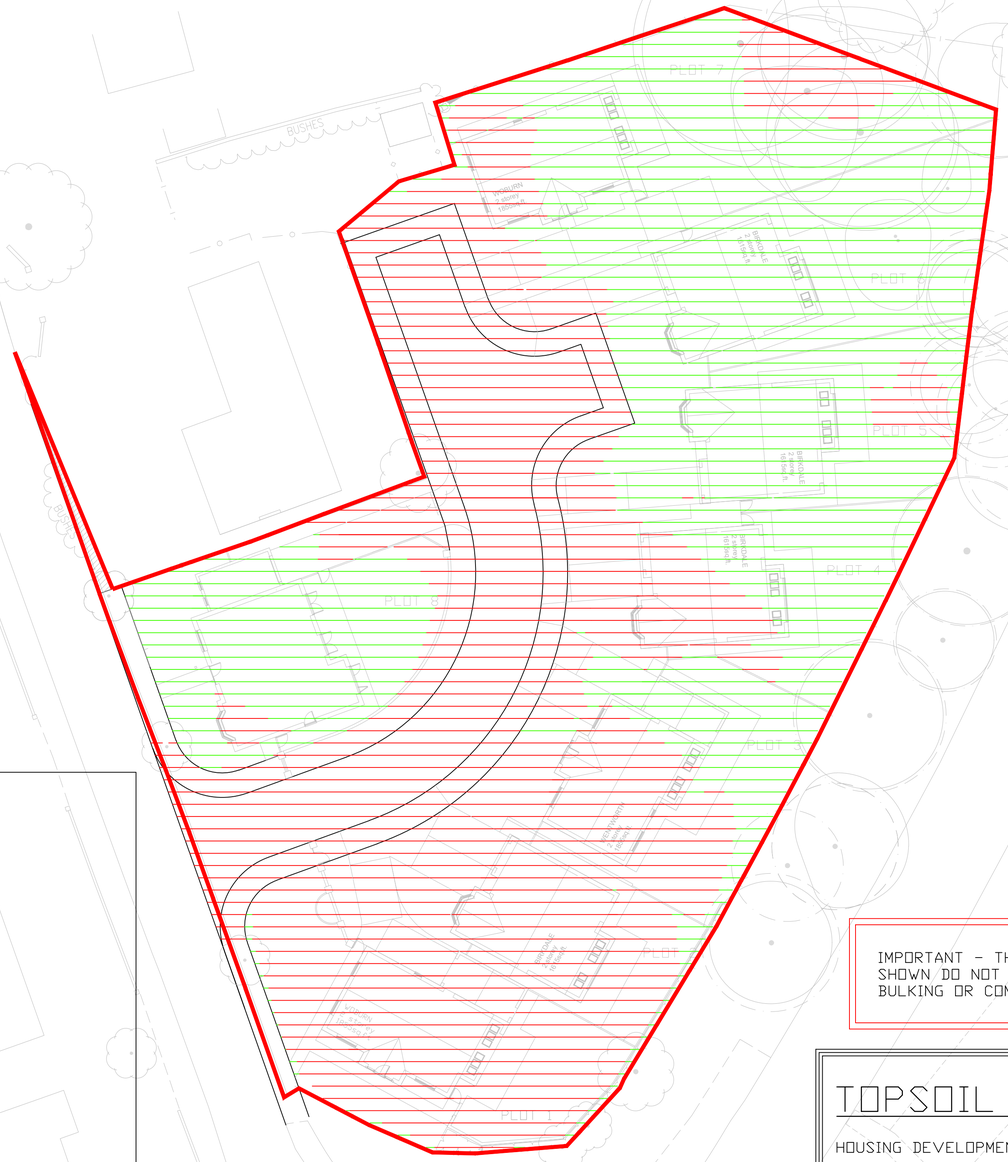
3. THIS SURFACE MODEL HAS THEN BEEN COMPARED USING A PRISMOIDAL COMPUTATION METHOD AGAINST THE SURVEY MODEL GENERATED IN POINT 1 ABOVE TO ESTIMATE VOLUMES OF CUT AND FILL

4. THIS HAS PREDICTED THAT THERE WILL BE SOME:-

1,962.6m³ OF CUT REQUIRED
481.4m³ OF FILL REQUIRED

LEADING TO A SURPLUS 1,481.2m³ OF MATERIAL

THESE FIGURES DO NOT TAKE IN TO ACCOUNT BULKING FACTORS OR ANY MOVEMENT OF MATERIAL ON SITE WHICH HAS TAKEN PLACE SINCE THE SURVEY BY SURVEY ENGINEERING PROJECTS. OR ARISINGS FROM OTHER SOURCES OR EXCAVATIONS



FORMATION DEPTHS BELOW PROPOSED FINISHED SITE LEVELS AND VOLUMES OF CUT AND FILL TO ACHIEVE FORMATION LEVEL

DEVELOPER :- OAKTREE DEVELOPMENTS **DEVELOPMENT:-** NORTHCOTE RD, LANGHO **DATE :-** 13.04.23

AREA	DRIVES	225 mm O/A	HOUSES	325 mm	GARDENS	150 mm
PLOTS 8	STONE	150 mm			POS AREAS	

POD	AREA m²	CUT m³	E/O STONE FILL m³	150 SUB BASE m³	AREA m²	CUT m³	FILL m³	AREA m²	CUT m³	FILL m³
ALL PLOTS	323	63.3	11.9	48.5	939	194.7	144.1	2009	225.7	337.3
				0.0						
				0.0						
				0.0						
				0.0						
				0.0						
				0.0						
				0.0						
				0.0						
				0.0						
				0.0						
				0.0						
TOTALS	323	63.3	11.9	48.5	939	194.7	144.1	2009.0	225.7	337.3

TOTAL VOLUME OF CUT GENERATED FROM THE ABOVE	483.7 m³	TOTAL STONE REQUIRED BELOW DRIVES	**60.4 m³**
FILL VOLUMES REQUIRED TO GARDENS AND HOUSES	481.4 m³	TOTAL TOPSOIL REQUIRED TO GARDENS	**301.4 m³**
FOUNDATION EXCAVATIONS AT 40m³ / PLOT	320.0 m³		
EXCAVATED MATERIAL FROM ROADS	495.3 m³	ADDITIONAL 6F2 STONE FILL REQUIRED BELOW ROADS	**0.0 m³**
EXCAVATED MATERIAL FROM SEWERS	323.6 m³		
SURPLUS SPOIL VOLUME	**1141.2 m³**		

IMPORTANT - THE VOLUMETRIC CALCULATIONS SHOWN DO NOT TAKE IN TO ACCOUNT ANY BULKING OR COMPACTION FACTORS

TOPSOIL VOLUMETRICS

HOUSING DEVELOPMENT AREA	0.411	Ha
HOUSING DEVELOPMENT AREA	4110	m²
AVERAGE TOPSOIL DEPTH FROM SI	250	mm
APPROXIMATE TOPSOIL VOLUME	1027.5	m³
DEPTH OF TOPSOIL TO LANDSCAPED AREAS	150	mm
APPROXIMATE VOLUME TO BE RETAINED FOR SOFT LANDSCAPED AREAS	301.4	m³
APPROXIMATE VOLUME TO BE REMOVED FROM SITE	726.1	m³

THE ABOVE MAKE NO ALLOWANCE FOR BULKING OR COMPACTION PLEASE SEE ADDITIONAL VOLUME CALCS

GENERAL

1. All adoptable sewers and associated works are to comply fully with "Design and Construction Guidance" & Local Practices
2. All highway works to be to adoptable standards and to to comply fully with the Local Authority specification.
3. All private drainage works are to comply fully with part H of the Building Regulations
4. All existing invert levels to be checked by the Contractor at the start of works and any discrepancies notified to REFA. All levels are based on topographical survey information provided by others.
5. All materials to bear the relevant B.S.Kitemark and comply fully with the specifications. All concrete & concrete products must use Sulphate resistant cement (unless the site investigation report proves that sulphate attack from soils and groundwater will not occur)
6. All opening notices etc. as required under highways acts etc. are to be obtained prior to commencement of works. All works are to be inspected by L.A., NHBC or Relevant Water Authority as applicable.

C.D.M. REGULATIONS 2015

In line with the above regulations we are obliged to inform the Client of their responsibilities under section CDM 15/1, and residual risks that may be encountered in the construction of these works. All design work has been carried out with Health and Safety aspects given full consideration. Wherever possible risks have been eliminated from the design, however due to the very nature of this type of work it is not possible to remove all the risks from the design.
We would also respectfully remind the Client of his obligations to take all reasonable steps in ensuring that only competent Contractors who have a valid safety policy are employed.
They should also provide satisfactory responses at tender stage as to the manner in which they will deal with the elements of risk involved in this type of work and in particular those highlighted by REFA below:-

1. Support / treatment for ALL excavation work.
2. Guarding to edges of excavations to prevent people,materials and vehicles falling into excavation.
3. Guarding of excavations outside working hours to prevent unauthorised access.
4. Undermining to adjacent roads or structures.
5. Confined space operations.
6. Dealing with existing services.
7. Traffic management on existing highways.
8. Procedure to be followed in event of accident or emergency.
9. Method of working where contaminated ground is present on site.
10. Confirmation will be required that all operatives are adequately trained, copies of relevant training certificates to be supplied.

The above list is by no means exhaustive but it does highlight operations that present a risk to contractors and the general public.
For clarification on any item please contact REFA.

rev	Revision details	Rev.By	Date

smas worksafe designer www.smasltd.com — as recognised by SSIP SAFETY SCHEMES IN PROCUREMENT

Drawing Stage		Drawing Status			
		Draft		Comments	Tender
●	Issued		●	Information	Construction
				Approval	As Built

Client
OAK TREE DEVELOPMENTS

Job title
NORTHCOTE ROAD LANGHO

Drawing title
CUT AND FILL DRG 1 AREAS

REFA
45 Bridgeman Terrace
Wigan, Lancs
WN1 1TT
Tel:-(01942) 826020
Fax:-(01942) 230816
CONSULTING ENGINEERS
CIVIL• STRUCTURAL
GEOTECHNICAL• ENVIRONMENTAL

Date	Scale	Drawn
17.04.23	1:250	RW

DRAWING No 22009/110/1 Rev

© This drawing is the property of REFA and should not be copied, used or its contents divulged without prior written consent.

A1 SHEET