

ACCESS AGREEMENT FOR BOREHOLE MONITORING PURPOSES

FROM: High Speed Two (HS2) Limited
2 Snowhill
Snow Hill Queensway
Birmingham
B4 6GA
("HS2 Ltd")

TO: [Name]
[Address]
(the "Licensor")

Dear [Sir/Madam] OR [NAME]

HIGH SPEED TWO (HS2) RAIL PROJECT
Property: [insert] ("Property")
Title Number(s) of the Property: [insert] .

Our Ref: [insert]

1. General

1.1 HS2 Ltd requires access over and occupation of parts of the Property for the purpose of undertaking borehole excavation installation and monitoring as detailed at Annex 1 and any works associated or ancillary to such survey work ("Surveys").

1.2 The Licensor confirms that:

1.2.1 the Licensor has a freehold, leasehold or other proprietary interest in the Property;
and

EITHER

1.2.2 the Licensor has the legal right to grant the rights of access, occupation and other rights contained in this Licence and warrants that no other party's consent is needed to grant this Licence; or

1.2.3 the Licensor has notified HS2 Ltd of any other owners, occupiers, tenants, licensees or users of the Property.

1.3 In consideration of the obligations on HS2 Ltd's part contained in this Licence, the Licensor grants HS2 Ltd and those authorised by it the right:

1.3.1 to enter and take vehicular and pedestrian access to, from and over the Property using the access routes as detailed in Annex 1 (or any other route as agreed between the parties (acting reasonably)); and

- 1.3.2 to occupy the part or parts of the Property as shown in Annex 1 (or any other part or parts of the Property as agreed between the parties (acting reasonably))

for the purpose of carrying out the Surveys (with such reasonable materials, machinery, tools, plant and equipment as HS2 Ltd and those authorised by it consider necessary) as licensee only from the date of this Licence ("**Commencement Date**") at all reasonable times until the Expiry Date (as defined in clause 5.6.5).

- 1.4 The date of this Licence shall be the date on which this Licence has been signed by the final party to it.

2. **Obligations of HS2 Ltd**

In consideration of the rights granted by the Licensor, HS2 Ltd undertakes as follows:

- 2.1 if HS2 Ltd in its absolute discretion elects to carry out the Surveys, to procure any contractors engaged by HS2 Ltd to carry out the Surveys do so in a good and workmanlike manner;
- 2.2 to pay to the Licensor in accordance with Annex 2 the Licence Fee (as defined in Annex 2) within 30 days of the date of the Access Date Prior Notice (as defined in clause 2.5.1.1) ;
- 2.3 to pay to the Licensor in accordance with Annex 2A and within 30 days of receipt of written demand the Licensor's reasonable and properly incurred professional fees (together with irrecoverable VAT) arising directly in connection with this Licence, subject always to:
- 2.3.1 the Licensor agreeing with HS2 Ltd their proposed professional fees before incurring them; and
- 2.3.2 the Licensor providing a valid VAT invoice made out to High Speed Two (HS2) Limited, 2 Snowhill, Queensway, Birmingham B4 6GA or such other address as notified to the Licensor from time to time

PROVIDED THAT the Licensor may not make any written demand under this clause 2.3 prior to the Commencement Date;

- 2.4 to comply with the 'Ground investigation delivery guidance notes' as attached at Annex 3;

2.5 *Entry*

- 2.5.1 to provide to the Licensor:
- 2.5.1.1 at least 10 working days' prior notice of when access will first be taken under the rights granted by this Licence ("**Access Date Prior Notice**"); and
- 2.5.1.2 at least 72 hours' prior notice (except in case of emergency) for each period of subsequent access and follow on or monitoring activities which will form part of the Surveys;

- 2.6 Making good

- 2.6.1 within a reasonable timeframe following completion of the Surveys to make good to the Licensor's reasonable satisfaction any physical damage HS2 Ltd has caused to the Property as a result of undertaking the Surveys; or
- 2.6.2 (if so agreed otherwise) to reimburse the reasonable and proper costs incurred by the Licensor in making good such damage within a reasonable period of demand (being not less than 30 days); and

PROVIDED THAT

- 2.6.3 no payments will be due under this clause 2.6 from HS2 Ltd to the Licensor at any time during which the works required or costs payable under clause 2.6.1. or clause 2.6.2 are in dispute or awaiting determination under clause 5.2.

2.7 *Indemnity*

2.7.1 to indemnify the Licensor against all direct losses (which in this clause 2.7 shall mean any proper claims, demands, damages, losses and (subject to provisos (a), (b), (c) and (d) immediately below) reasonably and properly incurred costs and expenses, but shall exclude any compensation which has been or is to be paid in accordance with clause 2.6) arising from a failure by HS2 Ltd (or those authorised by it) to comply with its obligations in this Licence, unless such actions, claims or demands arise as a result of the default, wrongful act or negligence of the Licensor (or its employees, agents, representatives, workmen, contractors, licensees or invitees) SUBJECT TO:

- (a) the Licensor giving written notice to HS2 Ltd as soon as practicable of any potential claim under this clause 2.7.1;
- (b) the Licensor at the cost of HS2 Ltd (such costs to be reasonably and properly incurred and approved by HS2 Ltd in advance of them being incurred) providing such further information and assistance as HS2 Ltd may reasonably request in relation to any claim under this clause 2.7.1;
- (c) the Licensor mitigating any losses it may suffer or incur as a result of an event which may give rise to a claim under this indemnity as far as is reasonably possible; and
- (d) the Licensor not making any admission of liability or settling, agreeing or compromising any action, claim or demand which may give rise to a claim under this clause 2.7.1 without the prior written consent of HS2 Ltd.

2.7.2 for the avoidance of doubt, no payments will be due under this clause 2.7 or otherwise under this Licence from HS2 Ltd to the Licensor at any time during which any works or costs are in dispute or awaiting determination under clause 5.2;

2.8 it is agreed that HS2 Ltd will not be obliged to make any payments to the Licensor at any time during which any making good works, reinstatement works or reimbursement of costs under clause 2.6 are in dispute or awaiting determination under clause 5.2 but this does not include

any payments under clause 2.2 or 2.3 which have already accrued at the date of reference for determination under clause 5.2 which shall remain payable.

3. **Obligations of the Licensor**

In consideration of the obligations on the part of HS2 Ltd, the Licensor undertakes as follows:

- 3.1 to allow all necessary access to the Property and to provide all reasonable co-operation to enable HS2 Ltd and/or those authorised by it to complete the Surveys and to exercise the rights granted by this Licence;
- 3.2 not to enter nor allow any third party under the control of the Licensor to enter or remain on any part of the Property where Surveys and/or any associated works are being undertaken without the prior written consent of HS2 Ltd (such consent not to be unreasonably withheld or delayed);
- 3.3 following request from HS2 Ltd and/or those authorised by it, to provide any relevant information about any hazards (including man-made hazards) or potential hazards on the Property to ensure the health and safety of those persons undertaking the Surveys to the extent that the Licensor has such information available to it;
- 3.4 not to obstruct nor interfere, nor allow any third parties under the control of the Licensor (including for the avoidance of doubt and without limitation employees agents representatives workmen contractors licensees or invitees) to obstruct or interfere with the Surveys;
- 3.5 should the Licensor intend to transfer or otherwise dispose of the Property or any part of it or grant any interest or occupational rights in relation to the Property during the period of this Licence, to:
 - 3.5.1 give HS2 Ltd not less than 28 days' prior notice of such transfer or disposal or grant and the identity of the proposed party to whom a transfer or disposal is to be made;
 - 3.5.2 use reasonable endeavours to ensure that the proposed party identified under clause 3.5.1 enters into a new licence with HS2 on the terms of this Licence; and
 - 3.5.3 notify HS2 Ltd in writing as soon as reasonably practicable following any third party becoming an owner, occupier, tenant, licensee or user of the Property.
- 3.6 to act reasonably, promptly and diligently when asked to provide approval or to agree any matters pursuant to the terms of this Licence; and
- 3.7 to comply with the obligations imposed on the Licensor in clause 2 of this Licence.

4. **Monitoring Facilities**

- 4.1 Where any in situ monitoring facilities ("**Monitoring Facilities**") are required to be retained on the Property, HS2 Ltd and/or those authorised by it will provide the Licensor or its nominated representative with the reasonably necessary information about the Monitoring Facilities and

the associated programme and shall liaise with the Licensor or its nominated representative to explain what is required.

4.2 In consideration of the Licence Fee the Licensor grants HS2 Ltd and/or those authorised by it the right to install and temporarily retain the Monitoring Facilities on the Property until the Expiry Date (as defined below), together with the right to enter and take vehicular and pedestrian access over the Property at all reasonable times (or in an emergency at any times) for the purpose of checking, monitoring and eventually removing the Monitoring Facilities.

4.3 Where any Monitoring Facilities are retained on the Property under this clause 4, the Licensor shall:

- (i) not interfere with or allow any third parties (including for the avoidance of doubt employees agents representatives workmen contractors licensees or invitees) to interfere with any the Monitoring Facilities; and
- (ii) promptly notify HS2 Ltd of any event which may affect the Monitoring Facilities or any damage to such facilities.

4.4 Where Monitoring Facilities are required on the Property for a period beyond the Expiry Date, the Licensor and HS2 Ltd shall both use reasonable endeavours to agree and enter into an extension to this agreement as soon as reasonably practicable.

5. General

5.1 This Licence is personal to HS2 Ltd and does not confer any leasehold or tenancy interest in the Property, nor any exclusive possession of the Property or any part of it.

5.2 The parties shall use reasonable endeavours to resolve any dispute arising in connection with this Licence between themselves. In the event of a failure to resolve any such dispute within 30 days of one party notifying the other of the dispute in accordance with clauses 5.4 and 5.5:

5.2.1 either party may refer the dispute for expert determination;

5.2.2 the expert shall be appointed jointly by the parties to this Licence (who in default of agreement shall on application by either party be appointed by the President of the Royal Institution of Chartered Surveyors or the President of the Central Association of Agricultural Valuers) (the “Expert”);

5.2.3 the decision of the Expert shall be final (except in the case of manifest error);

5.2.4 the costs of the parties and the costs of the Expert shall be paid by HS2 Ltd and the Licensor in such proportions as the Expert may direct and the Expert shall be instructed to award such costs in the proportions the Expert shall see fit;

PROVIDED THAT

5.2.5 in the event that HS2 Ltd has introduced either the small claims procedure or the interim small claims procedure (both as described in the ‘Ground investigation

delivery guidance notes' set out in Annex 3) and one of these procedures is applicable to the relevant dispute (including, without limitation, the value of the relevant dispute), then the matter will be subject to the small claims procedure or interim small claims procedure (as applicable) and will not be subject to expert determination under clauses 5.2.1 to 5.2.4

5.3 HS2 Ltd shall be permitted to perform any or all of its obligations under this Licence by procuring that those obligations are properly performed on its behalf.

5.4 Any notice under this Licence served by the Licensor on HS2 Ltd shall be sent to HS2 Ltd's Land Access Lead at High Speed Two (HS2) Ltd, 2 Snowhill, Queensway, Birmingham, B4 6GA or such other address as advised by HS2 Ltd from time to time with a copy to the Public Enquiries Helpdesk at the same address.

5.5 Any written notice under this Licence served by HS2 Ltd on the Licensor shall be validly served where such notice is sent to the Licensor at the address given at the head of this Licence or by email where the Licensor has provided an email address to HS2 Ltd and unless time of actual receipt is proved any written notice sent by the following means is to be treated as having been served:

5.5.1 if sent by post, on the second working day after posting; and

5.5.2 if sent by email, immediately on being sent.

5.6 *Termination*

5.6.1 Subject to clause 5.6.2, this Licence expires on the earlier of:

5.6.1.1 the date 24 months from the date of this Licence;

5.6.1.2 the date on which HS2 Ltd gives notice in writing to the Licensor that it does not intend to carry out any further surveys or monitoring under this Licence; and

5.6.1.3 the date specified in any notice served on the Licensor by HS2 Ltd pursuant to clause 5.6.7.

5.6.2 The exercise of powers of permanent acquisition or temporary possession conferred by the Act over the Property or any part of it shall terminate this Licence in respect of that part of the Property over which such powers are exercised from the date of possession or acquisition as the case may be. For the avoidance of doubt, the exercise of powers of permanent acquisition or temporary possession over part of the Property shall not affect the continued subsistence of the Licence in respect of the remainder of the Property.

5.6.3 In clause 5.6.2 "permanent acquisition" excludes;

(a) the acquisition or creation of easements or other rights over land including restrictive covenants; and

(b) the acquisition of subsoil.

5.6.4 For the purposes of this clause 5.6, "Act" means any Act of Parliament relating to the authorisation, planning and/or construction of a high speed railway line in Great Britain.

5.6.5 For the purposes of this Licence "Expiry Date" shall mean the date on which the Licence comes to an end under clause 5.6.

5.6.6 When this Licence ends it will be without prejudice to any outstanding claims between HS2 Ltd and the Licensor.

5.6.7 HS2 Ltd may terminate this Licence at any time and for any reason by serving written notice on the Licensor.

5.7 HS2 Ltd and the Licensor agree that:

5.7.1 this Licence constitutes the entire agreement between the parties in relation to the carrying out of the Surveys; and

5.7.2 if there are any inconsistencies between the terms of clauses 1 to 5 of this Licence and the terms of the Annexes to this Licence, the terms of clauses 1 to 5 of this Licence shall prevail.

SIGNED for and on behalf of the parties:

Signed: Dated:

Name:

For and on behalf of HS2 Ltd

Signed: Dated:

Name:

For and on behalf of the Licensor

CONTACT DETAILS

The Owner's preferred point of contact from HS2 is as follows:

Contact name (if different from above)

Phone

Email

Postal address
.....
.....
.....
.....

Any other special instructions:
.....
.....
.....
.....
.....

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ANNEX 1

**DETAILS OF SURVEYS TO BE UNDERTAKEN AND PEDESTRIAN / VEHICULAR ACCESS ROUTES FOR
INSTALLATION AND MONITORING PURPOSES**

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ANNEX 2
PAYMENT SCHEME

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| ACTIVITY | RATES (EXCLUSIVE OF VAT) |
|--|--|
| 1. Licence Fee | |
| <p>Where the Property is subject to a joint tenancy / ownership or multiple tenancies / ownerships / occupations and HS2 Ltd has entered or proposes to enter into this Licence or separate licences with the freeholder(s) and the leaseholder(s) and other owners or occupiers, multiple Licence Fee payments will not be made for the Property.</p> <p>Where there is / are freeholder(s) and leaseholder(s) or occupier(s) the Licence Fee for the Property will be shared between the freeholder(s) and the leaseholder(s) or occupier(s) in a 25:75 split.</p> | £600 per completed borehole undertaken |

Notes:

- Scale of Charges listed above is fixed for five years from 1 January 2017.
- In the case of a Licensor who has opted to tax the Property any invoice must be a valid value added tax (“VAT”) invoice addressed to High Speed Two (HS2) Limited, 2 Snowhill, Queensway, Birmingham B4 6GA and any irrecoverable VAT will be paid by HS2 Ltd.
- HS2 Ltd will not reimburse any time based charges for any Licensor involvement or input in the Surveys pursuant to this Licence.

ANNEX 2A

PROFESSIONAL FEES AND MANAGEMENT FEES

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PROFESSIONAL FEES AND MANAGEMENT FEES FOR ACCESS AGREEMENT FOR BOREHOLE MONITORING PURPOSES - ANNEX 2A

- HS2 Ltd would expect that any professional fees for the Licensor’s advisors involved in completing this Licence will be reasonable and proper, given that it is a standard document and procedure. Generally, reasonable professional fees based on reasonable hourly rates will be paid subject to the production of timesheets, diary records, activity logs and other relevant evidence (“**Supporting Evidence**”) and only in accordance with the terms of this Licence. As a guide and unless otherwise agreed, HS2 Ltd would expect the time commitment by the Licensor’s advisors to be in line with the table below and that appropriately qualified advisors (which may include property agents, surveyors, solicitors and agricultural specialists) will be used. HS2 Ltd would expect the professional advisors (including their relative seniority) used to be proportionate to the type of work.
- Additionally, if there is a justifiable need for management resource to be provided by the Licensor during the term of this Licence, such justifiable need shall be agreed in advance of incurring any fees with HS2 Ltd, then reasonable management fees for this will also be considered by HS2 Ltd.
- In line with current HMRC guidance, HS2 Ltd will pay for mileage at [45p/mile] up to 10,000 miles and [25p/mile] thereafter.
- HS2 Ltd already has fee arrangements in place with many land owner appointed property agents, which will be used where such property agents are appointed.

| ACTIVITY | CAPPED TIME CHARGES – HS2 Ltd will only reimburse up to the amount / number of hours specified of professional advice time (unless otherwise agreed by HS2 Ltd in advance) |
|--|---|
| The completion of this Licence to allow the Surveys. | £600 |

Notes:

- HS2 Ltd will not reimburse any time based charges for any Licensor’s involvement or input in the Surveys pursuant to this Licence unless otherwise agreed under the terms of this Licence.

HS2 Ltd will reimburse the Licensor for its reasonable and properly incurred professional and management fees subject always to:

- The provisions of this Licence;

- Submission of a copy of the Licensor's advisors' valid VAT invoice addressed to the Landowner, or addressed to the Landowner c/o HS2, or include reference to HS2 as the party responsible for payment. Invoice should be sent to 2 Snowhill, Queensway, Birmingham B4 6GA. The net value of the professional fee will be paid where the Licensor is VAT registered and able to recover the VAT. The gross value of the professional fee will be paid where the Licensor is not VAT registered. Where the Licensor is VAT registered but unable to claim the VAT, the gross value of the professional fee will be paid after suitable evidence has been provided by the Licensor of its VAT irrecoverability position. The invoice should clearly state whether the Landowner is VAT registered or not.
- Supporting Evidence to demonstrate time spent by the Licensor's advisors on the approved and agreed scope of work which is acceptable to HS2 Ltd; and
- Receipts for any disbursements or travel costs (HMRC agreed rates apply).

In addition to any restrictions in the terms of this Licence, the following fees and costs will be excluded from the payment of any Licensor's professional and management fees:

- Costs and fees which are not directly resulting from the grant of this Licence or the Surveys or which a claimant incurs for the purpose of obtaining information about the HS2 project, drawing up and depositing petitions and impact on their interests, or on canvassing for instructions;
- Costs and fees which in the opinion of HS2 Ltd (acting reasonably) are not reasonably necessary and are reasonably avoidable;
- Recoverable VAT or other recoverable sums;
- Any fees which are "doubled up" as between one or more advisors. For example where the Licensor has dismissed one advisor and subsequently appointed another, HS2 Ltd would not normally be expected to pay in total a greater fee than if only one advisor had been employed; and
- Avoidable or unreasonable disbursements, travel and subsistence.

Invoicing

- Invoices shall be sent to:

High Speed Two (HS2) Limited
2 Snowhill
Queensway
Birmingham
B4 6GA

Specifying the Property, HS2 Ltd.'s Reference and the Licensor's details and attaching the Supporting Evidence.

ANNEX 3

HS2 LTD – GROUND INVESTIGATION DELIVERY GUIDANCE NOTES

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Ground Investigation Delivery Guidance Notes

Document no.: LWM-HS2-LP-GDE-000-000002

| Revision | Author | Checked by | Approved by | Date approved | Reason for revision |
|----------|----------------------|------------------|-----------------|---------------|--|
| P01 | Keith Fairey | Andrew Rodger | Tim Musgrave | 19/02/2015 | |
| P02 | Nicola Harrington | Tim Musgrave | Peter Spittall | | Updated post RA for revised GI licence |
| | | | | | |

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1 Purpose

- 1.1.1 These Delivery Guidance Notes (DGN) are related to the Ground Investigation Programme for Phase One London - West Midlands route of the proposed High Speed Two (HS2) rail network and for Phase 2a and 2b of the rail network (hereafter referred to as the Proposed Scheme) and have been prepared to offer guidance on how High Speed Two (HS2) Limited (hereafter referred to as HS2) and its appointed contractors will deliver the Ground Investigation Programme.
- 1.1.2 These DGN will continue to evolve and are subject to refinement, amendment and expansion as necessary as the project design, assessment and Parliamentary processes develop.
- 1.1.3 These DGN set out a series of proposed measures to be considered by HS2 and its contractors throughout the ground investigation fieldwork to:
- to provide safe and effective planning, management and control over potential impacts upon people, businesses and the natural and historic environment; and
 - to provide the mechanisms to inform the land owners and their representatives throughout the ground investigation fieldwork.
- 1.1.1 HS2 and its contractors will comply as a minimum with applicable environmental legislation at the time of delivery. For this reason the applicable statutory requirements are not repeated within these DGN. Further management controls on specific areas, such as dust, noise and vibration management, will be considered from industry best practice guidance where appropriate.

2 Scope

- 2.1.1 These DGN set out a series of proposed measures to be considered by HS2 and its contractors throughout the ground investigation fieldwork.
- 2.1.2 This document comprises the following sections:
- Purpose of the DGN (Section **Error! Reference source not found.**) - which includes reference to measures and standards to protect private land owner interests and the environment during the ground investigation fieldwork;
 - Policy and environmental management principles (Section 6) – which form the basis of early environmental management to be implemented during the ground investigation fieldwork;
 - Implementation (Section 7) – which describes the mechanisms by which general environmental management and specific requirements are passed from HS2 to its contractors; and
 - General requirements by environmental topic (Section 9 to 18) – which set out the measures that will be implemented to limit disturbance from the ground investigation fieldwork as far as reasonably practicable in relation to the following topics :

-
- General requirements related to hours of work, pollution incident control and security;
- Agriculture, forestry and soils;
- Air quality;
- Cultural heritage;
- Ecology;
- Land quality;
- Noise and vibration;
- Traffic and transport; and
- Water resources and flood risk.

3 Definitions and abbreviations

3.1.1 Can be found at the end of this document in Section 19

4 Responsibilities

4.1.1 Are detailed within the text of the document

5 Preliminary

5.1 Introduction

5.1.1 These DGN will continue to evolve and are subject to refinement, amendment and expansion as necessary as the project design, assessment and Parliamentary processes develop.

5.2 What is Ground Investigation?

5.2.1 Ground Investigation is the examination and study of the soil, rocks and groundwater below the surface. A number of methods are used to obtain samples and to monitor and test them.

5.2.2 Boreholes may be dug by hand in constrained and congested areas or by using a drilling rig in more open areas. Ground investigation may also require the opening of trial pits or trenches and a range of supplementary sampling and monitoring activities, some intrusive, some non-intrusive.

5.2.3 Off-site laboratory tests are also carried out on many of the samples to supplement the information gathered on site. The aim is to discover the properties – especially the strength – of the soils and rocks in a particular location, the nature and level of the groundwater and to provide information before design and construction of the railway.

- 5.2.4 HS2 requires information about the ground that we intend to build the railway on (or in). This will enable determination of the detailed measures needed for the structures we intend to build, such as bridges, viaducts, stations and depots. It will also provide information for the design of road and river diversions, tunnels, cuttings and embankments.
- 5.2.5 The Ground Investigations will provide information on the nature and extent of any contaminated land which could be disturbed by the works, as well as confirming the location of buried utilities services and essential utility diversions.
- 5.2.6 Data from these preliminary Ground Investigations will ensure that the contractors designing and building the main works can do so safely, economically and efficiently. The information will also reduce the risk of encountering unexpected ground conditions during construction.
- 5.2.7 HS2's engineering development work uses records of previous ground investigations and other geological information held by the British Geological Survey and others. This information is extremely valuable. Unfortunately, though, it is not typically available for the exact HS2 route, especially in rural areas. Moreover, it may not provide relevant information or reach a depth sufficient for proposed tunnels.

5.3 Scope of investigation

- 5.3.1 The ground investigation fieldwork will normally be undertaken in two primary phases described as follows.
- 5.3.2 Phase 1: land based (non-intrusive) geophysical mapping
- 5.3.3 In accordance with adopted industry practices the position and the nature of any above and below ground services at or near the proposed exploratory hole location (or other location) shall be identified as accurately as possible by means of ground penetrating radar (GPR) survey techniques, opening of existing manholes, service covers, ducts and conduits and the investigation of any above ground cabinets and structures. Obvious surface features, drains, open watercourses, indentations and partially buried structures along with potential contamination sources will all be identified and factored into the Phase 2 works.
- 5.3.4 Phase 2: intrusive ground investigation exploratory holes
- Fieldwork
- 5.3.5 The information gathered from the land based (non-intrusive) geophysical mapping should enable confirmation on the location of the intrusive ground investigation exploratory holes. The information obtained from this survey and review of desk study information may result in the repositioning of an exploratory hole. Any repositioning will need to be confirmed by HS2's Ground Investigation Delivery Manager (GIDM) and agreed with the land owner.
- 5.3.6 Inspection pits shall be undertaken in many locations as an additional precaution against possible service strikes. The information obtained from these inspection pits may also result in the repositioning of the exploratory hole, again to be agreed with the GIDM and the land owner.
- 5.3.7 Phase 2 will comprise the following;

- Cable Percussion borehole
- Cable Percussion borehole with rotary follow on
- Pavement coring
- Structural Investigations
- Window Sampling and penetration testing
- Trial trenches (for confirmatory utility identification following the GPR survey)
- Surface Water Sampling

5.3.8 In addition to the above, structural cores form part of the GI works scope.

- 100mm (nominal diameter) structural cores at specified locations to inform the structural integrity of various structures. All cores will be retained, logged and photographed.

5.3.9 Other fieldwork requirements and provisional study locations may also be presented in the plans and schedules that will be accompanying these DGN.

- Sampling and monitoring

Both geotechnical and geo-environmental sampling and monitoring will be required.

- In-situ Testing

Standard Penetration Test (SPT) testing will be required in selected exploratory holes. Information on other supplemental in-situ testing can be supplied upon request

- Instrumentation

5.3.10 The following types of instrumentation may be installed at selected locations;

Combined or individual gas and groundwater standpipe; building movement or slope stability monitors; noise & vibration monitoring stations during the GI activities and groundwater (sampling and monitoring) and ground gas monitoring at all standpipe locations

- Laboratory Testing
 - Geotechnical laboratory testing of soils, rocks and groundwater is required for the design of tunnel and associated structures in addition to material reuse.

5.3.11 Geoenvironmental laboratory testing is required.

6 Policy and environmental management principles

6.1 HS2 sustainability policy

6.1.1 HS2 has developed and is implementing a sustainability policy, which is included at Annex A. The policy sets out both the corporate approach to be adopted by HS2 to incorporating environmental and sustainability aspects and the high level principles which will define how these matters will be addressed. All contractors appointed by HS2 on the ground investigation fieldwork and any of their sub-contractors will be required to comply with the requirements of the sustainability policy.

6.2 Statutory Requirements

6.2.1 HS2 will seek certain regulatory and statutory approvals from statutory bodies and undertakers e.g. the Environment Agency (EA) and Highway Authorities. The following matters are considered to be integral to the ground investigation fieldwork and will be reviewed by the contractor as part of the pre-commencement approval requirements:

- storage sites for works material, spoil or plant and machinery;
- artificial lighting on or near the highway;
- dust suppression in close proximity to sensitive receptors;
- road mud prevention measures; and
- Contamination risk and the protection of watercourses.

6.2.2 Relevant existing statutory controls will continue to apply to HS2 and its contractors e.g. relating to the environmental permitting regime for discharges into watercourses.

7 Implementation

7.1 Enforcement

7.1.1 These DGN along with the contract documentation cover the planning and undertaking of the ground investigation fieldwork. The responsibility for implementation will be with HS2 and its appointed contractors by means of the works contracts. The contracts will incorporate both:

- general requirements; and
- site specific requirements, some of which may not be immediately evident at the point of initial drafting.

7.1.2 The appointed contractors and their suppliers will be required to comply with the terms of the contract as set down by HS2 and appropriate action will be taken by HS2 as required to ensure compliance.

7.1.3 The general requirements are listed in the following sections of these DGN and will be applicable to the whole of the Ground Investigation Programme.

7.2 Site monitoring

7.2.1 The appointed contractors will undertake the necessary monitoring to comply with the requirements of these DGN and the contract plus any additional consent requirements that emerge from engagement and approval from statutory bodies. Monitoring may include:

- monitoring the effectiveness of mitigation ;
- monitoring the impact of the Ground Investigation works; and
- taking other actions as may be necessary to enable compliance.

7.2.2 Monitoring, together with provisions for any corrective action required, will be implemented under the contract.

7.3 Training and competence

7.3.1 HS2 has selected its GI contractors through a competitive procurement process which at each stage has questioned the skill, competencies, safety culture and general ability to deliver the works satisfactorily on a broad range of issues. The performance of these contractors will be regularly monitored throughout the GI works delivery programme.

7.3.2 HS2 will require all contractors to employ an appropriately qualified and suitably experienced workforce, where appropriate.

7.3.3 HS2's contractors will be responsible for identifying any training needs of their personnel to meet HS2 strict requirements and to ensure that appropriate

suitably qualified and experienced professionals to be engaged for this purpose. Training will include site briefings and toolbox talks as appropriate to equip relevant staff with the necessary level of knowledge on health, safety, community relations and environmental topics, and an ability to follow environmental control measures and to advise employees of changing circumstances as work progresses.

7.4 Considerate constructors

7.4.1 All lead contractors will be required to sign up and adhere to the Considerate Constructors Scheme (see Paragraph 19 for more information).

7.5 Contractors' method statements

7.5.1 HS2's contractors will set out the procedures to be followed for fieldwork operations in method statements which will address health, safety, site security and the environmental issues associated with fieldwork operations. The operations requiring a specific and detailed method statement will be identified using a risk based approach. As a minimum, method statements will be prepared for site preparation, investigation activities and reinstatement of land and/or infrastructure following completion of the main fieldwork operations.

7.5.2 Method statements will define any specific environmental control measures (including cultural heritage protection) to be implemented to meet the requirements of the contract. Individual site issues and constraints will be recorded via Location Specific Guidance Sheets (LSGS), a bespoke register and Gateway Report for each aspect of the proposed works programme.

7.5.3 The contractors' approach to method statements will be reviewed and accepted by the GI Delivery Manager acting on behalf of HS2.

7.6 Supervision

7.6.1 HS2's contractors will appoint sufficient suitably qualified and experienced personnel to supervise the ground investigation fieldwork. This will include as appropriate environmental management staff, with relevant experience in the environmental disciplines likely to be encountered during the fieldwork operations. They will be retained during the delivery programme to advise the contract management team, and supervise and report on the implementation of appropriate environmental mitigation measures and safeguards.

7.6.2 HS2 has appointed a Ground Investigation Delivery Manager (GIDM) to oversee the delivery programme.

7.7 Contact person

- 7.7.1 At each construction site, a person will be identified, who will be the initial point of contact for all management delivery matters. HS2 will retain the responsibility for liaison with the regulatory authorities.

8 General requirements

8.1 Community relations

- 8.1.1 HS2 and its contractors will implement a stakeholder information framework, to provide appropriate information, and to be the first point of contact to resolve community issues. HS2 will take reasonable steps to report on progress of the ground investigation fieldwork.

8.2 Advance notice of works

- 8.2.1 HS2 and its contractors will ensure that local residents, directly impacted businesses, local authorities and parish councils impacted by the proposed ground investigation fieldwork, will be informed in advance of works taking place by methods deemed appropriate. The notifications will detail the estimated duration of the works, the working hours and the nature of the works. All notifications will include a central helpline number.

- 8.2.2 Information on the works will also be available on the HS2 website.

8.3 Central helpline

- 8.3.1 HS2 with support from its contractors, will maintain an operations website (which includes an email function) and telephone helpline staffed 24 hours a day, 7 days a week, to handle enquiries from the general public and local businesses regarding ground investigation fieldwork delivery activities. It will also act as a first point of contact for information in the case of any emergency or an incident. The helpline details will be made available to land owners and widely promoted and displayed on site signboards and hoardings.

8.4 Small Claims Procedure

- 8.4.1 For Phase one works, HS2 has established a small claims procedure, modelled on those operated for the construction of the Channel Tunnel, the Channel Tunnel Rail Link (CTRL) and Crossrail, to provide a positive and clear mechanism for minor construction related residential, business or agricultural claims up to a value to be determined at the time.

- 8.4.2 This procedure is intended to be an informal approach to handling small claims that is designed to give a prompt response at minimum inconvenience to claimants. It is a voluntary arrangement that does not affect statutory rights of redress.

8.4.3 The procedure will cater for claims related to damage to property and effects arising from the delivery of the ground investigation fieldwork and other construction works, but not for personal injury.

8.4.4 Prior to Royal Assent on Phase 2a and 2b routes, an Interim small claims procedure will be established to specifically address issues resulting from the ground investigation fieldwork. Claims with a value up to £7,500 will be dealt with under this procedure. Claims with a higher value will be escalated accordingly.

8.5 Working hours

8.5.1 Consents

- HS2's contractors will seek to obtain consents from the relevant local authority under Section 61 of the Control of Pollution Act 1974 (Section 61) for works, where deemed appropriate. Consent for works on the public highway is dealt with via Section 171 of the New Roads and Street Works Act 1991 (NRSWA) and is dealt with in a later paragraph of these DGN.

8.5.2 Core working hours

- Core working hours will be from 08:00 to 18:00 on weekdays (excluding bank holidays) and from 08:00 to 13:00 on Saturdays. HS2 will require that its contractors adhere to these core working hours for each site as far as is reasonably practicable or unless otherwise permitted under Section 61 of the Control of Pollution Act 1974.
- Except in the case of an emergency, any work required to be undertaken outside of core hours will be agreed with the land owner prior to undertaking the works.

8.5.3 Start up and close down periods

- To maximise productivity within the core hours, HS2 contractors may require a period of up to one hour before and up to one hour after normal working hours for start-up and close down of activities. This may include but not be limited to deliveries, movement to place of work, unloading, maintenance and general preparation works. This will not include operation of plant or machinery likely to cause a disturbance to local residents or businesses.

8.5.4 Additional working hours

- Work within operational railway boundaries and work requiring possession of major transport infrastructure may be undertaken during night time, Saturday afternoon, Sunday and/or bank holiday working for reasons of safety or operational necessity and will often involve

consecutive nights work over weekend possessions, and may on occasion involve longer durations. Activities outside core working hours that could give rise to disturbance will be kept to a reasonably practicable minimum.

- 8.5.5 Certain ground investigation fieldwork is weather dependent. In these instances HS2's contractors may seek to extend the core working hours and/or days for such operations with the consent of the relevant local authority or land owner as appropriate.
- 8.5.6 Certain other specific works will require extended working hours for reasons of engineering practicability. These activities include, but are not limited to, major structural investigations and in locations with complex access limitations. Non-intrusive surveys, e.g. for wildlife or engineering purposes, may also need to be carried out outside of core working hours.
- 8.5.7 In the case of work required in response to an emergency or which if not completed would be unsafe or harmful to the works, staff, public or local environment, the relevant local authority or land owner as appropriate will be informed as soon as reasonably practicable of the reasons for, and likely duration of, the works.
- 8.5.8 Abnormal deliveries
- Abnormal loads or those that require an escort may be delivered outside core working hours subject to the requirements and approval of the relevant authorities.

8.6 Construction site layout and good housekeeping

- 8.6.1 To reduce the likelihood of either an incident or nuisance occurring the following measures will be used, adopted or managed where reasonably practicable:
- safe treatment of perimeters, cleanliness on site, waste management;
 - removal or stopping and sealing of drains and sewers taken out of use;
 - prevention of discharge of site runoff to ditches, watercourses, drains, sewers or soakaways without agreement of the appropriate authority;
 - maintenance of wheel washing facilities as and when they are installed or other containment measures;
 - location of storage, machinery, equipment and temporary buildings to minimise environmental effects;
 - controls on lighting/illumination to minimise visual intrusion or any adverse effect on sensitive ecology;
 - the location of site accommodation to avoid overlooking residential

property;

- management of staff congregating outside of site prior to commencing or leaving work;
- avoidance of use of loudspeaker or loudhailer devices;
- containing and limiting visual intrusion of works sites, as far as reasonably practicable;
- where reasonably practicable, maintenance of public rights of way (PRoW) (including diversions) for pedestrians, cyclists and equestrians affected by the ground investigation fieldwork, including reasonable adjustments to maintain or achieve inclusive access; and
- adequate provision of welfare facilities for staff;

8.7 Site lighting

8.7.1 Site lighting and signage will be provided at the discretion of the contractor to enable the safety and security of the ground investigation fieldwork sites.

8.7.2 Where installed lighting will be designed, positioned and directed so as not to unnecessarily intrude on adjacent buildings, ecological receptors and other land uses to prevent unnecessary disturbance, interference with local residents, railway operations, passing motorists, or the navigation lights for air or water traffic. This provision will apply particularly to sites where night working will be required.

8.8 Worksite security

8.8.1 Ground investigation worksites will be under the control of HS2's contractor, who has a statutory duty to prevent unauthorised access to the site and ensure that appropriate security measures are in place for the duration of the investigations. HS2 has identified the following generic security risks to the ground investigation fieldwork, which the contractor is expected to adopt responsibility for and supplement with their own risks:

- Organised crime;
- Opportunistic crime;
- Trespass;
- Activist protest causing or likely to cause any obstruction to delivery of the ground investigation fieldwork.

8.8.2 HS2's contractors will carry out site specific assessments of the security and trespass risk at each site, prepare a Security Plan and implement appropriate control measures.

8.8.3 The following measures may be used by the contractors to prevent unauthorised access to the site:

- the use of perimeter fencing or hoarding but only where necessary for site security and public safety, and placed so that any public right of way are maintained, or appropriately diverted;
- ensuring that appropriate site lighting and signage are provided and maintained to comply with statutory requirements and give adequate protection to the general public, land owners and other users of the site;
- establishing adequate "locking up" and "opening" procedures and employing security guards and patrols as appropriate;
- use of CCTV and infrared surveillance and alarm systems where deemed appropriate. Remote monitoring and visiting mobile security patrols may also be implemented;
- immobilisation of plant out of hours, removing or securing hazardous materials from site, securing fuel storage containers and preventing unauthorised use of scaffolding to gain access to restricted areas and neighbouring properties; and
- where deemed appropriate HS2 will consult with local crime prevention officers and inform contractors on recommended security proposals for each site with regular liaison to review security effectiveness and response to incidents.

8.9 Hoardings, fencing and screening

8.9.1 The following measures will be applied, as appropriate:

- maintenance of adequate fencing and hoardings to an acceptable condition to prevent unwanted access to the works, to provide noise attenuation, screening, and site security where required;
- use of different types of fencing, including hoardings and preparatory systems used for noise control;
- providing site information boards with out of hours contact details, 24 hour telephone number (for comments/complaints), and information on the works programme, at key locations;
- displaying notices on site boundaries to warn of hazards on site such as deep excavations, construction access, etc.;
- providing signage to indicate temporary re-routed pedestrian/cycle paths;

- 8.9.2 Temporary fences may be used in certain areas, such as for short-term occupation of sites, livestock control or at more remote locations.
- 8.9.3 Footways of adequate width to facilitate pedestrian flows will be provided with signs provided to facilitate safe access around the site boundary. Footways will be segregated from vehicular traffic.
- 8.9.4 Fencing and hoarding will, as far as is reasonably practicable, be located such that it will protect, not damage, sensitive habitats, trees or hedgerows.

8.10 Unexploded ordnance

- 8.10.1 As with any major infrastructure project, and based on HS2 desk based research and assessment HS2's contractors will carry out risk assessments for the possibility of any unexploded ordnance being found within ground investigation fieldwork areas. For high risk areas an emergency response procedure will be prepared and implemented by the contractors to respond to the discovery of unexploded ordnance.

8.11 Clearance and re-instatement of sites on completion

- 8.11.1 On completion of the specified ground investigation fieldwork, all plant, materials, equipment, temporary buildings and vehicles not required during subsequent activities will be removed from the site as soon as reasonably practicable by the contractor. All reinstatement will be completed in accordance with the terms of the licence. Where frequent opening up is anticipated, such as at key utility intersects then location specific temporary reinstatement may be put to the land owner for consideration.

8.12 Pollution incident control and emergency preparedness

- 8.12.1 Pollution prevention measures
- HS2's contractors will develop and implement appropriate measures to control the risk of pollution due to Ground Investigation works, materials and extreme weather events. This will include a pollution incident control plan which recognises the risk of pollution from the works activities and presents pro-active management practices to ensure that any pollution incident that may occur, such as a diesel spillage, is minimised, controlled, reported to relevant parties and remediated.
- 8.12.2 The following measures will be adopted to manage the risk of pollution incidents:
- ensure staff competence and awareness in implementing emergency

plans and using pollution response kit;

- statement of appropriate information to be provided in the event of any incident such as a spillage or release of a potentially hazardous material;
- notification of appropriate emergency services, authorities and personnel on site;
- notification of relevant statutory bodies, environmental regulatory bodies, local authorities and local water and sewer providers of pollution incidents, where required.

8.13 Fire prevention and control

8.13.1 All ground investigation fieldwork sites and associated accommodation and welfare facilities will have in place appropriate plans and management controls to prevent fires.

8.14 Extreme weather events

8.14.1 HS2 's contractors will consider all measures deemed necessary and appropriate to manage extreme weather events.

8.15 Interface management between adjacent construction areas

8.15.1 HS2 will oversee the interface between contractors and will require its contractors put in place measures to manage all aspects of interfaces between adjacent works areas, including the boundaries between areas under the control of different contractors or where reasonably practicable other fieldwork operations and site activities.

9 Agriculture, forestry and soils

9.1 Agriculture, forestry and soils management – general provisions

9.1.1 HS2's contractors shall implement controls to mitigate potential avoidable impacts on soils, farms, and farm-based businesses, including maintaining access and for this purpose HS2 and its contractors will:

- implement measures to conserve displaced soil resources, particularly in smaller isolated locations;
- contractors shall, where appropriate ensure that topsoil and subsoil are separately stripped, stored and fenced; protected from vehicular traffic and upon reinstatement, the topsoil and subsoil shall be reinstated in the correct sequence.

- identify watercourses and, where known, field drainage layouts and outfalls into watercourses or ditches, fixed irrigation pipes and sources of irrigation water and fixed water supplies for livestock. HS2 contractor will take necessary measures to avoid, preserve or reinstate any damaged features;
 - protect agricultural land adjacent to the delivery site, including provision and maintenance of appropriate stock-proof fencing and minimise traffic over the land leading to soil compaction;
 - reinstating any agricultural land which is used temporarily during fieldwork operations;
 - maintain farm accesses which may be affected by the works, including the manner in which farm access will be maintained and operational inconveniences minimised.
- 9.1.2 HS2 will ensure liaison is maintained with affected landowners, occupiers and agents, to ensure that any disruption to the normal operations of the farm or business is kept to a minimum and that appropriate site management procedures are put in place to enable any site specific measures in place as soon as reasonably practicable.
- 9.1.3 HS2 or its contractors as appropriate will:
- advise landowners, occupiers and agents, as appropriate, regarding the intended commencement of the works in areas of the site adjacent to agricultural and forestry holdings;
 - advise the programme of works and access routes to be used, adhering to the notice provisions detailed within the Access Licence; and
 - take precautions in developing the delivery programme to reduce disturbance.
- 9.1.4 Implementation of reasonable measures to prevent the spread of invasive and non-native species will be taken. The land owner will be consulted on the source of all soils introduced as part of the making good works.
- 9.1.5 HS2 and its contractors are to avoid direct contact with animals. Where livestock is to be moved or isolated from the works it will be responsibility of the land owner or occupier to manage the works.
- 9.1.6 If land or premises are under specific disease control restrictions, all site visits in connection with the ground investigation fieldwork shall be avoided, re-programmed or completed under specific guidance and controls implemented by the land owner.

10 Air quality

10.1 Air quality management – general provisions

10.1.1 HS2 will require its contractors to identify potential air quality impacts prior to commencement of the ground investigation fieldwork and to manage dust, air pollution, odour and exhaust emission during the ground investigation fieldwork. This will include the following as appropriate:

- reference to the general site management and good housekeeping procedures (relevant to limiting dust and air pollution);
- controls and measures to control or mitigate the effect of potential nuisance caused by the works;
- measures relevant to control risks associated with asbestos dust should asbestos based materials be encountered.

10.2 Measures to reduce potential impacts from site operations

10.2.1 Construction plant, vehicles and equipment; Measures will be implemented to limit emissions from plant and vehicles, which will include the following, as appropriate:

- operation of plant in accordance with the manufacturer's written recommendations;
- vehicles and plant will be switched off and secured when not in use;
- movement of traffic around the site will be kept to the minimum reasonable for the effective and efficient operation of the site;
- cutting and grinding operations will be conducted using equipment and techniques which reduce emissions and incorporate appropriate dust suppression measures;
- damping down of dust generating equipment and vehicles within the site and the provision of dust suppression in all areas of the site that are likely to generate dust; and
- measures to keep roads and accesses clean.

10.3 Excavations and earthworks activities

10.3.1 Dust and air quality management measures shall be implemented by the Contractor to limit pollution arising from transportation and storage of material as appropriate.

10.3.2 Dust pollution from excavations and earthworks activities will be limited through the use of the following measures, as appropriate:

- topsoil will be stripped as close as reasonably practicable to the footprint of the excavation or other earthworks activities;
- remedial soil spreading, seeding, planting or sealing of completed works will be undertaken as soon as reasonably practicable following completion of the site investigations.

11 Cultural heritage

11.1.1 Cultural heritage management – general provisions

- HS2 contractor will carry out the ground investigation fieldwork in such a way as to ensure there is no disturbance to scheduled monuments, listed buildings and other designated or non-designated heritage assets, for example archaeological sites and buildings of historic interest.
- Where works within archaeology sites is unavoidable, a suitably qualified person with relevant archaeological experience will be appointed by HS2 to guide the site operations.
- Should unexpected human remains or treasure be located during the ground investigation fieldwork then the contractor shall stop works and notify both HS2 and the land owner immediately. The contractor will await instruction from HS2 as to when works can continue.

12 Ecology

12.1.1 Appropriate measures will be adopted to protect the ecology of the area in which the ground investigation fieldwork takes place, with special attention to areas of significant ecological value.

12.1.2 HS2's contractor shall carry out the ground investigation fieldwork in such a way that any disturbance to areas of nature conservation interest and protected species is minimised. In doing so the contractor shall comply with all relevant nature conservation legislation and accepted industry practice. The works may require preparatory work to be undertaken ahead of the start of the ground investigation fieldwork to permit timely progress of the programme.

13 Land quality

13.1 Land quality management – general provisions

13.1.1 Land quality encompasses the issues of land contamination, designated geological resources and designated mineral and mining resources. HS2 will

require that its contractors will adopt appropriate measures to protect geological resources, to mitigate disturbance of mineral areas and to assess potentially contaminated land.

- 13.1.2 Existing land contamination and construction activities, which alter or create new pathways could affect the quality of aquifers in the vicinity of the works and impact the wider environment. HS2's contractors will be instructed to identify unreported contamination activities as an integral part of the ground investigation fieldwork.

13.2 Monitoring

- 13.2.1 As an integral element of the ground investigation fieldwork HS2 will require a gas monitoring procedure to be considered as appropriate due to the presence of areas of landfill, made ground, industry sites, quarries and naturally occurring gassing strata.
- 13.2.2 Groundwater and surface water monitoring plans will be considered, prepared and implemented as appropriate, in the vicinity of contamination risk.
- 13.2.3 Monitoring of any works that will impact geological or geomorphological resources will be carried out in accordance with these DGN, the contract specification or any other monitoring and control regime implemented as part of the ground investigation fieldwork.
- 13.2.4 Appropriate health, safety and environmental monitoring will be considered to support adherence to the procedures relating to working on or adjacent to land affected by contamination.

14 Landscape and visual

14.1 Protection of trees

- 14.1.1 The following protection measures will be considered and implemented during fieldwork operations, as appropriate:

- provision of appropriate protective fencing to reduce the risks associated with vehicles trafficking over root systems or beneath canopies;
- measures to prevent excessive compaction of soils;
- avoidance of vegetation buffer strips, where reasonably practicable;
- selective removal of lower branches to reduce the risk of damage by construction plant and vehicles;
- specialist guidance for working within root protection zones (RPZs) including procedures to follow in the event that significant roots are uncovered during work will be available via the GIDM.

15 Noise and vibration

15.1 Noise and vibration management - general provision

15.1.1 Best Practicable Means (BPM) will be applied during the ground investigation fieldwork to minimise noise at neighbouring residential properties and other sensitive receptors (including local businesses and quiet areas designated by either the local authority or the land owner).

15.2 Measures to reduce potential noise and vibration impacts

15.2.1 Best Practicable Means; - BPM are defined as those measures which are 'reasonably practicable having regard among other things to local conditions and circumstances, to the current state of technical knowledge and to financial implications'.

15.2.2 HS2 will require its contractors to consider the appropriate mitigation:

- noise and vibration control at source - for example the selection of quiet and low vibration equipment, review of construction programme and methodology to consider quieter methods, location of equipment on site, control of working hours, the provision of acoustic enclosures and the use of less intrusive alarms, such as broadband vehicle reversing warnings;
- screening - for example local screening of equipment, perimeter hoarding or the use of temporary stockpiles.

15.2.3 The recommendations of BS 5228 Code of practice for noise and vibration control on construction and open sites parts 1 and 2 will be implemented, together with the specific requirements of these DGN.

15.3 Section 61 consents

15.3.1 HS2's contractors will seek to obtain consents from the relevant local authority under Section 61 for the proposed ground investigation fieldwork, excluding non-intrusive surveys as and when directed by HS2 for works outside of the core hours. Details of the works, delivery methods, location of sensitive receivers and noise and vibration levels will be discussed with the relevant local authority, or authorities, both prior to fieldwork and throughout the delivery period.

15.3.2 Proposals for any monitoring arrangements deemed necessary will be agreed in advance with HS2 and the land owner.

16 Traffic and transport

16.1 Traffic management – general provisions

16.1.1 During the ground investigation fieldwork, HS2 will require that its contractors consider the impacts on the surrounding areas from the works and associated traffic and that these impacts are minimised and public access is maintained where reasonably practicable.

16.1.2 HS2 has prepared and included within the contract a template Framework Traffic Management Plan (FTMP) for ground investigation Works that sets out the requirements for managing highways and traffic for ground investigation fieldwork, prior to Royal Assent.

16.1.3 The FTMP will be issued by HS2 to local highway authorities as a part of their submission for consents for interference with a highway and associated temporary traffic management required as part of the ground investigation fieldwork.

16.2 General requirements and responsibilities

16.2.1 HS2 contractors will be required to assume responsibility for the management of all their logistics and traffic management activities and those of its suppliers. This includes:

- all logistics activities within the Site Operations
- all logistics to and from the Site Operations
- the removal and treatment of any excavated material
- the coordination of logistics and traffic management activities with other contractors and stakeholders

16.2.2 Contractors will be required to develop a logistics plan for their package of works. This plan will be required to detail the location of any temporary storage and works accommodation, welfare facilities, vehicle routes, site access points required, precautions to prevent congestion and inconvenience to local populations including timings of deliveries and vehicle movements etc.

16.3 General requirements for vehicle and driver safety

16.3.1 HS2's contractors will set out requirements for driver and vehicle safety standards in accordance with industry guidance.

16.3.2 HS2's contractors will be required to comply with the document "Standard for Construction Logistics: Managing Works Related Road Risk". Controls will be identified and implemented by contractors to manage the risks associated with workplace transport and mobile plant.

- 16.3.3 Controls shall extend to vehicle movements between work locations as well as on specific sites. Vehicles and pedestrians shall be segregated where practical and the segregation shall be clearly marked and effective as a control.
- 16.3.4 HS2's contractor will be required to ensure that all haulage firms, freight operators and suppliers engaged on the works, including owner-drivers, are assessed and selected to ensure that they meet the minimum requirements of this document.
- 16.3.5 A freight operator or haulier includes Contractors, their sub-contractors and suppliers engaged in the following activities:
- removing excavated material or waste.
 - delivering or moving equipment including temporary works, plant and materials.
 - delivering or moving loads from holding areas
- 16.3.6 HS's contractors will be required to implement controls to manage the risks associated with driver and vehicles movements. As a minimum:
- delivery drivers who are required to work on site outside of their cabs (for example to assist the erection of fencing) shall hold a valid CSCS card and attend a full site induction;
 - procedures shall be put in place to ensure that all visiting/delivery drivers are made aware of site controls;
 - drivers will be trained and competent to operate their class of vehicle in the environment it is being used;
 - drivers will be issued with PPE as required by site rules

16.4 **Additional requirements for vehicle safety management**

- 16.4.1 Compliance with current "blind spot" requirements and safety systems
- 16.4.2 HS2's contractors shall ensure that the use of innovation and technology to remove blind spots and prevent under-running, including retro fitting HGVs with required mirrors to meet standards which are to be introduced for new vehicles in order to increase pedestrian safety and the safety of other road users is employed as appropriate.

16.5 **Vehicle environmental management**

- 16.5.1 Compliance with night time HGV bans and overnight waiting bans
- 16.5.2 HS2's contractors will be required to ensure that they comply with night time and weekend bans on the movement of large goods vehicles or heavy goods

vehicles or apply for exemptions and comply with the conditions of exemption permits.

- 16.5.3 All contractors will be required to ensure that they comply with large goods vehicles or heavy goods vehicles overnight waiting bans.
- 16.5.4 Compliance with LEZ and other sustainability policies/environmental requirements
- 16.5.5 HS2's contractors will be required to control and limit emissions:
- vehicles and plant will be switched off and secured when not in use;
 - vehicle and plant exhausts to be directed away from the ground and be positioned at a height to facilitate appropriate dispersal of emissions;
 - movement of traffic around the site will be kept to the minimum reasonable for the effective and efficient operation of the site;
- 16.5.6 Measures to minimise queuing on the highway: - HS2's contractors may be required to provide new or secondary site access points to minimise queuing traffic.
- 16.5.7 Measures to minimise construction vehicle parking: - HS2's contractors will be required to ensure that measures are implemented to reduce construction traffic impacts associated with parking in residential streets. Further parking restrictions to be reviewed with the land owner.
- 16.5.8 Sheeting and wheel washing
- HS2's contractors will be required to provide and maintain wheel washing facilities, located on hard standing, where appropriate. Full wheel wash facilities may not be appropriate on every site, particularly where alternative measures can be applied to prevent excessive dirt or marking of the public highway.
 - Dust and air quality management measures will be required to be implemented by contractors to limit pollution arising from the transportation and storage of materials, including covering materials, deliveries or loads entering and leaving the site for the purposes of preventing materials and dust spillage.
- 16.5.9 Vehicle Noise controls
- HS2's contractors are required to use less intrusive noise alarms that meet the particular safety requirements of the site, such as broadband reversing warnings.
- 16.5.10 On-site speed controls
- HS2's contractors will be required to develop and implement measures

to control the impact from construction traffic including on-site speed limits.

16.5.11 Vehicle breakdowns on the highway

- HS2's contractors will be required to put in place procedures to manage vehicle breakdowns related to works traffic, particularly in peak times.

16.6 Environmental management of haul routes

16.6.1 In the context of these DGN haul route refers to any route across open ground to access worksite areas for ground investigation. The construction and maintenance of haul routes, will include the following measures, as appropriate:

- the surfacing and maintenance of haul routes to control dust emissions as far as reasonably practicable, taking into account the contractors intended level of traffic movements;
- inspection of haul routes regularly and their prompt repair if required;
- reuse of haul route surfacing materials where the locations of haul routes change during the course of construction;
- provision as necessary of areas of hard-standing at site access and egress points to be used by any waiting vehicles;
- methods to clean and suppress dust on haul routes (including watering) and in designated vehicle waiting areas. The frequency of cleaning will be suitable for the purposes of suppressing dust emissions from the site boundaries; and
- enforcement of speed limits on haul roads for safety reasons and for the purposes of suppressing dust emissions.

16.7 Worksite access

16.7.1 Emergency services and access protocols

16.7.2 Emergency access protocols will be developed by all contractors. HS2 will ensure that the requirements of the relevant fire authority and for ambulance use will be followed for the provision of site access points. The accesses may vary over time.

16.8 Worksite establishment on the highway

16.8.1 General arrangements: - HS2 contractor shall follow the following minimum requirements for street works:

- be tidy and safe with a clutter-free site so it is safe for pedestrians, cyclists and other road users.

- always explain what's happening through detailed, clear and consistent signage.
- always have activity on site or, if not, explain why (for example if concrete is drying).
- take up as little road / pavement space as possible with a compact working area and eliminating the unnecessary use of cones, safety barriers and storage of materials.
- help keep traffic moving by seeking permission to work outside peak hours, re-opening the road to traffic at peak times and, where this is not possible, working 24/7 or extended hours to complete works as quickly as possible (subject to noise consents). Diversion routes should be clearly signed.

16.8.2 Hoardings and barriers on the highway

- Barriers are to be used to enclose working areas on the highway, footway and verges in accordance with the guarding requirement of Safety at Streetworks and Roadworks – A Code of Practice (the red book)

16.8.3 Meeting Chapter 8 standards

- HS2's contractor's deployment of temporary traffic management is required to follow the requirements of Chapter 8 of the Traffic Signs Manual (Traffic Safety Measures and Signs for Road Works and Temporary Situations Parts 1 and 2).

16.8.4 Competence of installation

- All personnel involved in the installation, maintenance or removal of signing, lighting and guarding or the carrying out excavations in the public highway (including footpaths and grass verge) shall be suitably competent and in possession of the appropriate level (NRSWA) qualification and card.

16.8.5 Maintenance and inspection of layouts

- HS2 contractors will be required to ensure that the Site shall be subject to routine inspections by competent persons.
- HS2 may inspect a worksite in the highway and (a) direct that temporary traffic management is installed in accordance with the approved plans and/or (b) operated in accordance with the approved method statement. HS2 Limited may require the works to immediately cease until corrective action is undertaken.

16.8.6 Site information signing requirements: - Signing of worksites on the highway shall include:

- Employer and contractor information boards, including emergency contact information
- Relevant health and safety information for employees
- Relevant safety information for pedestrians and other road users as appropriate
- Relevant safety information concerning hazard materials used or stored on site.
- Displaying notices confirming that businesses whose access or view may be affected by construction works, remain open with directions for how to access them.

16.9 Worksite establishment with access to highway and highway management

16.9.1 Hard standing locations and wheel washing

- Contractors must not export risk - for example spread mud onto the public highway or cause muddy slip areas at areas where they are accessing and egressing site. The Contractor shall ensure that access and egress points are kept safe whilst in use.

16.9.2 Street sweeping – mechanical and hand

- The contractor will be required to undertake appropriate measures to keep roads and accesses clean.

16.9.3 Bankspersons and use of "STOP WORKS" boards

- Bankspersons should be competently trained, in relation to signalling to drivers, other traffic, keeping appropriate lookout, loading and unloading adjoining live traffic and use of "STOP WORKS" boards. On busy roads, where a vehicle needs to stop to unload adjoining a worksite, two bankspersons will be required to operate "give and take" traffic management using "STOP WORKS" boards, for the minimum practicable period in accordance with the red book.
- HS2's Contractor's plant and materials must not be swung over a live footway unless absolutely unavoidable. If this is necessary, access for pedestrians along the footway should be closed and either pedestrians diverted at suitable crossing points and/or pedestrians controlled via manual barriers across the footway, operated by bankspersons.

16.9.4 Protection of highway assets

- HS2's contractor will take reasonable measures to protect the assets of the highway authority and undertake restoration works as necessary including reinstatement of the carriageway surface and any markings, avoiding tracking any metal track vehicles on the carriageway, restoration of kerbs where access over a kerb has been necessary and levelling and reseeded grass verges. Contractors are to avoid creating conditions for standing water on carriageway surfaces (particularly in winter) and discharges into gullies.

16.10 Traffic signals

16.10.1 Operation of temporary traffic signals at highway works

- Where temporary traffic signals are required to be operated, HS2's contractor will obtain a licence from the relevant highway authority.

16.11 Highway construction or reinstatement

16.11.1 Agreement on materials to be used for permanent works – carriageway construction and surface, footway, street furniture, lighting

16.11.2 Highway reinstatement will be in accordance with the DfT's Specifications for the reinstatement of openings in the highways (2011).

16.12 Other highway management

16.12.1 Highway condition surveys and monitoring

- Prior to the use of any verge or access from a carriageway, a condition survey is to be carried out of the kerbs and the verge prior to commencement of works, including detailed photographs and a record of any existing damage to kerbs, verge and any other street furniture, including gratings, inspection pit covers etc. HS2's contractor is to retain the records for 6 months following completion of works.

16.12.2 Protection and reinstatement of verges and kerbs

- HS2's Contractor will be required to undertake protection of verges and, as necessary, the reinstatement of all working areas and accesses to site; this may include reinstatement of verges and kerbs.

17 Waste and materials

17.1 Minimisation of waste generation

17.1.1 HS2 will require that its contractors consider measures to minimise the waste generated from their works where reasonably practicable. This will include measures such as 'just-in-time' deliveries, careful storage of materials on-site, minimisation of packaging and use of re-usable packaging etc.

18 Water resources and flood risk

18.1 Surface water and groundwater management – general provisions

18.1.1 HS2 will require its contractors to consider their site activities and working methods appropriately to protect the quality of surface water and groundwater resources

18.1.2 Surface water and groundwater control measures to be considered will include the following, as appropriate:

- prevent unlicensed discharge into, and damage to, watercourses, surface and groundwater bodies including ponds, lakes and surface and foul water sewers;
- ensure that stationary plant is used with secondary containment measures to retain any leakage of oil or fuel, which will be emptied at regular intervals to prevent overflow;
- store spillage kits at key locations; and
- undertake risk assessments as appropriate associated with excavation work and dewatering impacts on surface water, groundwater and abstractions.

18.1.3 Private water supplies

- HS2 will require the contractor to ensure that excavation work does not impact on aquifers and private water supplies.
- Any water supply pipes encountered during the works will be protected. Any damage during construction will be repaired or replaced as quickly as reasonably practicable.

19 Abbreviations and definitions

| Title | Reference |
|---------------------------------|---|
| ACM | Asbestos containing material |
| BPM | Best Practicable Means - Defined in the Control of Pollution Act 1974 and Environmental Protection Act 1990 as measures which are 'reasonably practicable having regard among other things to local conditions and circumstances, to the current state of technical knowledge and to financial implications'. |
| BS | British Standard |
| CCTV | Closed circuit television |
| CDEW | Construction, demolition and excavation waste |
| CIRIA | Construction Industry Research and Information Association |
| CL:AIRE | Contaminated land: applications in real environments – an organisation dedicated to raise awareness of practical sustainable remediation technologies |
| Considerate Constructors Scheme | A UK national scheme which promotes good practice on construction sites through its codes of considerate practice, which commit registered sites to be considerate and good neighbours, as well as being respectful, environmentally conscious, responsible and accountable. For more information see: www.ccscheme.org.uk |
| Defra | Department for Environment, Food and Rural Affairs |
| EA | Environment Agency |
| EH | English Heritage |
| HS2 | High Speed Two (HS2) Limited - is a company wholly owned by the Department |

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| | for Transport, established in 2009 to develop plans for a new high speed rail network and present a proposed route connecting London and the West Midlands. |
| HSE | Health and Safety Executive |
| ICE | Institution of Civil Engineers |
| LA | Local authority |
| Lead contractor or contractor | The lead contractor on a construction site responsible for planning, managing and co-ordinating themselves and/or the works and all other contractors working on their site, or any other contractor directly employed by HS2 to undertake key construction works on site. |
| LPA | Local planning authority |
| NE | Natural England - the Government's advisory body on the natural environment. |
| HS2 | The body or bodies appointed to implement the Ground Investigation Programme. |
| NPPF | National planning policy framework |
| PPGs | Pollution prevention guidelines – EA guidance and advice on the law and good environmental practice |
| PRoW | Public rights of way |
| Section 61 | Section 61 of the Control of Pollution Act 1974 (which sets out procedures seeking and obtaining local authority consent to measures for the control of noise and vibration on construction sites). |
| SoS | Secretary of State |
| SSSI | Site of Special Scientific Interest |
| SWMP | Site waste management plan |

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| WSI | Written scheme of investigation (a programme for archaeological investigation works) |
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Template only not for use

Sustainability Policy

Purpose

HS2's purpose is to create world class high speed rail network to support sustainable growth in the UK. It is a major opportunity to provide greater choice in the way we travel to help deliver a sustainable transport system for the UK.

Our vision is of a high speed railway network which changes the mode of choice for inter-city journeys, reinvigorates the rail network, supports economy, creates jobs, reduces carbon emissions and provides reliable travel in a changing climate throughout the 21st century and beyond.

This policy sets out HS2 Ltd's commitment to be an exemplar project. Building this network will inevitably cause some local effects on communities, the natural and the built environment. We will strive to limit the negative impacts through design, mitigation and by challenging industry standards and we will look for environmental enhancements and benefits.

Through this policy we aim to support the following Government goals:

- Create a step change improvement in transport link between regional centres and from them to London.
- Enable more equal distribution of opportunity, connect communities and encourage regeneration.
- Stimulate sustainable economic growth through increased capacity and shorter journey times between key cities.
- Support British engineering, create job opportunities and develop skills in the UK.
- Deliver lower carbon long distance travel.
- Maximise integration of HS2 with existing UK and international transport networks.
- Encourage wellbeing and protect the environment.

Principles

We will promote high speed rail and balance community, environmental and economy issues. We have identified key themes as a focus for our work to:

Growth and regeneration - Support sustainable economic development and the localism agenda for regeneration.

Environmental change - Seek to avoid significant adverse effects on communities, businesses and the natural, historic and built environment. Minimise impacts where they occur and deliver enhancements as far as practicable to ensure there is no net loss to the natural environment.

Skills and employment - Improve skills, jobs, education and the economy through our investment along the length of the route. Act as a driver for improvements in the sustainability of the engineering and construction sector by ensuring that the right workforce is available at the right time with the right skills and behaviours. Promote diversity, openness and fairness

Climate change - Minimise the carbon footprint of HS2 as far as practicable and deliver low carbon long distance journeys that are supported by low carbon energy.

Resilience - Build network which is resilient for the long term and seek to minimise the combined effect of the project and climate change on the environment.

Resources and waste - Source and make efficient use of sustainable materials, maximise the proportion of material delivered from landfill and reduce waste.

Integrated transport - Engage with stakeholders to create seamless transport links with other modes and ensure accessibility for all.

Applicability, Implementation and Resources

To deliver our vision we will embed sustainability in our business at each phase of the project through:

A clear plan - Setting goals relevant to the stage of the project for design, through development, construction, operation, maintenance and renewal which stimulate innovation and ensure enhancements are protected for the long term. Our plan and this policy will be reviewed biennially.

Robust processes - Ensuring sustainability is integrated into our culture, procedures and processes. This will include the development of Sustainable Design and Delivery Principles as part of a process to enable us to balance the sometimes competing elements of sustainability and to understand whole life cost.

Procurement - Ensuring sustainability is integral in our procurement processes and is applied to our entire supply chain.

Innovation - Promoting sustainable construction practices, continually focusing ideas and technologies for improving sustainability.

Engagement and reporting - Engaging in dialogue about the project and working with local communities, key stakeholders and our supply chain. Openly reporting our progress in delivering the commitments we make on sustainability regularly and sharing what we learn.

HS2 is determined to ensure sustainability is embedded in the DNA of this project and that it is integrated into all of our work.

Approved on: 10 December 2014

Chief Executive Officer HS2

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