The Mineral Planning Group
GEOLOGICAL, MINING, PLANNING & ENVIRONMENTAL CONSULTANTS

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Mineral Sterilisation Assessment

Concerning a,

Proposed Residential Development at Hurst Quarry, Biddulph, Staffordshire

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JOB REFERENCE:

115/9

CLIENT:

Land Recovery Ltd.

Mineral Sterilisation Assessment - Hurst Quarry

1. INTRODUCTION

1.1 The Mineral Planning Group have been commissioned by *Land Recovery Ltd. (LRL)* to assess the potential for the proposed residential development at Hurst Quarry to sterilise a known mineral resource.

1.2 Hurst Quarry is an active (albeit currently low output) quarry, that is currently undergoing its First Periodic Review (ROMP) as part of the *Environment Act 1995* (and its subsequent amendments).

1.3 The sterilisation assessment will be carried out against Local and National Planning Policy dedicated to the issue.

2. SITE DESCRIPTION AND GEOLOGY

2.1 Hurst Quarry is located off Hurst Road, approximately 1.5 km northeast of Biddulph, Staffordshire. The site lies directly north of Hurst Road and Biddulph Grange Country Park. It is bound to the East, North and West by agriculture.

2.2 The land surrounding the quarry lies between 205 metres AOD to the southwest and 260 metres AOD to the northeast.

2.3 The site is within the Green Belt but has no further landscape or ecological designations within 250 metres.

2.4 The quarry permission boundary covers an area of approximately 21 Hectares

(*See Site Plan*).

2.5 The mineral permission is extant until the 31st of December 2036, at which point this site would be restored in accordance with the approved restoration scheme.

Geology - Superficial Deposits

2.6 British Geological Survey (BGS) maps note the superficial deposits across the site to be Devensian Till (Diamicton).

Geology - Solid Geology

2.7 BGS maps note the underlying bedrock at the site to be Rough Rock (sandstone) from the Carboniferous Period. It is from the solid geology that the existing Hurst Quarry extracts silica rock.

3. RELEVANT POLICY

3.1 The policy documents considered as part of this assessment are:

- The Staffordshire and Stoke-on-Trent Minerals Local Plan (SSMLP)(1999)
- The Emerging Minerals Local Plan for Staffordshire 2015-2030 (EMLP)(2015)[1]
- The National Planning Policy Framework (NPPF) (2012)

3.2 In 2006 the British Geological Survey (BGS) were commissioned to produce a revised Mineral Safeguarding and Mineral Consultation areas map for Staffordshire County Council as part of the SSMLP (Extracts attached as Appendix

[1] Deposited for final inspection in June 2015

B). The document details Hurst Quarry and its immediate surrounds as an *Area of Safeguarding for Silica Sand.*

3.3 **Relevant SSMLP policy**:

- MLP Policy 6: *Development within Mineral Safeguarded Areas should not sterilise or seriously hinder the extraction of mineral deposits of economic value which are capable of being worked in accordance with MLP Policy 4*[2].

  Where the proposed development falls within the Mineral Safeguarded Areas and may have a significant impact upon mineral resources then the responsibility rests with (the) prospective developer to prove the existence or otherwise, quantity and quality of the mineral prior to the determination of the planning application.

3.4 **Relevant EMLP policy**

- *3.1 During the Plan period the following mineral resources, within the Mineral Safeguarding Areas shown on the Proposals Map, will be safeguarded against needless sterilisation by non-mineral development:*

  a) Sand and gravel
  b) Limestone
  c) Cement shale
  d) Etruria Formation clays
  e) Anhydrite and gypsum
  f) Hollington Formation building stones

[2] MLP Policy 4 was revoked and is no longer extant

g) Silica sand associated with the Rough Rock Formation

h) Shallow coal with associated fireclays

- *3.2 Within a Mineral Safeguarding Area, non-mineral development except for those types of development set out in appendix 6, should not be permitted until the prospective developer has produced evidence prior to determination of the planning application to demonstrate:*

  a) the existence, the quantity and the quality of the underlying or adjacent mineral resource; and

  b) that proposals for non-mineral development in the vicinity of permitted mineral sites or mineral site allocations would not unduly restrict the mineral operations.

- *3.3 Within a Mineral Safeguarding Area, where important mineral resources do exist, non-mineral development except for those types of development set out in appendix 6, should not be permitted unless it has been demonstrated that:*

  a) the non–mineral development is temporary and does not permanently sterilise the mineral; or,

  b) the material planning benefits of the non-mineral development would outweigh the material planning benefits of the underlying or adjacent mineral; or,

  c) it is not practicable or environmentally acceptable in the foreseeable future to extract the mineral.

- *3.4 Within a Mineral Safeguarding Area, where important minerals do exist*

and the above criteria have not been met, the non-mineral development except for those types of development set out in appendix 6, should not be permitted until the mineral has been extracted.

3.5 **Relevant NPPF policy:**

- Paragraphs 143 and 144 state that Planning authorities should:

"…encourage the prior extraction of minerals, where practicable and environmentally feasible, if it is necessary for non-mineral development to take place."

&

"…other development proposals in Mineral Safeguarding Areas should not normally be permitted where they might constrain future use for mineral purposes."

4.0 STERILISATION ASSESSMENT

4.1 Until recently the Silica Rock extracted at Hurst Quarry has primarily been crushed and screened on site in order to be blended with the softer sands found at LRL's White Moss site in Alsager, Cheshire.

4.2 As of the 16th of September 2015, over 50% of White Moss Quarry's surface area has had permission granted for residential development of 350 dwellings and associated infrastructure. The remainder of the site is currently subject to a planning application for an additional 400 homes.

4.3 As such, it is evident that the remaining timescales for mineral extraction at White Moss quarry are limited, as too are the permitted recycling and blending activities.

4.4 An alternative approach would have been to relocate aggregate recycling and blending activities to Hurst Quarry as White Moss is 'run down'. However, as recently as April 2012[3], Staffordshire County Council have refused aggregate recycling and blending operations at Hurst Quarry on the following (but not limited to) grounds:

- Inappropriate development in the Green Belt
- Visual Impact
- Traffic Impact

4.5 A combination of an inability to recycle / blend aggregates at the site and the rapid run-down of mineral extraction at White Moss quarry renders mineral (Silica Rock) at Hurst Quarry uneconomically viable to extract for the foreseeable future.

4.6 Attached as Appendix A is a cross section of Hurst Quarry taken from a 1992 report[4] produced by *Hydrotechnica* for the sites' previous operators. The cross - section clearly shows the sandstone (Silica Rock) horizons 'pinching' to a shallow deposit before reaching the current northernmost working face. As such, beyond the present working face it is considered that the sandstone resource is either non-extent or present in such a limited volume that it is not economically viable to work.

[3] Attached as Appendix C is a brief summary of Hurst Quarry's recent planning history
[4] Copy held by Staffordshire County Council

4.7 Whilst the shallow northern deposit is not considered economically viable to extract at present, this does not mean any guarantees can be made that it would not become feasible to work the mineral at a later date.

5.0 ASSESSMENT AGAINST POLICY

Document	Policy Reference	Discussed (Paras)	Pass ✓ / Fail ×
SSMLP	Policy No.6	4.5 & 4.6	✓
EMLP	3.2a	4.6	✓
EMLP	3.3c	4.5 & 4.6	✓
NPPF	143 (5)	4.5 & 4.6	✓
NPPF	144 (7)	4.5 & 4.6 & 4.7	✓

6.0 SUMMARY

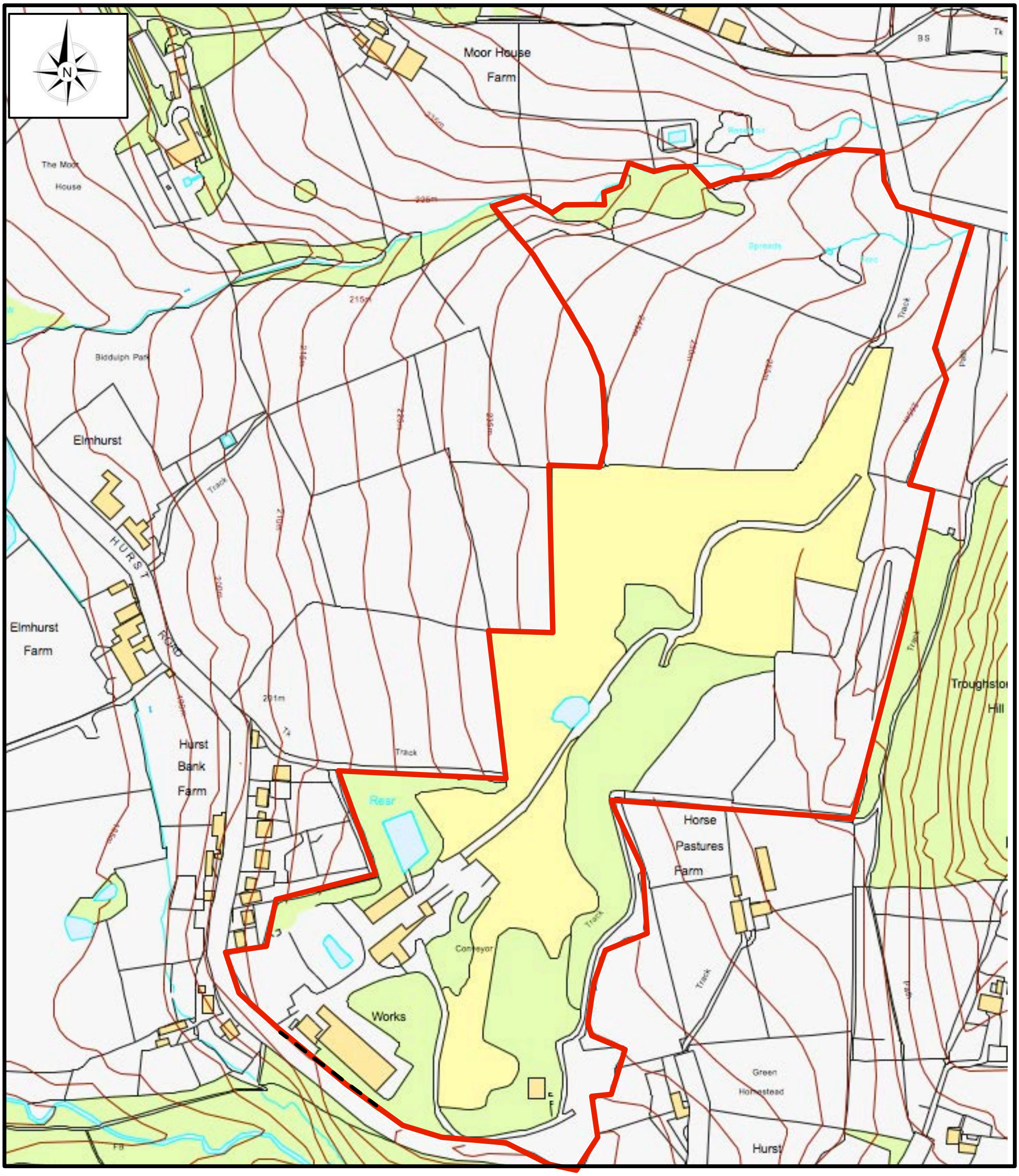
6.1 A combination of unfavourable geological horizons (a combination of glacial erosion and bedding plane dip angle) and the imminent cessation of mineral extraction at the 'sister' White Moss Quarry has, at this time, rendered the mineral reserve at Hurst Quarry uneconomically viable to extract.

6.2 Therefore, the proposed residential development does not sterilise an economically viable mineral and as such does not contradict any extant national

or local planning policy on the matter.

Site Plan

(Permitted Mineral Extraction Boundary)



Site: Hurst Quarry

Proposal: Supporting Info

Date: Feb 16

Scale: 1:3,000 @ A3

Ref: 115/9 - Red Line

Key:

Permission Boundary

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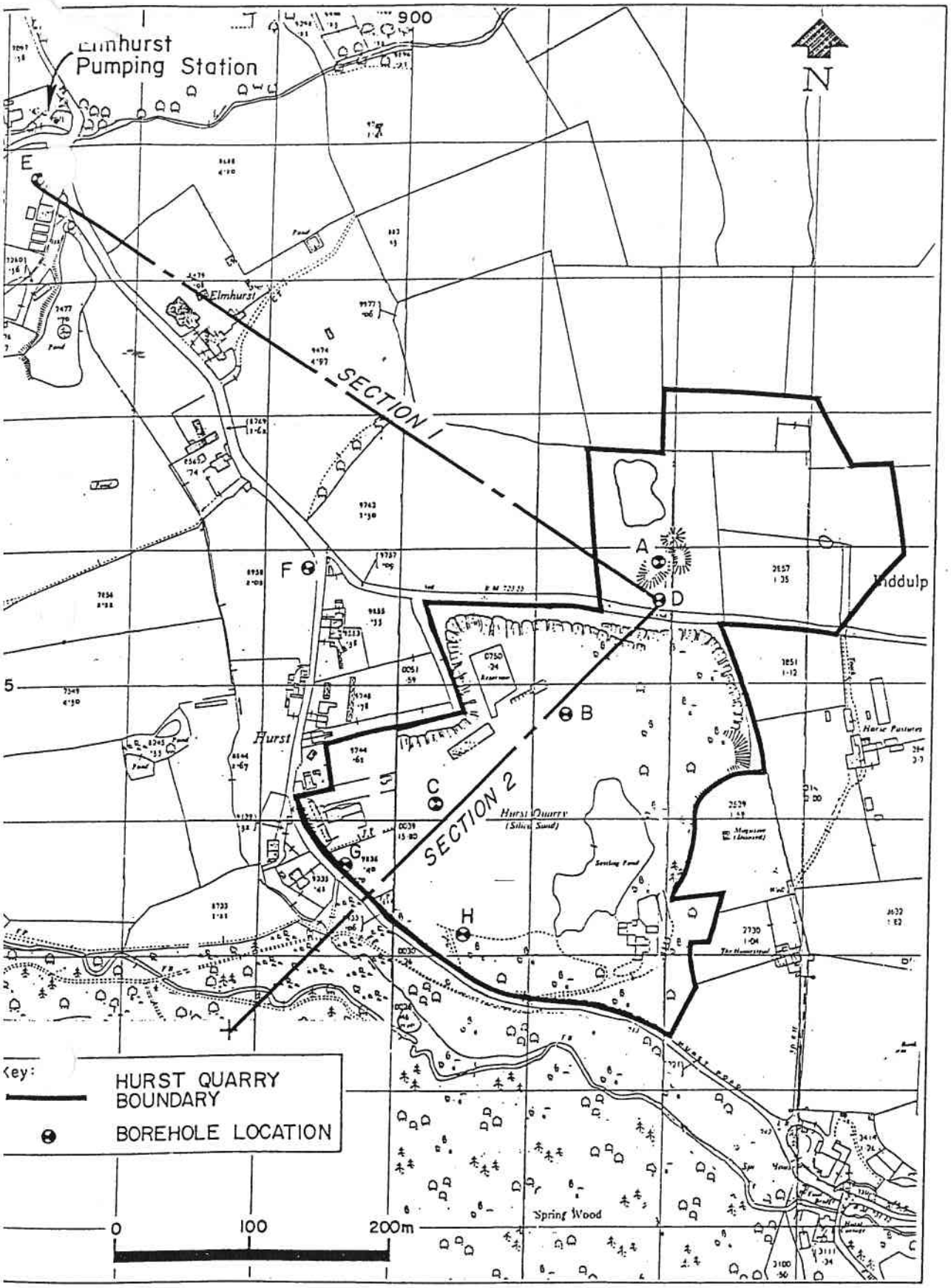
Appendix A

Geological Cross Sections



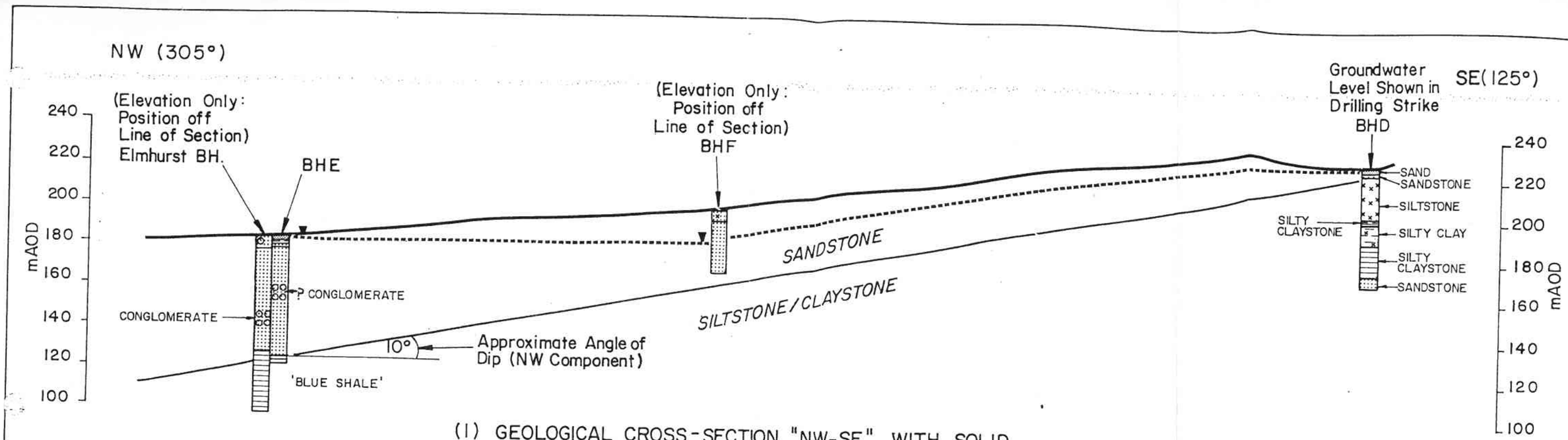
ENT:
HSS ENGINEERING

HURST QUARRY WASTE DISPOSAL SITE

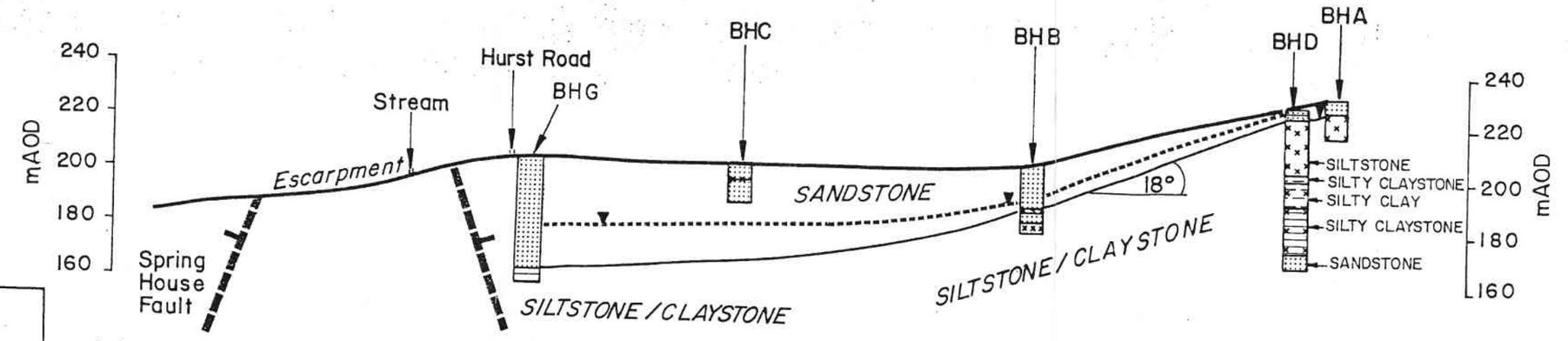
WING:
FIGURE 5
E EHOLE LOCATION PLAN

NO: 19110/R2/005
SCALE: AS SHOWN
DRAWN: KMT
CHECKED: MJB
DATE APRIL 1992

HYDROTECHNICA
Abbey Foregate Shrewsbury Shropshire SY2 6HP
Telephone: (0743) 236464 Telex: 35156 (HYTECH G)



(1) GEOLOGICAL CROSS-SECTION "NW-SE" WITH SOLID GEOLOGY ANNOTATED



(2) GEOLOGICAL CROSS-SECTION "SW-NE" WITH SOLID GEOLOGY ANNOTATED

KEY:

- Sand
- Sandstone
- Clay
- Claystone
- Siltstone
- Conglomerate
- Water Table
- Observed Water Level

Horizontal Scale

0 50 100m

CLIENT: HSS ENGINEERING

JOB: HURST QUARRY WASTE DISPOSAL SITE

DRAWING: FIGURE 6 GEOLOGICAL CROSS-SECTIONS

NO: 19110/R2/006 SCALE: AS SHOWN

DRAWN: KMT CHECKED: MJB

DATE: APRIL 1992

HYDROTECHNICA
Abbey Foregate Shrewsbury Shropshire SY2 6HP
Telephone: (0743) 236464 Telex: 35156 (HYTECH G)

Appendix B

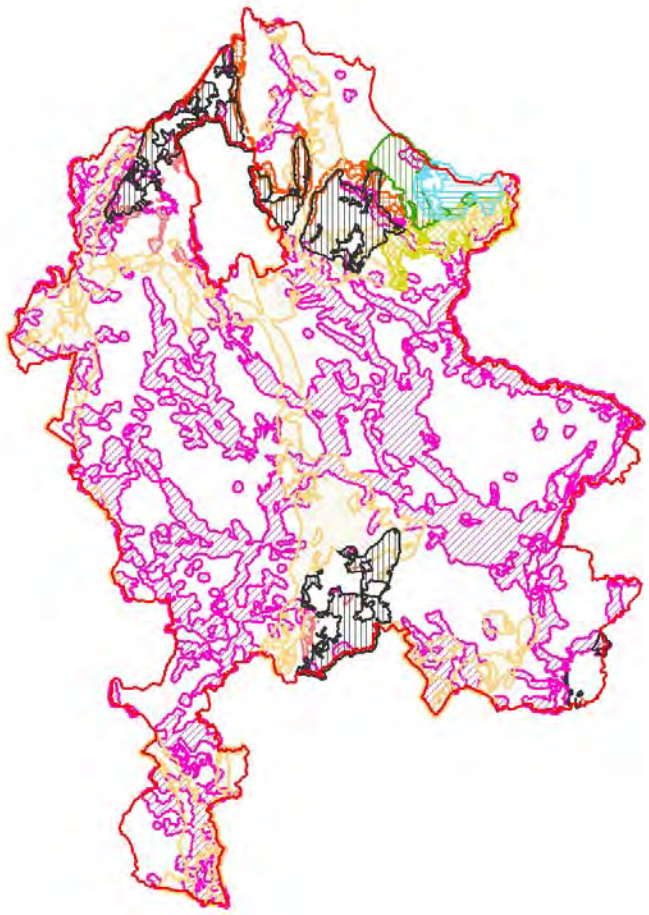
Mineral Safeguarding

British Geological Survey
NATURAL ENVIRONMENT RESEARCH COUNCIL

Provision of Geological Information and a Revision of Mineral Consultation Areas for Staffordshire County Council

Economic Minerals Programme

Commissioned Report CR/06/133

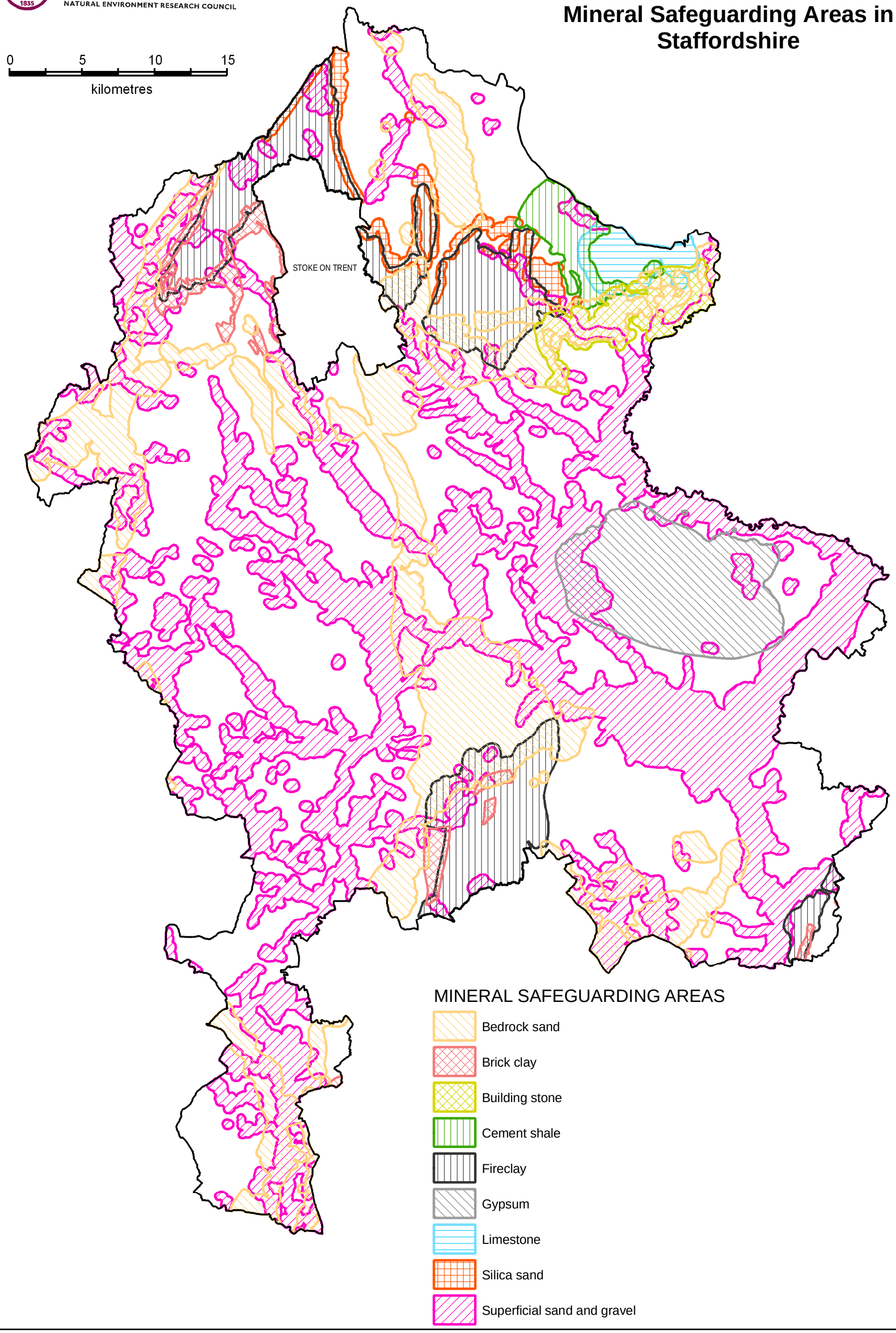


British Geological Survey
NATURAL ENVIRONMENT RESEARCH COUNCIL

FIGURE 6
Silica sand resources of Staffordshire with permitted sites

British Geological Survey
NATURAL ENVIRONMENT RESEARCH COUNCIL

FIGURE 12
Mineral Safeguarding Areas in Staffordshire



Appendix C

Hurst Quarry - Recent Planning History

Recent Planning History

Reference	Year	Proposal	Status
SM.10/11/101MW	2012	Aggregate Recycling	Refused
SM.03/04/101	2003	New Access	Granted
SM.EA/4V1	2000	Extension + Variation of Phasing	Granted
SM.EA/4	1999	First Mineral Review (ROMP)	Conditions Agreed