

Verification of Remediation of gardens adjacent to Alexine

Malting Lane, Donington, Spalding, Lincolnshire, PE11 4XA

Planning Application No. H04-0967-13 Full

1. Background

1.1 The Desk Study (SGC 13-12-01, dated 14th January 2014) concluded that the site was very clean and the concrete on which lorries were parked was completely free of any kind of diesel or oil staining. The concrete apron had gaps between the slabs of about 2 cm and aerated rainwater could penetrate under the slabs to accelerate the microbial metabolism of any small amounts of hydrocarbons that may have been washed into the soil. Lorries and the diesel tank had been removed from site many years ago and the probability of any significant contamination in the soil was very low.

1.2 The soil, however, could have been contaminated with small amounts of metals and heavy oil, so the risk was addressed by requiring garden areas to be excavated down to about 600 mm and replaced with soil of suitable quality. However, owing to circumstances relating to the construction, the soil that was applied to the gardens did not have any certificate of conformity or analytical certificate. Both gardens have been finished, but a small pile of soil see plot diagram in SGC report 13-12-01 Donington 2nd phase, dated 30th September 2016), about 3 m³, is still on site. The site owner, David Sainty, stated in an e-mail (screen grab after written part) that about 80 tonnes of soil had been delivered to site and that he had one delivery note (scanned image).

2 Sampling of Soil Pile

2.1 Hand dug holes, at least 10, into the sides and top revealed fresh soil and small samples from each of the dug out holes were placed into a bucket and mixed. This mixture was sampled by removing very small samples into a jar which was then sealed. This was repeated and a second sample was obtained.

2.2 The samples were placed into a cool box containing an ice pack for transport to the office. The cool box (with a new ice pack) was sent by carrier to The Environmental Laboratory Ltd where UKAS accreditation has been obtained for most of the species required.

3. Analytical Results

3.1 The two soil samples reported very low concentrations of metals, TPH and PAH

4. Conclusion

4.1 The soil that was analysed was confirmed as being from the stockpile that was used for rear gardens by David Sainty, the site owner, Bob Merchant, the architect and the next door neighbour in plot 3. Therefore the soil is extremely likely to be representative of the soil in the rear gardens.

4.2 David Sainty had one delivery note for 20 tonnes of soil and he stated that 80 tonnes in total had been delivered to the site. Using a density of $1.2 \text{ tonnes m}^{-3}$, this equates to about 67 m^3 . Deducting the approximate 3 m^3 left on site, this means that approximately 64 m^3 of soil had been applied to gardens.

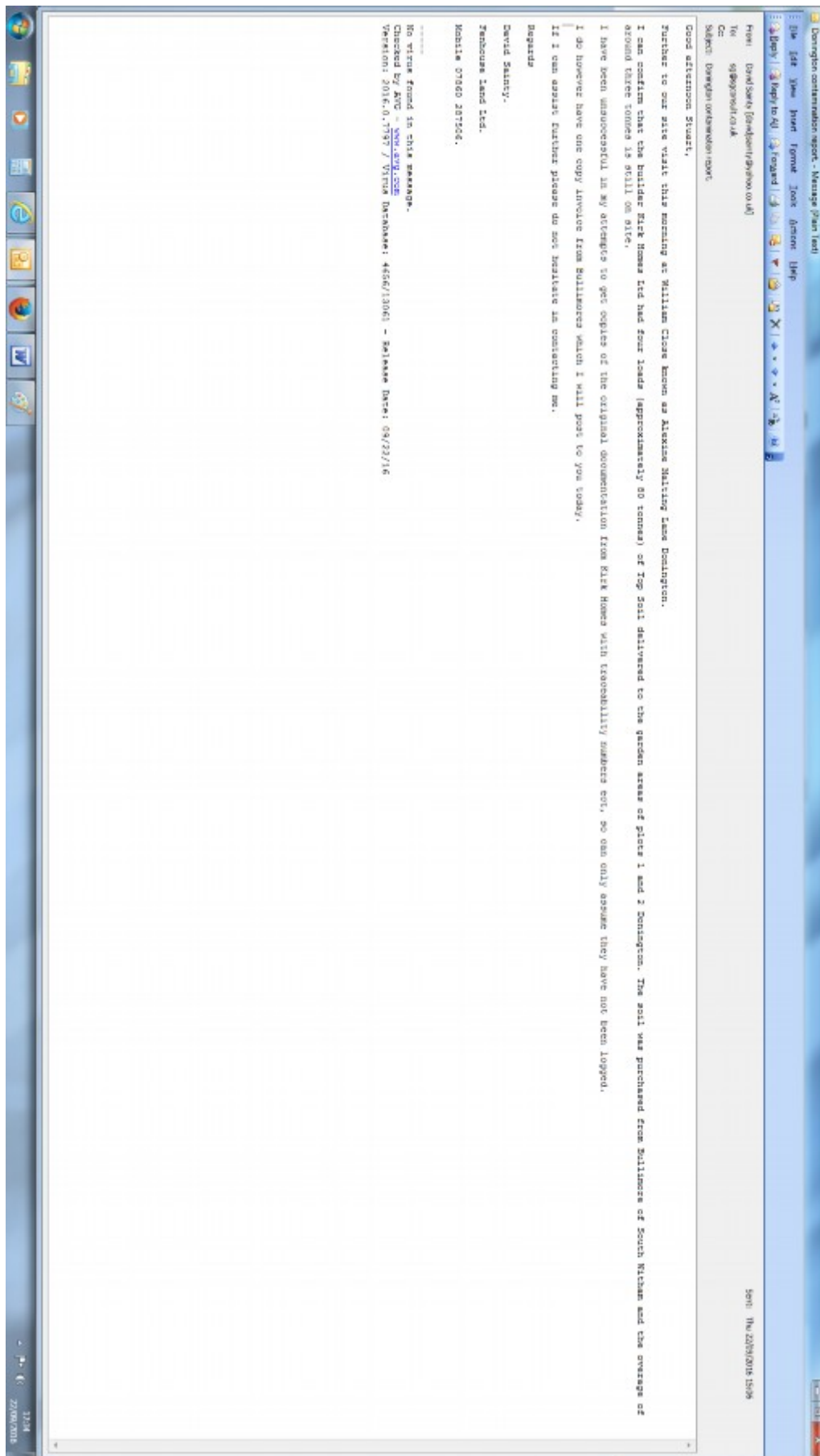
4.3 The areas of front and rear gardens are provided by G R Merchant in an e-mail and it is copied into this report at the end. Plot 3 has a total garden area of 110 m^2 , of which 40 m^2 is grassed. Plot 4 has a total garden area of 70 m^2 , of which 30 m^2 is grassed.

4.4 If only the grassed areas had soil applied, then the depth would be $64/70$ or about 900 mm; if the whole gardens had soil applied, then the depth would be $64/180$ or about 350 mm. It is more likely that the patio areas and paths would not be excavated, so the depth is not likely between these two values or about 600 mm. The analyses in SGC report number 13-12-01/2 indicate that the ground on plots 1 & 2 is at worst only very slightly contaminated, so even 350 mm of soil is sufficient to provide clean capping.

4.5 The soil that has been analysed illustrates that the soil in the rear gardens is not contaminated and the remediation has been completed for plots 3 and 4.

4.6 No further action is required in respect of environmental conditions.

Stuart Guy, BSc, PhD, C Chem, MRSC, C Eng, MIMMM



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Report number 13-12-01 verification

Date 2nd October 2016

Delivery Date	Delivery Ticket	Your Reference	OS	Prod Code	Product	Quantity	Rate	Unit	Amount
15/12/15	333167		85	535	SCREENED TOP SOIL	20.16	15.25	Tonne	307.44
						20.16	Sub Total		307.44
							Discount		0.00
							VAT @ 20.00%		61.49
							Total Value E		368.93

Invoice to:
KIRK HOMES LTD
C/O SOUTH Lincs PLANT HIRE
ENTERPRISE WAY, PINCHBECK
SPALDING Lincs
PE11 3YR

Invoice Number 589556

Invoice Date 19/12/15

Customer Account Number 144770

Customer Order Number

Site Code 055

Delivered to:
ALEXINE
MALTINGS LANE
DONINGTON X 3
PE11 4XA
ADRIAN 07775 112233

BULLIMORES SAND AND GRAVEL LTD
South Witham, Grantham, Lincolnshire
NG33 5QE
Telephone: 01572 767383
Facsimile: 01572 768222
E-mail: enquiries@bullimores.net
Website: www.bullimores.net

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SAND GRAVEL & ROAD STONE
PLANT & TOOL HIRE

SALES INVOICE

Terms: Net cash end of month following delivery
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Any queries please contact Accounts Dept on 01572 767383

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OK

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Report number 13-12-01 verification

Date 2nd October 2016

Photo 1 Brown soil remaining from application to gardens of first two plots (not grey soil)



Photo 2 Other side of soil heap, showing vigorous growth of weeds and grass



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Report number 13-12-01 verification

Date 2nd October 2016

Information from G R Merchant about garden areas, sent by e-mail

Dear Stuart

Following your telephone conversation with Bob yesterday the area of plot 3 front garden is 150m² and the area of plot 4 front garden is 100m².

If you require any further information please do not hesitate to contact us.

Regards
Hannah

G R Merchant Ltd
01406 490800

On 29 September 2016 at 09:28, G R MERCHANT <gr.merchant@btconnect.com> wrote:
Dear Stuart

RESIDENTIAL DEVELOPMENT
WILLIAM CLOSE, MALTINGS LANE, DONINGTON
FENHOUSE LAND LTD

Further to your email, to the best of our knowledge approximately 200mm of top soil was placed in the rear garden.

GARDEN AREAS

Plot 3 - Front garden is all block paving or gravel
Total rear garden - 110m²
Patio, footpaths & decking - 70m²
Lawn (grass) - 40m²

Plot 4 - Front garden all block paving and gravel
Total rear garden - 70m²
Patio, footpaths & decking - 40m²
Lawn (astro-turf) - 30m²

Regards
Bob Merchant

G R Merchant Ltd
01406 490800