



BAA.2210 Red Bank Neighbourhood, Victoria North HIF Infrastructure Project

VNIF-BNL-ZZ-YYY-MA-W-0001

Project Execution Plan

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Section A Project Execution Plan

A1.0 Introduction

This Project Execution Plan (PEP) describes the methods to be implemented to control the health safety and environmental requirements with regard to project scope of works detailed in section 2.1 of this plan. The BAM Nuttall policy and systems under which this plan is prepared are described in the BAM Nuttall management manual.

This plan is primarily in four parts that define the way in which each aspect of this project will be managed. Part A of this document contains the common BAM Nuttall core set of requirements. When this section is read in conjunction with Part B, Part C or D and associated schedules these interlink to form the following documents as defined in **Table A1.0** below:

Table A1.0 PEP Layout

Section A Common Requirements and schedules	+	Section B Health and Safety and schedules	=	Construction phase plan as required under CDM
	+	Section C Environment and schedules	=	Environmental management plan
	+	Section D Quality and schedules	=	Quality plan
	+	Section B, Section C, Section D and schedules	=	Project Execution Plan

The arrangements for the management of health, safety, environmental and quality issues during site activities within this project are detailed in the sections, schedules of this document. They make provision for the development and use of subsidiary documents – procedures, activity plans, inspection and test plans.

The overall purpose of the plan is to record the initial risk assessment, how we are going to proceed and establish a project system capable of meeting customer, statutory and regulatory requirements. It gives assurance that systems are in place and guides BAM Nuttall staff in implementing them.

A1.1 Project execution plan administration

Authorisation

The plan meets BAM Nuttall, customer and legislative requirements. It is verified as meeting system requirements of BAM Nuttall and those of ISO 9001, ISO 14001 and ISO 45001. This plan is authorised for use by the agent, area health and safety advisor, area environment advisor and quality manager. The Divisional Director confirms acceptance of overall responsibility for effective operation of this plan. Confirmation is either by e-mail, electronic signature or information management system, ProjectWise

Distribution

This plan once approved and verified is stored on the information management system used by the project. [VNIF-BNL-ZZ-YYY-MA-W-0001](#)

The plan once approved and verified is distributed by the agent or document controller via e-mail and stored as detailed in the project document control procedure.

- Email

Revisions to the plan

Major revisions to this plan are made and approved in the same way as the originals including the obtaining of customer approval and authorisation where required by the conditions of contract. Minor amendments to the plan are not referred to the original plan authorisers, Minor

amendments to procedures are dealt with by the agent through the document management system.

Inputs into the plan

This plan is based on the contract documents referenced in **Table A2.1** and any pre-construction information provided by the customer, the designer and/or forwarded by the Principal Designer

It has been prepared taking account of:

- ISO 10005 *Quality management guidelines for quality plans*
- ISO 9004 *Management for the sustained success of an organisation – A quality management approach*,
- BS 6079 *Project management. Principles and guidance for the management of projects*,
- PAS 99 *Specification of common management system requirements as a framework for integration*
- 'The Construction (Design and Management) Regulations Guidance on Regulations (L153)– *Managing health and safety in construction*'

Control measures defined within subsidiary documents to this plan (risk assessments, procedures, activity plans, work package plans and inspection and test plans), are primarily based on the following information sources:

Normative References and Definitions *MG00: Management System Definitions*

Normative references and definitions are defined in the contract specification and documents. These are detailed in **Table A2.1**

A2.0 The project

A2.1 The project works

The project to which this execution plan relates is described in **Table A2.1** this plan is subject to continual development as the project progress and information becomes available.

Table A2.1: The project

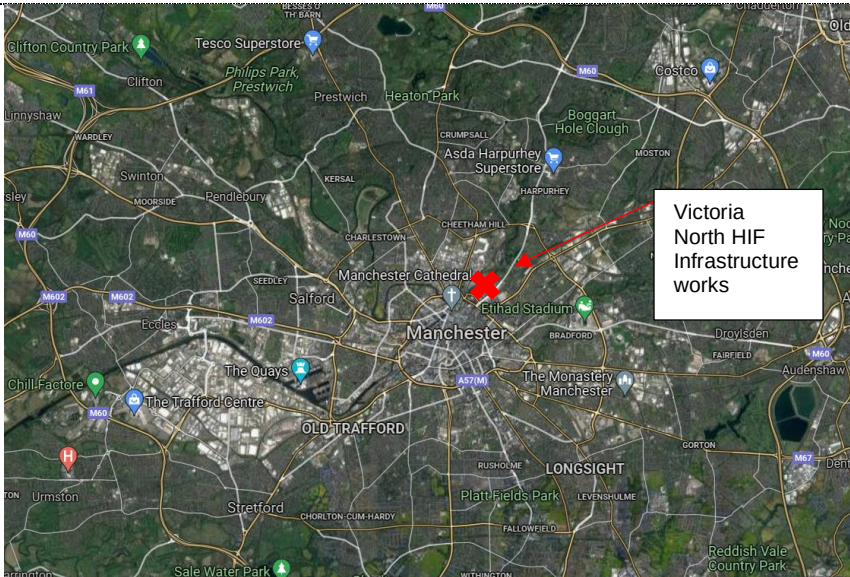
Project overview	The "design and build" enabling infrastructure works to support the subsequent residential led development for the Victoria North HIF masterplan.		
Client	Manchester City Council		
Client representative	Mark Walsh		
Principal Contractor	BAM Nuttall Ltd- Neil Peters		
Lead designer	ARUP- Lanzhu Shao		
Other designer(s)	Planit – Matt Stirton		
Principal Designer	Pell Frischman		
Others	N/A		
Contract terms and conditions	Professional Services Contract (PSC)		
Specification	TBC – Picked up in Main contract works		
F10	Date Applied for	Start Date	Finish Date:
	03/02/2022	07/02/2022	05/09/2022
Site working hours	Mon to Friday- 07:30 to 18:00hrs		

	No Weekend or night work planned for enabling works	
Scope of work (Project works covered by this plan)	Enabling works including demolition of Cream line Dairy, tree and vegetation clearance and temporary haul road construction along with site establishment.	
Significant works to be subcontracted	Demolition of Cream line Dairy Tree and Vegetation clearance	
Key Risks and Opportunities	- Contaminated land - Honey Street retaining wall - Asbestos found on site - Plot boundaries changing - Trespassers on site	- Re-use of existing material - Re-use of temporary materials for permanent works - Ecology and habitat enhancement

A2.2 Project location and Green Travel Plan

Project location

Table A2.2: Project location

Project Name and address	
Victoria North HIF Infrastructure works	
	Vehicle access is along Collyhurst Road via the bridge leading to Packaging Products (Coatings) Ltd, Collyhurst Road, Manchester, M40 7RT or via Red Bank Road through to Cream Line Dairy, 56-58 Red Bank, Cheetham Hill, Greater Manchester M8 8TS



Green Travel Plan

In line with our corporate requirements to consider the impact our works activities have on the environment, the agent has considered transport arrangement to and from site for personnel and visitors. **Schedule A2** defines the arrangements.

A2.3 Site security

Appropriate site security arrangements are selected by the agent following an assessment of the risks of injury to members of the public. Outline arrangements are defined in **Table 2.3**

Table A2.3: Site security

Security fencing	Fencing to be erected around all work areas whilst in progress, and security on site for out of hours working. Where existing fencing is in place this will be maintained for the period of works
Controlled access points	Cream Line Dairy Entrance – Locked gates P&P Entrance – Locked gates
Warning signs	To be provided advising public that works being carried out. Warning signs to be secured to surrounding fencing and at access points
Security cameras	These will be deployed where practical. Details to be developed
Security guarding	TBC – Propose fixed and mobile patrol options
Material and plant	Locked, isolation switches, secured within fenced compound
Fuel security	Lockable Double Bunded Fuel Tank
Any other relevant matter	If 3 rd Parties enter the fenced off area, works to stop and direct the party out of area. If persons approach the work, the operators will stop work and direct them safely past and away from the work area.

A2.4 Project objectives and targets

Specific objectives and targets with measurable performance indicators, including those set by the client, are defined for this project within the **Table 2.4** below. These targets are monitored by the agent for distribution to other interested parties.

Objective /Target	Performance indicator	Responsibility
Safety	100% of AP's are briefed 100% of Site Inductions Zero accidents or injuries Promotion of safety culture across the division	BAM
Environment	Zero reportable incidents All waste to be logged on BAM Site	BAM
Quality	Close out NCRs within 4 weeks	BAM
Management	CCS Score >40	BAM
Sustainability	Sustainable procurement and influencing the supply chain will be key to driving low carbon initiatives and performance measures	BAM

A2.5 Management arrangements

The agent is responsible for the implementation of this plan and ensures that it is communicated to all those who require to work in accordance with it directly and indirectly, including the supply chain.

A2.5.1 Project Organisation

The organisation chart contained in **Schedule A1** describes the project team, their relationships, contracted and nominated / designated roles. This includes any off site support staff who may be called upon for assistance by the project team. The project team is constantly reviewed against contract needs and requirements including any changes in the scope.

A2.5.2 Personnel selection (competence, knowledge, awareness)

Personnel are selected on the basis of qualifications, skills, knowledge, behaviours and experience (competence) to suit the scope of project works. The aim of this is to ensure that the selected project team has complimentary skills to meet the engineering delivery and requirements of the customer. A record of this knowledge skills analysis process is listed **Schedule A4** in the project personnel file. This schedule contains confidential information, which must be stored securely at all times in accordance with data protection requirements.

A2.5.3 Project appointment - NP17: Signatory Powers

The agent gives written notice to individual personnel of the responsibility for the nominated / designated roles listed in **Schedule A1**. Health and safety duties are further detailed in the BAM Nuttall health and safety policy booklet.

A2.5.4 Drugs and alcohol - NP3.2: Monitoring for drugs and alcohol (non-rail) NP3.3: Monitoring for drugs and alcohol, (rail) NP3.4: Declaration of medical restrictions, NP3.13 Discipline

BAM Nuttall expects employees and subcontractors to take a responsible approach to drugs and alcohol.

BAM Nuttall carries out pre-employment drug screening. On this project BAM Nuttall reserves the right to:

- carry out random tests for alcohol and drug use
- to test employees and subcontractors who are involved in industrial accidents
- where a manager believes that substance abuse has contributed to an incident, changed behaviour or affected work performance.

BAM Nuttall takes disciplinary action, including, counselling, which may lead to dismissal or removal from site. This includes personnel who refuse to undertake any testing which may or may not result in a positive test. In the case of subcontractors, this will lead to removal from the project.

A2.6 Supply chain management - NP5: Supply chain management

Supply chain management within BAM Nuttall is carried out in accordance with the requirements defined in NP5: Supply chain management and associated procedures. A list of vendors for this project is contained within the project procurement schedule SCF01.

Project wise link tbc

A2.6.1 Procurement of good and services for the project - NP5.3 Procurement of material goods, NP5.4 Procurement of sub-contractors and equipment

The agent reviews the procurement schedule or equivalent document prepared during the bid process in conjunction with the relevant company buyer or estimator. This joint review is to ensure that nominated vendors have the necessary skills, knowledge, experience and training to allow them to fulfil their requirements on this project. Procurement dates and special arrangements will be agreed and monitored by the agent and buyer. This is achieved through regular communication as the project progresses. Client supplied goods are subject to the same process of evaluation as those supplied by BAM Nuttall.

A2.6.2 Management of sub-contractors - NP5.6 Management of vendors on site

Subcontractors are required to submit documented information to illustrate how they intend to meet the contract and specification requirements to demonstrate compliance. Key sub-contractors are informed of the documents to be provided within their initial enquiry, for subsequent discussion and agreement during the start-up meeting carried out for sub-contractors and major suppliers.

Sub-contractors performance on site is continually managed over the course of the project works. This is the responsibility of the agent, who monitors and provides feedback on the vendor's performance as described within the company procedure.

A2.7 Product Traceability

Product traceability is a contract requirement of this project as defined in **Table 2.7**.

Table A2.7: Traceability requirements

Products and materials where traceability is required

Haul road – Products/materials tbc

Materials may be incorporated in the works as 'status unknown' and held traceable until tests confirm acceptability.

A2.8 Equipment control - NP11: Measuring equipment control

Monitoring, measuring and test equipment is inclusive of all surveying instruments, laboratory equipment, cable locators, field testing equipment, gas and noise monitors and any other specific items identified by the agent. The need for monitoring, measuring, testing and calibration of site equipment is identified within the projects inspection and test planning, company procedures and work specific activity plans.

Control of equipment is the responsibility of the site equipment engineer who is appointed in writing by the agent to ensure project equipment is controlled, checked and calibrated.

A3.0 Risk Management

The effective management of risk is fundamental to the control of work delivery and to the ultimate successful completion of this project. Continual forward thinking and introduction of appropriate controls prevents the occurrence of the unexpected, ensuring project objectives are achieved. The risks to health, safety, quality and environment have been identified during the preparation of this plan. These risks have been detailed in **Section 3.2** and **Section 3.3** of this plan.

A3.1 Management of project risk - NP22.5: Risk and opportunity management of project works

Risk and opportunity management at the construction stage commences with preparation of this project execution plan following a review of the contract requirements. Ongoing management of risk and opportunity is undertaken throughout the project. This is monitored using the live threats and opportunity management register (ROMR).

A3.2 Health, safety, quality and environmental risk - pre-construction and designers - NP23: Health safety and environmental risk assessment

The hazards identified from pre-construction information, including design risk assessments, that incorporate design lifecycle are listed in **Table 3.2** which provides a checklist for where they are dealt with in this plan.

Table A3.2: Hazards from pre-construction information

Hazard	Section of plan addressing hazard
Leptospirosis	B4.20 Other significant hazards
Invasive plants	A3.2: Constraints and enhancements
Existing/uncharted utilities	B4.2 underground services
Working close to railway lines	B4.18 Railways
Working near existing structures	B4.17 Stability of existing structures

Hazard	Section of plan addressing hazard
Plant movements	C3.5 Nuisance - NP27.4 Control of site nuisance
Asbestos	B4.20 Other significant hazards

A3.3 Health, safety, quality and environmental risk - construction phase - NP23: Health safety and environmental risk assessment

The risks from safety, health, quality and environment are identified during detailed planning of work activities. This includes work carried out in the design phase. Actions to prevent and reduce risks are identified with any remaining (residual) risks clearly understood and communicated to the workforce.

- **Section B** details health and safety risks
- **Section C** details environmental risks
- **Section D** details quality risks

Risk assessment may identify the need for an activity plan as a necessary control to manage the outcome and it is appropriate to prepare an activity plan for all activities of significant risk.

A3.4 Emergency procedure - SG23: Emergency planning

Site specific emergency procedures are prepared to ensure limitation of injury and damage should an incident occur.

The emergency procedures listed and included in **Table A3.4** below apply. Site notices describing these procedures are included in **Schedule A6**. A list of key personnel and organisations for contact or liaison in the event of an emergency, together with contact telephone numbers, is displayed as a site notice and included in **Schedule A6**.

Table A3.4: Incident and emergency arrangements

Site specific emergency arrangements	Are arrangements to be drilled?	Frequency of drill
Accident	Yes	Annual
Fire	Yes	Monthly
Confined space rescue	No	N/A for enabling works
Rescue from height	No	N/A for enabling works
Person in water	No	N/A for enabling works
Oil and chemical spill	Yes	3 Monthly
Watercourse pollution	No	N/A for enabling works

Following an incident, the emergency services and senior members of the management team are informed immediately and where applicable the relevant enforcing authority is also informed. Communication with the media and public is managed and controlled. Thereafter, all communication is referred to the Head of Communications at Head Office.

A3.5 Site tidiness

The agent ensures that facilities are kept clean and tidiness (housekeeping) is maintained in the following areas by completing **table A3.5** below:

Table A3.5: Site tidiness

Area	Action	Minimum Frequency
Offices,	Cleaner employed	Daily
Welfare and toilets	Cleaner employed	Daily
Access routes	BAMN General Foreman to review prior to commencing works in specific areas	Daily
Materials storage	Storage locations to be reviewed twice a day by General Foreman.	Daily
Work areas	BAMN and Subcontractor Supervisors	Daily

A4.0 Project design, planning and programming

A4.1 Design - NP7: BAM Nuttall design services NP20: Design management for design services

BAM Nuttall is responsible for the following elements of permanent works design:

Enabling works only

- All associated preparatory works, including tree clearance and demolition of Cream Line Dairy.

Communication contacts for the designers are listed in **Table A4.1**

Table A4.1: Communication with designer(s)

Name of Lead Designer	Name of representative	Position	Contact details
Arup	Melanie Edwards	Project director	melanie.edwards@arup.com
Method of communication			
Meetings	Weekly meetings		
Document transfer arrangements	Use of Project wise		
Other			
Name of Other Designer	Name of representative	Position	Contact details
BAM Nuttall Temporary works department	TBC	Design Engineer	TBC
Method of communication			
Meetings	Microsoft Teams – When required		
Document transfer arrangements	Email & Project wise		
Other			

The BAM Nuttall nominated project design co-ordinator ensures that design information, including all design changes and risk assessments, is issued to the Principal Designer. For

projects containing design elements this project execution plan is updated to reflect designer risk assessments.

The Lead Designer is also responsible for ensuring:

- Safe by design review is carried out
- That the work of all other designers meets the overall design requirements
- Design is subject to an interdisciplinary check
- That a constructability review is carried

The agent ensures any subcontractor designed temporary works, including formwork and falsework, are referred to the BAM Nuttall Design Department for the relevant categorised checking.

Design validation

The arrangements for any design validation, as defined in the, customer's requirements, specification, or designer's quality plan, are set out in the quality control plan of **Schedule D1**.

The design co-ordinator ensures that testing or trials are supervised appropriately, the designer is notified of the results and that the lead designer reviews them.

A4.2 Engineering Management

The agent appoints an engineering management team in accordance with BAM Nuttall procedures. Engineering appointments for this project are defined in schedule A1 of this plan.

If required a separate engineering management plan is produced and detailed in Section E of this plan. This section should be read in conjunction with Section A together they form the Engineering Management Plan for this project.

A4.3 Project planning - NP2: Planning and programming

For the project, the bid programme is used as the basis for the contract programme submitted for the approval of the client or his representative. From this programme, activities are identified and arrangements made for detailed planning.

In addition to work activities, arrangements are planned for the establishment of capability in terms of system, resources and competence. The planning process enables the timely identification and provision of these requirements in sufficiently robust form to allow the works to progress as programmed to the satisfaction of all stakeholders.

A4.4 Project programme - NP2: Planning and programming

The outline programme for the works is as described in the following table. Whilst the anticipated completion date stated is updated as necessary in revisions to this plan, it is indicative only and has no contractual significance.

Table A4.4: Project programme key dates

Contract award date	10/05/2021
Start on site date	01/02/2022 – Enabling works
Appointment / arrival on site of critical / key contractors	Tree Fellers – 01/02/2022
Key consent dates	Planning Approval 23/12/2021
Key sectional/milestone completion dates	Tree Felling – 28/02/2022 Prior to bird nesting season

Anticipated completion date	08/08/2022 – Enabling works only
------------------------------------	----------------------------------

The bid programme has been used as the basis for the contract programme. From this programme, activities are identified and arrangements made for detailed planning. The developed contract programme can be reviewed by following this link. **TBC**

A4.5 Access and egress / traffic routes (on and off the project) - *NS2: Access and egress*

The agent ensures that sufficient time and resources are allocated to maintain access routes for pedestrians and vehicles. Arrangements in place are listed in table A4.5 below.

Table A4.5: Access and egress / traffic route maintenance

Route	Responsibility	Action
Deliveries for enabling works	BAMN	Access across P&P bridge off Collyhurst road
Personnel segregation	BAMN	BAM Supervisor to install segregation appropriate to work area and maintain
Plant and equipment	BAMN	To only use designated access routes as per delivery procedure
Monitoring	BAMN	Traffic management maintenance crew available at all times during periods of work, regular inspection and maintenance as necessary, of all access routes.
Access to point of work	BAMN	As per Workplace Transport Plan
Zonal working	BAMN	BAM Supervisor to install segregation appropriate to work area and maintain

A4.5.1 Work place transport plan

The layout of access to and egress from the site, traffic routes, parking and loading/unloading areas, restricted areas are prominently displayed on a Site Transport Plan, including rules can be found in Schedule A8.

A4.6 Budget and financial control - *NP9: Budget and financial control*

BAM Nuttall seeks to deliver a sustainable business result by implementing a process of comprehensive, effective and consistent budget and financial control.

The project team are responsible for establishing financial controls as described below:

- Establishment of a robust performance monitoring systems that provides a basis for subsequent commercial monitoring during the life of the project.
- Obtaining a timely understanding of the projects performance against budget, taking into account the programme position.
- Providing management with a report of accurate and auditable costs at the end of each monthly accounting period.
- Ensuring that applications for payment, certification and cash received are all in accordance with the contract.
- Providing a reliable and clear forecast of the expected financial outcome of the project.

- Preparing clear, accurate and comprehensive commercial plans and reports.
- Cashflow management

A5.0 Communication

The agent determines and implements effective arrangements for formal communication with all stakeholders. Details of communication routes for this project are detailed in **Tables A5.1 to A5.5**

A5.1 Customer communication

On this project, such communication is achieved as indicated in the following table.

Table A5.1: Customer communication

Name of customer's representative	Position and organisation	Contact details
Mark Walsh	MCC Project Manager	Mark.walsh@manchester.gov.uk 07896041588
<i>Name of safety manager</i>	TBC	
<i>Name of environmental manager</i>	TBC	
<i>Name of quality manager</i>	TBC	
Arrangements for other meetings / forums	Regular Planned Public drop-in meetings with EA and BAMN representatives	

A5.2 Principal Designer

The agent will provide information to the Principal Designer in the ways described in the following table.

Table A5.2: Principal Designer Communication

Name of Principal Designer	Position and organisation	Contact details
Pell Frischmann	Pell Frischmann	Associate - Dave Spaul – 07534424777
Meeting / communication arrangements	Teams & face to face meetings - Monthly	
Information transfer method	<i>Pre-construction information, designer and health and safety file.</i>	

A5.3 Contractors

The agent will provide information from contractors to the Principal Designer in relation to construction information and for inclusion within in the health and safety file in the ways described in table 5.3. Alternatively this may be added as a separate schedule.

Table A5.3: Communication with other contractors

Name of contractor	Name of contractor representative	Position	Contact details
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PP O'Connor's	Neil Powell	Demolition Estimator	07872455671 Neil.powell@ppoconnor.co.uk
Method of communication			
Meetings	Pre-start & weekly thereafter		
Document transfer arrangements	Email		
Other			
Name of contractor	Name of contractor representative	Position	Contact details
Cornthwaites	Brian Thoburn	Operations Manager	07714136530 Brian@cornthwaitetreecare.co.uk
Method of communication			
Meetings	Pre-start & weekly thereafter		
Document transfer arrangements	Email		
Other			
Name of contractor	Name of contractor representative	Position	Contact details
BAM Ritchies	James Hogg	Snr Geotechnical Engineer	07881501487 James.hogg@bam.com
Method of communication			
Meetings	Pre-start & weekly thereafter		
Document transfer arrangements	Email		
Other			

A5.4 Other Interested Parties

The agent establishes communication links with other interested parties such as the, local authority, regulators, community representatives. Details of these are listed in **Table A5.4** below. Details of community links are provided in the community action plan contained in **schedule A3**.

The project will be registered with the Considerate Constructors Scheme (CCS) in accordance with criteria defined in BAM Nuttall Management Bulletin MB123 unless the client restricts such membership. Community investment activity data is recorded monthly on BAM Nuttall Ltd. Central database.

Table A5.4: Other interested parties

Designated Parties	Name & Address	Contact Name (s)	Contact Details (email, mobile, telephone)
HSE	Redgrave Court, Merton Road, Bootle, Merseyside L20 7HS		0151 951 4000
EA	Richard Fairclough House, Knutsford Road, Warrington WA4 1HT	Andy Davies	07393798325 Andy.davies1@environment-agency.gov.uk

Designated Parties	Name & Address	Contact Name (s)	Contact Details (email, mobile, telephone)
MCC Planning	Communications via Avison Young 11 St Jame's Square, Manchester, M2 6DN	Ed Harvey	07831402681 Edd.harvey@avisonyoung.com
MCC Highways	Communications via Avison Young 11 St Jame's Square, Manchester, M2 6DN	Ed Harvey	07831402681 Edd.harvey@avisonyoung.com
Network Rail	Communications via T&T 6th Floor, 55 Spring Gardens, Manchester, M2 2BY	Matt Ralph	07946605520 Matt.ralph@turntown.co.uk
FEC	Communications via T&T 6th Floor, 55 Spring Gardens, Manchester, M2 2BY	Matt Ralph	07946605520 Matt.ralph@turntown.co.uk

A5.5 Workforce - NP24 Activity Plan, SG26 Workforce consultation

The agent identifies workforce representatives to be involved in discussions pertaining to the ongoing methodology and programming of the works. People and personnel consulted are listed in the relevant activity plans or work package plans.

In addition the following formal arrangements have been established to consult with the workforce generally

Table A5.5: Other communication arrangements

Information discussed	Method	Frequency
Site Induction	Presentation with Verbal briefing and visual aid	Every 12 months or if absent from site for 3 months
General site information	Safety Committee	Monthly
Alerts and bulletins	Face to face	As determined by issue
Toolbox talks	Face to face	As determined by site needs
General observations	Observation cards Observation App	As matters are identified
Briefings	Verbal	Daily and feedback at the end of the shift
Activity Plans	Verbal	Each AP & RA
Workforce Forum	Verbal – Minutes Taken	Fortnightly

A5.6 Induction and site rules

The induction and site rules are developed from pre-construction information and these can be found in **Schedules A5** and **Schedule A6**. Documents are subject to review and revision as work or information changes or develops.

A5.7 Project Documented Information - *NP10: Disposal and retention of company documents*

Documented information used in the management of the project is defined by the agent. The agent is responsible for ensuring that the relevant documents are available to personnel required to use them and personnel carrying out work are responsible for ensuring that current documentation is used.

Project data - NP10.3: Management of documents during the contract phase of a project

The agent establishes a formal project data management system in accordance with division specific requirements. All documents received or issued by the project are controlled and maintained in accordance with this project system. It is fully described in a project specific procedure, listed in **Schedule D2** of this plan. The relevant parts of which are communicated to all project personnel required to work with documents.

Project documents are maintained throughout the duration of a project as evidence of the compliance, conduct, progress and certification of the project works, and to provide assurance that requirements have been met.

These documents include all correspondence, instructions, minutes of meetings, as-built programmes, resource schedules, registers, test certificates, inspection checklists, training records etc. Project documents are maintained and archived in accordance with the project document control system defined within this project management plan.

A5.8 Health and Safety File

The Health and Safety File details the information needed to alert those carrying out future construction work, including cleaning, maintenance, alterations, demolition and refurbishment. It identifies information to help those carrying out these works to determine a safe system of work.

The file will contain information for the client who has a duty to provide information about their premises and infrastructure, to those who carry out work there.

A5.8.1 Layout, format and storage

The template for the Health and Safety File will be agreed with the client.

Information will be collected throughout the project for the Health and Safety File by all parties. BAM Nuttall is responsible for preparing and submitting the Health and Safety File to the Principal Designer in an agreed format. The Health and Safety File will be submitted to the Principal Designer within a time frame identified by the contract from the date of substantial completion.

A5.9 Management of change - *NP21: Change management*

All changes to contract requirements, together with changes to arrangements, resources and subcontracts are recorded in accordance with any relevant contract requirements, and on the project change management register (CMR).

Superseded documents are promptly withdrawn from use and are clearly marked as superseded. All changes to construction requirements are reviewed for possible effects on existing risk assessments and subsequent control arrangements.

A5.10 BIM - BIMG A1.4 BAM Nuttall BIM Standard

BIM utilisation has been deployed on this project. A BIM execution plan (BEP) has been prepared using template BIMG A1.6. This plan is contained in **Appendix 7** to the project execution plan.

A6.0 Project Performance, Evaluation and Improvement

A6.1 Project Non conformity, complaints and corrective action

A6.1.1 Quality nonconformity - NP14: Non-conformity and corrective action

Nonconformities may be errors in work items or failures of management systems. Any person discovering a potential nonconformity reports it to the engineer responsible for inspections of that element of work so that it can be resolved immediately wherever possible. The engineer also informs his line manager. All project non-conformities are recorded on the project improvement register contained in BAM SMaRT.

Investigation concentrates on identification of root causes in order that appropriate action can be taken to avoid recurrence. Monthly reviews are made and analysed by the Quality Manager to ensure that all necessary action has been taken. All non-conformities are referred to quarterly divisional system review meetings for the initiation of suitable longer term actions.

A6.1.2 Health and safety nonconformity - NP1.14: Reporting and investigation of incidents

Nonconformity in respect of health and safety is recorded as an accident or incident, i.e. reportable accident, a lost time accident, an accident book entry, a reportable dangerous occurrence, significant incident, health and safety incident, near-miss / observation or inspection finding as appropriate.

Investigation concentrates on identification of root causes in order that appropriate action can be taken to avoid recurrence. Periodic reviews of accidents and incidents are made and analysed by the Director, Health and Safety to ensure that all necessary action has been taken. Recurrent problems or those relevant to other projects are referred to divisional system review meetings for the initiation of suitable longer term actions.

A6.1.3 Environmental nonconformity - NP27.7: Reporting environmental incidents

Nonconformity in respect of environmental matters is recorded as an environmental incident, near miss or inspection finding. Incidents are reported and inspection findings are recorded on the environment department database in accordance with departmental procedures.

Investigation concentrates on identification of root causes in order that appropriate action can be taken to avoid recurrence. Periodic reviews of incidents are made and analysed by the Head of Environment to ensure that all necessary action has been taken. Recurrent problems or those relevant to other projects are referred to divisional system review meetings for the initiation of suitable longer term actions.

A6.2 Audit and inspection

A6.2.1 Project audit - NP12: Audit

A programme of audit for the project is set by the divisional director at system review meetings. Audits are carried out by trained internal auditors who are independent of the project. A copy of the audit programme for this project is available from the **area quality manager**.

The agent makes arrangements to accommodate internal audits, together with any external audits requested by the customer or his representative, or arranged by the Head of Business Process and Quality, Director Health and Safety or Head of Environment for the registration bodies.

A6.2.2 Project Inspection - SG05: Safety tours, EG42: Closing out issues raised in BIM 360 Field Environmental inspection report

It is a requirement that health, safety, quality and environment are monitored continuously as a day to day activity. A site safety and environmental engineer is appointed to carry out routine weekly site inspections. Reports of these inspections are passed to the project agent who ensures that timely action is taken, usually confirming this at weekly site meetings.

Safety, environmental and quality inspections are carried out by divisional safety and environmental advisors and divisional quality manager(s). Results are reported in writing to the agent. The agent confirms to the divisional director in writing actions taken as a result of these visits.

In addition to the inspections detailed above project inspection visits will be conducted by senior managers. These visits not only act a monitoring tool for improvement, they provide valuable interaction and communication for project personnel with senior managers.

A6.3 Review - NP13: Review

A6.3.1 Project review (meetings)

Regular reviews are undertaken throughout the duration of the project at internal meetings of the project team to verify that planned arrangements remain suitable and are effective in controlling the work. These meetings also review the results of audits, nonconformities and problems and establish actions to prevent recurrence and improve the system.

Attendance and agenda for meetings are set out in **Tables A6.3.1a and b**.

Table A6.3.1a: Review meetings

Meeting	Frequency	Attendance
Progress	Monthly	Agent Senior site managers. Senior site QS Client representatives
Internal site co-ordination	Weekly Thursday am	Agent Sub-agent Section agents QSS
Internal health, safety environment and quality review	Monthly	Agent Sub-agent Section agents QSS Site safety and environment engineers Site quality engineer / quality manager
Internal section	Weekly Thursday pm	Section agents All section staff QS
Design management/ review meeting	Monthly	Agent Design coordinator All designer's representatives

Table A6.3.1b: Review meeting agendas

Alter table to suit site requirements					
Minimum agenda items	Progress	Internal site co-ordination	Internal HS&E	Section	Design Management meeting
Review and agree previous minutes/actions	✓	✓	✓	✓	✓
Health, safety and welfare, including review of CPP	✓	✓	✓	✓	
Environment	✓	✓	✓	✓	✓
Progress and programme	✓	✓		✓	✓
Resources – plant, materials and labour		✓		✓	✓
Client requirements and information required against programme. Review registers of TQs/RFIs, SIs/CVIs, and drawings.	✓	✓		✓	✓
Commercial matters	✓	✓		✓	✓
Risk assessments, activity plans, inspection and test checklists and approvals	✓	✓	✓	✓	✓
Suppliers and subcontractors performance, future programme, client approval.	✓	✓	✓	✓	✓
Nonconformities, problems, complaints, improvements.		✓	✓	✓	✓
Results of audit, audit plan.		✓	✓		
Quality control plan and allocation of inspection duties and approvals	✓	✓			✓
Contract records (as-built drgs, test results, completed checklists, maintenance manuals)	✓	✓			✓
Objectives and targets	✓	✓	✓		
Design delivery risks	✓				✓
Value engineering	✓	✓			✓
Next meeting date	✓	✓	✓	✓	✓

A6.3.2 Technical review – NP25 Technical and engineering delivery

To ensure that the best available technical knowledge is provided to the project agent, technical / quality reviews are held for matters where there is significant risk in terms of:

- health and safety
- activities/ items critical to quality
- quality of construction
- environmental impact
- company image and/or reputation

Activities to be subject to technical review, together with approximate timing, are listed in **Table A6.3.2**

Table A6.3.2: Technical review

Project activities subject to technical / quality review	Approximate date of review
Haul Road Construction	TBC

Records are maintained of all reviews in the form of meeting notes, records of actions, correspondence, and requests for information or as required by the contract.

A6.3.3 Customer feedback - NP26: Customer relationship management

The aim of the project team is to work in collaboration with the customer to achieve a project that is on time and budget. Customer satisfaction is monitored from project meeting and formal feedback.

A6.4 Improvement

The agent continually seeks to identify opportunities to improve the effectiveness and efficiency of the project, and of the BAM Nuttall business. All personnel are made aware of the need to recognise errors as opportunities for improvement. Without this awareness, mistakes are ignored or concealed and data for the improvement activity lost.

Improvement opportunities on this project are identified from:

- formal reviews of performance (see Section 6.3)
- feedback on performance from clients, vendors and regulatory bodies
- review of audit results
- analysis of nonconformities and complaints

A6.4.1 Delivering value and continual improvement through Lean

The project will utilise “**Lean Construction Thinking**” to allow conception, development and delivery of value innovation and continual improvement.

To initiate the improvement process the agent will act as the “**Lean Leader**” who will be responsible for the development of a sustainable lean culture on the project, selection of the lean projects and the improvement plan. This deployment plan is detailed in **insert applicable section** of this plan or insert hyperlink to plan.

In addition to the *lean leader* a “**Lean co-ordinator**” will be appointed who will identify improvement projects, select suitable tools and techniques for improvement, such as collaborative planning, deploy tools such as visual management, collect the data and monitor and report results to the Lean Leader. This organisational structure is detailed in the project organisation chart contained in **Schedule A1** of this plan.

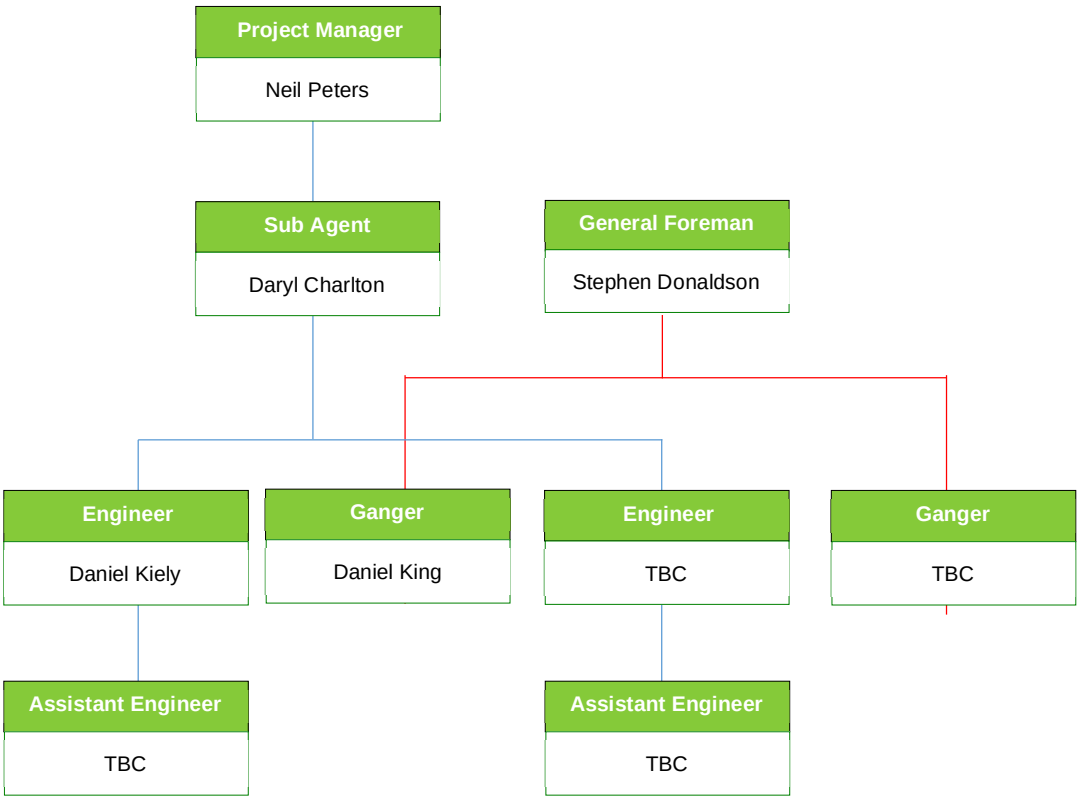
Schedule A1 Organisation Chart

Nominated personnel	
Equipment Engineer Daniel Kiely	Testing Engineer Daniel Kiely
Site Environmental Engineer Daniel Kiely	Temporary Works Co-ordinator Neil Peters
Site Safety Engineer Daniel Kiely	COSHH Co-ordinator Daryl Charlton
Appointed persons lifting Daryl Charlton	Fire safety Co-ordinator Joe Quinlan
Overhead and buried services Co-ordinator Daryl Charlton	First Aiders Stephen Donaldson
Electrical safety Co-ordinator Stephen Donaldson	Incident Co-ordinator Daryl Charlton
Plant Co-ordinator Stephen Donaldson	Site Waste Co-ordinator Daniel Kiely
Lean Co-ordinator Neil Peters	



To be adapted to suit project structure and contractual arrangements

Enabling works



To be adapted to suit project structure and contractual arrangements

<u>Name</u>	<u>Appointment</u>
Daniel King, Neil Peters, Stephen Donaldson.	First Aider
Daryl Charlton	Appointed person Lifting

Note

Signatory powers on this project are issued by the agent are in accordance with NP17 Signatory powers.

Schedule A2 Green Travel Plans



Icon	Description	Description of route
	Pedestrian	Route as shown in red on the map above
	Disabled	Route as shown in red on the map above
	Cycle	Route as shown in red on the map above
	Bus	- Catch the 17, 18 or 156 from Shudehill interchange. This will drop off on Osborne street with a 0.3mile walk through Sandhills park to P&P site entrance. - Catch the 41 Cross city or 135 from Printworks . This will drop off on Cheetham Hill road opposite St Chads Church with a 0.2mile walk along St Chads Street to Red Bank Road site entrance.
	Train	Mainline into Manchester Victoria and then follow walking route to site
	Tram	Exit system at Manchester Victoria and follow walking route to site
	Car/Motor cycle	Access from A665 to area
	Ferry	N/A
	Aeroplane	Manchester airport

Schedule A3 Community Action Plan

1.0 Introduction

BAM Nuttall Ltd is a socially responsible organisations committed to meeting the expectations of our stakeholders, while adding value to the environment and society. We aim to fully engage with local community groups, individuals, organisations and stakeholders directly impacted by our projects.

We recognise that how we recruit and retain employees, purchase goods and services can create opportunities to improve the community we operate in as well as improving our business performance.

BAM Nuttall Ltd believes we can make a significant and sustained improvement to the community by:

- Recruiting from and having a workforce profile that reflects the local community.
- Removing barriers to employment.
- Considering local suppliers when purchasing.
- Building local education and training links.
- Investing resources including time and money to support community groups, and charities.
- Listening and communicating with the community.
- Liaising with the community.

Our intention is to identify opportunities for community involvement within a two mile radius of each of our sites and offices. This plan sets site specific objectives for engagement with the relevant parties. It also designates responsible persons to the tasks and where appropriate, actions and timescales.

The community action plan is divided into four sections. Each section in turn details how we plan to eliminate any negative impacts of the works on the local community and where possible how we will endeavour to bring positive benefits to the local community, residents and supply chain as a result of the works.

- **Section 2: Implementation of plan on site**
- **Section 2: Identifying opportunities for community action**
- **Section 4: Record of community involvement**
- **Section 5: Review**

2.0 Implementation of plan

2.1 Community Liaison

BAM Nuttall Ltd will maintain effective liaison with landowners and the local community about ongoing construction activities and any potential disruption. We will use open days and letter drops ahead of the works to keep the community up to date.

All residents and businesses adjacent to the works will receive direct communication via letter drop, email, or meeting about the detailed plans and construction timetable in advance of works starting and all necessary detailed mitigation agreed that relate to access and reducing disturbance. We will also produce notices to display in the area, with information about the works. All communications will direct interested parties to sign up for regular general updates via the Project website which is managed by Counter Context - www.redbank-regeneration.co.uk. Regular general updates will also be posted on the “News” section of the website which is accessible to the public.

A project email address has been set up which the local community can use to address any enquiries or complaints. The inbox will be managed by the Project Stakeholder Engagement Manager, on receipt of a complaint, the issue will be referred to the wider project team for their consideration. The stakeholder engagement manager will co-ordinate and issue an appropriate response, subject to sign-off by the project team and MCC. All communication with Stakeholders is recorded on the Victoria North Engagement Register. Should any complaints require escalation, this will be passed on to the Client, Manchester City Council.

2.2 BAM Nuttall Contacts

BAM Nuttall Ltd will establish a project contact telephone number, manned during operational hours and with access to representative(s) with authority to resolve key issues. A log of all comments and actions taken will be kept and made available for inspection.

Contact Name	Organisation	Position	Tel:	Email
Neil Peters	BAM Nuttall	Project Manager	07920 231931	Neil.peters@bam.com
Mark Lowe	BAM Nuttall	H&S Advisor	07802 358602	Mark.lowe@bam.com
Daryl Charlton	BAM Nuttall	Sub Agent	07881002765	Daryl.charlton@bam.com
Stephen Donaldson	BAM Nuttall	General Foreman	07920084444	Stephen.donaldson@bam.com
Rebecca Stone	BAM Nuttall	Project Stakeholder Engagement & Social Value Manager	07900711136	Rebecca.stone@bam.com

2.3 Community disturbance

BAM Nuttall Ltd will ensure disturbance to the local community from construction activities is minimised to that required for safe implementation of the works. We will also minimise disruption to access for all properties. Any interruptions to access will be agreed with the property owner and kept to the minimum time required. Emergency access will be available at all times. Where required diversions and alternatively pedestrian crossings will be setup to avoid endangering the general public. We will develop a stakeholders management plan which will be a live document during the works. We will conduct onsite meetings which will be held with Product Packaging and the Showman's guild on a regular basis to address any concerns or queries.

3.0 Community Action Opportunities

3.1 Community Liaison

Our site will support suitable local causes and events that are nominated or participated in by our employees; however we also seek to interact with suitable organisations and charities within the area that we are working. A Social Value Delivery Plan has been created, identifying opportunities for engagement identified within the 3no. tier system established by Manchester City Council in their North Manchester Social Benefits Framework.

3.2 Education and training links and work experience opportunities

We will work with the following education and training institutions to share knowledge and provide work experience opportunities. We will develop a social values delivery plan for the main works which will outline in detail our plans during the project.

Institution name	Type of institution	Contact name	Contact details	Opportunity for involvement	Approve?
Eden Girls School	Secondary School	tbc	tbc	Develop long term relationship with the school throughout the project on careers in construction	

Bridge GM	Greater Manchester Combined Authority Consultants	tbc	tbc	Working with them on the wider careers programme for Greater Manchester on the virtual workshops to be delivered to schools – meet your futures event	

3.3 Employment opportunities

BAM Nuttall Ltd will strive to employ the members of our current workforce who live closest to the site wherever possible. The following roles cannot be provided by our available local employees and will be recruited from the local community:

eg
 Qualified plant operators (excavators/dump trucks)
 Joiners
 Steelfixers
 General Civil Engineering Operatives (GCEOs)
 Secretary/ administration
 Cleaner
 Quantity surveyor etc

We have agreed to advertise all jobs with **Yes Manchester** – a local recruitment company in the first instance.

The opportunities to be actioned have been approved by:		Date:	
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4.0 Record of Community Action

The record of community action will be recorded on the engagement register and updated regularly. We will also be providing quarterly reports to MCC on the social value delivered.

Engagement Register - [VNIF-ARP-ZZ-YYY-RE-WD-0005](#)

5.0 Review of Community Action

Objective	Yes	No	If yes, what do we do? If no, why not?
Does the workforce include members of the local community?	☐	☐	
Are people with disabilities actively employed? Have we removed barriers to employment – correct site setup and provision of welfare facilities etc?	☐	☐	
Were local suppliers considered when purchasing?	☐	☐	
Do we work with local educational and training institutions?	☐	☐	
Do we invest resources to support the local community and charities?	☐	☐	
Do we liaise with the community about our project?	☐	☐	

Review carried out by:		Date:	
------------------------	--	-------	--

Objective	Yes	No	If yes, what do we do? If no, why not?
Does the workforce include members of the local community?	☐	☐	
Are people with disabilities actively employed? Have we removed barriers to employment – correct site setup and provision of welfare facilities etc?	☐	☐	
Were local suppliers considered when purchasing?	☐	☐	

Review carried out by:		Date:	
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Other comments (e.g. lessons learned, feedback, etc)

Schedule A4 Skills Matrix

Role	Qualifications	Competence	Evidence
<i>Agent</i>	<i>Degree qualified</i>		
Sub-agent	First Class Honours Degree	Marine works Reinforced concrete Earthworks	Liverpool 2 Blyth Offshore Demonstrator River Hull Greave Clough Radcliffe & Redvales
<i>Foreman</i>		Marine works Reinforced concrete Earthworks	Liverpool 2 Hud Clough Greave Clough Radcliffe & Redvales
<i>Engineer</i>			
<i>Workforce</i>			

Schedule A5 Induction and Site Rules

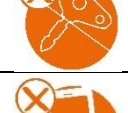
Schedule A5.1 Induction

Site induction agenda
Company vision
An overview of the project, including management arrangements on the site.
Senior management commitment to health safety, environment and quality on this project – confirmation that Safety is Paramount
The part people can play in the successful delivery of the project, including individuals responsibilities
Identification, awareness and measures to control the project risks, including relevant information from the Project Execution Plan
Importance of 'right first time'
Familiarisation with key personnel, project organisation and structure. This includes customer, principal designer etc.
Arrangement for briefing workers on an ongoing basis
Arrangement for consulting the workforce
Appreciation of fair treatment and respect for all
Site layout, facilities and security
Areas of restricted access including exclusion zones
Site rules familiarisation
First aid and emergency arrangements, including accident and incident arrangements
Mandatory permit requirements
Observation reporting and 'Your Safety is My Safety'
Occupational health checks
Monitoring for drugs and alcohol
Interaction with public

Schedule A5.2 Site rules

The following rules have been made to ensure the health and safety of you and your work mates on this site and protection of the environment. They apply to everybody on site.

Rule	Logo	Strapline
I never enter an exclusion zone		Mobile plant Seen is safe
I understand my job, and I am aware of the associated risks. If anything is unclear, I will ask for additional information.		Plan dropped? Work is stopped
I call other people to account about unsafe behaviour, and I accept that others can also call me to account about unsafe behaviour.		Choose to be safe together
I only start with my work after I have been instructed correctly (formally). I follow these instructions.		Sign up for safety Stick to the plan
I work with approved equipment and only if I am authorised to use it.		Competence starts with the card
I use my compulsory personal protection equipment.		PPE keeps you safe If you wear it
I do not work with installations or cables that are charged, unless I am authorised to do so.		No permit No dig No pins
I exclusively give safe instructions and exclusively follow safe instructions.		Safety is a team game
I do not work when I am under the influence of drugs, medication or alcohol.		D&A Keep dry Keep clean
I always use the designated access routes and keep them clear at all times		Choose the safe path Not the quick one
I always use the welfare facilities provided and keep them clean and tidy		Respect your Own welfare
I keep my workplace clean, safe and tidy.		Tidy site Safe site

Rule	Logo	Strapline
I never enter an exclusion zone (Lifted loads)		Lifted loads Look up Let go
I never enter an exclusion zone (Load release)		Secured materials Release with caution
Always drive safely with your phone off and seatbelt on		Drive safely Phone off Belt up
I work with approved equipment and only if I am authorised to use it.		Defective plant? Report it
Never use plant or equipment unless you are authorised, competent and it is safe to do so		Switch off and secure
Never use your mobile phone unless you are in a designated safe location		Safe answer Safe call
Never alter edge protection or scaffold unless you are authorised, competent and it is safe to do so		Hold onto handrails

These rules are common sense and easy to follow
Failure to follow them may lead to disciplinary action or your removal from site
And remember 'Your Safety is My Safety'

Schedule A5.3 Rules for Contaminated Land or Red Sites

Be on the lookout for:

- Signs of contamination during boring, excavating, soil stripping and similar operations (these could include discoloured soil, unexpected odours, a fibrous texture to the soils (e.g. asbestos), presence of foreign objects (e.g. chemical/oil, containers/waste), evidence of previous soil workings, underground structures or waste pits, evidence of made ground, old drain runs and contamination within buildings).

If contamination is suspected:

- Work will be stopped immediately;
- The discovery will be reported to the Agent who will seek expert advice and provide guidance on required controls / mitigation;
- The area will be sealed off to contain spread of contaminants;
- A risk assessment will be carried out to minimise the risk to health and safety of site workers. This will identify acceptable working methods, PPE, contact, and other required procedures;
- Any unexpected contaminated land that has been disturbed by construction activities will to be dealt with as hazardous waste and disposed of to a suitably licensed site in line with the relevant waste management regulations;
- Ensure that the suspected contamination is tested and characterised and agree changes to the existing site proposals and method statements;

Known areas of contamination

Due to the variable nature of the hazards related to this type of work a risk assessment is required to detail the controls required. This involves in-house or consultant expertise.

The controls cover:

- site set up and security
- personal protective equipment
- health surveillance
- sampling regime
- training
- monitoring of controls

Schedule A5.4 Rules for handling and disposal of sharps

- Tool box talk briefed to all persons prior to works commencing
- Never handle discarded needles or syringes – unless you are trained to do so and have the correct equipment
- Warn others close by to stay away
- If safe to do so, stay close to it and report it to your Supervisor
- If you are not able to stay close to it highlight it if possible
- Report it to the Supervisor

In the event of contact with a discarded needle encourage the puncture injury to bleed and wash well under cool running water with soap and cover with a dry (sterile) dressing. Seek medical advice as soon as possible, within 48 hours at the nearest local Accident & Emergency department.

Disposing of sharps

- Place needles and syringes into a sharps container. Always use tongs to pick up
- Dispose of as clinical waste

Schedule A6 Emergency procedure - injury, dangerous occurrence or significant incident – **Enabling works only**

In the event of an accident:

- Do not endanger your own life.
- Ensure that the injured person will not come to further harm.
- Notify the site office of:
 - the injured person's name and/or employer
 - location
 - type of incident
 - likely injuries
 - special requirements

The site office will:

- contact the first aider
- call an ambulance and/or other emergency services by dialling 999
- ensure access route is cleared
- arrange reception of ambulance/fire brigade/police at the nearest public road
- direct emergency services to location
- provide injured person's information to the emergency service
- notify injured person's employer if a subcontractor
- contact divisional director and area health and safety advisor
- initiate for cause drug and alcohol screening

The first aid kit is held in the Site welfare van

The site address is:

**Packaging Products (Coatings) Ltd,
Collyhurst Road,
Manchester,
M40 7RT**

Hospital Locations

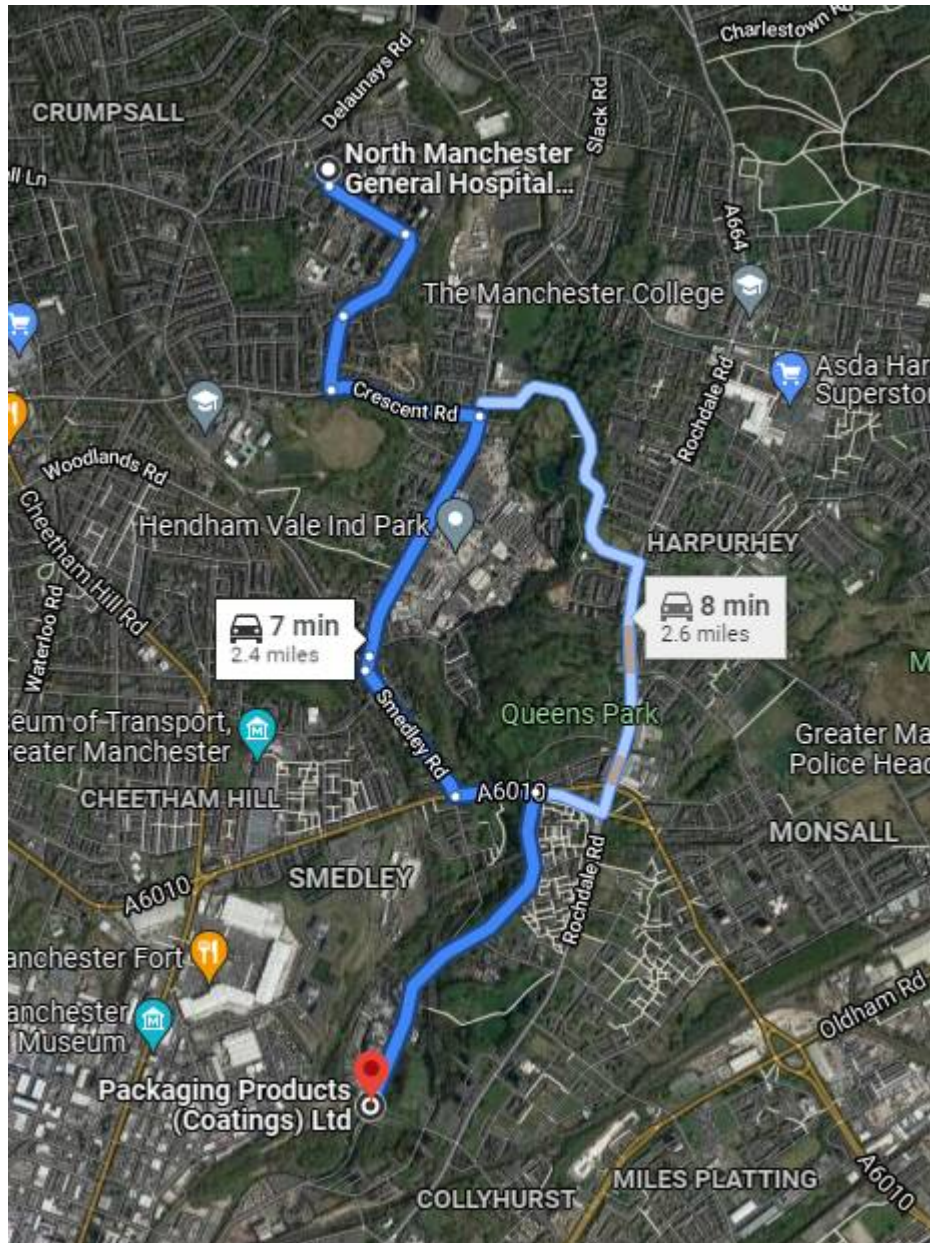
North Manchester General Hospital

Address:- 151 Delaunays Road, Crumpsall, Manchester, M8 5RB

Telephone:- 0161 7954567

Opening Hours:- 24/7

Description:- Primary accident and emergency centre serving the project



Ancoats Primary Care Centre

Address:- Old Mill Street, Manchester, M4 6EE

Opening Hours:- 0900 to 1500

Description:- Ancoats Primary Care Centre is a drop-in service for people who need URGENT care for minor injuries and illness. The centre should be used where you are unable to get an

appointment with your own GP and where you need to be seen the same day. It is intended as an alternative to going to A&E - which is for emergencies only.

Emergency procedure – Fire – **Enabling works only**

In the event of a fire in the site offices or other site accommodation:

- Alert all personnel of fire, evacuate all site offices and other units and assemble at the site compound assembly point.
- Do not stop to collect personal belongings.
- Contact the emergency services by dialling 999, or ensure that someone else does.
- Use appropriate fire extinguishers to contain or extinguish the fire **ONLY** if trained to do so.
- Do not put yourself or others at risk.
- Do not attempt to re-enter offices until approval is given by a senior member of staff.

In the event of a fire on site:

- Leave the area and assemble at the site compound assembly point.
- Notify a member of staff at the site offices.
- Use appropriate fire extinguishers to contain or extinguish the fire **ONLY** if trained to do so.
- Do not put yourself or others at risk.
- Do not return to the area of the fire until approval has been given by a senior member of staff.

The site office staff must:

- call the fire brigade by dialling 999 when informed of a fire
- ensure the access route is cleared
- arrange reception of fire brigade at the nearest public road
- direct emergency service to location

The site address is:

**Packaging Products (Coatings) Ltd,
Collyhurst Road,
Manchester,
M40 7RT**

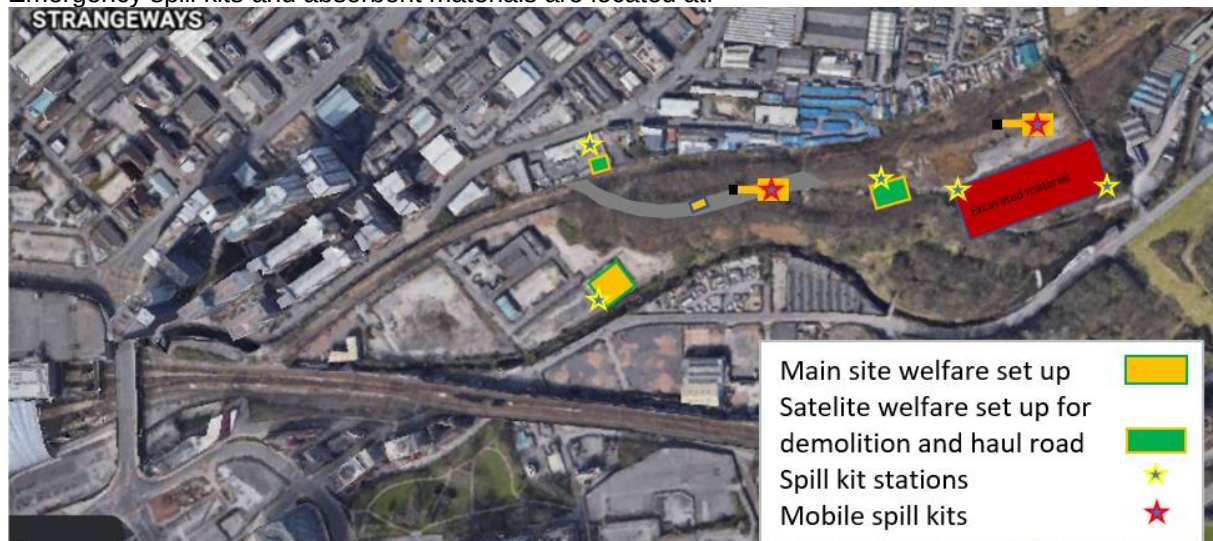
Emergency procedure – Pollution incident

In the event of an oil, fuel or silt pollution incident, take action to:

Raise the alarm	you may need assistance
Identify the source	what risks are involved, can you handle it yourself or are the emergency services required?
Protect yourself	are you wearing the correct PPE to deal with the incident?
Help any injured	but do not put yourself or colleagues at further risk
Stop the source	prevent further pollution if safe to do so by plugging leaks, righting drums, closing valves or turning off pumps
Contain the pollution	use emergency materials held on site and ensure that the pollution cannot escape by blocking drains, or creating a trench or bund to protect rivers and other watercourses
Prevent spread	if the pollution has already entered water, prevent its further spread downstream using booms for spills or silt fencing for silt
Notify your supervisor	as soon as it is possible to do so
Clean up	using appropriate absorbent materials or skimmers
Dispose of contaminated materials	used clean up materials will be classed as 'hazardous' or 'special waste'
Restock	emergency clean up materials should be replenished and restocked following their use

In the event of a major spillage to water (an incident that the project team cannot handle or contain) contact your environment advisor for further guidance and advice.

Emergency spill kits and absorbent materials are located at:



List of key personnel and organisations for emergency and liaison			
Name	Position	Location	Tel. no.
G Farrier	Divisional director	Newcastle	0191 273 7000
Kate O'Connell	Operations Manager	Manchester	07900264955
Neil Peters	Project Manager	Manchester	07920231931
Stephen Donaldson	General foreman	Manchester	07920084444
Daryl Charlton	Sub Agent	Manchester	07881002765
Mark Lowe	Health and safety advisor	Leeds	07802 358602
Eddie Duncan	Environment advisor	Leeds	07748 328507
Rebecca Stone	Project Stakeholder Engagement & Social Value Manager	Manchester	07900711136
Freya Jepson	Public relations	Camberley	01276 63484
24HR emergency contact number			07900711136 07920231931
Emergency liaison			
Organisation	Contact (name)	Telephone no.	Emergency tel. no. e-mail or reporting line
Incident co-ordinator	Neil Peters	07920231931	
Client	Mark Walsh	07896041588	
Principal designer	Dave Spaul	07534424777	
Fire	N/A	999	
Police	N/A	999	
Hospital	Manchester Royal Infirmary Accident & Emergency Department, Upper Brook Street, Manchester, M13 9NZ	0161 2764147	
HSE	Merton Road, Bootle, L20 7HS	0151 951 4000	
EHO	tbc		
Environment Agency	tbc		
Network Rail	tbc		
Local authority	tbc		
Gas supplier	tbc		
Electricity supplier	tbc		
Telecom	tbc		
Water	tbc		
Natural England or SNH*	tbc		
Canal and Rivers Trust	tbc		

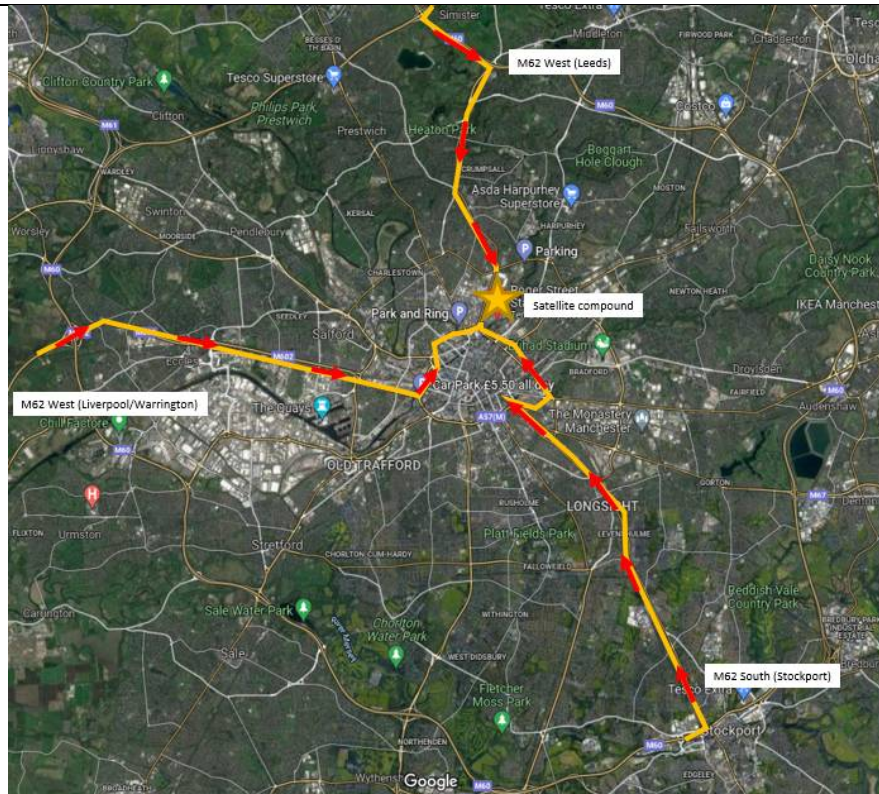
Schedule A7 Storage / Management of hazardous substances

Storage / management of hazardous substances / Summary of COSHH Assessments							
Hazardous substances to be stored on site	Storage arrangements	Volume of substance	Assessment available/ Expiry Date of assessment		Briefing arrangements	Health monitoring	Exposure monitoring
HVO Diesel	Locked bowser in bunded storage areas	5000L static	Yes		Activity Plan Briefing as required	Site Supervision	TBC as per Sympol COSH Assessments
Marker Paint	Site stores, away from heat source.	Aerosol	Yes		Activity Plan Briefing as required	Site Supervision	TBC as per Sympol COSH Assessments
Petrol	Clearly marked fuel container inside COSHH store on drip tray	25L	Yes		Activity Plan Briefing as required	Site Supervision	TBC as per Sympol COSH Assessments
Cleaning Products	Cleaner's store	Various	Yes		Activity Plan Briefing as required	Site Supervision	TBC as per Sympol COSH Assessments
Ready Mix Concrete	N/A – Delivered as required	As required	Yes		Activity Plan Briefing as required	Site Supervision	TBC as per Sympol COSH Assessments

Schedule A8 Works Transport Plan

Project Title:	Victoria North HIF Infrastructure Works	Contract No:	BAA.2210
Prepared By:	Daryl Charlton	Date:	17 th January 2022
BAM Project Manager:	Neil Peters	BAM Manager Contact No:	07920231931
Local Traffic Authority:	Manchester City Council	Local Traffic Authority Contact No	TBC
Main Compound Address:	TBC	Satellite Address for ENABLING WORKS:	Packaging Products (Coatings) Ltd Collyhurst Road, Manchester M40 7RT
Main Office Establishment for Staff & Visitors:	TBC		
Site welfare Parking Rules:	The following Rules Apply When Visiting the enabling works Compound: - o All Vehicles to take care when driving to the site compound – Max 20mph - o No vehicles are to be left/parked on Collyhurst Road - o Collyhurst Road is to be kept clean at all times – Road Sweepers Used if Req'd - o No delivery vehicles or HGV's to use Collyhurst Road before 8am or after 4pm - o All Vehicles to follow Signage - o All vehicles to use one way system - o All vehicles to reverse park		
Pedestrian Access & Bus Routes:	 Pedestrian Route: - o 1 No Bus Stop within 15 minute walk of the compound on Osborne Street - o Use existing public footpaths and crossing points - o Use pedestrian walkways within compound area		

Vehicle Access Routes Into P&P Enabling works Compound:	 - o Access can be gained from Collyhurst Road, over the P&P bridge and left up the access road. - o ALL vehicles must fully enter the secure compound area without blocking P&P bridge or Collyhurst road in any way - o No parking is allowed on P&P Bridge for Cars or Delivery Vehicles - o P&P Bridge is to be kept clean and clear at all times
Main Routes From Motorway to P&P satellite compound:	



M62 East (Leeds):

- o Leaving the M60 at J18, head South onto the M60
- o Leave M60 at J19 East onto Middleton road
- o Continue south for approximately 1.5 miles where you come to a cross roads
- o Turn left onto A665
- o Continue for South for a further mile and turn left only Smedley Lane.
- o Continue until you hit the T junction and turn right onto Smedley Road.
- o Continue until you hit the T junction and turn left onto A6010.
- o Continue 200m and turn right onto Collyhurst road.
- o Turn right onto P&P bridge and the Compound is on the left hand side.
- o Turn into the compound and Park your vehicle in the designate area – Parking or Deliveries
- o All delivery vehicles must report to the welfare cabins for further direction and all personnel must sign in
- o Reverse Parking at all times

M62 West (Liverpool)

- o The M62 merges into the M602, continue on this road which will then merge into A57 Regent Road.
- o Turn left onto Ordsall Lane, continue until you reach a T junction.
- o Turn left at the junction and head north on the A6042/Ring Road.
- o Continue until you reach another T Junction, with Manchester Arena on your right.
- o Turn right and continue on the ring road.
- o Turn left onto A664.
- o Turn Left onto Dantzic street and continue veering right and proceed on Dantzic street.
- o Continue onto Collyhurst road and P&P Bridge is on the left hand side

	- o Turn left over the bridge into the compound and Park your vehicle in the designate area – Parking or Deliveries - o All delivery vehicles must report to the welfare cabins for further direction and all personnel must sign in - o Reverse Parking at all times M60 South (Stockport) - o Come off the M60 at Junction 1 - o Head North on the A6 Stockport Road for approximately 5 miles - o Turn right at the Stockport Road/Devonshire street cross roads (McDonald's is on the right) - o Continue on the A665 Devonshire Street which merges onto Great Ancoats Street and then it merges to the ring road and finally it merges to Cheetham Hill Road. - o Turn right onto A664. - o Turn Left onto Dantzic street and continue veering right and proceed on Dantzic street. - o Continue onto Collyhurst road and P&P Bridge is on the left hand side - o Turn left over the bridge into the compound and Park your vehicle in the designate area – Parking or Deliveries - o All delivery vehicles must report to the welfare cabins for further direction and all personnel must sign in - o Reverse Parking at all times
Construction vehicles	- o All construction vehicles leaving site must have wheels checked for stones prior to existing site and entering onto the public highway. - o All loads to be sheeted prior to transit where possible. - o Load is to be left unsheeted if the load will not blow off in transit, does not produce dust and the load does not need to stay dry - o All Construction vehicles to be part of FORS
	 The Fleet Operator Recognition Scheme (FORS) is a voluntary accreditation scheme for fleet operators which aims to raise the level of quality within fleet operations, and to demonstrate which operators are achieving exemplary levels of best practice in safety, efficiency, and environmental protection. Note: A TM & Delivery Plan MUST be Sent Out With Order to ALL Suppliers Prior to Delivery Taking Place

Opening/Closed Times and Dates (If Applicable):	Project Start Dates	Enabling works February 2022
	Project Completion Dates	Enabling works August 2022
	First Allowable Delivery Time	8am
	Last Allowable Delivery Time	4pm
Additional Information		

Section B Construction Phase Plan

B1.0 Foreword

This section of the plan should be read with section A and with the current editions of the schedules for **Section A and B**. Together these documents define the arrangements for achieving health and safety standards on the project. They form the construction phase plan required under CDM Regulations.

B2.0 Health and safety arrangements including welfare

B2.1 Fire safety - SG11: Assessment of fire safety

The fire safety co-ordinator gives attention to the prevention and limitation of the effects of fire by avoiding stocks of flammable materials and provision of adequate emergency instruction and arrangements.

On this project, the applicable arrangements for fire safety are detailed in **Table B2.1** below.

Table B2.1: Fire safety arrangements

Flammable substances	Fire extinguishers kept in site offices and vehicles Keep fire extinguisher available during working
Banned activities	Open fires on site
Hot work permits	Any activity that generates heat needs to be covered by a Permit
Smoking	No smoking on site, or in site vehicles
Waste	No combustible waste to be stored on site, and to be disposed of off-site at the end of each day to an appropriate point.
Fire points	TBC
Alarm	See Emergency Procedure – Fire within section A6
Emergency supply	N/A
High risk premises	No high risk areas or premises identified
Accommodation	Site welfare vehicles to contain fire extinguishers
Personnel	
Fire marshal	Joe Quinlan
Fire co-ordinator	Joe Quinlan

B2.2 First aid - SG03: First aid

The location of first aid equipment and names of first aiders are prominently displayed so that assistance can be obtained in the shortest possible time.

The specific arrangements for first aid are as detailed in **Table B2.2** below:

Table B2.2: First aid arrangements

Materials, equipment and facilities	
First aid boxes	Kept in Site Offices
Travelling first aid kits	Kept within site vehicle
First aid rooms	For enabling works location there are no specific rooms allocated but when the need arises the site office will be utilised
Defibrillators	Defibrillator to be held within office & site vehicle
Personnel	
First aiders	Stephen Donaldson/Daniel King
Appointed persons	Stephen Donaldson

B2.3

Materials, equipment and facilities

Management of first aid equipment and supplies	Stephen Donaldson
--	-------------------

Site utility arrangements - SG20: Temporary electrical installations

This section describes the arrangements for planning site requirements for utilities to meet site requirements. Wherever practicable information on depths and location should be provided.

Table B2.3: Site utilities

Utility	Requirement	Inspection and Test Requirement	Routine inspection	Supplier
<i>Electricity (mains)</i>	<i>TBC</i>	<i>---</i>	<i>---</i>	<i>ENWL</i>
<i>Electricity (generated)</i>	<i>Yes</i>	<i>Generator serviced as per suppliers' instructions</i>	<i>Generator serviced as per suppliers' instructions</i>	<i>Nixons</i>
<i>Gas</i>	<i>No</i>	<i>---</i>	<i>---</i>	<i>---</i>
<i>Water/Waste Water</i>	<i>Yes</i>	<i>TBC</i>	<i>TBC</i>	<i>UU</i>
<i>Telecom</i>	<i>No</i>	<i>---</i>	<i>---</i>	<i>N/A</i>
<i>Utility supply in emergency situations</i>	<i>N/A</i>	<i>---</i>	<i>---</i>	<i>---</i>
Enabling works	Welfare Van	Delivery ticket	Weekly	Welfare hire

B2.4 **Welfare arrangements - SG21: Welfare facilities**

The agent ensures the provision of suitable facilities at all stages of the project and their maintenance to the highest possible standards of cleanliness and hygiene.

Outline arrangements are defined in **Table B2.4** below: and on a sketch inserted in **Schedule B1**

Table B2.4: Outline welfare arrangements

Toilets	Welfare Facilities in welfare van
Washing	Welfare Facilities in welfare van
Changing	Welfare Facilities in welfare van
Rest/food	Welfare Facilities in welfare van
Drinking water	Welfare Facilities in welfare van
Waste segregation	Welfare Facilities in welfare van
Responsibility for maintenance	BAM supervisor to arrange and coordinate

B2.5 **Zones – NS1.5: Zonal working**

Certain areas of the project will have no or restricted access throughout the project and will not be picked up any specific activity plan. This is due to Client requirements or the hazards in these areas. Areas with no access are exclusion zones. Areas of access limited to certain people are restricted zones.

Zonal areas not associated with a specific construction activity on this project are listed in **Table B2.5** below.

Table: Project Zones

Type of Zone	Description
Restricted Zone – Yellow	Area of demolition works
Exclusion Zone – Red	Slew radius of demolition equipment
Restricted Zone – Yellow	Area of tree clearance

Type of Zone	Description
Exclusion Zone – Red	Area around chipping plant
Restricted Zone – Yellow	Zone around the excavation works
Restricted Zone – Yellow	Zone in area of earthworks activities
Exclusion Zone – Red	Zone around invasive species
Exclusion Zone – Red	Slew area of excavators
Restricted Zone – Yellow	Lifting Operations
Exclusion Zone – Red	Lifting Operations (slew radius of crane)
Restricted Zone – Yellow	Vehicle routes & haul routes

B3.0 Health Management - NP1.17: Management of occupational health

The following hazards to health resulting from activities to be carried out on site are listed in **Tables B3.1** and **B3.2** below. Arrangement for health assessment and monitoring linked to the hazards identified are detailed in **Table B3.3** below:

B3.1 Noise - NP1.5: Control of occupational noise

Table B3.1: Occupational Noise

<u>Operation</u>	<u>Anticipated noise level (dBA)</u>	<u>Actual noise level (dBA)</u>	<u>Control</u>	<u>Time</u>	<u>PPE</u>
Excavators –	(outside) 99 dB(A) (inside) 71db(A)	TBC	Reviewed on Site and managed accordingly		No
Compactors/rollers	Standard 84dba Compacting 106dba	TBC	Reviewed on Site and managed accordingly		Yes
Dumpers – 25t moxy	(outside) 104 db(A) (inside) 73db(A)	TBC			No
Generators	(outside) 75 db(A)	TBC			No
Abrasive wheels	(outside) 98 db(A)	TBC	PPE, restricted zone		Yes
Chainsaws	(outside) 106db (A)	TBC	PPE, restricted zone		Yes
Chippers	(outside) 125db (A)	TBC	PPE, restricted zone		Yes
Strimmer	(outside) 101db (A)	TBC	PPE, restricted zone		Yes

Blower	(outside) 100db (A)	TBC	PPE, restricted zone		Yes
Pole pruner	(outside) 93db (A)	TBC	PPE, restricted zone		Yes

An exclusion zone will be in place around operating plant to higher external dB(A) quoted will not cause damage. If site team needs to approach plant the plant should be stopped to make the exclusion zone safe and reduce noise.

Where possible plant should be stopped completely not idling

B3.2 Vibration - SG08: Control of occupational vibration

Table B3.2: Occupational Vibration

Operation	Anticipated vibration level (m/s ²)	Tools used	Control	Time (minutes)
Tree felling	3.7	Chainsaw - Stihl - MS261	HAVS Assessment completed HAVS watch to be worn to monitor exposure	2hrs 40mins
Tree felling	3.7	Chainsaw - Stihl - MS262	HAVS Assessment completed HAVS watch to be worn to monitor exposure	2hrs 40mins
Tree felling	3.2	Chainsaw - Stihl - 201tv	HAVS Assessment completed HAVS watch to be worn to monitor exposure	3hrs 35mins
Tree felling	3.5	Strimmer - Stihl - FS460	HAVS Assessment completed HAVS watch to be worn to monitor exposure	3hrs
Tree felling	1.8		HAVS Assessment completed HAVS watch to be worn to monitor exposure	11hrs 20mins
Tree felling	3.5	Blower - Stihl - BR600	HAVS Assessment completed HAVS watch to be worn to monitor exposure	3hrs

B3.3 Dermatitis

Table B3.3: Dermatitis

Operation	Hazard	Control	PPE
Concreting/	Cement	- Low chromium VI - Avoid exposure	Full skin coverage with impermeable clothing

		Briefings/training on the risk associated with cement exposure	
Diesel		Outdoor use only, all containers kept closed when not in use, wash after exposure, all operatives briefed on COSHH Assessment prior to use	Full skin coverage with impermeable clothing
Petrol		Outdoor use only, all containers kept closed when not in use, wash after exposure, all operatives briefed on COSHH Assessment prior to use	Full skin coverage with impermeable clothing
HVO fuels		Outdoor use only, all containers kept closed when not in use, wash after exposure, all operatives briefed on COSHH Assessment prior to use	Full skin coverage with impermeable clothing

B3.4 Health assessment and monitoring arrangements - NP1.17 Management of occupational health

Health assessment monitoring arrangements for this project are defined in **Table B3.4** below:

Table B3.4: Health assessment monitoring arrangements

Hazard	By whom	Frequency
Noise	Competent person Occupational hygienist	Baseline health assessment within 3 months of employment and then annually thereafter (More frequently for specific individuals)
Vibration	Competent person Occupational hygienist	Baseline health assessment within 3 months of employment and then annually thereafter (More frequently for specific individuals)

B3.5 Manual handling - SG22: Manual handling

Exposure to manual handling, and the associated risk of injury, particularly back injury must be controlled. Manual handling training is given to all personnel at risk and the results of assessments are notified to those involved in the activity.

The activities listed in **Table 3.5** are likely to require a manual handling assessment.

Table B3.5: Manual handling

Activity likely to require a manual handling assessment
Site mobilisation and de-mobilisation
Handling Slung Loads
Demolition works
Tree clearance

B3.6 COSHH (Chemical and biological hazards including dust and fumes) - NP1.18: COSHH SG18: COSHH

The COSHH coordinator, ensures that all reasonable steps are taken to ensure that exposure of employees and others to hazardous substances is assessed and prevented or at least controlled to within statutory limits.

On this project, arrangements for storage of hazardous substances are detailed in **Schedule A7**.

Where appropriate, individual operation Activity Plans are to identify any COSHH materials, and provide details to allow Schedule A7 to be updated accordingly.

B3.7 Temperature and weather protection for personnel on site

The following **Table B3.7** below details suitable and sufficient controls are in place to minimise the risks regardless of location.

Table B3.7: Weather Protection

Temperature and weather hazards	Control
High temperature	Operatives to be reminded at morning briefings to hydrate during day. Drinking water supplies to be provided at all site office locations. Operatives to be supplied with drinking bottle to allow to carry around work site. Where possible operatives to work in shaded areas and where possible additional shading to be created on static work areas to protect operatives. If required additional breaks to be incorporated into workdays and working hours adjusted where practical.
UV protection	Factor 30 protection cream provided on site to provide UV protection. Operatives to be informed of daily UV levels in morning briefing and advised to apply protection cream. Full length arm sleeves advised to give additional protection.

	Where possible operatives to work in shaded areas and where possible additional shading to be created on static work areas to protect operatives.
Low temperature	Where temperatures reach points where ice and frost are formed operatives during the prestart briefings will be reminded of the risks of low temperatures. The Agent/ Foreman will carry out an assessment of the site. From this the works on site will be approved to commence or be suspended if required. Where necessary the site team will first clear paths and apply anti slip material (grit) to prevent slips trips and falls. Water supplies to cabins to be protected (lagged) to protect from freezing.
Poor visibility	If visibility is poor prior to work commencing the Site Agent and Foreman will carry out an assessment of the site. From this the works on site will be approved to commence or be suspended until visibility improves.
Rain	Operatives will be reminded of potential slips trips and falls associated with wet weather during prestart briefings. Agent/Foreman to subscribe to the EA's flood warning service to allow advanced warning of heavy rainfall. For heavy rain Agent/Foreman will assess the site conditions and where necessary provide additional risk assessment or suspend works. Rain fall will also effect works within the culvert due to increased flows. Close monitoring of the weather forecast, and potential rain fall will be undertaken, and works will be planned taking consideration of potentially increased flows.
Snow	In the event of snow fall all footpaths will be cleared. If continuous then the Site Agent and Foreman will review the planned operations and where necessary, provide additional risk assessment or suspend works. Drying room temperature to be maintained to allow cloths to dry out. Agents/foreman to subscribe to the EA's flood warning service to allow advanced warning of heavy snowfall. Melting snow will also effect works within the culvert due to increased flows. Close monitoring of the weather forecast, and potential snow fall will be undertaken, and works will be planned taking consideration of potentially increased flows due to melting snow.
Humidity	Temperatures will be monitored, and additional breaks given to site team to allow intake of liquid. Operations will be monitored through their durations.
Wind	Wind speeds will be monitored in advance and the forecasts provided within the morning briefings. Any lifting operations will have risks

associated with high wind speeds identified and suitable contingencies/guidance identified. For lifting operations winds speed of 12mps to be the cut off of operations.

B3.8 Fatigue

The planned working hours and monitoring regime on this site are given in the **Table B3.8** below:

Table B3.8: Fatigue management

	Dayshift		Nightshift		Control to minimise fatigue
	Hours worked	Breaks	Hours worked	Breaks	
Monday to Friday	07:30 to 1800	1/2hr mid-morning and 1/2hr lunch	No night working planned		Regular breaks depending on work type. Task rotation. Monitoring and recording of travel by all workforce no more than 14hrs door to door. Monitoring of tasks and physical/mental demands paced on individuals.
Saturday works at present not planned but if required	7:30-17:30	10:00-10:30 & 13:00-13:30	No night working planned		Regular breaks depending on work type. Task rotation. No less than 1 day's rest in any 7 consecutive days or 2 in any 14 days
Sunday works at present not planned but if required	7:30-17:30	10:00-10:30 & 13:00-13:30	No night working planned		Regular breaks depending on work type. Task rotation. No less than 1 days rest in any 7 consecutive days or 2 in any 14 days
Weekly / fortnightly break arrangements	N/A				

Information in relation to travel and working time should be recorded for all personnel.

B4.0 General arrangements that apply to the works

Other significant risks are covered in **Tables B4.1 to B4.20**. **Table B4.20** is provided to allow the agent to develop any customer requirements as defined in the pre-tender information, or other unusual risks that may be applicable to the works.

B4.1 Underground and overhead services - NP1.3 Control of excavation in the vicinity of buried services

The following information has been taken from the pre-construction information, service providers, Linesearch (www.linesearchbeforeudig.co.uk) and site surveys.

Any known to exist in the vicinity of the site are listed in **Table B4.1** below. With specific details held in the services register **Schedule B3**.

Table B4.1: Major underground / overhead assets

Identified major underground / overhead asset	Location	Activities affected	Control
None	Enabling works	None	Permit to dig in place prior to any breaking ground

Responsibility for ensuring arrangements for safety in the vicinity of overhead services in accordance with BAM Nuttall procedures is that of a **Buried and Overhead Services Coordinator**, appointed by the agent, whose duties are described in the BAM Nuttall health and safety policy booklet.

B4.1.1 Services, isolation points and diversion works

In association with these works the following services shall be disconnected / connected:

Service	Location of services and isolation point(s)	Planned date for connection (c) or disconnection (d)
BT	Cream line Dairy	TBC
Electric	Cream line Dairy	TBC
Water	Cream line Dairy	TBC
Gas	Cream line Dairy	TBC

B4.2 Temporary works - NP19: Control of temporary works

A description of any erection sequences, temporary propping arrangement etc. taken from the pre-construction and designer information should be included here ensuring safe by design.

Table B4.2: Temporary Works

Temporary work requirements	Influence on the permanent structure	Controls	Access arrangements required
Site welfare foundations	N/A	Competent design and installation.	Location specific
Heras fencing	N/A	Competent design and installation.	Location specific

Additional information in relation to temporary works are recorded on the temporary work register.

Insert link to temporary works register – Link TBC

B4.3 Working at height - SG15: Working at height

Table B4.3: Working at height

Activity	Height hazard	Controls	Monitoring and inspection
Site cabin mobilisation	Fall from height	Developed RAMS for works identifying procedures to be put in place and followed.	Before first use After adverse weather conditions Review and approval of RAMS (Activity plan). All persons to be briefed and Foreman to monitor works as they proceed to ensure compliance with documented plan of works.

B4.4 Lifting - NP1.1: Management of lifting operations

All lifting operations are subject to a lift plan that describes a safe system of work. A schedule of lift plans is maintained.

Responsibility for ensuring the establishment of this safe system of work is that of an appointed person (lifting), appointed by the agent.

Table B4.4: Lifting operations

Lift Plan Reference	Type of lift	Ground / platform information
Installation of Site Cabins	Basic	Existing hardstanding areas

B4.5 Excavation

Table B4.5: Excavation

Activity	Description	Controls / support arrangements	Monitoring arrangements
Bulk earthworks	Works to haul road	Specific Activity plan developed for works	Include compliance monitoring and inspection arrangements
Earthworks/clearance	Tree root clearance	Specific Activity plan developed for works	Include compliance monitoring and inspection arrangements
Other			

B4.6 Ground stability

Table B4.6: Ground Stability

Activity	Stability issue	Mitigation	Inspection
Works adjacent to river bank		Visual inspection by competent operator prior to any plant being positioned close to the river bank	Before use
Other			

B4.7 Stability of existing structures

Table B4.7: Structural Integrity of existing structure

Activity and effect	Existing structure	Type of inspection
Demolition of Cream Line Dairy &	Honey Street Retaining wall	Structural inspection to determine load bearing capacity to ensure plant and

construction of haul road		equipment and personnel are working within safe acceptable limits
Access & Egress	P&P Bridge	Structural inspection to determine load bearing capacity to ensure plant and equipment and personnel are working within safe acceptable limits
Access & Egress	St Catherine's Wood Bridge	Structural inspection to determine load bearing capacity to ensure plant and equipment and personnel are working within safe acceptable limits

B4.8 Contaminated land

BAM Nuttall will investigate, excavate and dispose of any potentially contaminated areas in accordance with contaminated land, environmental and health and safety legislation.

As outlined in the Stage 3 GIR there has been minimal contamination identified, further SI will be carried out during the enabling works to support this.

Table B4.8: Contaminated Land

Signs of Contamination	Test Results <i>Actual Levels</i>	Contamination Identified	Exposure Level Health Maximum Level	Action Taken
N/A				

B4.9 Cofferdams, caissons and tunnels

Table B4.9: Cofferdams, caissons and tunnels

Design Responsibility	Design Check	Layout Arrangements	Access Arrangements	Inspection / Maintenance Frequency
N/A				

B4.9.1 Cofferdams, caissons and tunnels with compressed air working

Table B4.9.1: Cofferdams, caissons and tunnels with compressed air working

N/A

B4.10 Working over or near water/drowning - SG16: Work over or near water

Table B4.10: Working over or near water / drowning

Activity	Location	Controls	Rescue Arrangements	Drill arrangement
Ground investigation	St Catherine's wood	Visual inspection by competent operator prior to any plant being positioned close to the river bank Specific Activity plan developed for works	TBC	Prior to works commencing & monthly thereafter

		Exclusion zones in place to keep plant/people minimum 2m away from rivers edge	

B4.11 Diving - SG17: Diving operations**Table B4.11: Diving**

Activity	Location	Depth	Dive team size	Dive Times	Nearest de-compression chamber
N/A					

B4.12 Piling**Table B4.12: Piling**

Type of piling operation	Piling platform design	Laydown areas	Operational controls
N/A			

B4.13 Lighting

Table B4.13 describes the lighting arrangements for all aspects for the work. Arrangements should be designed to minimise glare and provide suitable and sufficient lighting to allow work to be carried out safely.

Table B4.13: Lighting

Access	When required	Lighting arrangements
Car park	Hours of darkness / poor weather	Lighting towers to show spacing arrangements and route to pedestrian walkway
Office	Hours of darkness / poor weather	Sensor lighting to allow safe access to office building
Traffic and pedestrian routes	Hours of darkness / poor weather	Lighting tower
Work area	Hours of darkness / poor weather	Lighting tower
Work is planned to only take place during daylight hours	N/A	N / A

B4.14 Demolition and assembly including pre-fabricated components**B4.14.1 Demolition**

Table B4.14.1: Work involving demolition

A description of demolition activities and associated check and control measures are stated in Tables B4.14.1a and B4.14.1b. Information in relation to temporary works is contained in section B4.2

Demolition activity	Information from demolition survey/ pre-construction information/designers	Temporary works required	Stability checks required in temporary and permanent condition	Operational controls to minimise risk
Demolition of existing Cream line dairy buildings	TBC – To be developed nearer the time	None	None	Activity plans to be developed by specialist subcontractor

Table B4.14.1b: Competent personnel undertaking demolition

Organisation/ personnel carrying out demolition – supplier or in-house personnel	Competence of personnel List names of managers, supervisors and operatives	Evidence of competencies and where the records are kept	Evidence of involvement on previous demolition schemes, of similar complexity
PP O'Connor's	Neil Powell	TBC	TBC

B4.14.2 Assembly of pre-fabricated components**Table B4.14.2: Assembly of pre-fabricated components**

Activity	Ground information for lifting operation	Component information	Method information
N/A			

B4.14.3 Dismantling of pre-fabricated items**Table B4.14.3: Dismantling of pre-fabricated components**

Activity	Information for removal	Component information	Method information
N/A			

B4.15 Radiation**Table B4.15: Radiation**

Description of the work	Controls to prevent unauthorised access	Workforce controls
N/A		
Radiation Protection Adviser	N/A	

Radiation Protection Supervisor	N/A
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B4.16 Explosives

All work involving the use of explosives will be undertaken using the best practice standards given in the Health and Safety at quarries approved code of practice. **Table 4.16** below defines arrangements:

Table B4.16: Explosives

Activity	Location of nearby buildings / structures	Blast specification	Records	Inspection / Monitoring
N/A				

B4.17 Asbestos - NP1.6: Control of asbestos at work

BAM Nuttall only undertakes work with asbestos in limited circumstances, i.e. contaminated land, the removal of asbestos cement sheets or pipework encountered in the course of excavation and as an incidental part of the works. BAM Nuttall manages those who undertake work with asbestos on its premises or sites in accordance with BAM Nuttall Procedure NP1.6: *Control of asbestos at work*.

Details of asbestos anticipated on this project are provided in **Table B4.17**

Table B4.17: Asbestos

Asbestos anticipated on the project
Pre-demolition survey of Cream Line Dairy's identified asbestos in fuses – See survey for further information VNIF-BNL-ZZ-YYY-SU-S-0002

B4.18 Railways

All work involving railways should have been notified to the Railway Health and Safety Advisor during the bid process. This is confirmed, or notified if new, and the railway health and safety advisor advises on regulatory requirements and those of the particular infrastructure controller.

Work is managed in accordance with regulatory requirements and those of any licenses issued by the infrastructure controller.

Operations involving work on, over or adjacent to railways, including open line operations on this project are listed in **Table B4.18**

Table B4.18: Other requirements from Network Rail CPP

N/A

B4.19 Highways

Highways works are carried out within traffic management. This traffic management will have been designed before works commence.

Operations involving work on highways on this project are listed in **Table 4.19**

Table B4.19: Work on highways

Operation involving work on highways	
Enhancement of access into cream line site	Footpath closure as required

B4.20 Other significant hazards

Other unusual significant safety hazards are listed in **Table 4.20**, together with outline control measures.

Table B4.20: Other significant safety hazards

Hazard	Activities affected	Proposed control method
Maintenance of plant and equipment	Misc.	In accordance with Nuttall Procedure NP4
Needle stick injuries	All works in and around the site including site compound	Procedure to be drafted by BAM to deal with sharps. Designated team within the workforce briefed on the procedure and issued with PPE to remove sharps
Leptospirosis	All works within the site	Adequate welfare facilities provided. Adequate PPE provided.
Fly tipped rubbish	All works in and around the site including site compound	Procedure to be drafted by BAM to remove fly tipped rubbish from site with adequate PPE. This could potentially require a specialist contractor to carry out the works under BAM to remove the rubbish.
Asbestos – Cream Line Dairy's	Demolition of Cream Line Dairy's	This will need to be removed by a specialist licenced contractor who will remove and dispose of the asbestos in line with the control of asbestos regulation 2012.

Schedule B1 Welfare Layout



Enabling works site welfare units



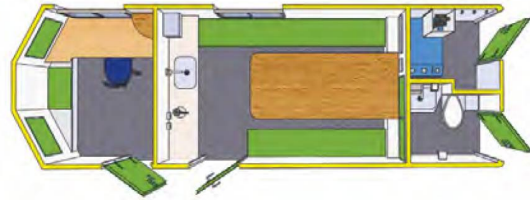
DIMENSIONS

WEIGHT (TONNE)

EMPTY: 2.95 FULL: 3.25

SIZE (METRES)

LENGTH: 6.7 WIDTH: 2.2 HEIGHT: 2.5



Schedule B2 Works Transport Layout



Schedule B3 Register of Service Drawings

Utility Type	Drawing Reference	Issue Date	Date Received
GPR Survey	PUM-11943-U-DR-001	08/12/2021	08/12/2021

Schedule B4 Water safety management plan

N/A

Section C Environmental Management Plan

C1.0 Introduction

This Environmental Management Plan (EMP) has been prepared to support the construction phase of Victoria North HIF Infrastructure Works. This is intended to be a high level EMP that outlines the general principles with additions made as information becomes available.

This plan should be read in conjunction with **Section A** of this Project Execution Plan.

C2.0 General Environment Requirements

C2.1 Environmental Aspects and Impacts Assessment

An environmental risk assessment has been carried out which identifies the environmental risk associated with core construction activities. Impacts from these activities were assessed in terms of risks to: air quality; archaeology and cultural heritage; contaminated land; ecology; landscape; material use and waste; noise and vibration; water; and public highways. The risks were assessed in terms of the potential likelihood and severity of consequence (extent / reversibility / sensitivity). Where medium and high risks were encountered, outline actions have been recommended and the residual post mitigation risk assessed. This risk assessment is included in **Schedule C1: Aspects and Impacts** and **Schedule C2: Environment Constraints Map**.

C2.2 Monitoring Arrangements

Prior to works commencing and thereafter quarterly the agent and the appointed environmental advisor review environmental risks and opportunities of the project documented in **Environmental Form EF12: Project Environment Risk review**. They agree level of support and frequency of inspection by the appointed environmental advisor.

Site operations are regularly monitored during the site environmental engineers and agents weekly inspections to ensure overall environmental performance (legislative, client, and ISO 14001 and BAM Nuttall requirements) is maintained throughout the project duration. Compliance monitoring and frequency is detailed in **Schedule C3: Environmental Monitoring**.

C2.3 Review Arrangements

This EMP will be reviewed when there is a substantial change to the scope or method of work, or every 3 months, whichever is soonest.

C2.4 Requirements and Consents

Consents, licences or permissions are required from a number of organisations including the Environment Agency, DEFRA, local water companies, local authority environmental health departments, local authority planning departments, Natural England and Natural Resource Wales etc.

These cover matters relating to work near water, disposal of waste, noise and vibration and ecology among others. Activities on this project assessed as requiring consent, licence or permission are listed in **Schedule C4: Consent licences and permissions**.

The BAM Nuttall Environmental Policy and key environmental information including poster campaigns will be displayed on notice boards at the project site offices.

C3.0 Specific Environmental Impact Areas

C3.1 Water (Resource) Management – NP27.1: Water management NP27.2: Oil storage and refuelling

A comprehensive assessment of the potential risks of water pollution as a result of work activities is made by the agent before each activity is carried out. Surface, ground and coastal waters are considered where appropriate. Activities likely to have an impact on controlled waters may be listed in **Table C3.1a**, together with appropriate control measures.

Table C3.1a: Water environmental controls

Location	Activity	Controls
Construction Plant	General	Use of bi-fuels, spill kits available at all work areas, spill containment drills carried out. Stationary plant and equipment containing fuel/oil to be kept on plant nappies. All plant to be in good condition and regularly serviced. All site team to be trained in spill drills which will be regularly trained. TBT on spill and pollution to be issued on site to all site team. Spill kits to be always kept with items of plant. Refuelling of plant to be undertaken away from water's edge. Diesel storage to be held in site compound in double banded bowzers on hard standing area. Generators to be used in accordance with EG02

Control measures are summarised in **Schedule C1: Aspects and Impacts**, with environmental constraints detailed in **Schedule C2: Environment Constraints Map**.

Water usage is recorded and monitored by use of the BAM SMaRT web based sustainability database / BAM Site app (delete as appropriate). On this project, ways in which water use is being reduced are listed in **Table 3.1b**

Table C3.1b: Water reduction measures

Activity	Measures to be adopted to reduce use
Dust suppression,	Good housekeeping
Vehicle wash down / wheel wash	Water usage to be monitored and recorded on BAM Site app
Toilets and taps,	Rainwater harvesting
Damp down of demolition works	Push taps and aerators

C3.1.1 Herbicide and Pesticide Application

If required, herbicide and pesticide application will be covered by a task specific activity plan, application will be by qualified experienced and registered sub-contractors only. Details of training records will be stored on-site or with the sub-contractor.

EA & MCC will be notified of all use of herbicides or pesticides within 10m of a watercourse.

C3.2 Fuel Oils and Chemicals - NP27.2: Oil storage and refuelling

Consideration is given to the location and method of storing fuel, oils and chemicals within suitable site areas for refuelling plant. Details of storage and refuelling arrangements are provided in **Schedule A7 Hazardous substances**.

Personnel responsible for refuelling plant & equipment will receive a tool box talk (Refuelling plant and equipment PP8) including site specific refuelling procedure including the emergency oil spill procedure, **Schedule A6** which will be displayed around site.

C3.2.1 COSHH (Chemical and biological hazards including dust and fumes)

The COSHH coordinator, ensures that all reasonable steps are taken to ensure that exposure of employees and others to hazardous substances is assessed and prevented or at least controlled to within statutory limits.

On this project, arrangements for storage of hazardous substances are detailed in Section B Construction phase plan **Section A Project Execution Plan**.

C3.3 Waste (Resource) Management - NP27.3: Waste management

Compliance with BAM Nuttall waste procedures and guidance ensures:

- compliance with relevant waste management legislation
- application of industry best practice
- identification of opportunities in waste minimisation/resource efficiency

The site waste management plan (SWMP) declaration, of **Schedule C5** identifies the waste streams generated with forecast quantities. The SWMP defines the selected waste management measures of prevention, reuse, recycling and recovery and, at the end of the project. This allows a comparison to be made between forecast and actual waste quantities.

Generation of waste material will be minimised at every stage of the project (design, procurement and construction), and reduction strategies will be implemented and detailed in the SWMP.

Quantities of waste, categorisation (inert, non-hazardous, and hazardous waste), are monitored by use of the BAM Site app. This is a live system which is reviewed and updated on a regular bases to ensure compliance and to track project waste performance. Copies of waste management contractors certificates, permits, licences or exemptions used or validated in consultation with the Environmental Advisor and retained on site in accordance with the site documentation control procedures.

C3.4 Contaminated Land

BAM Nuttall will investigate, assess remediation / disposal options of any potentially contaminated areas in accordance with contaminated land, environmental and health and safety legislation. Treatment / recovery / disposal options will be detailed in the relevant site waste management plan **Schedule C4** or Material management plan as required.

As outlined in the Stage 3 GIR there has been minimal contamination identified, further SI will be carried out during the enabling works to support this.

Specific arrangement for contaminated land are as detailed in **Table C3.4** below:

Table C3.4: Contaminated Land arrangement

Signs of Contamination	Test Results <i>Actual Levels</i>	Contamination Identified	Exposure Level Environment Maximum Level	Action Taken
N/A				

C3.5 Nuisance - NP27.4 Control of site nuisance

Construction activity has the potential to cause nuisance within the site, to site personnel, to local residents, site neighbour's and the general public in the form of noise, dust, mud, vibration smoke light and odour.

Activities likely to cause nuisance are identified by the agent, who selects appropriate control measures to avoid the nuisance or mitigate the effects if avoidance is impracticable.

Activities likely to cause nuisance may be listed in **Table C3.5**, together with appropriate control measures.

Table C3.5: Nuisance

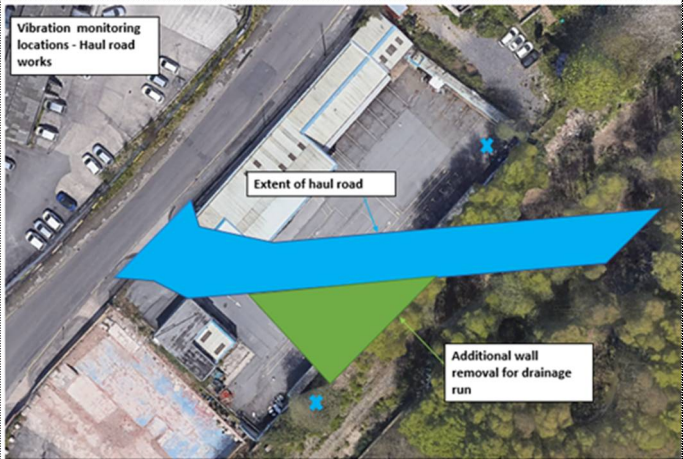
Activity	Potential nuisance	Control measures
Construction Works	Interference	All work areas to be securely fenced to prevent public access to areas All works to be carried out within site working hours Mon-Fri 07:30-18:00
Welfare accommodation	Lighting	Lighting within welfare to have PIR to turn off lights when area not in use. All lighting required for compound to be directed away from any homes or buildings in the areas.
Welfare accommodation	Odour	Regular emptying of waste bins
Welfare / site area	Litter	Provision of suitable waste containers, regular monitoring of issue, carry out litter sweeps of site perimeter etc. at close of each workday
Demolition of cream line dairy Earth works	Dust	Demolition areas to be dampened down prior to and during demolition works Towed water bowsers on site to suppress dust using water, obtained where possible by rainwater harvesting on site
General site works and plant operation	Noise	Mitigation measure as highlighted in BS5228:2014 to be utilised where possible/practical as exemplified below. • New efficient plant/equipment to be used on site with efficient exhaust sound reduction equipment fitted. • Manufactures enclosure panels to be kept closed during operation • Static items of plant to be housed within acoustic enclosure where practical
Demolition of cream line dairy	Noise	Prior to works taking place base line monitoring has been undertaken utilising a Type 1 sound level meter to record the existing levels within the area at the location shown in the below sketch. The results are : A, Taken 1/6/22 at 11:30 for 30 mins. LAeq 51.3 LAmx78.2 B, Taken 1/6/22 at 12:0 for 30 mins. LAeq 45.6 LAmx 61.4

Activity	Potential nuisance	Control measures
		C , Ref 03 Taken 1/6/22 at 12:30 for 30 mins. LAeq 48.2 LAmx 65.9  The demolition works will take place over a 5 week period which includes various phases including a soft strip of the structure and then removal of the structural frame which will take around 3 weeks. Following this will be the removal of the existing slabs and foundations which will take up the remaining 2 weeks and will include elements of breakout and also excavation to remove. As highlighted above there are 3 local receptors which may be impacted by the works (Grub, Cresta Cars and Flamingo Shisha Lounge). The monitoring positions highlighted have be located to allow monitoring and impact of these. During the demolition works sound readings will be taken to monitor and provide records of the levels. These will be recorded on the BAM EF02 form. (As EG06 guidance) Peak trigger levels for demolition works to cease will be 90db at 10m. Should operations (breach these levels work will cease immediately. Localised acoustic barriers (Heras's fence mounted as shown below) will be erected around work area (with barriers specifically positioned between the works and the identified receptors the barriers have a max noise reduction of up to 37db dependant on operation) Works would then recommence to allow noise level readings to be taken to confirm suitable mitigation has been put in place. Once readings confirm the mitigation is sufficient works would recommence and the acoustic barriers would be moved as the works proceed with more regular noise

Activity	Potential nuisance	Control measures
		readings taking place to confirm the trigger levels are not being breached.  Example of fence mounted acoustic barriers
Earthworks	Noise	Base line readings taken ahead of the works (as explained in the demolition section above). The construction of the access/haul road is planned to take approximately 5 week to construct and will be made up of the excavation, filling and compaction of areas to create the required access ramps into the site. As highlighted in the above for this element of works there will be 2 local receptors which may be impacted by the works (Grub and Flamingo Shisha Lounge). The monitoring positions highlighted have be located to allow monitoring and impact of these businesses during the operations. As the construction of the haul road is underway regular readings will be undertaken and recorded in the same manner as described in the demolition section above Peak trigger levels for earthworks to cease will be 85db at 10m. Should operations (breach these levels work will cease immediately. Acoustic barriers (Heras's fence mounted as shown below) will be erected along the boundary between the work area and the identified receptors. The barriers have a max noise reduction of up to 37db dependant on operation. Works will then recommence to allow noise level readings to be taken to confirm suitable mitigation has been put in place. Once readings confirm the mitigation is sufficient works will recommence with more regular noise readings taking place to confirm the trigger levels are not being breached.

Activity	Potential nuisance	Control measures
		 Example of fence mounted acoustic barriers
Demolition of cream line dairy	Dust	Demolition areas to be dampened down prior to and during demolition works as detailed below. - o Using a local hydrant - o The demolition team will place a filter or sandbags around any witnessed rainwater grids - o The client will indicate where the local water hydrant is located - o The demolition team will connect fire hoses to the hydrant - o Prior to demolition of the structure/ structures a demolition operative will spray the buildings to be demolished with the water gained from the feed supplied - o At a safe distance and during demolition the demolition operative will spray water onto the active areas of demolition and resultant debris pile - o The demolition site manager will at all times assess the effectiveness of the dust mitigation measures. If extensive dust nuisances exist, then demolition activities will cease, and a review of further mitigation measures agreed and implemented. - o Vehicles entering and leaving site will be covered to prevent any escape of materials during transport. - o Soft strip of building will be undertaken before demolition of the structures is undertaken.
Earth works	Dust	o For the installation of the haul road as the aggregate is placed and compacted a water bowser will be used to dampen down the area. This will be done by drenching the area with the bowser and spreader bar as the layers are place. Additionally, areas will be sprayed with a jet wash to dampen down where required and where the bowser and spreader bar cannot be utilised.

Activity	Potential nuisance	Control measures
		- No dry sweeping will be undertaken across the site, all road sweeping will be water assisted and be carried out to the required distance from site to remove any deposited material tracked out from Site from the roads. - All vehicles entering or leaving the site will be covered to prevent any escape of materials during transport. - Haul road and access roads will be inspected daily, and a record of the inspection kept. - Vehicles will be inspected prior to leaving site and any wash down required will be undertaken by operative using a jet wash on the hardstanding before entering the public road - Hard surface maintained between site and public road for inspection and clean down.
Demolition of cream line dairy	Vibration	Vibration monitoring will be undertaken during the demolition works. A Vibrock V900 Seismograph will be positioned (as shown on the above sketch) at the start of each day. The monitor once positioned provides continuous monitoring during the day. At the end of each day the recorded data will be downloaded and stored for inspection as required.  Trigger levels for the vibration would be those derived from the BSBS7385-2: 1993 Evaluation and measurement for vibration in buildings – Part 2: Guide to damage levels from ground borne vibration. A base line reading of 0.525mm/s has been recorded prior to works commencing and takes account of passing traffic etc. Trigger/threshold levels of 3.0mms

Activity	Potential nuisance	Control measures
Earth works	Vibration	 Vibration monitoring will be undertaken during the haul road construction works. A Vibrock V900 Seismograph will be positioned (as shown on the above sketch) will be positioned at the start of each day. The monitor once positioned provides continuous monitoring during the day. At the end of each day the recorded data will be downloaded and stored for inspection as required. A base line reading of 0.525mm/s has been recorded prior to works commencing and takes account of passing traffic etc. Trigger/threshold levels of 3.0mms
Welfare accommodation	Vermin	Employ specialist to install control measures
Earthworks	Mud on roads	Employ services of road sweep, regular monitoring of situation and utilising additional resources if required.
Construction traffic	Vehicle emissions	Minimise wagon movements, avoid idling of engines, and provide vehicle holding areas where wagons can park off the public road network. Regular maintenance regimes / servicing of site vehicles. Where possible the use of ECO plant will be utilised. If practical fully electric plant items will be utilised.
Construction traffic	Interface with public	Production of a Traffic management Plan to detail measures to minimise disruption, Off road parking to be made available for all vehicles, information packs to be provided to all suppliers and delivery drivers to ensure compliance with the projects Travel Plan.
Construction waste	Odour/vermin	Use of enclosed waste receptacles

Control measures are summarised in **Schedule C1: Aspects and Impacts with potential receptors** detailed in the **Schedule C2: Environment Constraints Map**.

C3.6 Ecology and biodiversity - NP27.5: Management of ecology and biodiversity EG09: Protected species

Where the project work disturbs, or has the potential to disturb, species of plants or wildlife, certain conditions may apply concerning timing of activities, exclusion areas and protective measures. The agent is responsible for identifying and putting in place appropriate control measures.

Activities restricted for ecological reasons and enhancements adopted on the project may be listed in **Table C3.6** below:

Table C3.6: Constraints and enhancements

Ecological constraints	
Location/ activity	Constraints and control
Enabling works	Protected species - no species identified in Works Information, survey to be carried out specialist prior to commencement of construction activities to identify any new issues.
	Invasive species present, pre-works treatment regime carried out Relevant TBT's to be issued to all site team to allow them to identify invasive species and understand the risks and the measures required in regard to Bio security. Invasive species management plan to be produced
	Prevention of spread of invasive species by use of Bio-security measures, including a) wheel washing of machinery/plant, b) washing of boots/shoes from site staff, c) use of caterpillar tracks rather than tyres to reduce material transfer off site, and d) ensure any site runoff from wash-down area is on hardstanding and directed to a public drain at least 10m from a water course.
	Tree fence to be installed to separate the separate areas regarding planning permission boundaries
Ecological enhancements	
Location	Enhancements
Enabling works	N/A

Control measures are summaries in in **Schedule C1: Aspects and Impacts** with ecological sensitive areas identified in **Schedule C2: Environment constraints map**.

C3.7 Built Heritage and Archaeology - NP27.6 Management of built heritage and archaeology

Arrangements are made for the identification and protection of areas of archaeological interest or listed structures and buildings. Any such areas identified during the undertaking of the project works will be immediately brought to the attention of the client and instructions sought. List of archaeological and listed structures may be detailed in **Table C3.7** below:

Table C3.7: Archaeology and listed structures

Areas of site subject to archaeological interest or with listed structures	Nature of interest, method of protection or other arrangements
Lowery steps	Area to be fenced off during all construction works and treated as an exclusion zone

Activities restricted for as built environment are summarised in **Schedule C1: Aspects and Impacts** with ecological sensitive areas identified in **Schedule C2: Environment constraints map**.

C3.8 Energy Management

BAM Nuttall seeks to reduce the emissions of greenhouse gases from the construction process on its projects and consequently looks for ways in which to reduce energy use. Sources of greenhouse gases contributing to the BAM Nuttall 'carbon footprint' include:

- Electricity and gas supply for heating, lighting and services to site accommodation
- Gas oil typically used in site plant and site generators
- Petrol and diesel used for commuting and business travel including transport of plant and materials
- Water supply and waste water treatment

Every effort is made to obtain grid supplied electricity to reduce the use of generators. Where this is not possible, a generator is used with consideration given to a setup which achieves the most optimum efficiency.

On this project, ways in which energy use is being reduced or alternative energy sources utilised are listed in **Table C3.8** below:

Table C3.8: Energy reduction measures

Carbon emission sources	Measures to be adopted to reduce use
Enabling works – Site welfare	Solar powered Eco welfare units
Main site compound - Electricity and gas	Insulated ECO welfare, Low energy lighting, PIR sensors for lighting, and main connection to main compound. Eco hybrid welfare units
Gas oil	Use of HVO fuels
Petrol and diesel for commuting	Car sharing / use of public transport to be encouraged.
Petrol and diesel for business travel	Use of digital platforms to minimise travel for meetings
Plant usage	Hybrid/Eco plant to be utilised. Where possible the use of electric plant to be prioritised.
Main site compound - Water supply	Rainwater harvesting to be adopted at welfare facilities to be used for dust suppression activities
Main site compound - Waste water treatment	Connect welfare toilets etc. to mains sewage wherever practicable.

Where non vendor accord supplier are used for the supply of fuel and energy, the agent ensures that consumption data is collated and entered on BAM Site app for monitoring purposes.

C3.9 Resource Sustainability

BAM Nuttall is aware of the global impact of the use of limited natural resources and of the need to reduce waste. Consequently, every attempt is made to reduce the use of primary aggregates and unsustainable products and materials wherever possible. Where practicable, commercially acceptable and in accordance with specification and regulatory requirements, use is made of waste or recycled material, or products containing recycled material.

Consideration is also given to the environmental impact caused during the lifecycle of the product within the scope of which BAM Nuttall can control or influence.

In accordance with the BAM Nuttall sustainability and environmental policies, every effort is made to use timber obtained from certified legal and sustainable sources.

Opportunities for the use of sustainable products and material have been identified as listed in **Table C3.9** below and will be pursued during the undertaking of the project works.

Table C3.9: Sustainable products and material

Opportunities for the use of sustainable products and material	
Product	Sustainable specification

Opportunities for the use of sustainable products and material	
Timber	100% sustainable timber FSC or PEFC certified
Aggregate	50% recycle content
Metal	90% recycle content
Concrete	Design specification
Products certified under BES 6001.	
Training	TBT on sustainable timber deliveries to be presented by Env Dept
Alternative chemicals and products	
Product	Substitute
N/A	

C3.9.1 Life cycle considerations

Within the scope of the design and construction of the project the following life cycle considerations have been taken into account as summarised in **Table C.3.9.1** below:

Table C3.9.1: Life cycle considerations

	Life cycle stage	Considerations	Outcome
Design	Design	Design optimised to reduce construction time and duration of works where possible	
	Raw materials	Off-site prefabrication methods (e.g., pre cast concrete) to be employed where possible to minimise environmental footprint on site <i>TBC</i>	
Construction	Production	<i>TBC</i>	
	Delivery of materials	Locally sourced where practical, bulk transport where possible, combined types of material from same supplier thus minimising number of trips / part loads.	
Use	Life of the structure	Minimum maintenance design adopted where possible	

C3.10 Landscape/ Restoration

On completion of the works the agent ensures that the works areas are restored as required by the planning authority and client.

The individual character, quality and value of the working area will be restored taking into consideration the wider landscape, biodiversity and historical context of the area as listed in **Table C3.10** below, or if required by planning consent or in the restoration plan provided by the customer.

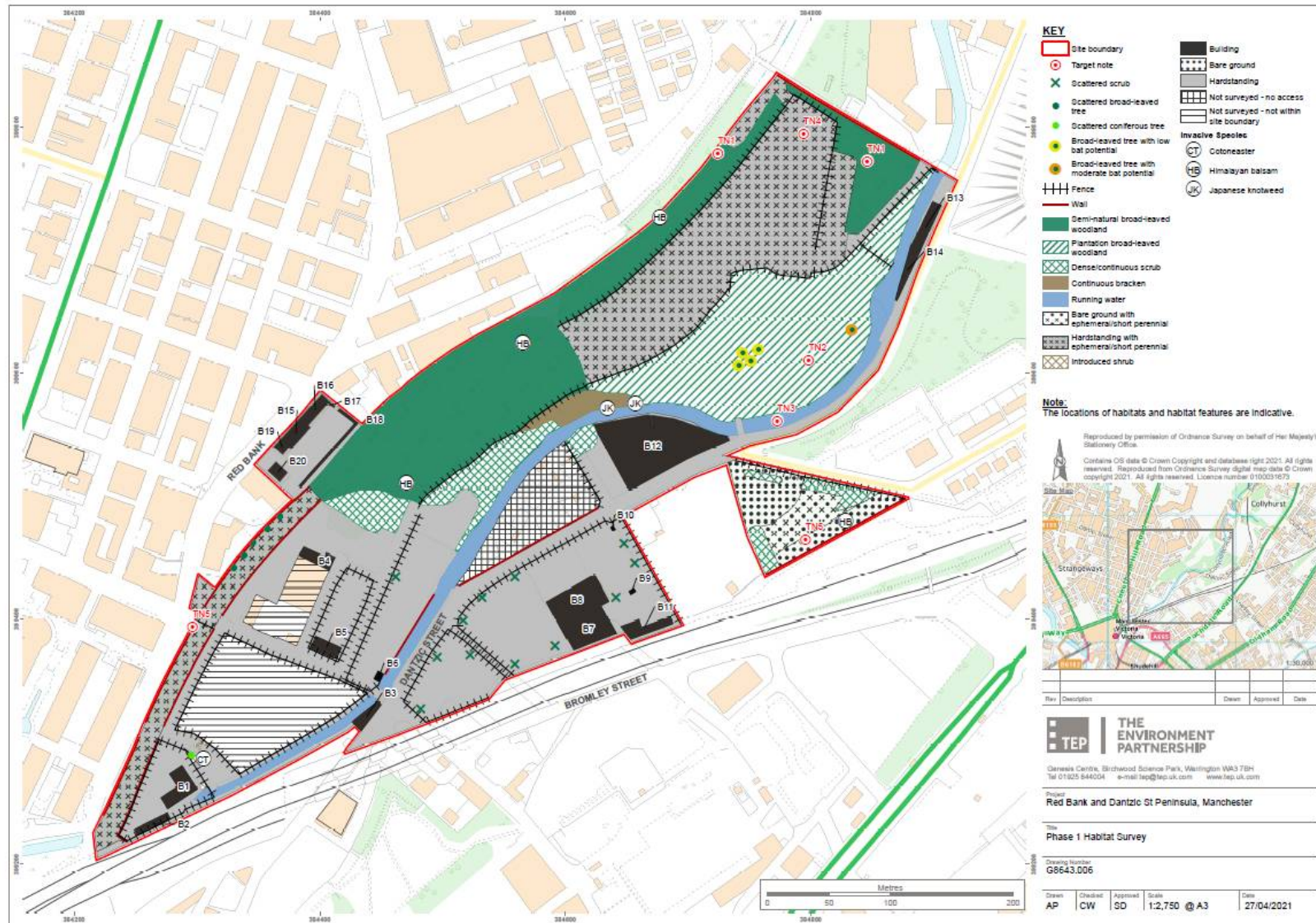
Table C3.10: Restoration requirements

Planning/ client requirements	Arrangements for restoration
TBC	

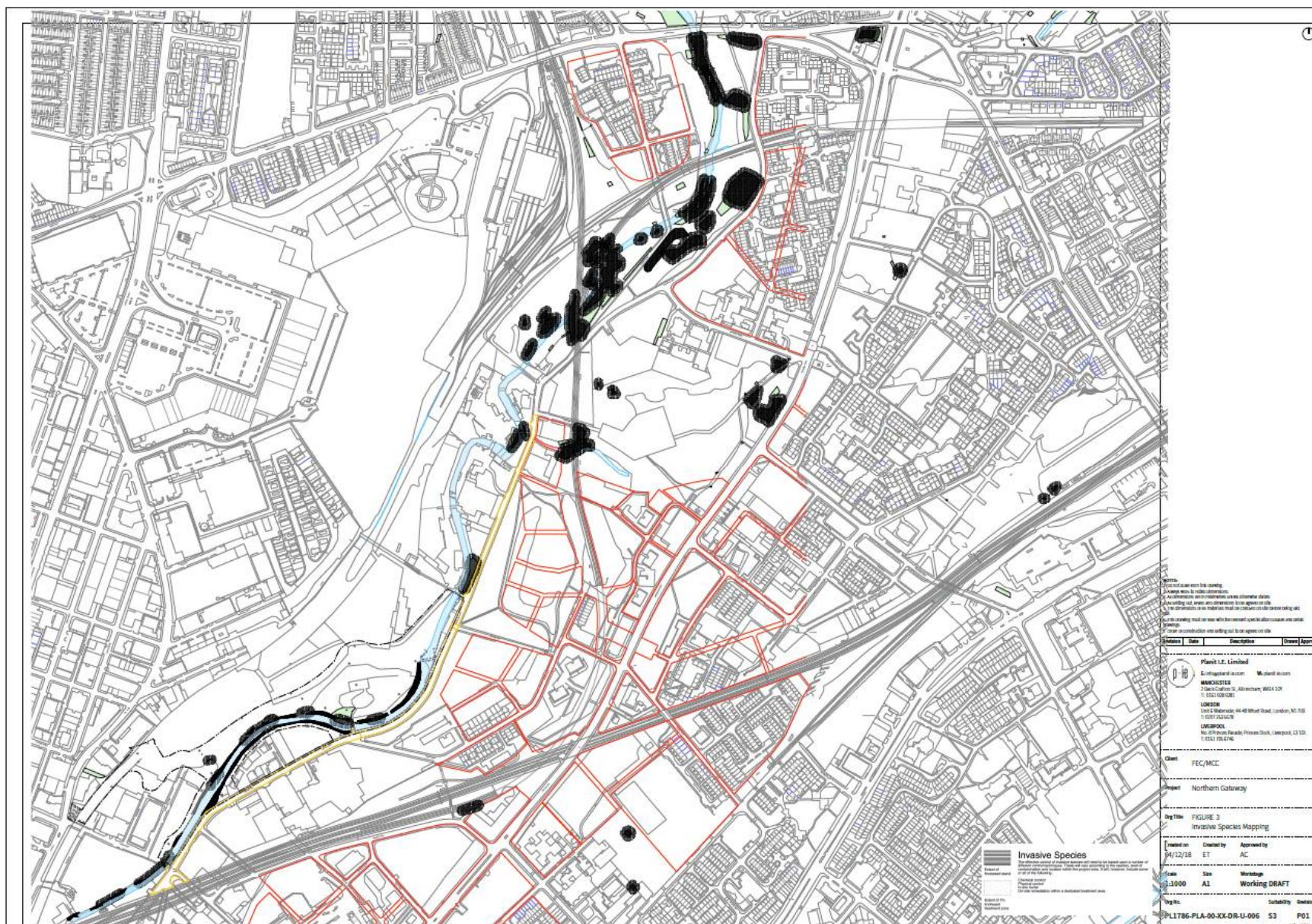
Schedule C1 **Environmental aspects and impacts assessment for construction works**

[VNIF-BNL-ZZ-YYY-RC-YE-0001](#)

Schedule C2 Environmental Constraints Map



MT19: Project Execution Plan



BAM Nuttall management system
Management template MT19: Project Execution Plan
Revision date: 16.07.19

MT19: Project Execution Plan

Environmental monitoring

Environmental aspect	Method of monitoring	Frequency	Responsibility (name/job title) or subcontractor	Records
Discharge to watercourse/Sewer	Visual inspection, sampling and analysis or otherwise as defined in consent.	Weekly	Site engineer or laboratory	Test results/ EF01/ EF03 Complaints log
Noise	Noise assessments Noise monitoring to be undertaken in accordance with BAM Environmental Guidance note EG06	Base line recordings to be undertaken and recorded ahead of operations commencing Readings to be taken at intervals throughout the demolition and haul road construction operations, with a minimum of 5 per week being undertaken whilst operations take place the readings will be taken to specifically target the elements of the demolition works and compaction operations on haul road	site engineer	Noise assessments/ (EF02) Monitoring data/ Complaints log
Dust	Visual inspection of site by site supervisor (foreman) and Demolition subcontractor's supervisor	Daily, and before commencement of operations.	BAM Site Supervisor and Demolition contractors Supervisor	EC01/ Site diary/ monitoring records/ Complaints log
Vibration	Vibration monitoring, Use of Vibrock V900 seismic monitoring unit.	Daily(equipment monitors continually during the day) as demolition and haul	Site engineer	EC01/ Site diary/monitoring records/ Complaints log

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Environmental aspect	Method of monitoring	Frequency	Responsibility (name/job title) or subcontractor	Records
		road construction works are undertaken		
Ecology	Inspection/walkover survey/watching brief (as defined in contract conditions)	As required	Consultant	Survey/inspection reports/EF04 Eco-permit
Condition of plant and equipment	Plant maintenance and inspection Visual inspections of plant	Daily	Plant dept. fitter Plant operator/foremen	Plant inspection sheet/ Foreman's diary
Fuel/chemical storage area	Visual inspection/checklist	Daily	Foremen/site environmental engineer	Completed checklists EC01/ Site diary
Waste disposal	Visual inspections on site Inspection/maintenance of records	Weekly	Foreman/Agent	Checklist/ Waste transfer records
Emergency spill kits	Visual inspection	Weekly	Foremen/site environmental engineer	Recorded inspections (EC01)
Emergency arrangements – e.g. practice drills	Practice drill	Monthly	Foremen/site environmental engineer	Record of drill/site training. (SF513)
Other				

Schedule C3 Consents licences and permissions

The following consents, licences and permissions are required

	Site process	Documentation consent/permits /licences	Controlling regulations	Issuing authority	Date Submitted to Issuing authority	Approval Period	Date Consent Approved	Consent / permit / licence ref no.	Surrender Date
General	Undertaking construction works	Planning permission	Town and Country Planning Act	Local authority	19 th November 2021 (Enabling works)		23 rd December 2021 (Enabling works)	132252/VO/2021 (Enabling works)	
	Undertaking building works	Building control approval	The Building Act	Local authority					
Water	Discharging water to a river, stream, ditch Installation/operation of septic tanks.	Discharge consent to controlled water	Water Resources Act Groundwater Regulations Environmental Permitting (England & Wales Regulations)	Environment Agency Natural Resources Wales	N/A				
	Site set up sewage discharge	Permission to discharge trade effluent to sewer.	Water Industry Act	Local water company	N/A				
	Temporary/permanent works over and in a main river. Works within 7-10m of a main river, note the distance may vary between EA regions. Raising ground levels in the floodplain beside a main river. Construction of a culvert or flow control structure (such as a weir) on any ordinary watercourse.	Flood defence consent (formerly known as land drainage consent/ works affecting watercourses consent)	Water Resources Act Land Drainage Act Local Byelaws	Environment Agency Natural Resources Wales	N/A				
	Works on flood plains	Prior permission	Water Resources Act Land Drainage Act	Environment Agency Natural Resources Wales	N/A				
	Works on flood defence structures	Prior permission	Local Byelaws	Environment Agency Natural Resources Wales	N/A				
	Abstracting or taking water from rivers, streams, lakes, ponds, tidal waters or groundwater. Constructing or altering any impounding works in rivers, streams, ponds or tidal waters. Dewatering activities may require a licence. Note: licence is not required for abstraction for any purpose of less than 20 cubic metres a day.	Abstraction licence: • Full licence — applicable to most abstractions over 20m ³ a day. • Transfer licence — moving water from one location to another with no intervening use. • Temporary licence — over 20m ³ a day over a period of less than 28 consecutive days.	Water Resources Act	Environment Agency Natural Resources Wales	N/A				
	Use herbicides near water	Prior permission	Food and Environmental Protection Act (Control of Pesticides Regulations)	Environment Agency Natural Resources Wales	N/A				
	Construction works (temp & perm) on the sea bed/within tidal waters/harbour area.	Marine licence — online pre application and application process	Marine and Coastal Access Act	Marine Management Organisation	N/A				
	Transfer/disposal of controlled waste	Controlled waste transfer notes	Environmental Protection Act Waste (England and Wales) Regulations	Producer Haulier	TBC				
	Transfer/disposal of hazardous waste (England & Wales)	Registration as a hazardous waste producer (Wales only)	Hazardous Waste Regulations	Producer Haulier	N/A				
Waste		Hazardous waste consignment notes							
	Carrying waste other than your own (controlled or hazardous)	Waste carriers registration certificate	Waste (England and Wales) Regulations	Environment Agency Natural Resources Wales	N/A				
	Keep, treat and dispose of waste	Environmental permit May need planning permission	Environmental Permitting (England & Wales) Regulations Town and Country Planning Act	Environment Agency Natural Resources Wales Local authority					
	Reuse waste materials off site	Environmental permit or exemption from Environmental Permitting regulations	Environmental Permitting (England & Wales) Regulations	Environment Agency Natural Resources Wales	TBC				

	Site process	Documentation consent/permits /licences	Controlling regulations	Issuing authority	Date Submitted to Issuing authority	Approval Period	Date Consent Approved	Consent / permit / licence ref no.	Surrender Date
Waste Continues	Treatment of contaminated land and water	Mobile Treatment Licence	Environmental Permitting (England & Wales) Regulations Contaminated Land (England) (Amendment) Regulations Contaminated Land (Wales) Regulations	Environment Agency Natural Resources Wales	TBC				
	Handling asbestos	Licence for work with asbestos from HSE Asbestos licensing unit	Control of Asbestos Regulations	HSE Asbestos Licences Unit	N/A				
	Manufacturing of aggregates and soils from demolition, construction, tunnelling and excavation wastes or waste ash, slag, clinker or rock, e.g. screening of soils.	Exemption from waste management licensing	Environmental Permitting (England & Wales) Regulations	Environment Agency Natural Resources Wales	TBC				
Nuisance	Crushing and screening operations Blacktop batching plants	Environmental permit or exemption (T5/T7) Authorisation to operate a part B prescribed process.	Environmental Permitting (England & Wales) Regulations Pollution Prevention and Control (England & Wales) Regulations	Local authority environmental health Environment Agency Natural Resources Wales	TBC				
	Managing noise and vibration levels	Prior consent under Section 61 (optional)	Control of Pollution Act	Local authority environmental health	TBC				
Wildlife	Cutting, topping or uprooting protected trees	Prior consent	The Town and Country Planning (Tree Preservation) (England) Regulations Town and Country Planning (Trees Amendment) (Wales)	Local authority planning dept					
	Works affecting hedgerows	Prior consent	Hedgerow Regulations	Local authority planning dept					
	Works affecting designated areas i.e. SSSIs, AONB	Prior consent	Wildlife and Countryside Act Habitat Regulations Countryside and Rights of Way Act	Natural England Natural Resources Wales					
	Works near badger setts	Prior consent	Protection of Badgers Act	Natural England Natural Resources Wales	N/A				
	Move/handle protected species (esp. bats, badgers and newts)	Licence	Wildlife and Countryside Act Habitat Regulations as amended	Natural England Welsh Assembly /Natural Resources Wales	N/A				
	Removal and/or introduction of fish with inland waters	Prior consent	Salmon and Freshwater Fisheries Act	Environment Agency Natural Resources Wales	N/A				
	Treatment of Japanese knotweed –burning on site	Prior consent	Wildlife and Countryside Act Clean Air Act Environmental Permitting (England & Wales) Regulations	Environment Agency Natural Resources Wales Local authority environmental health	N/A				
	Treatment of Japanese knotweed – burial	Formal notification	Wildlife and Countryside Act Environmental Permitting (England & Wales) Regulations	Environment Agency Natural Resources Wales	TBC				
Archaeology	Demolition or alteration of a listed building and historic structures within its grounds.	Planning Permission & Scheduled monument consent	Planning (Listed Buildings and Conservation Areas) Act	Local planning authority	N/A				
	Works on/near scheduled ancient monuments (SAM's)	Planning Permission & Listed building consent	Town and Country Planning Act Ancient Monuments and Archaeological Areas Act	Local planning authority English Heritage Welsh historic monuments	N/A				
	Demolition of an unlisted building in a conservation area.	Planning Permission & Conservation area consent	Planning (Listed Buildings and Conservation Areas) Act	Local planning authority	N/A				

Schedule C4 Site Waste Management Plan

This declaration is to be used in conjunction with BAM Site app.

Project reference	BAA2210
Project title	Victoria North Enabling works
Client	Manchester City Council
Principal contractor	BAM Nuttall Ltd
Site waste coordinator / Environment engineer	TBC
Contract value	TBC
Address/location	
Project description	Enabling works for Victoria North Project consisting of demolition of Cream line dairy, tree clearance works and construction of haul road in the area.
Document prepared by	N Peters

Declaration: We the client and principal contractor confirm that all reasonable steps will be taken to ensure that: a) all waste from the site is dealt with in accordance with the duty of care in section 34 of the Environmental Protection Act b) materials will be handled efficiently and waste managed appropriately	
Client:	Signed:
Principal contractor:	Signed:
Key subcontractor(s):	Signed:

This plan is reviewed at least every three months by the site waste coordinator and updated as necessary to ensure that waste management practices are in accordance with this plan.

Reviewed by	Date	Rev no.	Revision details (where applicable)

Introduction

This site waste management plan identifies and monitors:

- reuse of materials on the project e.g. cut and fill, site won materials
- waste minimisation implemented on the project
- waste management options for waste generated during the works including waste generated by subcontractors
- any cost savings achieved through waste minimisation

Materials identified within this SWMP are not necessarily statutory waste as they do not fall within the legal definition of waste ie 'any substance or object which the holder discards intends to discard or is required to discard.' There is no intention to discard materials such as:

- site won excavated materials
- aggregates crushed in accordance with the WRAP Quality Protocol (on or off site)
- pre-planned use of materials

All materials whether they are imported, reused 'as is' on site, recycled (on or off site) or sent off site for disposal are identified within the plan.

(See Appendix 1 for roles and responsibilities.)

Materials resource efficiency

The following waste reduction and reuse measures have been included in the design and/or specification for this project:

(To be completed with input from the designer – delete or add as appropriate)

<i>Design specifications</i>	
<i>Choice of materials</i>	
<i>Methods of construction</i>	
<i>Pre-fabrication off site</i>	N/A

Forecast of the types and quantities of waste

It is estimated that this site will produce the following types and quantities of waste:

Source and type of waste	EWC Code	Estimated quantity of waste (tonnes)	Proposed waste management action (reuse, recycle, etc)
Excavation waste			
Hazardous excavated material	17 05 03*	0	0
Non-hazardous soil and stones	17 05 04	3420	3420
Inert soil and stones	17 05 04	0	0
Construction (skip) waste			
Concrete	17 01 01	0	0
Mixed hardcore	17 01 07	0	0
Timber	17 02 01	5	5
Glass	17 02 02	0	0
Plastic	17 02 03	3	3
Mixed metals	17 04 07	0	0
Other mixed construction waste	17 09 04	0	0
Hazardous construction waste	Various	0	0
Mixed municipal waste	20 03 01	40	40
Demolition waste			
Concrete	17 01 01	684	684
Bricks	17 01 02	40	40
Mixed hardcore	17 01 07	250	250
Timber	17 02 01	0	0
Glass	17 02 02	1	1
Plastic	17 02 03	0	0
Mixed metals	17 04 07	10	10
Other mixed demolition waste	17 09 04	20	20
	Totals	4473	4473
		Difference	0

Delete / add waste streams as appropriate by double clicking on this table.

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Management of waste

The production of waste material on this site during the construction phase is avoided wherever possible by following the 'reduce, reuse, recycle, recover' measures outlined below. Only where these options have been exhausted is waste sent for disposal.

Reduction and reuse measures

The following measures will be employed to reduce and reuse waste on this site:

General	
Reduction measures	Reuse measures
Designed elements to use standard module sizes of available materials	Rainwater from accommodation roofs to be harvested for use in dust suppression measures
Accurate measurement, and minimal wastage will be allowed when ordering materials	
Materials are to be delivered just in time for the work package	
Materials are to be stored and transported correctly so as to avoid damage	
Materials are to be kept off the ground by the use of pallets or timber bites	
The following components are to be prefabricated: (Insert any relevant materials)	
All operatives are to receive training on the agreed reduction measures	
(any other measures)	
Concrete and hardcore	
Reduction measures	Reuse measures
Suspended GF slab to be designed to eliminate the requirement for extra fill	900 tonnes of hardcore from demolition is to be crushed and reused as aggregate
Teram to be used under temporary roads to reduce wastage through settlement	Remaining hardcore from demolition to be crushed and used as fill to excavations
Concrete orders to be as accurate as possible to reduce possibility of waste	Excess concrete from pours is to be used to create temporary paths around the site
(any other measures)	(any other measures)

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Excavated material (soil & stones)	
Reduction measures	Reuse measures
- Formation level to be raised to reduce excavation waste - Soil stabilisation to be used to minimise reduced level dig - Displacement piling to be used in lieu of CFA to reduce spoil - Mini piles to be used in lieu of pad foundations - Reinforced pad foundation to be used, backfilled with excavated material, in lieu of mass pads - Permanent formwork to be used to pile caps and ground beams to eliminate excavated working space - Drainage levels to be raised, and back-dropped into manholes, to reduce excavation depths - Trenches to be sheeted rather than battered to reduce excavated material (any other measures)	- A cut and fill exercise has been carried out to minimise waste off site - Arisings from excavations to be used as follows: 2000 tonnes to be used as backfill to excavations 850 tonnes to be used within landscape bunds (any other measures)
Timber	
Reduction measures	Reuse measures
- Reusable plastic pallets to be used - System shuttering to be used wherever practicable - Reusable plastic/metal hoardings to be used (any other measures)	- Reusable shuttering systems to be employed wherever practicable - Off-cuts of plywood to be saved and used to cover holes, and as protection to fragile materials - Designated area for waste timber to be set up for free reuse by others (any other measures)
Metals	
Reduction measures	Reuse measures
(any other measures)	- Off-cuts from long pipe work runs are to be stored for reuse in small runs (any other measures)

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Recycle and recovery measures

The following waste streams are to be segregated for recycling/ recovery off site:

Waste stream	EWC code	Storage option	Management option
• Paper and cardboard	20 01 01	labelled bins	Recycling within works
• Excavation waste	17 05 04		
• Packaging	15 01 06	labelled bins	
• Plastic	20 01 39	labelled bins	
• Timber	17 02 01	labelled bins	
• Mixed Metals	17 04 07	labelled bins	
• Mixed waste	17 09 04	labelled bins	
• <i>(any other waste types)</i>			

Project close-out review

This section of the plan is completed prior to the project close-out review, and discussed as part of the review meeting. The estimated quantities are drawn from the table in section 2, and reconciled against the actual quantities removed from site as detailed in BAM SMaRT / BAM Site app (delete as appropriate).

Comparison of estimated and actual quantities

Source and type of waste	EW Code	Estimated quantity of waste (tonnes)	Actual quantity of waste (tonnes)
Excavation waste			
Hazardous excavated material	17 05 03*		
Non-hazardous soil and stones	17 05 04		
Inert soil and stones	17 05 04		
Construction (skip) waste			
Concrete	17 01 01		
Mixed hardcore	17 01 07		
Timber	17 02 01		
Glass	17 02 02		
Plastic	17 02 03		
Mixed metals	17 04 07		
Other mixed construction waste	17 09 04		
Hazardous construction waste	Various		
Mixed municipal waste	20 03 01		
Demolition waste			
Concrete	17 01 01		
Bricks	17 01 02		
Mixed hardcore	17 01 07		
Timber	17 02 01		
Glass	17 02 02		
Plastic	17 02 03		
Mixed metals	17 04 07		
Other mixed demolition waste	17 09 04		
	Totals	0	0
		Difference	0

Delete / add waste streams as appropriate by double clicking on this table.

Explanation of any deviation from the original plan

Appendix 1 Roles and responsibilities

The Clients Representative will:

- Appoint a Principal Contractor
- Provide the Principal Contractor with details of all decisions taken before the site waste management plan was drafted on the nature of the project, its design, construction method or materials employed in order to minimise the quantity of waste produced on site
- Ensure a construction phase SWMP is produced

The agent for the Principal Contractor will:

- Ensure the SWMP for the construction phase is produced, and distributed to all staff and subcontractors
- Ensure that within three months of project completion:
 - that the plan has been monitored on a regular basis
 - section 5.1 is completed comparing estimated quantities with actual
 - section 5.2 is completed to explain any deviation from the plan
 - section 5.3 is completed to estimate the cost saving that have been achieved
- Keep a copy of the SWMP for a minimum of two years after project completion

The site waste co-ordinator / environmental engineer for the Principal Contractor will:

- Produce the construction phase SWMP prior to works starting on site
- Obtain from the client details of all decisions taken before the site waste management plan was drafted on the nature of the project, its design, construction method or materials employed in order to minimise the quantity of waste produced on site, for inclusion in the construction phase SWMP
- Keep a copy of the SWMP on site and display in suitable locations for information
- Review the plan monthly and update where necessary to accurately reflect progress
- Ensure the following waste data is recorded within BAM SMaRT / BAM Site app (delete as appropriate) when any waste is removed from site:
 - a description of the waste, including the 6 figure EWC code
 - the name of the company collecting the waste (waste carrier)
 - the site where the waste is being taken to (waste destination)
 - the quantity of the waste and whether it was;
 - reused on site
 - taken for reuse at an exempt or standard permit site
 - taken to a transfer station for segregation and onward recycling
 - taken to a dedicated recycling facility
 - sent to landfill (only if all other options have been discounted)
- Ensure details of recycling figures for the transfer stations used within the region are obtained and entered onto BAM Site app on a quarterly basis
- Ensure details of all waste carrier registration numbers, environmental permit numbers and exemption references for the carriers and disposal sites used within the region are verified in consultation with the Environmental Advisor and retained on site in accordance with the site documentation control procedure.

Schedule C5 Refuelling procedure

- No refuelling to be undertaken in close proximity of surface waters, drains, open excavations, grips
- Only trained nominated personnel to carry out refuelling operations

Prior to refuelling, ensure;

- You are in a safe position (i.e. no moving plant with free access to refuelling point)
- A suitable spill kit is available
- Check condition of hoses, nozzle for defects
- Deploy plant nappy at refuelling point

During refuelling, ensure;

- Correct refuelling cap is removed (i.e. not a water tank)
- Funnels to be used at all times when refuelling containers
- Refuelling operations are supervised at all times
- Due care and attention is paid to prevent drips and spills
- Return fuel hose to its hook and that lids/caps are replaced on fuel containers/plant
- Fuel tanks are secured after use and drums are stored upright in an area where they will not be knocked over or damaged

Nominated refuellers		
Name	Position	Toolbox talk PP8 Briefed
Stephen Donaldson	General Foreman	Completed
Daniel King	Supervisor/Ganger	Completed
name		Tick if carried out
name		Tick if carried out
name		Tick if carried out
name		Tick if carried out

Report all spills, leaking fuel lines, hoses or tanks to your supervisor

Section D Quality

D1.0 Introduction

This quality plan is applicable to the process of undertaking the project works at Victoria North for the provision of services in accordance with the contract and specification as described in **Section A, Table 1.1** of this document.

It defines the managerial arrangements required to meet and exceed the requirements of the project and Manchester City Council. It is prepared as a result of the project start up review, by **the agent** taking account of particular project requirements.

This quality plan together with Section A documents the necessary information required to effectively manage project quality from project planning to project delivery. It makes use of subsidiary documents such as BAM Nuttall procedures, project specific procedures, activity plans, task instructions, risk assessments and records that are used to control the works.

This plan, together with section A of this project execution plan, activity plans and associated inspection and test plans meet the requirements of ISO 10005 *Quality management guidelines for quality plans*. A compliance schedule detailing relevant sections of this project execution plan in relation to ISO10005 is contained in Appendix 2.

D2.0 Quality Plan

D2.1 Project quality requirements - NP25.3: Technical and engineering delivery during the construction and project management phase

Delivery of the quality, technical and engineering requirements of the project is managed primarily by ensuring an understanding of these requirements, use of a team of suitable and competent personnel and the undertaking of adequate planning.

D2.2 Quality programme - NP24: Activity plans

The overall manner in which quality hazards are controlled is set out in the project quality programme of **Schedule D1**. This high level plan defines the programmed task and identifies the documents to manage and demonstrate quality in relation to the specific activity. Sub-contract work is included within the quality programme.

This constitutes the development of activity plans from a quality perspective. Activity Plans are prepared. A list of activity plans for programmed activities for this project are referenced in schedule **D1 Quality programme**.

D2.3 Verification of requirements - NP25.4: Technical and engineering delivery of a construction activity on site MG20: Guidance on writing ITP's and ITC's

To verify that this planning is successful in controlling quality, the work is monitored closely and verified as it progresses. Verification is normally carried out by sampling, inspection and testing. Work which cannot be verified by final inspection or test (special processes) is controlled by monitoring that the work activity is undertaken in accordance with the agreed procedure.

These verification arrangements are set out in the inspection and test plans or checklists prepared for the programmed activity. If BAM Nuttall is contractually responsible for certification of the works under a rigorous self-certifying system based on checklists for each item of work, this is indicated in the quality programme.

Inspection and test plans or checklists define the means of demonstrating that specified requirements are met. They list inspection/test procedures, frequency of testing, witness/approvals, responsibility for test and record requirements.

The extent to which checklists are prepared and completed for items of work is dependent on the risk of nonconformity. This risk is a function of the complexity of the work activity, the competence of the resources undertaking it and the consequences of failure. A list of inspection and test plans or checklists is contained in **schedule D2** to this plan.

D3.0 Preservation of product

D3.1 Weather dependent work

Some work which is sensitive to temperature or moisture can only be carried out at certain times of the year unless additional controls such as protection from the elements are introduced. Activities which are weather dependent are listed in **Table D3.1** with details of the controls to be used if any.

Table D3.1: Weather dependent work

Activity	Control measure
Concrete work	Ensure batching plant has heated water facility Use frost blankets
Blacktop	Comply with specification temperature limits
Structural steelwork welding	Provide protective shelter
M&E installation	Ensure structure weatherproof
Earthworks	Not to be carried out in wet weather
Lifting Operations	Approved Lift plan, not to be carried out in high winds
Tree felling	No works to be completed in high winds
Haul road construction	Not to be carried out in wet weather

D3.2 Preservation of work

Some items of work are susceptible to damage from following activities unless protective measures are introduced. Work elements for which such measures will be taken are listed in **Table 3.2** together with outline details of the protection to be provided.

Table D3.2: Preservation of work

Work element	Protective measures

[illegible]

BAM Nuttall management system
Management template MT19: Project Execution Plan
Revision date: 16.07.19

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Schedule D1.2 Register of project procedures

Reference	Title	Author	Rev	Review Date
TBC				

Use this sheet as part of the PEP to list project specific procedures

This schedule will be maintained as part of the project document management system and updated from time to time as procedures are identified as being necessary.

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Schedule D1.3 Register of activity plans and inspection and test plans / checklists

Activity Plan Reference	Title	Author	Date Required	Date Issued	Review Date	ITP /ITC Reference	Work Status
BAA.2210-AP01	Site enabling works	D.Charlton	31/01/2022	26/01/2022	TBC	TBC	Live
BAA.2210-AP02	Vegetation clearance	B.Harrison	01/02/2022	14/01/2022	TBC	N/A	Live
BAA.2210-AP03	SI works	J.Hogg	01/02/2022	28/01/2022	TBC	TBC	Live

This schedule will be maintained as part of the project document management system and updated from time to time as procedures are identified as being necessary.

Appendix 1: Construction Design & Management Regulations 2015 (CDM) compliance schedule

CDM Regulation 2015 - Appendix 3 Reference		Relevant Section of the PEP		
		Schedule	Section	Title
5(a)	Description of the project		A2.1	The project works
	Programme and key dates		A4.4	Project programme
	Key members of the team (Management structure and responsibility)	A1	A2.5.1, A2.5.3	Organisation and responsibilities Client and other stakeholder communication The project works
	Extent and location of existing records and plans that are relevant to health and safety on site (Pre-construction information)		A3.2	Inputs into the plan Project design Risk and opportunities
5(b)	The management of the work			
	Health and safety aims for the project.		A2.4	Project objectives
	Site rules (cover but not be limited to) PPE Parking Use of radios, mobile phones Smoking, restricted areas Hot works Emergency arrangements (Brought to the attention of everybody on site) <i>Also translation of site rules if required.</i>	A5 A6	A5.6	Induction Workforce engagement Co-ordination of contractors Drugs and alcohol Incident and Emergency arrangements PPE Workplace transport
	Arrangement to ensure co-operation between project team members and co-ordination of their work (Site meetings)		A5.1 A5.2 A5.3 A5.4	Client communication Workforce engagement Management of sub-contractors Co-ordination of contractors Project review (meetings) Project verification
	Arrangements for involving workers		A5.5	Workforce consultation Project verification
	Site induction	A5	A5.6	Site induction
	Welfare facilities and first aid	B1	B2.4	Welfare facilities First aid
	Fire and emergency procedures	A6	B2.1	Fire safety Incident and emergency arrangements
	Control of any specific site risks listed in schedule 3 where they are relevant to the work involved.			
5(c)	Burial under earth-falls		B4.5 B4.6 B4.7	Excavations Other significant risks
	Engulfment in swampland		B4.6	Excavations Other significant risks
	Falling from height		B4.3	Work at height
	Chemical or biological substances, legal requirement for health monitoring		B3.6	Asbestos Contaminated land Hazardous substances

	CDM Regulation 2015 - Appendix 3 Reference	Relevant Section of the PEP		
		Schedule	Section	Title
				Other significant risks Health surveillance UV radiation
	Work with ionising radiation (Designation of controlled or supervised areas under regulation 16 of the Ionising Radiation Regulations)		B4.15	Ionising radiation
	Work near high voltage lines		B4.1	Overhead services
5(c)	Control of any specific site risks listed in schedule 3 where they are relevant to the work involved.			
	Work exposing workers to the risk of drowning		B4.10	Work over or near water
	Work on wells, underground earthworks and tunnels		B4.9 B4.9.1	Confined spaces Other significant risks
	Work carried out by divers having a system of air supply		B4.11	Other significant risks
	Work carried out in caissons with a compressed air atmosphere		B4.9	Other significant risks
	Work involving the use of explosives		B4.16	Explosives
	Work involving the assembly or dismantling of heavy prefabricated components		B4.14	Other significant risks

Appendix 2: BS ISO 10005 compliance schedule

BS ISO 10005:2018 reference		Relevant section of project execution plan	
6.2	Scope of the quality plan	A1 A2.1	Introduction The project works
6.3	Quality plan inputs	A1.1.3	Inputs to the plan
6.4	Quality objectives	A2.4	Project objectives and targets
6.5	Quality plan responsibilities	A1.1 A2.5 A5 A6.2 Schd A1	Project execution plan administration Management arrangements Communication Audits Organisation chart
6.6	Control of documented information	A5.7	Project documented information
6.7	Resources	A4.3	Project planning
6.7.1	Provision of resources	A4.3	Project planning
6.7.2	Materials, products and services	A2.6.1	Procurement of goods and services for the project
6.7.3	People	A2.5.1 A2.5.2	Project organisation Personnel selection
6.7.4	Infrastructure and environment for the operation of processes	A3.3 D3.0	Health, safety, quality and environmental risk - construction phase Preservation of work
6.7.5	Monitoring and measuring resources	A2.5.1 A2.5.2 D2.3	Project organisation Personnel selection Verification of requirements
6.8	Customers and other interested parties communication	A2.1 A5	The project works Communication
6.9	Design and development	A4	Project design, planning and programming
6.9.1	Design and development process	A4.1	Project design
6.9.2	Control of design and development changes	A4.1	Project design
6.10	Externally provided processes, products and services	A2.6	Supply chain management
6.11	Production and service provision	D2.1	Project quality requirements
6.12	Identification and traceability	A2.7	Product traceability
6.13	Property belonging to customers or external providers	A2.6.1 A2.7 A6.1.1 D2.3	Procurement of goods and services for the project Product traceability Quality non-conformity Verification of requirements
6.14	Preservation of outputs	D3	Preservation of work
6.15	Control of nonconforming outputs	A6.1.1	Quality non-conformity
6.16	Monitoring and measurement	D2.3	Verification of requirements
6.17	Audits	A6.2	Audit and inspection
7.1	Review and acceptance of the quality plan	A1.1 A2.5	Project execution plan administration Management arrangements
7.2	Implementation and monitoring of the quality plan	A1.1 A2.5.2 A6.2 A6.3 D2.2	Project execution plan administration Personnel selection (competence, knowledge, awareness) Audit and inspection Review Quality programme
7.3	Revision of the quality plan	A1.1	Project execution plan administration
7.4	Feedback and improvement	A6.3 A6.4	Review Improvement

Appendix 3: BIM execution plan

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