



Construction Environmental Management Plan

Prepared By:	Kiran Giri
Project Name:	Llanwern Primary School
Project Number:	HWS.0425
Site location:	Llanwern Primary School
Revision Number:	5
Revision Date:	21/11/2024

Uncontrolled when printed.

Revision Record

Rev	Date	Revision Details	Revised by
1	01/10/2024	First issue for comment	Kiran Giri
2	08/10/2024	First Issue	Kiran Giri
3	18/11/2024	Revision following review for planning discharge	Kiran Giri
4	18/11/2024	Minor amendments	Kiran Giri
5	21/11/2024		Kiran Giri

Table of Contents

1 Environmental Records

- 1.1 Environmental Records

2 Contractual Obligations

- 2.1 Contractual Obligation

3 Project Specific Environmental Aspects

- 3.1 Project Specific Environmental Aspects

4 Project Specific Environmental Controls

- 4.1 Introduction Project Specific Environmental Aspects
- 4.2 Construction Targets
- 4.3 Ecology, Archaeology, and Rights of Way
- 4.4 Materials Management and Responsible Sourcing
- 4.5 Oil, Fuel and Liquid Chemical Storage
- 4.6 Nuisance Prevention
- 4.7 Water Pollution Prevention Measures
- 4.8 Contaminated Land
- 4.9 Other Control Measures
- 4.10 Training
- 4.11 Emergency Procedures
- 4.12 Resource Management Plan

Project Information

Project title:	Llanwern Primary School
Project Number:	HWS.0425
Project description:	Construction of a Section 106 school for Redrow
Form of contract:	NEC
Published Date:	21/11/2024
Created Date:	12/07/2024
Prepared by:	Kiran Giri

Locations

Location Name	Telephone	Email	Location Address
Llanwern Primary School			

Project Team Contacts

Project Role	Name	Phone
Construction Director	Justin Price	+44 7825190345
Project Sustainability Manager		N/A
Building Services Manager		N/A
COSHH Co-ordinator	Kiran Giri	+44 7824408180
Regional Sustainability Advisor	Helena Bennett	N/A
Project Surveyor	Alex John	N/A
Project Manager	Kiran Giri	+44 7824408180
Site Administration/ Admin Assistant	Rachel Jones	+44 2920488811
Construction Manager		N/A
Managing Surveyor	David John	+447711 425092
Site Manager		N/A
Design Manager		N/A
Project BREEAM Manager		N/A
Commercial Manager		N/A

Emergency Contacts

Emergency Contact	Name	Company	Location	Contact Number
Environment Agency (Local Office)		N/A	N/A	
Ecologist		N/A	N/A	
LA Environmental Health Office		N/A	N/A	
Project Sustainability Manager		N/A	N/A	
Regional Sustainability Advisor		N/A	N/A	
Local Water Company (Sewerage Undertaken)		N/A	N/A	
Environment Agency Emergency Hotline		N/A	N/A	
Environmental Management		N/A	N/A	
Public Relations		N/A	N/A	

Roles and Responsibilities

Roles	Responsibilities
Construction Director/Manager	Assume overall responsibility for ensuring BAM Construction's Environmental Policy is implemented on the project.
Project Manager	- Ensure BAM Construction Environmental Procedures are implemented on site and set an example through high personal standards of environmental management. - Nominate Project Sustainability Manager.
Planner	Understand BAM Environmental policy and commitment to sustainable development.
Design Manager	- Consult Project BREEAM Manager when there are design changes to identify any effect on the project BREEAM assessment. - Understand how the responsible sourcing policy effects design decisions.
Site Manager(s)	- Assist Project Sustainability Manager in implementing environmental procedures. - Assist in the review of risk assessments and method statements to check environmental risks are considered.
Commercial Managers/Surveyors	Understand how the responsible sourcing policy effects design decisions.
Building Services Manager	Comply with the requirements of environmental regulations and BAM Environmental Operating Procedures.
Site Administrator/Admin Assistant	Be aware of how to add sustainability data to BAM SMaRT.
Other BAM Employees and subcontractors	Comply with the requirements of environmental regulations and BAM Environmental Operating Procedures.
COSHH Co-ordinator	Liaise with the Project Sustainability Manager to identify potentially hazardous waste streams and products that may be detrimental to the environment.

Project Sustainability Manager	• Implement BAM Construction's Environmental Procedures on site. • Review risk assessments and method statements to check environmental risks are considered. • Produce CEMP and update when required. • Act as point of contact for Environment Agency and Local Authority Environmental Health Officer. • Ensure statutory paperwork is in place. • Carry out on-site checks to ensure compliance with procedures. • Liaise with COSHH Co-ordinator to identify potentially hazardous waste streams and products that may be detrimental to the environment. • Act as point of contact for complaints from the general public. • Co-operate with the visiting Regional Sustainability Advisor and act on the recommendations given. • Ensure that BAMS MaRT is kept up to date. • Work with all staff to achieve sustainability targets. • Take action to minimise project resource consumption (including materials, energy and water). • Implement measures included in the Resource Management Plan.
Project BREEAM Manager	• Arrange BREEAM Assessor/BREEAM Accredited Professional (AP) site kick-off meeting to review BREEAM requirements and set deadlines. This meeting should include the design stage • BREEAM co-ordinator to understand BREEAM targets and make site management aware of the site team's BREEAM responsibilities. • Keep BREEAM on suitable meeting agendas to ensure a regular review of BREEAM is undertaken. Send BREEAM Assessor meeting minutes, especially when BREEAM points are raised • Ensure all contractor evidence is being collated during construction phase. • Liaise with BREEAM assessor/AP to ensure evidence for the post construction assessment is being collated in line with credits targeted at design stage. • Advise BREEAM Assessor/AP of potential change to design specification ASAP.

1 Environmental Records

1.1 Environmental Records

Details of the documents that need to be held on site are listed below.

All Key Performance Indicator Information will need to be recorded on BAM SMaRT.

Construction Environmental Management Plan (CEMP)

Action by	File Ref:
Kiran Giri	15

Resource Management Plan (RMP)

Action by	File Ref:
Kiran Giri	50-05, BAM SMaRT

Environmental Permit / Waste Management Licence / Exemptions, Carrier Registrations [off-site]

Action by	File Ref:
Helena Bennett	BAM SMaRT

Environmental Permit / Exemption Certificate [on-site]

Action by	File Ref:
Helena Bennett	50-05

Waste Transfer Notes

Action by	File Ref:
Rachel Jones	BAM SMaRT

Street cleaning & septic tank duty of care information	
Action by	File Ref:
Site Manager TBC	50-05

Energy supply arrangements (type of supply, supplier, MPAN, MPRN, account number(s))	
Action by	File Ref:
Bam Site Solutions	BAM SMaRT

Key Performance Indicator information (pollution incidents, energy use, mains water use, waste production, timber sustainability, environmental toolbox talks)	
Action by	File Ref:
Helena Bennett	50-05, BAM SMaRT

Method Statements and Risk Assessments	
Action by	File Ref:
Kiran Giri	50-10

COSHH Assessments	
Action by	File Ref:
Site Manager TBC	50-10

Site Incident Response Plans	
Action by	File Ref:
Kiran Giri	50-05

Regional Sustainability Advisor Visit Reports	
Action by	File Ref:
	BAM SMaRT/BIM360 Field

Section 60 / 80 Notices	
Action by	File Ref:
	50-05

Section 61 Consents	
Action by	File Ref:
N/A	50-05

Part B Authorisations	
Action by	File Ref:
N/A	50-05

Trade Effluent Consent	
Action by	File Ref:
N/A	50-05

Controlled Water Discharge Permit	
Action by	File Ref:
N/A	50-05

Other Consents (Archaeological, Hedge Removal, Tree Removal, etc.)	
Action by	File Ref:
N/A	50-05

BREEAM	
Action by	File Ref:
N/A	60

2 Contractual Obligations

2.1 Contractual Obligation

The project has an embodied carbon target of 800kg/m²

3 Project Specific Environmental Aspects

3.1 Project Specific Environmental Aspects

List all environmental Aspects (areas that will impact on the environment) identified from the [Environmental Pre-commencement checklist](#)

- Client requirements
- Planning restrictions / requirements
- Sustainable material procurement (including timber)
- Waste management (Refer to Resource Management Plan)
- Resource use
- Nuisance
- Vibration monitoring
- Contaminated land
- Earthworks
- Emergency procedures
- Hazardous chemicals (including fuel)
- Recycling waste on site (aggregates)
- Transport
- Local watercourses (including groundwater)
- Ecological issues / tree protection
- Water discharge / abstraction
- Concrete
- Maintaining clean roads
- Training & Awareness

4 Project Specific Environmental Controls

4.1 Introduction Project Specific Environmental Aspects

Targets set out below are the BAM Construction minimum requirements on each project. Where more stringent targets have been set, e.g. through BREEAM, should also be added.

4.2 Construction Targets

Explain how the site is going to measure its performance against the Environmental Targets for Construction. Include details of the KPIs to be measured. Example Targets are included below.

Site to register with the Considerate Constructors Scheme and target minimum score of 35 (40 BREEAM exemplary level performance) out of 50 with a minimum of 7 in each category.

Target zero pollution incidents by following this plan.

Measure Energy use as follows:

- BAM Fuel use (in litres) and bottled Gas/LPG (in Kg) to be recorded on BAM SMaRT from delivery tickets.
- Subcontractors to copy their delivery tickets for fuel oil, bottled gas, etc. to BAM for inclusion on BAM SMaRT.
- Energy supply details to be logged on BAM SMaRT indicating ownership of supply (BAM/Client), Supplier, MPAN, MPRN and account details where relevant.
- Automatic Meter Reading (AMR) Electricity (and where relevant Gas) meter(s) to be installed at main supply point/entry point to site, with usage (obtained from AMR report) recorded monthly (in kWh) on BAM SMaRT.

Water use readings (in m³) from the meter installed at the entry point to the site are also to be recorded on BAM SMaRT.

Waste production, and percentage of waste diverted from landfill, is to be monitored on BAM SMaRT.

- Log all BAM Waste Transfer Notes (WTN) and waste destinations.
- Subcontractors to copy all WTN to BAM. BAM to record on BAM SMaRT.

The Resource Management Plan includes details of the waste to be segregated for recycling on site.

All new timber and wood based products are to be from FSC or PEFC Chain of Custody sources. Details of all deliveries will be recorded on BAM SMaRT.

Environmental Toolbox Talks are to be carried out at least once a month, and be recorded on the Toolbox Talk Record. All environmental risks are to be included in site induction.

The Construction Environmental Management Plan and Resource Management Plan are to be reviewed on a quarterly basis.

Produce at least one environmental case study,

All CAT 1 subcontractors to be active members of the Supply Chain Sustainability School

Install an EV charging point, or the site confirms that there is insufficient capacity renewable electricity supply

The following sections detail how the project will manage its environmental aspects.

4.3 Ecology, Archaeology, and Rights of Way

The following measures will be employed to protect the ecology on the site:

- All mature trees that are to be retained are to be protected in accordance with BS 5837. No work may be carried out within the fenced areas without prior approval of a method statement. No mechanical excavation will be allowed within the fenced areas. No materials to be stored in protection zones.
- If any Japanese knotweed is encountered, work within 7m of the plant will be stopped, the area cordoned off and the local environmental regulator will be contacted to confirm the presence of Japanese Knotweed. Further project specific controls will be implemented if required.
- If protected species are identified after work begins, or it is suspected that a protected species may be present, work will be stopped when it is safe to do so and access restricted to the affected area. The Species Protection Officer of the relevant authority ([Natural England](#), [Natural Resources Wales](#) or [Scottish Natural Heritage](#)) will be contacted to carry out a site survey to confirm presence of a protected species. Any advice on the preservation or relocation of the species will be followed as required.
- If any finds suspected of being of archaeological or historic interest are uncovered the following action will be taken:
 - Cease all work within the area immediately
 - Protect the area by fencing or other means
 - Contact the LPA and local authority archaeologist. Contact details for the local authority archaeologist can be found at: www.algao.org.uk
 - Depending on the find it may be necessary to obtain Scheduled Ancient Monument consent before continuing with the work
- If human skeletal remains or evidence of a burial ground are uncovered, the Police and the Coroner will be contacted in addition to the local authority archaeologist.
- Finds regarded as treasure (rare coins and artefacts) will not be removed from site without consent.
- The nominated Biodiversity Champion is **Site Manager TBC**. Who has the authority to influence site activities and ensure that detrimental impacts on site biodiversity are minimised in line with the recommendations of a Suitably Qualified Ecologist (SQA). A formal letter of appointment is to be saved as BREEAM Evidence.

4.4 Materials Management and Responsible Sourcing

The following materials management measures will be employed:

- All hazardous materials will be kept within a locked storage area and access to these materials will be restricted to those who have viewed the COSHH assessment for the particular material.
- Other materials are to be stored in designated storage areas as agreed with the Site Management.

This project is committed to BAM's responsible sourcing policy, and is committed to:

- Considering the impact on natural resources when choosing goods and materials.
- Promoting the application of 'Life Cycle Thinking' when considering specifications during the design, specification and construction process to reduce the impact of buildings over their whole life.
- Minimising the use of materials with a hazardous content and promoting the use of materials which can improve the health of building users.
- Procuring all new timber and wood based products (for temporary and permanent use) from certified legal and sustainable sources. This includes Grown in Britain (GiB), Forest Stewardship Council (FSC), and Programme for the Endorsement of Forest Certification (PEFC). Chain of Custody evidence is required to confirm compliance.
- Insisting that our subcontractors have an Environmental Policy and work to BAM's environmental procedures to ensure compliance with relevant environmental protection laws and regulations.
- Encouraging our supply chain to implement or to be working towards a UKAS accredited third-party certified Environmental Management System.
- Encouraging our supply chain to become active members of the Supply Chain Sustainability School.
- Supporting and giving preference to procuring products which are able to demonstrate compliance with a recognised responsible sourcing scheme, certified by a third party, such as BES 6001 or Cradle to Cradle.
- Supporting and giving preference to waste management contractors that hold PAS402 certification.
- Eliminating excessive packaging, with a particular focus on single-use plastics, without having a negative impact on the delivered goods.

4.5 Oil, Fuel and Liquid Chemical Storage

The storage of all BAM and Subcontractor oil containers with a capacity of 200ltrs or more will comply with the requirements of the Control of Pollution (Oil Storage) regulations. A Site Incident Response Plan will be produced where quantities exceed 200ltrs. Only authorised personnel will be issued with a key to the bulk storage tanks for refuelling plant. When refuelling, the operator is to remain in attendance at all times.

The filling of BAM bulk storage tanks will be supervised by **Bam's Vehicle Marshal (TBC)**

- All personnel are to make themselves aware of the Site Incidence Response Plan (SIRP) (405-406) which will be displayed in a prominent position. The Project Sustainability Manager is to be notified of all spillages, however minor.
- At least one BAM specification spill kit will be available on site, at the location detailed on the SIRP.
- Although equipment (like a funnel) will be used to prevent drips, a plant nappy (or drip tray) will be available when refuelling plant and equipment on site to prevent contamination as a result of minor spills and drips.
- Subcontractor method statements will include the provision of spill kits for activities that could result in a spill, leak or hose burst.
- Oils and other chemicals, in containers with a capacity of less than 200ltrs, will be stored within a locked store on a secondary containment system. Only authorised personnel will be issued with a key to this store.
- Place containers of fuel smaller than 200 litres on plant nappies when in use on site. Return the containers to their secondary containment system when they are no longer needed, at least at the end of every day.
- Oil storage will be set up so that rainwater does not accumulate in impermeable drip trays / bunds
- If oil is stored outdoors and rainwater collects in drip trays or bunds, any oil from the water will be removed with an oil only absorbent pad. Used pads will be disposed of as hazardous waste. (There are also proprietary cleaning systems available for example the PIG® Outdoor Oily Water Filter Bucket).
- The location of Subcontractors' oil storage areas and procedures must be agreed with BAM Site Management prior to any deliveries. No storage will be permitted within an area designated as a Source Protection Zone, within 10m of a watercourse or within 50m of a well or borehole.
- All hazardous materials will be kept within a locked storage area.

4.6 Nuisance Prevention

The following measures are to be implemented to reduce the nuisance to neighbours, and to ensure they have an appropriate amount of involvement with the project:

- Site working hours will be 08:00 to 18:00hrs Monday to Friday, and 08:00hrs to 13:00hrs on Saturday. No work is to be carried out on Sundays or Bank Holidays.
- Send out a client approved newsletter before the start of the project, introducing the project team and giving a brief outline of the project, and thereafter at intervals of (insert interval) months. The newsletter will include the name and telephone number of the Project Sustainability Manager. (Site Newsletter Template)
- The Local Authority's Environmental Health Officer will be kept informed of all upcoming activities that may impact on the local residents.
- All compliments, comments and complaints will be recorded. The Project Sustainability Manager will take immediate action on receiving a complaint, and respond to any complaint by the end of the next working day. A senior member of the project team will verify that the corrective action has been effective.
- All plant and machinery will be switched off when not in use.
- Road going delivery wagons will remain on hard standings at all time whilst on site to prevent mud/debris being carried back onto the public highway.
- Bam's Gate person will inspect the wheels of all vehicles before releasing them onto the public highway. In the event that a vehicle fails to meet the cleanliness criteria to be released onto the highway the gate person will jet wash the vehicle. Any run off from the cleaning of vehicles will be diverted back to site for managing.
- A road sweeper will be employed as required to keep the roads adjacent to the site clear of debris. periodic inspections of the roadways will be carried out and recorded on Bam's field management software should there be any issued raised these will be made available for inspection.
- Prior to work commencing on site background noise readings will be recorded. The readings will be taken in specified locations so as to be representative of the levels experienced by neighbouring properties. (noise levels will be taken externally at property boundaries with the public highway and recorded on a noise monitoring drawing)
- During construction, periodic noise monitoring will be carried out at specified distances, at source, at the site boundary and at the locations used in the noise monitoring prior to commencement on site. Monitoring will take place throughout the project but will be more frequent during the earthworks, piling and frame stages of the build.
- Noise record will be recorded on Bam's field management software and will be made available for inspection should any issues arise.
- The foundation solution for the scheme involves driven piles due to the underlying ground conditions. During the piling operation vibration monitoring will be carried out to ensure that vibration levels experienced are within permissible levels. Once a piling contractor is appointed to the scheme a full monitoring scheme will be appended to the CEMP and also form part of the contractors Risk Assessment Method Statement (RAMS)
- Vibration levels will be recorded by both the piling contractor and on Bam's field management software and will be made available for inspection should an issue arise.

4.7 Water Pollution Prevention Measures

The following measures are to be put in place to ensure there are no pollution incidents:

- Oil and liquid chemicals are to be stored and handled as described in the Oil, Fuel and Chemical Storage section of this plan.
- A Site Incident Response Plan will be produced where quantities exceed 200ltrs.
- Plant nappies and drip trays will be used to prevent leaks from plant and vehicles from contaminating land.
- For larger pieces of equipment an impermeable area with controlled drainage will be used to prevent environmental incidents. This area will be located well away from controlled waters and surface water drains.
- Machinery should be inspected and evidence recorded on the Work Equipment Inspection Form. Additionally all leaks are to be reported for immediate action.
- Generators with external fuel tanks shall be operated in such a way so a hose burst will not result in an incident
- No waste water is to be pumped to any Controlled Waters or to any Foul or Surface Water Drains.

- An impervious concrete wash out area, consisting of **a polythene lined skip**, is to be constructed at the exit to the site. This is the only area where concrete wagons are permitted to wash out. The resulting waste water will be allowed to evaporate wherever possible. Where the water needs to be disposed of, it will be neutralised with a **Silt buster unit**.
- A vegetation buffer next to the watercourse will be left during the groundworks phase.
- All surface water drains and watercourses will be protected using cut-off ditches or earth bunds, both at least 10 metres from the watercourse.
- Dust fencing will be erected to prevent dust from blowing into the watercourse.
- Before disposing of significant volumes of contaminated water a test for contaminants will be undertaken and the water disposed as hazardous (special) waste if required.

4.8 Contaminated Land

- Describe how the spread of contaminants will be eliminated (or delete)
 - Wheel wash
 - Damping down
 - Provide bunds, cut off ditches, or other means to control surface water
 - Install specific arrangements to control ground water movement and flow
 - Separate out contaminated materials and store safely.
 - Store the contaminated materials in a particular way, for example to prevent contaminants leaching into the ground or into a controlled water.
 - Monitor the atmosphere at the workplace and site boundaries for both dust levels and contaminants in the dust.
- Describe how ground and surface water will be disposed of if it is contaminated or is likely to become contaminated.
 - Formal discharge consent from local water authority or environment agency
- If any suspected contaminated ground is encountered during the works, this is to be reported to the site management.

4.9 Other Control Measures

In addition to the above controls the following will be implemented on this site:

To be periodically reviewed throughout the project. Any requirements for additional controls will be noted within this section

4.10 Training

The following measures will be employed to ensure the Environmental Aspects and Controls are communicated to the relevant site personnel.

- Control measures noted above, along with details of the Resource Management Plan will be communicated to all Site Operatives at their initial Site Induction.
- An Environmental Notice Board in the site canteen will contain the following information:
 - BAM Environmental Policy Statement.
 - Relevant Environment Posters.
 - The latest relevant BAM Environmental Bulletin.
 - Site Incident Response Plan (SIRP) for oil.
 - Toolbox talks and/or other information relevant to the project.
 - Performance against, energy, water and waste targets
- Environmental Toolbox Talks relevant to site activities will be conducted once per month. Ecology toolbox talks will be undertaken based on the findings and recommendations for protection of ecological features highlighted within the Suitably Qualified Ecologist's report.

Site specific controls:

4.11 Emergency Procedures

A Site Incident Response Plan is to be displayed at all storage locations where 200 litres or more of a possibly polluting substance is to be stored.

Complete the plan to include the additional emergency procedures that may be required due to project specific hazards and display at all storage locations.

[Site Incident Response Plan](#)

4.12 Resource Management Plan

A Resource Management Plan (RMP), which complies with the requirements of the Site Waste Management Plan Regulations where they apply, has been drawn up.

The RMP has been produced to ensure that resource efficiency measures have been taken and that all waste from this site is to be managed appropriately and dealt with in accordance with Section 34 of the Environmental Protection Act 1990 (Waste Duty of Care) and the Environmental Protection (Duty of Care) Regulations.