LAND OWNERSHIP CERTIFICATES

Town and Country Planning (Scotland) Act 1997
Regulation 15 of the Town and Country Planning (Development Management Procedure) (Scotland)
Regulations 2008

CERTIFICATE A, B, C OR CERTIFICATE D MUST BE COMPLETED BY ALL APPLICANTS

CERTIFICATE A

Certificate A is for use where the applicant is the only owner of the land to which the application relates and none of the land is agricultural land.

l here	by certif	y that -						
(1)	(1) No person other than the applicant was owner of any part of the land to which the application relates at the beginning of the period of 21 days ending with the date of the application.							
(2)		the land to	o which the application relates constitutes or forms part of	×				
Signe	d:							
On be	half of:	MRC	rak, Lee Thomson					
Date:		15/08	12013					
CERTIFICATE B Certificate B is for use where the applicant is not the owner or sole owner of the land to which the application relates and/or where the land is agricultural land and where all owners/agricultural tenants have been identified.								
l he	I hereby certify that -							
(1) I have served notice on every person other than myself who, at the beginning of the period of 21 days ending with the date of the application was owner of any part of the land to which the application relates. These persons are:								
	Nam	Ð	Address Date of Service Notice					
(2)		of the lan ural land	d to which the application relates constitutes or forms part or	of				
(3)	The land or part of the land to which the application relates constitutes or forms part of agricultural land and I have served notice on every person other than myself who, at the beginning of the period of 21 days ending with the date of the application was an agricultural tenant. These persons are:							

Pro Construction (UK) Limited

Greyriggs, Boxton Road, California, Falkirk

> Consolidation of Abandoned Mineworkings Completion Report

Pro Construction (UK) Limited

Greyriggs,
Boxton Road,
California,
FALKIRK

Consolidation of Abandoned Mineworkings

Completion Report

Date of Issue:

June 2013

Report Status:

1st Edition

Project Reference:

G2012/356

Prepared by:

Neil Drummond – Geo-Environmental Scientist

Reviewed and

Approved by:

Neil Thomson - Director

Mason Evans Partnership Limited

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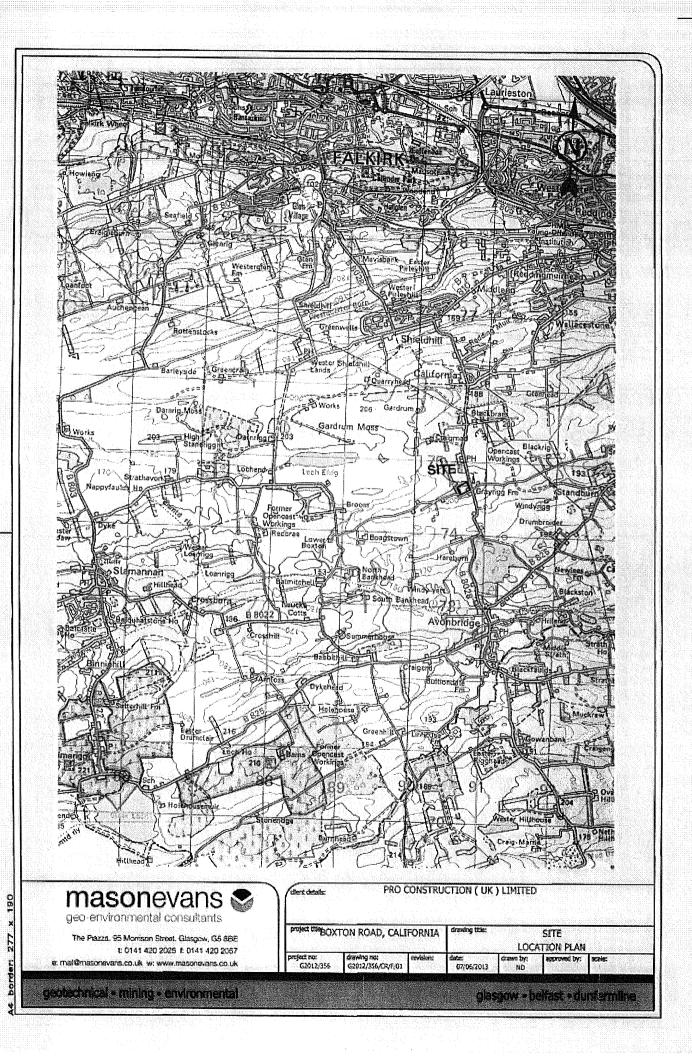
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1.0 INTRODUCTION

- 1.1 Mason Evans Partnership were commissioned by Pro Construction (UK) Limited (the Client), to undertake consolidation of abandoned mineworkings at the former Greyriggs Reservoir located at Boxton Road, California, Falkirk (Drawing No G2012/356/CR/F/01
- 1.3 It was advised that a surface instability risk could be anticipated in the event of any collapse in the abandoned mineworkings which were within influencing depth of the surface, possibly resulting in subsidence and/or structural damage to the proposed development.
- 1.4 Artificial consolidation of the mineworkings by drilling and pressure grout injection was therefore advised to remove the effect of potential collapse from the mineworkings beneath the proposed development.
- 1.5 This report presents an account of the stabilisation works and the results of testing to confirm the adequacy of the consolidation of the former mineworkings beneath the site.



2.0 CONTRACT FOR STABILISATION OF ABANDONED MINEWORKINGS

- 2.1 The works were designed to achieve effective consolidation of the mineworkings lying within a critical depth equivalent to a rock cover criterion of 10 times the seam thickness. This was determined from examination of borehole data and the geology was continually reviewed during the drilling of treatment boreholes.
- 2.2 The contract was awarded to the specialist contractor GB Land Engineering Limited.
- 2.3 The intended time for completion of the works as per the tender document was two weeks. The contract duly commenced on 21st May 2013 with practical completion for all grouting works recorded as 5th June 2013.

3.0

DRILLING & GROUTING OPERATIONS - MINEWORKINGS

3.1 General

- 3.1.1 The area which required treatment of abandoned mine workings was assessed from detailed geological correlation and reference to the proposed development layout plan.
- 3.1.2 The ground conditions encountered are indicated on Drawing No G2012/356/CR/F/02. The superficial cover across the area was suggested to be of made ground and glacial till. These soils were found to be approximately 20 m in thickness.

3.2 Borehole Drilling

3.2.1 The drilling operations involved in the stabilisation works were as follows:

Total number of boreholes drilled

No. 115

Total metreage drilled

2,822 m

3.3 Grouting Operations

- 3.3.1 The total volume of grout injected during the consolidation works was 35.88 tonnes. This averages 0.31 tonnes per hole. The approximate volume of grout injected into each of the boreholes is indicated as appropriate on Drawing No G2012/356/CR/F/03.
- 3.3.2 The grout mix utilised for the infill treatment boreholes was a 'cement: pulverised fuel ash' ratio of 1:12.

4.0 TEST BOREHOLES AND GROUT CUBE STRENGTH TESTS

- 4.1 On completion of the grouting works, one test borehole was sunk to the level of the seam to test the effectiveness of the consolidation operations. We also monitored the contractor's method of mixing, grout flows and consistency during the operations and confirmed the adequacy of the grout mixes used and the contractor's method of mixing and injection.
- 4.2 The pressure injection test carried out under our direction and supervision indicated effective treatment of the site and the consolidation of the development area was satisfactory. Drawing No G2012/356/CR/F/04 indicates the locations of the test hole.
- 4.3 In accordance with the Specification, grout cubes were obtained during the course of the Contract.
 Cubes will be tested at the end of a 14 day and 28 day curing period. The grout cube test results will be reported on receipt.

5.0 CONCLUSIONS

- 5.1 Borehole drilling and pressure grouting of abandoned mineworkings has been undertaken and completed within the proposed residential development at Greyriggs, Falkirk.
- 5.2 A total of 115 No. boreholes were drilled within the site, giving a drilling total of 2822 m. 35.88 tonnes of grout were injected into the workings.
- 5.3 The workings were consolidated using an infill grid consolidation layout of approximately 3.5 m centres.
- 5.4 The test borehole drilled on completion of the consolidation works at locations indicated on Drawing No G2012/356/C/F/04 confirmed the adequacy of the consolidation works and design philosophy.
- 5.5 We are satisfied that the potential surface instability risks to the construction of the proposed development posed by the shallow abandoned mineworkings have now been removed. In this respect, the development can proceed without further regard to potential mining instability constraints arising from the coal seams within the defined consolidation area.

We trust that this will meet with your current requirements. However, if you require any further information, please do not hesitate to contact us.

Neil Drummond

Geo-Environmental Scientist

Neil Thomson

Director

Appendix 1
Drawings

Mason Evans Partnership Limited

