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Environmental Impact Assessment

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Historic Building Recording


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Geophysical Survey


Borders Railway Project Site 624 Archaeological Evaluation

Report no. 1999

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Borders Railway Project, Site 624 Archaeological Evaluation

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Fig. 2 Site 624 pre-ex shot of the site with Eildon Hills in the background

Fig. 3 Tr. 7 post -ex showing the stone and gavel natural geology

Fig. 4 Tr. 19 post-ex showing the stone and gravel geology

1. INTRODUCTION

1.1 General

This report presents the results of an archaeological evaluation undertaken by CFA Archaeology Ltd (CFA) in December 2011 in advance of the construction of the Borders Railway Project. Site numbers relate to the study specific numbers from the Environmental Statement. The evaluation was undertaken on Site 624, the proposed location for Tweedbank Station carpark.

The Written Scheme of Investigation was based on mitigation measures approved by the Dr Chris Bowles, Scottish Borders Council Archaeologist which are identified in Table A4 in the *Cultural Heritage Management Plan* (Jones & Neighbour 2010). The area for evaluation was identified in the *Borders Railway Project Environmental Management System Manual* (McLuckie 2011). However, changes to the carpark layout lead to a larger area being evaluated.

1.2 Objectives

The objectives of the project were:

- to establish the presence/absence, extent, condition, character, quality and date of any archaeological features or deposits within the area of the proposed Tweedbank Station carpark (Site 624);
- to establish their vulnerability to the proposed development;
- to propose mitigation measures where appropriate to avoid, reduce or offset any predicted negative impacts on the archaeological resource.

2. WORKING METHODS

2.1 General

Work was conducted with regard to the Institute for Archaeologists' (IfA) *Standard and Guidance for an Archaeological Evaluation and Code of Conduct*.

The evaluation covered Site 624, trench numbering starts at Tr.1 and carried on to Tr.24.

2.2 Evaluation Strategy

The total site area for Site 624 was 15,626m²: twenty four trial trenches were opened which examined 1173m², slightly over 7% of the total area.

The trenches were excavated by machine under direct archaeological supervision to remove topsoil and other soil deposits down to subsoil or the first significant archaeological horizon, whichever was reached first.

Samples of all features of archaeological interest were hand excavated in order to establish their likely date, nature, extent and condition.

All hand excavation and on-site recording was carried out according to standard CFA procedures, principally by drawing, by digital photography and by completing standard CFA record forms.

Trench locations were recorded using industry standard surveying equipment and the trenches were backfilled on completion of recording.

3. ARCHAEOLOGICAL RESULTS

3.1 General

Appendix 1 contains a tabulated summary of trench dimensions and a list of the features encountered.

The trenches were distributed evenly across the site with attention given to a 10m buffer zone for a line of mature trees which run along the north edge of the site and a 30m buffer zone for a badgers set on the eastern end of the site. (See Fig. 1)

3.2 Evaluation – Site 624

Twenty four trenches (Fig. 2, Appendix 1) were excavated within Area 9. No features of archaeological significance were identified.

No field drains were encountered in any of the trenches.

4. CONCLUSIONS AND RECOMMENDATIONS

Overall, twenty four trial trenches were excavated which covered 1173m² or just over 7% of the total area evaluated. No features or deposits of archaeological significance were identified.

Based on the results of the evaluation CFA recommend that no further work is required; however, the responsibility for deciding the scope of any further work lies solely with Dr Chris Bowles on behalf of the planning authority.

The project archive, comprising all CFA record sheets, maps and reports will be deposited with the National Monuments Record of Scotland (NMRS) and copies of reports will be lodged with the Scottish Borders Council SMR.

A summary statement of the results of this evaluation will be submitted for publication in *Discovery and Excavation in Scotland 2012*.

5. BIBLIOGRAPHY

Jones C and Neighbour T 2010 'Borders Railway Project: Cultural Heritage Management Plan' Version 5 Rev A

McLukie A 2011 'Borders Railway Project Environmental Management System Manual, Version 5 Rev A

APPENDIX 1: SUMMARY OF EVALUATION TRENCHES

Trench	Trench Information
1	<p> Trench Size: 1.50m x 50m Trench Orientation: E-W Trench Depth: 0.35m-0.45m Topsoil Depth: 0.35m-0.45m No visible subsoil Topsoil sits on natural Geology is loose orange brown gravelly sand with medium (0.10m-0.15m) sub round stones and more gravel at the east end No archaeology </p> <p> Contexts in Trench Topsoil - 001 Natural - 002 </p>
2	<p> Trench Size: 1.50m x 49.50m Trench Orientation: WNW-ESE Trench Depth: 0.20m -0.25m Topsoil Depth: 0.20m -0.25m No visible subsoil Topsoil sits on natural Geology is mid orange brown gravelly sand with medium (0.10m-0.20m) sub round stones No archaeology </p> <p> Contexts in Trench Topsoil - 001 Natural - 002 </p>
3	<p> Trench Size: 1.50m x 51m Trench Orientation: NNW-SSE Trench Depth: 0.35m- 0.45m Topsoil Depth: 0.35m- 0.45m No visible subsoil Topsoil sits on natural Geology is orange brown sandy gravel in the north northwest end changing to orange brown gravelly sand toward the south southeast end, medium (0.10m-0.15m) sub round stones were throughout No archaeology </p> <p> Contexts in Trench Topsoil - 001 Natural - 002 </p>
4	<p> Trench Size: 1.50m x 50m Trench Orientation: E-W Trench Depth: 0.35m-0.40m Topsoil Depth: 0.35m-0.40m </p>

	<p>No visible subsoil Topsoil sits on natural Geology is orange brown gravelly sand with small to medium (less than 0.05m-0.20m) sub round and sub angular stones No archaeology</p> <p>Contexts in Trench Topsoil - 001 Natural - 002</p>
5	<p>Trench Size: 1.50m x 46m Trench Orientation: E-W Trench Depth: 0.40m-0.45m Topsoil Depth: 0.40m-0.45m No visible subsoil Topsoil sits on natural Geology is loose orange brown sandy gravel with small to medium (less than 0.05m- 0.20m) sub round and sub angular stones. At 35m one large stone approximately 1m x 0.80m No archaeology</p> <p>Contexts in Trench Topsoil - 001 Natural - 002</p>
6	<p>Trench Size: 1.50m x 45m Trench Orientation: WNW-ESE Trench Depth: 0.25m- 0.45m Topsoil Depth: 0.25m- 0.45m No visible subsoil Topsoil sits on natural Geology is orange brown gravelly sand with gravel patches and small to medium (less than 0.05m-0.20m) sub round and sub angular stones No archaeology</p> <p>Contexts in Trench Topsoil - 001 Natural - 002</p>
7	<p>Trench Size: 1.50m x 58m Trench Orientation: NNW-SSE Trench Depth: 0.35m- 0.40m Topsoil Depth: 0.35m- 0.40m No visible subsoil Topsoil sits on natural Geology is orange brown gravelly sand more gravel toward the south southeast end with small to medium (less than 0.05m-0.20m) sub round and sub angular stones, one large stone approximately 0.50m x 0.40m</p>

	<p>No archaeology</p> <p>Contexts in Trench Topsoil - 001 Natural - 002</p>
8	<p>Trench Size: 1.50m x 31m Trench Orientation: NW-SE Trench Depth: 0.30m -0.40m Topsoil Depth: 0.30m -0.40m No visible subsoil Topsoil sits on natural Geology is orange brown sandy gravel with small to medium (less than 0.05m – 0.20m) sub round and sub angular stones No archaeology</p> <p>Contexts in Trench Topsoil - 001 Natural - 002</p>
9	<p>Trench Size: 1.50m x 24m Trench Orientation: NE-SW Trench Depth: 0.35m – 0.50m Topsoil Depth: 0.35m – 0.50m No visible subsoil Topsoil sits on natural Geology is orange brown gravelly sand with sandier patches and small to medium (less than 0.05m – 0.20m) sub round and sub angular stones No archaeology</p> <p>Contexts in Trench Topsoil - 001 Natural - 002</p>
10	<p>Trench Size: 1.50m x 26m Trench Orientation: NE-SW Trench Depth: 0.35m-0.40m Topsoil Depth: 0.35m- 0.40m No visible subsoil Topsoil sits on natural Geology is orange brown gravelly sand with small to medium (less than 0.05m – 0.20m) sub round and sub angular stones No archaeology</p> <p>Contexts in Trench Topsoil - 001 Natural - 002</p>
11	<p>Trench Size : 1.50m x 22m Trench Orientation: NW-SE</p>

	<p>Trench Depth: 0.30m-0.40m Topsoil Depth: 0.30m-0.40m No visible subsoil Topsoil sits on natural Geology is orange brown gravelly sand with gravels and small to medium (less than 0.05m – 0.20m) sub round and sub angular stones No archaeology</p> <p>Contexts in Trench Topsoil - 001 Natural - 002</p>
12	<p>Trench Size: 1.50m x 25.50m Trench Orientation: NE-SW Trench Depth: 0.40m -0.60m Topsoil Depth: 0.40m -0.60m No visible subsoil Topsoil sits on natural Geology is orange brown gravelly sand with sand patches and small to medium (less than 0.05m-0.20m) sub round and sub angular stones No archaeology</p> <p>Contexts in Trench Topsoil - 001 Natural - 002</p>
13	<p>Trench Size: 1.50m x 21m Trench Orientation: NW-SE Trench Depth: 0.20m - 0.55m Topsoil Depth: 0.20m –0.55m No visible subsoil Topsoil sits on natural Geology is yellowish brown clayey sand in the northwest end turning to mid brown gravelly sand at the southeast end with small to medium (less than 0.05m-0.20m) sub round and sub angular stones No archaeology</p> <p>Contexts in Trench Topsoil - 001 Natural - 002</p>
14	<p>Trench Size: 1.50m x 19m Trench Orientation: WSW-ENE Trench Depth: 0.30m -0.45m Topsoil Depth: 0.30m -0.45m No visible subsoil Topsoil sits on natural Geology is yellowish brown sand with gravels and small to medium (less than 0.05m-0.20m) sub round and sub angular stones at the</p>

	<p>west southwest end changing to orange brown sand with small to medium sub round and sub angular stones No archaeology</p> <p>Contexts in Trench Topsoil - 001 Natural - 002</p>
15	<p>Trench Size: 1.50m x 30m Trench Orientation: N-S Trench Depth: 0.40m -0.45m Topsoil Depth: 0.40m -0.45m No visible subsoil Topsoil sits on natural Geology is orange brown gravelly sand with small to medium (less than 0.05m – 0.20m) sub round and sub angular stones No archaeology</p> <p>Contexts in Trench Topsoil - 001 Natural - 002</p>
16	<p>Trench Size: 1.50m x 28m Trench Orientation: N-S Trench Depth: 0.45m -0.55m Topsoil Depth: 0.45m -0.55m No visible subsoil Topsoil sits on natural Geology is orange brown gravelly sand with coarse sand at the south end and small to medium (less than 0.05m-0.20m) sub round and sub angular stones throughout No archaeology</p> <p>Contexts in Trench Topsoil - 001 Natural - 002</p>
17	<p>Trench Size: 1.50m x 27m Trench Orientation: NNW-SSE Trench Depth: 0.35m -0.45m Topsoil Depth: 0.35m – 0.45m No visible subsoil Topsoil sits on natural Geology is orange brown sandy gravel with small to medium (less than 0.05m-0.20m) sub round and sub angular stones No archaeology</p> <p>Contexts in Trench Topsoil - 001 Natural - 002</p>

18	<p> Trench Size: 1.50m x 24m Trench Orientation: NW-SE Trench Depth: 0.45m – 0.55m Topsoil Depth: 0.45m – 0.55m No visible subsoil Topsoil sits on natural Geology is orange brow gravelly sand with small to medium (less than 0.05m – 0.20m) sub round and sub angular stones No archaeology </p> <p> Contexts in Trench Topsoil - 001 Natural - 002 </p>
19	<p> Trench Size: 1.50m x 25m Trench Orientation: E-W Trench Depth: 0.40m – 0.45m Topsoil Depth: 0.40m – 0.45m No visible subsoil Topsoil sits on natural Geology is orange brown sandy gravel with small to medium (less than 0.05m – 0.20m) sub round and sub angular stones No archaeology </p> <p> Contexts in Trench Topsoil - 001 Natural - 002 </p>
20	<p> Trench Size: 1.50m x 30.50m Trench Orientation: WSW-ENE Trench Depth: 0.40m – 0.60m Topsoil Depth: 0.40m – 0.60m No visible subsoil Topsoil sits on natural Geology is orange brown gravelly sand to light brown coarse sand with many small to medium (less than 0.05m-0.20m) sub round and sub angular stones No archaeology </p> <p> Contexts in Trench Topsoil - 001 Natural - 002 </p>
21	<p> Trench Size: 1.50m x 20m Trench Orientation: NW-SE Trench Depth: 0.30m – 0.40m Topsoil Depth: 0.30m – 0.40m No visible subsoil Topsoil sits on natural </p>

	<p>Geology is orange brown sand at the southeast end changing to orange brown sandy gravel in the northwest with small to medium (less than 0.05m-0.20m) sub round and sub angular stones throughout</p> <p>No archaeology</p> <p>Contexts in Trench Topsoil - 001 Natural - 002</p>
22	<p>Trench Size: 1.50m x 35m Trench Orientation: WNW-ESE Trench Depth: 0.30m - 0.35m Topsoil Depth: 0.30m – 0.35m No visible subsoil Topsoil sits on natural Geology is light orange brown gravelly sand with small to medium (less than 0.05m – 0.20m) sub round and sub angular stones in the west northwest changing to orange brown sandy gravel with small to medium sub round and sub angular stones No archaeology</p> <p>Contexts in Trench Topsoil - 001 Natural - 002</p>
23	<p>Trench Size: 1.50m x 20.50m Trench Orientation: NW-SE Trench Depth: 0.30m – 0.40m Topsoil Depth: 0.30m – 0.40m No visible subsoil Topsoil sits on natural Geology is orange brown gravelly sand with small to medium (less than 0.05m – 0.20m) sub round and sub angular stones No archaeology</p> <p>Contexts in Trench Topsoil - 001 Natural - 002</p>
24	<p>Trench Size: 1.50m x 17m Trench Orientation: WNW-ESE Trench Depth: 0.40m – 0.45m Topsoil Depth: 0.40m – 0.45m No visible topsoil Topsoil sits on natural Geology is orange brown gravelly sand with small to medium (less than 0.05m – 0.20m) sub round and sub angular stones No archaeology</p>

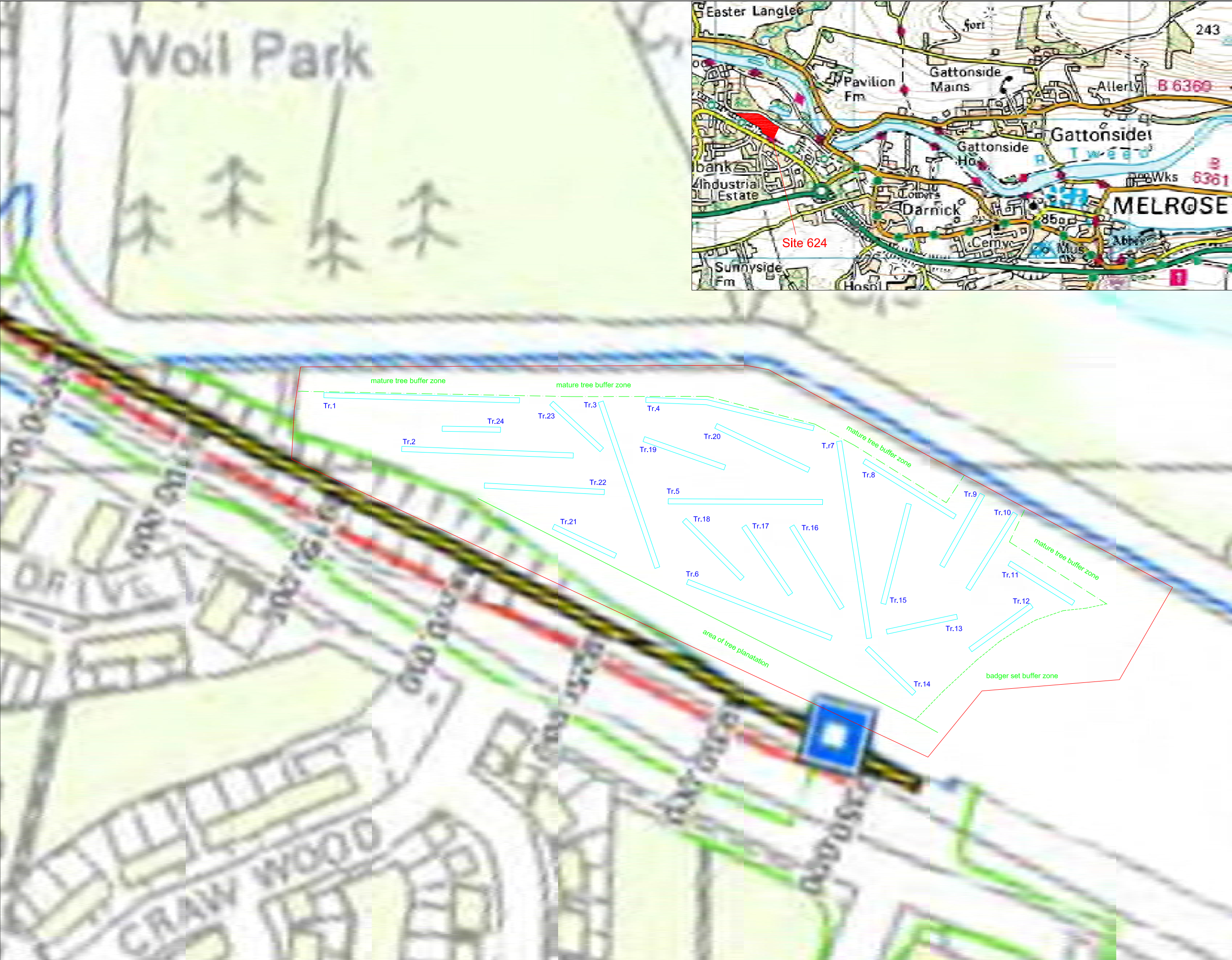
	Contexts in Trench Topsoil - 001 Natural - 002
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APPENDIX 2: PHOTOGRAPHIC REGISTER

Digital Shot	Description	From	Conditions
1	General Shot Pre-X Looking East	W	Clear/Bright
2	Trench 1 Post-Ex	E	Clear/Bright
3	Trench 2 Post-Ex	W	Clear/Bright
4	Trench 3 Post-Ex	N	Clear/Bright
5	Trench 4 Post-Ex	W	Clear
6	Trench 5 Post-Ex	W	Clear
7	Trench 6 Post-Ex	W	Clear
8	Trench 7 Post-Ex	NNW	Clear
9	Trench 8 Post-Ex	W	Clear
10	Trench 9 Post-Ex	N	Clear
11	Trench 10 Post-Ex	N	Clear
12	Trench 11 Post-Ex	W	Clear
13	Trench 12 Post-Ex with edge of badger buffer	NE	Clear
14	Trench 13 Post-Ex	E	Clear
15	Trench 14 Post-Ex	SW	Clear
16	Trench 15 Post-Ex	SW	Clear
17	Trench 16 Post-Ex	NW	Clear
18	Trench 17 Post-Ex	SE	Clear
19	Trench 18 Post-Ex	S	Clear
20	Trench 19 Post-Ex	E	Clear
21	Trench 20 Post-Ex	W	Clear
22	Trench 21 Post-Ex	NW	Clear
23	Trench 22 Post-Ex	WNW	Cloudy
24	Trench 23 Post-Ex	NW	Cloudy
25	Trench 24 Post-Ex	WNW	Cloudy
26	General Shot Backfilled Area	W	Cloudy
27	General Shot Backfilled Area	W	Cloudy

APPENDIX 3: Context Register

Context	Fill of	Location	Description
001		SITE	Topsoil
002		SITE	Natural



Key:

- development area
- evaluation trenches



Fig. No:	1	Revision:	A
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Title:
Site location and evaluation trench location plan

Project:
Borders Railway Project, Site 624 Evalauton

Client:
EDM Ltd per Transport Scotland

Scale at A3:
1:1000






Fig. 2 Area 624 pre-ex shot of the site with Eildon Hills in the background



Fig. 3 Tr. 7 post-ex showing the stone and gavel natural geology



Fig. 4 Tr. 19 post-ex showing the stone and gravel geology

Key:	Fig. No:	2-4	Revision:	A	Client:	ERM Ltd <i>per</i> Transport Scotland			<div><div>CFA ARCHAEOLOGY LTD The Old Engine House Eskmills Park Musselburgh East Lothian, EH21 7PQ t: 0131 273 4380 f: 0131 273 4381 e: info@cfa-archaeology.co.uk w: www.cfa-archaeology.co.uk</div></div>		
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