Report No: 2015R030



Minions Film Impacts 2015, Cornwall Archaeological Impact statements



Cornwall Archaeological Unit

Report No Report Name							Rep	ort Author
2015R030	Minions Film Impacts					Colin	Buck	
Event Type								
Impact Assess	ment							
Client Organis	ation		Clie	nt Co	ontact			
Fox UK Productions Ltd Carn Burton								
Monuments (N	1onUI	D)						
24325	2432	29	12775		13210	24324	1	12587
Fieldwork date	es (Fro	om) (To)		(Created	Ву)	(Cr	eate Date)
18/3/2015 30/3/2015				Colin Buck		2	27/3/2015	
Location (post	al add	dress; or o	eneral loc	ation	and parish)			
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(Town – for u		sites)						
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1 Project background

Fox (UK) Productions (Carn Burton) have commissioned from Cornwall Archaeological Unit (CAU), Truro (email dated 16/3/15), an archaeological impact report to mitigate archaeological impacts during the setting up, access, filming and clearance following production of a film at Cheesewring Quarry, Withybrooke mine, and Goldiggings Quarry, Minions.

2 Aims and objectives

The main focus of the report is to facilitate the production of method statements and constraint maps showing the archaeological sites, and to provide site consultancy to the film company (Fox UK Productions Ltd) to minimise site impacts in advance of setting up and filming, and to inform/enable method statements to be produced by the different site contractors.

This report will inform the film production designers of archaeological site constraints, and mitigation measures, to avoid any impacts during the setting up and filming production days (mid to end April 2015).

3 Working methods

A site visit was undertaken on 18/3/2015, with David Campbell-Bell and Colin Buck to walk all access routes, and to view and comment on all the proposed site impacts, in order to mitigate any impacts to archaeological or other landscape features (all within the Cornwall and West Devon World Heritage Site).

The results and recommendations from the site visit have been transferred onto mapping information, partly provided by Fox (UK) Productions, and CAU, Truro, which has been reproduced in this report. Where appropriate, working methodologies for specific parts of the project (access routes/parking areas/track strengthening, etc), have also been produced.

4 Historical background

Summary

Bodmin Moor, the largest of the Cornish Granite uplands, has a wealth of archaeological remains that few parts of Britain can equal. In prehistory the uplands were used with a surprising intensity, reflecting the value of these wide tracts of rough pasture to a people whose beliefs and ideas are tantalisingly displayed in their stone circles and stone rows, barrows and cairns. What is especially valuable is the survival of whole areas of prehistoric landscape, with related settlements and field systems.

Contemporary with the medieval hamlets circling the fringes of the moor are many tin streamworks where shallow moorland valleys, and steeper wooded valley fringes and hillsides, have been systematically dug over to extract tin gravels. Historically Bodmin Moor, or 'Foweymore' was once Cornwall's most important medieval Stannary (tin producing area). Evidence of medieval metallic ore workings are dramatically illustrated by the Withybrook streamworks (Fig 10), and later medieval (16th century) outcrop lines of pits and shafts following the course of the copper lode across the landscape.

The south east corner of Bodmin Moor is particularly important for the 1830s and 1840s copper bonanza. Centred on Caradon Hill, it was one of the most dramatic episodes in Cornish industrial history, and had a crucial impact on East Cornwall demography, agriculture and later transport systems. The Moors best preserved and largest complexes of mines (1830s to 1914), with shafts, adits, engine houses, horse whims, platforms and dressing floors, etc, are found in this area.

By the mid to late 19th century many granite quarries had also been established, meeting the demand for carefully cut hard stone used in major public works, including

docks, lighthouses and London bridges. In addition, everywhere on the Moor are traces of the more casual removal and splitting of surface moorstones for such use as gate posts, lintels and millstones for example. Figure 4 is an extract of the first edition OS 1880 OS map for the study area sites, showing the impact of medieval, 19th century mining and granite extraction quarries. More detailed 1880 OS maps are also included for each of the three sites.

Cheesewring Quarry

In 1845 the first lease for the quarrying of granite on Stowe's Hill was granted to Trethewey, Clogg and Co by the Duchy of Cornwall. Operations were developed, as Cheesewring Granite Co Ltd, with the construction of the Kilmar tramway in 1858 when production reached 11,274 tons. The company was acquired by John Freeman and Co in 1863 and a new lease was granted in 1868 allowing further expansion of the quarry when it was equipped with three timber mast cranes. By the early 20th century output was dramatically reduced with the general decline in Cornish granite quarrying, and production had all but ceased by 1934. The quarry was surveyed by CAU in 1984 and further details given by Sharpe (1993).

As part of a project commissioned in 1996 by Caradon District Council, Cornwall Archaeological Unit carried out an assessment and recording exercise in connection with a proposal to replace the fence along the western edge of Cheesewring Quarry (Buck 2005, 22-25). The site is described in the Sites and Monuments Register (SMR) as MCO 24324, its upper section a Scheduled Monument (see Figs 7 and 8). Figure 5 is a detailed extract of the first edition OS 1880 OS map for the Cheesewring study area.

Witheybrook Mine/West Phoenix Mine

Witheybrook Mine

References to the working of this ground below Stowes Hill survive from as early as 1513, when "Wethybrok Work" is recorded (PRO/SC2/159/17); references to "Callapoll Worke" in 1570 (BL/ADD 40730), "Welcome to one, or Cowlapoole" and "Little Witheybrook or Broadway" in 1691 (CRO/DDCN 1940) and "Witheybrook Tinwork" in 1727, all nearby sites, indicate tin working in this area over a long period of time. The 1880 OS shows an area marked as Witheybrook Mill at the point where the Stowes Lode crosses the Witheybrook Valley, and just to the east of the site of the complex at Norris' shaft, West Phoenix (14022). A chimney and the outlines of a derelict structure are also shown, but little more. The site is listed in the Sites and Monuments Register as MCO 13210.

West Phoenix Mine

Setts here were taken up and re-worked by Cornwall Great United Mines (14056/7) during the 1830's, when they probably consisted of shallow shafts connected to a drainage adit. The valley-bottom shaft at Witheybrook was worked for some time by a horse-whim, and later by a small engine set up by an Exeter company (1851), but work had effectively ceased by 1863 and was "idle" by 1865. The sett was taken up again for copper and tin by Phoenix Mine as Phoenix and West Phoenix United Mines (or Phoenix United (14020)) in 1886 as it was recognised that this ground had been little developed below that reached by surface workings.

Eventually underground work began on the site, and a new range of buildings were constructed to house a 70" pumping engine at Norris' shaft, with a 24" rotary engine a little to the south, and a small range of ancillary structures (Materials House, Account House, Smith's Shop, Miner's Dry and Carpenter's Shop), beside an access road. Material hauled from the shaft was probably stamped by the rotative engine. An engine matching this description was offered for sale at West Phoenix in November 1898.

There are some returns for tin between 1872-5, and the mine worked for copper from 1877-86, but output figures are hidden within those for Phoenix United, or confused

with Stowes mine. Employment figures for the later years (1880-86) show only small numbers employed. The fate of West Phoenix was bound up with that of the rest of Phoenix United from their amalgamation in 1886, and was thus closed with the remainder of the group of mines in 1889. A short period of re-working is noted for 1891-8 (b16). The Ordnance Survey 1880 map shows the locations of the two engine houses, shaft, ancillary buildings and roadway, but little else (Fig 10). The site is described in the Sites and Monuments Register as MCO 12775.

Goldiggings Quarry

Gold Diggings or Caradon quarry was run from the mid-c19 by Joseph Sweet of Liskeard as a source of high quality granite for monumental stone. The quarry was still working in the 1920's and probably closed prior to WW2. The area of working comprises three linked excavations, the largest to the south, measuring 50m by 50m. Sawing and shaping yards were adjacent to this in a central area between the two main quarries, and 11 flat-topped finger dumps spill out over the hillslopes to the east to a max length of 77m at the base, ranging in height from 7.0m to 11.0m. The area was surveyed by CAU in 1977. Three crane sites were identified and a number of structures appear in photographs taken in the 1920's, the remains of which are still extant. Steam power was used to drive the cranes and air compressor, and a small pump to extract water from the excavation. Flues lead from plinths to a metal chimney at the NW end of the dressing floor. Other buildings contain machine beds, and a smithy, possibly dating from the earliest working of the sett lies to the north of the dressing floor. The site is listed in the Sites and Monuments Register as MCO 24325.

5 Mitigation of site impacts

Summary site description of impacts

Figures 1 to 4 show the three main sites for filming; Cheesewring Quarry (Cave scene), Withybrook and West Phoenix Mine (Playground scene), and Goldiggings Quarry (Emma's Beach scene). Although there will be little ground impact to each of these sites, access to the sites will be by lorries, a tractor and trailer, and 4 X 4 vehicles with other filming infrastructure including tele-handlers, etc. The site impacts are shown on illustrated figures at the end of the report both generally and for each site, with related method statements in the appendix.

Cheesewring Quarry and access track (Cave scene) impacts

Access tracks to quarry (Figs 1 to 4)

There will be limited access to heavy vehicles along the main (former quarry railway line) access track from Minions, given the constraint of the ground above Stowes Lode, (south of the former collapse of Stowes Shaft in February 2009), see Figures 1 to 6.

Given the historical continuity of outcrop working on Main Lode since at least the early sixteenth century (and probably before that), it seems likely that the upper parts of this lode have been worked over many times before (creating potentially unstable ground for some distance either side of the lode). It is possible that subsidence in the trackbed of the Cheesewring Quarry branch of the Liskeard and Caradon Railway (which appear to partly consist of soft kaolinised granite), may reflect the proximity of stoping not far below the ground surface near the outcrop of the lode (Buck 1996, 55).

Two sections of temporary trackway will be laid at the locations shown on Figs 5 and 6. The first across the rear garden or field of the former Manager's house (SX 25996 72151 to 26016 72187), the second along the extant sections of trackway (timber setts and tramrails) as it enters the quarry (SX 25914 72321 to 25963 72295). A specialist company (Autotrac – see Method Statements in the Appendix at the end of the report)

will lay the track on the ground as it traverses the sites, infilling with timber for deep changes of slope.

It is understood that the Duchy of Cornwall have recommended that no heavy vehicles (beyond the weight of a standard 4 x 4 vehicle) are driven over this section of track – particularly above Stowes Lode (see Figs 5 to 7). As a consequence, heavy vehicles including transporting the 'Autotrac' system of temporary interlocking roads, will need to access Cheesewring Quarry via the existing track west of the quarry (see Figs 2 and 9). It should be noted that this track is already quite soft, and frequent heavy vehicular access for the filming will no doubt make the existing tyre tracks much deeper, which given heavy rainfall will cause excessive erosion. It is being recommended that any deep track damage is carefully levelled to reduce ongoing erosion, under archaeological supervision.

Cheesewring Quarry (Figs 5 to 8)

A survey of the interior of Cheesewring Quarry was undertaken by CAU (P. Rose and N. Johnson) in 1988, using a RCHME survey plan base map (1984 GRH 33/M9/13). The survey identified stone working areas within the quarry, including sheltered locations for stonemasons and steam crane platforms.

The Duchy of Cornwall estate occasionally grant licenses for the crushing and removal of granite stone from its interior (the most recent example being the stone reinforcement of the Plymouth Breakwater in 1986, resulting in the removal of large granite blocks from this quarry by fleets of large lorries). Given the archaeological importance of the extant remains within the quarry and the need for their continued preservation, it was deemed important to produce an archaeological constraint map, providing guidance to the Duchy of Cornwall where stone could or could not be extracted when necessary.

In consultation with the County Archaeologist, an A3 plan was drawn and the archaeological constraints added. This has been reproduced in this report as Fig 8. A Method Statement relating to the removal of granite (referring to Fig 8), was produced jointly by the Duchy of Cornwall and CAU (reproduced as Appendix 1), this should subsequently be adhered to by all agencies (Buck 2005, Section 7.2, 24-25). This archaeological constraint information can also be used to inform for this filming episode.

The Cave itself (SX 25832 72306) will be formed and erected on site with small rock anchors drilled and resin anchored into the granite face where necessary. The film company also has permission from the Duchy of Cornwall to remove all the timber fencing and barbed wire along the western side of the quarry (to remove it from the screen view); this will subsequently be replaced by the Duchy after filming.

Witheybrook Mine (Playground scene)/West Phoenix Mine impacts (Figs 9 to 12)

There will be very little site impact at the Witheybrook Mine Playground scene – rather use of the adjacent tracks for film crew access etc. This will entail a number of sites for parking, power generation and other necessities away from screenshot (see Figs 4 and 12).

The former site of West Phoenix Mine (with remnants of its two engine houses – see Fig 10), will site temporary parking areas for 4 X 4 trucks etc (out of screenshot for the playground scene to the north east). Again, assuming good weather, this should have a negligible impact on the ground surface. However, if the weather is wet, it would be preferable if the trucks do not cause damage to the grass surface (covering levelled waste ground with likely metal ore contaminants).

This site is perhaps the most hazardous in terms of mine shafts. The film company has obtained a mines search for known shafts from the Duchy of Cornwall, however as stated elsewhere in this report, these are old mine workings stretching back to at least the medieval period – accurate mine plans were only produced since the 1840s. In

addition, there are a number of costean pits etc stretching across the site – most of which are undocumented, and may well be shallow shafts.

Goldiggings Quarry (Beach scene) impacts (Figs 13 to 15)

Granite boulders placed along the west edge of the track into the quarry (adjacent to the vertical edge of the quarry face), are to be temporarily moved out of screen shot, and then replaced after filming.

Other impacts will be negligible, and include the presence of a tele-handler for a stunt effect and parking areas on hard surfaces, etc.

General comments

There are a variety of power generator locations and service car/lorry/4 X 4 truck parks across the site (see Figs 2 and 4), these are to have an interlocking plastic/metal surface laid on the ground. This will minimise damage and impact to the ground or any sub surface archaeological features.

The long access track to the Goldiggings Quarry (south of Minions) will be frequently used by a number of heavy vehicles (including access to the Cheesewring Quarry) – there are a number of pits within the track which will be infilled with a similar granite stone (to match the colour and granite type with the existing track material). A Method Statement has been produced by the approved contractor (Michael Hoare), but not reproduced in this report. It is recommended (from a World Heritage Site (WHS) perspective), that an appropriate granite infill is used, the material is efficiently compressed into the 'pits/hollows', and that no excess is left on the track. It may well be appropriate that this (very visible) work is approved by the site archaeologist (on behalf of the WHS), as perhaps the only (positive impact) visible evidence of the filming, within the moorland landscape.

Site Gazetter

Site No.	Name / Summary	HER No. / Designation	Impact / Contingency
1	Prehistoric enclosure with three adjacent hut circles 700m NNE of Minions	DCO251	Scheduled site is adjacent to the track – but only light vehicles will use the track itself. Negligible impact.
2	Earlier prehistoric hillfort, two cairns, medieval pound, adjacent prehistoric field systems, hut circles and transhumance huts on Stowe's Hill	DCO241	Scheduled site is above the quarry face to the north of the film site. Extant access track features will be covered. Archaeological constraints within quarry given. Negligible impact.
3	Cheesewring - Undated natural feature	MCO22244	Negligible impact.
4	Stowes Pound - Prehistoric enclosure, Prehistoric hut circle, Prehistoric hut platform, Neolithic tor enclosure, Bronze Age cairn	MCO21824	Scheduled site is above the quarry face to the north of the film site. Extant access track features will be covered. Archaeological constraints within quarry given. Negligible impact.
5	Cheesewring Quarry - Post Medieval quarry	MCO24324	Extant access track features will be covered. Timber/wire fencing to west side temporarily removed. Archaeological

			constraints within quarry given. Negligible impact to ground surface – small bolt resin anchors to be inserted to rock face to support cave proforma.
6	Witheybrook - Early Medieval streamworks	MCO24329	Filming using existing landscape character. Parking in vicinity. Negligible impact.
7	Gold Diggings Quarry - Modern quarry	MCO24325	Filming using existing landscape character. Temporary placement of granite boulders. Parking in vicinity. Access track hollows infilled. Negligible impact.
8	Witheybrook - Early Medieval streamworks	MCO38832	Filming using existing landscape character. Parking in vicinity. Negligible impact.
9	Gold Diggings Quarry - Undated socketed stone	MCO40389	Negligible impact.
10	Wardbrook - Undated bank (earthwork)	MCO38831	Negligible impact.
11	Stowes Hill - Post Medieval quarry	MCO38837	Negligible impact.
12	Wardbrook - Post Medieval settlement	MCO18244	Negligible impact.

Figs 7, 9, 11 and 15 show these sites, none of which are impacted to a significant degree. All site impacts mitigated by site consultancy with Fox UK Productions Ltd, and production of Method Statements from site contractors (see Appendix).

6 Recommendations

This report should form the basis of a summary statement of the area's archaeological significance and site constraints. It is recommended that the site impact mitigation (mainly in terms of the appropriate siting and method of track impact mitigation) is followed according the site plans and working mitigation methodologies given in this report.

However, given the impact of the infilling of hollows in the southern track route, and possible infilling of the 'soft ground' track (particularly if the weather proves to be wet), with a JCB excavator, then it is recommended that a site archaeologist carries out a site visit after filming has finished to ensure that all these works are undertaken with a high degree of competency, and that all the film sites are viewed to ensure no other damage or impacts have occurred.

7 References

Buck, C S, 1996, Proposed shaft treatment at Minions, Archaeological Assessment, CAU Buck, C S, 2005, Minions, Mitigation recording during Phase 1 Land reclamation works (1997 – 2005), Historic Environment Service (Projects)

Buck, C S, 2009, Caradon Hill Area Heritage Project mines, Cornwall – Impact Assessment Report, Historic Environment Service (Projects)

Herring, P, and Rose, P, 2001, Bodmin Moor's Archaeological Heritage, CAU Sharpe, A, 1993, Minions - Archaeological Survey of the Caradon Mining District (Revised), CAU

8 Websites

http://www.cornish-mining.org.uk Cornish World Heritage Site

http://archaeologydataservice.ac.uk/archives/view/dob/ Defence of Britain Archive

http://www.english-heritage.org.uk/caring/listing/ English Heritage designation information

http://www.english-heritage.org.uk/publications English Heritage guidance

http://www.heritagegateway.org.uk/gateway/ English Heritage's online database of Sites and Monuments Records and Listed Buildings.

http://whc.unesco.org/ World Heritage Site information

9 Project archive

The CAU project number is 146479

The project's documentary, digital, photographic and drawn archive is maintained by Cornwall Archaeological Unit, Cornwall Council, Fal Building, County Hall, Treyew Road, Truro, TR1 3AY.

English Heritage/ADS OASIS online reference: cornwall2-209591

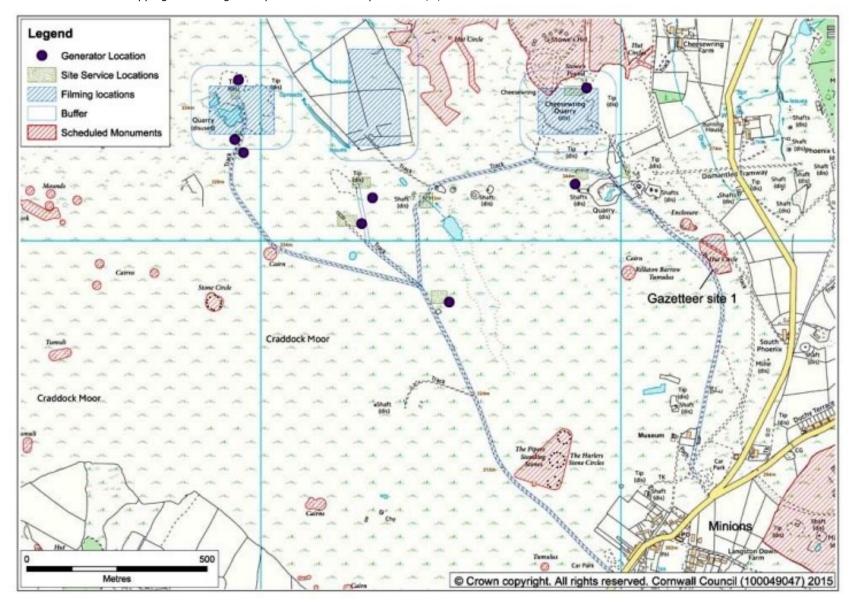


Fig 1 Location and site map

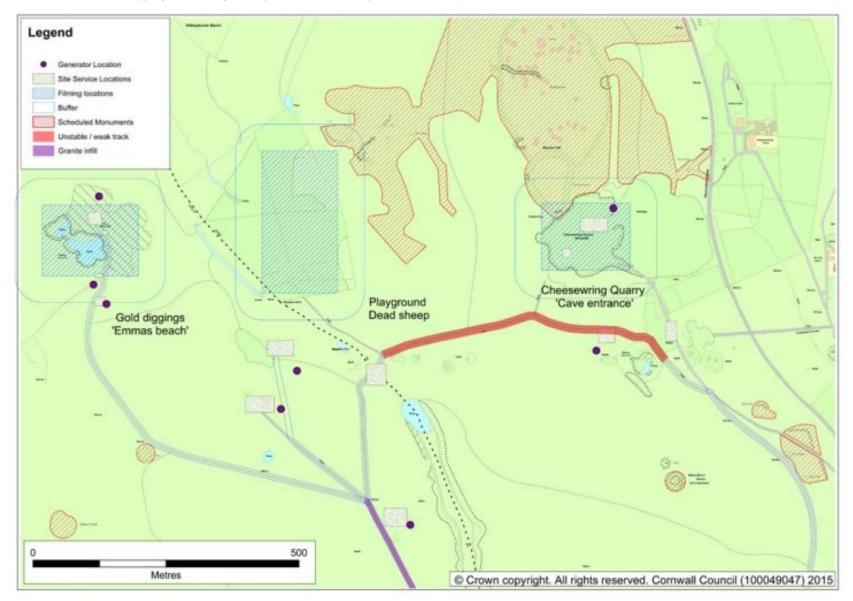


Fig 2 Overall summary site impacts and archaeological constraints

MINIONS: ARIEL SERVICE PLAN

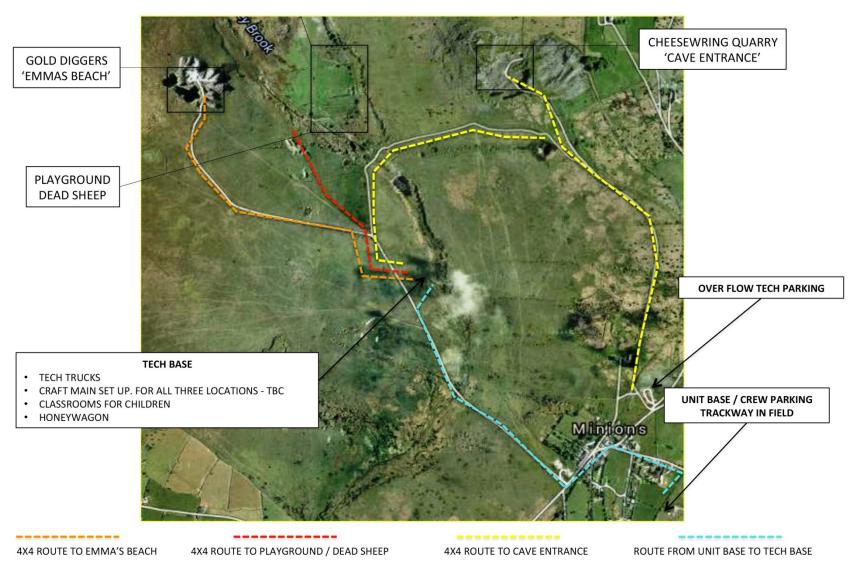


Fig 3 Aerial view of overall summary site impacts (Fox UK Productions Ltd)

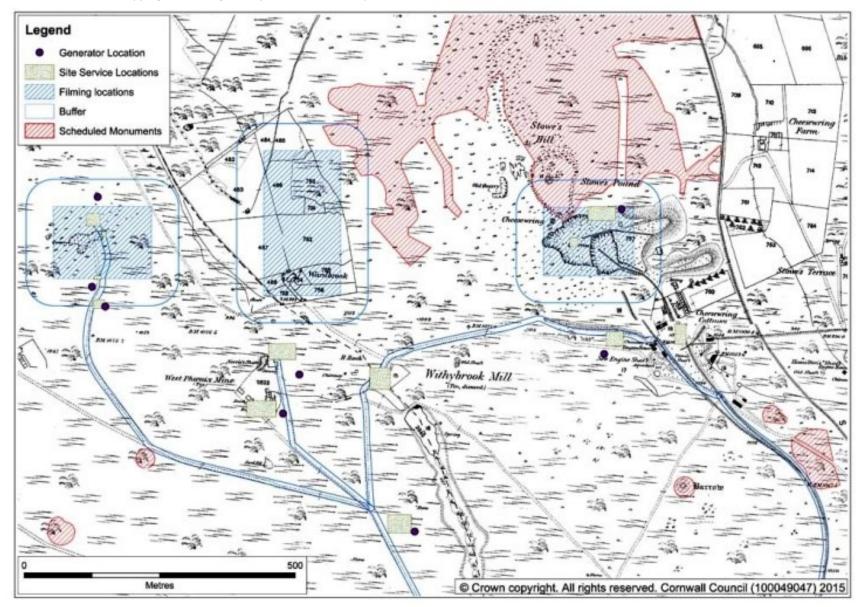


Fig 4 Extract from the OS First Edition 1:2500 Map c1880 for the overall summary site impacts

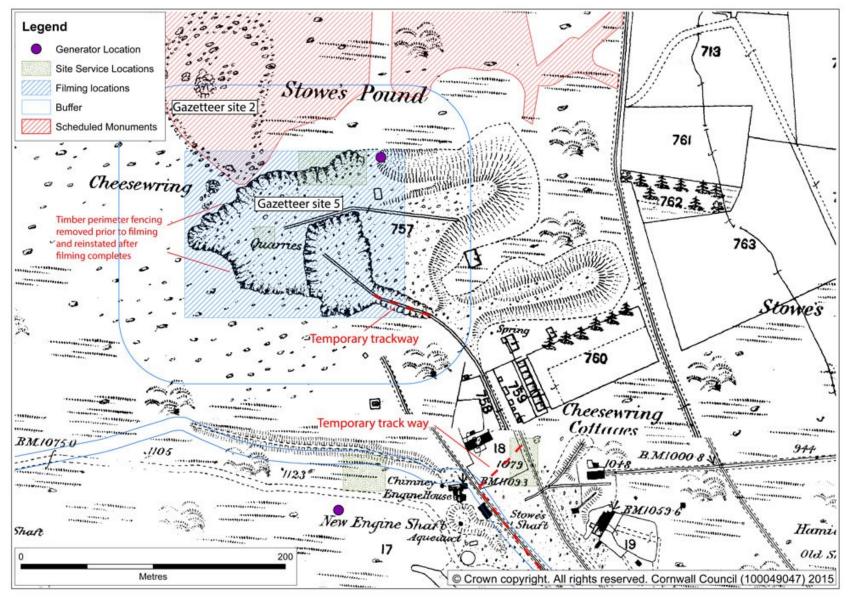


Fig 5 Detail extract from the OS First Edition 1:2500 Map c1880 for the Cheesewring Quarry, showing site impacts

CAVE ENTRANCE LOCATION: ARIEL SERVICE PLAN **PROPOSED 40KVA SUPER SILENT GENNY TELEHANDLER** WIRE RIG PROPOSED SERVICE AREA **4X4 WRANGLING** MINI CRAFT SET UP (EZ UP) 'CAVE ENTRANCE' LOCATION **RUNNING LUNCH** MINI TECH BASE **CHINESE HAT TENTS** DROP OFF AREA OFF SET CRAFT (TBC IF VEHICLES ARE ABLE TO ACCESS) HONEYWAGON **PROPOSED 40KVA GENNY**

Fig 6 Cheesewring Quarry (Cave scene) site impact map (Fox UK Productions Ltd)

4X4 ROUTE TO CAVE ENTRANCE

WALKING ROUTE FROM HONEYWAGON TO CAVE ENTRANCE

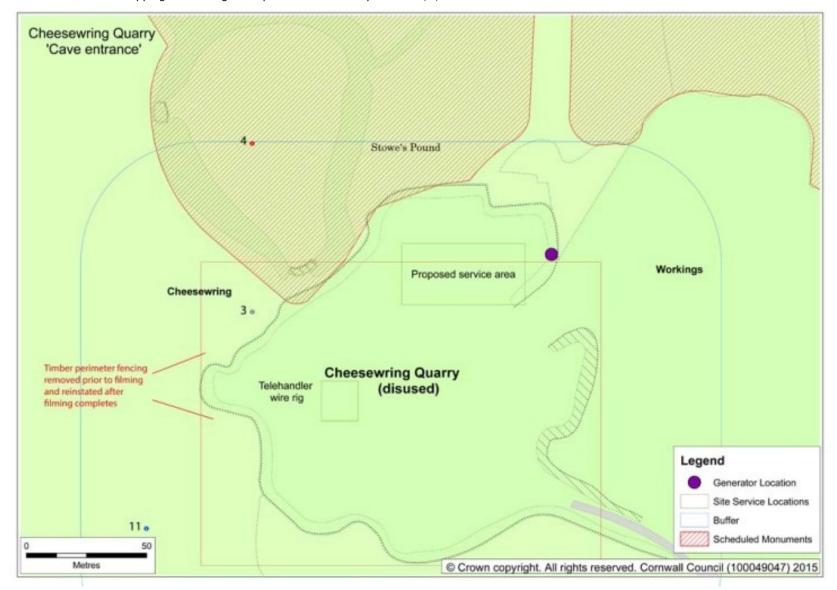


Fig 7 Detail view of Cheesewring site designations and SMR gazetteer sites (refer to site gazetteer table (Section 5) for site numbers)

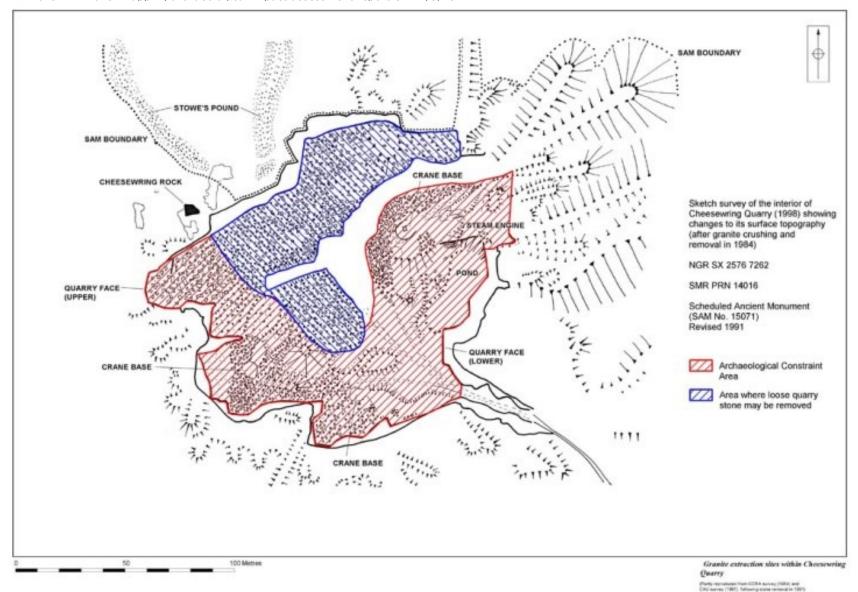


Fig 8 Survey of archaeological features within Cheesewring Quarry (Buck 2005). Refer Appendix 1 for related Method statement.

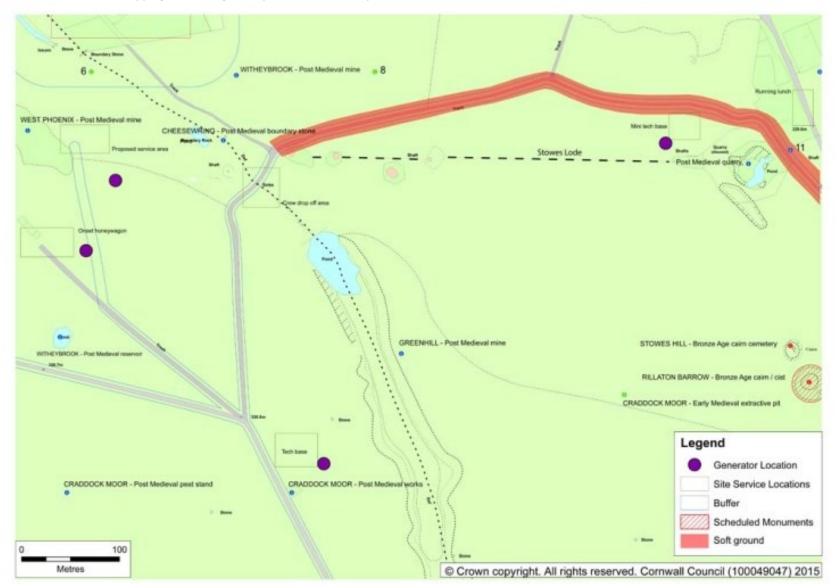


Fig 9 Detail view of soft track site designations and SMR gazetteer sites (refer to site gazetteer table (Section 5) for site numbers)

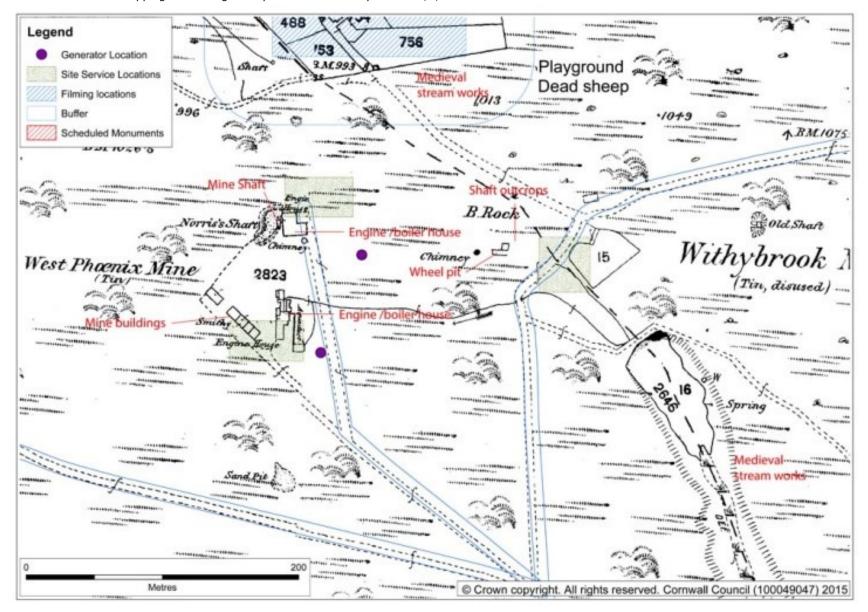


Fig 10 Detail extract from the OS First Edition 1:2500 Map c1880 for Witheybrook and West Phoenix mines, showing site impacts

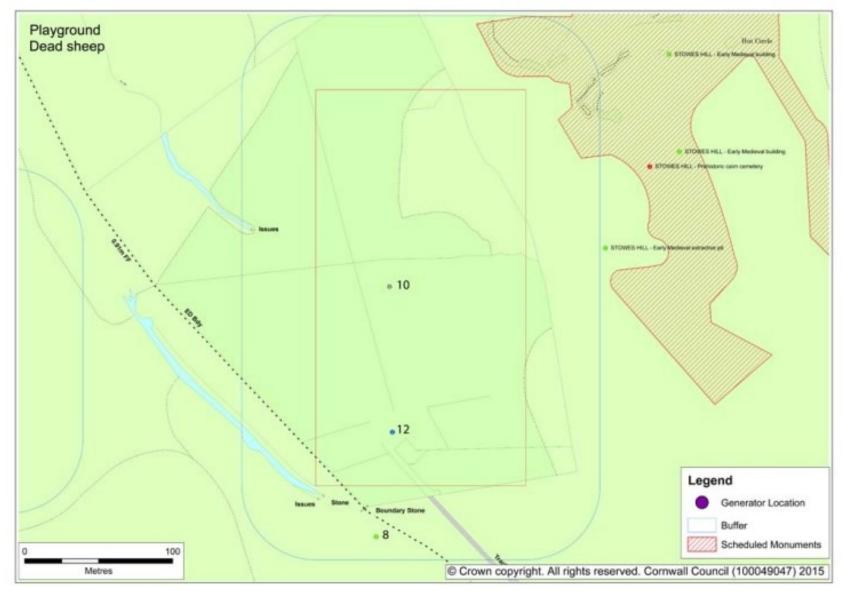


Fig 11 Detail view of mine site designations and SMR gazetteer sites (refer to site gazetteer table (Section 5) for site numbers)

PLAYGROUND: ARIEL SERVICE PLAN

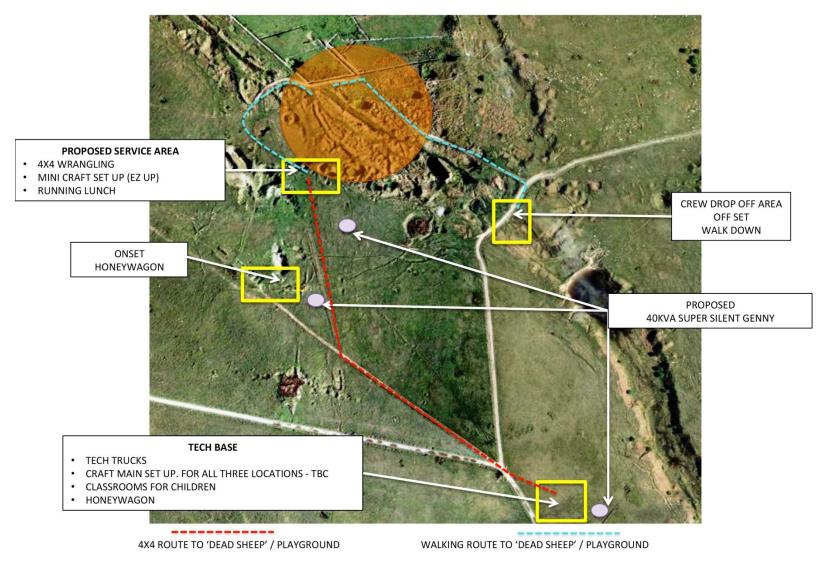


Fig 12 Mine (Playground scene) site impact map (Fox UK Productions Ltd)

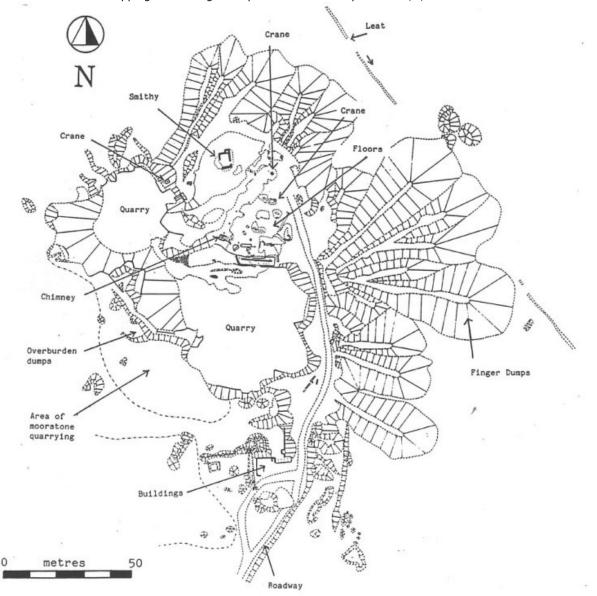


Fig 13 Survey of archaeological features within Goldiggings Quarry (Sharpe 1993, 133)

EMMA BEACH LOCATION: ARIEL SERVICE PLAN **PROPOSED 40KVA SUPER SILENT GENNY** PROPOSED 4X4 WRANGLING AREA ARTISTS DROP OFF • MINI CRAFT SET UP (EZ UP) HONEYWAGON (TBC) **EMMA'S BEACH** TELEHANDLER LOCATION WIRE RIG DROP OFF AREA OFF SET MINI TECH BASE HONEYWAGON CRAFT RUNNING LUNCH (CHINESE HAT TENTS **PROPOSED 40KVA GENNY PROPOSED 40KVA GENNY** ---------WALKING ROUTE FROM CRAFT / HONEYWAGON TO EMMA BEACH 4X4 ROUTE EMMA BEACH

Fig 14 Goldiggings Quarry (Beach scene) site impact map (Fox UK Productions Ltd)

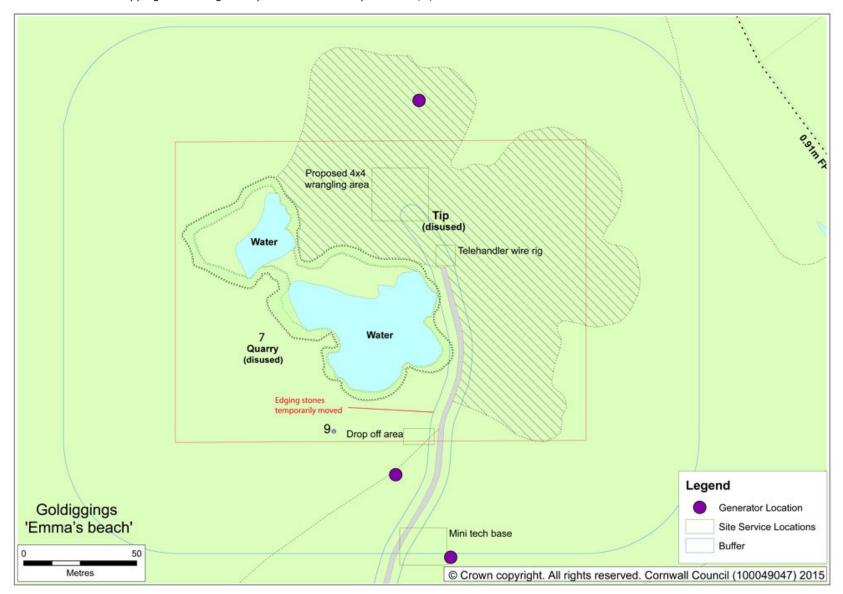


Fig 15 Detail view of Goldiggings site designations and SMR gazetteer sites (refer to site gazetteer table (Section 5) for site numbers)

Appendix 1

METHOD STATEMENT for works within Cheesewring Quarry

Removal of loose quarry stone from Cheesewring Quarry, Bodmin Moor.

Prepared subsequent to a meeting between Thomas Arculus, Duchy of Cornwall and Colin Buck, Area Archaeologist, Cornwall County Council 15th January 2003.

- 1. Enter quarry via old railway line track from the Old Dry.
- 2. Care must be taken not to disturb the wooden and granite railway sleepers found *in situ* from the entrance lobby to the interior of the quarry.
- 3. No vehicles other than rubber tyred vehicles are to be allowed access. If a tracked digger is needed this must be brought onto the site by means of a low loader lorry and unloaded in one of the areas marked on the attached plan. Care should be taken to <u>avoid</u> driving over the extant rails in the entrance lobby of the quarry.
- 4. Loose quarry stone may only be removed from the area shown on the attached plan.
- 5. No stone may be taken from the Archaeological Constraint Area illustrated on the attached plan.
- 6. No loose stone should be left blocking access routes within the quarry (emergency vehicles need access around the quarry).
- 7. Supervision by the Duchy of Cornwall will be undertaken to ensure compliance with the detailed measures in this method statement.

23/1/2003

Thomas Arculus (Asst. Land Steward, Duchy of Cornwall)
Colin Buck (Senior Archaeologist, Historic Environment Service, CCC)

Method statement reproduced from Buck (2005, 42). Although in this case no stone is to be removed the main tenets of the method statement should be followed.

Appendix 2

AUTOTRAK PORTABLE ROADWAYS LIMITED

BRICKNELLS FARM 952 FRINGFORD ROAD 686 CAVERSFIELD www.portableroadways.com OXON, OX27 8TJ TEL: 01869 248 FAX: 01869 250

METHOD STATEMENT FOR LAYING AND REMOVAL OF TEMPORARY ROADWAY ON SITE

Laying of the Roadway

1) Before commencement of any work a meeting between the customer and a representative from Autotrak Portable Roadways Ltd will be held to identify any safety and management issues which may be specific to the customer requirements.

Subjects likely to be discussed will be:

Restricted areas on site

Traffic and pedestrian routes

Activities of other contractors

Surface conditions, drainage, the requirement and responsibility for cutting grass

Underground and overhead services present

Secure areas for storing plant and equipment

The supervisor will ensure that all members of his personnel on site are made aware of the outcome of this meeting, and that they conform to customers requirements, and that they will comply with the Health and Safety requirements of Autotrak Portable Roadways Ltd, its customer and any other contractor with whom they share the site.

- 2) Panels will be delivered on site to the previously agreed storage area and stacked with up to 40 panels per stack.
- 3) Panels will be transported from the storage area to the area where they are to be utilised using a forklift, operated by a CITB trained operator. Under no circumstances will untrained or unauthorised personnel be allowed to operate these machines on site.
- 4) Autotrak supervisor together with the customers representative will identify and mark the exact route of the proposed roadway.
- 5) Autotrak supervisor will mark out the precise boundary of the roadway with string lines and pegs.

6) Terram matting, if needed, will be unrolled for a distance of about 10 meters and panels positioned adjacent to the string line on top of the matting.

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- 7) After 3 panels have been laid they will be bolted together with steel plates, nuts and bolts using 110V nut runners operated from an electric generator.
- 8) The forklift with panels will drive over the assembled road to consolidate it and to deliver the next load of panels to be laid. The Terram will be unrolled in front of the panels as they are laid.
- 9) At the end of each shift the supervisor will ensure that all roadway laid is bolted together, that the site is cleared of all debris, and that all panels, except those already laid, are returned to the storage area, that the plant is parked safely in the prescribed parking place and keys have been removed. All items of portable equipment and fuel will be removed from the site at the end of each shift and returned at the beginning of the next shift.
- 10) At the beginning of each day the supervisor will:

Report to the customer or his agent and ascertain any changes to the planned work schedule.

Inspect previously laid roadway,

Identify any special safety equipment (high visibility waistcoat, hard hats, inclement weather gear, steel toed boots, gloves etc.) or signage that may be needed and ensure, that if appropriate, it is provided and used.

Removal of Roadway

- 1) Starting at the part further most from the storage area steel plates, nuts and bolts are removed and placed in the storage boxes and transferred to the Autotrak vehicle adjacent to the workplace. The panels are lifted by the forklift and placed onto the lorry, which is driven backwards along the existing roadway. When the lorry is stacked with up to 30 panels it is taken to the storage area and stacked no more then 40 panels high awaiting loading onto a lorry.
- 2) Terram matting to be rolled up and removed as it becomes uncovered.
- 3) At the end of the removal sequence the supervisor will inspect the site, ensure that all debris is removed and the area is left clean and tidy and free from safety hazards. He will then report to the customer and together they will inspect the site to ensure that it is left to his satisfaction.

For and on behalf of Autotrak Portable Roadways Ltd

Michael Fox Director

Appendix 3



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Langford Lane
Kidlington
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OXON, OX5 1FQ

TEL: 01865

METHOD STATEMENT FOR LAYING AND REMOVAL OF TEMPORARY ROADWAY ON SITE

Laying of the Roadway

1) Before commencement of any work a meeting between the customer and a representative from Autotrak Portable Roadways Ltd will be held to identify any safety and management issues which may be specific to the customer requirements.

Subjects likely to be discussed will be:

Restricted areas on site

Traffic and pedestrian routes

Activities of other contractors

Surface conditions, drainage, the requirement and responsibility for cutting grass

Underground and overhead services present

Secure areas for storing plant and equipment

The supervisor will ensure that all members of his personnel on site are made aware of the outcome of this meeting, and that they conform to customers requirements, and that they will comply with the Health and Safety requirements of Autotrak Portable Roadways Ltd, its customer and any other contractor with whom they share the site.

- 2) Panels will be delivered on site to the previously agreed storage area and stacked with up to 40 panels per stack.
- 3) Panels will be transported from the storage area to the area where they are to be utilised using a lorry with a rear mounted crane operated by a CITB trained operator. Under no circumstances will untrained or unauthorised personnel be allowed to operate these machines on site.
- 4) Autotrak supervisor together with the customers representative will identify and mark the exact route of the proposed roadway.

- 5) Autotrak supervisor will mark out the precise boundary of the roadway with string lines and pegs.
- 6) Terram matting, if needed, will be unrolled for a distance of about 10 meters and panels positioned adjacent to the string line on top of the matting.

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VAT Registration No 623 9000 69

- 7) After 3 panels have been laid they will be bolted together with steel plates, nuts and bolts using 110V nut runners operated from an electric generator.
- 8) The lorry loaded with panels will reverse over the assembled road to consolidate it and to deliver the next load of panels to be laid. The Terram will be unrolled in front of the panels as they are laid.
- 9) At the end of each shift the supervisor will ensure that all roadway laid is bolted together, that the site is cleared of all debris, and that all panels, except those already laid, are returned to the storage area, that the plant is parked safely in the prescribed parking place and keys have been removed. All items of portable equipment and fuel will be removed from the site at the end of each shift and returned at the beginning of the next shift.
- 10) At the beginning of each day the supervisor will:

Report to the customer or his agent and ascertain any changes to the planned work schedule,

Inspect previously laid roadway.

Identify any special safety equipment (high visibility waistcoat, hard hats, inclement weather gear, steel toed boots, gloves etc.) or signage that may be needed and ensure, that if appropriate, it is provided and used.

Removal of Roadway

- 1) Starting at the part further most from the storage area steel plates, nuts and bolts are removed and placed in the storage boxes and transferred to the Autotrak vehicle adjacent to the workplace. The panels are lifted by lorry mounted crane and placed onto the lorry, which is driven forwards along the existing roadway. When the lorry is stacked with up to 30 panels it is taken to the storage area and stacked no more then 40 panels high awaiting loading onto a lorry.
- 2) Terram matting to be rolled up and removed as it becomes uncovered.
- 3) At the end of the removal sequence the supervisor will inspect the site, ensure that all debris is removed and the area is left clean and tidy and free from safety hazards. He will then report to the customer and together they will inspect the site to ensure that it is left to his satisfaction.

For and on behalf of Autotrak Portable Roadways Ltd

Michael Fox Director

Appendix 4

AUTOTRAK PORTABLE ROADWAYS LTD

TELEPHONE: 01869 248952 FAX: 01869 250 686 BRICKNELLS FARM CAVERSFIELD OXON, OX27 8TJ

METHOD STATEMENT FOR LAYING AND REMOVAL OF TEMPORARY ROADWAY ON SITE

Laying of the Roadway

1) Before commencement of any work a meeting between the customer and a representative from Autotrak Portable Roadways Ltd will be held to identify any safety and management issues which may be specific to the customer requirements.

Subjects likely to be discussed will be:

Restricted areas on site

Traffic and pedestrian routes

Activities of other contractors

Surface conditions, drainage, the requirement and responsibility for cutting grass

Underground and overhead services present

Secure areas for storing plant and equipment

The supervisor will ensure that all members of his personnel on site are made aware of the outcome of this meeting, and that they conform to customers requirements, and that they will comply with the Health and Safety requirements of Autotrak Portable Roadways Ltd, its customer and any other contractor with whom they share the site.

- 2) Panels will be delivered on site to the previously agreed storage area and stacked with up to 20 panels per pallet (1 tonne), no more than 2 pallets per stack.
- 3) Panels and Terram matting will be transported from the storage area to the area where they are to be utilised using a fork lift truck (FLT) operated by a CITB trained operator. Under no circumstances will untrained or unauthorised personnel be allowed to operate FLTs on site.
- 4) Autotrak supervisor together with the customers representative will identify and mark the exact route of the proposed roadway.
- 5) Autotrak supervisor will mark out the precise boundary of the roadway with string lines and pegs.
- 6) Terram matting will be unrolled for a distance of about 10 meters and panels positioned adjacent to the string line on top of the matting.

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- 7) After 8 panels have been laid they will be bolted together with steel plates, nuts and bolts using 110V nut runners operated from an electric generator.
- 8) The FLT loaded with a pallet of panels will drive over the assembled road to consolidate it and to deliver the next load of panels to be laid. The Terram will be unrolled in front of the panels as they are laid. Steel pins will be driven through holes in every 5th panel and the end panels to anchor the roadway to the ground and to eliminate the risk of movement in use.
- 9) At the end of each shift the supervisor will ensure that all roadway laid is bolted together and pinned down, that the site is cleared of all debris, and that all panels, except those already laid, are returned to the storage area, that the FLTs are parked safely in the prescribed parking place and keys have been removed. All items of portable equipment and fuel will be removed from the site at the end of each shift and returned at the beginning of the next shift.
- 10) At the beginning of each day the supervisor will:

Report to the customer or his agent and ascertain any changes to the planned work schedule.

Inspect previously laid roadway,

Identify any special safety equipment (high visibility waistcoat, hard hats, inclement weather gear, steel toed boots, gloves etc.) or signage that may be needed and ensure, that if appropriate, it is provided and used.

Removal of Roadway

- 1) Starting at the part further most from the storage area steel plates, nuts and bolts are removed and placed in the storage boxes and transferred to the Autotrak vehicle adjacent to the workplace. The panels are lifted by hand and placed onto a pallet resting on the forks of the FLT, which is driven backwards along the existing roadway. When the pallet is stacked with up to 20 panels it is taken to the storage area and stacked no more than 2 pallets high awaiting loading onto a lorry.
- 2) Terram matting to be rolled up and removed as it becomes uncovered.
- 3) At the end of the removal sequence the supervisor will inspect the site, ensure that all debris is removed and the area is left clean and tidy and free from safety hazards. He will then report to the customer and together they will inspect the site to ensure that it is left to his satisfaction.

For and on behalf of Autotrak Portable Roadways Ltd

Michael Fox Director