







1MCo4 Main Works - Contract Lot S2

Management Systems and Procedures - Waste Transfer and Treat Station - Ruislip Southern Sustainable Placement S2

MDL Code:

Document no.: 1MCo4-SCJ_SDH-EV-PRO-SSo5_SLo7-000004

Revision	Author	Checked by	Approved by		Date approved	Reason for revision
C01	Ellis Krishan	Nigel Phelps	Isobel Byrne Hill	Steven Bodenham	15/11/2021	For Acceptance
	E. Mrishan.	LBLARES	I. Cyafill .			

SECURITY CLASSIFICATION: OFFICIAL

Handling instructions: None





Revision changes, authorisation and reason for issue records:

Revision	Author	Date authored	Checked by	Date checked	Approved by	Date approved	Reason for revision
C01.1	Ellis Krishan	09/08/2021	James Ennis	18/08/2021	Mark Gaby	19/08/2021	RSSP - Waste Transfer and Treat Station (WTS) Permit
C01.2	Ellis Krishan	08/11/2021	Nigel Phelps	12/11/2021	Isobel Byrne Hill	15/11/2021	RSSP-WTS – reissue following incorporation of SCS comments

Contents

1	Introdu	ction	2
	1.1	Associated Documents	3
2	Environ	mental Management System	4
3	Staff ro	les and responsibilities	5
4	Operati	ons and maintenance	12
	4.1	Procedures to control operations that may have an adverse impact on the environment	12
	4.2	Air quality and dust	13
	4.3	Materials, land quality and waste	14
	4.4	Plant, equipment, and material storage	16
	4.5	Sound, noise, and vibration	18
	4.6	Water	20
5	Compla	ints and incident management	21
	5.1	Incident response	21
	5.2	Complaints	21
6	Commu	nication	22
	6.1	Risk assessment, method statements and start of shift briefings	22
	6.2	Training and Awareness	22
	6.3	Specific environmental training and appointments	22
7	Assuran	ice and performance evaluation	24
	7.1	Introduction	24
	7.2	Environmental monitoring	24
	7.3	Inspections and audits	24
	7.4	Sustainability reporting	24
8	Continu	al improvement	25
	8.1	Non-conformance and corrective actions	25
	8.2	Opportunities for improvement	25
	8.3	Environmental management review	25
Appe	ndix A1 -	- EMS Certificate	28
Appe	ndix A2 -	- Wamitab Certificate	29
Appe	ndix B - I	Incident levels and flow chart	30
Appe	ndix C - 9	Site Specific Risk Assessment	32

Placement S₂

Document no.: 1MCo4-SCJ_SDH-EV-PRO-SSo5_SLo7-000004

Revision: Co1

1 Introduction

- 1.1.1 Phase One of HS2 will provide dedicated high-speed rail services between London,
 Birmingham, and the West Midlands. It will extend for approximately 230km (143 miles). Just
 north of Lichfield, high speed trains will join the West Coast Main Line for journeys to and
 from Manchester, the North West and Scotland.
- Phase One of HS2 is the first phase of a new high-speed railway network proposed by the Government to connect major cities in Britain. It will bring significant benefits for inter-urban rail travellers through increased capacity and improved connectivity between London, the Midlands, and the North. It will release capacity on the existing rail network between London, Birmingham and the West Midlands and so provide opportunities to improve existing commuter, regional passenger, and freight services.
- 1.1.3 The Materials Management Plan Framework for the HS2 scheme sets out framework for materials reuse within the scheme.
- This Management Systems Plan has been prepared for the Waste Transfer and Treat Station Ruislip Southern Sustainable Placement (RSSP-WTS) operated by Skanska Costain STRABAG Joint Venture (SCSJV). The site is located in an area of semi-rural, former agricultural land located immediately north west of Ickenham and to the west of West Ruislip, in the London Borough of Hillingdon; centred around Grid Reference TQo6517 87233. This document containing the Management Systems and Procedures will comprise a suite of documents that together will be submitted to the Environment Agency (EA) as part of an application for an environmental permit.
- 1.1.5 The RSSP-WTS facility will receive Tunnel Boring Machine (TBM) arisings via a conveyor system directly from the construction of Northolt Tunnel West and West Ruislip Portal.

 Materials entering the facility will be temporarily stored and, if required, treated within the facility with lime/ggbs to ensure that they have suitable properties (geotechnical and chemical) for placement in the following areas: Ruislip Southern Sustainable Placement (RSSP) and Copthall Tunnel (Copthall backfill). Materials transported from RSSP-WTS to Copthall Tunnel will be via a return conveyor mechanism, whilst transport to RSSP will be via vehicular transport along a designated haul road.
- 1.1.6 The document provides the following:
 - A summary of the management systems that will be implemented;
 - Details of the management and staffing of the site;
 - Details of the training provided for staff and management;
 - Procedures to control operations that may have an adverse impact on the

Template no.:

HS2-HS2-IM-TEM-000-000265

Placement S₂

Document no.: 1MCo4-SCJ_SDH-EV-PRO-SSo5_SLo7-000004

Revision: Co1

environment;

- Complaints and incident management;
- Assurance and performance evaluation; and
- Methods outlining continual improvement.

1.1 Associated Documents

- 1.1.1 This report should be read in conjunction with the following documents:
 - Environmental Permit Application Forms (1MCo4-SCJ_SDH-EV-FRM-SSo5_SLo7-000011);
 - Non-technical summary (1MCo4-SCJ_SDH-EV-NOT-SSo5_SLo7-000008);
 - Site Condition Report (1MCo4-SCJ_SDH-EV-REP-SSo5_SLo7-000009);
 - Site Operating Plan (1MCo4-SCJ_SDH-EV-PLN-SSo5_SLo7-000016);
 - Noise and Vibration Management Plan (1MCo₄-SCJ_SDH-EV-PLN-SSo₅_SLo₇-000015); and
 - Dust and Emissions Management Plan (1MCo4-SCJ_SDH-EV-PLN-SSo5_SLo7-000013).
- 1.1.2 Documents associated with the wider RSSP-WTS facility and permit site are cross referenced where appropriate.

Placement S₂

Document no.: 1MCo4-SCJ_SDH-EV-PRO-SSo5_SLo7-000004

Revision: Co1

2 Environmental Management System

- 2.1.1 SCSJV operates an externally audited Environmental Management System (EMS) which is certified to ISO140001:2015 and in line with the overarching Environmental Management Plan [R2] and associated environmental topic plans and procedures. These overarching plans provide a high-level overview of the environmental and sustainability requirements associated with the project. The EMS should also be read in conjunction with the HS2 Code of Construction Practice (CoCP) [R3], which sets out the minimum standards and control measures to be implemented on HS2 sites.
- 2.1.2 A copy of the EMS certificate is included in Appendix A.

Placement S₂

Document no.: 1MCo4-SCJ_SDH-EV-PRO-SSo5_SLo7-000004

Revision: Co1

3 Staff roles and responsibilities

3.1.1 The site will be operated in a safe and efficient manner using fully competent staff.

- 3.1.2 All new personnel will undergo induction training and will be supervised by an appropriate senior member of staff in respect of the Environmental Permit, the Environmental Management System, the Site Operating Plan, Sustainability Policy (HS2-HS2-SU-POL-000-00001) [R4], SCSJV Environmental Policy (1MC03-SCJ-EV-POL-S001-000001) [R5], Waste and Excavated Materials Procedure (1MC03-SCJ-EV-PRO-S001-000007) [R19] and the Site Waste Management Plan (SWMP) (1MC03-SCJ-EV-PLN-SS02_SL02-000005) [R20]. The induction training will allow all involved personnel to be aware of the designated roles and responsibilities before the onset of the works.
- 3.1.3 Any changes in the technically competent management of the site and any incoming person together with evidence that such person has the required technical competence will be submitted to the Agency in writing within 5 working days of the change in management. Technically Competent Management and Technical Competence shall be as defined under Section 74 of the Environmental Protection Act 1990. The following key roles and appointments are applicable to this site. The training and competency requirements for each of these roles is set out in the overarching EMP [R2] and the associated topic specific plans.

Placement S₂

Document no.: 1MCo4-SCJ_SDH-EV-PRO-SSo5_SLo7-000004

Revision: Co1

Role	Responsibility
Skanska Costain STRABAG Joint Venture (SCSJV) Area Lead/ Lead Construction Manager	Allocate sufficient resources and authorities to meet contractual obligations. Support and enable SCSJV to deliver an environmental beneficial and sustainable project.
Section Lead/ Terminal Manager	Approves Risk Assessments and Method Statements (RAMS) and supports environmental review processes with SCSJV Environmental Managers/ Advisors and the SCSJV Community Liaison Manager.
	Responsible for assigning and communicating roles, responsibilities and authorities for environmental management and compliance (with relevant environmental permits etc.) within the Terminal Team, to meet the requirements of the Environmental Management Systems. These individuals (Environmental Co-ordinators, Waste Controllers etc.) must be appointed and notified to the Environmental Advisor.
	Ensure RAMS contain the required level of environmental assessment and controls, including named individuals with responsibilities for environmental controls and waste.
	Responsible for communicating the environmental requirements to subcontractors and the effective management of the works in line with the Site-Specific Environmental Control Plan (SSECP).
	Brief staff and ensure they are aware of the requirements of environmental conditions in RAMS and procedures through toolbox talks (TBTs).
	Provide SCSJV with a record of all briefings to ensure all information is disseminated to staff prior to work commencing.
	Ensure any alerts/ exceedances, or potential exceedances (environmental monitoring of noise, dust, vibration etc.) are tracked, responded to, and subsequently investigated.
	Ensure fortnightly environmental site inspections are undertaken and supplied to Environmental Advisors.
	Review fortnightly environmental inspection reports at regular SCSJV planning & progress meetings, recording any resulting actions.
Earthworks Construction Manager	Provide area-wide advice and guidance on movement and storage of excavated material on site, including tunnel arisings. Responsible for production of Material Management Plan (MMPs) and manages earthworks sub-contractor.
	Oversee excavation works programme and movements to ensure adherence with environmental requirements.
Environmental Manager/ Advisor	Reviews environmental sections of RAMS.
	Co-ordinates environmental specialist support and technical submission of environmental consents.

Template no.:

HS2-HS2-IM-TEM-000-000265

Page 6

Uncontrolled when printed

Placement S₂

Document no.: 1MCo4-SCJ_SDH-EV-PRO-SSo5_SLo7-000004

Revision: Co1

Role	Responsibility		
	Leads communication, engagement and reporting with HS2 and regulators.		
	Communicates EMS requirements and supports training as required.		
	Assess and agrees training needs with the Training Manager.		
	Supports the Terminal Manager to enhance and assure environmental performance and reporting of any areas of improvement/ corrective action.		
	Plan audits, inspections and monitoring to confirm environmental compliance.		
Terminal Manager/ Manager	Develops RAMS to ensure they contain the required level of environmental assessment and controls and monitors subcontractors for MS and RAMS compliance.		
	Support Construction Managers and the Noise & Vibration Specialist to manage noise and vibration including reporting to HS2 and regulators.		
Technically Competent Management	TCM will operate under the WAMITAB Scheme. (See Appendix A2)		
(TCM)	The TCM will be responsible for the day-to-day operations at the premises, and to ensure that premises personnel operate the site in compliance with the Environmental Permit. They will be responsible for ensuring adequate training of staff has been undertaken.		
	The TCM will report any problem, or potential problem, to Senior Management as well as the Environment Agency.		
	The TCM will attend site in accordance with the attendance criteria specified within 'Environmental Management – Guidance: Legal Operator and Competence Requirements: environmental permits' available on the GOV.UK website.		
Site Supervisor/ Foreman/ Engineer	Responsible for the day-to-day implementation of best practicable means (BPM) mitigation measures required to minimise the impact arising from the works.		
Environmental Consents Manager	Provide central coordination role between specialists, environmental team, Terminal Team, and planners to ensure all required consents are received on time.		
	Assist the specialist in gathering required construction/ design related information to support consent application.		
Area Logistics Manager	Responsible for overseeing the logistics planning of all materials, plant, and vehicle deliveries to and from site. Co-ordinates vehicle/ lorry checks		
	Responsible for coordination with logistics control tower.		
	Managing on-site logistics activities.		

Template no.:

HS2-HS2-IM-TEM-000-000265

Placement S₂

Document no.: 1MCo4-SCJ_SDH-EV-PRO-SSo5_SLo7-000004

Role	Responsibility
	Work closely with the Environmental Managers/ Advisors and air quality specialist(s) to ensure environmental compliance.
Stakeholder Interface Manager	Responsible to build positive relationships with all local stakeholders and ensure that SCSJV activities are explained to residents, businesses, and local authorities in a clear and timely manner, including, responsible for resolving noise related comments or complaints from our neighbours and proactively managing relationships with our stakeholders and warning stakeholders of emergency works.
	Reviews community liaison/ U&A sections within RAMS
	Liaise with Environmental Managers/ Advisors to report and mitigate complaints relating to environmental nuisance/ property
	Supports community and social engagement aspects (Considerate Constructors Scheme (CCS) etc.)
	Notifies residents that may be affected by potentially disruptive activities
	Develop separate Community Relations Plans for each London Borough detailing engagement with the local community including receiving and responding to complaints and ensuring appropriate action is taken in response to any non-compliance
Design House Consultants/ Specialists	Work closely and collaboratively with Environmental Managers/ Advisors, to assess the final design of all assets against the requirements of the HS2 Environmental Statement, Environmental Minimum Standards and associated technical papers and information papers.
Environmental Co-ordinator (appointed)	Carry out fortnightly recorded site inspections and support compliance with the CCS.
	Inform Environmental Advisor of any environmental issues.
	Supports the Environment Team and Terminal Team to maintain environmental records.
	Manage site lighting plans and control of light pollution.
	Monitor subcontractors for RAMS compliance.
	Support Construction Managers and the Noise & Vibration Specialist to manage noise and vibration including reporting to HS2 and regulators.

_					
Т	em	nla	ıtΔ	nΛ	
	CIII	ρ 10	···	110.	•

Placement S₂

Document no.: 1MCo4-SCJ_SDH-EV-PRO-SSo5_SLo7-000004

Role	Responsibility
	Ensure any alerts/ exceedances, or potential exceedances (environmental monitoring of noise, dust, vibration etc.) are tracked, responded to and subsequently investigated.
Waste Controller (appointed)	Works with the Environment Team and the Waste and Materials Specialist to ensure an area Site Waste Management Plan (SWMP) is in place, identifying and implement ways to avoid, reduce, reuse, and recycle waste prior to activities commencing on site.
	Manage legal and contractual waste management requirements with support from the Environment Team and the Waste and Materials Specialist.
	Ensure Duty of Care requirements are complied with and that all waste is classified correctly prior to removal from site.
	Maintain all records and support the Waste and Materials Specialist with monthly reports.
	Support the Waste and Materials Specialist to audit waste processes from cradle to grave to ensure legal compliance.
	Advise and support Terminal Teams on waste management issues.
SHE Systems/ Training Manager	Manages the Safety, Health and Environment (SHE) training needs and records matrix (1MCo3-SCJ-HS-TEM-Soo1-0000510 [R6]) and works with Environmental Managers/ Advisors to identify, plan, and deliver training as appropriate/required.
Procurement & Supply Chain Manager	Implements the SCSJV Sustainable Sourcing Plan (SSP) (1MCo3-SCJ-EV-PLN-Soo1-000010) [R7] across the supply chain, working with Environment and Commercial Teams to manage sustainable sourcing requirements through the project.
	Ensures all major subcontractors and consultants are issued with controlled copies of this SSECP and any other applicable environmental plans and procedures.
Commercial Manager	Manages the environmental performance and conformance of appointed suppliers and contractors including the monitoring and collection of data, with the support of Environmental Managers/ Advisors.
Air Quality Specialist	Provide area-wide advice and guidance on air quality related matters including monitoring and compliance to ensure works packages are delivered in accordance with the requirements of the EMS. Develop and maintain the Dust and Emissions Management Plan (DEMP) (1MCo4-SCJ_SDH-EV-PLN-SSo5_SLo7-000013) and lead its implementation at all Asset locations.
	Managing compliance within agreed air quality constraints. This includes completion of Non-Road Mobile Machinery (NRMM) compliance checks on all plant and equipment being delivered and used on site, prior to their arrival. Ensuring appropriate action is taken in response to any NRMM non-compliance.

_					
Т	em	nla	ıtΔ	nΛ	
	CIII	ρ 10	···	110.	•

Placement S₂

Document no.: 1MCo4-SCJ_SDH-EV-PRO-SSo5_SLo7-000004

Revision: Co1

Role	Responsibility
Historic Environment Specialist	Provide advice and guidance on heritage matters. Develop and obtain heritage consents for all work packages. Liaison with enforcing authorities including
	Historic England and HS2.
	Provide advice and guidance on archaeological matters. Develop and obtain archaeological consents for all work packages
Carbon Specialist	Manage contractual requirement with regard to carbon assessment, reduction, and reporting.
Ecology and Arboricultural Specialist	Provide area-wide advice and guidance on ecological matters including invasive species/biosecurity issues and on arboricultural issues. Develop and obtain ecological consents for all work packages. Liaison with enforcing authorities including Natural England.
	Complete Stage 1 and 2 tree surveys and advise site team on trees to be retained and protection measures.
	Provide area-wide advice and guidance on arboricultural related matters. Review and assure tree survey reports. Carry out inspections/audits of tree surveys, felling and pruning operations by the landscape contractors (including timber evaluations).
Contaminated Land Specialist	Provide area-wide advice and guidance on land contamination related matters to ensure work packages are delivered in accordance with the requirements of the SCSJV Land Quality Management Plan (1MC03-SCJ-EV-PLN-S001-000012) (LQMP) [R9].
Landscape Architect	Provide area-wide advice and guidance on landscape and urban design related matters. Review and assure landscape design and operations by the landscape contractors.
Temporary Works Manager	Provides site drainage and lighting design drawings to support consents as required.
	Provide area-wide advice and guidance on lighting requirements. Review and assure lighting design and ensure that lighting requirements are in accordance with the CoCP [R3] and Lighting Management Plan [R10]. Liaison with residents as required.
Utilities Manager	Manages the design of water treatment systems and secures consent to discharge to sewer for site drainage.
	Works with the Environment Team and the Water Specialist to manage compliance with consent condition and monitoring requirements.
Noise and Vibration Specialist	Provide area-wide advice and guidance on noise and vibration related matters to ensure work packages are delivered in accordance with SCSJV Overarching EMP [R2], and CoCP [R3], including dispensations, variations, and overrun applications.

Template no.:

HS2-HS2-IM-TEM-000-000265

Page 10

Uncontrolled when printed

Placement S₂

Document no.: 1MCo4-SCJ_SDH-EV-PRO-SSo5_SLo7-000004

Role	Responsibility
Building Research Establishment's Environmental Assessment Method (BREEAM) Specialist	Supports the development of the EMS to achieve the BREEAM Excellent target. Ensures specific credits targeted for each area are included in Section 4 of this plan.
Waste and Materials Specialist	Oversee land contamination management across the MWCC assets and classification, management and coordination of wastes generated across all work packages. Provide updates on key waste legislation, duty of care documentation and audit requirements. Responsible for providing advice and guidance to the Excavated Materials Manager to assist with completion of MMPs and to ensure their correct implementation on site.
Water Resources and Flood Risk Specialist	Provide area-wide advice and guidance on specific water resources and water related matters to ensure work packages are delivered in accordance with the EMS, CoCP [R ₃], water-related consents. Identify areas of high risk for contamination and heightened sensitivity to flood risk. Provide support to the SCSJV Environmental Consents Manager on compilation and submission of any water-related consents as required.
All staff	Carry out works in accordance with agreed methods and briefings. Report anything that deviates from agreed processes. Report all incidents, spills, and best practice to site agents. Attend induction and environmental training as required.

Table 1 - Roles, responsibility, and responsible persons

Placement S₂

Document no.: 1MCo4-SCJ_SDH-EV-PRO-SSo5_SLo7-000004

Revision: Co1

4 Operations and maintenance

- 4.1 Procedures to control operations that may have an adverse impact on the environment
- 4.1.1 The Site Supervisor will identify those operations that may have an adverse impact on the environment. Environmental risks will be managed in accordance with Best Practicable Means BPM and the control measures detailed in the CoCP [R3].
- 4.1.2 Site-Specific Risk Assessments for dust are presented in Appendix C.
- 4.1.3 The following control measure categories have been identified:
 - Air quality and dust;
 - Materials and waste (including land quality);
 - Plant, equipment, and material storage;
 - · Sound, noise, and vibration; and
 - Water.

Document no.: 1MCo4-SCJ_SDH-EV-PRO-SSo5_SLo7-000004

Revision: Co1

4.2 Air quality and dust

4.2.1 The following controls apply:

Ref	Action	Owner	Evidence	Target date/frequency
C4.2.1	 All works including, but not limited to the following: site establishment/layout; operation of plant, vehicles, and equipment; transportation, storage and handling of waste and materials; use of haul roads; Shall be managed and controlled in line with Best Practicable Means (BPM). BPM site-specific control measures are detailed in the DEMP for RSSP-WTS 1MCo4-SCJ_SDH-EV-PLN-SSo5_SLo7-000013. See Fugitive Dust and Emissions Risk Assessment for the control measures that are to be applied (Appendix C2). 	Terminal Manager Temporary Works Manger Earthworks Construction Manager Logistics Manager Environmental Co-ordinator	Site layout drawings PPM/ plant service records Vehicle and plant records RAMS TBTs as per RAMS Inspections	TBC (site layout) Refer to RAMS schedule Daily dust inspections and fortnightly environmental inspections
C4.2.2	All logistics activities including construction, excavated materials, highways/ local traffic, and travel to work shall be managed through the SCSJV Logistics Strategy (1MCo3-SCJ-CL-PLN-S001-000001) [R12] and corresponding plans. Vehicle and plant (NRMM) shall be procured in line with project requirements and checked upon delivery.	Refer to RAMS schedule Daily dust inspections and fortnightly environmental inspections	Logistics Strategy [R12] and corresponding plans	NA

Template no.:

HS2-HS2-IM-TEM-000-000265 Page 13 Uncontrolled when printed

Document no.: 1MCo4-SCJ_SDH-EV-PRO-SSo5_SLo7-000004

Revision: Co1

Ref	Action	Owner	Evidence	Target date/frequency
C4.2.3	Monitoring and reporting will be undertaken in line with the Fugitive Dust and Emissions Risk Assessment (Appendix C2) and the DEMP for RSSP-WTS (1MCo4-SCJ_SDH-EV-PLN-SSo5_SLo7-000013). The Air Quality Specialist will manage the installation and maintenance of the air quality monitors and reporting. Training will be provided to the SCSJV site team to ensure appropriate on-site management of fugitive dust and emissions and response to trigger alerts. An automatic continuous real-time particulate monitor (PM10) (Osiris Monitor) which meets MCERTS performance standard for indicative ambient particulate monitors will be installed and operational at the western site boundary of the site towards the nearest sensitive residential premises (approx. 100m to the west of the storage bins area and immediately north of the topsoil storage area). The monitor forms part of a network of multiple dust monitors around SCSJV sites in the area and the wider HS2 route in London.	Air Quality Specialist Terminal Manager Environmental Manager/ Advisor Environmental Co-ordinator	Installation, maintenance, and calibration records Trigger alert system and investigation recording RAMS/ TBTs/ training Monthly monitoring reports	Prior to procurement As required

4.3 Materials, land quality and waste

4.3.1 The following controls apply:

Template no.:

Document no.: 1MCo4-SCJ_SDH-EV-PRO-SSo5_SLo7-000004

Revision: Co1

Ref	Action	Owner	Evidence	Target date/frequency
C4.3.1	If wastes that are suspected to not conform to the EWC code (detailed in the 1MCo ₄ -SCJ_SDH-EV-PLN-SSo ₅ _SLo ₇ -oooo ₁ 6) are identified in incoming waste, the load should be rejected, and the import should stop, and the Environmental Advisor notified. If any potentially contaminated load has been tipped, it should be quarantined and chemically tested. The import should stop, and the producer formally contacted.	Procurement Manager Terminal Manager Quality Manager/ Waste and Materials Specialist	Procurement records Quality management system (ITPs) TBTS as per RAMS	Prior to procurement As required
	Following the rejection of 3 loads of the same material from the same supplier, an incident shall be raised by the Environmental Advisor.			

Template no.:

HS2-HS2-IM-TEM-000-000265 Page 15 Uncontrolled when printed

Document no.: 1MCo4-SCJ_SDH-EV-PRO-SSo5_SLo7-000004

Revision: Co1

4.4 Plant, equipment, and material storage

4.4.1 The following controls apply:

Ref	Action	Owner	Evidence	Target date/frequency
C4.4.1	All work materials shall be stored appropriately to guard against breakage, theft, and damage. There will be a COSHH store on site for minor chemicals, which will be contained and bunded. The materials stored are sodium hexametaphosphate and cube mould oil, which will be stored in COSHH cupboard with a spill nappy underneath. The access will be restricted to certain staff only. Drainage will allow the laboratory floor to be washed down, which will be connected to a washout system; where it will be treated. Polluting material storage facilities shall be located on reinforced concrete slab surfaces and located away from storm water sewers, grids, channels and water courses or adequate measures must be taken to protect against pollution. Sources of pollutions (including waste skips, fuel storage) shall be stored over 10 metres from watercourses (including floodplain areas). No diesel, oil or polluting material storage facilities will be located within the RSSP-WTS permit boundary, rather they will be located within the existing Copthall South Office. Lime and ggbs will be stored within silos, which are contained over a concrete treatment apron which is drained. Where possible, mobile plant should be refuelled in the designated area an no refuelling must take place within 10 metres of any drains or watercourses. Appointed and trained person only to use diesel-filling equipment in line with the SCSJV Refuelling Guidance.	Terminal Manager Temporary Works Manager Environmental Co-ordinator Procurement Manager	Site plans Procurement records RAMS/TBTs Appointment Fortnightly and monthly inspections	Refer to RAMS schedule Prior to procurement Investigation recording

Template no.:

HS2-HS2-IM-TEM-000-000265 Page 16 Uncontrolled when printed

Document no.: 1MCo4-SCJ_SDH-EV-PRO-SSo5_SLo7-000004

Revision: Co1

Ref	Action	Owner	Evidence	Target date/frequency
	Where appropriate, the use of drip trays shall be used on all static plant and regularly maintained. Plant nappies will be placed under all plant and equipment where appropriate.			
	A suitable area for maintenance of plant and equipment including vehicle washdown areas will be provided in the Copthall South Office premises. This will be located over 10 metres away from drains and watercourses.			
	Spill response equipment, appropriate to the size of the facility, shall be located in close proximity of the facility. All spills to be reported as per incident procedure.			
C4.4.2	All plant and equipment shall be specified, operated, and maintained in good/	Terminal Manager	Procurement records	Prior to procurement
	efficient working order and in line with the DEMP (1MCo4-SCJ_SDH-EV-PLN-SSo5_SL07-000013) and RSSP-WTS Specific Noise and Vibration Management	Procurement Manager	RAMS	Refer to RAMS schedule
	Plan (1MC04-SCJ_SDH-EV-PLN-SS05_SL07-000015) and any consents e.g., Section 61 consent. Plant shall never be left running unnecessarily and where	Environmental Co-ordinator	TBTs as per RAMS	
	reasonably practicable, plant shall be located away from sensitive noise boundaries	Environment Manager/ Advisor	Fortnightly and monthly inspections	

Template no.:

HS2-HS2-IM-TEM-000-000265 Page 17 Uncontrolled when printed

Document no.: 1MCo4-SCJ_SDH-EV-PRO-SSo5_SLo7-000004

Revision: Co1

4.5 Sound, noise, and vibration

4.5.1 The following controls apply:

Ref	Action	Owner	Evidence	Target date/frequency
C4.5.1	All logistics activities including highways/local traffic, delivery vehicles (noise from reversing alarms etc.) and travel to work sites shall be managed through the SCSJV Logistics Strategy [R12] and corresponding plans. The local community and other stakeholders will be informed in advance of works through regular ongoing engagement in line with the Community Liaison Plan (1MCo4-SCJ-SE-PLN-Soo2-ooooo4) [R13]. Any out of hours works must be notified to the residents 7 days prior to the work taking place.	Logistics Manager Stakeholder Interface manager	Logistics Strategy [R12] and corresponding plans Community Liaison Plan [R13] and events correspondence	NA As per Community Liaison Plan [R13]
C4.5.2	Noise and vibration on site shall be managed in line with the Noise Vibration Management Plan (1MCo4-SCJ_SDH-EV-PLN-SSo5_SLo7-000015) included with the permit application. This document is based on the overarching HS2 requirements for the monitoring of noise and vibration with the addition of site-specific measures for the RSSP-WTS site following a BS4142 assessment. For specific details refer to 1MCo4-SCJ_SDH-EV-PLN-SSo5_SLo7-000015 included with this application. The site will be required to operate 24 hours a day, 7 days a week.	Terminal Manager Noise & Vibration Specialist Environmental Manager/ Advisor Environmental Co-ordinator	Variation or dispensation RAMS TBTs as per RAMS Fortnightly and monthly inspections Monthly noise reports/ triggers	RAMS (as per schedule)
C4.5.3	Engage with the Local Authority on a monthly basis to provide updates on programme, and proposed construction activities.	Terminal Manager Noise & Vibration Specialist Stakeholder Interface manager	Meeting minutes	Monthly As required

Template no.:

HS2-HS2-IM-TEM-000-000265 Page 18 Uncontrolled when printed

Document no.: 1MCo4-SCJ_SDH-EV-PRO-SSo5_SLo7-000004

Ref	Action	Owner	Evidence	Target date/frequency
C4.5.4	Noise monitoring will be undertaken in line with the Noise & Vibration	Noise and Vibration	Installation, maintenance, and	Installed upon site
C4.5.4	Management Plan (1MCo4-SCJ_SDH-EV-PLN-SSo5_SLo7-000015) for the RSSP-WTS area. The Noise Impact Assessment for the site has identified the need for the	Specialist	calibration records	establishment/ installation of hoarding.
	following site-specific measures in addition to those Best Practicable Means (BPM) measures set out in the CoCP and LEMP.	Terminal Manager Environmental Manager/	Trigger alert system and investigation recording	As required
	The Noise and Vibration Specialist will manage the installation and maintenance of the noise monitors and reporting. Training will be provided to the SCSJV site	Advisor Environmental Co-ordinator	RAMS/ TBTs/ Training Monthly monitoring reports	Refer to RAMS schedule
	team to ensure appropriate monitoring and response to alerts/ triggers.	Environmental co ordinator	TBTs as per RAMS	

Document no.: 1MCo4-SCJ_SDH-EV-PRO-SSo5_SLo7-000004

Revision: Co1

4.6 Water

4.6.1 The following controls apply:

Ref	Action	Owner	Evidence	Target date/frequency
C4.6.1	Water resources (and consents compliance) will be managed in line with the Water Resources Plan (1MCo3-SCJ-EV-PLN-Soo1-000036) [R21] and monitored/reported in line with the Surface Water Monitoring Plan [R22] and the Ground water monitoring Plan (1MCo3-SCJ-EV-PLN-Soo1-000030) [R23].	Water Resources and Flood Risk Specialist Utilities Manager (for sewer)	Site baseline survey Site drainage design drawings and water treatment design TBC RAMS TBTs as per RAMS Reporting	Refer to RAMS schedule Reporting as required
C4.6.2	Any discharge to sewer must be agreed with Thames Water/ Affinity Water via Trade Effluent Consents which will be obtained and managed by the utilities team with the support of the Water Resources and Flood Risk Specialist.	Utilities Manager Water Resources and Flood Risk Specialist	Trade effluent consent TBC Site drainage design drawings and water treatment design TBC	As required.

Placement S₂

Document no.: 1MCo4-SCJ_SDH-EV-PRO-SSo5_SLo7-000004

Revision: Co1

5 Complaints and incident management

5.1 Incident response

- 5.1.1 The SCSJV has developed its incident management procedures to align with the HS2 incident management process which, in summary includes:
 - A three-tier response command structure (Gold, Silver, Bronze) to manage an incident;
 - A single process for the management of all events that constitute an incident, with defined levels to help frame the response – Levels 1 to 4 (Level 1 being the most serious incidents);
 - A 24-hour, 365-day Help Desk, operated by HS2, to start the co-ordination of HS2's
 response to an incident and to support the SCS JV where appropriate. The help desk is
 the first point of contact (0207 944 6570) to HS2 for all Level 1 and 2 incidents on the
 programme; and
 - An on-line incident reporting system (HORACE) that records the details of an incident and supports communications, investigation, and follow-up activities to avoid a recurrence.
- 5.1.2 The Environmental Incident Control Plan (1MCo₃-SCJ-EV-PLN-Soo₁-ooooo8) [R24] is will detail the requirements for dealing with an environmental incident. The incident levels and flow chart can be found in Appendix B.
- 5.1.3 Unexpected discoveries are anything encountered on site which was not planned for.
- 5.1.4 Environmental incidents will also be reported to the Environment Agency in line with the permit conditions.

5.2 Complaints

5.2.1 HS2 operate the HS2 Public Help Desk 24 hours per day, 7 days a week, to manage all complaints, handle enquiries and co-ordinate incident response. The SCSJV Community Engagement Team maintain 24/7 contact with the helpdesk and be available to answer any queries or liaise with site supervisors for investigation and resolution of complaints.

Placement S₂

Document no.: 1MCo4-SCJ_SDH-EV-PRO-SSo5_SLo7-000004

Revision: Co1

6 Communication

6.1 Risk assessment, method statements and start of shift briefings

- 6.1.1 Risk assessments and method statements will be written to cover specific activities and work. The Terminal Team works with the environment team to review and provide environmental content within RAMS. This plan will be used when drafting RAMS to ensure the relevant environmental risks are effectively captured and assessed, making sure RAMS are approved in accordance with the controls stated within this document.
- 6.1.2 Site Supervisors/Managers will hold daily start of shift briefings to ensure suitable coordination of site activities. Relevant environmental risks and control measures identified in the RAMS will be communicated as required.

6.2 Training and Awareness

Project and site inductions

- 6.2.1 All staff will receive a HS2 MWCC Induction. SCSJV and HS2 staff and operatives engaged onsite will undertake a site-specific health, safety, and environmental management induction prior to visiting or commencing work on site.
- 6.2.2 The induction will include the main requirements of the EMS to inform staff and operatives of the main environmental risks and controls to be implemented on site.

6.3 Specific environmental training and appointments

- 6.3.1 In addition to the full site induction and task briefings, a number of tailored environment training courses will be delivered throughout the project that are site specific and relevant to operatives' roles and responsibilities.
- All site supervisors shall attend Site Environmental Awareness Training (SEATS) within 3 months of joining the project, unless they have evidence to show they have completed the course within the last 5 years. This training shall be repeated every 5 years.
- 6.3.3 The two key environmental appointments on site are the Waste Controller and the Environmental Co-ordinator. These individuals must be nominated and appointed by the Terminal Manager and have attended the training/ signed the appointment letters for these roles. Key personnel will also require specific Waste Duty of Care training.
- 6.3.4 The SHE Systems Manager/ Training Manger maintains the SHE Training Matrix [R6] that identifies and records environmental training for all individuals working on lots S1 and S2.

Placement S₂

Document no.: 1MCo4-SCJ_SDH-EV-PRO-SSo5_SLo7-000004

- 6.3.5 Specific environmental training will be developed as required on site. Current courses in development include Air Quality/ Dust monitoring and Monitoring of Noise and Vibration.
- 6.3.6 Tool-box talks will be provided by both the Terminal Team, The Environment Team, and the environmental specialists. The content and frequency of these briefings will be included in site specific RAMS and corresponding TBTs.

Placement S₂

Document no.: 1MCo4-SCJ_SDH-EV-PRO-SSo5_SLo7-000004

Revision: Co1

7 Assurance and performance evaluation

7.1 Introduction

7.1.1 As detailed under each of the control measures, inspections and audits will be undertaken throughout the operational life of the permit.

7.2 Environmental monitoring

7.2.1 Environmental monitoring encompassing noise, vibration and air quality monitoring will be required to support the environmental assurance requirements.

7.3 Inspections and audits

7.3.1 Targeted Risk Matrix (TRM) assessment will be undertaken on a fortnightly basis by the site environmental advisor. Quarterly scored inspections will be undertaken internally by SCSJV, and quarterly environmental audits will also be undertaken internally by SCSJV. Monthly reporting of the environmental condition of the facility will be undertaken and submitted for review to the Environment Agency.

7.4 Sustainability reporting

- 7.4.1 SCSJV will measure and report environmental data as monitored above and in line with the Sustainability Reporting Technical Standard (HS2-HS2-SU-STD-000-000007) (R26) using the Environmental Sustainability Reporting Template (HS2-HS2-SU-TEM-000-000007) (R27) through the monthly Project Management Update (PMU).
- 7.4.2 The information will be used to monitor performance of the works against SCSJV objectives and targets that will be reviewed at HS2/SCSJV environment meetings.

Placement S₂

Document no.: 1MCo4-SCJ_SDH-EV-PRO-SSo5_SLo7-000004

Revision: Co1

8 Continual improvement

8.1 Non-conformance and corrective actions

- 8.1.1 Non-conformances (identified through audits, lessons learnt or incidents) will be logged on a Non-conformance Log by the Environment Team.
- 8.1.2 The Non-conformance Log will be reviewed during progress review meetings and lessons learnt will be shared with parent companies, other contractors and with HS2.

8.2 Opportunities for improvement

- 8.2.1 The SCSJV will review incidents to ensure investigations and corrective and preventative actions have been completed on time; identify trends and actions to be implemented; and disseminate lessons learnt with the aim of preventing recurrence.
- 8.2.2 Operatives will be encouraged to report near misses (a Level 4 incident) and good practice on the HS2 online incident reporting system.

8.3 Environmental management review

- 8.3.1 An environmental management review will be held at least every 6 months. This will include members of the Terminal Team and the Senior Leadership Team and key supply chain members where appropriate.
- 8.3.2 Environmental performance will be reviewed, including risks and opportunities identified and actions taken.

Placement S₂

Document no.: 1MCo4-SCJ_SDH-EV-PRO-SSo5_SLo7-000004

Revision: Co1

References

The following documents are client and industry related documents from which the above information is drawn or to be referred to:

Reference	Title	Reference
R1	Materials Management Plan Framework	HS2-HS2-EV-STD-000-000006
R ₂	SCSJV MWCC Overarching Environmental Management Plan S1 and S2	1MC03-SCJ-EV-PLN-S001-000003
R ₃	HS2 Environmental Minimum Requirements Annex 1: Code of Construction Practice	LWM-HS2-EV-STA-000-000107
R4	HS ₂ Sustainability Policy	HS2-HS2-SU-POL-000-000001
R ₅	SCSJV Environmental Policy	1MCo ₃ -SCJ-EV-POL-S001-000001
R6	SHE Training Matrix	1MCo ₃ -SCJ-HS-TEM-Soo1-0000510
R ₇	SCSJV Sustainable Sourcing Plan	1MCo ₃ -SCJ-EV-PLN-S001-000010
R8	Dust and Emissions Management Plan - Waste Transfer and Treat Station - Ruislip Southern Sustainable Placement S2	1MC04-SCJ_SDH-EV-PLN-SS05_SL07-000013
R9	Land Quality Management Plan S1 and S2	1MCo ₃ -SCJ-EV-PLN-S001-000012
R10	Lighting Management Plan S1 and S2	1MCo ₃ -SCJ-EV-PLN-S001-000027
R11	Noise and Vibration Management Plan - Waste Transfer and Treat Station - Ruislip Southern Sustainable Placement S2	1MCo4-SCJ_SDH-EV-PLN-SSo5_SLo7-000015
R12	Construction Logistics Strategy S1 & S2	1MCo ₃ -SCJ-CL-PLN-Soo1-000001
R13	Community Liaison Plan S2	1MC04-SCJ-SE-PLN-S002-000004
R14	Site Specific Environmental Control Plan, West Ruislip	1MC04-SCJ-EV-PLN-SS05_SL07-000003
R15	Statement of Intent	1MC03-SCJ-EV-APP-SS02_SL02-000001
R16	Fugitive Dust and Emissions Risk Assessment - Waste Transfer and Treat Station - Ruislip Southern Sustainable Placement S2	See Appendix A1 of Document: 1MCo4-SCJ_SDH-EV-PLN-SSo5_SLo7-000013
R17	Importing Recycled Aggregates Procedure	1MC03-SCJ-EV-PRO-S001-000009
R18	Excavated Materials Management Plan S1 and S2	1MC03-SCJ-EV-PLN-S001-0000017
R19	Water Resources Plan S1 and S2	1MCo3-SCJ-EV-PLN-S001-000036
R20	Surface Water Monitoring Plan S1 and S2	1MCo ₃ -SCJ-EV-PLN-S001-000029

Template no.:

HS2-HS2-IM-TEM-000-000265

Page 26

Uncontrolled when printed

Placement S₂

Document no.: 1MCo4-SCJ_SDH-EV-PRO-SSo5_SLo7-000004

R21	Groundwater Monitoring Plan S1 and S2	1MCo3-SCJ-EV-PLN-S001-000030
R22	Environmental Incident Control Plan S1 and S2	1MCo ₃ -SCJ-EV-PLN-S001-000008
R23	Monthly Environmental Inspection	1MCo ₃ -SCJ-EV-TEM-S001-000018
R24	Sustainability Reporting Technical Standard	HS2-HS2-SU-STD-000-000007
R25	Environmental Sustainability Reporting Template	HS2-HS2-SU-TEM-000-000007

Placement S₂

Document no.: 1MCo4-SCJ_SDH-EV-PRO-SSo5_SLo7-000004

Revision: Co1

Appendix A1 - EMS Certificate







Certificate of Registration

ENVIRONMENTAL MANAGEMENT SYSTEM - ISO 14001:2015

This is to certify that: Costain Group Pic

Costain House Vanwell Business Park Maidenhead

Berlishire SL6 4UB United Kingdom

Holds Certificate Number: BMS 45057

and operates an Environmental Management System which complies with the requirements of ISO 14001;2015 for the following scope:

The provision of professional services relating to the delivery of engineering and technology led solutions at every stage in the life-cycle of a client's asset, from conception, planning, design through delivery, testing, commissioning, handover, operation, and decommissioning.

These services may be provided to a client as a sole entity, in a joint venture or as a member of an alliance.

For and on behalf of BSI:

Andrew Laurny EMEA Systems Certification Director

Original Registration Date: 1999-06-07 Latest Revision Date: 2020-10-28 Effective Date: 2020-11-09 Expiry Date: 2023-11-08

Page: 1 of 3





...making excellence a habit."

This directions was based decironously land remains the property of 851 and is bound by the conditions of contrast. As electronic certificate cashes sucher funded certifications can be waitabled at www.trisgroup.com/Chardonicomy

Extransion and Contact: SCI, Stammit Court, Sary Amunat, Krowthill, Hillion Reynau PRC 6PR, Tall + 44 545 900 9000.
SSI Amaterica UK Limited, expaire of in Corpland under number PRCGI21 at 309 Olevelok High Road, Landon RK1 4NL, UK.
A Procedur of the ISE Straig of Companies.

Template no.:

HS2-HS2-IM-TEM-000-000265

Page 28

Uncontrolled when printed

Placement S₂

Document no.: 1MCo4-SCJ_SDH-EV-PRO-SSo5_SLo7-000004

Revision: Co1

Appendix A2 - Wamitab Certificate



Document no.: 1MCo4-SCJ_SDH-EV-PRO-SSo5_SLo7-000004

Revision: Co1

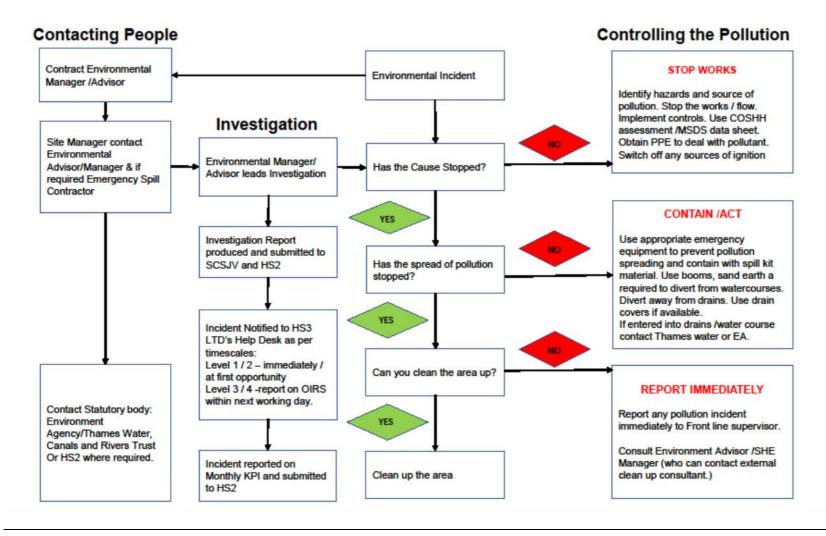
Appendix B - Incident levels and flow chart

Level 1	Level 2	Level 3	Level 4
Incidents that cause persistent or extensive harm or damage to the environment e.g., requiring external involvement to clean-up (and therefore a high likelihood of regulatory action including receipt of a statutory notice or other intervention by enforcing authority). Persistent and significant breach of permit / licence or consent conditions	Incidents that have caused or may cause significant harm or damage to the environment; or Persistent non-significant breach or significant non-persistent breach of consent conditions.	Incidents that have caused minor harm or damage to the environment (e.g., minor fuel spill on to ground, noise monitor exceedance).	An event, controlled through implementation of an effective incident control measure (e.g., drip tray used, effective use of noise barrier).

Template no.:

HS2-HS2-IM-TEM-000-000265 Page 30 Uncontrolled when printed

Document no.: 1MCo4-SCJ_SDH-EV-PRO-SSo5_SLo7-000004



Placement S₂

Document no.: 1MCo4-SCJ_SDH-EV-PRO-SSo5_SLo7-000004

Revision: Co1

Appendix C - Site Specific Risk Assessment

C1 - RSSP-WTS Risk Assessment Matrix

C_{1.1} Exclusions

The following exclusions apply to the Risk assessment and management plans provided in C2 below:

Hydrogeology: Underlying bedrock is classified by the Environment Agency as a Principal Aquifer (Seaford Chalk). No current or historic groundwater abstractions are located within 500m of the site. Given the significant thickness of vertically confining strata (e.g., London Clay and Lambeth Group) between the main potential source of contamination (Made Ground) and the Principal Chalk aquifer (top horizon of the chalk is 25.6m bgl), there is no pathway between the source and the receptor (Chalk aquifer); as such, the chalk aquifer is not considered to be a receptor of the works at RSSP-WTS.

Designations: Designations are outlined in Table 3 of the Site Condition Report (1MCo₄-SCJ_SDH-EV-REP-SSo₅_SLo₇-000009)

Site Operation: Noise and Vibration Management Plan.

C2 - Fugitive Dust and Emissions Risk Assessment

What do you do that can harm		Assessing the risk(Unmitigated)		itigated)	Managing the Risk		Residual Risk(mitigated)		
Hazard	Receptor	Pathway	Probability of exposure	Consequence	What isthe overall risk?	Risk management	Probability of exposure	Consequence	What is the overall risk?
Exhaust emissions from road vehicle movements on site including entering and leaving the site.	Residents to the west on Harvil Road and to the East / Southeast on Breakspear Road	Air	Medium	Medium	Medium	 All road vehicle movements to the site will be prebooked and allocated delivery times to prevent queuing of vehicles at the site entrance off Harvil Road. Vehicle numbers will be kept to a minimum, and the conveyor will limit HGV movements. All Light Duty Vehicles will meet Emission Standard Euro 6 (Diesel) and Euro 4 (Petrol). All Heavy Good Vehicles (HGVs) will meet Emission Standard Euro VI. All road vehicles will be maintained in accordance with the manufacturer's instructions and hold a current MOT. A noticeboard summarising the site rules for visiting drivers is displayed in a prominent position adjacent at the site entrance, and a complete set of rules will be displayed in the site office. Copies of the site rules will be available for issue to visiting drivers. Movement of road vehicles around the site will be kept to the minimum reasonable for the effective and efficient operation of the site. Vehicles will be switched off when not in use. 	Low	Low	Low
Exhaust emissions from on site Machinery (Non- road Mobile Machinery – NRMM)	Residents to the west on Harvil Road and to the East / Southeast on Breakspear Road	Air	Medium	Medium	Medium	 All relevant NRMM (with a power rating between 37-560kW) will meet a minimum emission standard Euro Stage IIIB*and Stage IV* from 1st January 2022. *IIIA for constant speed engines of any power i.e. generators. NRMM meeting emission standard Euro Stage V or using alternative low/zero emission technology (e.g. hydrogen or electric) will be preferred depending on market availability. All NRMM will be operated in accordance with the manufacturer's written recommendations. On-site NRMM will be switched off and secured when not in use on site. NRMM exhausts to be directed away from the ground and positioned at a height to facilitate appropriate dispersal of exhaust emissions. Movement of NRMM around the site will be kept to the minimum reasonable for the effective and efficient operation of the site. The use of diesel or petrol-powered generators will be reduced by using mains electricity or battery-powered equipment where reasonably practicable. All NRMM will use ultra-low-sulphur diesel or Hydrogenated Vegetable Oil (HVO). NRMM maintenance records will be kept on site and reviewed regularly. 	Low	Low	Low

Document no.: 1MCo4-SCJ_SDH-EV-PRO-SSo5_SLo7-000004

Revision: Co1

What do you do that can harm		1	Assessing the risk(Unmitigated)		itigated)	Managing the Risk	Residual Risk(mitigated)		
Hazard	Receptor	Pathway	Probability of exposure	Consequence	What isthe overall risk?	Risk management	Probability of exposure	Consequence	What is the overall risk?
Dust emissions from the waste delivery to site by the conveyor system	Residents to the west on Harvil Road and to the East / Southeast on Breakspear Road	Air	Medium	Medium	Medium	 The conveyor belt system will be enclosed for its length of travel within the site. The conveyor belt system will have a suitable belt cleaning system (scrapers/brushes and watering) to prevent the build-up dry friable materials on the conveyor. A mist spray system of nozzles will be fitted to the exit shroud of each conveyor belt discharge and operated, as required, to avoid fugitive dust emissions form the waste materials becoming air borne beyond the discharge point. The conveyor system will be regularly inspected and maintained in accordance with the manufacturer's instructions to ensure the belt cleaning and dust suppression systems are working effectively and efficiently. Drop heights from the conveyor to stockpiles will be kept to the reasonably practicable minimum. The waste material storage area (muck bin storage area) will comprise walls on western, northern and eastern facades to roof level and the 7,850m² area will be roofed. An automatic continuous real-time particulate monitor (PM10) (MCERTS indicative) will be installed and operational at the western site boundary towards the nearest sensitive residential premises (approx. 100m to the west of the storage bins area and immediately north of the topsoil storage area. The monitors have a site action level set at 75µgm-3 based on a 5-minute average, which if triggered will send an email alert to relevant site and project personnel and instigate cessation of work and investigation into the source of the trigger. Corrective action will be implemented before recommencement of site operations. The outcome of trigger alerts and investigation will be notified to EA, LB Hillingdon and HS2 as soon as practicable and within 48 hours. All monitoring data, trigger alert investigations and complaint investigations are reported on the www.gov.uk website. 	Low	Low	Low
Dust emissions from loading and storage of lime /ggbs in silos	Residents to the west on Harvil Road and to the East / Southeast on Breakspear Road	Air	Medium	Medium	Medium	 Lime/ggbs will only be stored on site within the designated silos. Dust emissions from unloading road tankers shall be minimised by venting to the silo filter using a delivery tanker fitted with an on-board, truck-mounted relief valve and filtration system, and by connecting transfer lines first to the delivery inlet point and then to the tanker discharge point, and by ensuring delivery is at a rate which does not pressurise the silo. Bulk lime/ggbs tanker transfer lines will be securely connected to the silo delivery inlet point first, and then the tanker discharge point before the delivery 	Low	Low	Low

Template no.: HS2-HS2-IM-TEM-000-000265

Page 34

Uncontrolled when printed

What do you do that can harm			Assessi	ng the risk(Unm	itigated)	Managing the Risk	Resid	ual Risk(mitigate	ated)		
Hazard	Receptor	Pathway	Probability of exposure	Consequence	What isthe overall risk?	Risk management	Probability of exposure	Consequence	What is the overall risk?		
						 commences. Materials will be delivered at a controlled rate, and the rate adjusted to prevent pressurisation of the silo. Silos shall not be overfilled or over pressurised and there shall be an overfilling and over pressure warning alarm. Deliveries will automatically stop where overfilling or over-pressurisation is identified. Displaced air from pneumatic transfer shall pass through filtration prior to 					
						 emission to air. The filter systems will be regularly inspected and cleaned to prevent blockages and accumulation of powder in the filter system. 					
Dust emissions from stockpile management within the muck storage bin area	Residents to the west on Harvil Road and to the East / Southeast on Breakspear Road	Air	Medium	Medium	Medium	 The height of waste material stockpiles will always be at least 0.5m below the top of the 3.8m walls. Drop heights from vehicles/NRMM involved in the transfer of materials on the site will be kept to the reasonably practicable minimum. Vehicles/NRMM transporting materials within the site will not be overloaded Daily cleaning and suppression of dust in the muck storage bin area will be supplemented using a road sweeper (7t or larger) and / or large capacity vehicle pulled (HGV), or driven, water bowser. The number of handling operations of stockpiled waste materials will be kept to the minimum reasonably practicable. A visual inspection of operations within the muck storage bin area will be undertaken at regular intervals during the day and recorded. Any shortfalls in 'housekeeping' and effectiveness of dust suppression will be identified and rectified promptly. 	Low	Low	Low		
Dust emissions from road vehicles and NRMM movements on site including entering and leaving the site via Harvil Road.	Residents to the west on Harvil Road and to the East / Southeast on Breakspear Road	Air	Medium	Medium	Medium	 On site speed limit for any vehicle/NRMM will be 5mph. Speed limit signage will be displayed at the site entrance and around the haul route and enforced by onsite traffic marshals. The entrance / egress of the site and haul road that circles the waste material storage area (muck storage bins) will comprise an impermeable concrete slab. The haul road serving the topsoil storage area (south of the wooded area) will comprise course granular compacted materials. A visual inspection of haul routes ('housekeeping' and repair) will be undertaken at regular intervals during the day and recorded. Any shortfalls in 'housekeeping' 	Low	Low	Low		

Template no.: HS2-HS2-IM-TEM-000-000265

Page 35

Uncontrolled when printed

What do you do that can harm			Assessi	ng the risk(Unm	itigated)	Managing the Risk Residual Risk(mitigated)				
	Hazard	Receptor	Pathway	Probability of exposure	Consequence	What isthe overall risk?	Risk management	Probability of exposure	Consequence	What is the overall risk?
							 will be identified and rectified promptly. Similarly, repairs will be arranged and implemented. Daily cleaning and suppression of dust on haul routes will be carried out using a road sweeper (7t or larger) and / or large capacity vehicle pulled (HGV), or driven, water bowser. Manual jet washes (estimated inventory of 4-6) and sweeping facilities will be available on site for cleaning of small/limited areas where access for larger road sweeper and vehicular water bowsers is limited / prevented. The frequency of cleaning during the day will be suitable for the purposes of suppressing dust emissions and preventing friable deposits on haul routes. All HGV road vehicles and NRMM leaving the site will use the automated wheelwash facility. All vehicle wheels will be subsequently checked and if necessary be resent through the wheel wash for further cleaning prior to the site egress at Harvil Road. An automatic continuous real-time particulate monitor (PM10) (MCERTS indicative) will be installed and operational at the western site boundary towards the nearest sensitive residential premises (approx. 100m to the west of the storage bins area and immediately north of the topsoil storage area. The monitors have a site action level set at 75µgm-3 based on a 5-minute average, which if triggered will send an email alert to relevant site and project personnel and instigate cessation of work and investigation into the source of the trigger. Corrective action will be implemented before recommencement of site operations. The outcome of trigger alerts and investigation will be notified to EA, LB Hillingdon and HS2 as soon as practicable and within 48 hours. All monitoring data, trigger alert investigations and complaint investigations are reported on the www.gov.uk website. Movement of vehicles / NRMM around the site will be kept to the minimum reasonable for the effective and efficient operation of the site. Drop heights from excavators to vehicles/NRMM involv			
							 The number of handling operations of stockpiled waste materials will be kept to the minimum reasonably practicable. 			

Template no.:
HS2-HS2-IM-TEM-000-000265

What do you do that can harm			Assessing the risk(Unmitigated)			Managing the Risk		Residual Risk(mitigated)		
Hazard	Receptor	Pathway	Probability of exposure	Consequence	What isthe overall risk?	Risk management	Probability of exposure	Consequence	What is the overall risk?	
Dust emissions from stockpile management within the topsoil storage area	Residents to the north on Harvil Road and to the East / Southeast on Breakspear Road	Air	Medium	Medium	Medium	 A sufficient number of dust canons will be located within the topsoil storage area (estimated up to 4 depending on size) and operated to avoid fugitive dust emissions from the waste materials and deposits on the off-haul route areas becoming airborne. Drop heights from vehicles/NRMM involved in the transfer of materials on the site will be kept to the reasonably practicable minimum. Vehicles/NRMM transporting materials within the site will not be overloaded Daily cleaning and suppression of dust in the topsoil storage area will be supplemented using large capacity vehicle pulled (HGV), or driven, water bowser. The number of handling operations of stockpiled waste materials will be kept to the minimum reasonably practicable. A visual inspection of operations within the topsoil storage area will be undertaken at regular intervals during the day and recorded. Any shortfalls in the effectiveness of dust suppression will be identified and rectified promptly. Seeding, sealing of completed earthworks will be undertaken as soon as reasonably practicable following completion of the materials transfer to the topsoil storage area. 	Low	Low	Low	