

2025



**Dalziel Foods,
Rogerstone – Warehouse
and Carpark Extension
Construction Environmental
Management Plan (CEMP)**



DOCUMENT INFORMATION			
Project	Dalziel Foods - Proposed extension to existing warehouse and change of use of adjacent land to form staff car park		
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1	December 25	Additional detail added regarding traffic management.

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1 INTRODUCTION

1.1 DOCUMENT BACKGROUND

- 1.1.1 This Construction Environmental Management Plan has been prepared by EcoVigour on behalf of Dalziel Foods, for the management of Environmental / Ecological Impacts from the proposed extension to the existing warehouse and change of use of adjacent land to form a staff car park at Unit 6 , Afon Ebbw Road, Rogerstone, Newport, NP10 9HZ (Figure 1).
- 1.1.2 The works will broadly involve:
- ◆ Vegetation clearance of the construction site.
 - ◆ Break out an section of the existing carpark and excavation for the foundations of the new warehouse structure.
 - ◆ Earthworks within the new carpark area to achieve the required line and level.
 - ◆ Installation of new surface water drainage.
 - ◆ Casting of a concrete base for the new warehouse.
 - ◆ Erection of a new steel frame building.
 - ◆ Laying and compaction of aggregates and laying of the new SUDs carpark.
 - ◆ Associated utilities connections.
- 1.1.3 The following Management Plan details how potentially polluting activities will be controlled to minimise possible environmental impact. This CEMP includes:
- ◆ A description of the scheme.
 - ◆ An outline construction methodology.
 - ◆ A description of the site setting and existing status.
 - ◆ A description of the sensitivity of the site, the communities around it and the potential effects of the project on these.
 - ◆ Identification of watercourses surrounding the site and pathways to them.
 - ◆ Key staff and their roles – to be updated as the project moves from design/planning to the construction phase.
 - ◆ Consultees and liaison mechanisms.
 - ◆ Monitoring and reporting procedures.
 - ◆ Planning requirements for the project.
 - ◆ Procedures to mitigate impacts.
 - ◆ Incident response and reporting procedures.
 - ◆ Environmental monitoring, audit, and reporting procedures.
- 1.1.4 **This is a live document and will be developed further as the project moves into the preparation/construction phase.**



2 THE PROJECT:

2.1 PROJECT OBJECTIVES

- 2.1.1 The main aim of the CEMP for the scheme is to aid Dalziel Foods with the extension to the existing warehouse, into the current staff parking area and the change of use of adjacent land to form a staff car park in an environmentally acceptable and sustainable way, considering all the construction and environmental implications associated with the scheme.
- 2.1.2 The overall site boundary and areas of habitat due to be affected by the works are outlined below:



1: Site Boundary.

2.2 SITE DETAILS:

- 2.1.1 The site is located in the western side of the Rogerstone community in Newport. The proposed development site is divided by Afon Ebbw Road into a northern and southern site comprising a disused bunded and overgrown area, and an operational warehouse and logistics site organised and maintained by Dalziel Foods Ltd, respectively.
- 2.1.2 The environment immediately north of the site comprises broad-leafed woodland, backed by a residential area. The east of the site is residential, with a large housing estate present. The environment to the south and west of the site is primarily industrial with two commercial and retail premises (McDonalds & Morrisons) nearby.

2.3 ACCESS AND TRAFFIC MANAGEMENT



- 2.3.1 Access to the site is from the A467 onto Meadowlands Drive, which provides access for the commercial / industrial units and a large residential area. The site is accessed from Afon Ebbw Road, which also provides access to a McDonalds Restaurant, Walls Truck and Van Rental and Servicing and King David Tyres retail and wholesale tyre distributor.
- 2.3.2 At no point within the construction works will it be acceptable to impede access to these businesses without prior agreement or to block traffic or cause potentially dangerous obstructions on Afon Ebbw Road.
- 2.3.3 The project will be sequenced to ensure minimal disruption to traffic along Meadowlands Drive and Afon Ebbw Road and to ensure safe access, with unimpeded visibility along these routes. The proposed new carpark will be constructed ahead of the expansion works within the main Dalziel site. This will provide sufficient car and van parking to avoid the need for parking along Afon Ebbw Road and to allow the expansion works to be contained within the Dalziel Site.

Table 1 – Anticipated Vehicle Movements – Carpark Area:

Materials:	Approximate Quantity	Vehicle Movements
Plant delivery and collection		4
Topsoil strip removal 1300m ² to a depth of 300mm = 390m ³ . 60% of this retained on site for landscape areas and to topsoil along retained section of the bund = 156m ³ to be removed.	156m ³	16
Sections of existing bund to be removed	18m ³	2
Drainage arisings – majority of drainage arisings will be re-used as backfill.	30m ³	3
Capping materials for the construction of the new carpark – 1100m ² x 250mm = 275m ³	275m ³	28
Aggregates – Type 1 Sub-base;	275m ³	28
Aggregates – Drainage materials;	40m ³	4
Drainage Materials – pipes, manholes, gullies		1
Miscellaneous deliveries – geotextile, Grass park, reinforcement, etc		8
Aggregates – Concrete to back kerbs and edging, semi-dry mix		3
Graded stone for GrassPark areas 400m ² x 120mm	48m ³	5
Surfacing plant delivery and collection		2
Aggregates – bituminous bound materials – 700m ² x 180mm	126m ³	13
Fencing materials		1
Landscaping materials – plants, trees, mulches, tree stakes / guy systems;		1
Total HGV Vehicle Movements (one way)		119

Total HGV Vehicle movements – two way	238
5 week programme - No of days (5 days a week, 5 weeks)	25
Average HGV movements per day – two way	9.5
Average HGV movements per hour – two way (8-hour day)	1.2

- 2.3.4 However, there will be periods within the construction when HGV movements are intensive i.e. during the delivery of aggregates i.e. capping which is likely to be laid over a 3 day period resulting in an average of 19 HGV movements per day or 2.5/hour. This will be offset by periods when there are few or no HGV movements throughout the working day.



- 2.3.5 For the carpark, an excavator will be delivered to site and will remove a section of the bund around the site to allow access. Topsoil will be stripped ahead of the machine and the site will be excavated to formation level. Geotextile and then stone will be laid to form an access onto the site. Vehicles will not enter the site until this has been done and vehicles do not have to track onto earth surfaces. Further geotextile and stone will be laid ahead of delivery vehicles so that they never have to track onto soil surfaces and hence will not get soil onto their wheels.
- 2.3.6 The carpark will be taken to compacted stone level prior to the commencement of the new building on the main site. The carpark area will be used for contractor car parking and as a compound for the main works. For the initial stage of works, a maximum of 2 vans (machine operator, banks person and Works Manager) are anticipated, which will be parked in the existing Dalziel carpark. Following this, sufficient stoned area will be available for further parking in the carpark area.

Table 2 – Anticipated Vehicle Movements – Carpark Area:

Materials:	Approximate Quantity	Vehicle Movements
Plant delivery and collection		4
Break out sections of existing concrete slab within yard and dispose of arisings – 800m ² x 350mm	280m ³	28
Drainage arisings – majority of drainage arisings will be re-used as backfill.	30m ³	3
Capping materials to trim areas of the new concrete slab – 800m ² x 100mm = 80m ³	80m ³	8
Shuttering for concrete slab.		1
Aggregates – Drainage materials;	20m ³	2
Drainage Materials – pipes, manholes, gullies		1
Miscellaneous deliveries – geotextile, reinforcement, lighting, signage, etc		8
Aggregates – Concrete for concrete slab for new warehouse and forecourt – 800m ² x 250mm	200m ³	30
Steel Frame for new building		3
Cladding for new building		2
Internal fit out of building		10
Roller shutter doors		1
Windows and doors		1
Total HGV Vehicle Movements (one way)		102

Total HGV Vehicle movements – two way	204
12 week programme - No of days (5 days a week, 12 weeks)	60
Average HGV movements per day – two way	3.4
Average HGV movements per hour – two way (8-hour day)	0.5

- 2.3.7 Again there will be short periods which the majority of the vehicle movements are condensed into i.e the concrete pour for the new slab, once the pour commences for a bay it is not possible to stop as this would result in a cold joint being formed. It is likely that the slab would be poured in at least two bays and these pours would be several days apart. Hence the maximum number of HGV movements in a single day is likely to be 15 (30 two way movements, in and out of the site) during the concrete pour, the vehicles would be met at the gate, banked into position, the concrete would be tested for compliance (slump test) and the mixer would then discharge over a period of approximately 15 minutes.



- 2.3.8 Consultation will be undertaken with surrounding businesses, regarding the timing of peak delivery periods, to avoid conflicts with peak traffic movements times for these properties.



Figure 2: Site Access Route

- 2.3.9 Loads to the site will be booked in advance with the Site Manager to avoid multiple vehicles arriving at the same time. During the delivery of aggregates, it will be requested that vehicles arrive at 20 minute intervals to allow vehicles to be tipped and aggregates to be laid, prior to the next vehicle arriving.
- 2.3.10 A Traffic Marshal will be appointed to meet deliveries to the site. They will take the delivery note and guide the vehicles to the tipping point.
- 2.3.11 HGVs will not be permitted to track onto soil surfaces, with the works phased as described above, to avoid this. It is likely that stone dust from sub-base materials could be dragged from the site onto Afon Ebbw Way. This will be monitored and a road brush will be on standby to clean the road, as required. If this is found to be a particular problem, jet washing will be implemented at the site entrance.
- 2.3.12 Even during peak periods (filling of the carpark area and casting of the slab, additional vehicles movements will not impact flows along Meadowlands Drive.



3 ROLES AND RESPONSIBILITIES:

Table 3: List of Roles and their Responsibilities within the Works.

Role / Personnel / Organisation	Contact	Responsibilities
Project Manager: TBC	Email: Mob:	- Responsible for the management of the project. - Responsibility for the development and implementation of the CEMP / PPC. - Will delegate other environmental duties to members of the project team as required.
Site Agent: TBC	Email: Mob:	- Responsible for the delivery of the infrastructure elements of the project including earthworks, piling, bridge construction, public liaison, etc. - Responsible for the control of environmental impacts during construction and ensuring that the construction process follows sustainability best practice. - Responsible for ensuring that the requirements of the CEMP and PPC are delivered on site.
Environmental Advisors: EcoVigour	Tel: 08448 400 401 Email: tmeads@ecovigour.com	Advise on Pollution Control, Waste Management, Environmental Site Management i.e. noise, dust, storage of wastes, house keeping, etc.

4 CONSULTATION / CONSENTS:

4.1 CONSULTATION:

- 4.1.1 Consultation has been undertaken with the A J Panning and Development and Newport City Council (*Cyngor Dinas Casnewydd*), regarding the project. An application is being made to Newport City Council for Planning Permission.

5 PROJECT SPECIFIC ENVIRONMENTAL RISK ASSESSMENT / MITIGATION.

- 5.1.1 The following aspect register formulates the assessed risk by multiplying the likelihood of an event or encountering a species (L), by the severity implicated by that event/encounter (S). This quantified the assessed risk of the impact (R).
- 5.1.2 (L) & (S) are measured between Negligible (1), moderate (2) & high (3) to create the final value.



Potential Impact	Risk Assessment			Mitigation / Enhancement Measure	Risk Assessment with Mitigation			Management / Monitoring	Responsibility
	L	S	R		L	S	R		
Pollution Control and The Water Environment									
Pollution impacts to surface water drainage – The works will be undertaken adjacent to Afon Ebbw Road with the potential for suspended solids contamination within surface water runoff to pass through the surface water drainage and to the Ebbw River, which flows approximately 200m north of the site. It will therefore be essential that suspended solids contamination is minimised during earthworks and construction phases.	2	1	2	Detailed planning needs to be undertaken in terms of: - The works area will be isolated from surface water drainage inlets with temporary silt fencing. - Appoint an Environmental Response Gang for installing and maintaining silt mitigation and reacting to any pollution incidents. - Small amounts of runoff can be directed towards areas of vegetated land.	1	1	1	Visual assessments of water entering surface water drainage will be included as part of Daily Environmental Site Inspections. Should issues be identified, works will cease until the source of the pollution has been identified and remedied. If pumping systems are required, they will be monitored continuously. Discharges will be assessed visually throughout the pumping operation.	Dalziel Foods / Contractor
Hydrocarbon Spillage during re-fuelling, use and storage of plant – Plant and equipment will be used on site which will require the use of diesel, petrol, and oils. There is potential for the spillage of fuels and oils during fuelling and servicing. Oils and fuels can also be leaked due to mechanical failure for plant and vehicles, such as burst hydraulic hoses. Hydrocarbons have the potential to cause major impacts on soils and watercourses.	2	3	6	Bulk fuels will be stored in double skinned tanks in a dedicated COSHH area, which is remote from surface water drainage and where the risk of this being impacted by plant and vehicles is minimised. Fuels and oils will not be stored within 10m surface water drainage entry points. Fuelling of plant and equipment will only be undertaken by trained operatives wearing suitable PPE. Filler guns will be used for fuelling from bowzers. Funnels will be used when fuelling plant and equipment with restricted access to the fuel filler. Plant nappies will be placed beneath fuel filling apertures during re-fuelling.	1	3	3	Environmental Site Inspections will be undertaken, which will include the status of plant and equipment with respect of hydrocarbon spillage / leakage. If spills or leaks are identified, action will be taken in line with the Emergency Preparedness and Reponeses Plan	Dalziel Foods / Contractor



Potential Impact	Risk Assessment			Mitigation / Enhancement Measure	Risk Assessment with Mitigation			Management / Monitoring	Responsibility
	L	S	R		L	S	R		
				All items of static plant will be placed on a plant nappy. If plant or equipment is found to be leaking hydrocarbons or other fluids it will be suitably environmentally isolated or removed from site until repaired. If hydrocarbons are spilt they will be cleaned up in line with the Emergency Preparedness and Response Procedure as described in Section 9.					
COSHH Substances – Release to atmosphere of environmentally damaging COSHH Substances.	3	3	9	COSHH Assessment will be undertaken for all materials to be bought to site. COSHH Assessments will need to cover how potential COSHH materials could impact on the environment and the mitigation required for this. COSHH Materials will be stored in a dedicated COSHH store which will be a secure, contained facility.	1	3	3	COSHH Data Sheets will be stored with and issued with any COSHH substances. COSHH Substances will be signed out and back in. The COSHH System will be audited as part of the daily environmental checks.	Dalziel Foods / Contractor
Flooding – The Access route to the work area is subject to Low and Medium surface water flooding from intense and prolonged periods of precipitation. Evidence of surface water flooding is at the end of Ebbw Road towards the turning circle and entrance to the northern site (as seen in Figure 4) The northern site may be subject to surface water flooding due to the	1	1	1	Care will be taken to ensure that the watercourses along the boundaries are maintained free from site material. All plant to be stored in areas away from surface depressions with the potential for surface water flooding.	1	1	1	Visual assessments of surface water flooding will be included as part of Daily Environmental Site Inspections.	



Potential Impact	Risk Assessment			Mitigation / Enhancement Measure	Risk Assessment with Mitigation			Management / Monitoring	Responsibility
	L	S	R		L	S	R		
bunded perimeter and the absence of identified drainage. Riverine flooding is not a hazard for either site.									
Wildlife and Ecology									
Tree Protection Orders of trees – No significant trees have been identified on site.	1	1	1	No large trees should be felled, without prior checking with the Local Authority tree officer. e. Damage to trees will be avoided, , however if potential impacts to the trees will need to be assessed by an arborist. The Root Protection Zone of trees should be fenced to prevent ground disturbance within the area, which could result in damage to the root structure of the trees.	1	1	2		Dalziel Foods / Contractor
Bats	1	3	3	The trees around the works areas have been assessed as having negligible potential to be used by roosting bats. It is possible that bats are active in the area. - If the proposed works are carried out during the time of year when bats are active (March to October inclusive), works should be carried out during daylight hours; commencing at least 1 hour following sunrise and finishing at least 1 hour before sunset, to avoid unnecessary disturbance to bats. - There should be no night-time working.	1	3	3	Potential for the presence of bats to be included within Toolbox Talks for the works. Three number bat boxes are to be installed on mature trees near the works. Specification and locations to be agreed with Clients Ecologists.	Dalziel Foods / Contractor



Potential Impact	Risk Assessment			Mitigation / Enhancement Measure	Risk Assessment with Mitigation			Management / Monitoring	Responsibility
	L	S	R		L	S	R		
				If night-time working is unavoidable then advice on how to reduce potential disturbance to bats should be sought from a suitably qualified ecologist. - If large trees are to be removed, they will be assessed for their potential to support roosting bats.					
Birds – All nesting birds are protected by law. Vegetation around the site, has suitability for use by nesting birds.	3	3	9	Should vegetation clearance be undertaken within the bird breeding season, pre-works nesting bird surveys should be undertaken and vegetation clearance works should be undertaken under Ecological Watch and Brief (ECoW)	1	3	3	Pre-vegetation nesting bird surveys and ECoW during vegetation clearance.	Dalziel Foods / Contractor / EcoVigour
Badgers, hedgehogs and other small mammals.	1	3	3	No evidence of badgers has been found, but if a badger sett is identified within 30m of the works, area, works will cease and the Ecologist will be contacted.	1	3	3		Dalziel Foods / Contractor
Reptiles – The presence of reptiles has not been confirmed and the habitat around the works site is sub-optimal, but there is a low potential to encounter reptiles, in vegetated areas.	2	3	6	Reptile mitigation to be implemented as described in Section 11.4.	1	2	2		Dalziel Foods / Contractor
INNPS – Himalayan Balsam and Japanese Knotweed have been identified in proximity to the work area.	3	3	9	No Invasive Non-Native Plant Species (INNPS) are present within the site, however Himalayan Balsam and Japanese Knotweed have been identified within 100 meters to	1	2	2	Biosecurity should be policed, throughout the project in line with Section 10.	Dalziel Foods / Contractor



Potential Impact	Risk Assessment			Mitigation / Enhancement Measure	Risk Assessment with Mitigation			Management / Monitoring	Responsibility
	L	S	R		L	S	R		
				the work area. There is no requirement to control these, although Dalziel Foods may want to implement a programme of control through the application of herbicide, to ensure the plants do not grow into the site.				The works area should be monitored for further evidence of INNPS growth.	
Nuisance									
Noise – There are no residential properties adjacent to the site. The nearest residential property to the site is Lilac Grove, approximately 60m NE. This is screened from the site by a section of woodland. There is extensive residential development within the wider environment. Nuisance to residential properties is possible.	3	3	9	Care will be taken to ensure no excessive noise is created as to not disturb local residents and wildlife near the site. Working hours will be restricted to: Mon – Fri: 07:30 – 18:00 Sat: 07:30 – 13:00 Sun: By agreement. Works may be required outside of these hours, but these will be agreed in advance by the Newport City Council Project Manager.	2	1	2	Complaints regarding nuisance will be dealt with by the Site Manager.	Dalziel Foods / Contractor
Dust – Development of construction access routes, earthworks and cutting operations have potential to result in the generation of dust. There is potential for concrete cutting works to be required, which will result in the generation of dust.	3	2	6	Dust mitigation will be required in line with Section 0. Dust and Particulates. If damping down is to be used, a spreader bar is to be used on the bowser to ensure that only the required volume of water required is delivered, which will improve water efficiency and reduce risk from silt being mobilised. Refer to Section 13 – Control of Emissions to Air.	1	2	2	Observations will be made throughout the working day by Works Managers with mitigation instructed as appropriate.	Dalziel Foods / Contractor
Vibration – There is potential for vibration impacts within the surrounding area, which have	2	2	4	Low vibration equipment should be used where possible to ensure the minimum levels of vibration is generated by site	2	1	2	Vibration monitoring will be undertaken:	Dalziel Foods / Contractor



Potential Impact	Risk Assessment			Mitigation / Enhancement Measure	Risk Assessment with Mitigation			Management / Monitoring	Responsibility
	L	S	R		L	S	R		
potential to impact residential properties surrounding the site. Key activities which may result in ground born vibration are dynamic compaction.				activities. During construction of access points methods of work will be reviewed and if there is potential for vibration impacts, alternative methods will be used i.e. dynamic compaction substituted for dead rolling using thinner layers with more passes of the roller.				During period which are perceived to generate high vibration levels by the risk assessment which will be included as part the method statement for each activity. Upon receiving any communication from third parties which raises vibration as a potential issue.	
Visual Intrusion – The current site is situated within a industrialised area, therefore it is unlikely to for neighbouring businesses or nearby residents and commuters to consider the construction works as being a visual intrusion.	2	2	4	The site will be maintained in an orderly manner, plant will be returned to holding areas at the end of the shift. Waste will be placed into well organised labelled skips, with covered skips used where appropriate. Materials will be stored in secure locations, where they are not overly obtrusive. Hoardings may be erected in the form of lines of Heras fencing, covered with opaque coverings, in areas where screening is appropriate. Hoardings will be removed once all work has been completed.	1	1	1	No monitoring proposed. Monitoring of visual intrusion will be undertaken through the Community Liaison process.	Dalziel Foods / Contractor
Artificial Lighting – Intrusion for residents and wildlife from artificial lighting.	2	2	4	Due to its potentially damaging effects, Dalziel Foods are committed to prevent or reduce all forms of light pollution where possible. If site lighting is required it will: It will use lamps which emit low levels of ultraviolet light.	1	2	2	Visual monitoring of light pollution. Artificial lighting will be monitored as part of the Environmental Site Inspection process.	Dalziel Foods / Contractor



Potential Impact	Risk Assessment			Mitigation / Enhancement Measure	Risk Assessment with Mitigation			Management / Monitoring	Responsibility
	L	S	R		L	S	R		
				- Safety lighting within pedestrian areas at site compounds – Low level, full cut off lighting fixtures will be used. These will be PIR controlled and hence will only operate during periods when the site is operational. - Task lighting at work sites (low level task lighting) – This will be localised and will be directed so that it is focused onto works areas, with minimal light spill. - Vehicle Headlights – Vehicle use will be minimised after dark.					
Mud on Roads – Site material being dragged onto Afon Ebbw Way	3	2	6	Works will be phased to ensure delivery vehicles do not have to travel on soil surfaces. Stone dust may be dragged onto the highway. This will be monitored and road brushing, instructed as required. Wheel washing in the form of a bowser jet wash at the site entrance, will be instructed, if required.	1	2	2	Traffic Marshal to monitor condition of surrounding highways throughout the working day. Site manager to have oversight of the process.	Contractor / Dalziel Foods
Smoke – Nuisance from windblown smoke.	1	1	1	Burning on site will not be permitted.	1	1	1	No burning to be enforced by Works Managers.	Dalziel Foods / Contractor
Odours – are unlikely during the works.	2	1	2	No specific mitigation is proposed in respect of odour.	1	1	1	Odours will be monitored through the Environmental Site Inspection Process.	Dalziel Foods / Contractor



6 CONTROL OF SILT-CONTAMINATED RUNOFF INTO SURFACE AND GROUNDWATER

6.1 POTENTIAL RECEPTORS

- 6.1.1 The Ebbw River flows within 200 meters to the northeast of the works site. Therefore the Ebbe river is a potential receptor which silt, hydrocarbon and pollution could flow.

6.2 RISKS:

- ◆ Silt contaminated runoff from the site flowing into the river.
- ◆ Silt passing through surface water drainage to the river during heavy precipitation or fluid spills. Hydrocarbons contaminating the River.

6.3 PATHWAYS:

- ◆ Silt-contaminated water is entering existing surface drainage – field drainage and existing highway drainage.
- ◆ Silt-contaminated water flows directly into the Ebbw river and its associated tributaries and brooks, running through and around the site.
- ◆ Silt-contaminated water is flowing into previously undetected drainage.

6.4 CONTROLS:

- 6.4.1 The key control for silt mitigation will be through planning of operations at the site with consideration to the following:

6.5 PREVENTING SILT BEING MOBILISED

- 6.5.1 To prevent silt from being mobilised and site runoff from becoming contaminated, the following measures will be employed:
- ◆ Temporary geotextile silt fencing will be used to isolate the works area from access routes, which will contain silt within the dammed area and allow it to settle prior to water being pumped.
 - ◆ Dust suppression systems must be carefully coordinated to ensure excessive volumes of water are not sprayed onto areas, mobilising suspended solids.
 - ◆ Silt containment around material stockpiles using silt fencing, in particular fine stone, during periods of wet weather.

6.6 SILT MITIGATION MEASURES

- 6.6.1 Runoff across the site will be minimal due to most work taking place over 200 meters from the watercourse. The potential for water to flow directly towards the watercourse which flows north to south is low. Mitigation will take the form of:
- ◆ Hazardous materials must be stored away from surface water drainage.



7 HYDROCARBONS AND CHEMICALS AND COSHH MATERIALS:

7.1 DEFINITIONS:

- ◆ Double skinned tank – twin walled tank where there is a small gap between the inner skin and the outer skin. All equipment comply with *The Water Resources (Control of Pollution) (Oil Storage) (Wales) Regulations 2016*.
- ◆ Secondary Bund – bunded area around an oil, fuel or chemical container which encompasses all of the ancillary equipment from the containers i.e., inlet/outlet pipes, sight glasses etc.
- ◆ Integrally Bunded Tanks – These are purpose-built storage units whereby the tank is situated within a liquid tight steel container. All gauges and ancillary equipment are also located within the container. The containers are lockable and are to remain locked at all times when not in use, to prevent tampering.

7.2 RISKS:

- ◆ Leakage of fuels and oils from plant and machinery.
- ◆ Leakage/spillage of fuels, oils and chemicals from containers.
- ◆ Spillage of fuel during refuelling.
- ◆ Runoff from excessive use of shuttering oil.
- ◆ Hydrocarbons washed out from un-cured bituminous paints and sealants.
- ◆ Wind blowing of COSHH materials.

7.3 PATHWAY:

- ◆ Hydrocarbons and chemicals entering existing site drainage.
- ◆ Hydrocarbons and chemicals entering watercourses or groundwater.
- ◆ Hydrocarbons and chemicals entering drainage from site offices, canteen, storage units.
- ◆ Hydrocarbons and chemicals escaping to ground.
- ◆ Wind blowing of fine powders.

7.4 CONTROLS:

- ◆ COSHH assessments will be undertaken for all materials bought to site. These assessments will include environmental exposure information and instructions for dealing with accidental release of the materials including environmental impact from the materials. COSHH assessments are to be maintained in the COSHH file in the site offices and with the COSHH material.
- ◆ Plant and vehicles should be inspected for oil and fuel leaks prior to the start of each shift and following each breaks. Plant will be inspected for integrity of hydraulic pipes, fuel lines and oil systems. Any item found to be defective will be removed from site, until repaired.
- ◆ Re-fuelling of plant and machinery shall not take place within 10m of surface water drainage. .
- ◆ Fuelling is only to be carried out by appropriately trained personnel, issued with appropriate PPE.
- ◆ The re-fuelling of static and small items of plant shall be carried out by a suitably trained, designated person using fuel cans with spouts which can be inserted into re-fuelling apertures of the plant being re-fuelled. If such fuel cans are not available a funnel will be used.



- ◆ If possible, bowsters used for the re-fuelling of plant shall not be left full overnight or at the end of the working shift. If bowsters are to be left full overnight they shall be stored in a secure bunded area and the bund shall have a capacity of 110% of the bowser.
- ◆ All fuels, oils, and chemicals to be stored in suitable containers within controlled secondary bunded enclosures such as double skinned tanks, fuel cubes, drip trays, plant nappies and COSHH Cabinets. These shall be positioned remote from surface water drainage. Liquid containers shall be stored in locations where they are not at risk of being struck by vehicles or plant.
- ◆ Bulk diesel and oils to be stored in a double skinned tank. Any valve, filter, sight gauge, vent pipe, or other related equipment (not including a fill pipe or draw off pipe) should be situated within the secondary containment system. The outlet from the tank shall be lockable and shall be locked off at the end of the working shift.
- ◆ Suitable security shall be provided for fuel and chemical storage areas.
- ◆ The secondary containment system must provide storage for at least 110% of the tanks maximum capacity. If more than one container is stored, the system must be capable of storing 110% of the biggest container's capacity or 25% of the capacity of all of the containers within the bund, whichever is the greater.
- ◆ All tanks shall be labelled to show their contents, volume, refill procedure and spill response procedure.
- ◆ All static plant and containers of hydrocarbons or chemicals should be placed within a drip tray or Plant Nappy. Plant Nappies will be used in favour of drip trays as they do not accumulate rainwater. Drip trays should be fitted with integral oil traps to allow them to drain, or provision should be made for the removal of water during wet weather.
- ◆ All plant and equipment shall be removed from excavations and ditches at the end of each shift.

7.5 RE-FUELLING PROCEDURE:

- 7.5.1 Only trained designated personnel will undertake the re-fuelling of plant and equipment.
- 7.5.2 Training will be given on the following:
 - ◆ Correct PPE – Personnel undertaking fuelling with wear hydrocarbon resistant overalls or apron, oil resistant boots, long oil resistant gloves and eye protection.
 - ◆ Use of re-fuelling guns, i.e., guns will be placed into the fuelling aperture, if the aperture is not accessible a suitable funnel will be used, full attention is to be paid during re-fuelling to ensure the fuelling gun is shut down prior to the tank over-flowing.
 - ◆ Plant nappies will be placed beneath the equipment being re-fuelled or beneath the fuelling aperture.
 - ◆ Process for accessing fuelling apertures on items of plant.
 - ◆ Funnels will be used for the refuelling of static plant.
 - ◆ Fuel guns will be locked when left unattended and will be stored within bunded areas.
 - ◆ Fuelling will not be undertaken within 10m of surface water drainage.



7.6 MONITORING:

- 7.6.1 Fuel, oil and COSHH storage facilities will be inspected as part of Site Managers Weekly Site Inspections.
- 7.6.2 Visual monitoring will be undertaken of site runoff during periods of wet weather. These will consider signs of hydrocarbon contamination including sheens on water and staining. This will inform requirements for further mitigation or maintenance of existing features.

8 CONTROL OF CONCRETE CONTAMINATED RUNOFF:

8.1 RISKS:

- ◆ Concrete delivery vehicles washing out at uncontrolled locations.
- ◆ Failure of shuttering during concrete pours.
- ◆ Excessive bleed from shuttering during concrete pours.
- ◆ Concrete contamination from jet washing / hydro cutting of green concrete.
- ◆ Direct spillage of concrete into watercourses.

8.2 PATHWAYS:

- ◆ Cement contaminated water entering existing surface drainage.
- ◆ Cement contaminated water flowing directly into watercourses or groundwater.
- ◆ Cement contaminated water flowing directly into highway drainage.

8.3 CONTROLS:

- ◆ A dedicated concrete washout pit will be constructed within the site compound. This will consist of a bunded pit or skip lined with 1200-gauge polythene. The pit will be cleared via excavator regularly as required. Concrete delivery drivers will be fully briefed on this & will use this facility at all times. This Washouts will be signed, and site operatives will be instructed to guide vehicles to it. If a washout is required at the actual bridge site, where space is limited, products such as Concrete Washout Systems can be used. Refer to <http://www.siltbuster.com/construction/products/concrete-washwater/rcw.php>. Locations of washouts to be included within Method Statement and Environmental Risk Assessments.
- ◆ Shuttering to be checked by the temporary works coordinator/section engineer for integrity prior to pours and the rate of rise to be controlled during the pour.
- ◆ Weather conditions will be monitored prior to concrete pours and concrete pours will not be undertaken during periods where water levels may rise.
- ◆ Water from the jet washing / hydro cutting of green concrete shall not be permitted to flow into surface water drainage but shall be retained on site to allow particulates to settle and pH to adjust.

8.4 MONITORING:

- 8.4.1 Weekly Site Manager Site Inspections will be undertaken during which storage facilities will be inspected.



- 8.4.2 Visual monitoring will be undertaken of site runoff during periods of wet weather. These will consider signs of cementitious contamination including discolouration and residues. This will inform requirements for further mitigation or maintenance of existing features.

9 EMERGENCY PREPAREDNESS AND RESPONSE

9.1 EMERGENCY CONTACTS:

Table 4: Emergency Contact List.

Contact Type	Contact Details
Incident Manager	
Natural Resources Wales	0300 065 3000 - (to be informed in the event of oil/chemical spill or fire).
Emergency Services	999 - (Request service required)

9.2 ENVIRONMENTAL INCIDENT:

Table 5: Environmental Incident Types and Examples.

Incident/Issue Type	Example
An inappropriately controlled emission to land, sea, air or water (e.g., spillage, fumes, dust, vibration, noise, disposal) that has potential to cause environmental harm if not controlled properly.	Release of silt contaminated water to the protected adjacent sites. Dust emissions to neighbouring properties or onto agricultural land and areas of ecological significance.
A substantiated complaint from a third party affected by the project	Noise complaint from local resident. Statutory intervention from Torfaen County Borough Council / NRW.
An event causing major quantifiable environmental harm	Damage to a site or archaeological significance. Injury or death to a European Protected Species.
A breach of a consent licence that may lead to statutory intervention	Breach of discharge limits agreed with NRW. Breach of Planning Conditions
A breach of Environmental Legislation	Failure to ensure the Duty of Care for waste has been complied with.
Issue of a statutory enforcement notice, Local Authority, Natural Resources Wales	NRW prosecution or warning letter. Local authority abatement notice.

Other Examples:

- ◆ The discovery of contaminated land, where no contamination indicators were found in the SI or historical site documents.
- ◆ Discovery of protected species where there were no indicators.
- ◆ Flooding from events outside the 1 in 100 year probability.



Responsibilities

- 9.2.1 In all cases responsibility for immediate action lies with the person discovering the incident. They should take whatever actions they can, to immediately stop the source and contain the pollution.
- 9.2.2 In all cases the incident shall be immediately reported to the general foreman who shall report it immediately to the site manager who will act as the incident controller. The Incident Controller shall coordinate resources to put the containment and mitigation plan in place. The Environmental Coordinator and Health and Safety Manager shall be informed immediately and shall assist in the supervision of the containment and mitigation plan as necessary.
- 9.2.3 The Environmental Advisor shall assist in post incident training, incident reporting / monitoring and documentation for the CEMP.

Fuel or Oil entering a watercourse or drainage:

- 9.2.4 The response will depend on the amount of hydrocarbon spilt and the flow of the stream. As a general rule the following steps should be taken.
- ◆ Stop release of fuel by removing the source or by using plastic sheeting and bunding.
 - ◆ Deploy an oil absorbent boom across the watercourse to contain the spill.
 - ◆ Place oil absorbent mats on the water surface to absorb the oil. N.B. once used these are to be stored and disposed of as special waste. Impermeable gloves and boots and disposable overalls are to be worn.
 - ◆ The above items can be found in the oil spill kit, these are located with foremen, environmental coordinator, store man and in the environmental emergency area in main stores.
 - ◆ Contaminated water can also be pumped from the watercourse into a sealed container for disposal by a registered waste handler.
 - ◆ Natural Resources Wales to be contacted: **0300 065 3000**.

Fuel or Oil spillage on land:

- ◆ Stop release of fuel by removing the source or by using plastic sheeting and bunding.
- ◆ Excavate oil contaminated soil and place in an oil tight container. This must be disposed of by a specialist waste handler as hazardous waste.
- ◆ If spillage is onto a hard surface, all drains and gullies must be sealed immediately. Absorbent materials such as sand, sawdust, straw or oil absorbent granules/mats are to be placed over the contaminated area to soak up the spill. These should then be removed and stored and disposed of as special waste. Impermeable gloves and boots and disposable overalls are to be worn.
- ◆ The above items can be found in the oil spill kit, these are located with foremen, environmental coordinator, store man and in the environmental emergency area in main stores.
- ◆ Natural Resources Wales to be contacted: **0300 065 3000**.

Spillage of chemicals:

- ◆ Where possible remove source of pollution.
- ◆ Obtain as much information on the chemical spilt as possible to evaluate the potential harm it could cause to staff and the environment.
- ◆ If it can be ascertained that there is no significant health and safety risk the chemicals should be dealt with as oil, above.
- ◆ If a potential health and safety risk is identified the area should be evacuated and the emergency services contacted.
- ◆ Natural Resources Wales to be contacted: **0300 065 3000**



Silt entering a watercourse:

- ◆ Remove the source of the contamination, ceasing works in or near watercourses or removing contaminating material from watercourses.

Other Environmental Incidents:

Discovery of protected plants or wildlife, e.g., badgers, otters, newts, birds etc:

Cease work in area and contact Site Manager or ECoW. A mitigation strategy will be developed.

Discovery of archaeological remains:

- ◆ Cease work in area and contact Site Manager.

Environmental Response Equipment

- 9.2.5 Spill kits are available from foremen's vehicles, Environmental Response Crews, site cabins, environmental coordinator, and the stores. Sandbags, straw bales, plastic sheeting, etc are available from the Environmental response area in the stores.

9.3 INCIDENT REPORTING

- 9.3.1 All environmental incidents shall be reported to the Incident Controller immediately, they will then take the necessary action to ensure that the incident is dealt with and the responsible agencies (NRW, CADW, ENV Health, etc) are informed. The Environmental Advisor and Project Manager must be informed so that they can take any measures required. The incident shall then be reported on form GEN/IR/001 Environmental Incident Report within 24 hours of the incident. The report shall include an explanation of the cause, the actions taken to mitigate the incident and proposals to prevent reoccurrence of the incident. Incidents shall be ranked in terms of their severity:

- ◆ Category A – Major incident i.e., release of polluting substance resulting in fish kill or serious environmental harm. Death of a protected species. Intervention of statutory authorities required. Incident to be notified to statutory authorities i.e., **NRW 0300 065 3000**.
- ◆ Category B – Spillage of 5l or more of polluting substance, silt contamination of a watercourse, extending past the site boundary. Incident to be notified to statutory authorities i.e., **NRW 0300 065 3000**.
- ◆ Category C – Minor incident – spillage of less than 5l of polluting substance, silt contamination of a watercourse which can be controlled by the time it reaches the site boundary. No requirement to notify NRW.

- 9.3.2 Assessment of incident severity is subjective, and the discretion of the Incident Controller and ECO will be applied.

- 9.3.3 The Environmental Incident Report Form shall include the following information:

- ◆ Time, date, and location of the incident
- ◆ The root causes of the incident
- ◆ Actions taken to remedy the incident.
- ◆ Personnel involved.
- ◆ Third parties and statutory bodies involved.
- ◆ Procedures put in place to ensure there is no re-occurrence.



9.4 REPORTING OF HAZARDS:

- 9.4.1 A hazard is a situation of occurrence which has potential to cause environmental damage. For example – pumps not in drip trays, waste left on site, full concrete washouts, retained vegetation or archaeological remains not fenced or signed.
- 9.4.2 Hazards shall be reported to the section foreman or site agent immediately and corrective action shall be taken immediately. The Section Foreman / Site Agent shall complete form GENV/HR/001 Hazard Removed Report which shall be returned to the Environmental Clerk of Works. This form records the name of the person reporting the hazard, the nature of the hazard and the corrective action taken. This is then signed off as complete by the ECoW or Project Manager.
- 9.4.3 All hazard removed reports are entered into a quarterly prize draw where the person reporting the hazard has the opportunity to win a prize.

9.5 NEAR MISS REPORTING:

- 9.5.1 A near miss is an occurrence or situation where there has been a breach of environmental procedures resulting in loss but there has not been a major environmental impact. For example – a concrete wagon has washed out outside a concrete washout point, but the contaminated water has not entered drainage or surface water, oil has leaked from plant or equipment but has not entered controlled waters.
- 9.5.2 Near misses shall be reported to the section foreman or site agent immediately and corrective action shall be taken immediately. The Section Foreman / Site Agent shall complete form GENV/NM/001 Near Miss Report which shall be returned to the Environmental Clerk of Works.
- 9.5.3 This form records the name of the person reporting the hazard, the nature of the hazard and the corrective action taken. This is then signed off as complete by the ECoW or Project Manager.

9.6 FLOODING

- 9.6.1 Silt deposition at the northern site indicates surface water flooding/standing water from blocked or inadequate drainage (Figure 3).



Figure 3: Silt build-up indicative of poor drainage at northern site entrance.



- 9.6.2 The NRW Surface Water Flood Risk Map (Figure 4) indicates the risk of flooding along the access routes to the site and possible surface water flooding to the northern site.
- 9.6.3 Periods of intense and prolonged rainfall can cause surface water flooding. Flood Zone 3 displays the extent of flooding from with a 1% (1 in 100) chance or greater of happening in any given year, including an allowance for climate change. Flood Zone 2 displays the extent of flooding from: Surface water & small watercourses with less than 1% (1 in 100) but greater than or equal to 0.1% (1 in 1,000) chance of happening in any given year, including an allowance for climate change.

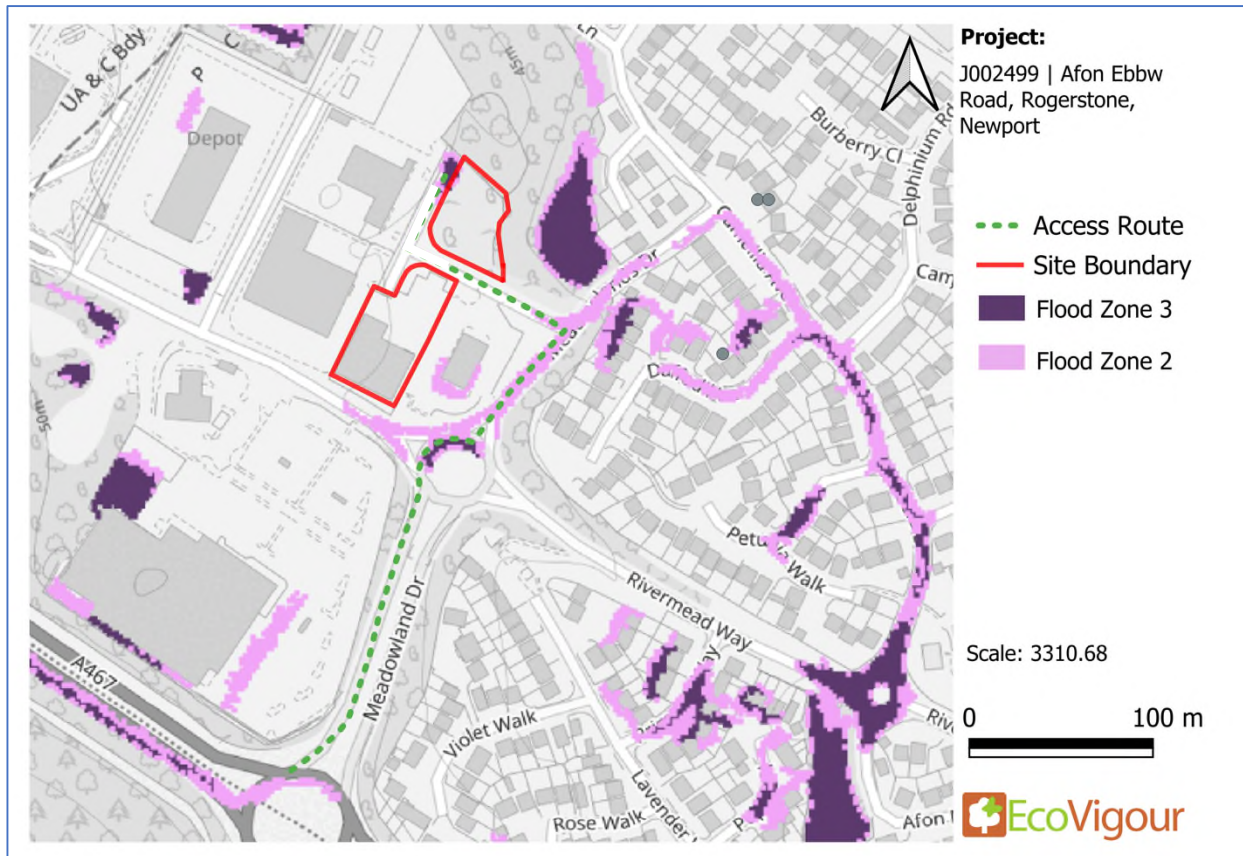


Figure 4: Surface Water Flooding (Data provided by Natural Resources Wales).

9.7 CLEANLINESS OF THE SURROUNDING HIGHWAY NETWORK

- 9.7.1 The following measures will be employed to maintain the cleanliness of the surrounding highway network if required:
- ◆ Construction accesses will be regularly cleared of site material.
 - ◆ Hard surfaced site access tracks will be constructed to prevent erosion and disruption to the watercourse banks and surround areas.
 - ◆ Machinery and equipment will be maintained and clean prior to entering and leaving site.

Monitoring:

- 9.7.2 Visual inspections of highways, surrounding the site will be undertaken by Works Manager daily with the results used to direct further mitigation in the form of wheel washing, highway cleansing, as required. The frequency of this will be increased during periods of wet weather but inspections will continue during dry weather.



10 BIOSECURITY

10.1 JAPANESE KNOTWEED

- 10.1.1 Japanese knotweed has been identified in within 100 meters of the northern boundary woodland (Figure 7). Japanese knotweed is an invasive non-native perennial plant that spreads through the spreading of rhizomes within the soil (Figure 5). Therefore, it is imperative to ensure that soils contaminated with Japanese knotweed are not moved around the site in accordance with The Invasive Alien Species Order 2019.



Figure 5: Japanese knotweed identified near site boundry.

10.2 HIMALAYAN BALSAM

- 10.2.1 Himalayan balsam has been identified in within 100 meters within the northern boundary woodland (Figure 6 & 7). Himalayan Balsam is an annual plant, spread through seeds, produced in pods in late July / August. The plant starts its growth cycle in May and reaches maturity in late June. It then flowers and the flower heads turn to seed pods, which uncoil to project seeds up to 5m from the plant. If the plant can be cut down or pulled prior to flowering, the cycle is broken, as no seeds will be produced that season. However, there will stilxl be a residual seed load within the soil from previous seasons. Therefore, all areas of Himalayan balsam should be treated as contaminated and anything entering that area should be considered contaminated.



Figure 6: Himalayan balsam identified near the site boundary.



Figure 7: Locations of INNPS.

The client may wish to implement a programme of herbicide control of the INNPS adjacent to the site. This may require land owner consent.



11 LANDSCAPE AND ECOLOGY

11.1 NESTING BIRDS

- 5.3.1 Vegetation removal is proposed on the northern site; therefore, disturbance to birds is possible.
- 5.3.2 If active nests are discovered, a suitable buffer zone will be installed around the nest, this buffer zone will be decided by an ecologist taking species and vegetation density into consideration. A minimum 5m buffer zone should be established around the nest(s) and no de-vegetation or other heavy machinery work should be carried out within the buffer zone(s) until it is confirmed that the nest(s) is completed and that the young have fledged.

11.2 BATS

- 11.2.1 None of the trees within the works area were assessed as having potential for roosting bats due to an absence of potential roosting features (PRFs) identified during the survey; however, the presence of foraging and commuting bat species is considered likely.
- 11.2.2 Works should be confined to daylight hours and a dark corridor maintained along the woodland edge.
- 11.2.3 Bats should be considered within the development of the lighting scheme for the site, with low level lighting used, which is PIR activated so is not permanently lit.

11.3 SMALL MAMMALS

- 11.3.1 Measures to ensure any burrowing or hibernating small mammals are not crushed or injured during works will also be incorporated into the works i.e., removal of active burrows using hand-shovels or hand-dismantlement of brash piles/stone walls.

11.4 REPTILES, AMPHIBIANS, GREAT CRESTED NEWTS AND SMALL MAMMALS

- 11.4.1 The site has limited potential to support reptiles; however, there is potential for amphibians and small mammals to be encountered in areas of vegetation surrounding the site. To avoid adverse impacts to these species, the following measures should be implemented:
- ◆ Vegetation clearance should be undertaken as a two-stage cut, working from the site into areas of retained vegetation:
 - ◆ Vegetation should be cut to a height of 150mm above ground level under the supervision of the ecologist;
 - ◆ The area should be thoroughly searched by the ecologist and then vegetation can be reduced to ground level;
 - ◆ Any amphibians encountered will be moved by the supervising ecologist to a suitable safe location;
 - ◆ If amphibians are identified on site and there is any suspicion that these may be great crested newts, works will cease immediately, and a qualified ecologist contacted;
 - ◆ Any features such as rubble / log piles, brash, sheet materials, etc, which could be used for shelter by reptiles or amphibians will be removed by hand under the supervision of the ecologist;
 - ◆ If burrows are encountered, these will be investigated by an ecologist using an endoscope, a camera trap may be set to identify if the burrow is in use and the nature of the use;
 - ◆ If active, burrows will be excavated by hand, by the ecologist, to the extent of the burrow.
 - ◆ If water voles are identified, NRW will be notified. Water voles are a licensable species and a course of action will need to be decided upon, which could include further surveys and EPS Licensing.



12 NUISANCE EFFECTS ON NEIGHBOURS

12.1 SENSITIVE RECEPTORS ADJACENT SITE

12.1.1 There are no residential properties adjacent to the site. The nearest residential property to the site is Lilac Grove, approximately 60m NE. This is screened from the site by a section of woodland. There is extensive residential development within the wider environment. Nuisance to residential properties is possible.

12.1.2 There is potential for noise from the works to impact species in the woods bordering the northern site.

12.2 NOISE AND VIBRATION:

12.2.1 Risks:

- ◆ Disturbance to residents and businesses from construction noise and vibration – particularly dynamic compaction operations.
- ◆ Disturbance to residents and businesses from dust and odours.
- ◆ Local authority enforcing a prohibition notice on the site or a particular activity due to excessive noise or vibration.
- ◆ Disturbance to the ecology of the surrounding area due to excessive noise, vibration, and dust.

12.2.2 The following construction activities have potential to generate excessive levels of noise:

- ◆ The movement of plant around the site, particularly excavators and dumpers.
- ◆ Dynamic compaction activities.
- ◆ Lifting activities.
- ◆ Excavation of materials across the site.
- ◆ The running of generators to power the site compound, pumps and other static items of plant.

12.3 CONTROLS:

12.3.1 The following control measures will be put in place with the aim of achieving this:

12.4 WORKING HOURS

12.4.1 A key method of limiting nuisance is the restriction of working hours. All works and ancillary operations, which are audible at the site boundary, shall be carried out only between the following hours:

Table 6: Working Hours for the Site.

Day	Working Hours
Monday - Friday	07:30 – 18:00
Saturday	07:30 – 13:00.
Sundays and Public Holidays	At no time unless agreed with LA EHO

12.4.2 Deliveries to and removal of plant, equipment, machinery and waste, including soil, from the site must also only take place within the permitted hours detailed above.

12.4.3 It is unlikely that night works will be required as part of the works. If it is required to continue construction works during night working hours (8 pm to 6 am), Dalziel Foods will consult with Newport City Council.



12.5 MITIGATION MEASURES FOR NOISE AND VIBRATION:

12.5.1 The following shall be put in place to further mitigate the impact of noise and vibration:

- ◆ The works will adhere to BS 5228: parts 1 and 2, as well as BS 7385: parts 1 and 2.
- ◆ All equipment will be turned off when not in use.
- ◆ All significant noise sources will be enclosed using localised screens and hoardings. If this is not possible, consideration will be given to protecting the receptor using localised screening. Pumps/generators etc must be at least 25m away from sensitive receptors.
- ◆ Where possible loading and unloading shall be carried out away from noise sensitive areas and shall be limited to working hours.
- ◆ Acoustic covers to engines shall be kept closed at all times during operation.
- ◆ Materials shall be lowered where possible and not dropped. The surfaces onto which the materials are being moved shall be covered by resilient material.
- ◆ Plant known to emit noise strongly in one direction shall be orientated so that the noise is directed away from noise sensitive receptors.
- ◆ It will be ensured that all plant is regularly maintained to ensure sound reduction is still effective.
- ◆ Where reasonably practicable, plant and/or methods of work causing significant levels of vibration at sensitive premises, shall be replaced by other less intrusive plant and/or methods of working.
- ◆ All audible warning systems and alarms shall be designed, where reasonably practicable, to minimise noise, non-audible warning systems shall be utilised in preference.
- ◆ The use of vibrating compaction equipment shall be restricted in the vicinity of dwellings and other buildings. The exact exclusion distance will be dependent on the equipment to be used, the geomorphology and topography of the area.
- ◆ Toolbox talks (TBTs) will be undertaken to advise all operatives of the potential issues of the generation of noise and vibration, as well as the mitigation measures outlined in this document. Records of these talks will be kept in the site office.

12.6 MONITORING OF NOISE AND VIBRATION:

- 12.6.1 Monitoring will be carried as a reaction to complaints or concerns from the project team to ensure that the noise generated by the site falls within the agreed acceptable limits as per BS4142 and BS5228 methodologies.
- 12.6.2 Noise measurements if required will be undertaken in accordance with BS 7445: 1991 – Description and Measurement of Environmental Noise.
- 12.6.3 Monitoring shall be carried out using a minimum of a Type II noise meter complying with IEC 61672-1:2003. The meter used will have been serviced and calibrated by the manufacturer within the last 12 months.
- 12.6.4 The meter will be set up at the receptor deemed most at risk during the activity being undertaken at the time. This is usually the receptor closest to the works (the house 100m from the bridge abutment), however this



may vary depending on the nature of the receptor.

- 12.6.5 Noise meter set up typically involves positioning the meter on a stand of approximately 1.2m in height near the receptor. The meter is placed at least 2m from any reflective surface (such as a wall or fence) in order to prevent inaccurate readings from sound reflection.
- 12.6.6 The following parameters shall be reported:
- ◆ LAeq (dB)
 - ◆ Peak (dB)
 - ◆ LA01 (dB)
- 12.6.7 If noise levels are perceived as being unreasonable or if there are complaints regarding noise works will cease and alternative methods of works will be agreed with the LPA and the Project Manager before recommencing works. To ensure there is compliance with this, a permit to proceed shall be issued for all night working/ works that are likely to generate elevated noise levels.

12.7 VIBRATION

- 12.7.1 The vibration meter will be set up at the same location as the noise meter. Neither device interferes with the other, so results for both are uninfluenced by this.
- 12.7.2 Vibration levels will likely be measured using the following equipment:
- ◆ M800 Seismograph, with real time monitoring via the web-service.
 - ◆ Tri-axial orthogonal geophone pack.
- 12.7.3 As with the noise meter, the vibration meter used will have been serviced and calibrated by the manufacturer within the last 12 months.
- 12.7.4 Installation requires the weighing down of the geophone pack using a weight such as a sandbag, ensuring that the pressure pads are all in contact with the ground below.

12.8 SITE LIGHTING:

- 12.8.1 Due to its potentially damaging effects, Beaver Bridges are committed to prevent or reduce all forms of light pollution where possible.
- 12.8.2 It is unlikely that night works will be required as part of the works. If it is required to continue construction works during night working hours (8 pm to 6 am), Newport City Council will be contacted in advance.
- 12.8.3 The following measures will be implemented for site lighting:
- ◆ Safety lighting within pedestrian areas at site compounds – Low level, full cut-off lighting fixtures will be used. These will be PIR controlled and hence will only operate during periods when the site is operational.
 - ◆ Task lighting at work sites (low level task lighting) – This will be localised and will be directed so that it is focused onto works areas, with minimal light spill:
 - ◆ Vehicle Headlights – Vehicle use will be minimised after dark.

12.9 VISUAL INTRUSION:

- 12.9.1 The site is overlooked from many vantage points and hence there is little which can be done regarding visual intrusion. Site compounds will be located remote from residential properties and will be hoarded using Beaver Bridges branded hoarding:



- ◆ Where appropriate, fencing will be utilised to screen the works from the general public.
- ◆ If required, dust control will be implemented, particularly during periods of prolonged dry weather.
- ◆ Machinery shall be parked away from residential and commercial properties overnight.
- ◆ The site shall be kept litter free; all waste will be returned to the site compound for re-use or disposal and materials shall be stored in a well-ordered manner.

12.10 TRAFFIC DISRUPTION AND CLEANLINESS OF SURROUNDING HIGHWAYS:

- 12.10.1 Loads to the site will be booked in advance with the Site Manager to avoid multiple vehicles arriving at the same time. During the delivery of aggregates, it will be requested that vehicles arrive at 20 minute intervals to allow vehicles to be tipped and aggregates to be laid, prior to the next vehicle arriving.
- 12.10.2 A Traffic Marshal will be appointed to meet deliveries to the site. They will take the delivery note and guide the vehicles to the tipping point.
- 12.10.3 HGVs will not be permitted to track onto soil surfaces, with the works phased as described above, to avoid this. It is likely that stone dust from sub-base materials could be dragged from the site onto Afon Ebbw Way. This will be monitored and a road brush will be on standby to clean the road, as required. If this is found to be a particular problem, jet washing will be implemented at the site entrance.

13 CONTROL OF EMISSIONS TO AIR:

13.1 DUST AND PARTICULATES:

- 13.1.1 Dust emitted from site can cause severe nuisance to surrounding residents, businesses, and facilities. In its simplest form it can cause additional cleaning work and reduce resident's quality of life but in its most severe form it can have acute effects on people's health especially those suffering with respiratory conditions such as asthma. Dust can also carry contaminants which have great impacts on health.
- 13.1.2 Dust can have an impact on the ecology of the area, blanketing vegetation, preventing it from transpiring and reducing food sources for animals and invertebrates.

13.2 RISKS:

- ◆ Dust emitted from earthworks operations.
- ◆ Dust emitted from vehicle movements.
- ◆ Dust emitted from cutting operations.
- ◆ Dust emitted from materials handling.
- ◆ Particulates emitted from vehicles and plant exhaust systems.

13.3 CONTROLS FOR MATERIAL HANDLING

- ◆ Fine, dry materials shall be stored within buildings or with adequate protection from the wind and dampened, shrouded, or screened in dry weather.
- ◆ Stockpiles shall be positioned as far as is reasonably practicable away from residential areas, places of public access or other sensitive receptors.
- ◆ Stockpiles shall be maintained with shallow slopes to prevent slippages and shall be seeded where appropriate to prevent windblown dust.



13.4 CONTROLS FOR VEHICLE & PLANT MOVEMENT

- ◆ Working area shall be dampened down in dry weather conditions, using water from grey sources where possible. Damping down water should be applied using a spray bar attached to the tanker as opposed to a nozzle. Nozzles over apply water mobilising suspended solids and generating silt contaminated run off. Nozzles also use much more water than spray bars meaning smaller areas can be treated between re-fills of the bowser and hence damping down efficiency is reduced.
- ◆ General site traffic shall be restricted to watered or paved roads.
- ◆ All vehicles and plant on site shall be fully serviced and maintained, so that they do not emit smoke and particulates. If vehicles produce black smoke they will be removed from operation and sent for service.
- ◆ No machinery shall be left running when not in use.
- ◆ Site speed limits shall be enforced and speeds limits within site boundaries shall be reduced in dry weather to reduce dust generation.

13.5 CONTROL OF SITE OPERATIONS

- ◆ Equipment likely to generate excessive quantities of dust shall be enclosed, shielded, fitted with dust extractors, filters, and scrubbers.
- ◆ Sheeting of vehicles: all HGVs carrying loose material capable of spillage or which has the potential to give rise to dusty emissions from the vehicles during transit shall be sheeted. This requirement shall be enforced by the *Contractor* and any transgressions shall be recorded in a logbook by the *Contractor* with details of measures to be taken to prevent further occurrences. The logbook shall be available for inspection by the *Project Manager* and local authority at any time during working hours.
- ◆ Drop heights shall be kept to a minimum during the movement of materials.
- ◆ Where necessary, dust suppression will be utilised. This will take the form of a towed water bowser fitted with a spray nozzle which will be driven around the site. Care will be taken to ensure the damping down will cover the haul roads and any area where earthworks are in operation.
- ◆ Prevention of wind-blown dust arising from storage mounds: storage mounds shall be profiled to reduce erosion where the nature of the material could lead to it being rain washed or windblown. Mound surfaces shall be kept sufficiently damp to prevent windblow unless and until the surface is spray sealed or stabilised by means of vegetation. Materials that have the potential to give rise to dust emissions shall be stored as far away from the boundaries of the site as is reasonably practicable. Long-term stockpiles shall be seeded or sealed as appropriate.
- ◆ If equipment which produces excessive dust (concrete cutting and scabbling) does not have suppression equipment fitted, a water mist shall be used to damp down dust (handheld plant sprayers can be used for this purpose).
- ◆ Spraying of paints and chemicals shall only be carried out in wind free conditions.
- ◆ Visual monitoring for dust shall be undertaken daily during periods of dry weather, observations made shall be actioned immediately.
- ◆ A 'dry' wheel wash will be installed as minimum.

13.6 MONITORING OF EMISSIONS TO AIR:

13.6.1 Visual inspections shall be undertaken for airborne dust during dry periods.

13.6.2 A logbook shall be kept available for inspection by the local authorities, in order to record the following matters:

- ◆ Any complaint relating to emissions alleged to be due to construction activity received from a local resident or business including date and nature of the complaint and any measures taken as a result of that complaint.



- ◆ The date and vehicle registration number of any construction vehicle that is observed carrying material that has the potential to release dust during transit and is not covered. Details of measures taken to prevent further occurrence shall be included.

13.6.3 If it is deemed that there is a risk to health or of nuisance to surrounding residents, monitoring shall be carried out using dust deposition gauges situated on the downwind site boundary.

14 EQUIPMENT MAINTENANCE

- ◆ Daily checks will be undertaken by plant operators prior to using the equipment. This includes checks for fuel and oil leaks, fuel and coolant levels, hydraulics, and safety equipment. These checks will include a written check list which will be kept on file in the site office.
- ◆ All plant and equipment will be serviced as per the manufacturer's instructions, but at minimum annually. Service documentation will be kept on file in the site office.
- ◆ Certification will be maintained for any lifting equipment used on site and refreshed as required to ensure certification is current and valid. This documentation will be stored within the site office.
- ◆ All electronic equipment used on site, including within the site office, will undergo portable appliance testing (PAT) to ensure safety of use.
- ◆ Any equipment brought into site will be inspected prior to its arrival to ensure that it is in good working order.
- ◆ A designated maintenance area will be set up and utilised for any work that needs to be undertaken on plant. This area will be equipped with spill kits and plant nappies to prevent ground and surface water contamination.

15 TRAINING

15.1.1 All staff involved with the project shall be trained to a level to ensure that they are more than capable of carrying out their duties with minimal environmental impact. Training will be undertaken in the following forms:

15.2 SITE INDUCTION:

15.2.1 **ALL** personnel on the project shall undergo a site induction. This induction will include information on the environmental aspects of the works, as described within this document.

15.2.2 Site Induction will include a briefing on the importance of the environmental / ecological features of the site, including the possible presence of reptiles, and mammals.

15.3 FORMAL TRAINING:

15.3.1 Only personnel holding a recognised site safety certificate such as Construction Skills Certification Scheme (CSCS) will be allowed to work on the site.

15.4 TOOLBOX TALKS:

15.4.1 Environmental Risk Assessments shall be carried out as part of the Method Statement process. The outcome of these risk assessments will be included within the Method Statement Toolbox Talk.



15.5 INFORMAL ONE ON ONE INSTRUCTION:

- 15.5.1 This shall be undertaken by the ECoW during site inspections and day to day visits to site. Personnel will be given instruction on specific aspects of the works, in small groups. If required supporting material shall be utilised such as manufacturer's instructions or company handouts.