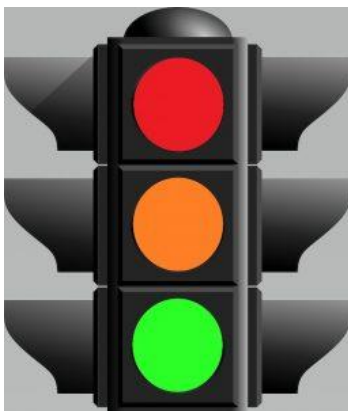


**CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN (CEMP)
KEY SHEET REFERENCES**

Dolgarrog Pipe Bridge

SCHEME DETAILS			
Project Name	Dolgarrog Pipe Bridge	Project Manager	John Gregson
Project Code	TBC	Site Manager	Rhys Lewis
Date completed / last reviewed	7 th May 2021	Environmental Scientist	N/A
Workstream:	DCWW Infra		
Scheme Description	Upgrading of Dolgarrog Pipe Bridge Deck and Pipe Supports		

CIRCULATION	
For Environmentally Sensitive Schemes	 <p>NOTE* this scheme is of LOW environmental sensitivity.</p>

PART 1: ENVIRONMENTAL & PLANNING CHECKS

- REFER TO PRE CONTRACT INFORMATION AND DESK TOP STUDIES FOR FURTHER DETAILS ON ENVIRONMENTAL IMPACTS OF THE ACTIVITIES LISTED BELOW ALONG WITH THE REQUIRED PREVENTATIVE MEASURES
- ALL WORKS SHOULD BE IN ACCORDANCE WITH LEWIS's, 'ENVIRONMENTAL PROTECTION DURING CONSTRUCTION HANDBOOK'.
- ENVIRONMENTAL PLAN REFERENCES ARE FROM THE INFORMATION PROVIDED WITHIN THE PRE-CONSTRUCTION INFORMATION RECEIVED FROM THE CLIENT AND LEWIS ENVIRONMENTAL PROTECTION DURING CONSTRUCTION HANDBOOK
- KEY:
- LCE Environmental Protection During Construction Handbook (L1)
- LCE Waste Management Handbook (L2)
- DCWW CAF317 Enabling Checklist (CAF)

ENVIRONMENTAL CONSTRAINTS, DETAILS & ACTIONS	APPLICABLE? Y/N	ENV PLAN REF
Known protected species within / adjacent to the site. Tool Box Talk No. E08	Y	L1 CAF
Refer to 'Environmental Protection During Construction Handbook' (section 5) for further information		
Biodiversity data search requested by G. Smith (DCWW Environment Manager). Remediation / reparation works to be undertaken by Lewis CE who will identify and mitigate ecological risks as far as practically possible		

ENVIRONMENTAL CONSTRAINTS, DETAILS & ACTIONS	APPLICABLE? Y/N	ENV PLAN REF
<p>on site. There is a possibility that remediation / reparation works will require removal of vegetation on both the east and west approaches, for vehicle/equipment access. Site team to received detailed TBT on protected species prior to commencing minimal vegetation clearance to restricted access areas. Use hand tools wherever possible.</p>		
<p>Designated sites within / adjacent to the site Tool Box Talk No.</p>	Y	L1 section 3 CAF
<p>INTERNATIONAL SITES: Dolgarrog Pipe Bridge is within 10km of 2no. Special Area of Conservation (SAC) sites. Localised areas of Mwyngloddiau Fforest Gwydir / Gwydir Forest Mines are situated approximately 5km south of Dolgarrog Bridge. Eryri / Snowdonia is situated approximately 2km west of the site. The proposed works are to be undertaken on an existing DCWW bridge and 2no. existing above ground DCWW potable water pipelines. No source-receptor pathways occur as part of proposed works. The 2no. SAC sites are not hydraulically connected to the Dolgarrog Bridge site. The works will not affect an International Site.</p> <p>NATIONAL SITES: Dolgarrog Pipe Bridge is within 2km of 1no. National Nature Reserve (Coed Dolgarrog) and 4no. Sites of Special Scientific Interest (Coed Dolgarrog, Morfa Uchaf Duffryn Conwy, Plas Maenan, Mwyngloddiau A Chreigian Gwydir). Coed Dolgarrog is situated approximately 1km west of the site. Plas Maenan is situated approximately 600m east of the site. Morfa Uchaf is situated immediately north / adjacent to the site. Dolgarrog bridge seems to form the boundary for the Morfa Uchaf SSSI site. Proposed works are likely to be hydraulically connected to Morfa Uchaf with source-receptor-pathway. SSSI assent required from NRW, DCWW to advise party responsible for this. However, the proposed nature of the works over the pathway is unlikely to cause any detrimental impact to the immediate or surrounding area.</p> <p>Dolgarrog Bridge is situated within a Registered Landscape of Outstanding and of Special Interest in Wales (Lower Conwy Valley HLW (Gw) 4). DCWW to advise on liaison with alliance partner heritage specialist. Remediation / reparation works being undertaken on existing bridge superstructure and decking. As such, landscape site unlikely to be affected.</p>		
<p>Known invasive plants on site Tool Box Talk No. E09</p>	N	L1 section 6
<p>Refer to 'Environmental Protection During Construction Handbook' (section 6) for further information.</p>		
<ul style="list-style-type: none"> There does not appear to be any invasive species present in the immediate working area, however, operation teams will be briefed on the potential for invasive species to be present in order that the risk can be quickly identified and managed. 		
<p>Trees on site to be protected / retained during works Tool Box Talk No E10</p>	N	L1 section 7
<p>There are NO Tree Protection Orders (TPO's) in place for this site however; Damage to trees MUST be avoided regardless. Refer to 'Environmental Protection During Construction Handbook' (section 7) for further information.</p>		
<ul style="list-style-type: none"> Observe NJUG VOL 4 and BS5837 guidelines for all trees. Observe root protection zones at all times. It is not envisaged during the construction phase that any further trees will be affected. Do not store plant and equipment under trees. Ensure specialist working methods are carried out & that all site staff aware of the working methods 		
<p>Hedgerows to be removed during works Tool Box Talk No. E10</p>	N	L1 section

ENVIRONMENTAL CONSTRAINTS, DETAILS & ACTIONS	APPLICABLE? Y/N	ENV PLAN REF
		8
<p>There are no Hedges to be removed however, there will be some trimming of shrubs required. BEFORE any trimming takes place ensure a non-intrusive check is carried out for any nesting birds or any other wildlife</p>		
<p>Archaeological mitigation is required Tool Box Talk No.</p>	N	L1 section 4
<p>No archaeological interests have been identified on site.</p>		
<p>Dolgarrog Bridge is not near any recorded heritage assets.</p>		
<p>Conservation areas / listed buildings present around the area of works Tool Box Talk No. 15/23</p>	N	L1 section 4
<p>Dolgarrog Bridge is not close to any listed buildings. Dolgarrog Bridge is not close to any scheduled monuments.</p>		
<p>Landscaping requirements on completion of these works Tool Box Talk No.</p>	N	N/A
<p>Dolgarrog Bridge is not situated within a designated landscape. Boundary of 1no. Wales National Park (Snowdonia) is situated approximately 800m west of the bridge.</p>		
<p>Community Issues and Public Rights of Way affected by the works Tool Box Talk No.</p>	N	N/A
<p>DCWW own the bridge, and the land to the east and west of the site. No negotiations / permissions from landowners necessary to undertake works.</p> <p>Dolgarrog Pipe bridge is a permissible Public Right Of Way (PROW). Bridge crossing is currently closed and will remain closed until remediation / reparation works have been undertaken and the bridge is deemed safe for the public. As such, the proposed works will not affect a PROW as bridge is currently closed. Lewis will secure the access to the bridge for the duration of the works and erect appropriate signage to notify members of the public of the works and that no access to the bridge is permitted.</p>		
<p>Known contaminated soil on the site Tool Box Talk No. 23</p>	N	L1 section 12
<p>Refer to 'Environmental Protection During Construction Handbook' (section 12) for further information.</p>		
<p>Geo-environmental appraisal / preliminary risk assessment deemed unnecessary. This project includes remediation / reparation works on an existing 105m long pipe bridge (Dolgarrog Bridge, Conwy) and 2no above ground potable water mains (450mm diameter & 600mm diameter). The proposed works will not require any excavation into the existing ground, or earth re-profiling.</p>		
<p>Waste Management Tool Box Talk NoE11</p>	Y	L1 section 13
<p>Waste arisings from proposed remediation / reparation works likely to include: defective timber decking boards (approx. 320 boards, strap ties associated with securing timber decking boards, defective corroded parapet railings (length currently unknown), Krafton board offcuts, metal offcuts, Galvafruid paint tins, potential for minor vegetation</p>		

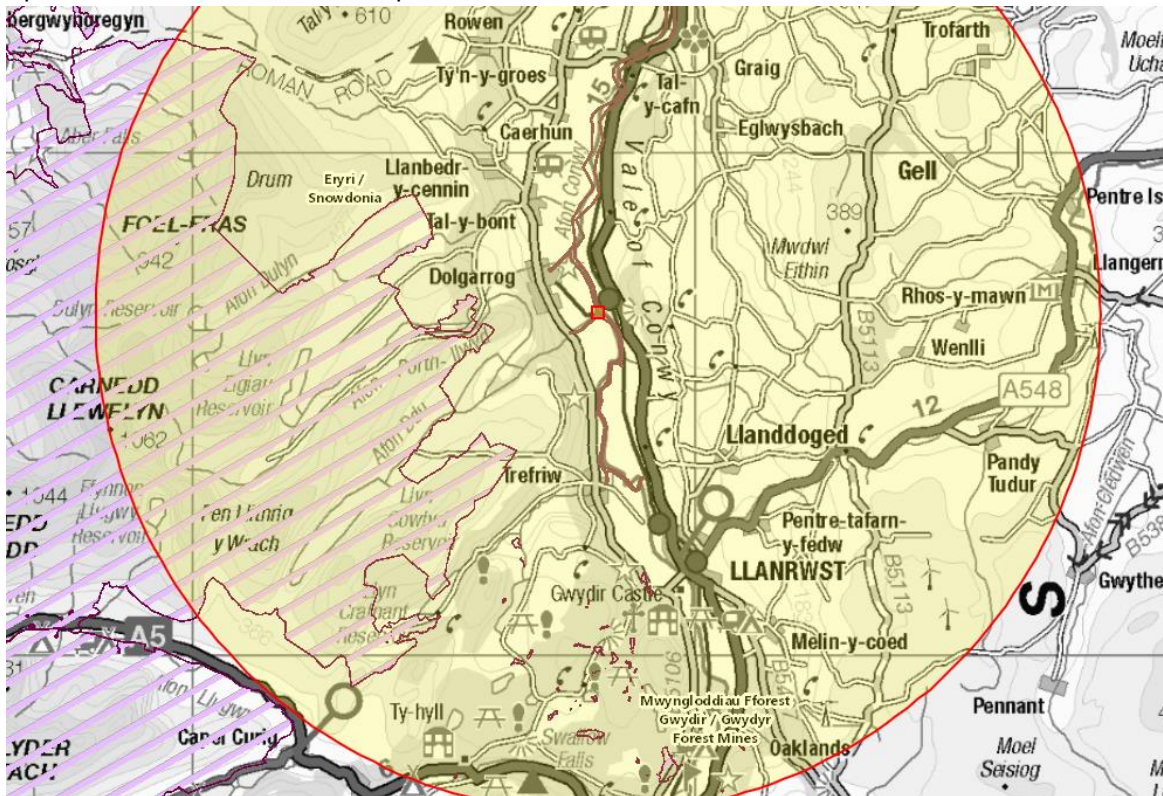
ENVIRONMENTAL CONSTRAINTS, DETAILS & ACTIONS	APPLICABLE? Y/N	ENV PLAN REF
<p>clearance and minor ground preparation for compound & machinery/equipment storage. Dedicated skips will be provided to allow for the different waste streams and sent to local recycling facilities. No muck/soil is envisaged being removed from site. A mixed waste skip will be provided for canteen waste that will be kept to a minimum. All waste facilities will be stored in the satellite compound located approx. 50m from the river embankment. Where possible, skip will be covered.</p>		
<p>Area of works are within Water Source Protection Zone Tool Box Talk No.</p>	N	N/A
Not Applicable		
<p>Site drainage Works Tool Box Talk No.</p>	N	N/A
Not Applicable		
<p>Watercourses – Protection during construction Tool Box Talk No. E03, E05, E06</p>	Y	L1 section 10
<p>Refer to ‘Environmental Protection During Construction Handbook’ (section 10) for further information.</p> <ul style="list-style-type: none"> The site (i.e. Dolgarrog Bridge) is directly above a main river (i.e. River Conwy) with tidal influence. Burroughs have contacted NRW regarding the need for a FRAP. A FRAP is not required for the proposed works, as works requiring a Marine Licence are exempt from providing a FRAP. No work planned to take place directly in the water course but works around this area could affect Fuel storage area to be located a minimum of 50m from the river. Silt netting to be erected where site run off could find its way to the river bank. Ensure all plant and equipment in in good serviceable condition with not obvious signs of liquid leakage. Spill kits to be available on site and at the work location suitable for the type of work being carried out Spill response training to be given to the site teams Assess the impact of rain water run-off. Install silt netting where required to prevent run off from directly entering the watercourse. Spill response TBT to be given. Specialist Emergency Spill response support 24hours call out available. Emergency Spill Response plan established and briefed to all personal No chemical storage other than fuel is envisaged. Visqueen covered crash deck and surrounding netting will be installed under the works to prevent falling debris / materials / tools from entering the watercourse. 		
<ul style="list-style-type: none"> NO dewatering , pumping of any kind is envisaged throughout this scheme. 		
<p>Marine Consents Tool Box Talk No.</p>	Y	L1 section 3 CAF
<p>The site (i.e. Dolgarrog Bridge) is directly above a main river (i.e. River Conwy) with tidal influence. Burroughs have contacted NRW regarding the need for a FRAP. A FRAP is not required for the proposed works, as works requiring a Marine Licence are exempt from providing a FRAP. This CEMP/PPP will form part of the Marine License application.</p>		
<p>Noise Level Restrictions Tool Box Talk No.</p>	Y	L1 section 14
<p>Proposed remediation / reparation works will likely impact noise and vibration in close proximity to the bridge, as works are being undertaken on the existing steel superstructure however this is likely to be minimal and not significantly impact the local surroundings adversely.</p>		

ENVIRONMENTAL CONSTRAINTS, DETAILS & ACTIONS	APPLICABLE? Y/N	ENV PLAN REF
Odour/Dust issues associated with this scheme Tool Box Talk No.	N	L1 section 14
Not anticipated.		
Visual Intrusion Tool Box Talk No.	N	
Not Applicable		
The works have been subject to planning permission Tool Box Talk No.	N	
Proposed remediation/repair works WILL require planning permission. Local Authority for Dolgarrog is Conwy Council. DCWW TO ADVISE ON PLANNING PROGRESS AND DEVELOP WITH LA		
Flood Risk:	Y	CAF
Dolgarrog Bridge and surrounding embankments are situated within a Zone C2 flood zone. Remediation/repair works being undertaken on the bridge will be elevated 4-6 metres above the water level and as such are likely to remain unaffected. Lewis CE are aware of the risk associated with C2 flood zone and plan to locate the site compound and equipment / machinery storage accordingly. DCWW to advise on Flood Consequences Assessment (FCA) and party responsible for obtaining FCA.		

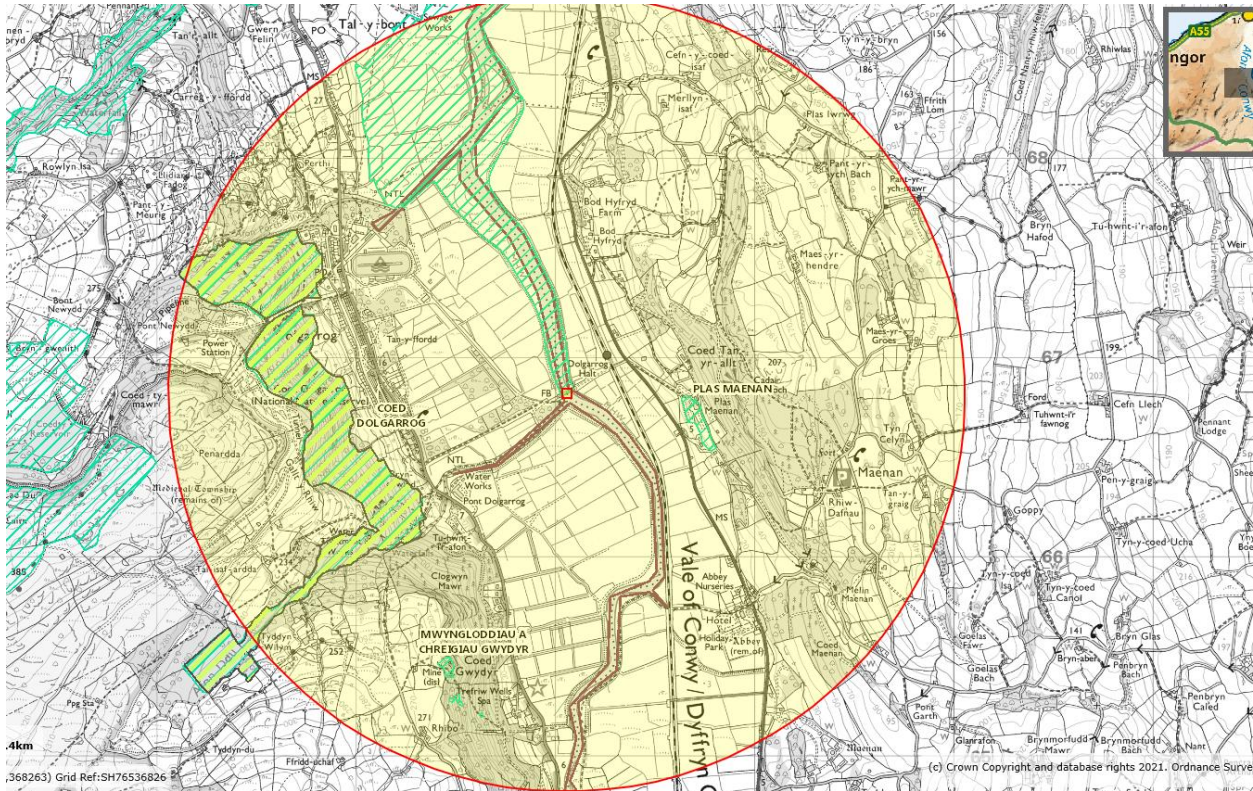
Appendices

- LCE Environmental Protection During Construction Handbook (L1)
- LCE Waste Management Handbook (L2)
- DCWW CAF317 Enabling Checklist (CAF)
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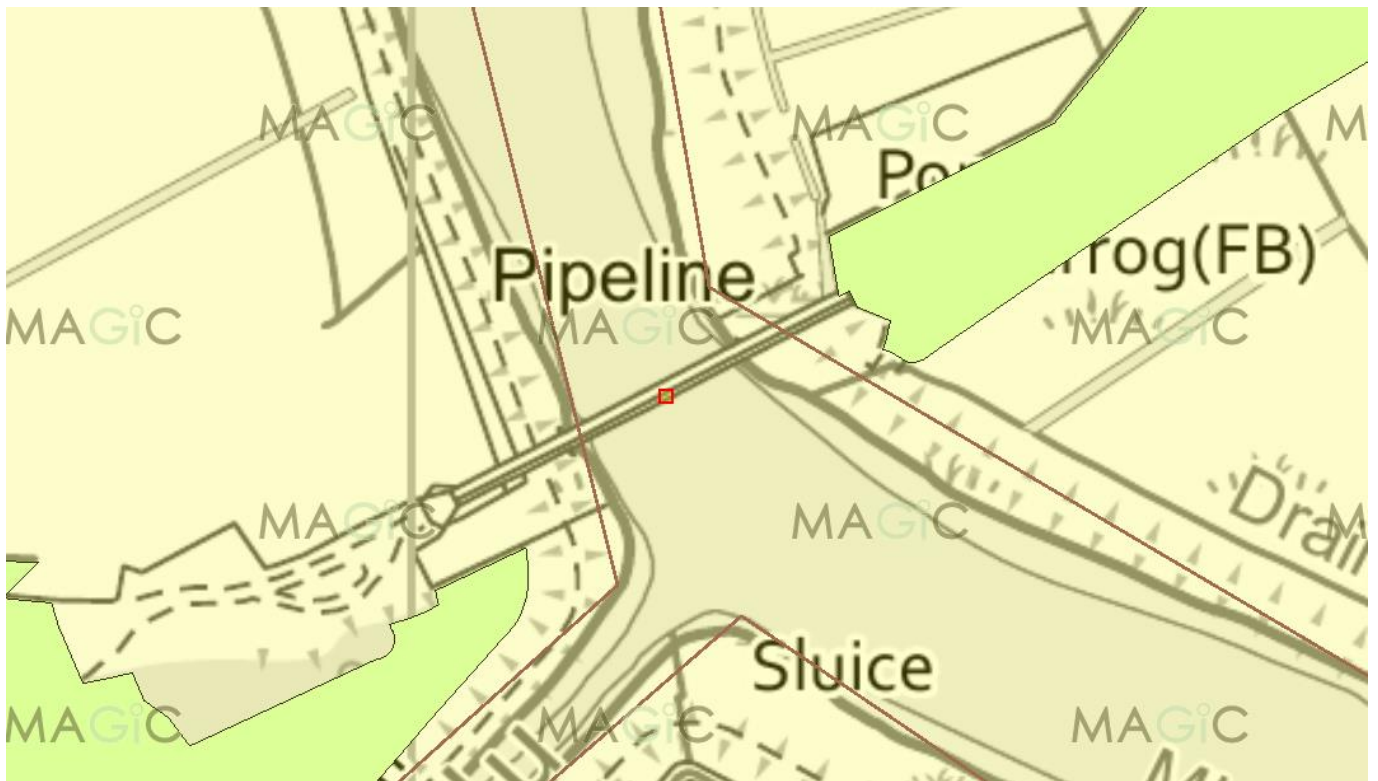
Special Area of Conservation Map



Special Area of Conservation Map



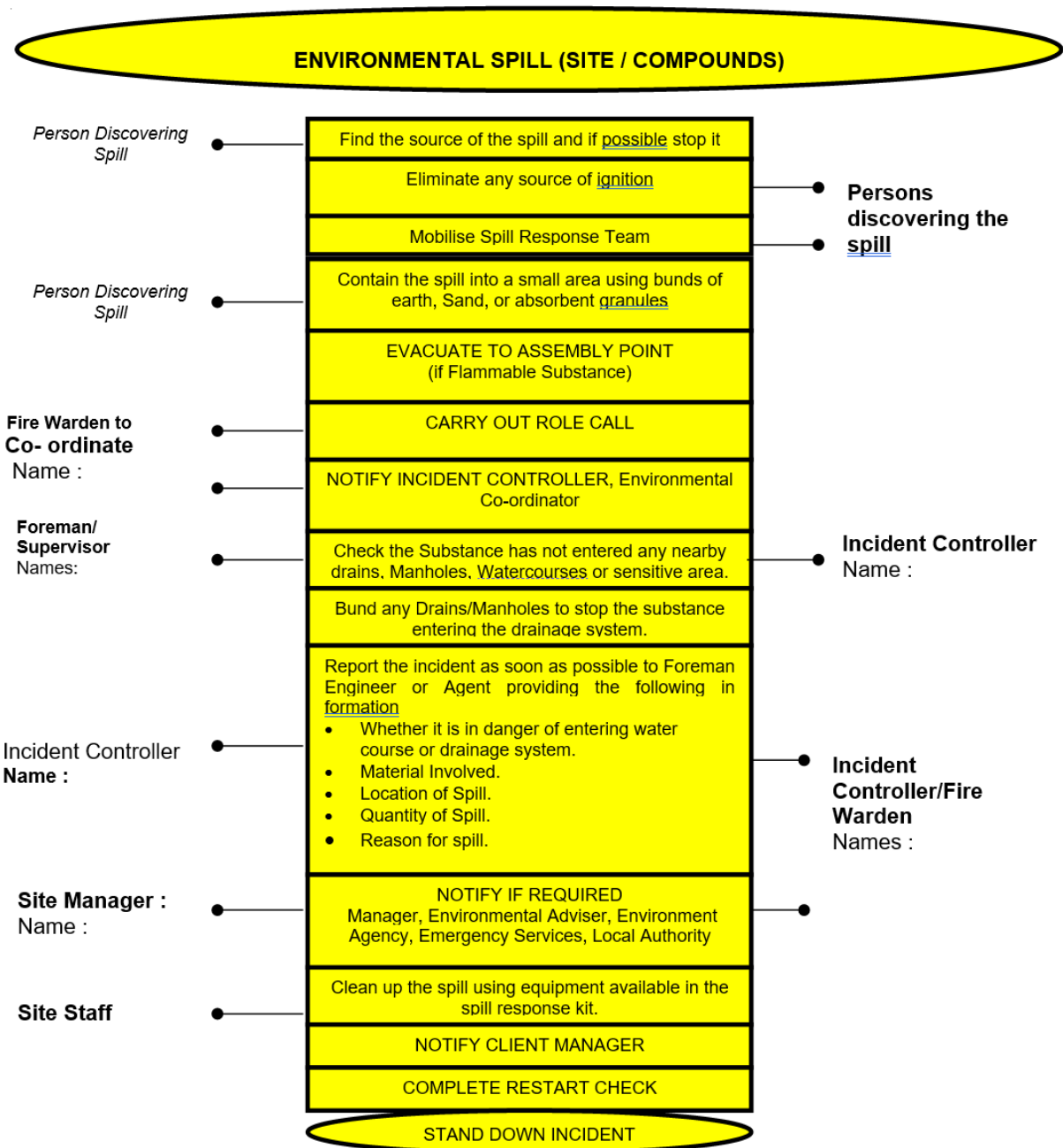
Site Location



Dolgarrog Pipe Bridge



Example Environmental Spill Response Procedure



PART 2: CEMP CHECKLIST

TO BE USED BY THE SITE MANAGER/PROJECT ENGINEER AS A CHECKLIST AND REVIEWED AT PRE-COMMENCEMENT MEETING

SITE MANAGER TO IDENTIFY WHERE ITEMS ARE APPLICABLE AND RECORD SPECIFIC DETAILS WHERE APPROPRIATE

STORE IN THE SITE ENVIRONMENTAL FILE (SECTION 1) TOGETHER WITH ANY ENVIRONMENTAL RISK ASSESSMENTS OR METHOD STATEMENTS PRODUCED ON SITE

POINTS TO REMEMBER	RELEVANT PROCEDURES	ENV PLAN REF	APPLICABLE TO SCHEME?	RECORD SPECIFIC DETAILS e.g. arrangements for preventing mud transfer, dewatering arrangements, nuisance mitigation measures
Plant/Vehicle Movements				
Ensure vehicles, plant and equipment is fit for purpose and maintained.	Plant & Equipment Procedures to be followed Pollution Prevention Procedure to be implemented Emergency Pollution Incident Response Procedure to be posted along with contact phone numbers	L1 sections 2, 11	Yes	
Arrangements should be in place to prevent mud transferring to the highway and for highway/access track cleaning if muddy	Pollution Prevention Procedures to be in place. Haul roads to be sub based. Arrange for regular visits of road sweeper if required	L1 sections 2, 11, 10, 15	Yes	
Arrangements should be in place for vehicle wash down including containment and appropriate disposal of wash down water.	Pollution Prevention Procedure Waste Management Handbook	As above	Yes	
Areas should be identified for fuel and chemical storage and refuelling with appropriate bunding provided	Environmental Protection During Construction Handbook Pollution Prevention Procedures Emergency Incident Response Procedures	L1 sections 2, 10, 11	Yes	
There must be a spill response plan in place, with spill kits and drip trays available in the working areas and the site compound.	Pollution Prevention Procedure	L1 section 11	Yes	
There must be arrangements in place for emptying drip trays	Pollution Prevention Procedures	As above	Yes	

Appropriate quantities of materials should be ordered and materials stored in designated areas	Environmental Protection During Construction Handbook Waste Management Handbook Pollution Prevention Procedures	L1 section 2	Yes	
Arrangements should be in place to follow the waste hierarchy where possible: prevent, reuse, recycle, or recover waste before disposal to landfill (even if no PWMP required).	Environmental Protection During Construction Handbook Waste Management Handbook	L1 section 13	Yes	
For relevant schemes there must be a site specific project waste management plan.	Project Waste Management Plan Procedure	N/A	NO	
Where hazardous wastes are produced (above 500kg in 1 year) the site must be registered as a hazardous waste site	Waste Management Handbook Waste Management Procedure	N/A	NO	
Materials to be retained/produced/managed on site must be characterised and relevant notifiable exemptions sought N.B. If seeking exemption for re-use liaise with environmental scientist beforehand to check for indirect environmental issues and existing waste exemptions registered at site.	Waste Management Handbook Waste Management Procedure	N/A	NO	
Haulier and landfill site / recycling centre must be identified	Waste Management Handbook Waste Management Procedure	N/A	NO	
Power / resources should be used appropriately to avoid wastage, e.g. use of electricity, equipment, paper and cleaning agents.	Waste Management Handbook Environmental Protection During Construction Handbook	L1 section 2	Yes	
Office waste and expired electrical equipment should be disposed of appropriately	Waste Management Handbook Waste Management Procedure	N/A	NO	
Promote good housekeeping and ensure site, plant & equipment are secure overnight	Environmental Protection During Construction Handbook	L1 section 2, 13	Yes	

Minimise nuisance (e.g. traffic, noise, dust odour, light) and disruption to local community (e.g. loss of service, loss of business) where possible	Environmental Protection During Construction Handbook Pollution Prevention Procedure	L1 section2, 14, 15	Yes	
Dust suppression facilities must be in place where appropriate	Environmental Protection During Construction Handbook Pollution Prevention Procedure	L1 section 15	Yes	
The NRW contact must be identified where working in proximity to watercourses / within floodplain and to discuss dewatering operations. N.B. If dewatering within 500m of an SAC, SPA, SSSI or within a nature conservation site an Environmental Permit may be required.	Discharge of Groundwater Procedure		Yes	
Ensure water is fully de-chlorinated before it is discharged into watercourses/drains following sterilisation of water mains	CESWI 6 th Ed, Section 7 Pollution Prevention Procedure	N/A	NO	
Concrete/ cement washout activities must be carried out in a designated bunded area away from drains and watercourses	Environmental Protection During Construction Handbook Pollution Prevention Procedure	L1 section 10, 11	NO	
Water should be used appropriately to avoid wastage, e.g. ensure taps and hoses are not left running.	Environmental Protection During Construction Handbook	L1 section 2	Yes	
Arrangements must be in place to brief site staff about environmental and third party issues (using toolbox talks and AIMS updates/alerts)	Environmental Protection During Construction Handbook	L1 all sections	Yes	