



**CONSTRUCTION AND ENVIRONMENTAL
MANAGEMENT PLAN**

Pitsford Road Miles Platting Manchester M40 8GS

Revision P

INTRODUCTION

The Technical Department and Site Management Team are responsible for ensuring that all elements of this Project Environmental Plan are maintained and suitable for the duration of the project works. This Plan, which is to be retained in the Site Office, is to be made available for inspection at any time whether by interested third parties, our employees or our subcontractors. The following items are included within this Project Environmental Plan:

Environmental Risk Assessment. The assessment details the control measures for significant site environmental hazards or potential pollution incidents. In addition to controlling the hazards and risks, the assessment details the person or organisation responsible for implementation of the control measure. The assessment is to be reviewed at frequent intervals throughout the construction phase of the project to ensure it remains suitable and sufficient.

1.1 Control of Surface Water Drainage

During Construction only 'clean' waters shall pass through the surface water system. The surface water drainage system, including the oversize storage pipes, will not require lining.

Following plot completion Bellway shall include information in the Homeowners' Pack regarding disposal of hazardous wastes and liquids to further reduce the risk of contamination after the construction phase.

This CEMP will take consideration of the significant risks from site and the measures in place to reduce the risk of contamination, the three activities below are examples of activities with significant risk if not managed correctly:

- refuelling
- wheel-washing
- washing concrete delivery vehicles

Surface waters on site shall be controlled, and not be allowed to seep or wash away into the ground or nearby watercourses. Specialist De-Watering equipment shall be used where natural filtration measures cannot cope with silt.

1.2 Groundwater Quality

The site Traffic Management Plan (TMP) shall be completed and maintained as a live document throughout the construction phase. The CEMP will have all susceptible watercourses and bodies of water identified, to ensure the site management are aware of the risks. Compound, storage and re-fuelling areas shall be kept a minimum 10m away from these areas and identified on the plan.

2. Silt Management Plan

Surface waters generated on site must not be discharged to ground. Bellway shall undertake regular toolbox talks on silt management for all staff, particularly ground workers. The induction shall include the necessary measures required to protect the environment from silt.

Soil bunds with straw fence 'gates' will be used to control surface water run-off and reduce the risk of silt contamination. Bellway's TMP and route of build will reduce the movement of plant to prevent tracking mud into clean areas, onto roads, and onto highways.

Road scraping and cleaning shall be undertaken on site with the use of existing site plant. Highways will be cleaned with a hosepipe to reduce the risk of restricting traffic movements on the highway. Gullies on newly constructed roads that are in the work area will have straw and terram installed to avoid silt entering the surface water drainage. They will be inspected and replaced as necessary.

Hardstanding is created in front of plots at an early stage to create a 'clean' material storage area for the forklift, to improve the street-scene and to reduce the risk of slips, trips and falls.

Inspection regimes of gullies, silt bunds, hay bales and manholes forms part of the Temporary Works procedures and shall be undertaken weekly.

3. Dust Management Plan

The dust nuisance has been assessed and found to be low in both in terms of risk and potential. However, the following must occur for this assessment to be correct:

- All haul roads are to be constructed of crushed hardcore material and formed at all early stage.
- Roads are to be constructed, with gullies, at an early stage.
- Speed is to be restricted to 10 mph.
- Damping down shall be undertaken as necessary.
- Dust suppression is to be used when cutting materials such as bricks, blocks, roof tiles, concrete etc., and operatives are to wear appropriate PPE, as per Bellway procedures.
- Exhaust pipes of machinery are to be directed away from the ground.

All of the above will be undertaken line with the following guidance

- The control of dust and emissions from construction and Demolition. Best Practice Guide. November 2006. London Councils.
- Institute of Air Quality management - Guidance on the assessment of dust from demolition and construction 2014.
- Institute of Air Quality Management - Guidance on Air Quality Monitoring in the vicinity of demolition and construction sites 2014.

4. Plant & Equipment Maintenance and Management

Bellway shall comply with the Provision and Use of Work Equipment Regulations 1998 (PUWER) and the Lifting Operations and Lifting Equipment Regulations 1998 (LOLER), and in so doing shall:

- a. require the thorough inspection certificates for all plant on site.
- b. ensure all plant is visually inspected upon receipt and on a weekly basis.
- c. record the statutory weekly inspections in an appropriate register, which will be retained on site for the duration of the works and archived for 3 years thereafter.
- d. store all equipment and fuel in bunded areas when not in use.
- e. ensure the plant is serviced and maintained as determined by the competent operator, and this maintenance is recorded.
- f. quarantine any plant deemed to be unfit for use in an area which is made up of hardstanding materials. Any quarantined plant or equipment must be removed from site within 48 hours.

In addition to these measures, all plant is to be steam-cleaned off-site prior to being brought to site. All bunds will have sufficient capacity to store 110% of the fuel/oil it stores. A spill kit will be located in the forklift, and a second in the compound.

5. Oils, Fuels, and Chemicals

Bellway's standard compound requires hardstanding for plant and material storage, a double bunded fuel store, which is also located on hardstanding, and an emergency spill kit (see Appendix 1).

Arrangements identified herein for the protection of the environment shall also be identified on the traffic management plan, included in the site-specific induction, signed in line with the Health and Safety (Safety Signs and Signals) Regulations 1996 and be located on site.

The compound includes storage in the form of lockable containers which are fire and vandal-proof. The site will be fully enclosed in double-clipped heras fencing, braced in line with Bellway's Temporary Works procedures and visually inspected on a regular basis (the frequency being no less than weekly, but more often if trespassers are regularly attempting to gain entry to site).

Any static oil storage containers will:

- Comply with EA documents: PPG2 – Above ground oil storage tanks, and PPG7 – The safe operation of refuelling facilities.
- Be no more than 2 years old at the time of installation.
- Be double skinned with integral bunding and be of sufficient strength and integrity as to ensure that they are unlikely to burst or leak.
- Be located on bunded, impervious hardstanding with a capacity of not less than 110% of the largest tank, or largest combined volume of connected tanks located within the area of bunded, impervious hardstanding. All rainwater accumulating in the bund must be removed. This waste will be

treated as hazardous if contaminated with oil. Bellway shall use sand to soak up oil/fuel and provide hazardous waste containers in the compound for such substances to be removed.

- Be positioned so that they are not vulnerable to impact from vehicles.
- Not be positioned within 10 metres of any watercourse.
- Have valves and other ancillary equipment that can be locked and kept within the bund when not in use.
- Have hoses and fittings (for filling vehicles etc) that have a valve or tap which closes automatically when not in use and cannot be fixed in the open position.

Plant refuelling and fuel deliveries must:

- Only be carried out by authorised and trained operatives
- Only be carried out within the designated compound, with a base surface in impermeable material.
- Comply with guidance provided in section of 7.3 of the EA document: PPG7 – The safe operation of refuelling facilities.

Bellway will not store in excess of 10 litres of oil or fuel in a portable container. The use of Mobile Fuel Bowsers is not permitted on the site.

All other chemicals, substances and hazardous materials will be documented within the Construction Phase Health and Safety Plan, their data sheets and COSHH assessments available, and locked in an appropriate container to prevent unauthorised discharge or use.

Bellway use and store LPG and flammable liquids on site and shall ensure:

- Storage areas are appropriately signed.
- Containers of flammable liquids and LPG cylinders are in suitable cages in open compounds which are securely fenced and shaded from the sun.
- Flammable liquids and LPG are not stored together.
- The amount of flammable liquids and LPG cylinders are appropriate for their use and storage facilities available. Excessive quantities will not be stored on site.
- They are at least 10 metres away from any structure or temporary building unless it has a 30 minutes' fire resistance.

6. Wheel Wash Area

Wheel-washing is unlikely to be required due to the programme of build allowing for road construction at an early stage and the subsequent provision of a clean route thus minimising the risk of vehicles taking mud onto the highway.

However, in the unlikely event that this does not adequately control the risk, a high-pressure hose will be operated by the site labourer in an area of hard standing. The same hose will be used to wash off the roads from the pavement.

7. Emergency Procedures

In the event of a significant spill Bellway's Environmental Emergency Preparedness and Response Procedures must be enacted, which includes assessing the spill, isolating, containing and absorbing the spill, disposing of the waste materials, reordering the spill kits used, and contacting the authorities. As a minimum the following must be contacted:

- The Environment Agency – Tel 0800 80 70 60 (24 hour)
- Bellway Regional Office – 01925 846700
- Local Environmental Health 0345 1400 845

Bellway's Environmental Emergency Preparedness and Response Procedures forms the basis for the Spill Response Plan and must be approved by the Local Planning Authority before work commences (Appendix 2). A covering page is to be attached including:

- Site address
- Location of spill response equipment
- Information on trained and/or competent person(s) to use the spill response equipment
- Emergency contact details (as above)

A minimum of the Site Manager and the ground works Supervisor are to be trained in emergency response. Their training records are to be added to this Plan and a prominent sign with their names on displayed in the welfare facilities. All personnel are to be made aware of the environmental risks of the site during their induction, which includes the identity of the spill response competent people.

8. Noise & Vibration

10.1 Noise

All site activities will be undertaken in line with **BS 5228:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites for the construction activities**.

8.1.1 Community Relations

Local residents will be informed of relevant construction activities to reduce any concerns. An appointed person will be allocated to keep people informed and deal with any complaints. These will be treated fairly and expeditiously.

8.1.2 Control of Noise at source

The following measures will be implemented to reduce noise at source

- Avoid unnecessary revving of engines and switch off equipment when not required.
- Keep internal haul routes well maintained and avoid steep gradients.

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- Minimize drop height of materials.
- Start-up plant and vehicles sequentially rather than all together.
- All vehicles must have appropriate silencers or mufflers where possible, which are regularly serviced and maintained.

8.1.3 Specification and substitution

On procurement, the quietest available plant will be assessed this will be in accordance with best practical means.

8.1.4 Enclosures

As far as reasonably practicable, sources of significant noise will be enclosed. The extent to which this can be done depends on the nature of the machine or process to be enclosed and their ventilation requirements. This will be assessed, and measures implemented for the site compound and welfare arrangements on the site.

8.1.5 Use and siting of equipment

Plant will always be used in accordance with manufacturers' instructions. Care will be taken to site equipment away from noise-sensitive areas. Where possible, loading and unloading will also be carried out away from such areas. Machines will not be left running unnecessarily, as this can be noisy and wastes energy.

8.1.6 Maintenance

Regular and effective maintenance by trained personnel is essential and will do much to reduce noise from plant and machinery. Increases in plant noise are often indicative of future mechanical failure.

10.2 Controlling the spread of noise

Distance and screening will be implemented where reasonably practicable to reduce noise in noise sensitive areas. This can be achieved by the careful location of welfare and office facilities and material storage areas, which will be assessed and implemented for the site.

10.2.1 Noise control targets

Monitoring of noise at sites where noise is an issue should be regarded as essential. Measurement may be carried out for a number of reasons, including the following:

- a) to allow the performance of noise control measures to be assessed.
- b) to ascertain noise from items of plant for planning purposes.
- c) to provide confirmation that planning requirements have been complied with.

An assessment will be made on this site and noise monitoring will be undertaken if required.

The above guidance is not extensive on this site to complying with **BS 5228:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites for the construction activities**. Continuous monitoring of compliance will be undertaken through the development life cycle and necessary revisions will be implemented when highlighted.

10.3 Vibration

The below guidance is not extensive on this site to complying with **BS 5228:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites for the construction activities**. Continuous monitoring of compliance will be undertaken through the development life cycle and necessary revisions will be implemented when highlighted.

The following measures will be implemented on site:

- Vibration isolation of plant at source
- Controlling the spread of vibration
- Implementation of vibration control targets
- Reducing vibration levels by the energy of blows or cycles. The distance between source and receiver.
- Assessing the ground conditions established from remediation activities to reduce vibration levels.
- Selection of vibration levels
- Removing underground obstructions
- All of the above will be assessed and implemented through the design process and assessment of the piling contractor used for this development.

11. Fire

Bellway undertake a fire risk assessment for every site. Initial risk assessment has determined this site to be low in terms of both risk and potential. However, a designated smoking area will be provided in the compound, hot works permits are to be used for soldering operations by the plumbers, and the road surfacing works are to use a controlled fire for heating rakes where required. This is also subject to hot works permits.

NO BURNING IS ALLOWED ON SITE UNDER ANY CIRCUMSTANCES.

12. Recycling / Disposal of Waste

The Bellway Site Waste Management Plan will be documented and maintained on site. The purpose of the plan is to initially reduce the waste being generated on site through improved planning, buying and design. However, it will also be used to document the method and manner of waste management on site and will be available to the Environment Agency upon request.

13. Impact on Wildlife

Please see Ecological Report which includes details on the impact to wildlife.

14. Communication

Prior to the commencement of development this plan and that of the Ground Worker will be submitted to the Local Authority for approval.

The plans will be communicated to the workforce through initial site induction and toolbox talks by the site management and are subject to regular review.

Prior material and subcontractor orders will make reference to relevant parts of the plan.

15. Management of Invasive Weeds, flora and fauna.

Specialist investigations reports for Invasive weeds, flora and fauna will be undertaken at the Viability / Preconstruction stage of the development. Specific method statements and management procedures will be produced. Each method will be employed in several ways depending on the location, the population density and the extent of control required. Specialist Contractors who will be fully evaluated will be employed to undertake this work. Optimus build Ltd will work in coordination and cooperation with the contractor.

All the procedures will be managed and communicated on site with the following:

- Communication in the Induction Procedures.
- Toolbox talks.
- Inclusion in the Construction Phase Plan.
- Communications of Investigations to relevant Contractors.
- Ensuring Contractors Risk Assessments and Method Statement include the control measures of Invasive weeds where applicable.

16. Site Security

The site security arrangements will take consideration of the environmental risks identified in this plan, and the control measures therein.

The hoarding and / or fencing will be free of graffiti and non-project specific posters.

All perimeter security fencing will be kept in good repair and will be monitored and maintained throughout the project.

17. Site Welfare Facilities

Bellway's standard compound set-up will be used on this site, a copy of the layout is included in *Section 18 – Site Plan*. It will ensure storage, fuel and chemicals are not stored within 10m of watercourses and any wastewater is disposed of appropriately, not discharged to ground.

18. Stockpiling of Soil & Aggregates

Where stockpiling of excess soil or aggregates it may be necessary to create a bund around them or cover them in wet weather to prevent excess silt becoming a problem. This will be determined and managed through the course of the construction as and where necessary.

Working times

Monday to Friday 08:00 to 18:00 and Saturday working 08:30 to 12:00. No work on Sunday or Bank Holiday.

Quieter activities which are carried out inside buildings such as electrical works, plumbing and plastering may take place outside of agreed working times so long as they do not result in significant disturbance to neighbouring occupier

Contact details and how to report incidents of unneighbourly behaviour from the construction process will be provided throughout the development. Our customer care contact details are as follows:

Phone: **01925 846 700**

Email: **ccare-mc@bellway.co.uk**

All reported incidents will be investigated in line with Bellway Homes incident investigation procedures. These procedures enable action to be taken by the relevant departments to close out all measures required from reported incidents. A log of all reported incidents will be kept and be made available for inspection by the planning authority on request.

Environmental Risk Assessments

Significant Scheme Environmental Aspects

Risk assessment:	Environmental Management for the Construction of Roads and houses.							
Activity undertaken	Hazard	Persons at Risk	Risk level			Control Measures	Risk after	Actioned by
			H	M	L			
Noise generated during construction of Roads and houses	Nuisance to the public	Public		x		Position ancillary plant (e.g. Generators, compressors, pumps) to reduce noise disturbance, i.e. furthest from receptors or behind noise barriers Take care when unloading vehicles to minimise noise Route delivery vehicles so as to minimise any noise disturbance to local residents as well as reducing potential vibration impacts upon structures Do not leave plant engines unnecessarily idling Ensure subcontractors properly maintain and operate all plant according to manufacturer's recommendations so as to avoid causing excessive noise Programme deliveries in line with the planning hour's Regularly monitor both on and off site to ensure minimal noise and vibration impacts upon local neighbours and wildlife	Low	Principal Contractor Contractors
Noise generated during construction of Roads and houses	Nuisance to the public	Public		x		Erect site hoarding, screens or barriers, as necessary and practicable, to shield noisy activities Limit operation times to agreed working hours Comply with Section 61 Agreements (agreement with Local Authority to limit noise), if applicable Notify and consult with all potentially affected parties that may be adversely affected from	Low	Principal Contractor Contractors

					construction site noise either via verbal face to face communications or letter drops Provide the local authority with advance notice of any works scheduled to take place outside agreed working hours Select inherently quiet plant, where appropriate. Continuous monitoring of compliance will be undertaken through the development life cycle and necessary revisions will be implemented when highlighted.		
Vibration generated during construction of Roads and houses	Nuisance to the public	Public		x	Assess (e.g., via structural surveys) any and all structures that may be adversely impacted by vibration from vehicles or site activities Ensure all major compressors are 'sound reduced' models fitted with properly lined and sealed acoustic covers, where appropriate, that are kept closed whenever the machines are in use Ensure all ancillary pneumatic percussive tools are fitted with mufflers or silencers of the type recommended by the manufacturers Place vibrating equipment or plant on a base separate to that on which any sensitive structure is located to reduce vibration impacts Continuous monitoring of compliance will be undertaken through the development life cycle and necessary revisions will be implemented when highlighted.	Low	Principal Contractor Contractors

Risk assessment:	Environmental Management for the Construction of Roads and houses.							
Activity undertaken	Hazard	Persons at Risk	Risk level			Control Measures	Risk after	Actioned by
			H	M	L			
Construction activity of roads and houses that generates Dusts	Nuisance to the public	Public		X		Ensure all construction traffic follows specifically designated routes.	Low	Principal Contractor Contractors
						Implement speed limits for all vehicular movements Cover all vehicles carrying loose materials Dampen down haul roads, as necessary, to reduce dust emissions Conduct all cutting and grinding operations in a manner to reduce the risk of dust migration e.g., wet cutting techniques		
						Adopt dust suppression techniques (e.g., water suppression) to reduce dust emissions.		
						Locate stockpiles away from any sensitive receptors, where feasible.		
						Cover, seed or fence stockpiles to prevent wind whipping		
						Regularly monitor both on and off site to ensure minimal dust and odour impacts upon local neighbours and wildlife.		
						Continuous monitoring of compliance will be undertaken through the development life cycle and		

					necessary revisions will be implemented when highlighted.		
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Risk assessment:	Environmental Management for the Construction of Roads and houses.							
Activity undertaken	Hazard	Persons at Risk	Risk level			Control Measures	Risk after	Actioned by
			H	M	L			
Construction activity that generates Visual Impact & Light	Nuisance to the public	Public		X		Erect site hoarding, screens or barriers, as necessary and practicable, to screen site activities Choose and assemble site lighting to reduce light nuisance impacts to local neighbours and wildlife Position lighting properly and direct light downwards to minimise impacts of light pollution on neighbours and wildlife Switch off site lighting or minimise its use during periods of site inactivity Keep site boundaries clean and tidy at all times Maintain hoarding and / or fencing so as to be free of graffiti and non-project specific posters Repair damaged or unsightly hoarding and / or fencing, as soon as possible.	Low	Principal Contractor Contractors

References

Health & Safety at Work Act 1974.
GS29 Parts 1-4-7-8.
The Provision and use of Work Equipment Regulations 1998.
The Management of Health & Safety Regulations 1999.
Legislation relating to hazardous materials COSHH Regulations 2002.
The Construction (Design & Management) Regulations 2015.
HSE information notes GS 29 Parts 1 – 4.
The Party Wall Act 1996.
The Lifting Operations and Lifting Equipment Regulations 1998.
The Work at Height Regulations 2009.
The Control of Noise at Work Regulations 2005.
The control of dust and emissions from construction and Demolition. Best Practice Guide. November 2006. London Councils.
Institute of Air Quality management - Guidance on the assessment of dust from demolition and construction 2014.
Institute of Air Quality Management - Guidance on Air Quality Monitoring in the vicinity of demolition and construction sites 2014.
Environmental Protection Act 1990.
Control of Pollution Act 1974
BS 5228:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites for the construction activities.