



Ysgol Y Deri Expansion

Construction Environmental Management Plan (CEMP)

Project name:	Ysgol Y Deri Expansion	Project No:	SWW0066
Site Address:	Fort Road, Cosmeston, Penarth, CF64 5UY		
Client:	Vale Of Glamorgan Council - Sustainable Communities for Learning		
Project Telephone No.	N/A	Document Reference No.	CEMP01

Prepared by	Job Title	Signature
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NB: This section should be updated manually, and this page kept / inserted at the front of the plan during / further to any revisions that have been made									



Document Status and Control

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		<i>Name</i>	<i>Date</i>
0	Initial draft supporting the SAB application and Planning Submission	Andrew Evans	24/03/22
1	Updated in line with new drawings for full SAB submission and Planning	Andrew Evans	30/08/22
2	Updated minor references with regards to surveys, scope of work and dates	Andrew Evans	10/10/22
3	Updated to reflect comments made by NRW, SRS and SAB during Planning	Andrew Evans	23/01/23



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1.0 Introduction & Purpose

- 1.01 The purpose of the Construction Environmental Management Plan (CEMP) is to develop, maintain, implement, monitor and improve environmental control procedures in accordance with the relevant legal and regulatory requirements, contract specification and the ISG construction management system which complies with ISO14001:2004.
- 1.02 The CEMP provides project-specific management measures and is a dynamic document which should be reviewed if activities or conditions onsite change that may influence management measures.
- 1.03 This document has been developed to avoid, minimise and mitigate against any construction effects on the environment and surrounding community. It should be considered a living document with reviews being undertaken at set intervals and new information added as appropriate.
- 1.04 This CEMP details management measures to minimise environmental impact from the construction phase of the development.
- 1.05 This CEMP will be reviewed as minimum every 3 months or when site conditions change.
- 1.06 The CEMP has been prepared and produced to support the planning application for the development of the new **Ysgol Y Deri Expansion in Cosmeston** and identifies mitigation measures and construction best practice techniques that will be used to satisfy the findings from the **Preliminary Ecological Appraisal** prepared by AECOM.
- 1.07 A requirement of any subsequent planning consents is the implementation of this core document; the Construction Environmental Management Plan (CEMP). The CEMP is required to encompass environmental controls when required, with due consideration to relevant environmental legislation.
- 1.08 The CEMP provides the framework for which commitments made in the Preliminary Ecological Appraisal or any requirements of planning conditions can be realised. The CEMP outlines the ISG approach to environmental management throughout the construction phases with the primary aim of reducing any adverse impacts from construction on local sensitive receptors.
- 1.09 The CEMP has the following objectives to ensure ISG achieve its identified responsibilities to the project stakeholders – customers, communities, society, and people:
- To ensure ISG’s Sustainability Policy is implemented on site
 - To comply with relevant legislation and contractual requirements
 - To ensure that all environmental risks are identified, managed and mitigated
 - To promote best practice working on site



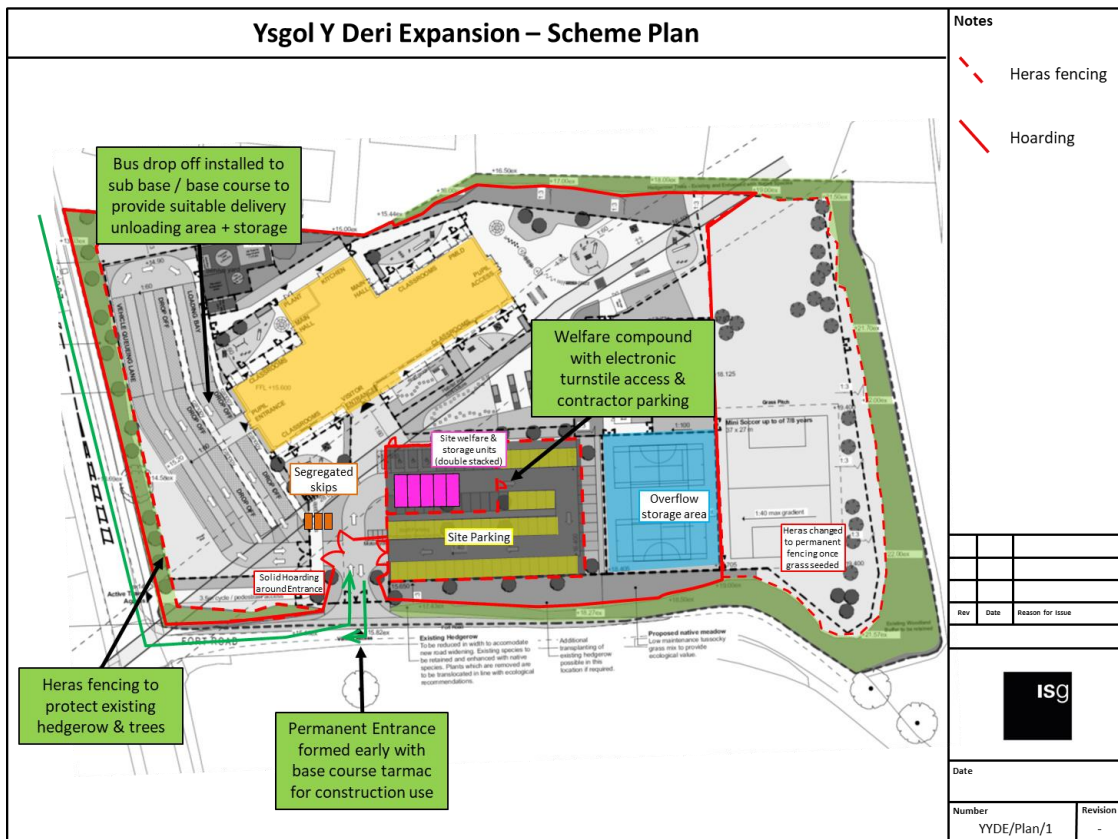
- To minimise the impacts on all relevant stakeholders and sensitive receptors
- To minimise wastage and maximise local resources

1.10 The Construction Environmental Management Plan (CEMP) provides the framework for which commitments made in an Environmental Statement or any requirements of planning conditions or Section 106 agreements can be realised.



2.0 Site Location & Project Description

- 2.01 This CEMP has been produced for the development of the Ysgol Y Deri Expansion site on behalf of The Vale of Glamorgan Council – Sustainable Communities for Learning. The site is approximately 22,000m² and located within the semi-rural location of Cosmeston to the south of Lower Penarth, Vale of Glamorgan.
- 2.02 The proposed works include new build, external works and hard & soft landscaping. The key elements of the project are identified below:
- the construction of a new 2 storey school building
 - the construction of staff car parking, including EV charging points
 - the construction of a bus drop-off area
 - the formation of a MUGA and artificial grass play area
 - the formation of a grass sports pitch and various other soft landscaping areas
 - the widening of Fort Road and replacement of the existing associated drainage system
- 2.03 The site will be accessed from Fort Road, using what will become the permanent vehicle entrance, with possible pedestrian access off Lavernock Road later in the project in line with the active travel masterplan. The access will be formed during the Fort Road widening works at the start of the project to enable two way traffic during the construction phase.



- 2.04 A logistics / phasing plan is attached to this CEMP in Appendix 2.
- 2.05 The new building GIFA is 3023m², with a footprint of circa 1800m².
- 2.06 An aerial view of the current site layout is shown below.



- 2.07 The site is located on the B4267 Lavernock Road between Cosmeston and Sully in an agricultural area dominated by fields with hedgerows and some scattered woodland blocks. Cosmeston Country Park and Medieval Village is located 20 m north west of the site. A disused railway line runs adjacent to the southern boundary of the site. The Penarth coastline is located 0.8 km south.
- 2.08 The scope of works will comprise of the following:
 - Hoarding and fencing
 - Drainage and service ducts



- Earthworks (excavation and fill works)
- Substructure works
- Superstructure construction of the main building
- External pedestrian landscaping and play areas, including MUGA, artificial pitch and grass sports pitch
- Hard landscaping, including car parking, bus drop off area and access roads
- Highway (S278) works to Fort Road

2.09 The site hours of work are defined as follows:

Monday to Friday = 08:00 – 17:30

Saturday = 08:00 – 13:00

Sundays / Bank Holidays = no working

No piling or drilling works are expected, however, if exceptionally noisy activities are taking place these will only be conducted on weekdays between 08:30 and 17:30.

2.10 During the construction period it may be necessary in exceptional circumstances to work outside the prescribed working hours. Should this occur, the hours, duration and nature of these works will be communicated to VoG representatives for their agreement.

2.11 Site History / Land Restrictions

2.11.1 Historical maps show the site as agricultural land dating back to at least 1879. The Archaeological Report states the potential for both medieval and post-medieval archaeological remains within the site to be considered low as it is located outside the boundaries of the settlement to the north, and Lower Cosmeston Farm to the northeast.

2.11.2 The site is not located within a Conservation Area and it does not contain any designated heritage assets. The Original house at Lower Cosmeston Farm is listed as a Designated Historic Asset, although it is 80m from the site boundary. The Cosmeston Medieval Village on the opposite side of Lavernock Road is listed as a County Treasure.

2.11.3 A desk study was undertaken in October 2020 found the Severn Estuary SPA, SAC and Ramsar Site to be located 0.8km east of site. There are also five SSSIs, eight SINCs and one LNR within 2km of the site. Due to the distances from the site, localised nature of the works and absence of pollution pathways there will be no impacts on any of the Designated Nature Conservation Sites within 2 km, or the SPA, SAC or Ramsar site features.

2.11.4 Protected and Priority Species Records from the last 10 years within 2 km highlighted the presence of amphibians, reptiles, birds, bats and other mammals, however, none were within the site boundary. The closest noted species was the Slow worm *Anguis fragilis* with records of 150m North, separated from site by Lavernock Road. This is common across all species with most of the records being from the North direction from site. Further surveys are planned for completion during the Spring and Summer of 2022.

2.11.5 The site is currently a disused pastoral field comprising neutral semi-improved grassland, not currently subject to management. Semi-natural habitats are present on the perimeter of the site comprising broadleaved semi-natural woodland, intact native species-rich hedgerow and rows of trees, with areas of both dense and scattered scrub throughout. The Phase 1 Habitat Map from the AECOM Preliminary Ecological Appraisal can be seen below:



2.11.6 There are no ASNW, PAWS, RAWs or AWSU areas within or adjacent to the site boundary.

2.11.7 There are no TPOs within or adjacent to the site.

2.12 Ground Conditions and Ground Contaminations

2.12.1 The geology at the site consists of limestone and mudstone of the St Mary’s Well Bay Member across the northern half of the site with marine mudstones of the Lavernock Shales Member underlying the southern half of the site.

2.12.2 Topsoil - between from ground level to between 0.2m and 0.3m below ground level (bgl), comprising a firm dark brown silty CLAY with rootlets; over

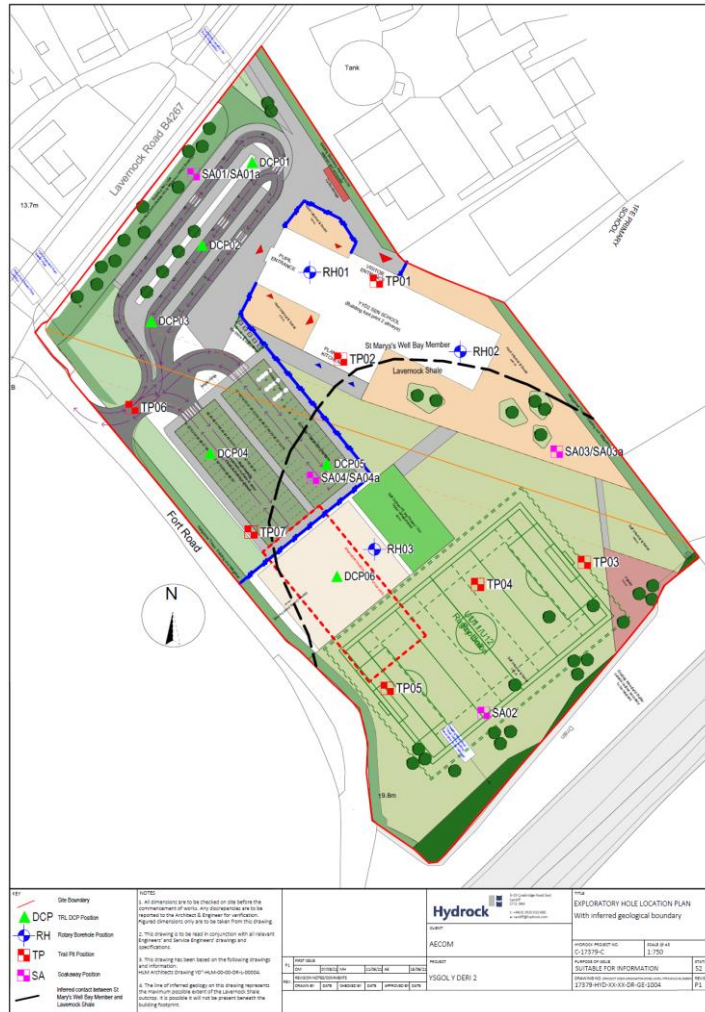
2.12.3 *In the northern part of the site:*

- Weathered St Mary’s Well Bay Member – from the base of the topsoil to between 0.85m and 1.20m bgl, generally comprising a firm to stiff orangish brown and grey gravelly CLAY; over
- St Mary’s Well Bay Member – from the base of the weathered material to a depth of at least 5.7m bgl (base not proven), comprising thin medium strong LIMESTONE beds interbedded with thin very weak to weak MUDSTONE beds.

2.12.4 *In the southern part of the site:*



- Weathered Lavernock Shale – from the base of the topsoil to depths of between 0.90m and 1.70m bgl, comprising a firm orangish brown CLAY; over
- Lavernock Shale – from the base of the weathered material to a maximum depth of 1.70m bgl (base not proven), generally comprising an extremely weak thickly laminated MUDSTONE.



- 2.12.5 During post-fieldwork monitoring high levels of ground water have been recorded (~0.2m bgl). There was also a 'significant inflow' observed in RH02 and TP02 during the initial fieldwork, with seepage / minor seepage observed to all other locations.
- 2.12.6 Exceedances of 6 different PAH compounds [benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, chrysene, dibenz(a,h)anthracene and indeo(1,2,3,cd)pyrene] were detected in a single topsoil sample taken from TP01, which is located close to the current entrance of the field adjacent to the farmyard. It is therefore considered likely that farm machinery would have been tracking across this point and that the topsoil would have been disturbed by this machinery with the introduction of contaminants being a real possibility.
- 2.12.7 All four soakaway test positions showed 'no infiltration'.
- 2.12.8 The site is located within a radon affected area where new buildings require basic radon protection measures.



- 2.12.9 Significant collapse of trial pit faces was noted following trial pit excavation. This was noted in pits excavated through the St Mary's Well Bay Member where the weathered horizon continued to considerable depths.
- 2.12.10 The site is deemed to be within Characteristic Situation 1 (Situation A).
- 2.12.11 A non-specialist UXO assessment indicates a moderate bomb risk. A full UXO desk study indicates a medium risk for the site and will require mitigation measures for site investigation and construction.



3.0 Construction Programme

3.01 An initial contract construction programme has been developed and can be found in **Appendix 3**.

3.02 Outline dates for the key construction activities are as per the table below:

Milestone	Date
Start on Site (Enabling Works)	February 2023
Start on Site (Construction)	May 2023
Completion of the works	July 2024
New school opens	September 2024

3.03 All works are to be constructed in conjunction with the control measures identified in this document.

3.04 There is little risk of flooding on the site itself, however, Lavernock Road and Fort Road are both highlighted as High Risk for surface water flooding. This is further covered by the FCA completed by Hydrock. As a competent contractor ISG must ensure that the construction activities on site do not make this any worse, and are looking to improve the flooding on Fort Road via the planned drainage works.

3.05 The control measures identified in **Appendix 5** will be applied before the start of each phase, in line with the plans in **Appendix 6**.

3.06 All works are to be coordinated with the recommendations advised during the planning approval period.

3.07 All works are to be coordinated with the recommendations from the Vale of Glamorgan Sustainable Drainage Approval Body (SAB). Explanation of how the various SAB features on the site will be protected is covered in **Appendix 8**.



4.0 Roles and Responsibilities

4.01 ISG recognises the need for accountability and responsibility for environmental issues at all levels in our organisation. This includes the site staff and operatives (including sub-contractors), who are a key determinant of environmental performance, and the senior management who ensure that the works are undertaken in accordance with this CEMP.

4.02 The **Senior Project Manager** will be responsible for:

- The Senior Project Manager is ultimately responsible for the effective resourcing of staff to ensure that all the environmental requirements identified in the CEMP are undertaken and also for ensuring that all construction planning and activities comply with the requirements of the CEMP
- Ensuring that the CEMP is developed & held on site and that it is implemented throughout all phases of the project
- Ensuring the CEMP details are updated as and when relevant information is provided by the stakeholders associated with each section of the CEMP; e.g. further consent conditions, pre-construction surveys, etc
- Maintaining the CEMP and ensuring that all contractors and visitors comply with it
- Ensuring that environmental issues identified within the Pre-Construction Information and the pre-construction site surveys and relevant information gathered from agencies, local councils etc are addressed
- Communicating the CEMP and other related document to employees, contractors and client representatives.

4.03 The **Project/Construction Manager** will be responsible for:

- The Project Manager will be appointed as the “**Sustainability Co-ordinator**” and will act as the sustainability champion for the project and is responsible for the implementation of environmental management procedures, monitoring and liaison with regulators
- The Project Manager will be appointed the **Project Environmental Coordinator (PEC)**
- The Project Manager will appoint a “**Biodiversity Champion**” who will be responsible for:
 - Ensuring all necessary ecology and habitat surveys have been carried out
 - Ensuring all relevant licences have been obtained and are complied with
 - Ensuring staff receive appropriate training and adequate communications
 - Ensuring appropriate mitigation measures are implemented
- Obtaining relevant licences, permissions or consents and ensuring compliance
- The site and all stored materials and chemicals are safe and secure
- Management of the Considerate Constructors Scheme process
- Ensure site statutory and directional signage is clearly visible for visitors to follow and whom they are to report to
- The site is kept clean and tidy



- Control access and egress to site for authorised personnel only
- Emergency egress arrangement so that those leaving site in the event of a pollution or spillage incident may do so safely
- Ensure staff are properly trained in the use of spill kits and appropriate first aid
- Ensure there are adequate first aid facilities on site
- Ensure that all those working on site have had a site induction and received an environmental briefing. Induction details will be advised in the construction phase health and safety plan
- Ensure that all risk assessments and method statements are reviewed and take cognisance of the control measures identified in this CEMP
- Timber used is from a sustainable source and legal
- Obtain chain of custody certificates for all timber suppliers

4.04 The **Sustainability Manager** will be responsible for:

- Has the authority to establish and continually review systems, procedures, specifications and approvals in order to provide and maintain an effective EMS, which will satisfy both internal and external parties.
- Ensure the CEMP is implemented and followed by all site personnel
- Ensure fortnightly toolbox talks include environmental matters
- Keep records of any incidents and prepare reports to identify lessons learnt
- Ensure site activities comply with legislation
- Inspect and audit the supply chain
- Deliver environmental training where required
- Set environmental targets and record data against it
- Undertaking environmental monitoring and auditing against the below measures:
 - Waste production
 - Energy consumption (electricity and diesel)
 - Timber Procurement
 - Subcontractor and supplier locations
 - Material recycled content

4.05 The **Public Liaison Officer/Community Benefits Manager** will be responsible for:

- Arranging public forums and open days for the project and address any concerns.
- Ensure all local residents and stakeholders are kept informed of progress
- Establish relations with key stakeholders
- Deliver the ISG corporate and social responsibilities targets
- They will act as the first point of contact for members of the public



- Production of newsletters, bulletins, posters etc. and display of the same throughout site offices and the local area on a regular basis to raise awareness of current issues both within the project team and throughout the local community
- Maintaining the communications log



5.0 Communicating to Sub-Contractors & Visitors

- 5.01 All sub-contractors and their operatives coming to work on the scheme will be given an induction.
- 5.02 Part of the induction will include a section on the Environment and will cover the ISG Environmental Policy, environmental control measures and the content of this CEMP.
- 5.03 Environmental notices and targets will be displayed around the site and on the hoarding.
- 5.04 The Project Manager will be responsible for monitoring communications between all relevant parties ensuring that all environmental matters to the project are discussed and managed and observation of the communications will be documented in the weekly site meeting.
- 5.05 Environmental layouts of the site will be updated as site conditions change and will include location of fuel storage, recycling / skip area, gas bottle storage, material storage, welfare locations and access and egress routes around the site.



6.0 Environmental Risks & Control Measures

6.01 The Environmental Statement identifies the environmental risks used to prepare the mitigation measures identified in this chapter of the CEMP.

6.02 A Ground Investigation (GI) and Preliminary Ecological Appraisal (PEA) has been carried out on the site.

6.03 Transport

6.03.1 A Transport Assessment was produced by AECOM as part of the planning application.

6.03.2 The daily HGV movements during the construction phase are deemed to be low and would not have a noticeable effect upon the current conditions.

6.03.3 A Construction Traffic Management Plan (CTMP) will be developed in line with any planning conditions. The CTMP will include details of the following controls:

- Site layouts segregated plant and pedestrians
- A copy of this plan is issued to the supply chain with each tender enquiry
- The content of this plan is communicated at the site induction to all persons
- This document and the site layout plans are deemed live documents and will change as site constraints and conditions change
- This document is to be used as a guide for all Tier 1, 2 and 3 sub-contractors in the production of their own site specific on and off-site traffic management plans
- The boundary of the site will be protected by a mixture of 2.4m high timber hoarding, composite panelling systems and Heras fencing.
- Access to site will be to authorised personnel only and via a biometric turnstile located at the site compound
- A trained vehicle marshal wearing orange coloured (as per highway standards) Hi-Viz clothing will control access and egress of all deliveries to the site
- All vehicles will be banked by trained operatives
- All delivery drivers will receive a copy of the driver induction and traffic management plan layout prior to and upon arrival
- Unloading and loading materials will be done by mechanical means where practicable
- Fall protection is to be fitted to delivery vehicles where access to the loading platform is required
- ISG will encourage all vehicles delivering goods are to be registered with FORS and CLOCS schemes thus helping vulnerable road users share the roads confidently with construction traffic



- An off-site “hold point” is to be identified and used in the event of road congestion
- Vehicle gates in hoarding will be set back from Fort Road to allow deliveries to pull off the carriageway whilst waiting to be allowed on to site
- This CTMP is deemed a live document and is subject to change as the scope of work develops and site conditions change. It is to be used as a guide for all Tier 1, 2 and 3 sub-contractors in the production of their own site specific on and off-site traffic management plans
- In certain instances, we may need to accommodate larger deliveries arriving overnight or at first light
- Deliveries to and from site are restricted to the site hours
- There will be parking on site, however we have identified potential disabled parking spaces and they will be shown on the site layout plan
- A prominent sign / information board will be erected at the main entrance of the site detailing the nature of the project and listing the organisations responsible for the design, construction and operation of the scheme
- Statutory Safety signage at the main entrance and around the site will be displayed in prominent positions
- During periods of the construction there is a risk of transporting spoil (through dirty wheels) onto the road network and to mitigate this risk we will monitor site conditions at exit points with additional measures such as wheel-washing or road sweepers employed to keep roadways clear and safe
- A Green Travel Plan will be developed to promote the use of public transport, cycling and walking to work
- All subcontractor method statements are to include risk assessments for loading and unloading vehicles
- Trailing leads are to be minimised as far as possible and the use of cable safe hooks promoted
- Good housekeeping standards are to be maintained to reduce risks from slips and trips
- Delivery Driver distances will be captured

6.04 Ecology

- 6.04.1 No part of the site is covered by any statutory designations, however, there are a number of these within the site’s zone of influence.
- 6.04.2 Within the Site boundary there is potential for invertebrates, reptiles, common amphibians, breeding birds, foraging, commuting and roosting bats, dormouse, badger and hedgehog.
- 6.04.3 The below mitigation measures are advised for ecological features identified (and not identified as present) by the PEA and ongoing ecological surveys:



Bats

- The LERC returned records of bats including activity and roosting records within 2 km of the Site. Closest roost is located 1.6 km north and foraging records are located 0.5 km north of the Site boundary.
- There are no features within the Site boundary with suitability to support roosting bats. A farm building of constructed of sheet, corrugated steel and asbestos roofing adjacent to the north-east boundary was identified as having Negligible potential for roosting bats. Semi-natural broadleaved woodland directly adjacent to the south boundary has trees of sufficient size and age to contain potential roost features. Three trees within this woodland habitat were identified as having Low and Moderate bat roost suitability.
- Further Bat surveys have been completed during the Spring and Summer of 2022. These comprised of walked transects and automated monitoring across multiple visits to identify general levels of bat activity. A physical check using ladder or rope access techniques was utilised to survey the 3 no. trees identified with potential for roosting bats during August 2022.
- The following mitigation measures will be implemented:
 - Construction night work will be avoided to reduce attracting bats
 - Site lighting will utilise warm white lights to reduce impact on bat flight paths

Badgers

- No records of badger were returned from the LERC within 2 km of the Site boundary, and no evidence of badger activity was identified on Site during the PEA survey.
- The Site is connected to habitats in the wider landscape suitable to support badgers including suitable habitat to support setts. Further sett surveys therefore took place during the summer of 2022 to confirm there is not any badger presence.

Dormouse

- The LERC returned one record of dormouse located 0.6 km east, connected to Site via hedgerows.
- Nesting tubes were set out around Site in mid-March 2022 and have been inspected monthly by a licenced ecologist to date through until October 2022. No evidence of dormice were found during these inspections.
- The following mitigation measures will be implemented:
 - Lighting will be controlled as per the recommendations for bats to avoid impacts on dormouse.
 - Vehicles, machinery and people will avoid tracking within habitat suitable for supporting dormouse (scrub, hedgerow and woodland).

Reptiles

- The LERC returned one record of slow worm from 150 m north, separated from Site by Lavernock Road.
- The interfaces of the semi-improved neutral grassland edges, scattered scrub and dense scrub are suitable to support reptiles such as common lizard and slow-worm.



- In order to confirm the likely presence/absence of reptiles, a survey took place which started in March / April 2022 based on best practice guidelines described by Froglife (1999). This involved the deployment and checking of artificial reptile refugia (e.g. 0.5m x 0.5m squares of roofing felt) across suitable habitat areas. These refuges were checked on over seven separate occasions under suitable weather conditions throughout April / May 2022.
- The survey was concluded to determine the location of reptiles, an estimated population and inform a mitigation strategy, however, no reptiles were found. A reptile method statement by the ecologist is therefore deemed as not required.

Birds

- The LERC returned records of common passerine and Schedule 1 birds from within 2 km of the Site. Woodland, scrub, hedgerows and rows of trees are suitable to support a range of breeding, sheltering and foraging passerine species. Grassland areas offer foraging opportunities for birds. The grassland is unlikely to be suitable for ground nesting species. There is no habitat suitable on or adjacent to the Site for supporting breeding Schedule 1 birds.
- The proposed removal of hedgerow and scrub will reduce habitat suitable for supporting breeding birds, the removal of grassland will reduce the opportunities for foraging birds. Similar habitat is available within the wider landscape and as such the impact on local bird populations is considered negligible.
- Nesting birds are likely to use the local scrub land, trees and hedgerows, and so the following mitigation measures will be implemented:
 - Vegetation clearance of the scattered scrub should ideally take place in the months September-February, outside of the main bird breeding season.
 - Where this is not possible, then an inspection by a suitably qualified and experienced ecologist will undertake a search for active nests immediately before the clearance.
 - If nesting birds are encountered during construction, contractors are to be advised to stop work immediately and contact the ecologist for advice and the production of a suitable revised method statement.
 - If an active nest is encountered, a species-appropriate protective buffer (usually around 5 m) will be erected around the nest and will remain in place until all young have fully fledged. This can be up to eight weeks.

Trees

- There are a number of trees adjacent to / within the site boundary, none of which have tree preservation orders attached to them.
- For these boundary trees, which are to be retained, tree protection areas will be created using an approved fencing system or by installing the hoarding to the site side.
- Protective fences will comply with BS 5837 2012 – Trees in relation to design, demolition and construction. The fencing will have all weather notices attached, marked as ‘Construction Exclusion Zone – No Access’.

Invasive Plants

- No invasive species have been discovered on site.

6.05 Ground Conditions and Water Resources (Pollution Prevention)

- 6.05.1 There is a small drain highlighted on the OS map adjacent to the South boundary of site, however, this was a dry ditch during site surveys and is also above the highest point of the site.
- 6.05.2 Chemicals and hazardous materials such as fuels and lubricants are to be stored during the construction phase these includes:
- Fuels
 - Oils
 - Lubricants
 - Paint and Coating
 - Adhesives and resins
 - Solvents
 - Compressed gases
 - Cements and binders
- 6.05.3 Measures will be developed, implemented, maintained and monitored in order to comply with the Water Resources Act (1991) section 85 and associated regulations.
- 6.05.4 The following list shows measures that will be put in place to prevent pollution and would conform to the best practice policy proposed by technical guidance notes (TGN) issued by NRW and the **Pollution Prevention Guidelines** (PPGs):
- A watching brief will be implemented to ensure that no contamination enters the nearby water bodies or drains
 - Spill kits easily identified and located close to relevant work areas, including within machinery such as the forklift
 - Emergency Spill Drill training and tests to be undertaken periodically
 - Spillages reported to ISG immediately so that a Spill Response can be initiated
 - Liquids stored minimum 10m from any watercourse
 - Materials stored correctly and in designated areas agreed with ISG
 - Fuel stored in a lockable and double bunded storage area agreed with ISG with a drip tray provided if the filling point is outside the bunded area
 - Drip trays to collect leaks from standing pumps or standing plant
 - Contaminated ground removed as soon as practicable and stored in a segregated area for disposal away from other stockpiles or materials



- Concrete washout areas will be agreed with ISG - as a minimum, a lined skip, which can be dewatered and broken out at regular intervals will be provided or a proprietary system will be implemented. This will be situated close to the new building footprint in the centre of site
- Road sweeper washout areas either offsite or in a designated washout out area will be agreed with ISG
- All abandoned below ground drainage or service ducts to be removed (grubbed out), filled or ends blocked to ensure there are no pathways for pollutants to enter the ground
- If dewatering is required along any part of the construction site, pumped groundwater will be held on site or disposed of appropriately according to NRW Pollution Prevention Guidelines
- All stockpiled materials are to be sealed from weather and placed on an impermeable surface and bunded to prevent surface water run off
- Perched water found in any excavations should be pumped through fuel traps if hydrocarbons are evident

6.06 Air Quality

- 6.06.1 It is recognised that a key concern for the local community and the surrounding areas will be any disturbance to air quality caused by traffic generated during the construction stages.
- 6.06.2 Lower Cosmeston Farm and the Cosmeston Medieval Village are the only direct neighbours of the site.
- 6.06.3 A construction traffic management plan (CTMP) will be prepared and communicated to all and it lays out the traffic management principles for the project.
- 6.06.4 There are a number of site activities to be carried out that have the potential to generate substantial amounts of dust and debris. These include; disk cutting, filling skips, reduced level digging and ground build up.
- 6.06.5 Dust and emissions to air are a major concern to ISG and the neighbouring properties to the new development. To minimise the effects of any dust and debris generated on site the following control measures will be employed:
 - Erect solid or Heras style barriers around specific work phases
 - Tarmac traffic routes to and from site as soon as possible utilising final construction base course
 - Employ a road sweeper to maintain tarmac traffic routes around the site and also the incoming infrastructure of the site
 - Provide a water bowser and hose to dampen down dust / debris during dry periods
 - Ensure screens are fitted and used by all wagons delivering and removing debris such as stone and muck from site
 - Jet wash the wheels of wagons leaving site when required



- Provide skips and bins that are adequately covered; this will prevent any lighter materials being picked up by prevailing winds and blowing away
- Ensure equipment is fitted with dust bags and water suppression where possible
- Bag or cover materials such as sand and cement
- Weigh down all light materials
- Dispose of waste materials immediately
- Record and immediately take action to mitigate any complaints
- Damped down stockpiles of any excavation arising
- Monitor wind direction and strength; if there is a potential for blown dust and debris to be a problem, work suspended until measures are put in place to control the problem or the wind changes
- Damped down dust through the use of water mist generators, such as a Spray Cannon
- No burning of waste, or other materials, shall take place on site

6.07 Noise and Vibration

6.07.1 Noise and vibration statutory nuisances are controlled under the Environmental Protection Act 1990.

6.07.2 Several of the site activities to be undertaken may generate significantly high noise levels. In order to gauge and thus effectively manage the noise levels experienced, noise assessments will be taken prior to commencing and throughout the completion of all potentially noisy site activities. Measurements of LA10T, LA90T, LAeqt and LMax are to be assessed.

6.07.3 A combined dust and noise monitoring station will be installed around the perimeter of the site, whereby additional mitigation measures will be implemented to control the situation if acceptable levels are exceeded.

6.07.4 The following noise control mitigation measures will be implemented on site:

- Complete noisy activities during site hours unless impractical to do so
- Inform the client of significantly noisy activities so that they are aware of the potentially high noise levels
- Implement a turn off policy for static or intermittent plant and vehicles
- Keep plant and equipment well maintained
- Operate plant and equipment in a method that minimises noise levels
- Select plant and equipment to comply with noise limits
- Operate equipment fitted with enclosures with enclosures in place at all times



- Handle materials in a manner that minimises noise (i.e. no dropping materials to reduce impact noise)
- Locate generators and compressors as far from noise-sensitive receptors as reasonably practicable
- Compressors will be fitted with properly lined and sealed acoustic covers which will be kept closed when not in use
- Pneumatic percussive tools will be fitted with mufflers of the type recommended by the manufacturer
- The selection of vehicles will be made with emphasis on silent types
- Radios (playing music) will not be permitted on site
- Provide permanent power (site 110V) rather than generators and compressors where possible
- If required, super-silenced generators will be used
- The **Project Manager** will communicate any unavoidable out of hours noisy work to all stakeholders and neighbours a minimum of 48 hours before
- Record and immediately take action to mitigate any complaints received by the site team

6.08 Townscape and Visuals

- 6.08.1 The site will be protected by 2.4m high solid hoarding (with viewing hatches if required) and Heras fencing as appropriate. The hoarding will protect the public from the site works and will act as the secure line whilst providing an acoustic shroud for the works. The hoarding will be located on a similar line to the permanent fence line so as to not impact the existing hedgerow boundary.
- 6.08.2 The hoarding solution will be designed and constructed to an approved temporary works design.

6.09 Built Heritage (Above Ground)

- 6.09.1 The site is not within a Conservation Area and it does not contain any designated heritage assets. The original house at Lower Cosmeston Farm is listed as a Designated Historic Asset, although it is 80m from the site boundary. The Cosmeston Medieval Village on the opposite side of Lavernock Road is listed as a County Treasure.

6.10 Construction Lighting

- 6.10.1 During the construction phase consideration will be given to construction lighting and the effect it will have on the adjacent farm and other local sensitive receptors. No security lighting or generators will be operational on site outside of normal construction hours.



- 6.10.2 Where possible a daylight only construction programme will be adopted to minimise adverse lighting. It is unavoidable that construction activity may require work during the hours of darkness in consideration of shorter daylight availability during winter months.
- 6.10.3 The temporary lighting installed as part of the site set up may impact on our neighbours outside of the site boundary. To reduce the imposition of all site lighting, the following control measures which are in line and in accordance with the Institute of Lighting Engineers (ILE's) guidance for the reduction of lighting pollution (2000) will be implemented:
- Design and implement a lighting strategy to eliminate sky glow, light presence, glare, intrusion and flicker
 - Inspect lighting on a weekly basis to ensure it is in good working order
 - Clean lighting regularly to ensure correct lighting levels are maintained
 - Ensure all lighting is turned off, or on timers when works are not being undertaken
 - Record and immediately take action to mitigate any complaints
 - Reduced late night working to avoid attracting any migrating bats
 - Use warm white lighting to avoid interference with sensitive wildlife
 - Lighting turned off outside of normal construction hours
- 6.10.4 Furthermore, the site lighting strategy will be agreed with the Clients Project Manager to ensure it meets their requirements. Periodic reviews of this strategy will be undertaken to ensure compliance with the requirements and site constraints.

6.11 Complaints and public engagement

- 6.11.1 A suggestion box will be positioned adjacent to the site entrance so local residents can submit complaints or other feedback about the project.
- 6.11.2 The site entrance will also display ISG Site Management contact information, along with the Considerate Constructors Scheme details, to allow local residents to contact the site if required. This will be complimented by the site community noticeboard which highlights upcoming activities which could affect local residents.
- 6.11.3 Digital feedback via QR codes will also be possible and these will be positioned at the site entrance, along with other information about the site and the final scheme.
- 6.11.4 All complaints and feedback will be monitored regularly by site management and reported using the site communication log by the Public Liaison Officer / Community Benefits Manager. Updates on actions taken to respond to public feedback will be included on the community noticeboard.



7.0 Construction Site Waste Management Plan (SWMP)

- 7.01 A construction site waste management plan (SWMP) will be completed and maintained on site by the Project Manager.
- 7.02 As a member of UKCG, ISG is committed to continuing use of Site Waste Management Plans (SWMP) on its projects in order to implement the waste hierarchy. The SWMP is used to identify opportunities for elimination, re-use or recycling of materials prior to disposal.
- 7.03 All wastes generated during the project will be tracked (ensuring legal and responsible transfer and disposal). Waste generation is recorded, with the site team reporting on results. No waste, or other materials, will be burnt on site under any circumstances.
- 7.04 The SWMP will be available for all to see and it will be communicated to all persons working on the site at the site induction.
- 7.05 ISG will use the agreed template (BRE SmartWaste for example) to record waste.
- 7.06 The principle types of construction materials will be aggregates, stone, concrete, reinforcement steel, steel, gypsum, metals, plastics, canteen waste and some hazardous waste (oils, paints etc).
- 7.07 All waste streams will be identified by their European Waste Catalogue code.
- 7.08 The European Waste Catalogue codes are transposed into UK law through The List of Wastes (LOW) Regulations.
- 7.09 A table of the potential waste streams is shown below:

Waste Type	EWC / LOW Code
Concrete	17 01 01
Bricks	17 01 02
Tiles and ceramics	17 01 03
Mixtures concrete, bricks, tiles and ceramics (haz)	17 01 06*
Mixtures of concrete, bricks, tiles and ceramics	17 01 07
Wood	17 02 01
Glass	17 02 02
Plastic	17 02 03
Bituminous mixtures containing coal tar	17 03 01*
Bituminous mixtures (e.g. planings)	17 03 02
Iron and steel	17 04 05
Mixed metals	17 04 07
Soil & stones (haz)	17 05 03*
Soil & stones (inert or non-haz)	17 05 04
Dredging spoil	17 05 06
Gypsum-based construction materials (haz)	17 08 01*

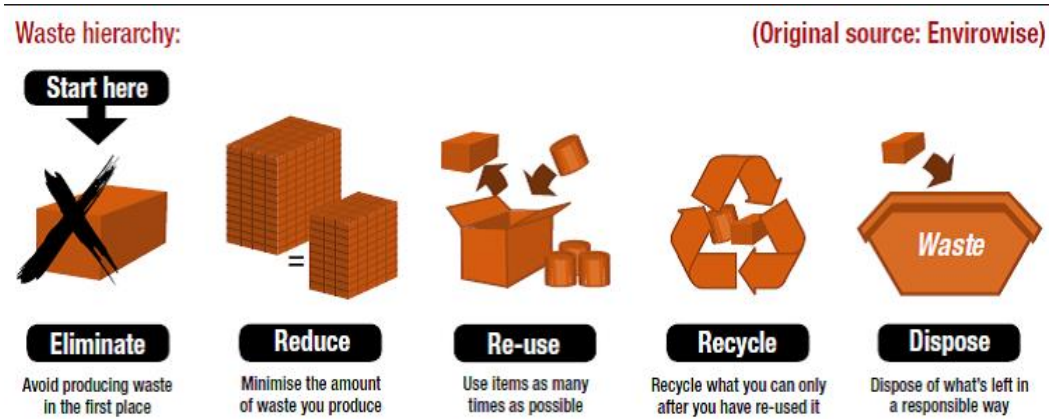


Gypsum based construction materials (non haz)	17 08 02
Mixed Hazardous - C&D waste	17 09 03*
Mixed C&D waste	17 09 04
Paper and cardboard	20 01 01
Biodegradable waste	20 02 01
Street-cleaning residues	20 03 03
Septic tank sludge	20 03 04
Waste paint and varnish (solvents / haz)	08 01 11*
Waste paint and varnish (non haz)	08 01 12
Paper and cardboard packaging	15 01 01
Plastic packaging	15 01 02
Wooden packaging	15 01 03
Metallic packaging	15 01 04
Packaging	15 01 06

7.10 The SWMP will identify the personnel and their roles and responsibilities. This includes maintaining records of waste transfers. The appointed site manager will also ensure compliance within any permits and record keeping.

7.11 ISG must ensure all controlled waste is managed in accordance with the following Duty of Care requirements:

- Ensure all waste is correctly assessed and categorised
- Prevent the illegal deposit or handling of controlled waste by any other person
- Prevent waste material from escaping our control
- Only transfer controlled waste to an “authorised person” (Waste Collection Authority, the holder of an Environmental Permit, Registered Water Carrier or Waste Disposal Authority)
- Ensure that non-hazardous waste is transferred under a Waste Transfer Note which must be retained for two years
- Hazardous waste is moved under a waste consignment note that provides a clear description of the waste material. The consignment note must be retained for three years
- The waste is the responsibility of the company until it has been fully recovered or finally disposed of



7.12 The ISG Project Manager (or his appointed deputy) will be responsible for the following:

- Maintaining records of waste transfers for the operations under their control
- Written Information/Waste Transfer Notes (non-hazardous waste) – two years under environmental legislation but up to six years under commercial requirements
- Consignment Notes (hazardous/special waste) – three years
- Maintaining records required for the Waste Stream Assessment and Environmental Plans
- Maintaining compliance with any exemptions/permits for the sites
- Ensuring all wastes are stored securely
- Only using waste suppliers from the preferred supplier list (where this is not possible inform procurement who will provide suitable options)
- When transferring waste to companies not on the approved supplier list ensure that duty of care checks have been carried out and recorded
- Where possible ensure waste is segregated either on site or off site
- Set targets for diverting waste from landfill
- Re-use waste on site where possible

7.13 Responsible Sourcing

- 7.13.1 Prior to commencement on site confirmation of validated chain of custody certificate or responsible sourcing certification is provided by the contractor for all applicable materials. If evidence is not provided materials may be turned
- 7.13.2 Upon delivery to site all sub-contractors will provide ISG with a copy of the delivery note confirming the date of delivery, delivery location, type and quantity of materials
- 7.13.3 When delivering timber to site delivery tickets must comply with the EU timber regulations



8.0 Site Consumption Targets

- 8.01 As part of the ISG 2024 Vision to reduce our carbon footprint ISG will set out and identify certain control measures and targets to the temporary site setup. Incoming services, such as water and electricity will be metered and monitored on a monthly basis.
- 8.02 The target is to reduce water and electric consumption by 10% year on year based on a similar size and value project.
- 8.03 The electrical power consumption target set for Ysgol Y Deri Expansion will be based on 0.3T CO₂e / £100k, giving a figure of 59.7T CO₂e or **256,224 kWh**.
- 8.04 The site supply will be sub metered as agreed.
- 8.05 The following measures will be implemented to reduce energy consumption:
- Inspect and record dust build up on lighting
 - Clean lighting regularly to ensure correct lighting levels are maintained
 - Ensure all lighting is turned off, or on timers at the end of the working day or when works are not being undertaken
 - Install PIR's in cabins to control lighting requirements
 - Fully insulated cabins with double-glazing are to be used as welfare facilities
 - Provide and make use of heaters with thermostat controls and timers in cabins
 - Monitor and record the water heating system for leaks
 - Set the hot water temperatures to less than 60°C
 - Ensure water heaters are switched off one hour prior to the end of the daily work and during holiday periods / weekends
 - Ensure water heaters are fitted with timer switches
 - Switch off all electric equipment not in use
 - Ensure workers are using battery powered or 110 volt electrically powered tools and machinery rather than compressed air power tools where possible
- 8.06 The reduction of water usage on site is becoming more and more important on sites.
- 8.07 The target for water usage has been set as 5.8m³ / £100k. The target for Ysgol Y Deri Expansion will therefore be **1,154m³**.
- 8.08 To reduce water consumption and thus meet water usage targets, the following control measures will be implemented: Turn off policy for all taps, hoses and fill points when not in use



- Locate bowsers under down pipes to collect rainwater when not in use
- Use push button spray taps on all hand basins
- Use low flow (<9L/min) showerhead in shower
- Use of water-less urinals, or installation of “Cisterniser” to flush when wash basin is used instead of using a timer
- Review requirement for water use for each operation and build in water reducing actions

8.09 Net Zero Carbon

- 8.09.1 The new school will be designed to achieve Net Zero Carbon - Operational Energy as defined in the UKGBC Net Zero Carbon Buildings.
- 8.09.2 A specific net zero carbon strategy pertaining to achieving the necessary requirements will be created along with a strategy tracker to ensure the deliverables are on track.



9.0 Incident Planning & Management

- 9.01 An environmental incident is any event which has or could have caused damage to any form of biodiversity. Incidents could include encountering unexpected contamination, flooding, spills and leakages, damage to wildlife and fires.
- 9.02 Incidents often lead to a non-compliance with legal and other requirements such as planning consents and ISG sustainability policies. All types of environmental incident or near miss must be reported, recorded and investigated.
- 9.03 ISG aims to achieve its Key Performance Indicator of zero site related environmental incidents. To ensure impacts are managed and minimised, and lessons learnt, any environmental incidents will be responded to and reported in accordance with the ISG Environmental Impact Assessment and Emergency Response process. Where situations occur that could have resulted in an environmental incident, these are reported as environmental near misses using our internal near miss reporting procedure. Significant incidents will be reported to the Client team.
- 9.04 All incident reporting will be done in accordance with the ISG Environmental response and preparedness document. A copy of this document is attached in **Appendix 4**.
- 9.05 All site personnel and subcontractors will be made aware of the reporting requirements.
- 9.06 In the event of an environmental incident, appropriate corrective and preventative actions will be proposed, set out and completed.
- 9.07 Project risk rating is tabulated below:

Item	Risk	Risk Rating
Activity - General Site Activities	The project will create noise during construction	16
Activity - General Site Activities	The project will involve temporary works within or near features of nature conservation/biodiversity features or trees	16
Receptors - Adjacent Properties	Residential / commercial / industrial or publicly used buildings are adjacent to the site	15
Activity - General Site Activities	The project will create vibration during construction	12
Activity - General Site Activities	The project will create dust during construction	12
Materials - Hazardous Materials	The project will store, handle or use hazardous materials (e.g. adhesives, bitumen, cement, grout, fuel, oil, mortar or chemicals etc) on site	12
Receptors - Services and Substructure	Existing services (utilities), underground storage tanks, ducting, cellars or foundations are present on site	8
Receptors - Drainage	As part of the temporary or permanent works fuel / oil interceptors (also referred to as separators) will be installed on site	8
Materials - Fuel	As part of the works fuel will be used or stored on your site	8
Materials - Oils	As part of the works oils (e.g. lubricating, shuttering or hydraulic etc) will be used or stored on your site	8
Materials - Oils	As part of the works plant or equipment that is hydraulically operated will be used	8