

Project No: CRMMS 020

Project Name: East Rhyl Coastal Defence

BALFOUR BEATTY UK

APPENDIX C

SUSTAINABILITY PLAN

(PRM-TF-0001d)

Template Issue Date: 10/07/2017

Template Version No: 1.0

Author: DG

Project Ref No: CRMMS 020	Issue No: 1	Issue Date: 30 March 2020	Page: 1 of 18
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1. INTRODUCTION

1.1. Purpose of plan

The purpose of this document is to define the project specific approach to the management of sustainability, environmental compliance and delivery social value outcomes of project activities.

The plan details the sustainability and environmental control measures applied to operational activities to ensure that risks are mitigated and opportunities realised.

1.2. Plan links to other sections of Project Management Plan

The overall Project Management Plan documents how all aspects of the ISO 14001 standard are addressed. Specific sections of note are:

Scope and Requirements	Section B
Project Objectives	Section C
Resources and Responsibilities	Section E
Induction, training and Briefing	Section F
Risk assessments	Section F
Compliance checks and Inspections	Section F
Communication and liaison with Interested Parties	Section F
Customer Satisfaction, Feedback and Improvement	Section E
Supply Chain Management	Section D
Documentation and Records	Section A

1.3. Relevant documents, records and plans

The table below lists existing records and plans, containing findings and recommendations, which must be considered in planning of operational activities e.g. contaminated land surveys, ecology reports, noise assessments, planning conditions, green certification pre-assessment, customer targets, work winning commitments

Pre-Construction Surveys, Records and Plans (note: Submitted as part of original planning consent; now available on the project site file)	
1	Habitat regulations screening assessment, JBA Consulting, October 2018
2	Noise and air quality assessment, JBA Consulting, 30 October 2018
3	Environmental impact assessment screening and scoping report, ER-JBA-02-00-RP-EN-0003-S4-P02, January 2018
4	Wintering bird survey, ER-JBA-02-00-RP-BD-0001-S8-P01, July 2017
5	Landscape and visual impact assessment, JBA Consulting, October 2018
6	Transport Assessment, JBA Consulting, October 2018
7	Environmental statement, ER-JBA-02-00-RP-EN-0004-A6-P02, December 2018
8	Ground investigation report, JBA Consulting, February 2018
9	Addendum to the ground investigation report, JBA Consulting, October 2018
10	Flood consequence assessment, JBA Consulting, October 2018
11	Outline construction methodology, BB, December 2018, updated March 2020

2. MANAGEMENT OF THE WORK

This section sets out the project specific actions that will be taken to meet the customer sustainability requirements and deliver against the company's sustainability strategy the Blueprint.

Sustainability data for the project is recorded and monitored through the Sustainability Portal on a monthly basis. Details on how data is captured and reported can be found in SUS-PR-0001 Sustainability Reporting Procedure.

2.1. Project Sustainability (Environmental and Social Value) Goals

The following provides a summary of the company's Sustainability (Environmental and Social Value) goals that all projects are expected to deliver:

Goals	
Blueprint – Driving efficiencies and work within environmental limits	
Zero Harm - Pollution Prevention and Environmental Compliance	
Blueprint – Healthy Communities through realising supply chain value, developing skills & talent, addressing diversity and inclusion	
<i>Note: Other blue print goals addressed in Health and Safety and customer satisfaction</i>	
Other project specific goals (please detail):	See section 6.5 of Project Management Plan

2.2. Project Sustainability Objectives and Targets

The following table provides a summary of the projects sustainability objectives and measures. The targets and management of these objectives are detailed in the sustainability action plan in Annex...:

* Project Lead to update and amend the table below with project specific objective in line with customer requirements and to use this to complete the sustainability action plan using SUS-TF-0002a. It is recommended that projects set their own targets and use the Sustainability Portal to track their performance.

Objective	What We Measure
Reduce Energy and Fuel Use	Scope 1&2 CO ₂ e emissions
Reduce Waste Generated	Waste Produced (tonnes)
Reduce Waste to Landfill	Waste Sent to Landfill (tonnes)
Reduce Mains and Abstracted Water Use	Water Usage (m3)
Produce an Involved action plan to deliver added social value	Refer to section 4 of this plan for details

2.3. Sustainability and Environmental Roles and Responsibilities

Everyone in Balfour Beatty UK has a responsibility for implementing and adhering to the principles of both the Sustainability and Environmental Policies of the company in order to effectively carry out their role.

The project management structure and responsibilities are located in section E of the Project Management Plan. This section documents who the Project Sponsor / Lead has assigned responsibilities of the both the Sustainability Co-ordinator and Environmental Management Representative roles to within the project team.

The Project Lead is responsible for assigning appropriate roles and responsibilities within the project management team that they adequately reflect the significant environmental risk and opportunities that have been identified to ensure that legal compliance obligations can be met and Balfour Beatty BMS requirements delivered.

Individual team members that sign up to projects specific sustainability and environmental roles need to be made aware that by signing the following responsibilities are confirming that they understand and accept the designated duties and responsibilities.

Sustainability Co-ordinator	
Name(s)	Chris Hull
Deputy Name(s)	Michael Heyes, Chris Roberts
Contact Number	07845 052860, 07513 484258, 07521 195712
Assigned Responsibilities	
<ul style="list-style-type: none"> Communicate sustainability good practice, case studies, innovation and targets to the project team, supply chain and wider HSES team Ensure Sustainability KPIs are reported, submitted and signed off on a monthly basis in the Sustainability Portal and are reported to the project team and customer (as required) Ensure an 'Involved' plan is in place for the project, is being followed and that the community section of the Sustainability Portal is updated on a monthly basis Ensure customers' sustainability (including social value) requirements are being met Act as the main point of contact for sustainability between the project team and the wider HSES Team 	
I confirm that I understand and accept the designated duties and responsibilities	
Designated Signature:	
I confirm that I understand and accept the designated duties and responsibilities	
Deputy(s) Signature(s):	

Environmental Management Representative	
Name(s)	Chris Hull
Deputy Name(s)	Michael Heyes, Chris Roberts
Contact Number	07845 052860, 07513 484258, 07521 195712
Assigned Responsibilities	
<ul style="list-style-type: none"> Ensure that identified operational controls for the management of environmental risks and opportunities are implemented and have the intended outcome Ensure that operational controls implemented for the management of environmental risks and opportunities are assessed, monitored and their performance reported to site / project leader Approval to assign responsibilities to a Deputy and / or Assistant Environmental Management Representative to meet Contract, Site or Project specific environmental risk and opportunities requirements Ensure that all responsibilities set out in the contract / project management plan and delegated duties letter are met 	
I confirm that I understand and accept the designated duties and responsibilities	
Designated Signature:	
I confirm that I understand and accept the designated duties and responsibilities	
Deputy(s) Signature(s):	

Environmental Clerk of Works, incl. Ecological Clerk of Works, Archaeological Clerk of Works (ACoW) and Landscape Clerk of Works (LCoW)	
Name(s)	JBA Consulting
Deputy Name(s)	JBA Consulting
Contact Number	TBC
Assigned Responsibilities	
<ul style="list-style-type: none"> Will be responsible for supporting the Balfour Beatty in ensuring that a range of environmental objectives are achieved during construction. These objectives primarily relate to biodiversity, landscape, cultural heritage, construction effects and site waste. Biodiversity: Daily checks to ensure pollution prevention measures are effective in relation to chemicals, fuels and sediment - and emergency kits are available, and staff are trained in their use. Landscape: The LCoW will be required to ensure that the potential impacts of construction on public amenity for those using the sea front are minimised - and also there is full landscape restoration when construction is complete. Cultural heritage: The ACoW will be responsible for ensuring the agreed Written Scheme of Investigation (WSI) is followed including pre-commencement investigations, monitoring and recording. Construction effects: Monitoring noise, light and potential contaminants to ensure mitigation measures are effective; and Site waste: Minimising construction waste and maximising re-use of materials. 	
I confirm that I understand and accept the designated duties and responsibilities	
Designated Signature:	
I confirm that I understand and accept the designated duties and responsibilities	
Deputy(s) Signature(s):	

3. ENVIRONMENTAL MANAGEMENT PLAN - ARRANGEMENTS FOR MANAGEMENT OF SIGNIFICANT ENVIRONMENTAL RISKS AND OPPORTUNITIES

3.1. Significant Project Environmental Risk and Opportunities

An Environmental Risk and Opportunities Assessment of site activities has been conducted and is fully documented in the Environmental and Sustainability Risk and Opportunity Register which is located in appendix 6.

The significant environmental aspects identified for this project are as follows and will be communicated in the Site Induction:

CEMP Ref.	Environmental Objective	Action Proposed	Responsibility
		BB – Balfour Beatty Environmental Clerk of Works (ECoW), Ecological Clerk of Works (EcCoW), Archaeological Clerk of Works (ACoW) and Landscape Clerk of Works (LCoW) as required.	ECoW, EcCoW, ACoW and LCoW
		<i>Biodiversity & Nature Conservation</i>	
BN1	Prevent the damage or degradation to habitats within a direct proximity of the construction site. Prevent direct damage to habitats	Measures would be undertaken to reduce risks of pollution and run-off following CIRIA Guidance: <i>Control of water pollution from construction sites. Guidance for consultants and contractors.</i> Any chemical, fuel and oil stores will be located on impervious bases within a secured bund with a storage capacity 110% of the stored volume. Biodegradable oils and fuels should be used where possible. Drip trays will be placed underneath any standing machinery to prevent pollution by oil/fuel leaks.	BB supported by ECoW & EcCoW

CEMP Ref.	Environmental Objective	Action Proposed	Responsibility
		BB – Balfour Beatty Environmental Clerk of Works (ECoW), Ecological Clerk of Works (EcCoW), Archaeological Clerk of Works (ACoW) and Landscape Clerk of Works (LCoW) as required.	ECoW, EcCoW, ACoW and LCoW
	in Liverpool Bay SPA or Dee Estuary SPA via pollution and run-off.	Where practicable, refuelling of vehicles and machinery should be carried out on an impermeable surface in one designated area well away from any watercourse or drainage (at least 10m). Emergency spill kits will be available on site and staff trained in their use. Operators should check their vehicles on a daily basis before starting work to confirm the absence of leakages. Any leakages should be reported immediately. Daily checks should be carried out and records kept on a weekly basis and any items that have been repaired/ replaced/ rejected noted and recorded. Any items of plant machinery found to be defective should be removed from site immediately or positioned in a place of safety until such time that it can be removed. Working areas to be clearly marked and regularly checked by EcCoW	
BN3	Prevent the spread of the non-native invasive barnacle <i>Austrominius modestus</i>	Any timber groynes that are removed shall be stored above the high-water mark prior to disposal.	BB supported by ECoW & EcCoW
		<i>Landscape and Visual</i>	
LV1	Mitigate against visual effects from Marine Drive/ East Parade.	To minimise the impacts of noise, dust and light spill, the compound perimeters will consist of secure solid faced hoarding as set out in the outline construction methodology. Elsewhere to mitigate against visual effects on Marine Drive/ East Parade and adjacent receptors, visually permeable construction site hoarding (i.e. Heras fencing) will be considered in key locations to prevent screening of sea-views.	BB supported by ECoW
LV2	Reinstatement of site to pre-construction conditions on completion of works.	Precondition surveys undertaken prior to commencement of works would be used as a record for reinstatement. All areas of land within the site temporary occupied during the construction phase would be reinstated to the pre-construction condition or that agreed with Denbighshire County Council. This would include reinstatement of Marine Promenade, the site compounds, the access ramp to the beach, and the site entrance. The main compound area would be reinstated to amenity grassland and planting would be undertaken. The new slopes to the rear of the raised promenade level would be landscaped with topsoil and reseeded. In areas where hard-landscape treatments are disturbed these would be reinstated using the same palette of materials as existing or similar. Where appropriate, existing materials would be stored for the duration of the contract to allow reinstatement.	BB supported by LCoW

CEMP Ref.	Environmental Objective	Action Proposed	Responsibility
		BB – Balfour Beatty Environmental Clerk of Works (ECoW), Ecological Clerk of Works (EcCoW), Archaeological Clerk of Works (ACoW) and Landscape Clerk of Works (LCoW) as required.	ECoW, EcCoW, ACoW and LCoW
		Restoration of the beach would utilise material excavated during construction, plus any excess beach material that has naturally accumulated in the works area during the construction period. Memorial benches relocated during construction would be sympathetically put back, with guidance on appropriate locations sought from Denbighshire County Council and Rhyl Town Council.	
		<i>Cultural Heritage</i>	
CH1	Offset physical impacts on archaeology, vegetation and landscape evolution of the site through time through phased investigations – Phase 1 prior to construction mobilisation.	Walkover survey and trial augering where exposures of sediment permit such works. Any submerged forest tree stumps/trunks, or wooden structural remains, which are currently exposed within the construction area should be recorded in situ, prior to construction, noting location, stratigraphic information, dimensions and descriptive record. Samples should be taken for dendrochronological dating and species identification. Geophysical survey to map out buried topography and identify the position of potential palaeochannels. This would be a two-stage process that would include electromagnetic surveys at low tide to map the geoelectrical differences across the beach (these would reflect the nature of the underlying geology) and a shallow seismic survey at high tide to model the distribution of seismic units across the site. The outcome of these surveys would be a series of topographic interpretations and subsequent targets for test pitting/drilling. Survey, recording and sampling following any exposure of significant deposits as a result of storms. Test pitting/boreholes to recover samples from the buried sequences for palaeoenvironmental analysis. These works would also examine the subsurface for archaeological and/or biological remains. Full excavation, recording and sampling of timber structures and deposits in Area B to ensure their preservation by record.	ACoW
CH2	Offset physical impacts on archaeology, vegetation and landscape evolution of the site through time through phased investigations – Phase 2 main construction phase.	Avoidance of exposed deposits in Areas A and C, with appropriate demarcation during construction if necessary. Watching brief during groundworks associated with the following: construction of beach access ramp; excavation of beach sand; construction of rock armour; construction of beach access steps. The watching brief will also monitor the wider foreshore throughout the construction phase to identify anything revealed as a result of turbulent flows around stockpiled materials. Any significant discoveries to be demarcated by temporary barrier fencing until investigations are completed. Any trees or wooden structural remains encountered during the construction phase should be recorded in situ, with some hand excavation around the remains, sufficient to facilitate sampling.	ACoW with support of BB

CEMP Ref.	Environmental Objective	Action Proposed	Responsibility
		BB – Balfour Beatty Environmental Clerk of Works (ECoW), Ecological Clerk of Works (EcCoW), Archaeological Clerk of Works (ACoW) and Landscape Clerk of Works (LCoW) as required.	ECoW, EcCoW, ACoW and LCoW
		Survey, recording and sampling following any exposure of significant deposits as a result of storms for the duration of the project.	
CH3	Offset physical impacts on archaeology, vegetation and landscape evolution of the site through time through phased investigations – Phase 3 on completion of phase 2 mitigation.	Assessment and analysis of recovered materials. Dendrochronological samples will need to be assessed for suitability for dating and the species type and age of the trees/timbers will be determined. Where cross-matching with existing tree ring data cannot be determined, it may be necessary to undertake radio-carbon dating of some of the material to provide dating evidence.	ACoW
		<i>Construction effects</i>	
CE2	Mitigate impacts of noise on residential receptors.	Non-tidal out of hours work has the greatest potential to generate complaints, and so would be avoided where reasonably practicable. Specific mitigation measures to reduce noise impacts would also be employed. White noise reversing warning beacons would be fitted to vehicles on the site rather than tonal beacons. When accessing/egressing the site during unsociable hours, vehicles would adhere to a voluntary low speed limit while passing through residential areas. Noise will be monitored throughout the construction phase. Best Practicable Means (BPM) would be employed throughout the construction to mitigate noise impacts. For example careful planning to select quiet plant would dramatically reduce noise levels. Similarly, careful planning would be employed such that the timing and duration of noisiest activities would be restricted during the day.	BB supported by ECoW
CE4	Reduce impacts of lighting the construction site on sensitive receptors.	Mitigate any impacts of light spill or glare on adjacent residential receptors following measures recommended in the Institute of Lighting Engineers' (ILE's) <i>Guidance Notes for the Reduction of Obtrusive Light</i> . Do not over-light working areas; Dim or switch off lights when a task is complete or the area is not in use; Use specifically designed lighting equipment that minimises the upward spread of light near to and above the horizontal when the task is finished; Keep glare to a minimum by ensuring that the main beam angle of all lights directed towards any potential observer is not more than 70°; Higher mounting heights allow lower main beam angles, which can assist in reducing glare.	BB supported by ECoW

CEMP Ref.	Environmental Objective	Action Proposed	Responsibility
		BB – Balfour Beatty Environmental Clerk of Works (ECoW), Ecological Clerk of Works (EcCoW), Archaeological Clerk of Works (ACoW) and Landscape Clerk of Works (LCoW) as required.	ECoW, EcCoW, ACoW and LCoW
CE6	Manage the risk of causing marine pollution	Measures would be undertaken to reduce risks to the water environment following CIRIA Guidance: <i>Control of water pollution from construction sites. Guidance for consultants and contractors</i> . Examples of good practices are set out as follows: Site storage of fuel and chemicals shall be above the mean high water level and away from high-risk locations, such as 10m of a waterbody. All liquids and solids of a potentially hazardous nature (for example diesel fuel, oils, solvents) will be stored in a bunded locked container on surfaced areas (bund to contain an additional 10% over the capacity of the liquid stored). Refuelling of plant and equipment will only be permitted at designated refuelling areas. No refuelling shall take place on the beach area at any time. Small plant will be taken from the works face (when on the beach) and refuelled at a designated fuel area established above the mean high water level. All refuelling and bulk deliveries shall be supervised at all times. The relevant emergency prevention oil spill kits will be available where plant is operating and operatives shall be trained in the use. Any spillages shall be contained and reported to the using the formal incident recording system. Drip trays will be used to prevent oil leaking from machinery when parked/stored, and during refuelling of machinery.	BB supported by ECoW
		<i>Construction – Site</i>	
CS1	Ensure sustainable management of waste in accordance with the principles of the waste hierarchy.	A Site Waste Management Plan (SWMP) would be produced to assist with the sustainable disposal sustainable disposal bulk waste materials including dismantled timber groynes and demolition concrete where this is not able to be reused as aggregate.	BB supported by ECoW

3.2. Legal Permits, Consents and Licenses

The project has the following permits, consents, licences and exemptions in place. They hold legal compliance requirements that are met within the project operational activities. Copies can be located in the contracts document filing system.

Permits, Consents, Licences and Exemptions	Requirements	Monitoring and Inspection Arrangements for Compliance	Responsibility
Marine Licence, CML 1873	Refer to Marine Licence granted, CML 1873	Site activities to be monitored by BB Management team to ensure compliance.	Section Manager

Permits, Consents, Licences and Exemptions	Requirements	Monitoring and Inspection Arrangements for Compliance	Responsibility
Coast Protection Act 1949	Refer to 2019- CPA2, cover letter to DCC 8 November 2019.	Site activities to be monitored by BB Management team to ensure compliance.	Section Manager
Section 184 permit	Agreed construction and design	Subject to DCC highways Inspection	Section Manager
Section 61 Permit	Agreed noise levels in section 61 application	Site activities to be monitored by BB Management team to ensure compliance. Section 61 to be applied for if works are required outside of these hours.	Public Relations Officer/ Section Manager
Planning Permission, Denbighshire County Council, 45/2018/1197/PF	Refer to Statement of Decision on EIA Development granted	Site activities to be monitored by BB Management team to ensure compliance.	Section Manager/ Environmental Management Representative
Archaeological written scheme of investigation	Refer to CPAT WSI 2066, produced by Clwyd-Powys Archaeological Trust	Site activities to be monitored by Archaeological CoW	JBA consulting

3.3. Identification of Environmentally Sensitive Receptors

The projects sensitive receptors have been assessed and are listed below.

Feature/Issue	Details
Protected Sites e.g. SSSI	Within 200m of the construction site is the internationally designated Liverpool Bay Special Protection Area (SPA), within 5km is the Dee Estuary, Special Area of Conservation and Ramsar site. Special Protection Area
Water course (please name)	Irish Sea; To reduce the risk of marine pollution fuel and chemicals would be stored at least 10m away from the beach. Refuelling would only take place at designated refuelling areas located away from the beach.
Cultural Heritage	Lookout tower in the boundary wall on East Parade. Royal Alexandria Hospital. There would be no long-term effects on the Conservation Area or any of the listed properties on completion of construction.
Archaeology	Within the construction site at Splash Point there are the remains of historic fish traps. Prehistoric human footprints have also been recorded. Peat deposits and tree remains associated with an ancient submerged forest has been identified. As there is potential for these and other unknown features to be damaged or lost as a direct result of construction activities, the area of the construction site around Splash Point will be subject to an archaeological investigation prior to the start of construction activities on the beach.

Feature/Issue	Details
Protected Species e.g. Bats, Badgers	There would be no direct impacts on protected bird species from the construction works. Alternative foraging habitat is also available as the footprint of the works is very small in comparison to the area of available intertidal habitat on the North Wales coastline. Given that construction work on the foreshore would take place at low tide, fish would not be disturbed or affected by the construction works.
Industrial / retail / business units	Pavilion Theatre to West of Marine Drive Compound Golf course to East of Site Hotels and guesthouses along seafront
Residential properties	To South of Working Area
Educational establishment	Not affected
Hospitals / medical facilities	Royal Alexandra Hospital, provision of outpatient services only, Grade II listed,
Public buildings (not otherwise mentioned)	Pavilion Theatre
Woodland / Trees	No trees will be affected by this work.
Hedgerows	A limited section of hedgerow (15 -20m) will be removed for provision of main compound access off Marine Drive. Visually, the implications of the hedgerow removal is temporary and minimal. Replacement planting with like for like replacement (in agreement with the council) will be undertaken on completion of the works.
Public footpaths	Public footpaths 10 and 11 along promenade. These will be closed off for the duration of the works to protect the public. The Wales Coast Path and National Cycle Network Route 5 would be diverted inland around the construction site.
Parks/recreation areas	Rhyl Beach, Promenade
Other (Please Detail)	Some of the groynes on Rhyl Beach support a non-native invasive barnacle species. To ensure that this non-native species of barnacle does not spread elsewhere, any groynes removed during construction would be appropriately disposed of away from the marine environment.

3.4. Site Plan

A copy of the site plan can be found in Appendix 2 of this document and includes the following: See also Master Pollution incident Plan ([ENV-TF-0005a](#))

sensitive areas (as identified in the previous table)	Site CDM area	
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4. ARRANGEMENTS FOR DELIVERY OF SOCIAL VALUE - INVOLVED PLAN

The project sustainability coordinator, identified in section 2.3 of this document, will ensure an Involved Plan is in place for the project, is being followed and that the community section of the Sustainability Portal is updated on a monthly basis.

The following table provides a summary of the objectives and measure of the Involved Plan:

	Performance Indicators	Measured by	Targets
1.	Fair Payment Terms		
1.1	Tier 3 suppliers to be paid within 23 days of <i>main contract</i> certification	Monthly report submitted to Project Lead and QS detailing all payments due, dates made, reference numbers and contact details for supplier should an audit be undertaken.	100%
2.	Supply Chain Labour		
2.1	Labour from within 10 miles	Monthly labour returns issued by the subcontractor to Project Lead and QS and Balfour Beatty signing in process	20%
2.2	Labour from within 20 miles		40%
2.3	Labour from within 40 miles		75%
3.	Supply Chain Spend		
3.1	Tier 3 supplier spend within 10 miles	Monthly report of predicted final supplier spend submitted to Project QS	20%
	Tier 3 supplier spend within 20 miles		40%
	Tier 3 supplier spend within 40 miles		75%
4.	Tier 3 suppliers*		
4.1	Tier 3 Supply Chain who are classified as a SME	Monthly report of predicted final supplier spend submitted to Project QS	85%
4.2	Tier 3 supply chain spend with SME's		85%
6.	Employment and Skills		
6.1	All work opportunities will be advertised with		JobCentre Plus
6.2	Work Experience Under 16 years old (min 5 days each)	Copy of work placement diaries or evidence to be provided to Project Lead and QS	1
6.3	Work Experience Over 16 years old (min 2 weeks each)		2
6.4	Adult Employment opportunities advertised locally	Copy of adverts to be provided to Project Lead and QS	100%
6.5	Adult Opportunities filled by individuals not in employment, education or training, unemployed or leaving education (min of 13weeks of employment)	Copy of letters of employment or confirmation from JobCentre Plus (or similar) along with labour records	4
6.6	Intern, Trainee, Apprentice or Graduate, New Starts and or Completions plus (minimum number of weeks per apprentice)	Copy of letter of employment / registration with college or university along with labour returns	2 (52 weeks)
6.7	Vocational Qualifications Starts or Finishes (eg/ NVQ)	Copy of registration and or training certificate along with labour returns	4
6.8	Professional Qualifications Starts or Finishes (eg/ CIOB, ICE, MRICS)		1
6.9	Academic Qualifications Starts or Finishes (eg/ GCSE, HNC or Degree)		1
6.10	Training days for Health and Safety	Copy of training records	6 days
6.11	Training days for Professional Development		2 days
6.12	Training days for Sustainability and Innovation		2 days
7.	Supply Chain Satisfaction		
7.1	Complete the Supply Chain Satisfaction Survey with the Project Team within 1 week of Project Completion.	Copy of supplier satisfaction survey to be returned to Project Lead and QS within 1 week of completing works on site.	100%

5. ANNEXES

Documentation to deal with activity and location specific Environmental Risks and Opportunities:

1. Site History, Previous use of Site (extract from outline CEMP produced for planning application)

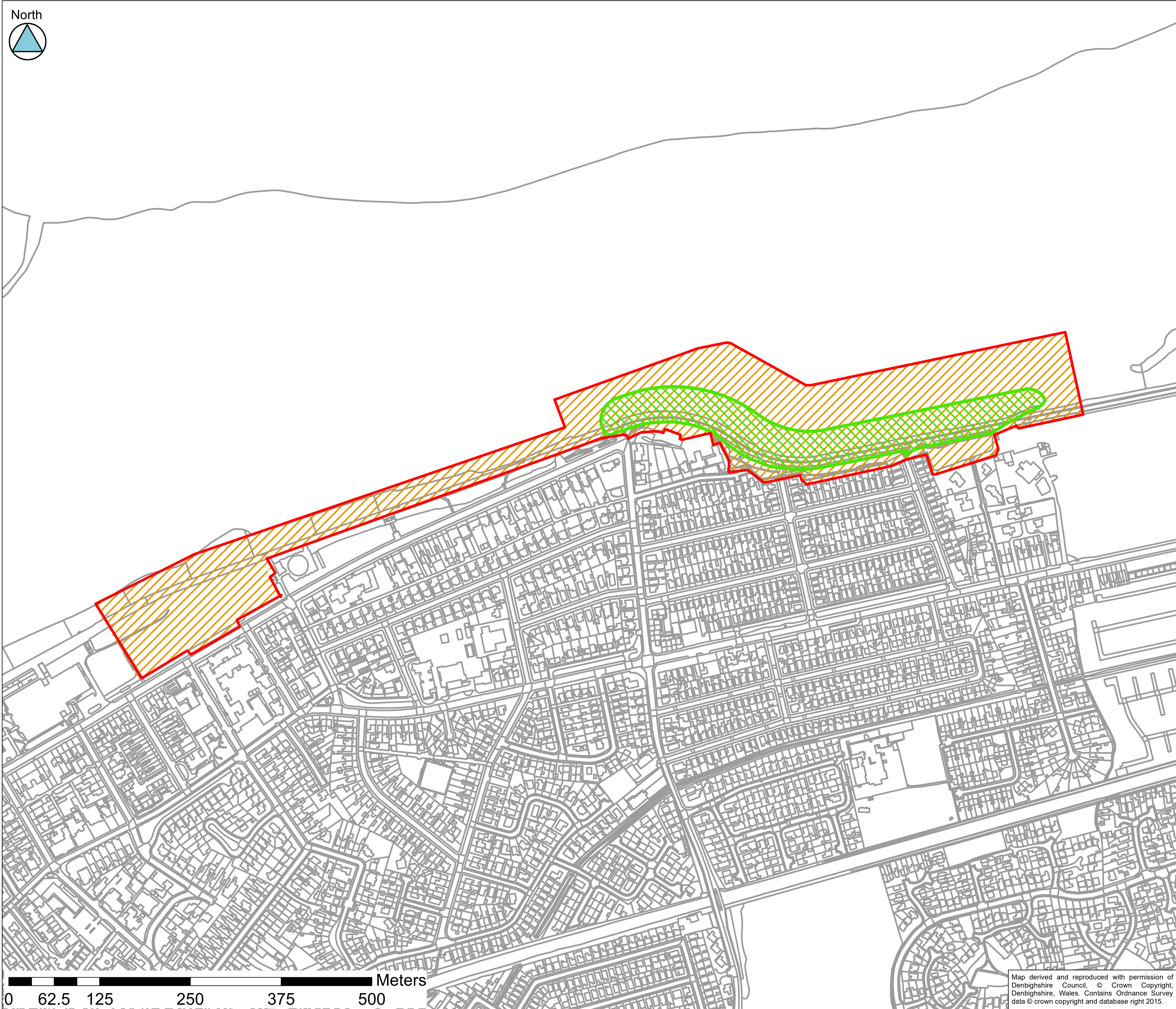
Rhyl is a seaside resort town on the coast of Denbighshire, North Wales (Figure 1). The town has historically been protected from coastal flooding by a range of defence structures, which in the east of the town are now exceeding their performance standards and design lives.

At East Rhyl, the defences overtopped in 2013, causing deep flooding to 130 residential properties and prompting the evacuation of 400 people. Flood modelling has shown that the risk of this happening again is increasing with climate change, meaning the effectiveness of the existing defences is set to reduce. Action is therefore needed to East Rhyl now and in the future, to sustain the viability of Rhyl as a settlement and tourist destination.


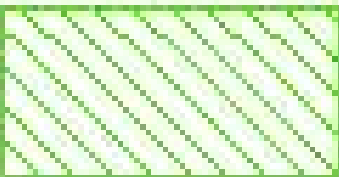
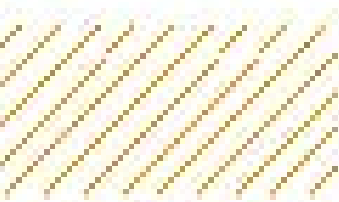


Figure 1: Location of the proposed new defences (red area) and the extent of the construction site (blue area)

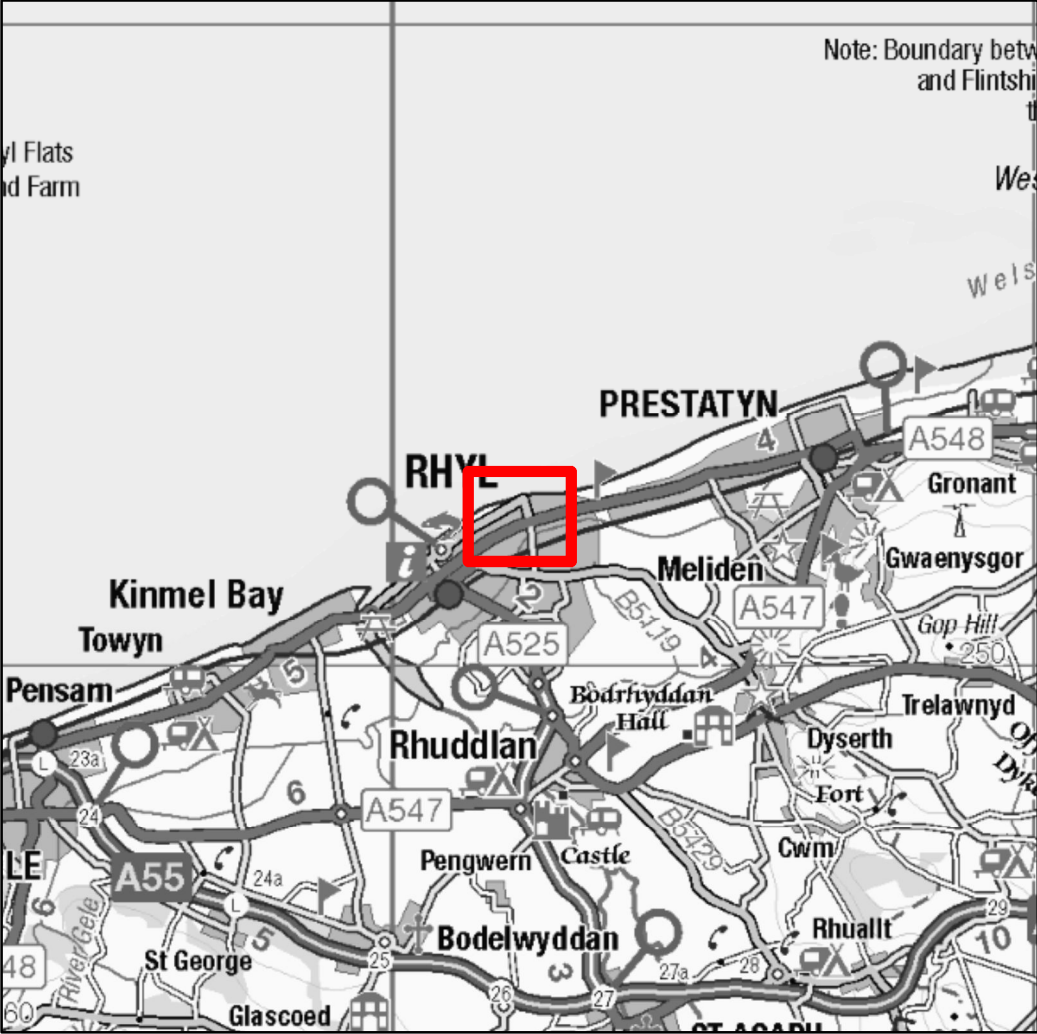
2. Site plan



LEGEND

-  Red Line Boundary
-  Operational Site Extent (3.1ha)
-  Construction Site Extent (13.1ha)

KEY PLAN



Contains OS data © Crown copyright and database right 2017 (<https://www.ordnancesurvey.co.uk/>)

Rev.	Modifications	Date	Drawn	Checked	Approved



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sir ddinbych
denbighshire
County Council



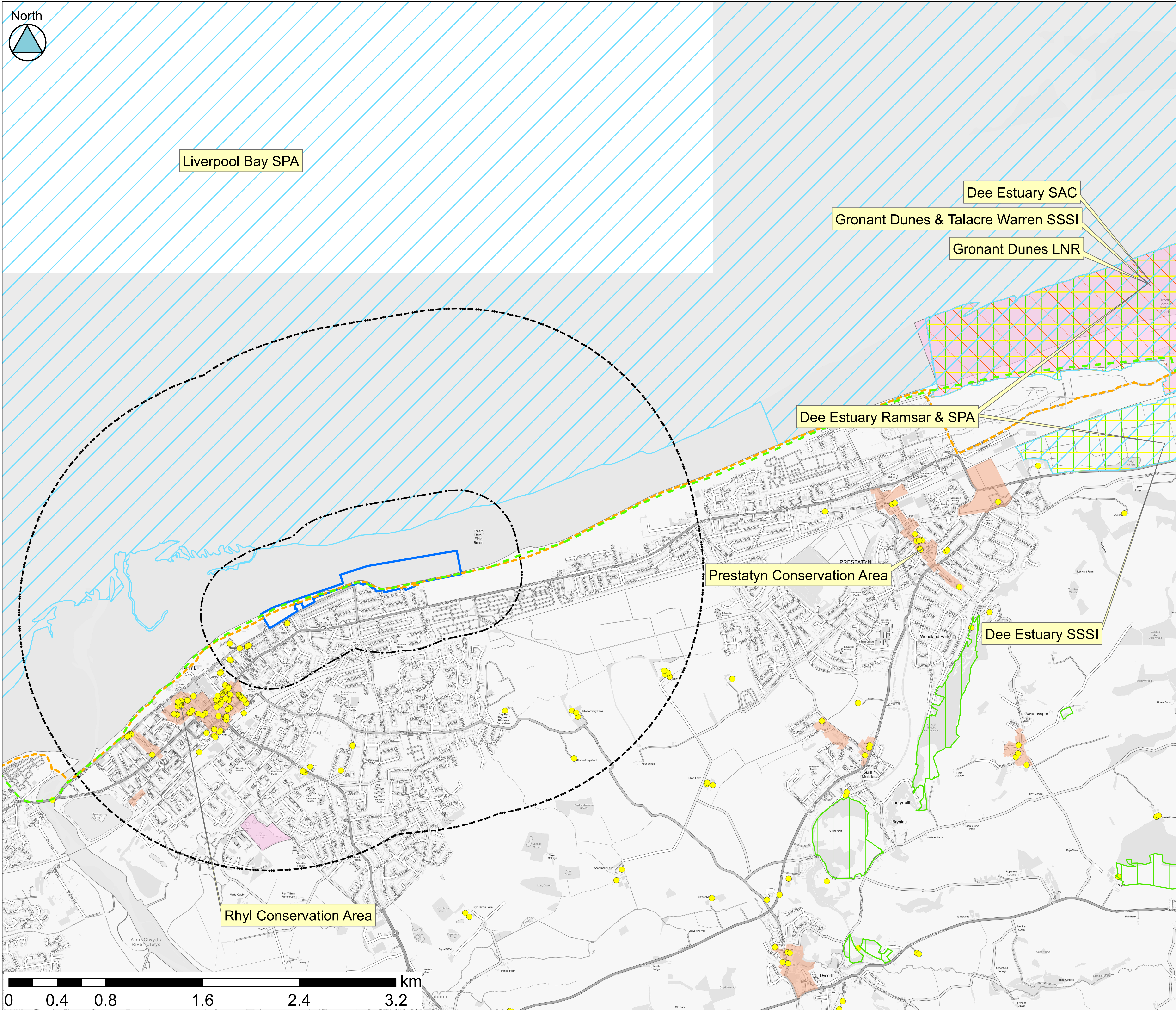
East Rhyl Site Boundary Location

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Scale:	1:2,500	Drawn	BS	13/12/2018
		Checked	MC	13/12/2018
		Approved	SW	

Digital File Name: ER-JBA-00-00-DR-C-0001-S8-P07-Site_Boundary

Drawing Number:	Sheet No.:	Rev.:
ER-JBA-00-00-DR-C-0001-S8-P07-Site_Boundary	1 of 1	



LEGEND

- Site
- 500m site buffer
- 2000m site buffer
- Ramsar Site
- Special Protection Areas (SPAs)
- Special Area of Conservation (SAC)
- Site of Special Scientific Interest (SSSI)
- Local Nature Reserve (LNR)
- North Wales Coast Path
- North Wales Coastal Route 5 (Cycle Path)
- Conservation Areas
- Listed Buildings

KEY PLAN



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Rev.	Modifications	Date	Drawn	Checked	Approved



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for
sir ddinbych
denbighshire
County Council



Environmental Constraints Plan

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Scale:	1:15,000	Drawn	BS	05/01/2018
		Checked	MC	08/01/2018
		Approved	SW	

Digital File Name: ER-JBA-02-00-MP-EN-0001-S1-P02-Environmental_Constraints_Plan_1_of_2

Drawing Number:	Sheet No.:	Rev.:
ER-JBA-02-00-MP-EN-0001-Environmental_Constraints_Plan_1_of_2	1 of 2	

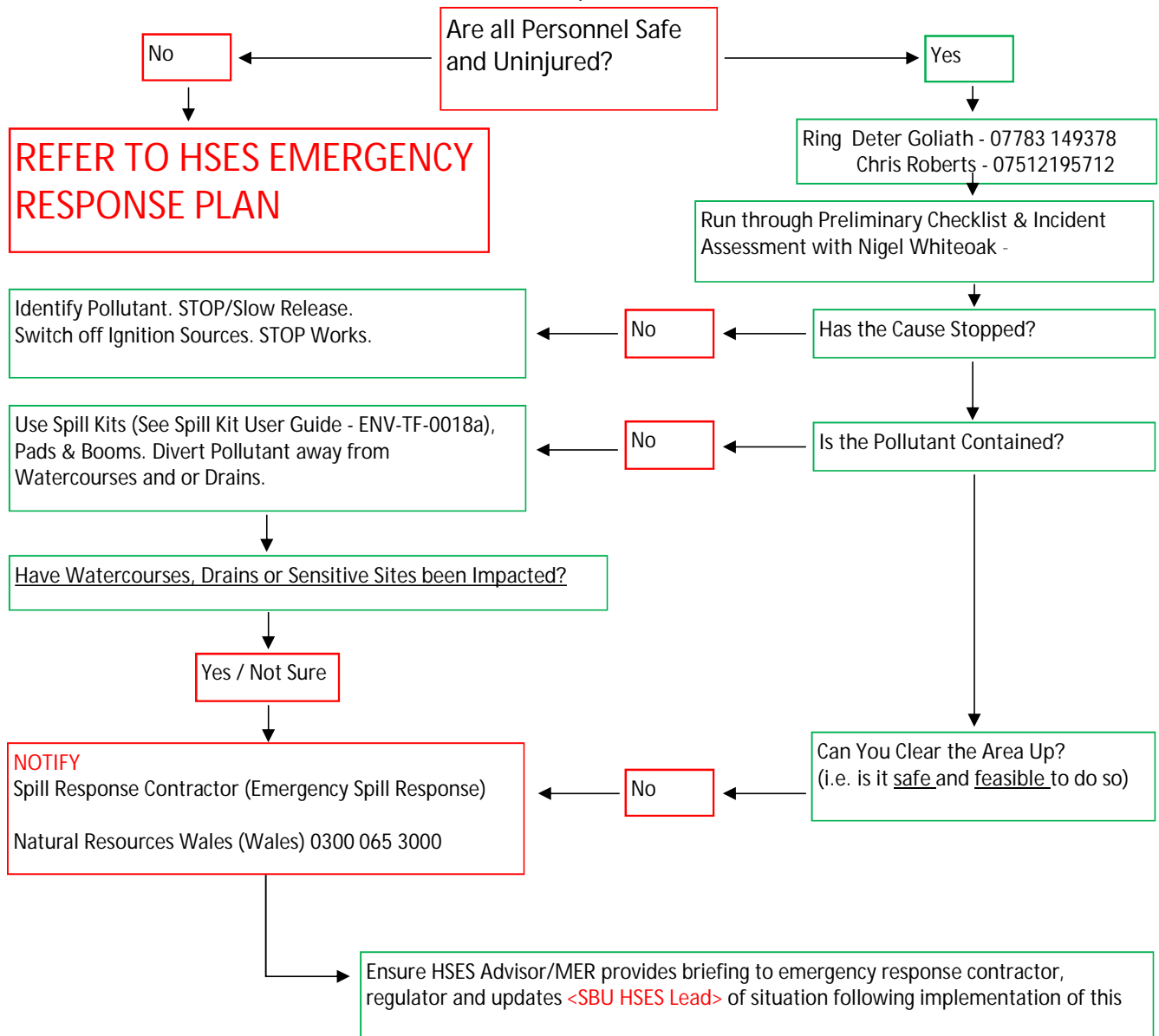
3. Master Pollution Incident Plan ([ENV-TF-0005a](#))

Environmental Incident

Spillage of oil/fuel/chemicals, discharge of silty water or fuel oil to watercourse or drain

STOP ALL WORKS

Appoint members of staff to make calls, take photographs and write down key evidence (scribe).



For fly-tipping or illegal waste dumping in England, Wales and Northern Ireland contact the Local Authority. In Scotland contact 'Dumb Dumpers' on 0845 2 30 40 90

Public complaints for noise & nuisance should be directed to Denbighshire County Council via their web site or The Public Relations Officer on TBA

For further information please refer to Emergency Response Matrix and Assessment (HSES-TF-0003a) and Site Specific Master Pollution Incident Plan (ENV-TF-0005a)



Environment Immediate Action Plan

Pollution Incident Action Plan

- Establish the location / source of the spill / leak and stop further discharge
- Locate your nearest spill kit and prevent further coverage
- Use the absorbent granules and or pads to soak up any spillage
- Clean up the contaminated spill kit and place into a special waste / hazardous waste disposal bag (ensure appropriate PPE is worn at all times)
- Report the Incident to your Line Manager
- In the event that the contaminants have entered the drainage systems the NRW should be contacted (**0300 065 3000 – Option 1**)
- In the event of Fuel being discharged into the Drainage System the Emergency Services (Fire) should be notified by dialling 999
- In the event of fuel entering the drainage system everyone operating on site must be evacuated to a designated place of safety.

	Foul Drainage
	Surface Drainage
	Spill Kits
	Interceptors

Rivers, Streams, Brooks

Key Contacts

BB Helpline - 0800 121 4444

EA/SEPA/NRW/NIEA – 0300 065 3000

Emergency Services 999 (in the event that fuel is discharged down the drainage system)

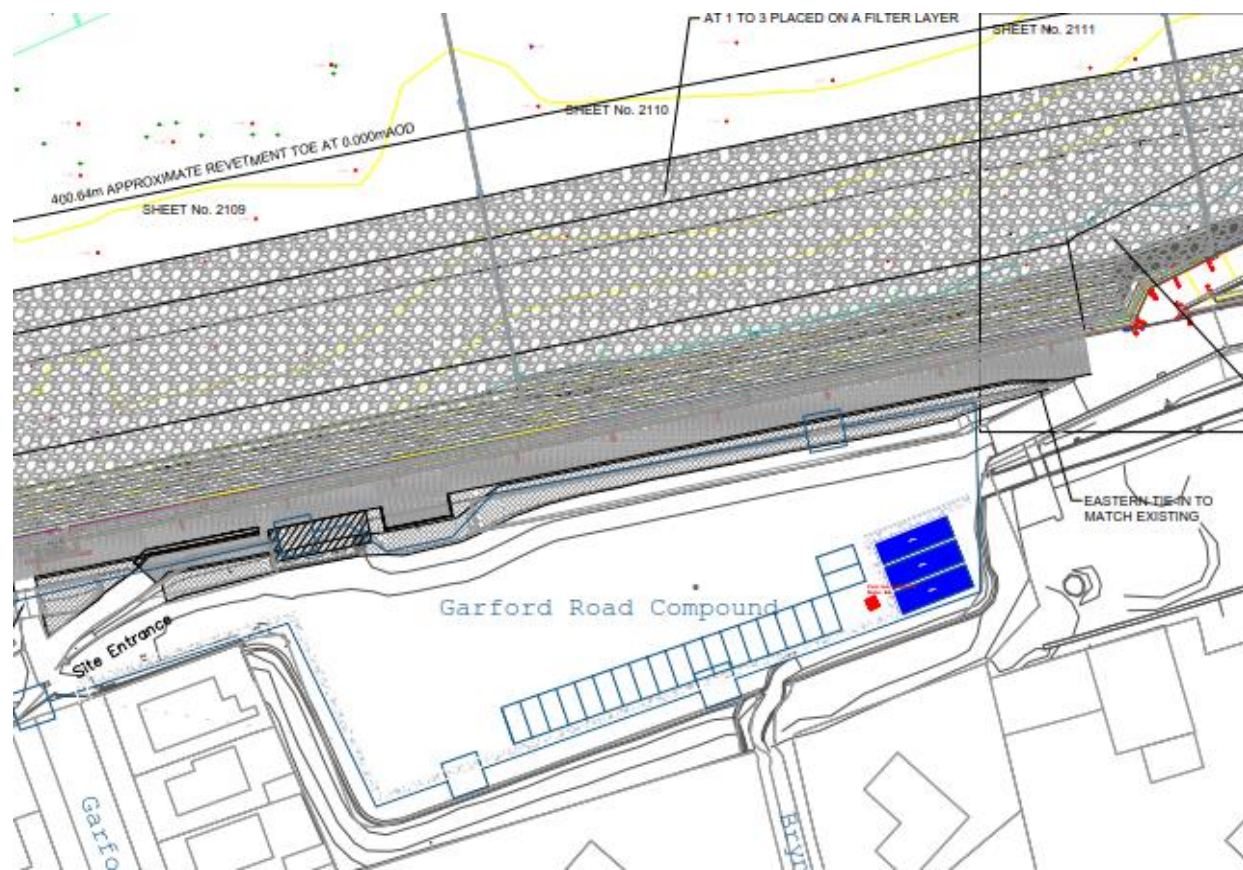
Water Provider – Dwr Cymru/ Welsh Water 0800 085 3968



THINK

- DO NOT PUT ANY CONTAMINATED WASTE INTO THE GENERAL WASTE STREAM**
- DO NOT POUR OIL DOWN ANY DRAINAGE SYSTEM**





Environment Immediate Action Plan

Pollution Incident Action Plan

- Establish the location / source of the spill / leak and stop further discharge
- Locate your nearest spill kit and prevent further coverage
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THINK

- DO NOT PUT ANY CONTAMINATED WASTE INTO THE GENERAL WASTE STREAM**
- DO NOT POUR OIL DOWN ANY DRAINAGE SYSTEM**



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1	Working close to archaeological & heritage remains	Archaeology & Heritage	Impact: Damage caused to monuments, artefacts and archaeological sites Risks: failure to fulfil compliance obligations, reputational damage, complaints, negative publicity, fines, delay to works	3	1	3	3	9	A	<div>ENV-RM-0045a Archaeology</div> <div><u>Normal / Abnormal:</u> Investigate likelihood for archaeological finds prior to work commencing / cordon off / implement recommendations e.g. watching briefs / written scheme of investigation in place and followed / seek advice from Local Authority / consult professionally qualified archaeological contractor / Provide Detailed Archaeological Mitigation Design in Tender showing collaboration between environmental specialists / determine method of investigation involving all people it may affect in terms of programme / pre-excavation plan with input from ecologists and conservationists <u>Emergency:</u> Stop work if damage occurs or if unknown archaeology identified and consult professionally qualified archaeological contractor or archaeological clerk of works</div>	3	1	3	1	3	G	Archaeological CW/ Environmental Management Representative/ Section Manager												

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2	Working close to listed buildings -	Archaeology & Heritage	Impact: Potential for damage / disturbance / loss of heritage assets Risks: failure to fulfil compliance obligations, reputational damage, negative publicity, fines, prosecution, delay to works	3	1	3	3	9	A	<div>ENV-RM-0045a Archaeology</div> <div><u>Normal / Abnormal:</u> Investigate location of listed buildings prior to work / Follow advice and methodology agreed with a qualified professional <u>Emergency:</u> Stop work if damage occurs and consult the Local Authority Listed Buildings Officer</div>	3	1	3	1	3	G	Environmental Management Representative/ Section Manager
7	Working through or close to archaeologically 'unevaluated areas'	Archaeology & Heritage	Impact: Potential for discovery of or damage to monuments / artefacts / archaeological sites Risks: reputational damage, complaints, negative publicity, fines, delay to works	3	1	3	4	12	R	<div>ENV-RM-0045a Archaeology</div> <div><u>Normal / Abnormal:</u> Investigate likelihood for archaeological finds prior to work commencing / obtain archaeological desk-top and walkover survey / put mitigation in place as advised by surveys / be prepared for unexpected finds <u>Emergency:</u> Stop work if unknown archaeology identified and consult professionally qualified archaeological clerk of works</div>	3	1	3	1	3	G	Archaeological CoW/ Environmental Management Representative/ Section Manager

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10	Compound located adjacent to protected area e.g. SSSI, SAC, SPA	Ecology & Biodiversity	Impact: Disturbance to protected species / visual impact on protected area / potential pollution to protected areas from litter and releases to water Risks: Reputational damage, negative publicity, prosecution, clean-up costs	3	1	3	3	9	A	<div>ENV-RM-0016d Ecologically</div> <div>Normal / Abnormal: Ensure personnel aware of any protected areas, carry out an environmental aspect assessment for the site and implement any necessary mitigation measures</div> <div>Emergency: Stop work</div>	3	1	3	1	3	G	Environmental CoW/ Environmental Management Representative/ Section Manager												

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13	Working within or close to protected sites - SSSI, SPA, SAC, Ramsar, NNR, LNR, AONB	Ecology & Biodiversity	Impact: Damage to protected areas / loss of biodiversity / disturbance to protected species / visual impact on protected area / potential pollution to protected areas from litter and releases to water Risks: reputational damage, negative publicity, prosecution, fine, delay to works	4	1	4	3	12	R	<div>ENV-RM-0016d Ecologically</div> <p><u>Normal / Abnormal:</u> Contact Natural Resources Wales or equivalents to obtain consent/assent for work and to agree working methods / consult ecologist / re-route works / site specific method statement / brief control measures to site teams / seek advice and guidance from local fisheries trust or specialist fisheries contractor if work may have potential impact on fisheries <u>Emergency:</u> Stop work <u>Opportunities:</u> build good working relationship with regulator through liaison during planning phase</p>	4	1	4	1	4	G	Environmental CoW/ Environmental Management Representative/ Section Manager										

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18	Working in / around / through hedges	Ecology & Biodiversity	Impact: Loss of habitat / damage to ecology & biodiversity / disturbance to species / loss of biodiversity / increased risk of ground movement or erosion Risks: insufficient measures taken to dissuade nesting bird species and terrestrial species e.g. reptile, negative publicity, reputational damage, fines, prosecution, lack of or incomplete reinstatement, reduction in population of some species	2	1	3	3	9	A	<div><div>ENV-TB-0016g Hedgerows</div><div><u>Normal & Abnormal:</u> Check with Local Authority whether hedge is protected / avoid works in bird nesting season or consult ecologist / obtain permission from landowner / avoid need to remove hedges where possible <u>Emergency:</u> Stop works <u>Opportunities:</u> Implement ecological enhancement measures</div></div>	2	1	3	1	3	G	Environmental CoW/ Environmental Management Representative/ Section Manager

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22	Working in sensitive coastal habitats	Ecology & Biodiversity	Impact: Weeds to spread into sensitive coastal habitat to the exclusion of native coastal species Risks: reputational damage, negative publicity, remediation costs	2	1	3	3	9	A	<div>ENV-RM-0016a Managing</div> <p>Normal / Abnormal: Use of wheel washes to prevent spread of plant and vegetative matter / agree methods of work with regulators / weed control programme Emergency: None</p>	2	1	3	1	3	G	Environmental CoW/ Section Manager										

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33	Office heating	Energy Use	Impact: Depletion of natural resources / global warming and climate change Risks: price of energy and increased costs / availability of energy	1	1	2	4	8	A	<div>ENV-TB-0006a Act on Energy</div> <p><u>Normal & Abnormal:</u> turn off heating at night / do not leave heaters on when rooms unoccupied <u>Emergency:</u> Failure in heating system or inadequate heating system results in portable heaters being used which are less efficient resulting in increased energy usage, CO2 emissions and heating costs. <u>Opportunities:</u> procure renewable energy / use alternative low carbon energy sources / install renewable energy generation / use of automated controls to manage energy demand</p>	1	1	2	2	4	G	Site Team / Environmental Management Representative										

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34	Office lighting / electricity use	Energy Use	Impact: Depletion of natural resources / global warming and climate change Risks: price of energy and increased costs / availability of energy	1	1	2	4	8	A	<div>ENV-TB-0006a Act on Energy</div> <p><u>Normal & Abnormal:</u> turn of equipment an lights when not in use / do not use electrical equipment unnecessarily / use renewable sources where available / purchase through BB Group deal / choose energy efficient items where possible/automated lighting controls. <u>Emergency:</u> Inadequate office lighting or loss of main lighting resulting in use of desk lamps which are less efficient resulting in increased energy usage, CO2 emissions and electricity costs. Use of backup power generation (generators) which which are less efficient than mains electricity and will result in increased environmental impact, particularly carbon emissions. <u>Opportunities:</u> procure renewable energy / use alternative low carbon energy sources / install renewable energy generation / use of automated controls to manage energy demand</p>	1	1	2	2	4	G	Site Team / Environmental Management Representative

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Date of issue:11/12/18

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35	Facilities management & maintenance	Facilities Management	Impacts: Depletion of natural resources, use of fossil fuels / depletion of natural resources / global warming and climate change Risks: increase in price of energy, cost to business, failure to fulfil legal requirements / Group suppliers not used for electricity and gas obtained centrally / approved suppliers not being used resulting in required competencies not being in place	1	1	2	4	8	A	<div>ENV-TB-0006a Act on Energy</div> Normal / Abnormal: Use approved contractor to maintain air conditioning units and record use of refrigerants / use BB Group supplier for electricity and gas and record usage via AMR meters / provision of containers for segregating waste <u>Emergency:</u> Consult Facilities Team / Environmental Advisor in case of emergency <u>Opportunities:</u> procure renewable energy / use alternative low carbon energy sources / install renewable energy generation / use of automated controls to manage energy demand	1	1	2	2	4	G	Site Team / Environmental Management Representative										

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37	Maintenance and use of heating systems	Facilities Management	Impacts: Release of GHGs / global warming and climate change / high electricity use / depletion of fossil fuels. Risks: increased energy costs	1	2	1	4	8	A	<div>ENV-TB-0006a Act on Energy</div> <p><u>Normal & Abnormal:</u> Adopt mains power where possible and AMR meters / regular monitoring of electricity and fuel use / ensure heating system regularly maintained. <u>Emergency:</u> Failure in heating system or inadequate heating system results in portable heaters being used which are less efficient resulting in increased energy usage, CO2 emissions and heating costs. <u>Opportunities:</u> procure renewable energy / procure more efficient technology / use alternative low carbon energy sources / install renewable energy generation / use of automated controls to manage energy demand</p>	1	2	1	2	4	G	Site Team / Environmental Management Representative												

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40	Spillage of diesel through damaged tank or drips	Material use & storage	Impact: Contamination of ground / ground water / surface water / damage to habitats / disposal of spill kits and hydrocarbon contaminated waste Risks: costs of disposal, waste exceeding hazardous waste landfill acceptance criteria, reputational damage, prosecution, clean up costs	4	2	4	4	16	R	<div>ENV-RM-0007a Storage of</div> <div>Normal & Abnormal: Provision of spill kits / use of drip trays / maintenance of tanks and bunds Emergency: Stop work / refer to project environmental plan / utilise emergency response contractor if significant spill which can't be dealt with in-house</div>	4	2	4	1	4	G	Section Manager												

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41	Storage of materials and equipment including sand and aggregates	Material use & storage	Impact: Air pollution caused by dust / nuisance to third parties / pollution of surface water drainage system and watercourses / damage to livestock, plants & protected areas / waste generation and disposal /depletion of water resources Risks: complaints, reputational damage, fines and prosecution	1	2	2	3	6	G	<div>ENV-RM-0036a Materials Planning & Waste</div> <p><u>Normal / Abnormal:</u> Store materials in bays / out of wind / covered / compact stockpiles / damp down / spill kits / drip trays / regular checks on storage areas / dust netting / apply for environmental permits or exemptions when storing waste materials <u>Emergency:</u> None <u>Opportunities:</u> reduce potable water use by collecting rainwater for damping down operations</p>	1	2	2	2	4	G	Section Manager												

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42	Storage of fuel & oil	Material use & storage	Impact: Contamination of ground / ground water / surface water / damage to habitats / disposal of spill kits and hydrocarbon contaminated waste Risks: costs of disposal, waste exceeding hazardous waste landfill acceptance criteria, reputational damage, prosecution, clean up costs	4	2	4	4	16	R	<div>ENV-RM-0007a Storage of</div> <div><u>Normal / Abnormal:</u> Double skinned fuel tank / tank & associated pipework within bund / drums stored on spill pallets / locked tank / use of drip trays or plant nappies / concrete hard standing / bund maintenance / spill kits / pollution incident plan / drainage plan / regular inspections of fuel storage areas / store fuel away from watercourse / availability of spill kit materials to deal with large spills <u>Emergency:</u> Refer to project environment plan. Utilise emergency response contractor if significant spill which can't be dealt with in-house</div>	4	2	4	1	4	G	Section Manager / Environmental Management Representative												

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				Legal	H&S	Env					Legal	H&S	Env																
43	Storage of gas cylinders	Material use & storage	Impact: Disposal of waste Risks: Cost to the business and difficulty of disposal if gas cylinders aren't returned to supplier	1	2	1	4	8	A	<div>ENV-RM-0035a Waste</div> <u>Normal / Abnormal:</u> Store in secure gas cages / separate empty and full gas cylinders / return empty cylinders to suppliers <u>Emergency:</u> None	1	2	1	1	2	G	Section Manager / Environmental Management Representative												
46	Working close to private residences	Nuisance	Impact: Nuisance to neighbours and local stakeholders / impact on access to properties / negative visual impact Risks: complaints, reputational damage, negative publicity	2	1	3	4	12	R	<div>ENV-RM-0013a Nuisance</div> <div>ENV-RM-0015a Noise</div> <u>Normal / Abnormal:</u> Notify residence of work taking place / use water suppression / consider working hours / Section 61 consent / use silenced plant / turn equipment off when not in use / consider where parking vehicles <u>Emergency:</u> Stop work	2	1	3	2	6	G	Section Manager / Public Liaison Officer												

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47	Working outside 'normal' working hours i.e. tidal works	Nuisance	Impact: Nuisance to neighbours and local stakeholders / impact on access to properties / negative visual impact Risks: Reputational damage, complaints, restrictions imposed on working hours, negative publicity, fines and prosecutions	2	1	3	5	15	R	<div>ENV-RM-0013a Nuisance</div> <div>ENV-RM-0015a Noise</div> <p>Normal / Abnormal: limit out of hours work to that which is absolutely necessary / maintain plant / super-silenced plant / liaison with local residents / letter drops / acoustic shields / consider positioning of plant / Section 61 consent</p> <p>Emergency: Stop work</p>	2	1	3	2	6	G	Section Manager / Public Liaison Officer												

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48	Admin / office work	Office	Impacts: Use and depletion of natural resources / global warming and climate change / depletion of fossil fuels / use of landfill space Risks: price of energy and increased costs	1	1	1	5	5	A	<div>ENV-TB-0006a Act on Energy</div> <p><u>Normal / Abnormal:</u> turn equipment off when not in use / procure recycled and low impact office consumables from approved office supplier / don't heat or light offices at weekends or when not is use / segregate waste / recycle printer cartridges / adopt mains power utility service where possible through BB Group supply deal / AMR meters where possible / implementation of the 'green dot' scheme</p> <p><u>Emergency:</u> None</p> <p><u>Opportunities:</u> Adoption of energy efficient lighting, heating infrastructure etc. / paperless office / two sided printing / reduced costs through less paper use / source renewable electricity</p>	1	1	1	2	2	G	Section Manager / Environmental Management Representative												

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49	Office cleaning	Office	Impacts: Use of natural resources / use of electricity / depletion of fossil fuels / disposal of empty bottles of cleaning agents / disposal of partially full bottles of cleaning agents / use of water / depletion of water resources Risks: partially full bottles of cleaning agents disposed of incorrectly in bins or skips.	1	1	1	5	5	A	<div>ENV-RM-0035a Waste</div> <p><u>Normal & Abnormal:</u> Use biodegradable cleaning products / store cleaning products in original containers / ensure COSHH information is available / use all cleaning materials prior to disposal of containers / dispose of empty and partially full containers appropriately <u>Emergency:</u> Stop works and contain waste if cleaning materials have been inappropriately disposed of. <u>Opportunities:</u> source lower environmental impact cleaning products</p>	1	1	1	1	1	G	Section Manager / Environmental Management Representative												

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50	Use of computers & other electrical office equipment	Office	Impacts: depletion of fossil fuels / global warming and climate change Risks: price of energy and increased costs	1	1	1	5	5	A	<div>ENV-TB-0006a Act on Energy</div> <p><u>Normal / Abnormal:</u> turn equipment off when not in use / adopt mains power utility service where possible through BB Group supply deal / AMR meters where possible / implementation of the 'green dot' scheme / use of automated controls to manage energy demand e.g. light movement sensors</p> <p><u>Emergency:</u> Use of backup power generation (generators) which which are less efficient than mains electricity and will result in increased environmental impact, particularly carbon emissions.</p> <p><u>Opportunities:</u> procure renewable energy / use alternative low carbon energy sources / install renewable energy generation / use of automated controls to manage energy demand</p>	1	1	1	3	3	G	Section Manager / Environmental Management Representative										

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51	Use of stationary and paper	Office	Impacts: Depletion of natural resources / waste disposal Risks: Use of paper from non-sustainable sources resulting in ecological damage and impacting the carbon cycle	1	1	1	5	5	A	<div>ENV-RM-0035a Waste</div> <p>Normal / Abnormal: Use recycled paper / use paper from sustainable sources e.g. FSC certified / use scrap paper for notes / provide bins for recycling paper / use of the M2 & Safecom printing service to control and log printing activity / introduction of the 'ban the bin' scheme / print double sided</p> <p><u>Emergency:</u> Use outstanding stocks paper from non-sustainable sources and re-order sustainably sourced paper.</p> <p><u>Opportunities:</u> Procure FSC paper / ask 'does it need printing'</p>	1	1	1	2	2	G	Section Manager / Environmental Management Representative										

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52	Kitchen and toilet use	Office	Impacts: Depletion of water resources / treatment of effluent disposed of to sewer Risks: availability of mains potable water / availability of sewer to discharge to	1	1	1	5	5	A	<div>ENV-RM-0042a Discharging</div> <p><u>Normal / Abnormal:</u> use of water saving devices on taps etc. / rainwater harvesting / report and repair leaks and drips / all sinks etc. to discharge to sewer <u>Emergency:</u> Turn off water in serious leak situations <u>Opportunities:</u> Use greywater recycling for toilet flushing</p>	1	1	1	3	3	G	Section Manager / Environmental Management Representative										

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202	Gritting car parks, pavements and walkways	Office	Impact: Depletion of natural resources / global warming / climate change / pollution of surface water / unauthorised discharge to sewer Risks: Grit entering surface water drainage system / Rain washing grit away resulting in high concentration levels of grit in the discharge and potential discharge to surface water / Potential for increase in slips, trips, falls and car accidents if inadequate winter maintenance activities are carried out at offices	1	2	2	3	6	G	<div>ENV-RM-0022a Environmental Considerations</div> <p><u>Normal / Abnormal:</u> Store grit undercover, don't use excess quantities of grit unnecessarily <u>Emergency:</u> Report to iSMS where rain washes grit away causing it to enter watercourse.</p>	1	2	2	2	4	G	Section Manager
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61	Construction of access roads / tracks	Operations	Impacts: Visual impact / pollution to watercourses / negative impact on aquatic ecology / impact on land Risks: raw material availability	1	2	3	3	9	A	<div>ENV-RM-0010a Silt Mitigation</div> <div>ENV-RM-0036a Materials Planning and Waste</div> <p><u>Normal / Abnormal:</u> type of access to be considered in line with ground conditions e.g. bog mats, floated stone roads, trackway for vehicular and pedestrian access / selection of low ground-pressure plant / specify recycled aggregate / use existing accesses where possible <u>Emergency:</u> None <u>Opportunities:</u> lower impact options such as use of trackway or recycled stone</p>	1	2	3	2	6	G	Section Manager										

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63	Bituminous works	Operations	Impact: Nuisance caused to neighbours, depletion of natural resources / global warming / climate change Risks: Complaints, negative publicity	2	3	2	3	9	A	<div>ENV-RM-0015a Noise</div> <div>ENV-RM-0013a Nuisance</div> <p>Normal / Abnormal: acoustic screening / noise assessment / out of hours working / identify noise levels prior to commencement / muffled tools / silenced plant / no measures required</p> <p>Emergency: Stop work</p>	2	3	2	2	6	G	Section Manager / Public Liaison Officer										

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66	Cleaning & washing of plant, equipment and work areas	Operations	Impact: Depletion of natural resources, runoff of liquids into drains/watercourses without consent causing pollution / global warming / climate change Risks: Reputational damage, negative publicity, fines, prosecution, clean up costs	1	2	3	4	12	R	<div>ENV-RM-0012a Vehicle</div> <p>Normal / Abnormal: Implementation of an environmental management plan / implementation of grey water recycling facilities / obtain environmental permit or consent for discharging to watercourse / sewers</p> <p>Emergency: Stop work and seek professional advice</p>	1	2	3	2	6	G	Section Manager												

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67	Use of concrete	Operations	Impact: Depletion of natural resources, pollution to ground, pollution to water / global warming / climate change Risks: Reputational damage, negative publicity, fines, prosecution, clean up costs	1	2	2	4	8	A	<div>ENV-RM-0009a Concrete</div> <u>Normal / Abnormal:</u> Set up bunded hardstanding and settlement tank / specific area for wash out / use concrete washout skip / supervisor or foreman to advise at appropriate time / no wash-out to occur on site <u>Emergency:</u> Stop work	1	2	2	2	4	G	Section Manager												
68	Concrete washout	Operations	Impact: Pollution to water / pollution to ground / damage to flora and fauna / loss of biodiversity Risks: Reputational damage, negative publicity, fines, prosecution, clean up costs	2	2	4	4	16	R	<div>ENV-RM-0009a Concrete</div> <u>Normal / Abnormal:</u> designated area for wash out away from drains and watercourses / use concrete washout skip / vehicle to return to concrete depot for washout / waste to be removed by licensed waste contractor / use of concrete sock <u>Emergency:</u> Stop work	2	2	4	1	4	G	Section Manager												

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71	Dewatering excavations	Operations	Impact: Silt pollution to watercourses / silt blocks drains / discharge to sewers without permission / discharge to surface water drains without permission / depletion of fossil fuels / global warming Risks: Reputational damage, negative publicity, fines, prosecution, clean up costs	1	2	3	4	12	R	<div>ENV-RM-0043a Water</div> <p>Normal / Abnormal: protect drains e.g. with covers or sand bags / pump over grass with landowner permission / pump to sewer with permission / tanker off site / de-water away from surface water e.g. watercourses Emergency: Stop work</p>	1	2	3	2	6	G	Section Manager										

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76	Driving on unmade surfaces	Operations	Impact: Nuisance to local stakeholders / damage to crops Risks: Complaints, reputational damage	1	1	2	3	6	G	<div>ENV-RM-0013a Nuisance</div> <div>ENV-RM-0015a Noise</div> <p>Normal / Abnormal: Damp down in dry conditions / minimise speed Emergency: None</p>	1	1	2	1	2	G	Section Manager / Public Liaison Officer										

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79	General construction activities	Operations	Impact: Disturbance to wildlife and their habitats / pollution to air / pollution to water / noise nuisance / depletion of natural resources / global warming / climate change / depletion of water resources Risks: Reputational damage, complaints, negative publicity, fines and prosecution, availability of raw materials	2	2	2	3	6	G	<div><div>ENV-RM-0016a Managing</div><div>ENV-RM-0035a Waste</div><div>ENV-RM-0015a Noise</div></div> <div>Normal / Abnormal: Identify sensitive environmental receptors & assess likely impacts prior to commencement / implement controls / install adequate barriers / fencing / consult specialists / identify alternative accesses / consult with local authorities and neighbouring residents prior to works commencing / section 61 consents put into place prior to works / attach and utility services to site cabins and welfare facilities where possible Emergency: Stop works</div>	2	2	2	2	4	G	Section Manager / Public Liaison Officer

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85	Laying black top surfaces	Operations	Impact: Nuisance caused by odour / depletion of natural resources / global warming / climate change Risks: complaints, negative publicity	1	2	2	3	6	G	<div><div>ENV-RM-0013a Nuisance</div><div>ENV-RM-0015a Noise</div></div> <div>Normal / Abnormal: Position equipment away from residential properties where possible / notify local residents of work taking place Emergency: None</div>	1	2	2	2	4	G	Section Manager / Public Liaison Officer
87	Loading/unloading of deliveries & materials	Operations	Impact: Nuisance to neighbours and wildlife / releases to land / releases to water / waste disposal Risks: complaints, negative publicity, reputational damage	2	3	2	3	9	A	<div><div>ENV-RM-0013a Nuisance</div><div>ENV-RM-0015a Noise</div></div> <div>Normal / Abnormal: Arrange deliveries to minimise impact on local area / comply with any planning requirements / Section 61 agreements for night time works / consult with local authorities and neighbouring residents prior to work / damping down materials with high dust potential Emergency: None</div>	2	3	2	2	6	G	Section Manager / Public Liaison Officer

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89	Maintenance of plant & equipment	Operations	Impact: Depletion of raw materials / disposal of waste including hazardous waste / global warming and climate change Risks: Cost to business, failure to fulfil compliance obligations	2	2	2	4	8	A	<div>ENV-RM-0035a Waste</div> <u>Normal & Abnormal:</u> regular monitoring of waste volumes / disposal via approved suppliers with waste carriers licences and to licensed sites <u>Emergency:</u> None	2	2	2	1	2	G	Section Manager										

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91	Night time working	Operations	Impact: Nuisance caused to neighbours Risks: complaints, negative publicity, reputational damage	3	1	3	4	12	R	<div>ENV-RM-0013a Nuisance</div> <div>ENV-RM-0015a Noise</div> <p>Normal & Abnormal: Avoid night time working in sensitive areas where possible / use of low noise generating plant / use of baffles / consider positioning of plant / noise assessment prior to works / letters notifying residents of works / Section 61 notice / positioning of flood lights to avoid stray lights / consider use of shield and flight deflectors</p> <p>Emergency: Stop works</p>	3	1	3	2	6	G	Section Manager/ Public liaison Officer										

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92	Operation of plant and motorised equipment	Operations	Impact: Damage to protected sites / spread of invasive species through dispersal /noise disturbance to protected species / disturbance to local residents / contamination to surface water drains and watercourses / GHG emissions and climate change impacts / depletion of natural resources Risks: reputational damage, negative publicity, prosecution, fine, cost of fuel	1	3	3	4	12	R	<div><div>ENV-RM-0016a Managing</div><div>ENV-RM-0015a Noise</div><div>ENV-RM-0021b Invasive and</div><div>ENV-RM-0016d Ecologically</div></div> <div><u>Normal & Abnormal:</u> consents obtained to work in protected sites / plan site layout including access and refuelling points / clean and wash plant following work through invasive species / ecological surveys / fingertip searches / consultation with local authorities and neighbouring residents prior to working / section 61 agreements for night time works / operational checks of plant and equipment prior to work / regular monitoring of fuel usage <u>Emergency:</u> Stop work <u>Opportunities:</u> install telematic technology on plant and equipment to provide visibility of use and consumption patterns</div>	1	3	3	2	6	G	Section Manager / Public Liaison Officer / Environmental CoW

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93	Operative behaviour and movement around site	Operations	Impact: Disturbance to local residents Risks: complaints, reputational damage	1	1	2	3	6	G	<div>ENV-RM-0015a Noise</div> <div>ENV-RM-0013a Nuisance</div> <div>Normal & Abnormal: No shouting, playing of loud music. Vehicles turned off when not in use. Emergency: None</div>	1	1	2	2	4	G	Public Liaison Officer / Section Manager
94	Over-ordering of materials	Operations	Impact: Unnecessary use of raw materials / increased waste generated / unnecessary disposal costs / increased global warming and climate change impacts from transport Risks: material availability, increased cost to business	1	1	3	3	9	A	<div>ENV-RM-0036a Materials Planning and Waste</div> <div>Normal & Abnormal: Accurately assess material needs / check stock prior to placing orders Emergency: None</div>	1	1	3	2	6	G	Section Manager

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97	Piling operations	Operations	Impact: Noise and vibration nuisance to third parties / global warming and climate change / damage to archaeological remains Risks: reputational damage, complaints, negative publicity	2	3	2	3	9	A	<div>ENV-RM-0013a Nuisance</div> <div>ENV-RM-0015a Noise</div> <p><u>Normal & Abnormal:</u> Vibration assessment / noise assessment / identify vibration levels prior to commencement / working hours <u>Emergency:</u> None</p>	2	3	2	2	6	G	Section Manager / Public Liaison Officer												

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100	Refuelling of plant and vehicles	Operations	Impact: Depletion of natural resources / global warming/ climate change / contamination to watercourses / contamination to land / impact on ecology Risks: cost of fuel, cost to the business, prosecution, clean up costs	2	3	4	4	16	R	<div>HSF-PR-0046 Plant</div> <div>ENV-RM-0018a Spill</div> <p>Normal & Abnormal: never leave plant/vehicles unattended when refuelling / use of drip trays or plant nappies / availability of spill kits / clean up any spills or leaks / report spills and leaks into iSMS regular inspections of refuelling areas / availability of spill kit materials to deal with large spills</p> <p>Emergency: In the event of a significant spill which can't be dealt with in-house, utilise emergency response contractor.</p> <p>Opportunities: Use of electric vehicles and battery operated plant / install telematics technology on plant and equipment to determine consumption and use patterns / use alternative low carbon fuel where possible</p>	2	3	4	1	4	G	Section Manager												

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103	Road Construction	Operations	Impact: Depletion of natural resources / disposal of waste / nuisance to local stakeholders caused by noise, dust / potential for surface water contamination / potential for releases to land / global warming / climate change Risks: raw material availability, cost to business, use of unwashed stone resulting in silt run-off	2	3	3	3	9	A	<div>ENV-RM-0010a Silt Mitigation</div> <p><u>Normal & Abnormal:</u> Consider working hours / noise monitoring if required / spill kits available / segregate waste / dispose to approved waste contractor and disposal site / retain waste transfer documentation <u>Emergency:</u> Stop work <u>Opportunities:</u> lower impact options such as use of trackway or recycled stone</p>	2	3	3	2	6	G	Section Manager / Public Liaison Officer												

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105	Site security	Operations	Impact: Depletion of natural resources / global warming / climate change / visual impact of perimeter site fencing Risks: complaints from local residents (noise & light)	1	2	1	3	6	G	<div>ENV-RM-0015a Noise</div> <p><u>Normal & Abnormal:</u> Turn of equipment when not is use / use silenced generators for night time works <u>Emergency:</u> Where possible reposition generator in event if noise complaints / report complaints to the BB Helpline / report incidents on iSMS <u>Opportunities:</u> Reduce generator noise by installing renewable energy sources e.g. solar panels</p>	1	2	1	2	4	G	Section Manager												

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107	Storage of building materials	Operations	Impact: Disturbance to wildlife and impact on vegetation / nuisance to third parties / potential surface water pollution / waste disposal. Risks: complaints, reputational damage, possible fine	1	2	1	3	6		<div>ENV-RM-0036a Materials Planning and Waste</div> <div>Normal / Abnormal: Store materials in bays / out of wind / covered / compact stockpiles / damp down / spill kits / drip trays / undercover to prevent damage / regular checks on storage areas</div> <div>Emergency: None</div>	1	2	1	2	4		Section Manager												
109	Storage of plant and equipment on unmade ground	Operations	Impact: Pollution to ground Risks: clean up costs, fines, reputational damage	1	1	2	4	8		<div>ENV-RM-0007a Storage of Fuels Oils and Liquids</div> <div>Normal / Abnormal: Store away from surface water drains / spill kits available / drip trays and plant nappies available / regular monitoring for leaks and spills</div> <div>Emergency: Report leaks into iSMS</div>	1	1	2	2	4		Section Manager												

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113	Theft of plant / equipment / fuel	Operations	Impact: Pollution to rivers, surface water drains , foul drains and ground Risks: negative publicity, failure to fulfil compliance obligations, possible fines, prosecution, clean up costs	2	3	3	3	9	A	<div>ENV-RM-0007a Storage of</div> <div>ENV-RM-0019a Working near Watercourses England and</div> <div>ENV-RM-0019b Working near</div> <div>Normal / Abnormal: consider the need for security cameras or security personnel / lock plant & equipment and ensure secure if left on site / store plant & equipment away from watercourses / spill kits with plant</div> <div>Emergency: Stop work</div>	2	3	3	2	6	G	Section Manager												

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115	Use of construction materials	Operations	Impact: Use of natural resources / inefficient use of construction materials / waste disposal Risks: Increase in raw material costs, cost to the business of wastage	1	2	2	3	6	G	<div><div>ENV-RM-0035a Waste</div><div>ENV-RM-0036a Materials Planning and Waste</div></div> <div>Normal / Abnormal: implementation of the waste hierarchy / regular monitoring and reporting of waste production and costs Emergency: Stop work</div>	1	2	2	2	4	G	Section Manager
116	Use of COSHH substances	Operations	Impact: Spill or leaks polluting surface water drains, watercourses and ground / production of waste materials including hazardous waste Risks: clean up costs, reputational damage, prosecution, fines	2	4	2	3	12	R	<div><div>ENV-RM-0007a Storage of</div></div> <div>Normal / Abnormal: secure COSHH storage / implementation of procedures for using COSHH Emergency: Stop work</div>	2	4	2	1	4	G	Section Manager

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118	Use & maintenance of mechanical plant and vehicles	Operations	Impact: Depletion of natural resources / global warming / climate change / air pollution including fumes / waste disposal / nuisance caused by noise Risks: Cost to business / increase in fuel price / use of renewables / use of automated controls to manage energy demand	2	3	2	3	9	A	<div>ENV-RM-0035a Waste</div> <div>ENV-RM-0015a Noise</div> <div>ENV-RM-0014a Air Quality</div> <p>Normal / Abnormal: Switch off plant when not in use / maintenance regime in place / regular servicing / remove plant with excessive fumes from site / air monitoring if required / ensure hazardous waste is segregated / use drip trays during maintenance activities / obtain noise readings prior to commencement of works / acoustic screening / consult Natural England or equivalent if species disturbance is likely</p> <p>Emergency: Stop works</p>	2	3	2	2	6	G	Section Manager / Public Liaison Officer												

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120	Use of plant, equipment, machinery & vehicles	Operations	Impact: Depletion of natural resources / global warming / climate change / nuisance to local stakeholders / disturbance to wildlife / potential pollution to water and ground Risks: Price of diesel and petrol rises, increased cost to business	2	3	2	3	9	A	<div>ENV-RM-0014a Air Quality and</div> <div>Normal / Abnormal: regular maintenance and servicing / spill kits available / daily checks prior to use / report faulty machinery & equipment / damp down surfaces if dusty / spill kits Emergency: Don't use plant / equipment / machinery etc. if not in good order of repair Opportunities: Inclusion of hybrid vehicles on fleet list, inclusion of lower emission vehicles on fleet list, battery powered plant / use of renewables / use of automated controls to manage energy demand</div>	2	3	2	2	6	G	Section Manager												

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121	Use of road saws / stihl saws	Operations	Impact: Depletion of natural resources / global warming / climate change / emission of dust resulting in nuisance impact / noise nuisance / fire to surrounding vegetation. Risks: complaints, negative publicity	2	3	2	3	9	A		ENV-RM-0014a Air Quality and ENV-RM-0015a Noise Normal / Abnormal: Use water suppression / notify local residents about work Emergency: None	2	3	2	2	6	G	Section Manager																	

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Project:		East Rhyl Coastal Defence		Pre Mitigation							Post Mitigation																		
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				Legal	H&S	Env					Legal	H&S	Env																
122	Use of site lighting (outside)	Operations	Impact: Depletion of natural resources / global warming / climate change / disturbance to people in neighbouring properties / disruption to local wildlife by disrupting ecological cycles / complaints from local residents Risks: complaints, negative publicity	1	1	2	3	6	G	<div>ENV-RM-0013a Nuisance</div> <p><u>Normal / Abnormal:</u> Adopt mains power utility services where possible / implementation of the 'green dot' scheme / use timers so turned off when not needed / focus light on work site and prevent unrequired light dispersal / use movement sensors to activate lights</p> <p><u>Emergency:</u> Where possible, reposition lighting in event of nuisance complaints / report complaints to the BB Helpline / report incidents on iSMS</p> <p><u>Opportunities:</u> Use of LED technology to reduce energy consumption / use of renewable technology to power lighting / use of automated controls to manage energy demand</p>	1	1	2	2	4	G	Section Manager / Public Liaison Officer												

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				Legal	H&S	Env					Legal	H&S	Env														
123	Use of welfare cabins on site	Operations	Impact: Depletion of natural resources / global warming / climate change / disposal of waste / disposal of waste water / disposal of septic tank waste Risks: failure to fulfil compliance obligations, lack of sewer to discharge waste water to	1	2	3	3	9	A	<u>Normal / Abnormal:</u> use of water saving devices on taps etc. / rainwater harvesting / report and repair leaks and drips / attach mains utility services to site cabins and welfare facilities where possible / sinks to drain to sewer or to septic tank, not to ground <u>Emergency:</u> None	1	2	3	2	6	G	Site Team / Environmental Management Representative										

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Project:		East Rhyl Coastal Defence		Pre Mitigation							Post Mitigation																		
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				Legal	H&S	Env					Legal	H&S	Env																
136	Approval of Suppliers	Procurement	Impact: Potential for approving suppliers who don't have correct environmental licences / permits / exemptions / potential for suppliers to carry out activities other than those they were approved for e.g. carrying waste / potential for waste supplier to take BB waste to unlicensed sites Risks: Reputational damage, negative publicity, prosecution, fines, clean up costs, failure to fulfil compliance obligation	4	4	4	3	12	R	<div>PRC-PR-0002 Supply Chain Prequalification Procedure</div> <p><u>Normal / Abnormal:</u> Supplier assessment process using Constructionline. <u>Emergency:</u> Stop using supplier <u>Opportunities:</u> Approve suppliers for specific activities</p>	4	4	4	1	4	G	Project Lead - Deter Golieth												

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Project:		East Rhyl Coastal Defence		Pre Mitigation						Post Mitigation							
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				Legal	H&S	Env					Legal	H&S	Env				
137	Procurement of materials	Procurement	Impact: Depletion of natural resources / air pollution and road congestion from transporting materials / natural resource depletion and associated habitat degradation / potential to procure non-sustainably sourced materials / waste generation from over-ordering / global warming / climate change / waste disposal / potential to source materials from an illegal source / environmental damage caused by extraction and during production Risks: materials unavailable, cost to business of sourcing from further-afield, failure to fulfil compliance obligations, negative publicity, reputational damage	1	1	3	4	12	R	<div>PRC-PL-0007 Sustainable</div> <p><u>Normal & Abnormal:</u> Sustainable Procurement Policy in place / Quantity Surveyors to calculate material quantities / spare materials to be returned to depots for re-use / procure locally / procure from approved suppliers / use recycled / secondary aggregates / responsible sourcing of materials e.g. FSC timber with chain of custody</p> <p><u>Emergency:</u> Report products which don't meet Sustainable Procurement Policy e.g. non-FSC timber or no chain of custody documentation into iSMS, make report to Procurement if illegally sourced materials are suspected</p> <p><u>Opportunities:</u> investigate material substitution, use of local suppliers to minimise impacts</p>	1	1	3	1	3	G	Project Lead - Deter Golieth

Document Authoriser: Poul Wend Hansen

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				Legal	H&S	Env					Legal	H&S	Env														
138	Compliance with legislation / compliance with Balfour Beatty reporting procedures	Reporting	Impact: Incidents don't receive adequate response Risks: Negative publicity, reputational damage, fines, prosecution	5	5	5	5	25	R	<div>HSES-RM-0001c UK Environmental Legal Register</div> <div>HSES-PR-0001 Health Safety and Environmental Legislation and Other Requirements</div> <div>HSES-PR-0005 Incident Reporting and Investigation</div> <div><u>Normal & Abnormal:</u> All environmental incidents and near misses recorded on iSMS / BB legal team to be consulted if required <u>Emergency:</u> UK Environment Team to be consulted <u>Opportunities:</u> Build good working relationship with regulators by self-reporting / support clients to meet their legal reporting requirements where possible</div>	5	5	5	1	5	Project Lead - Deter Golieth											

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140	Vandalism / Theft by third party	Third Party	Impact: Contamination to the local or wider environment Risks: negative publicity, reputational damage, failure to fulfil compliance obligations, potential prosecution, clean up costs	3	3	4	3	12	R	<div>ENV-RM-0007a Storage of field, oils and liquids</div> <p><u>Normal / Abnormal:</u> locked skips / locked bowsters / locked storage facilities / ensure adequate site enclosure / security personnel / use of anti vandal paint / CCTV / electric fencing <u>Emergency:</u> Security personnel and CCTV on high risk sites.</p>	3	3	4	1	4	G	Section Manager												

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141	Employee business travel	Travel & Transport	Impact: Depletion of natural resources / global warming / climate change / air pollution from higher emissions if one employee per vehicle / nuisance to local stakeholders / dust / pollution of surface water drains Risks: Price of diesel and petrol, increased cost to business	2	3	3	5	15	R	<div>PRC-PL-0100 UK Travel and</div> <div>OPS-RM-0012 Company Car</div> <p><u>Normal / Abnormal:</u> Put on crew bus where possible / employ local labour / car sharing / video conferencing to avoid need to travel / use of public transport <u>Emergency:</u> Fuel protests resulting in fuel shortage and disrupting employees travel to work / severe weather conditions including snow & ice, floods, high winds causing the office to be closed or transport to be disrupted. Result in the need for employees to work from home / increased reliance on electricity for charging vehicles. Business continuity plans for offices. <u>Opportunities:</u> Inclusion of hybrid vehicles on fleet list, inclusion of lower emission vehicles on fleet list</p>	2	3	3	2	6	G	Environmental Management Representative/ Section Manager												

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				Legal	H&S	Env					Legal	H&S	Env														
142	Transportation of people & materials	Travel & Transport	Impact: Depletion of natural resources / global warming / climate change / air pollution from higher emissions if one employee per vehicle / nuisance to local stakeholders / dust / pollution of surface water drains Risks: Price of diesel and petrol, increased cost to business	2	3	3	5	15	R	<div>OPS-RM-0012 Company Car</div> <div>Normal / Abnormal: Green travel plans for permanent locations / regular monitoring of fuel use / use of WebEx / tool box talks / lowering the carbon footprint of fleet vehicles / set up bunded wheel wash / utilise road sweeper Emergency: Utilise warning signs to warn other road users of mud/debris on public highway Opportunities: Inclusion of hybrid vehicles on fleet list, inclusion of lower emission vehicles on fleet list</div>	2	3	3	2	6	G	Site Team / Environmental Management Representative										

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200	Employee travel to work	Travel & Transport	Impact: Depletion of natural resources / global warming / climate change / air pollution from higher emissions if one employee per vehicle / nuisance to local stakeholders / dust / pollution of surface water drains Risks: Price of diesel and petrol, increased cost to employees / increased fuel use and CO2 emissions in instances where electric charging points are not available or are in use by others	1	2	3	4	12	R	<u>Normal / Abnormal:</u> electric charging points provided for company cars / provision of car share bays / provision of public transport options / business continuity plans in place for office. <u>Emergency:</u> Fuel protests resulting in fuel shortage and disrupting employees travel to work / severe weather conditions including snow & ice, floods, high winds causing the office to be closed or transport to be disrupted. Result in the need for employees to work from home / increased reliance on electricity for charging vehicles. Business continuity plans for offices. <u>Opportunities:</u> Development of green travel plans for offices, employees able to work from alternative offices which are closer to their home / installation of electric charging points.	1	2	3	2	6	G	Site Team												

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144	Transfer of waste and disposal	Waste	Impact: Global warming and climate change / depletion of landfill capacity Risks: Potential use of waste carrier without valid waste carriers licence / potential use of disposal sites without the correct environmental permit, exemption or equivalent / increased costs if local disposal and recycling sites not utilised / potential that waste is fly-tipped by waste carrier / inadequate waste segregation / potential for prosecution / no provision of recycling bins / recycling bins not used correctly / recycling bins in place but no recycling waste collection in place.	4	1	3	4	16	R	ENV-RM-0035a Waste <u>Normal / Abnormal:</u> Review disposal options prior to office establishment / segregate waste materials as they are generated / identify reclaim and reuse materials where possible / dispose of materials in accordance with duty of care / ensure licensed waste carriers are used / segregate all hazardous and non-hazardous waste for disposal / do not landfill liquid hazardous waste / prioritise recycling / dispose of waste via Group deal with Reconomy. <u>Emergency:</u> Stop works and contain waste if waste has been inappropriately disposed of. <u>Opportunities:</u> View waste as a resource and prioritise reuse	4	1	3	1	4	G	Section Manager / Environmental Management Representative										

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148	Generation and storage of inert waste including spoil	Waste	Impact: Potential contamination to surface water / negative visual impact / potential breach of waste storage limits / potential breach of waste treatment legislation / incorrect definition of waste applied / nuisance to local stakeholders Risks: failure to fulfil compliance obligations, fines and prosecution, delay to works, increased costs, failure to see waste as a resource	2	1	2	4	8	A	<div>ENV-RM-0035a Waste</div> <div>Normal / Abnormal: Open skip / covered skip / locked skip / monitoring of skips / regular litter picks / store away from watercourses / don't store under trees / install silt protection measures if needed e.g. silt fencing, rock dams, cut off ditches, settlement ponds / store away from drains / waste exemption or permit to be obtained for storage of waste if necessary Emergency: Collect litter as required / sheet spoil in heavy rain Opportunities: Follow the waste hierarchy</div>	2	1	2	2	4	G	Section Manager / Environmental Management Representative												

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159	Transport of waste by third party	Waste	Impact: human health impacts / global warming / noise, dust and traffic congestion causing nuisance for local community / potential to use supplier without waste carriers licence / potential for waste carriers licence to be revoked / potential for disposal sites to be utilised which don't have environmental permits or exemptions in place Risks: failure to fulfil compliance obligations, lack of control over disposal sites utilised	4	1	4	4	16	R	<div>ENV-RM-0035a Waste</div> <p><u>Normal / Abnormal:</u> use approved waste carriers where waste carriers licence and disposal site licences have been approved prior to use / obtain waste transfer note and retain for 2 years / use of Group Reconomy deal <u>Emergency:</u> Where existing waste carriers and disposal sites can't be used, approve new waste carriers and sites prior to use <u>Opportunities:</u> reuse waste material where possible and with the appropriate regulatory licences, consents and permissions in place.</p>	4	1	4	1	4	G	Section Manager / Environmental Management Representative												

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				Legal	H&S	Env					Legal	H&S	Env				
160	Waste disposal	Waste	Impact: Potential use of waste contractors without valid waste carriers licences / potential use of disposal sites without correct licences in place / reduction in landfill capacity / nuisance caused to local community through operating waste disposal sites Risks: failure to fulfil compliance obligations, reputational damage, prosecution, fine	4	1	4	4	16	R	<div>ENV-RM-0035a Waste</div> <div><u>Normal / Abnormal:</u> use approved waste carriers where waste carriers licence and disposal site licences have been approved prior to use / follow waste hierarchy to reduce waste disposed of to landfill <u>Emergency:</u> Where existing waste carriers and disposal sites can't be used, approve new waste carriers and sites prior to use <u>Opportunities:</u> reuse waste material where possible and with the appropriate regulatory licences, consents and permissions in place.</div>	4	1	4	1	4	G	Section Manager / Environmental Management Representative

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163	Waste being transferred to other parties i.e. waste carrier, disposal site, recycling facility	Waste	Impact: Potential for use of waste contractors without valid waste carriers licence / potential to use disposal site without valid environmental permit / exemption Risk: failure to fulfil compliance obligations, negative publicity, prosecution, fine	4	1	4	4	16	R	<div>ENV-RM-0035a Waste</div> <p><u>Normal / Abnormal:</u> Skip waste to go through Reconomy Group deal and waste carriers licences and disposal site licences maintained on the Reconomy portal / Procurement to carry out waste duty of care checks when on-boarding suppliers / annual renewal of checks <u>Emergency:</u> Where existing waste carriers and disposal sites can't be used, approve new waste carriers and sites prior to use <u>Opportunities:</u> reuse waste material where possible and with the appropriate regulatory licences, consents and permissions in place.</p>	4	1	4	1	4	G													

5. Evaluation of environmental compliance and performance

SCOPE

This procedure applies to all Company projects, offices, facilities, asset and concession companies and Joint Venture (JV) projects where the Company Management System has been adopted by the JV Board. Where the Company is required to operate another party's Management System then the Asset or Concession Company/Joint Venture/Alliance Business Management System (BMS) requirements must be followed in relation to assessing the validity of third-party management systems.

PURPOSE

This procedure documents how Balfour Beatty UK determines what is monitored and measured in relation to its environmental compliance and performance to enable action to be taken to meet its environmental objectives and compliance obligations.

ABBREVIATIONS / DEFINITIONS

HSES	Health, Safety, Environment and Sustainability
SHELT	Safety, Health and Environment Leadership Team
AMP	Audit Management Programme
Red Text	Not yet available

INPUTS

Reference	Type	Title
SUS-PR-0001	Procedure	Sustainability Reporting
SUS-RM-0001a	Reference Material	Enablon Data Requirements, Manual Meter Reading Guide and Guidance for Reviewing Energy Data
QUA-PR-0001	Procedure	Management Review Meeting Requirements
MSC-MA-0001b	Manual	Business Management Systems Manual - Appendix B Policy, Organisation and Arrangements for Environment
ENV-PR-0001	Procedure	Environmental Risk and Opportunities procedure
ENV-RM-0001	Reference Material	Environmental Risk and Opportunities
HSES-RM-0001a	Reference Material	Legislation, Regulation, Information and Other Requirements - Environment
HSES-PR-0009	Procedure	HSES Visits, Tours, Inspections and Leading KPI's

OUTPUTS

Reference No.	Document Title	Retention Period	Responsibility
Annual Enabling Function Plan	UK HSES Enabling Function Plan	NA	HSES Director
Annual Team Plan	UK Environment and Sustainability Team Plan	NA	HSES Group Head of Environment &

			Sustainability
ENV-RM-0004	E&S Compliance Question Sets	NA	HSES Group Head of Environment &
ENV-TF-0004a	Environmental Management Representative Inspection	Project Duration	Project Lead
ENV-SF-0004a	Environmental Emergency Drill Response Record	Project Duration	Project Lead
ENV-SF-0004a	Spill Environmental Emergency Drill Record	Project Duration	Project Lead

PROCEDURAL REQUIREMENTS

1. Evaluation of environmental compliance and performance

1.1 The monitoring and measurement of environmental compliance and performance is carried out across all levels of the Company.

The UK Environment Team ensures that the business performance feedback and outcomes of the Gated Life Cycle Process, External Audits, Operational Audits and HSES Visits Tours Inspections and Leading KPIs ([HSES-PR-0009](#)) are used to complete the evaluation of environmental compliance and performance of Balfour Beatty's UK business and operational activities as well as providing assurance that the UK BMS enables this.

The details of the monitoring and measurement of Our Blueprint reporting can be found in Sustainability Reporting ([SUS-PR-0001](#)) which sets out the environmental performance reporting requirements within the HSES Portal and the annual reporting Data Requirements are set out in its appendices ([SUS-RM-0001a](#), [b](#) & [c](#)).

The details and approach to environmental incident reporting and investigation are set out in the procedure Incident Reporting and Investigation ([HSES-PR-0005](#)).

1.2 In order to evaluate Balfour Beatty UK's environmental compliance and performance, the UK Environment Team reviews the Company's Environmental Legal Register (Reference [HSES-RM-0001c](#)) and Risk & Opportunities Register (Reference - [ENV-RM-0001](#)) as part of the company's ongoing management review activities with the Strategic Business Unit / Business Unit HSES enabling function teams.

This ensures that action to address performance deficiencies can be agreed and taken while any changes in the company's operational activities and legislative or regulatory requirements can be documented, understood and action taken to address these changes within the UK BMS. Plans for the operational implementation to address changes are agreed with and completed by Business Unit HSES Directors and Leads.

The evaluation of environmental compliance and performance includes but is not limited to:

- EU, UK, national, and local legal and regulatory requirements
- The Zero Harm Vision and Our Blueprint, Balfour Beatty's Sustainability Strategy
- Requirements specified in permits, licences or other forms of authorisation
- Orders and consents from regulatory bodies
- Judgements of courts, administrative tribunals and enforcement agencies
- Client and other stakeholder requirements which Balfour Beatty UK has chosen to as part of its environmental management system.

A further key part of the evaluation of environment of compliance and performance is the regular review of the documenting of the Company's assurance of compliance status of each item in the Legal, Regulatory and Other Requirements Register ([HSES-RM-0001a](#)).

This regular review is documented within the Company register as well as ensuring that the register also documents the link to the relevant environmental aspects and impact control method set out in Environmental Risk and Opportunities Register ([ENV-RM-0001](#)).

1.3 Governance for environmental compliance and performance

Failures to meet compliance or address environmental performance will be reviewed and resolved by the most appropriate HSES lead at operational, business unit and strategic business unit level.

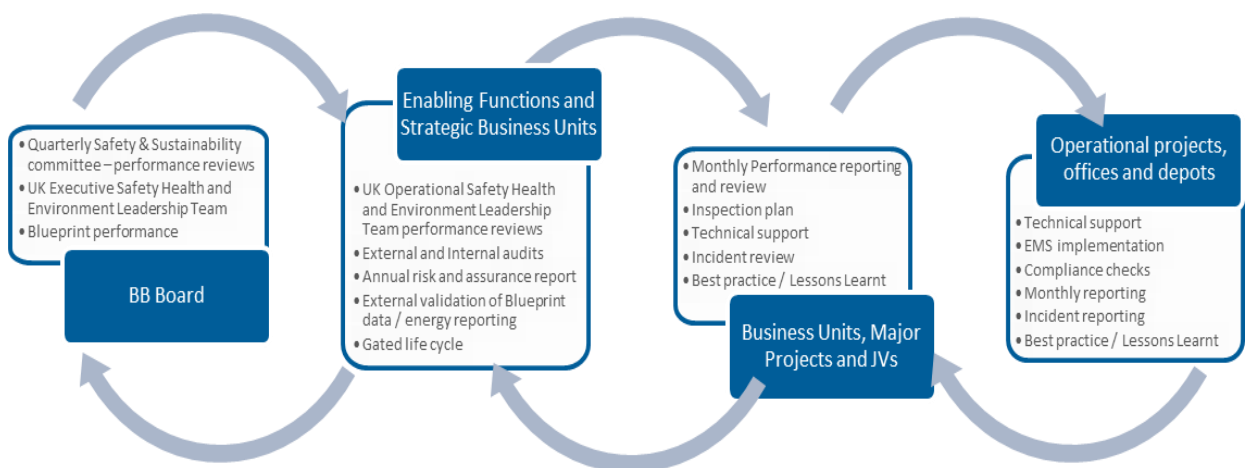
Compliance and performance is reviewed and actions approved to resolve any deficiencies as per HSES Visits Tours Inspections and Leading KPIs ([HSES-PR-0009](#)), Setting People to Work Safely ([HSES-PR-0011](#)).

Compliance and performance is reviewed and actions approved as per the agendas, performance data reviews and discussions at the UK operational SHELTS, the UK Executive SHELTS and at the Group Safety and Sustainability Committee.

Where non-compliance is not resolved in a timely manner, issues will be escalated to the next level of hierarchy to ensure senior management are alerted as illustrated in [Annex1](#).

1.4 UK HSES enabling function activities for environmental compliance and performance

The UK HSES Enabling Function supports the evaluation of compliance across different organisational levels of the Company as detailed below:



The UK Environment Team works with the wider UK HSES Enabling Function and business stakeholders to ensure that environmental compliance and performance are monitored and measured and required assurance activities completed. Typical stakeholders that the team may engage with are outlined in [Annex2](#).

1.5 The UK Environment Team reviews audit findings, non-compliance and environmental incident data on an ongoing basis to evaluate the level of environmental compliance across all levels of the Company in implementation of the UK BMS to meet legal, client and business needs.

1.6 Where common themes are identified the UK Environment Team develops and communicates appropriate information material for dissemination. The team engages with key functional teams (see [Annex2](#)) where appropriate to agree actions to correct any issues identified to ensure the Company fulfils its compliance requirements.

2. Gated life cycle

2.1 The UK Environment team and wider HSES Enabling Function support the gated life cycle process by providing technical support as required (please refer to the [Gated Life Cycle requirements of the BMS](#)).

This support enables environmental risk, opportunities and compliance requirements to be identified

early in the winning business process ensuring that the Company can organise and resource itself accordingly to meet the requirements of its client commitment and operational requirements.

This process is vital for the evaluation of compliance. It ensures that the HSES enabling function is able to provide the right level of operational support and resourcing for the management environmental risk, opportunities and delivery of environmental compliance.

This ensures the completion of the assessment of compliance requirements, the implementation of the UK BMS, recording of adequate compliance checks and the assurance of the environmental performance of operational activities.

This activity generates performance information that is vital in the evaluation of the compliance of the Company's activities as part of the management review process as documented in [QUA-PR-0001](#).

3. Audit

- 3.1 The UK Operational Audit Team work with the company's independent management system certification company to agree an audit plan for the UK Business Management System, enabling functions and operational activities to ensure that the Company meets the requirements of the international standards organisation's standard for environmental management: ISO 14001.
- 3.2 The UK Environment Team work with the Operational Audit Team to agree an annual operational audit plan to assess the performance of the business management system in terms of environmental performance and the meeting of compliance obligations.
- 3.3 The annual operational audit plan is a rolling, 3-year programme based on the UK Environment Team's assessment of the organisation's environmental risk and opportunities, legal compliance obligations, other environmental requirements and operational performance. It considers the Company's past environmental performance as well as outcomes of past audits, inspections, compliance checks and incidents.

The consideration of the effectiveness of actions taken to correct non-compliances enable themes or priority areas for audit focus to be discussed and agreed.
- 3.4 The UK Environment Team works with the Operational Audit Team to ensure that they have the technical understanding needed to demonstrate that the audits completed are effective in their assessment of the business management system and the Company's compliance obligations.
- 3.5 All audit findings and actions identified and agreed with the Company are logged in the company's AMP system by the Operational Audit Team to ensure that they are effectively closed out. The system also enables the audit findings and actions to be analysed to understand themes and trends for continual improvement as well as to assess the effectiveness of actions taken to fix non-compliances.

4. HSES Visits, Tours, Inspections and Leading KPI's

The UK procedure HSES Visits, Tours, Inspections and Leading KPI's ([HSES-PR-0009](#)) sets out the requirements that all UK operational business units and activities that must be implemented including how the outcomes of these activities are recorded within the HSES portal.

It is the Project Lead's responsibility, as set out in the Business Management Systems Manual Appendix B Policy, Organisation and Arrangements for Environment ([MSC-MA-0001b](#)), to ensure that the risks and opportunities for the activities undertaken on that project are assessed and documented as per the Environmental Risk and Opportunities procedure ([ENV-PR-0001](#)).

The output of the assessment is used to document the required compliance checks for the planned operational activities. The frequency of the checks is dependent on the type or activity, the location of the activity and the environmental impact of the activity.

5. Environmental Management Representative Inspections

- 5.1 As part of the annual evaluation of performance and compliance, the UK Environment Team documents environmental performance and aligns compliance to the nine environmental risks faced

by UK operational activities.

Performance of compliance to the nine environmental risks enables agreement of the focus of inspections and business unit support with each UK Strategic Business Units / Business Unit. This is a requirement of the annual management review process as documented in Management Review Meeting Requirements ([QUA-PR-0001](#)).

- 5.2 The Project Management Plan Procedure ([PRM-PR-0001](#)) sets the requirement for the Project Lead to appoint an Environmental Management Representative.

The Policy Organisation and Arrangements for Environment ([MSC-MA-0001b](#)) sets the requirement for the operational management team of UK activities to appoint an Environmental Management Representative who is responsible for the organisation and completion of relevant Inspections using [ENV-TF-0004a](#).

Environmental Management Representative Inspection is considered the minimum environmental inspection which must be carried out on all projects at least once per month.

If the appointed Environmental Management Representative is a trained and experienced environment and sustainability professional (please refer to HSES Training and Competence - [HSES-PR-0026](#)) then [ENV-TF-0004a](#) Environmental Management Representative Inspection form can be adapted and edited as required to meet operational and client requirements.

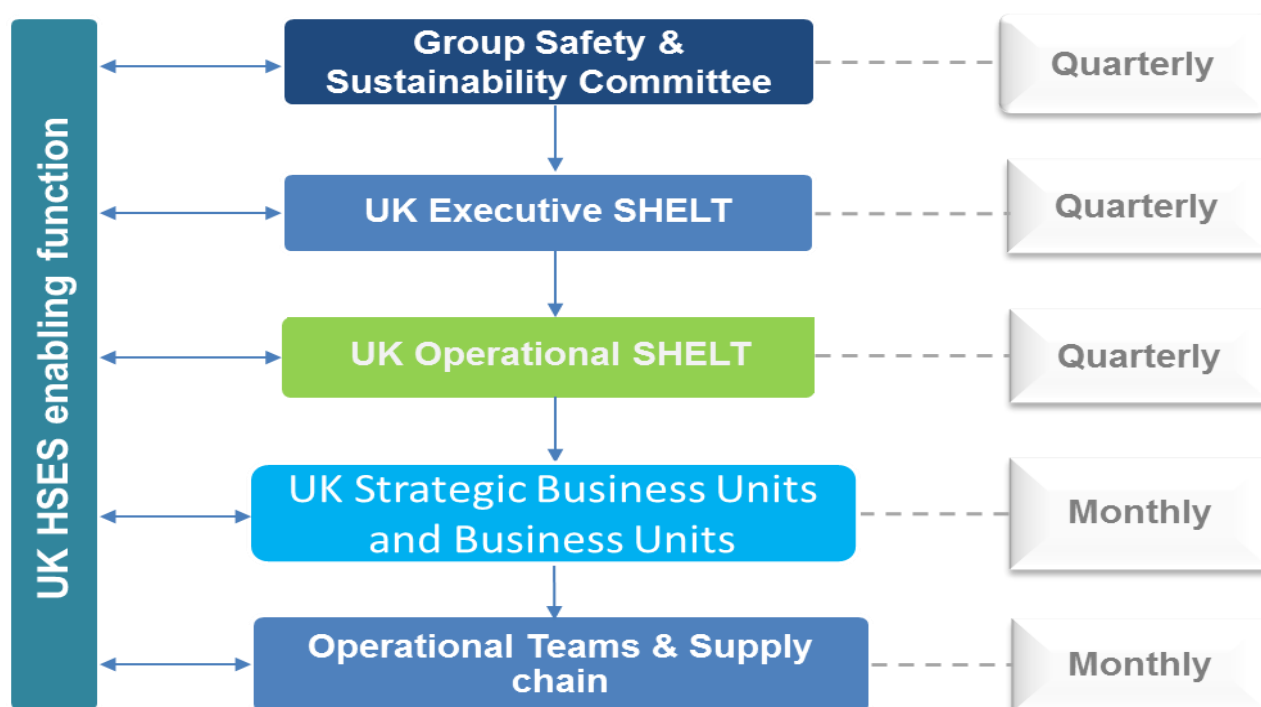
However if the appointed Environmental Management Representative is not a trained and experienced environment and sustainability professional then:

- Questions must not be deleted to ensure that the inspection form is completed fully which may prompt new risks to be identified that have not been previously considered.
- All sections must be answered and if a question is not applicable then the N/A column should be marked
- Additional questions may be added if required in order to make the inspection form more relevant to an individual project.

6. Environmental Emergency Response Drills

- 6.1 The Emergency Arrangements procedure ([HSES-PR-0003](#)) details the frequency of environmental emergency response drills that must be carried out. Records of the drills are maintained using Environmental Emergency Drill Response Record ([ENV-SF-0004a](#)) and the Spill Environmental Emergency Drill Record ([ENV-SF-0018a](#)).

Annex
1



Annex
2

UK Environment Team key stakeholders for BMS collaboration	
Risk and Assurance: <ul style="list-style-type: none"> - Annual risk and assurance of business activities 	Site mobilisation: <ul style="list-style-type: none"> - Environment and sustainability mobilisation questions - Support requests
Operational audit team: <ul style="list-style-type: none"> - Enabling function, business unit and operational audits - Annual risk assessment of activities and ISO 14001 certification 	Heads of Health, Safety, Environment and Sustainability: <ul style="list-style-type: none"> - Resourcing and Technical support (Heads of E&S and HSE advisors) - BMS implementation and content to meet business needs
Work Winning : <ul style="list-style-type: none"> - Alignment of BMS environmental documentation to Gated Life Cycle Process and activities 	HR Learning and Development : <ul style="list-style-type: none"> - Skills & capability matrix and training needs analysis - Ownership on internal training material
BMS team: <ul style="list-style-type: none"> - Environmental documentation ownerships, updates and management 	Procurement and Supply Chain Management: <ul style="list-style-type: none"> - Agreement of standards, assurance needs and performance requirements