Environmental Management Plan (EMP)

Project Name:	Ysgol Gyfun Cwm Rhondda	**Contract No:**	10009671
Completed by:	Nick Hamersley	**Date:**	05/12/2025

Revision Number	Description of changes made	Updated by	Date of Update
P01	Submission for PAC	NH	05/12/2025
P02	Submission for Planning accounting for comments provided by RCT Environmental Health Team from PAC: - Working Hours Updated (3.2.1) - Power supply for lighting control. (3.2.4) - Permitting for mobile crushing and screening. (4.4.1) Updates following NRW comments from PAC: - Downstream water quality monitoring included following consultation with Siltbuster and preservation of water quality. (3.4) - Updates to Highways drainage pathways for pollution prevention (3.2.7)	NH	27/01/2026

This document forms Appendix B.2 of the Construction Phase Plan.

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Schedule V - CL:AIRE Materials Management Plan and Qualified Person Declaration Receipt

Schedule VI – Resource Efficiency Management Plan

Schedule VII – Social Value Timeline

1. Introduction

This EMP has been prepared in accordance with the Kier SHEMS Environmental Management Standards and Guidance. It identifies specific environmental issues associated with the construction of **Ysgol Gyfun Cwm Rhondda, Graigwen Road, Porth, CF39 9HA.** any surrounding environmental constraints that may be affected and stipulates the procedures that will be used to manage them. Relevant environmental information will be communicated as required.

The aim of the project is to provide a Welsh medium community school, Ysgol Gyfun Cwm Rhondda (YGCR), to include new teaching facilities for 750 pupils (ages 11-16) and 150 sixth form students, accumulating to 900 pupils to sustainable communities for learning (SCfL) programme standards.

The energy strategy for the completed building must achieve **Net Zero Carbon (NZC)** in operation with an **embodied carbon target below 600kg CO^2/m^2** in line with Welsh Government's Carbon Reduction Commitments.

The project will deliver sustainable learning environments that invest in **biodiversity** to enhance the surrounding environment and support active travel.

The project is required to achieve a **BREEAM rating of Excellent.**

An EPC energy efficiency rating of A is obtained by incorporating sustainable design features to improve energy efficiency within the building and will, where appropriate, use materials from sustainable sources. **Air Permeability rate of $3m^3/h.m@50Pa$** is to be achieved.

All amendments to this EMP must be made and documented by project management in consultation with the Safety, Health and Environmental Manager or Environmental Manager / Adviser.

Name	Job Title	Email	Mobile
Scott Bowler	Environmental Manager	Scott.Bowler@kier.co.uk	07714 662134
Isabel Cluley	Environmental Advisor	Isabel.Cluley@kier.co.uk	07729 076595

Any authorisations or permits identified within the EMP should be documented using the Environmental Permits and Authorisations Guidance (England & Wales) and then held in schedule VI.

2. Environmental Aspects & Impacts

Prior to commencement of the project, or each asset an environmental aspect and impact assessment must be undertaken in accordance with the Aspect and Impact Management Operating Procedure OP-GR-067. For guidance on completing the Aspects and Impacts Register FO01-CON-067 please contact your Safety, Health and Environmental Manager or Environmental Manager / Adviser.

The assessment looks at each site activity against the following environmental aspects:

- Emissions to Air
- Emission to Land
- Emissions to Water
- Waste Generation
- Nuisance & Environmental Health
- Ecology & Biodiversity
- Cultural Heritage
- Use of Raw Materials
- Use of Natural Resources

Details of the control measures identified in the assessment will be communicated to relevant subcontractors. Subcontractors must manage all risks / impacts associated with their work activity / package in accordance with this document.

Where the subcontractor identifies additional environmental risk / impacts the Project Environmental Co-ordinator (PEC) and Project Manager must be informed, and the Aspect & Impact Assessment must be reviewed and amended as required.

In the event subcontractors undertake works that require reference to document(s) listed in section 2.3 of the Construction Phase Plan (Part A), these will be provided / incorporated into their contract as part of the subcontract documentation.

Kier may, from time to time, externally communicate information relating to significant environmental aspects and the company's performance. Such decisions will be made by appropriate management and documented.

3. Specific Project Environmental Requirements

This section incorporates information derived from documents scheduled in 2.3 of the Construction Phase Plan.

3.1. Unexploded Ordnance

A Phase 1 Ground Conditions Desk Study has been undertaken by Stantec for the Ysgol Gyfun Cwm Rhondda Project (Document Number 333701644-STN-XX_XX-RP-GE-1000 - 6th August 2025) and noted the following:

In general accordance with CIRIA Report C681 (Stone et al 2009) a non-specialist UXO screening exercise has been undertaken for the purposes of ground investigation and is presented in the table below.

Data	Comment	Further Assessment Required
Site History	There is no indication of former military use from the desk study.	No
Post War Development	There is no evidence of ruins or bomb damage circa 1945, which suggests the site has not been impacted by WWII bombings.	No
Geology Type	The ground conditions comprise Made Ground, overlying the Rhondda Member Sandstones and Mudstones. It is unlikely UXO would remain undetected.	No
Surface Cover during WWI	The surface cover during WWII comprised open fields. There is the potential that UXO, if present, would remain undetected.	No
Indicator of Aerial Delivered UXO	Screening against the Zetica bomb risk map (Appendix D) indicates the site to be in an area where the bombing density is low.	No

The non-specialist UXO screening exercise has indicated that whilst there is the potential for UXO to remain undetected no further assessment is required with regard to UXO in relation to ground investigation as hard bedrock is anticipated at shallow depth, and UXO would most likely have exploded upon impact.

3.2. External (Client / Enforcing Authority) Requirements

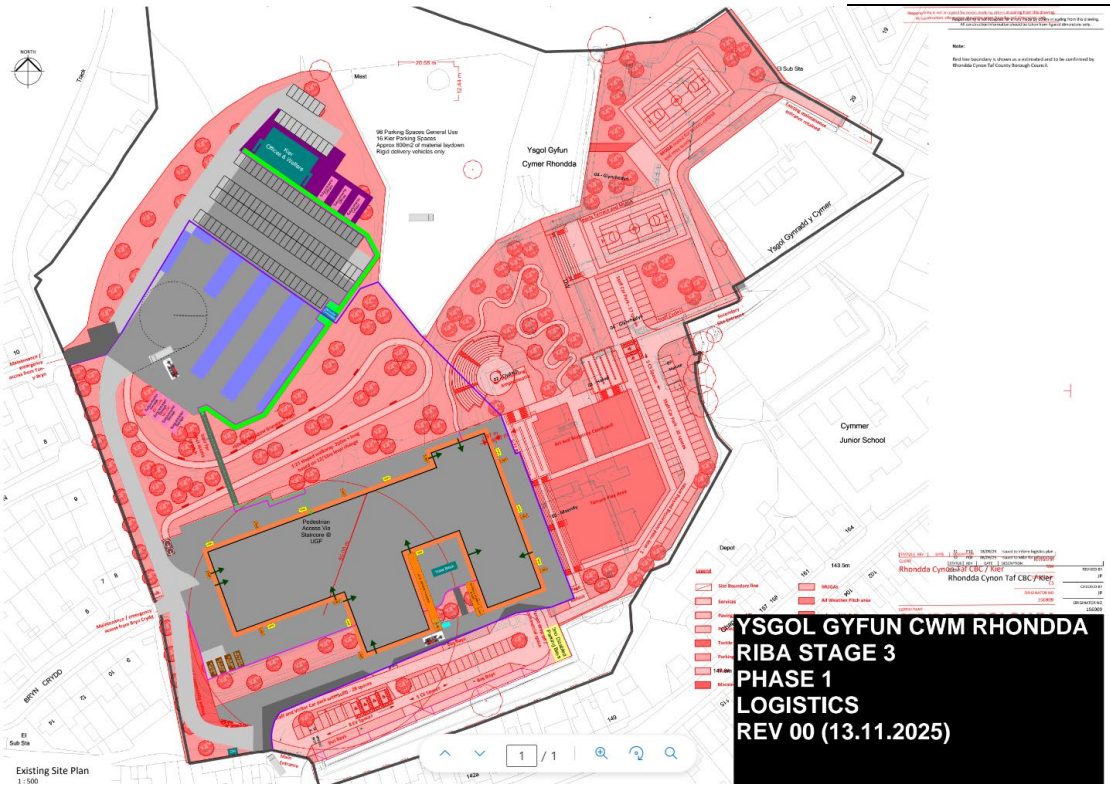
3.2.1 Working Hours

Site working hours shall be **Monday to Friday**, **08:30** to **18:00** hours (no noisy construction activities are permitted before **08:00,,** although workers can arrive prior to this time). **Saturday** working hours are restricted to the hours of **08:00-13:00.** No work shall take place on Sundays or during public holidays. Office staff may stay later than the normal working hours.

Where there are site operations that could go beyond the times listed above, these will need to be in agreed with the RCT Senior Environmental Health Officer, David Hart david.m.hart@rctcbc.gov.uk. These types of operations may include **power floating** of concrete floor slabs which, depending on atmospheric conditions, can go on into the early hours of the morning. We understand the requirements for this to be agreed in advance and noise and lighting to be kept to a minimum. We will try to mitigate disruption as much as possible through design e.g. deigned out the need to power float the upper floors by applying screed. It is likely that we will still need to power float the ground floor slab, which could be up to five NO. concrete pours. A **Section 61** notice may be required with RCT EHO for these types of operations. This will be discussed and confirmed with RCT prior to commencement.

3.2.2 Site Parking and Vehicle Access

In order to keep managing contractor Parking for Contractor vehicles will be on the 4G pitch on the upper plateau with access for cars only via Tan-y-Bryn, where our site compound will be located. This is to ensure that Contractor vehicles will not be parking in residential streets. Note that the main entrance for larger vehicle will be via the main entrance to the school, albeit a separate access to the school gates will be constructed to segregate construction vehicles from the car park and bus bay that is to remain in position of the school for bus drop off and staff parking. Due to the restricting width of Tan-y-Bryn and Bryn Crydd, we do not intend on bringing heavy vehicles through the residential area. There may be limited times when access via this road will be required, but this will only be undertaken in consultation with RCT and the local residents via letter drop.

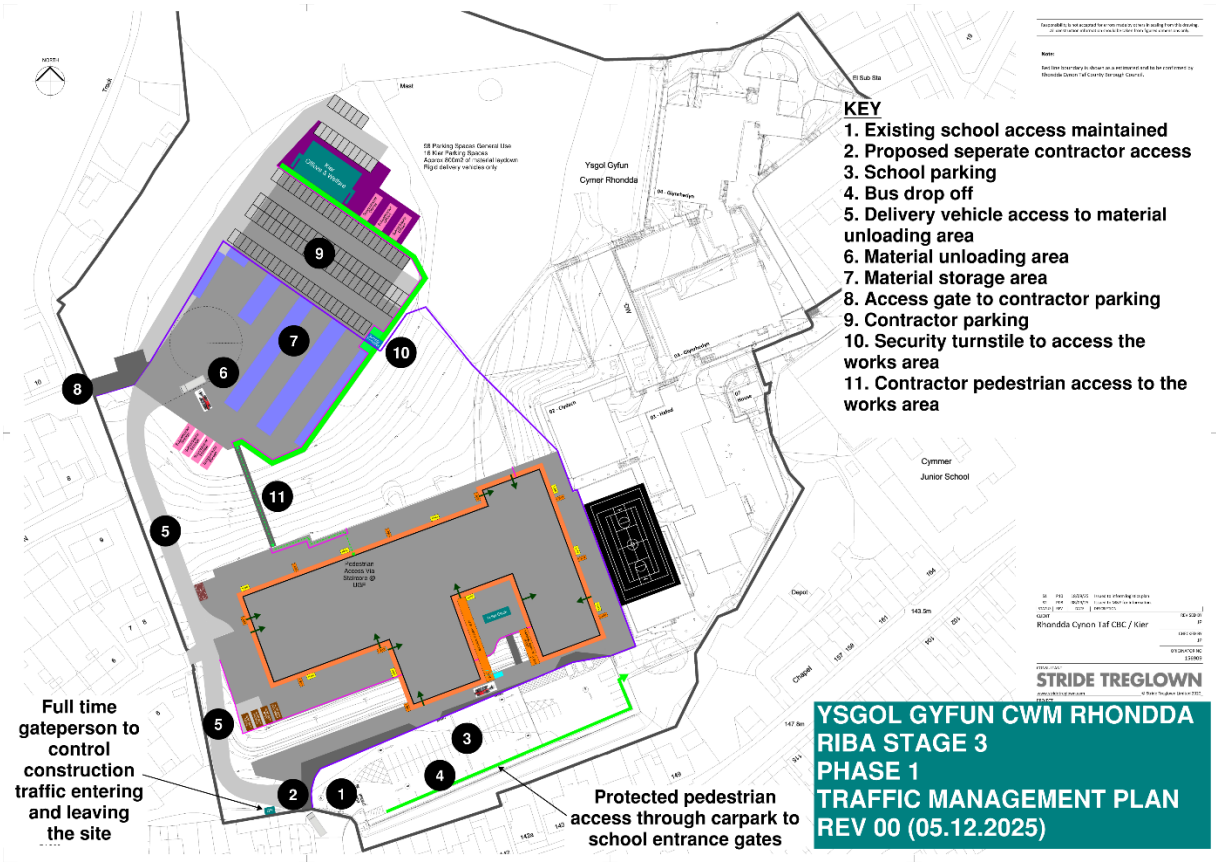


A haul road will be constructed early between the lower car park level with access up to the mid-plateau and upper plateau to construct the new school and for the 4G pitch respectively. This will be tarmacked to base course level to give HGV's and telehandlers a clean running surface and minimise the potential for mud or debris to be brought outside of the site boundary. In the event of mud being generated on outside roads we will employ road sweeper to keep the external and internal access roads clean.

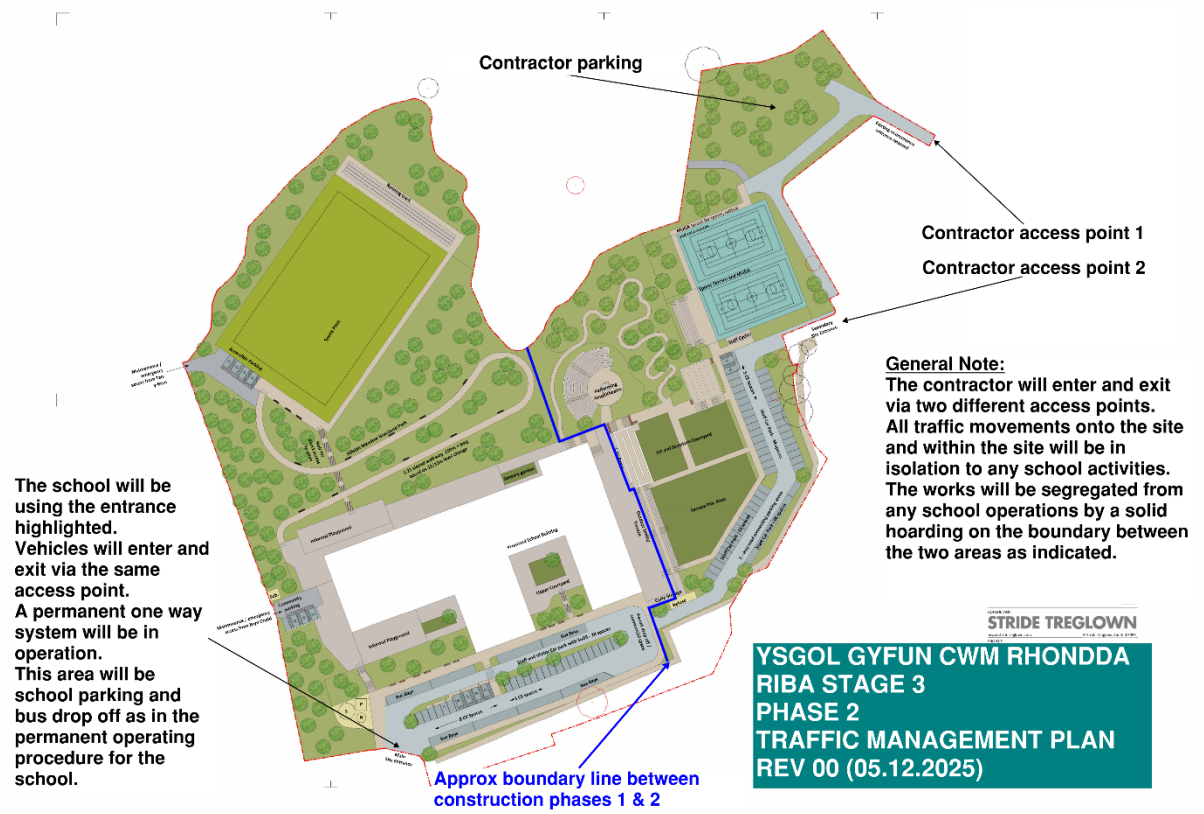
A Traffic Management Plan will be developed and regularly updated for the construction phase, which will be included in Sub-Contract order packs, briefed to the workforce during the site induction process and Toolbox Talks, and displayed on site to ensure that it is communicated to, and adhered by, the workforce.

The Traffic Management plan will follow principles of prevention and ensure segregation of school operations from site operations so far as reasonably practicable, while ensuring that people/plant segregation is maintained and where it cannot be completely separated, is controlled to minimise risk to users of the school, members of the public and contractors. Each phase of traffic management is summarised below.

Phase 1 – Construction of Main School



Phase 2 – Demolition of Existing School and Construction of MUGA's and Parking



3.2.3 Noise, Dust and Vibration

Noise and vibration during construction will be managed in accordance with the Pollution and Nuisance Management Operating Procedure (OP-GR-063) and Kier Guidance Noise GU11-GR-063: Control of Noise. In addition, all works will comply with the requirements set by the Rhondda Cynon Taf County Borough Council (RCTCBC) Environmental Health Officer.

Noise, dust and vibration will be minimised wherever possible. We will locate vibration, dust and noise monitoring equipment adjacent to environmentally sensitive receptors, such as neighbouring residential boundaries and carry out baseline monitoring outside of construction hours to understand the impact. These areas are indicated on the Environmental Constraints Plan in the Appendix – See Schedule II.

Kier will consult with the local population to make them aware of the works and traffic management strategy shall include methods for limiting noise and debris.

Mitigation and Control Measures:

The following measures will be implemented to minimise noise, dust and vibration impacts on nearby receptors:

· Erection of temporary acoustic screens or earth bunds around noise-generating equipment or operations.

· Isolation and shutdown of plant and equipment when not in use.

· Fitting of "white noise" reversing alarms on construction vehicles to reduce tonal nuisance.

· Ensuring all engine compartment doors remain closed during operation.

· Limiting on-site vehicle movements through implementation of a one-way system where practicable.

· Working within hours agreed with RCT County Borough Council as outlined in Section 3.2.1 – limited works may need to take place outside of agreed working hours, but these will be discussed and agreed with RCT County Borough Council and other relevant parties prior to commencement.

· Scheduling of particularly noisy activities to avoid sensitive moments in time, as far as reasonably practicable (e.g. early mornings, evenings, weekends, exam periods.) – limited noisy activities may occur during these times (e.g powerfloating extending into evening/nighttime), however these will be discussed and agreed as outlined above.

· Provide facilities to ensure that dust created by the works is kept to a minimum. This shall include but not be limited to dust suppression or cutting equipment, spraying/cleaning of vehicles, and regular boundary noise, dust and vibration monitoring during construction to ensure emissions are limited and mitigation measures remain effective.

· Lorries and skip wagons leaving the site will be sheeted.

3.2.4 Lighting Control

Site lighting will be designed and managed to minimise light spill beyond the site boundary and to prevent nuisance to neighbouring residents and ecological receptors. Lighting levels will be proportionate to operational requirements and sensitive to the surrounding environment. Kier will ensure that the project's lighting strategy aligns with the ecologists' requirements to reduce light overspill and minimise impact on the ecology of the surrounding area.

Our preference is to connect directly to the electric mains to mitigate the requirement to run the site using generators. We will be applying for temporary building supplies from National Grid, or alternatively establishing a mains supply from the existing school. At the bottom of the pollution prevention hierarchy is using generators, and is a last resort.

Out-of-hours activities are restricted to power floating of the ground floor concrete slab, required to achieve the specified finish. The design has eliminated the need for power floating on upper floors by adopting screed finishes, thereby minimising the frequency and extent of night-time operations. Where power floating is necessary, low-level tower lighting will be used and directed inward towards the work area, avoiding illumination of residential areas and the wider environment.

To further minimise light pollution:

· Only essential lighting for safety and security will remain operational outside of standard working hours.

· All temporary lighting will be fitted with timers or motion sensors to ensure lights are automatically switched off when not required.

· Security lighting will be low-intensity, downward-facing, and shielded to prevent upward or outward glare.

These controls will ensure compliance with relevant guidance such as the Institution of Lighting Professionals (ILP) GN01:2021 – Guidance Notes for the Reduction of Obtrusive Light, maintaining protection for both the local community and ecological receptors.

3.2.5 Waste and Embodied Carbon Reduction

Kier shall maximise recovery of construction and demolition waste. We intend on crushing the existing buildings to 6F2 in line with WRAP protocol and using it for temporary and permanent works to satisfy our fill requirements. Excess material will be re-used off site. Soils onsite will be re-used where possible under Definition of Waste Code of Practice and a Material Management Pan produced. Kier has a zero waste to landfill policy ensuring all waste soils will be recycled.

Kier shall ensure that waste streams are separated and where possible materials reused or recycled in line with best guidance set out in the Contractor's BREEAM assessment. Kier is responsible for the safe disposal / recycling of all waste materials generated by the works. The Site Waste Management Plan will be recorded using our Rio tool with the report downloaded monthly.

Kier is responsible for developing the design and providing the Client with suitable design solutions that meet the embodied carbon aspiration of 600kg CO^2/m^2 in line with the Welsh Government's Carbon Reduction Commitments. Our sustainability consultant McCann and Partners are currently producing the Lifecycle Carbon Assessment for the project in conjunction with the design team to inform an optimal embodied carbon design solution.

3.2.5 BREEAM

The site will be registered with Building Research Establishment Environmental Assessment Methodology (BREEAM) scheme, with a target *Excellent* rating. The BREEAM AP is McCann and Partners Consulting Engineers, who will provide specialist guidance with our BREEAM commitments and collate evidence of credits achieved.

3.2.6 Considerate Constructors Scheme (CCS)

In line with the standard of Kier Projects, the site will be registered with the CCS scheme. During the construction phase, the project will target a score of 45/45 across all CCS monitoring visits to reflect our social value pledges and commitment to the wider community.

3.2.7 Road Cleanliness and Control of Silt Run-off

An early site activity includes forming site haul roads / permanent roads and car parking which will be constructed using hardcore and will be brought up to tarmac binder course as soon as practicably possible. This will ensure that site traffic will not be driving through mud and silty water and provides a road surface that is easily maintainable.

Silt socks will be placed in any nearby road gullies to prevent silty run-off entering any watercourses. Cut off drains will be installed early (further discussed in 3.4 to capture surface water run-off, including highways contaminants. This will be filtered via a Siltbuster to ensure quality of water being discharged.

Silt treatment in the form of settlement or filtration will be required (e.g *Siltbuster* or similar), and consideration must be given to other contaminants that may be present (e.g., oil, fuel etc.), which will be separated prior to discharge.

A surface water management plan (section 3.4) has been produced to assess construction water and run off to ensure suitable mitigations are in place including application of relevant discharge or trade effluent consents

During times of daily increased site traffic, for instance, when pouring the concrete slab / deliveries of haul road stone, a road sweeper will be employed for the duration of the activity. This will provide further protection to measures already in place to ensure no mud becomes present on the public highway.

The condition of the roads leading up to the site will be monitored as required during increased construction traffic. The gate person will be responsible for monitoring the condition with any issues reported to site management immediately. The site management will then implement further action as required.

3.2.8 Ecological Considerations

A concentration of Himalayan Balsam has been identified in the vicinity of the site. Consideration must be given to avoid disturbing and/or spreading the species during construction works. See section 3.8.1.

Bat emergence surveys have been conducted in the existing buildings by our contracted ecologist *Cura Terrae*, who discovered no emergences across six separate surveys, and have declared that no further bat emergence surveys are needed at present. However, due to the Potential Roost Features (PRF's) within the existing buildings, the initial demolition works must be undertaken with specified control measures including specialist supervision and careful demolition by hand - see section 3.8.2.

Kier shall adequately protect and preserve all flora at Site, except any which are to be removed as part of the contracted works. A preliminary Arboricultural survey by Middlemarch consultancy was commissioned in August 2025, which can be found in the appendices of this document – ref. RT-MME-182456-01. According to the survey, there are a variety of *Category B* trees which Kier should look to retain as a priority. See Section 3.8.3.

Biodiversity in Wales requirements for the project are to be determined by the Green Infrastructure Statement produced by our Architect / Landscape Architect Stride Treglown in liaison with our ecologist Cura Terrae and will form part of the Ecological Impact Assessment (EcIA), ref. 25183.002. See Section 3.8.4

3.2.9 Social Value

We will endeavour to use RCT based contractors wherever feasible to ensure that the local community are seeing the benefit of the construction and employment opportunities in terms of local spend and the local pound to ensure that RCT KPI's are met in terms of social value. There will be training and employment opportunities created to improve socio-economic benefits in the local area. We will have close liaison with our neighbours and keep residents abreast of our opportunities through quarterly newsletters and communication of our activities where required.

We will look to provide learning opportunities to the students of Ysgol Gyfun Cwm Rhondda, and other facilities such as local primary schools, in the form of careers talks, work experience, and construction-related activity days. We are also committed to supporting local charities through volunteering and sponsorship, endeavouring to support charities local to RCT where possible.

Social value KPI commitments outlined in Social Value Timeline document (see Schedule VII in the Appendix).

3.3. Surface Waters, Wells and Source Protection Zones

Wales – click here for Source Protection Zones GeoIndex - British Geological Survey

Project Located Within	Applicable (Y / N)	Authorisations
8m of a Main River, culvert or flood defence	N	FRAP N/A
16m of a tidal river, culvert or flood defence	N	FRAP N/A
16m of a sea defence structure	N	N/A
Flood Zone 2 or 3	Y	Flood Risk Assessment
Source Protection Zone 1	N	Piling Risk Assessment and no discharge to piling matt (option 2b of GU03-GR-035)
In, under, over or within 8m an Ordinary Watercourse	N	Ordinary Watercourse Land Drainage Consent / lead local flood authority agreement
50m of a watercourse	Y	There is a dry ditch on the upper plateau, that during the wetter months drains the existing tip
250m spring, well or borehole	N	

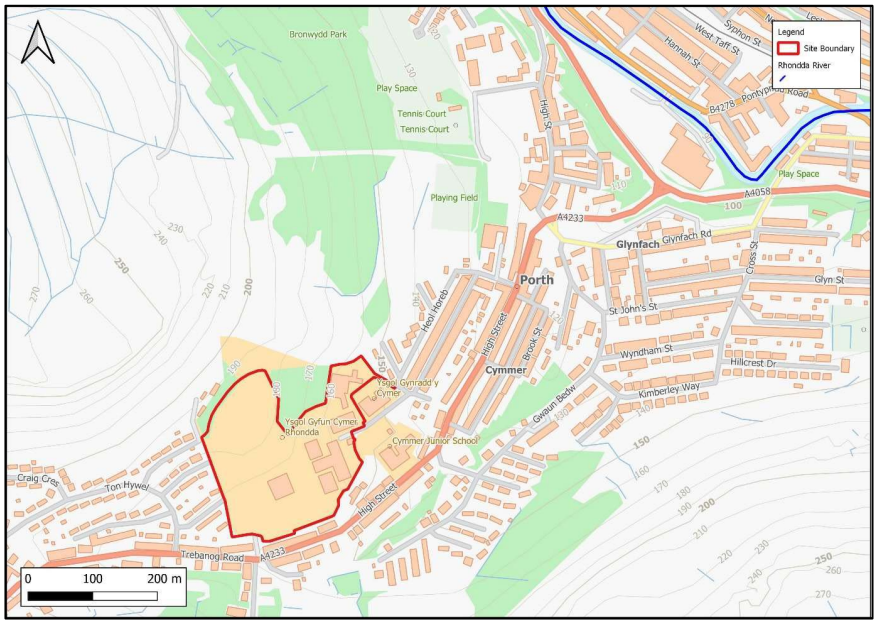
Stantec Hydrock Ltd have been commissioned by Kier Construction Limited to undertake a Flood Consequence Assessment (YGCR-STN-00-XX-T-W-000001) for the proposed development at Ysgol Gyfun Cwm Rhondda, Graigwen Road, Porth, CF39 9HA. This report is an assessment of flood risk to the development, from on and off-site sources, and to offsite receptors arising from development at the site. This report has been prepared to address the requirements of Technical Advice Note 15: Development and Flood Risk (TAN151) through:

- Assessing whether the proposed development is likely to be affected by flooding from fluvial, tidal, surface water, groundwater, sewer and artificial sources.
- Assessing whether the proposed development is appropriate in the suggested locations; and
- Detailing measures necessary to mitigate any flood risk identified; to ensure that the proposed development and occupants would be safe, and that flood risk would not be increased as a result of development.

3.3.1 Fluvial Flooding

The nearest Main River under NRW jurisdiction is the Rhondda River, which is situated approximately 600m northeast of the site. The Rhondda River flows in a south easterly direction away from the site and reaches its confluence with the River Taff approximately 5km east of the site. There are no Ordinary Watercourses within a close proximity to the site.

The location of the site in relation to the Rhondda River can be seen adjacent plan.

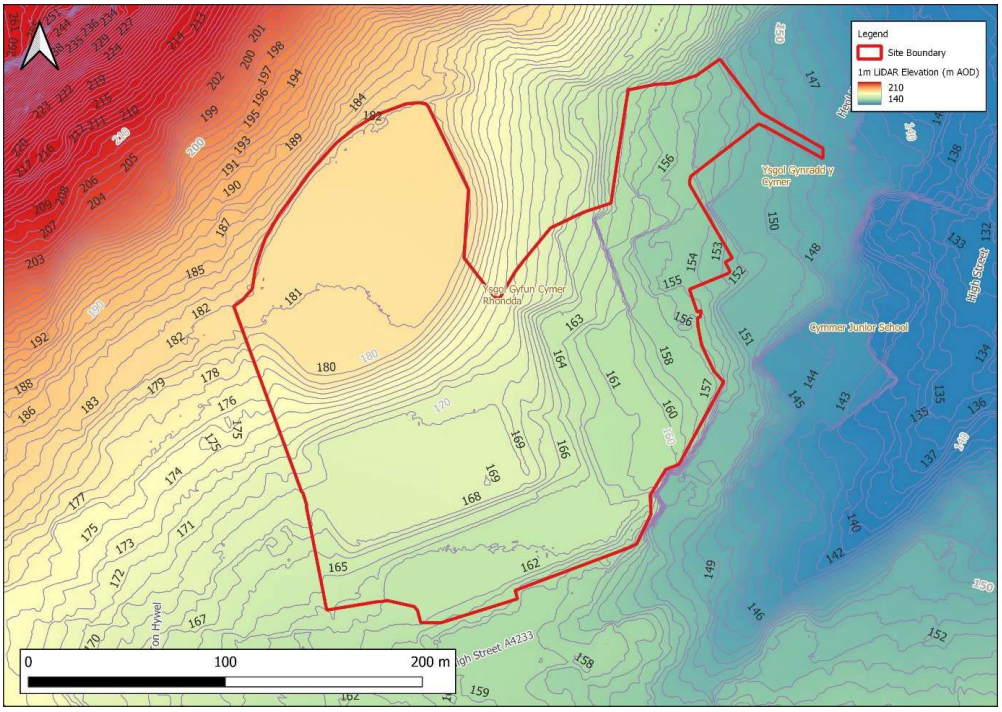


The proposed development is located in Flood Zone 1 which is defined as follows by Natural Resources Wales in terms of fluvial flood zones:

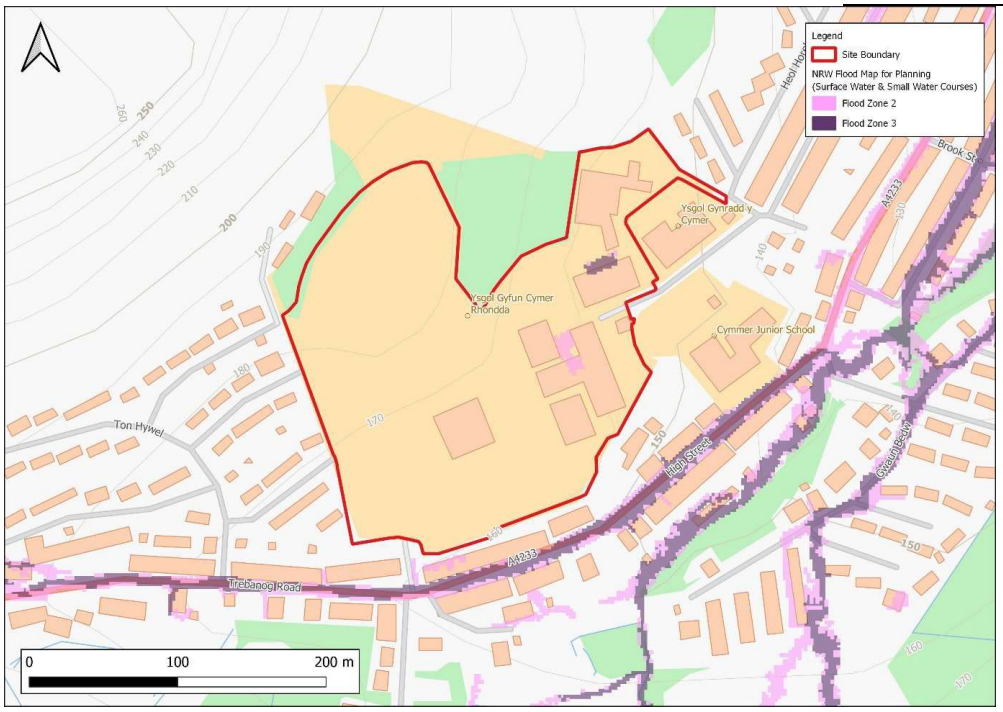
- **Flood Zone 1 (Low Risk)** comprises land assessed as having a ≤0.1% chance of flooding from rivers in any given year (equivalent to the ≥1 in 1,000-year return period flood event), including an allowance for climate change.

3.3.2 Surface Water Flooding

Due to the topography of the site the site's greatest risk of flooding is pluvial, i.e. from surface water run-off and overland flows, although when the development is complete, it is expected that the site will be at a 'low' risk of flooding from surface water sources due to the proposed drainage strategy.



Although the development is mostly within Pluvial Flood Zone 1, (very low risk), there are isolation areas just outside the site boundary within Pluvial Flood Zone 2 (medium risk) and 3 (high risk), that will be as a result of water run-off from elevated areas.

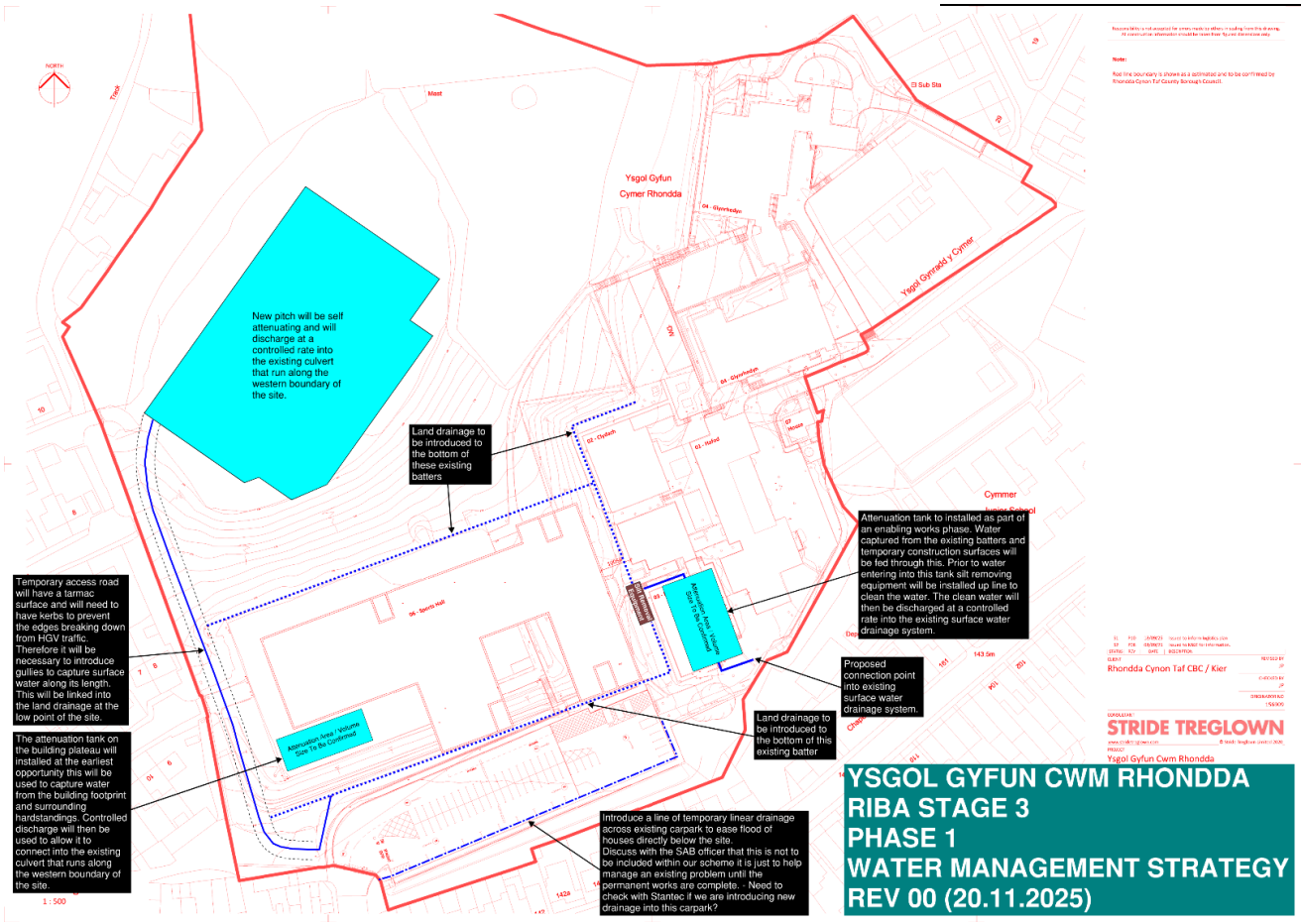


3.4. Groundwater & Dewatering

Kier will be managing the surface water during the construction phase through onsite attenuation and temporary drains to capture the surface water, until the development is fully complete. If water becomes silty, it will be pumped into a Siltbuster when silt and water will be separated prior to being discharged into the onsite attenuation, which will be installed early in the project. This will allow water to be attenuated and released into the existing surface water system at a rate to be agreed with Dwr Cymru Welsh Water under Trade Effluent Consent to utilise their system, and/or via Environmental Permit From Natural Resources Wales. We envisage the rate of discharge in the temporary condition during construction will be no greater than the rate in the permanent scenario.

https://business.dwrcymru.com/en/my-business/trade-effluent

Please see below proposed water management plan for the Construction Stage of the project.



Proposed **Water Management Strategy (Phase 1)** above. Attenuation areas will be introduced as outlined to control the discharge rate of surface water and connected into the existing culvert or storm drainage system respectively. Linear land drainage will be installed to capture runoff from the existing batters, which will then feed into a silt removal system (e.g S*iltbuster* or equivalent), whereby the sediment is removed, and the water can enter the attenuation area.

Visual downstream water quality will be regularly monitored for the duration of the project to ensure the removal of suspended solids and quality is effective at preventing the mobilisation of silt downstream. If it is found to be inadequate, work must stop immediately on site until sufficient mitigation has been implemented to prevent a reduction in water quality. This will be undertaken at the point of discharge, following treatment and prior to leaving the redline boundary to ensure we are robust with measuring the water leaving the construction site.

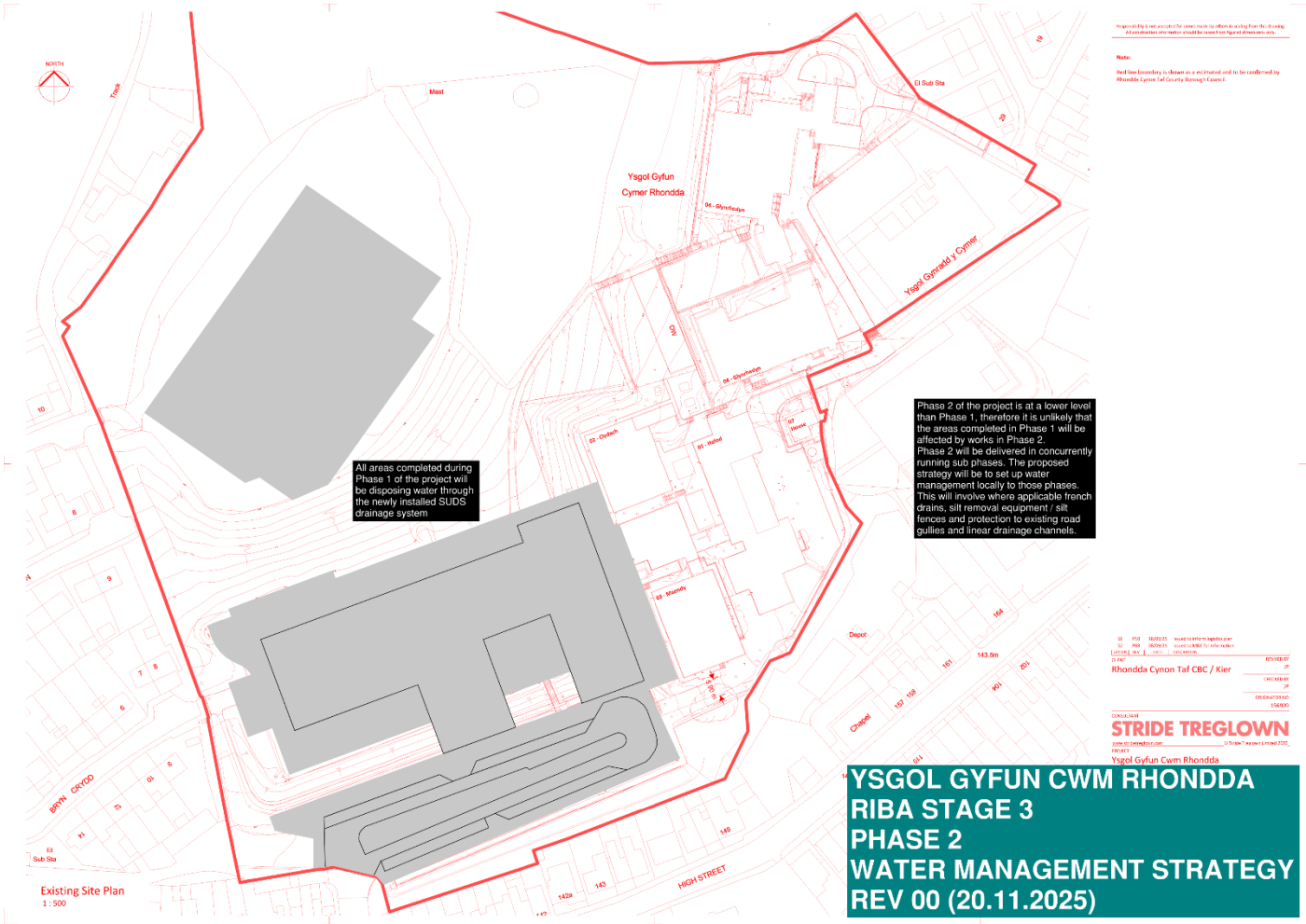
Liaison is required with Dwr Cymru Welsh Water and National Resources Wales, to confirm agreement of the above proposition.

Any site works that may impact on the site drainage or water quality shall:

- Soakaway where soils allow,
- Consider and manage erosion,
- Retain any silts on site and prevent silts from discharging into watercourses or drains,
- Remove pollutants in surface water; and
- Prevent accidental spillages reaching watercourses.

As part of the site induction, Kier Construction staff and supply chain sub-contractors will be instructed to abide by any specific environmental controls, and general good practice.

Phase 2 includes the demolition of the existing school buildings and the construction of new multi-use games area, car parking and hard and soft landscaping. Water will be captured before leaving site, treated and discharged using the methodology discussed at a rate agreed with DCWW / NRW.



Remaining Flood Risk Source types are listed below in the table following the Flood Consequence assessment and all risk levels remain 'Low' risk.

Flood Risk Source	Mitigation Proposed	Final Risk Level
Tidal	N/A	Low
Fluvial	N/A	Low
Surface Water	FFLs are above surrounding ground and external levels slope away from building entrances..	Low
Groundwater	N/A	Low
Sewers	N/A	Low
Artificial Sources	N/A	Low

As part of the Ground Investigation Works, we have installed monitoring wells. These will be backfilled and made redundant, so they don't cause an environmental risk in the future, in line with EA guidelines.

There are no natural surface water features with proximity of the site. However, we will take measures to ensure that storm water connections are well protected from run off from our works. These measures include using Drain Guards to protect gullies against similar to the below and silt nets to protect run off outside the boundary which will be strategically placed to suit site terrain/topography.

Where Oils and Fuels are being stored, they will be double bunded and located away from any sensitive receptors. A spill kit will be provided in the vicinity and personnel trained to deal with spills and dispose of correctly.

Groundwater

Groundwater flooding is caused by the emergence of water originating from sub-surface permeable strata. A groundwater flood event results from a rise in groundwater level sufficient for the water table to intersect the ground surface and inundate low lying land. Periods of prolonged rainfall may also be a cause of groundwater flooding, with aquifers and soils becoming saturated.

The underlying bedrock geology is classified as a Secondary A Aquifer, and the superficial deposits beneath the south of the site are classified as Secondary (Undifferentiated). BGS Historical Borehole records located in the northwest of the site (borehole no. ST09SW32) encountered artificial deposits of shale and coal and did not encounter groundwater. The Tier 2 Geotechnical and

Geoenvironmental Assessment prepared for the site by Terra Firma in February 2025 demonstrates that groundwater was not encountered in any of the three exploratory holes located across the south of the site.

The South East Wales SFCA (2022) did not include any historical records of groundwater flooding within Rhondda Cynon Taf. Although the SFCA states that the presence of permeable sandstone across the County Borough allows for the storage and movement of groundwater, it should be noted that the artificial deposits of shale and coal identified below parts of the site are considered to not be conducive to upward percolation of groundwater and subsequent flooding. The SFCA also states that the areas where groundwater is closest to the surface (<0.025m) and therefore are at the greatest risk of groundwater flooding are located around the Main Rivers, with the majority of the rest of the catchment having groundwater depths below 5m. Given the site's 600m distance from the nearest Main River, groundwater depths at the site are considered to be below 5m.

TAN15 does not specify any requirements for groundwater flood risk, other than that it is considered within an FCA.

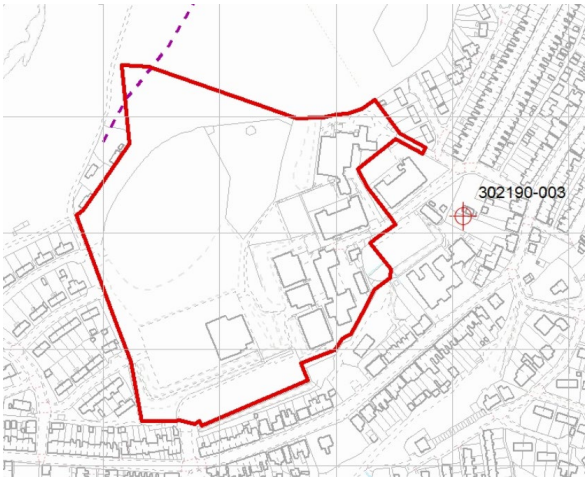
Therefore, the existing site is considered to be at a 'low' risk from groundwater sources and there is unlikely to be a requirement to dewater other than over-pumping rainfall from excavations through a Siltbuster system prior to discharging.

Further site investigation carried out by Stantec on behalf of Kier Construction noted the following conditions within the Phase 2 Ground Investigation Report | 333701644-STN-XX-XX-RP-GE-1001:

Groundwater was only encountered in the three boreholes and ranged in depth between 5.00m and 21.5m bgl. The shallow water table at circa 5m is believed to be perched within the Till, this level dropped to circa 20m once the boreholes were progressed into the fractured Rhondda Member Sandstone.

3.5 Contaminated Land / Coal Mining

The legacy of industrial and coal mining activity within Rhondda Cynon Taf requires consideration as part of the project. A Coal Mining Risk Assessment and Phase 1 Geotechnical Report (333701644-STN-XX-XX-RP-GE-1000) has been produced by Stantec and has noted that the area has been worked for coal mining in the past. A shaft is known to exist at the location shown below.



A Coal Mining Report has been obtained from the Mining Remediation Authority showing that there are 20 No. known seams worked underneath the site between 1970 and 1935.

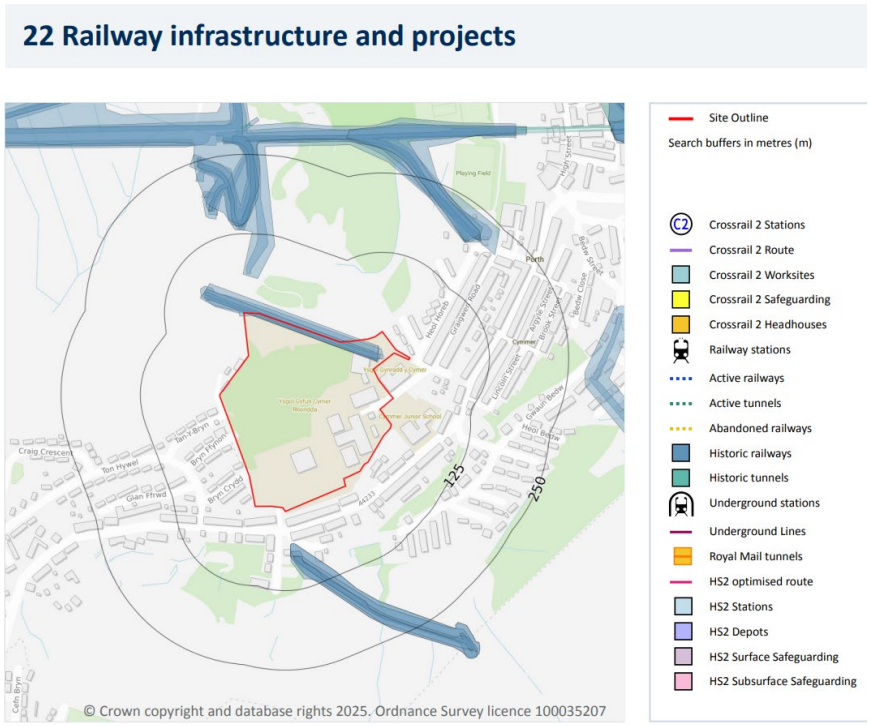
Seam	Depth (m)	Direction to working	Dip (°)	Dip Direction	Thickness (m)	Year last worked
No.2 Rhondda	56	Beneath property	4.3	North-east	0.90	1878
No.2 Rhondda	60	Beneath property	7.8	South-west	0.90	1870
No.3 Rhondda	123	Beneath property	6.7	South-west	1.00	1900
No.3 Rhondda	126	Beneath property	3.5	North-east	1.00	1873

Due to the depth of workings in the No.2 Rhondda and No.3 Rhondda and extraction thickness of 0.90 – 1.00m, in accordance with guidance in CIRIA C758, 2019 there is sufficient coverage of bedrock over the shallowest seam / recorded underground working, therefore these workings / seams are not considered to pose a risk to the proposed development.

Site investigation was carried out during July 2025 by Stantec on behalf of Kier, which included boreholes down to 30m. Three out of the four boreholes were drilled due to time constraints and ground conditions slowing drilling progress. The three boreholes were progressed to between 26m and 29m bgl. Thin coal traces were encountered within the bedrock, but no coal seams were encountered. The risk of ground related to subsidence relating from the Fforest Fach seam is considered low as there is a minimum of 20m of rock cover beneath the site. No further consideration of coal mining risk is considered necessary.

Consideration must be given to the potential for contamination on the site from industrial works. It is known from historical maps that a tramway crossed the northern boundary of the site as shown below. The Phase 2 Site Investigation report following Site Investigation also noted hazardous material within BH01 due to high metals The 'General' Made Ground is generally classified as non-hazardous waste. Testing will be undertaken on site prior to disposal and hazardous / non-hazardous materials will be separated in accordance with the CL:AIRE Materials Management Plan (TBC). No samples were found to exceed the screening criteria for the site.

There is on-going monitoring of the ground gas levels to determine the ground gas protection measures that are required (CS1, CS2, CS3 etc). We will undertake independent verification of the gas membrane to inform our verification plan / remediation strategy.



It must also be noted that there are old tips along that boundary, that are marginally within the site boundary. These tips are being monitored and managed by the RCT Tips Officer. It has been discussed that RCT will carry out baseline monitoring for movement of these tips, using tilt sensors, prior to construction work bring undertaken to gather baseline data. This will then be monitored through the construction phase. The current tip drainage runs through the site and drains within the western boundary of the site.

A concentration of Himalayan Balsam has been identified in the vicinity of the site adjacent to the woodland at the top of the plateau. Consideration must be given to avoid disturbing and/or spreading the species during construction works and it is likely that this will be treated prior to it flowering prior to our start on site.

3.6 Standing Heritage & Archaeology

Archaeology Wales were commissioned by Kier in September 2025 to produce a Heritage and Archaeological Desk-Based Assessment (DBA), ref. YGCR-AWA-00-XX-RE-Z-0001. The DBA recorded a total of six Scheduled Monuments, 95 Listed Buildings, six Conservation Areas, and no Registered Parks and Gardens and one Registered Historic Landscape within the 5km study area. The development has been deemed to have **no impact** upon these monuments.

There are 34 **heritage assets** recorded within the regional HER and the National Monuments of Wales database within the 500m Study area, two of these assets fall within the development area; Ysgol Gyfun Cymer Rhondda (NPRN414977) which is located within the majority eastern area of the development site of which numerous buildings are proposed to be demolished, and the second asset within the site boundary is Cymer Infant School (NPRN801311) which is unlikely to be directly impacted by the proposed development, however, it's communal value will be impacted with its counterpart being demolished.

During the map regression research, a new asset was identified, a small farmstead in the northern area of the proposed development site (YGCR001) i.e. the proposed location of the 4G pitch. The asset

first appears as a small rectangular building on the Tithe Map of the parish of Llantrisant dated 1842. This building appears on the mapping until at least 1967 and is labelled as Ton-Hywell.

The newly identified asset of Ton-Hywel (YGCR001) could potentially survive at a sub-surface level, therefore a programme of archaeological monitoring (i.e watching brief) and recording during any intrusive groundworks needed to relandscape the playing field, will be undertaken.

Due to the proposed demolition of the existing Ysgol Gyfun Cwm Rhondda (NPRN414977), a suitable programme of historic building recording has been recommended prior to the commencement of works to the structure. Kier will ensure that sufficient photographic records of the buildings are in place before any demolition works commence.

The site location does not lie within any designated conservation areas.

3.7 Sensitive Neighbours

The following sensitive receptors could be influenced by the construction works:

- The existing school facilities – most notably to the teaching blocks to the **East** of the site.
- Cymmer Primary School – located adjacent to the **East** of Ysgol Cwm Rhondda
- Nearby residential streets to the **West** – most notably (but not limited to): Bryn Crydd, Bryn Ffynon and Tan-Y-Bryn Rd.

Liaison with the local residents/community will be prioritised by Kier to minimise the effects of our disruption. Communication will be ensured in the form of regular newsletters, open days/evenings, site team contact details prominently displayed to the public etc. Control measures outlined above such as dust, noise and vibration reduction, lighting pollution control, wheel washing or other methods of controlling the spread of mud, and enforcing agreed site hours will also help reduce impact.

Kier will also ensure stringent control of delivery routes and contractor parking to prevent any overspill into the nearby community.

We will carry out noise and vibration monitoring at the boundary to ensure we aren't exceeding limits of RCT's Environmental Health Officer.

3.8 Ecology & Biodiversity

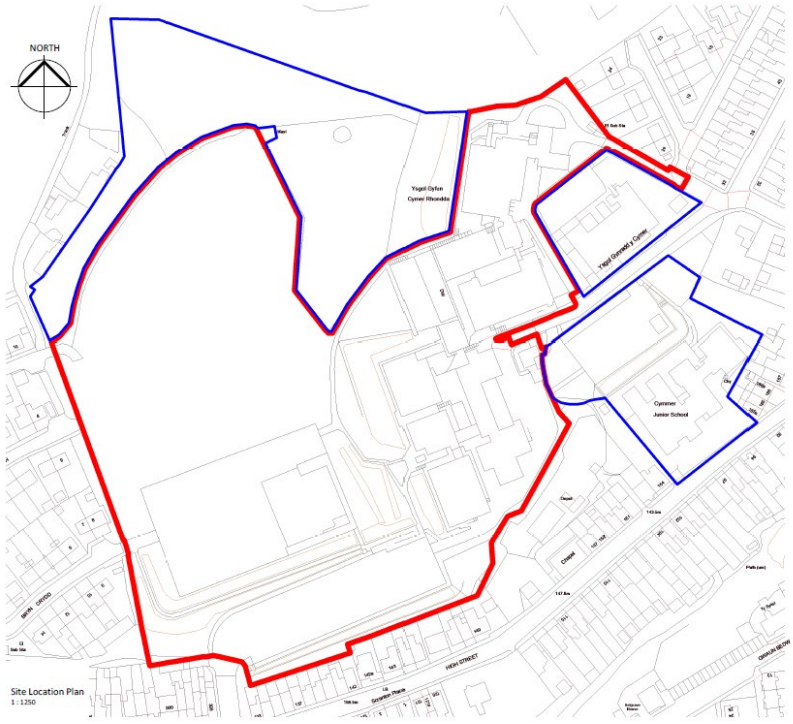
Terrestrial or marine designated site for nature conservation

For more information, please see *Cura Terrae* EcIA report (ref. 25183.002)

Project Located Within	Applicable (Y / N)	Notes
Local Wildlife Site (LWS)	N	Discharge of planning condition
Local Nature Reserve (LNR)	N	Discharge of planning condition
National Nature Reserve (NNR)	N	Discharge of planning condition
RAMSAR	N	HRA and Assent / Consent for works
Site of Special Scientific Interest (SSSI)	N	Assent / Consent for works
Special Area of Conservation (SAC)	N	HRA and Assent / Consent for works
Special Protection Area (SPA)	N	HRA and Assent / Consent for works
500m of SSI, SAC or SPA	N	Temporary Dewatering from Excavations to Surface Water RPS cannot be used
50m of any of the designated sites listed above	N	

3.8.1 Invasive Non-Native Species

During July 2025 Cura Terrae we appointed by Kier Construction to undertake a Preliminary Ecological Impact Assessment. This noted the presence of Himalayan Balsam at the top of the site adjacent to the proposed 4G pitch, please refer to Schedule II – Environmental Constraints Plan for location. Note that this is outside the development red lie boundary, but within the RCT ownership boundary. All Himalayan balsam must be controlled to avoid the natural spread to off Site habitats.



Where removal is required or spreading may occur to facilitate Site investigations or groundworks, a precautionary approach following an INNS Method Statement (INNS MS) should be taken when clearing Himalayan balsam during works.

Removal of Himalayan balsam would involve the hand pulling before it goes to seed. Making sure that the plant is not cut off above the first node as regrowth can occur. In addition, the plants could be treated with glyphosate. Management of this species should take place prior to flowering where possible and should not be undertaken once the plants are in seed, seed pods explode on touch which would further spread the species at the Site. Pulled or cut plants should be left to dry out and die, where possible. They should then be disposed of appropriately. If the soils have to be taken off site, they must also be transported and disposed of appropriately.

Site staff should be provided with a toolbox talk and information sheet which will detail and displays Himalayan Balsam as well as other common invasive species which may be encountered on Site, e.g. giant hogweed *eracleum mantegazzianum* and Japanese knotweed *Fallopia japonica.*

Should other invasive species or any diseases be identified at any point, then these would need be managed through a management plan to be implemented by appointing a suitably experienced contractor/specialist.

The area should be monitored for a further minimum two years to ensure that Himalayan balsam does not recolonise. A long-term management plan should be put in place to eradicate Himalayan Balsam from the Site. Areas such as the woodland could be fenced off to stop people entering areas with Himalayan balsam and spreading it around the school grounds.

3.8.2 Bat Surveys

A Preliminary Roost Assessment (PRA) was undertaken initially, which categorised the existing buildings according to their potential for bat roosting: Buildings were categorised for roost potential:

- Building 4 – Moderate potential
- Buildings 1a, 1b, 3a, 7 – Low potential
- Buildings 2 and 6 – Negligible potential;

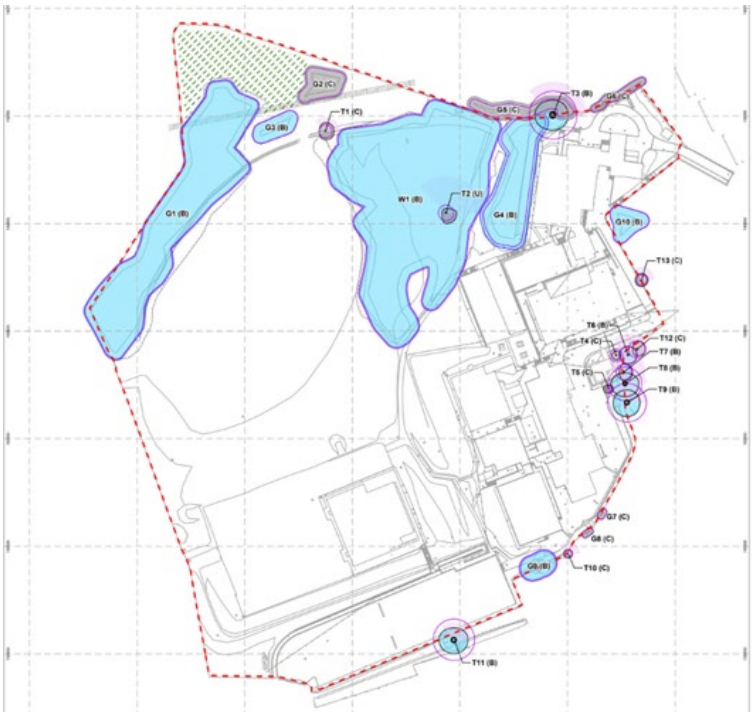
Following this, multiple dusk emergence surveys were undertaken by Cura Terrae, none of which confirmed bat roosting within the existing buildings. However, it was identified that Potential Roost Features (PRF's) were identified across several buildings, meaning that there is a possibly that bats may use them opportunistically.

While Cura Terrae have confirmed that no immediate further surveys are required, the initial demolition works must take place under a non-licensable method statement (NLMS), and under supervision of an NRW bat licensed ecologist. Any dismantling of features suitable for bats, including but not limited to, roof tiles, eaves, soffits, must be undertaken by hand, and under supervision of an NRW ECoW.

Toolbox Talks and Safe Systems of Work will include the possibility of bat roost presence, ensuring that all site operatives remain vigilant and aware of possible risk. Further information can be found within Cura Terrae's Ecological Impact Assessment (EcIA), ref. 25183.002.

3.8.3 Arboricultural Surveys

The main Arboricultural feature surrounding the site is the woodland to the North, which the EcIA identifies as an *important habitat,* particularly for commuting and foraging bats. Consideration will be given to ensure that light overspill into the existing woodland is kept to a minimum.



While there are no Tree Protection Orders (TPO's) in place that will be affected by the project, The Preliminary Arboricultural Assessment by Middlemarch Ecology, ref. RT-MME-182456-01, categorises surrounding trees into orders of importance in terms of ability/importance of being retained. Consequently, it has identified Root Protection Areas (RPA's) to implement into the construction process, although works near these identified features are likely to be fairly minimal. Consideration will be given during the design process to ensure that the recommended arboricultural features are retained without overriding justification to remove.

A singular category 'U' tree (i.e dead) has been identified within the woodland North of the proposed site. The arboricultural report recommends that risk reduction works be carried out on this feature. RCTCBC have been informed of the elevated risk of this feature.

3.8.4 Other Relevant Species – Amphibians, Reptiles, Breeding Birds

The EcIA report identifies a number of animal species which are likely to be present in the surrounding area. These include: Amphibians (not including the Great Crested Newt), Reptiles, Breeding Birds, Hedgehogs, and various Invertebrates. The likelihood of Badger presence has also been assessed, however has been deemed unlikely due to the absence of visible setts and other evidence.

By implementing the control measures identified in the EcIA report, the residual effect on the species listed above are deemed to be **neutral** at minimum. A further preconstruction ecology walkover will be undertaken 6 weeks prior to start onsite to ensure the conditions and mitigations of the assessment remain relevant

3.8.5 Biodiversity Benefit

The project will have a *biodiversity benefit* element included and developed during the RIBA Stage 4 design, with an aim to enhance the biodiversity qualities of the site and the surrounding area following the completion of the construction works.

3.9 Project Specific Sustainability Targets

Element	Action	Ysgol Gyfun Cwm Rhondda
Pollution Prevention	Significant incidents	0
Greenhouse Gas Impact	Reduce electricity and fuel use by 5%	1100kgCO2e/ £100k value
	Record subcontractor fuel use	All projects
	Reduce subcontractor emissions (Scope 3 emissions) by using low emission plant, equipment and / or fuel, i.e. HVO+	Directly procure Hydrotreated Vegetable Oil (HVO) fuel only. Directly procure low emissions plant only. Encourage sub-contractors likewise.
Zero Waste	Implement the principles of the circular economy and implement a take-back or closed-loop recycling scheme	Pallet and excess timber collecte by Community Wood Recycling / Receilo Protec Armstrong Dulux Rockwool Desso Recofloor TCI (GB)
	Divert non-hazardous construction, demolition and excavation wastes from landfill	95%
	Reduce the volume of construction wastes generated by 5%	5.9m3/£100k value
	M3 construction wastes per 100m2 GIFA	13.3m3/100m2 (if Targeting BREEAM Credit)
Protection of Habitats & Resources	Record and reduce water use by 5%	9.2m3/£100k value
	Biodiversity Gain	TBC

4. General Project Environmental Requirements

4.5 Waste Management

All waste will be managed in accordance with the Waste Management Operating Procedure OP-GR-065 and where relevant, the Soil Management and Contaminated Land Operating Procedure OP-GR-061.

Ysgol Gyfun Cwm Rhondda will manage waste through the implementation of RIO waste management tool. The project team will use RIO to identify and record waste streams, forecast waste volumes and identify suitable methods to eliminate, or where this is not practicable, reduce waste generated by the project.

When considering management options for identified waste streams, Kier and supply chain members will adhere to the principles outlined in the waste hierarchy below.

Kier and its sub-contractors must ensure waste is stored away from drains, boreholes, wells and controlled waters. Containers shall be in good condition and, where required, covered to prevent dust and litter being blown out. If there is any likelihood of stored waste contaminating the area

surrounding the site, all necessary steps must be taken to ensure no contamination occurs. This may include the use of containment bunds with rain shelters and the use of sealed containers, i.e. clip-top drums and fluorescent tube coffins.

Before waste is treated and / or removed from Ysgol Gyfun Cwm Rhondda, all subcontractors / waste contractors must provide the project team with legible copies of the following documentation:

- Environmental permits (mobile plant licences) and exemption certificates authorising on-site crushing and screening activities.
- Waste Carriers Registration Certificates.
- Environmental Permits, (Waste Management Licences and Pollution Prevention Control Permits).
- Notification certificate of exemption from environmental permitting.

The project team and, where applicable, subcontractors will ensure that the removal of all inert / non-hazardous waste is recorded on waste transfer notes (WTNs). Legible copies of all WTNs must be kept for a minimum of two years following collection. These documents will be stored on site and made available on request.

The project team and, where applicable, subcontractors will ensure the removal of all hazardous waste is recorded on hazardous / special waste consignment notes (H/SWCNs). Legible copies of all H/SWCNs must be kept for a minimum of three years following collection. These documents will be retained on site and made available on request.

Legible copies of all WTNs and H/SWCNs, recording the removal of waste from Ysgol Gyfun Cwm Rhondda must be issued to Kier. This includes waste generated on site by subcontractors.

When removing hazardous waste from projects located in England or Wales, a premises code must be recorded on all HWCNs.

A premises code has been obtained from Natural Resources Wales in accordance with section 4.4.1 of the Waste Management Operating Procedure OP-GR-065. The premises code for the project is **TBC.**

4.6 Storage of Fuel, Oils & Building Chemicals

Fuel, oil and chemicals will be managed in accordance with the Pollution and Nuisance operating Procedure OP-GR-063 and COSHH Operating Procedure OP-GR-051. Please also refer to Oil & Fuel Storage – Above Ground CS01-CON-063 and Chemical & Paint Storage GU06-GR-063 Mandatory Guidance.

Containers must be stored within a Spill Nappy (or similar), bund or any other suitable secondary containment system (SCS). All containers must be located in a safe place to minimise the risk of damage and locked-off when not in use.

For oil tanks, intermediate bulk containers and mobile bowsers the SCS must be able to hold:

- Where one container is being stored - a minimum of 110% of the total volume.
- Where more than one container is being stored - a minimum of 110% of the largest container's storage volume, or at least 25% of their total volume (whichever is greater).

- For drum storage, the interceptor tray must be able to hold at least 25% of the total storage capacity of the drums.

Bunded areas must be made impermeable to water and oil and protected from the ingress of rainwater. The base and walls of the bund must not be penetrated by any valve, pipe or opening that is used for draining the system.

Oil storage areas (including generator locations) that are likely to be in use for more than 2 months must have an impermeable surface, i.e. they must be concrete. The impermeable surface must extend a sufficient distance to ensure minor leaks and spills from refuelling operations can be safely identified and contained. Well stocked, appropriately sized spill kit(s) and plant nappies or equivalent pads must be located at each storage area.

The location of all oil storage areas and mobile bowsers must be inspected and approved by Kier before use. Approved locations will be labelled on the Site Constraints Layout Plan (see schedule II). Where practicable, separate oil storage areas should be established for each subcontractor.

All oil storage areas and mobile bowsers must clearly display an Enviro-tag. Enviro-tags must be completed by Kier as part of the inspection regime prior to installation and first use of all oil storage areas and mobile bowsers. Subsequent routine monitoring must be undertaken as a minimum on a weekly basis. During inspections, relevant guidance provided in this minimum standard should be referenced by scanning the QR code printed on the Enviro-tag.

4.2.1 Working on Liquid Fuel Lines & Storage Systems

Works on fuel tanks and lines must be covered by suitable RAMS. Where applicable, control measures must account for potential environmental risks, e.g. surface waters, groundwater, drinking water treatment facilities and nature conservation sites. A photographic record of fuel line and / or tank decommissioning works must be retained with photographs taken before, during and on completion of the works.

All wastes, including fuel and oils must be managed in accordance with the Waste Management Operating Procedure OP-GR-065.

4.7 Managing Concrete Wash Water

Concrete wash water contains suspended solids and is highly alkaline (has a high pH). Solutions that are highly alkaline are as harmful to the environment as strong acids. Unlike wet concrete that is poured into the ground, concrete wash water is very mobile and can easily enter drains and controlled waters, e.g. groundwater, rivers and reservoirs, causing significant harm to aquatic life and the environment.

The hierarchy of control described in Managing Concrete Wash Water GU08-GR-063 will be used to identify and implement suitable control measures for managing concrete wash water. A member of the Kier SHE team must approve selected management options prior to concrete being delivered to site. Approved site-specific management options are filed in schedule IV of this EMP.

The location of all proprietary equipment, containers etc. must be inspected and approved by Kier before use. Approved locations will be labelled on the Site Constraints Layout Plan (see schedule II).

All areas used to manage concrete wash water must clearly display an Enviro-tag. Enviro-tags must be completed by Kier as part of the inspection regime prior to installation and first use of all concrete wash water areas. Subsequent routine monitoring must be undertaken as a minimum on a weekly basis. However, where a Temporary Trade Effluent Consent is in place, monitoring must be undertaken as specified within the authorisation.

4.4.1 Mobile Crushing & Screening Process

Crushing and screening will be managed in accordance with the Waste Management Operating Procedure OP-GR-065 and the Demolition – Mobile Crushing and / or Screening Operations Control Standard CS01-GR-090.

In Rhondda Cynon Taf (RCT), a Section 80 notice must be submitted to the local authority at least six weeks before starting any demolition work

Crushing and screening of demolition material must be conducted in accordance with the plant operation manual and, where applicable, environmental permit (mobile plant licence) / waste exemption certificate. The operator must use the best available techniques (BAT) for preventing or, where this is not practicable, reducing emissions from the installation. The following items must be considered when attempting to reduce the environmental impact of this process:

- Location
- Operation
- Maintenance
- On-site transfer of dusty materials
- Condition of roadways / haulage routes
- Stockpiling materials

4.4.2 General Site Activities

With regard to nuisance, the methodology in which work activities are undertaken must apply best practicable means (BPM) in order to minimise negative impact on local, sensitive receptors, such as schools and domestic dwellings. However, if measures to reduce excessive dust and noise are unsuccessful, work must stop and an alternative method devised before work can resume.

The following measures must be considered when attempting to reduce noise and dust:

- Use sheeted lorries and sealed / covered skips.
- Use dust extraction equipment when drilling and cutting.
- Damp down haulage roads and stockpiled materials in dry or windy weather.
- Sweep access roads regularly.
- Grass over / stabilise topsoil which is being stockpiled for landscaping or off-site re-use.
- Locate plant and equipment away from sensitive receptors.
- Use screens, including earth bunds to act as acoustic barriers.
- Isolate plant and equipment when not in use.
- Fit white noise systems on vehicles to reduce noise nuisance when reversing.
- Keep engine compartment doors closed.
- Limit vehicle movements on-site, e.g. use of one-way system.

4.8 Previously Unidentified Issues

If one or more of the following is discovered, work in that location must stop immediately and the Project Environmental Co-ordinator (PEC) informed:

- Contaminated soils.
- Archaeological remains or features.
- Suspicious objects.
- Underground storage tanks.
- Invasive species, e.g. Japanese knotweed.
- Protected species, e.g. badgers, bats, amphibians, reptiles and plant life.

4.9 Subcontractor and Supplier Environmental Reporting

Subcontractors and suppliers must adhere to the Responsible Procurement Strategy. Where applicable, they must also provide the following information / documentation on a weekly basis to the Kier project team:

- A record of the number of litres of fuel delivered to site, e.g. red diesel (gas oil), white diesel and petrol.
- Volume of water used on site (where separate subcontractor supplies are in use, e.g. stand pipes).
- Legible copies of all waste transfer notes (WTNs) and hazardous/special waste consignment notes (H/SWCNs).
- Legible copies of all chain of custody certificates belonging to suppliers delivering new timber to site.
- Legible copies of all timber delivery notes.
- Legible copies of all recycled aggregate delivery notes (volume of aggregate must be recorded on notes).

4.10 Emergency & Incident Preparedness

To minimise the risk of a pollution incident, subcontractors must ensure all operatives understand the environmental risks associated with their work activity and what control measures are in place to eliminate or reduce negative environmental impact.

Major environmental incidents shall be reported and managed in accordance with MIRP Operating Procedure OP-GR-013.

Environmental emergency planning must be managed in accordance with the Fire Management Site Operating Procedure OP-GR-020 and Appendix B.6 of the Construction Phase Plan. The Major Incident Response Plan must be implemented where relevant.

Investigation and reporting of environmental incidents must be undertaken in accordance with the Incident Reporting and Investigation Operating Procedure OP-GR-011.

4.11 Monitoring, Auditing & Reporting

Please refer to 6.18 of the Construction Phase Plan.

4.12 Management Structure & Responsibilities

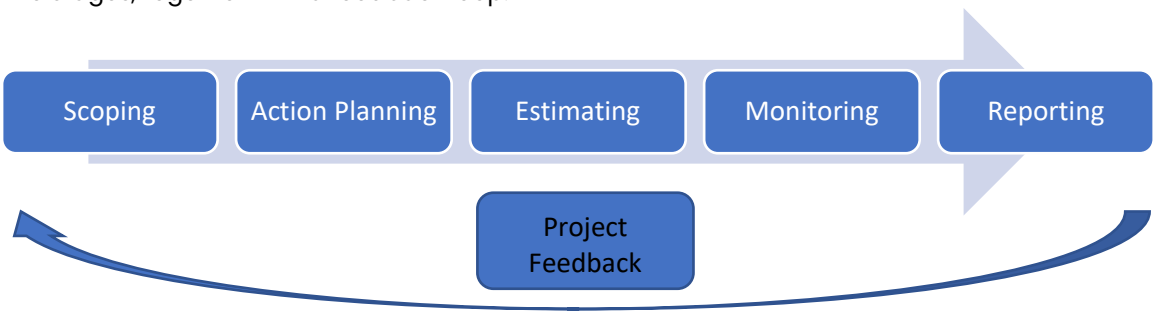
Please refer to 6.1 and 6.2 of the Construction Phase Plan.

4.13 Training Awareness & Competence

Please refer to 6.14 of the Construction Phase Plan

Resource Efficiency

Kier has adopted the principles of resource management planning as developed by the Waste and Resources Action Programme (WRAP). The resource management planning process is broken into five stages, together with a feedback loop.



By implementing the Construction Resource Efficiency Strategy, the project team will:

- Demonstrate innovation.
- Support the requirements of environmental assessment methods, such as BREEAM.
- Go beyond compliance.
- Build more efficiently and reduce risk.
- Achieve environmental benefits.
- Create savings for all stakeholders.

The online RIO platform and energy reports issued by Energise will be used throughout the contract to monitor, record and report environmental performance. Resource management planning will be documented in RIO sections 2, 3 and 4. Section 2 will record all waste and resource minimisation measures implemented during the various project phases.

Waste Minimisation strategies specific to the project are within the Resource Efficiency Management Plan documentation within Schedule V1 in the Appendix.

5.5 Materials & Design

A list of design decisions has been recorded in schedule III of this plan. The items listed are based on the twelve resource efficiency themes identified by WRAP. Further information can be obtained from the project design manager / assistant design manager.

Timber and timber based products will comply with the Timber Purchasing Minimum Standard CS05-GR-017 and will be certificated timber that have been specified, e.g. FSC, PEFC or GiB

The site will be registered under the BREEAM scheme with a target *Excellent* rating.

Green materials will be prioritised during the design phase of the project – including, but not limited to – Low carbon concrete (e.g GGBS), recycled steel & Environmental Performance Declaration (EPD) certified materials.

Prefabricated materials will be prioritised during design – including, but not limited to – prefabricated lift shafts and stairs (including stair cores).

A green roof system will be implemented into the design, likely to be Alumasc as the design develops, due to poor infiltration rates in the existing ground and limited opportunity for swale features to attenuate water due to site constraints.

Please reference to Resource Efficient Management Plan (REMP) in Schedule VI for further information on design decision taken to reduce waste or use materials efficiently.

5.6 Soils & Aggregates

The following table records the requirement for soils and aggregates on the project.

The design process is not sufficiently progressed at this stage to determine quantities of material, but this will be revisited post during RIBA Stage 4:

[This table **must** be completed during preconstruction to ensure appropriate lead times are available to obtain CL:AIRE Materials Management Plans, etc. Where it is necessary to import topsoil, please refer to GU03-GR-061 Importing Topsoil Guidance. Where importing Recycled Aggregate refer to Recycled Aggregate Guidance, complete the FO07-GR-065 Materials & Waste Movement Tracker, and if under QP complete the declaration found on the last page of the Importing Recycled Aggregate Guidance. Store all relevant documentation in schedule IV.]

Item	Origin	Y / N	Source	Volume (tonnes)	Use	Control
Untreated topsoil	Site	Y / N	N/A	N/A	N/A	WFD / RPS Soils
Treated topsoil, e.g. screened		Y / N	N/A	N/A	N/A	U1 / P19 /MMP
Untreated subsoils		Y / N	N/A	N/A	N/A	WFD / RPS Soils
Treated subsoils, e.g. screened		Y / N	N/A	N/A	N/A	U1 / P19 /MMP
Treated / untreated made ground		Y / N	N/A	N/A	N/A	U1 / P19 /MMP
Recycled aggregates		Y / N	N/A	N/A	N/A	U1 / P19 /MMP
Asphalt / Road Planings		Y / N	N/A	N/A	N/A	U1 / P19 /MMP
Untreated topsoil	Import	Y / N	Facility & address	N/A	N/A	U1 / MMP / RPS Soils
Treated topsoil, e.g. screened		Y / N	Facility & address	N/A	N/A	U1 / MMP / RPS Soils / Manufac.
Untreated subsoils		Y / N	Facility & address	N/A	N/A	U1 / MMP / RPS Soils
Treated subsoils, e.g. screened		Y / N	Facility & address	N/A	N/A	U1 / MMP / RPS Soils / Manufac.
Virgin aggregates		Y / N	Facility & address	N/A	N/A	N/A
Recycled aggregates		Y / N	Facility & address	N/A	N/A	U1 / P19 /QP

Where an MMP will / has been drafted, file a copy along with the Qualified Person Declaration Receipt in schedule V of this EMP.

5.7 Waste Management

For detailed information relating to the management of waste at Ysgol Gyfun Cwm Rhondda, e.g. targets, waste forecast, waste minimisation measures and waste records, please refer to the project's Resource Efficiency Management Plan (REMP) in Schedule VI of the Appendix.

The REMP will consider key points such as:

- Pre-demolition / pre-refurbishment audit (including identification of non-waste salvage items).
- Existing building elements with hazardous coatings / finishes, e.g. paint containing lead.

- Waste segregation on / off site.
- Hazardous waste streams and how they will be managed.
- Waste exemption(s) required, e.g. U1 / Para 19 or Para 9 and T5 / Para 13 or 21.
- Take back schemes, e.g. Travis Perkins.
- Closed-loop recycling schemes, e.g. Protec, Armstrong, Dulux, Rockwool, Desso, Recofloor and TCI (GB)

5.8 Energy, Fuel & Water

A full list of energy and water saving measures and initiatives are listed within the Resource Efficiency Management Plan in Schedule VI of the Appendix.

Site accommodation at Ysgol Gyfun Cwm Rhondda conforms to the Site Accommodation Sustainability Specifications CS04-GR-070.

Project value	Any		<£1m	>£1m
Fire-rated / non fire-rated	Fire-rated		Non-fire rated	
Type	Cabins	Modular	Any	
Minimum EPC rating	B	A	B	A
Timed, thermostatically controlled heating	Yes	Yes	Yes	Yes
LED lighting with PIR sensors	Yes	Yes	Yes	Yes
Double glazed windows	Yes*	Yes*	Yes	Yes
Insulated external doors on closers	Yes*	Yes*	Yes	Yes
Dehumidifiers draining to exterior in drying rooms	Yes*	Yes	Yes	Yes
Low energy hand dryers in all toilets	Yes*	Yes	Yes	Yes
Smart energy controls / energy management system*	Yes	Yes	Yes	Yes
Non-concussive (push) taps in bathrooms	Yes	Yes	Yes	Yes
Dual flush cisterns	Yes	Yes	Yes	Yes
Waterless urinals	Yes	Yes	Yes	Yes

Schedule I - Environmental Aspect & Impact Assessments

Aspect	Potential Impact	Phase(s)			Initial Risk			Guidance	Control measures in addition to guidance where available	Residual Risk		
		C	D	E	Likelihood	Environmental Impact	Risk			Likelihood	Severity	Risk
Site Set Up												
Setting up site accommodation	Excessive use of natural resources (water, electricity, carbon)	X	X	X	Occasional	Short term	Medium	CS04-GR-070 Site Accommodation Sustainability Specifications	Accomodation powered by mains as soon as reasonably practicable. MeasurableEnergy Smart Sockets. Timed suppiles. Waterless urinals.	Unlikely	Short term	Medium
Pollution prevention												
Storage of fuel and / or COSHH	Pollution of watercourses	X	X	X	Occasional	Medium term	High	Oil and fuel storage	Dedicated COSHH stores, store well away from watercourses	Unlikely	Medium term	Medium
	Pollution of drainage	X	X	X	Occasional	Short term	Medium	Oil and fuel storage	Witches hat drain guards to be installed to any nearby gullies	Unlikely	Temporary	Low
	Pollution of ground and groundwater	X	X	X	Occasional	Medium term	High	Oil and fuel storage	Bunded hardstand fuel storage area, plant nappies and spill kits	Unlikely	Medium term	Medium
Refuelling of plant and vehicles	Pollution of watercourses	X	X	X	Occasional	Short term	Medium	Refuelling	Bunded hardstand fuel storage area, plant nappies and spill kits, store well away from watercourse/culvert	Unlikely	Temporary	Low
	Pollution of drainage	X	X	X	Occasional	Short term	Medium	Refuelling	Witches hat drain guards to be installed to any nearby gullies	Unlikely	Temporary	Low
	Pollution of ground and groundwater	X	X	X	Occasional	Medium term	High	Refuelling	Bunded hardstand fuel storage area, plant nappies and spill kits	Unlikely	Medium term	Medium
Managing concrete wash water	Pollution of watercourses and / or ground due to improper / inadequate treatment	X	X	X	Occasional	Short term	Medium	Managing concrete wash water	Store wash water on site for disposal as hazardous waste	Unlikely	Short term	Medium
	Unauthorised discharge of concrete wash water	X	X	X	Likely	Short term	Medium	Managing concrete wash water	RAMS/SSoW briefing. Demarcated washout area. Supervision and monitoring.	Unlikely	Short term	Medium
Other (please specify)												
Other (please specify)												
Water management												
Encountering groundwater	Pollution of groundwater			X	Likely	Short term	Medium		Siltbuster system in place to minimise contamination. Silt nets where applicable.	Unlikely	Short term	Medium
	Exposure of site workers to waterbourne contaminants			X	Likely	Medium term	High		Operatives briefed. RAMS in place. Appropiate PPE. Restrict access to areas if required	Unlikely	Medium term	Medium
Working near water	Fuel / chemical pollution	X	X	X	Occasional	Medium term	High	Oil and fuel storage	Store away from watercourse. Hardstand bunded storage area	Unlikely	Medium term	Medium
	Silt pollution	X	X	X	Occasional	Short term	Medium		Drain guards to potentially affected receptors	Unlikely	Short term	Medium
Rainwater and/or groundwater in excavations	Unauthorised discharge of rainwater			X	Occasional	Short term	Medium		Discharge over open ground with landowner permission	Unlikely	Short term	Medium
	Localised flooding			X	Occasional	Short term	Medium		Water management plan in place including additional drainage in place during construction process	Unlikely	Short term	Medium
	Silt pollution of surface waters			X	Occasional	Short term	Medium		Siltbuster system in place	Unlikely	Short term	Medium
Generation of trade effluent	Unauthorised discharge of trade effluent	X	X	X	Occasional	Short term	Medium		Discharge only with DCWW trade effluent consent. Site management to closely monitor for non-compliance	Unlikely	Short term	Medium
Other (please specify)												
Other (please specify)												
Nuisance												
General site activities	Generation of dust	X	X	X	Regular	Temporary	Medium	Pollution and nuisance	Regular monitoring on site and at relevant receptors. Dedicated cutting enclosures to minimise spread to receptors	Unlikely	Temporary	Low
	Generation of noise	X	X	X	Regular	Temporary	Medium	Pollution and nuisance	Noise monitoring at relevant receptors. Acoustic barrier system in place as/when required. Sheeted scaffold.	Occasional	Temporary	Low
	Generation of vibration	X	X	X	Regular	Temporary	Medium	Pollution and nuisance	Vibration monitoring at relevant receptors. Low-vibration equipment prioritsed where possible	Occasional	Temporary	Low
	Light pollution	X	X	X	Regular	Temporary	Medium	Pollution and nuisance	Out of hours working minimised. Lighting facing away from social / environmental receptors as far as reasonably practicable.	Likely	Temporary	Medium
Other (please specify)												
Other (please specify)												
Ecology and Biodiversity												
Working near trees	Damage to root system	X	X	X	Occasional	Long term	High	Tree and hedgerow protection	Brief relevant trades on arboculturalist report. Inclusion in RAMS/SSoW	Unlikely	Medium term	Medium
	Loss of habitat	X	X	X	Occasional	Medium term	High	Tree and hedgerow protection	Brief relevant trades on arboculturalist report. Inclusion in RAMS/SSoW	Unlikely	Medium term	Medium
	Soil erosion	X	X	X	Occasional	Medium term	High	Tree and hedgerow protection	Brief relevant trades on arboculturalist report. Inclusion in RAMS/SSoW	Unlikely	Medium term	Medium
	Enforcement activity due to tree damage	X	X	X	Occasional	Short term	Medium	Tree and hedgerow protection	Brief relevant trades on arboculturalist report. Inclusion in RAMS/SSoW	Unlikely	Short term	Medium
Tree pruning / felling	Loss of habitat	X	X	X	Likely	Medium term	High	Nesting birds	None envisaged from ecologist report. Liaise with ecologist if any concerns arise.	Unlikely	Short term	Medium
	Unauthorised pruning or felling	X	X	X	Likely	Medium term	High	Ecology and biodiversity	Brief relevant trades on arboculturalist report. Inclusion in RAMS/SSoW	Unlikely	Medium term	Medium
Grass cutting	Disturbance of protected species	X	X	X	Likely	Medium term	High	Ecology and biodiversity	None envisaged from ecologist report. Liaise with ecologist if any concerns arise.	Unlikely	Medium term	Medium
	Loss of biodiversity	X	X	X	Likely	Short term	Medium	Ecology and biodiversity	None envisaged from ecologist report. Liaise with ecologist if any concerns arise.	Unlikely	Short term	Medium
Protected species	Loss of biodiversity	X	X	X	Likely	Short term	Medium	Ecology and biodiversity	None envisaged from ecologist report. Liaise with ecologist if any concerns arise.	Unlikely	Short term	Medium
	Unauthorised disturbance of protected species	X	X	X	Likely	Short term	Medium	Ecology and biodiversity	None envisaged from ecologist report. Liaise with ecologist if any concerns arise.	Unlikely	Short term	Medium
	Biodiversity gain through habitat enhancement	X	X	X	Benefit	Benefit	Benefit	Ecology and biodiversity	*Biodiversity Net Gain* recomendations to be included in design.	Benefit	Benefit	Benefit
Invasive species	Loss of biodiversity through spread of invasive species	X	X	X	Occasional	Long term	High	Ecology and biodiversity	Inform relevant trades of *Himalayan Balsam* presence. Include in SSoW	Unlikely	Medium term	Medium
	Enforcement due to allowing the spread of invasive species	X	X	X	Occasional	Short term	Medium	Ecology and biodiversity	Inform relevant trades of *Himalayan Balsam* presence. Include in SSoW.	Unlikely	Short term	Medium
Other (please specify)												
Other (please specify)												
Waste Management												
On site production of aggregate from inert waste	Reduction of waste	X	X		Benefit	Benefit	Benefit	Recycled aggregate	Explore possibility of using of demolition arisings as as reusable aggregate backfill during the construction phase.			
	Unauthorised use of crushed waste	X	X		Occasional	Short term	Medium	Recycled aggregate	Develop MMP and implement control measures	Unlikely	Short term	Medium
Import of aggregate	Unauthorised use of aggregate	X	X		Occasional	Short term	Medium	Recycled aggregate	Imported aggregate to be certified and approved	Unlikely	Short term	Medium
Asbestos removal	Exposure of site workers to hazardous substances		X	X	Likely	Short term	Medium	Asbestos management	Initial asbestos survey to be undertaken and reccomendations followed. Asbestos awareness training to relevant trades. Asbestos removal (if any) by licensed contractor only.	Unlikely	Short term	Medium

	Generation of hazardous waste		X	X	Frequent	Temporary	Medium	Asbestos management	Removal by licensed contractors / waste carriers only. Operatives briefed if area is at risk of asbestos presence. Awareness training in place.	Likely	Temporary	Medium
Removal of other hazardous materials	Exposure of site workers to hazardous substances		X	X	Likely	Short term	Medium	Waste management	Adequate PPE. Safe cutting techniques. Soil assessment / radon monitoring to determine radon presence. Competent demoliton contractors	Unlikely	Short term	Medium
	Insufficient waste classification		X	X	Likely	Temporary	Medium	Waste characterisation and testing	On site waste testing where applicable. Competent / certified removers and carriers	Unlikely	Temporary	Low
	Generation of hazardous waste		X	X	Frequent	Temporary	Medium	Waste management	Adequate PPE & training defined by RAMS/SSoW. Removal by certified waste carrier.	Regular	Temporary	Medium
Storage of non-hazardous waste	Creation of litter	X	X	X	Regular	Temporary	Medium	Waste management	Housekeeping included in RAMS/SSoW/Site induction brief. Site Management to monitor	Regular	Temporary	Medium
	Increased recycling rate due to waste segregation	X	X	X	Benefit	Benefit	Benefit	Waste management	Segregated skips on site to achieve 95% recycling rate. Canteen / Office waste segregated.	Benefit	Benefit	Benefit
Segregation of office/welfare waste	Enforcement due to non-segregation and breach of duty of care	X	X	X	Unlikely	Short term	Medium	CS01-GR-065 Simpler Recycling Requirements	Site management to ensure facilities in place and closely monitor compliance.	Unlikely	Short term	
Storage of hazardous waste	Pollution of watercourse from contaminated run off	X	X	X	Likely	Short term	Medium	Waste management	Avoid storage where possible. Store securely (wrapped etc.) and away from any nearby watercourses	Unlikely	Short term	Medium
	Pollution of ground from contaminated run off	X	X	X	Likely	Short term	Medium	Waste management	Avoid storage where possible. Store securely (wrapped etc.)	Unlikely	Short term	Medium
	Unlawful disposal of waste	X	X	X	Unlikely	Short term	Medium	Waste management	Removal by certified hazardous waste removal contractor. Records (WTN's etc) kept on RIO system.	Unlikely	Short term	Medium
Disposal of waste	Enforcement due to breach of duty of care	X	X	X	Unlikely	Short term	Medium	Waste management	Removal by certified waste removal contractor. Records (WTN's etc) kept on RIO system.	Unlikely	Short term	Medium
	Benefit through use of Materials Exchange Platform	X	X	X	Benefit	Benefit	Benefit	SCSS Materials Exchange Platform (MEP)	Options to be explored during construction phase	Benefit	Benefit	Benefit
	Social benefit through use of social enterprises	X	X	X	Benefit	Benefit	Benefit	Waste management	Options to be explored during construction phase	Benefit	Benefit	Benefit
Other (please specify)												
Other (please specify)												
Soil management (excavations and landscaping)												
Exposure of contaminated soils	Production of hazardous waste			X	Frequent	Temporary	Medium	Waste management	Ensure regular and all appropriate waste testing is carried out if where required	Likely	Temporary	Medium
	Exposure of site workers and end users to contamination			X	Occasional	Short term	Medium	Waste management	Cordon off if found. Site induction brief if required, appropriate PPE, and liscenced contractor only.	Unlikely	Short term	Medium
Stockpiling of soil and stone	Pollution of surface water from runoff			X	Occasional	Short term	Medium	Soil management & contaminated land	Stockpiles located on hardstanding and to be suitably bunded.	Unlikely	Short term	Medium
	Pollution of drainage from runoff			X	Occasional	Short term	Medium	Soil management & contaminated land	Stockpiles located on hardstanding and to be suitably bunded.	Unlikely	Short term	Medium
	Pollution of ground from runoff			X	Occasional	Short term	Medium	Soil management & contaminated land	Stockpiles located on hardstanding and to be suitably bunded.	Unlikely	Short term	Medium
	Creation of dust			X	Regular	Temporary	Medium	Soil management & contaminated land	Stockpiles located on hardstanding and to be suitably bunded.	Occasional	Temporary	Low
On site reuse of soils	Avoidance of use of raw materials			X	Benefit	Benefit	Benefit	Reusing soil	Develop MMP to minimise movements..	Benefit	Benefit	Benefit
	Reduction in delivery vehicle movements			X	Benefit	Benefit	Benefit	Reusing soil	MMP	Benefit	Benefit	Benefit
	Enforcement for unauthorised use of soils			X	Occasional	Short term	Medium	Reusing soil	MMP	Unlikely	Short term	Medium
Off site reuse of soils	Reduction in waste generation			X	Benefit	Benefit	Benefit	Waste management	Explore certified recycled material where possible.	Benefit	Benefit	Benefit
	Enforcement for unauthorised use of soils			X	Occasional	Short term	Medium	Waste management	Imported agreggate certified and approved	Unlikely	Short term	Medium
Import of soils	Reduction in raw material use through reuse of soils			X	Benefit	Benefit	Benefit	Importing topsoil	MMP	Benefit	Benefit	Benefit
	Enforcement for unauthorised use of soils			X	Occasional	Short term	Medium	Importing topsoil	Imported agreggate certified and approved	Unlikely	Short term	Medium
Other (please specify)												
Plant, equipment and vehicles												
Vehicle and plant maintenance	Improved fuel efficiency	X	X	X	Benefit	Benefit	Benefit		HVO fuel used by Kier direct fleet (and encourage Sub-Contractors). Daily & weekly plant checks.	Benefit	Benefit	Benefit
	Avoidance of fuel leaks	X	X	X	Benefit	Benefit	Benefit		Daily & weekly plant checks	Benefit	Benefit	Benefit
Use of diesel alternatives	Reduce greenhouse gas emissions	X	X	X	Benefit	Benefit	Benefit		Electric / low emissions plant to be explored and encouraged during construction phase. HVO fuel as above	Benefit	Benefit	Benefit
	Reduce air quality degradation	X	X	X	Benefit	Benefit	Benefit		Green travel plan during construction phase. Encourage car sharing, public transport etc. HVO fuel use (less pollutant)	Benefit	Benefit	Benefit
Incentivise green travel	Reduce greenhouse gas emissions	X	X	X	Benefit	Benefit	Benefit		Green travel plan during construction phase. Encourage car sharing, public transport etc	Benefit	Benefit	Benefit
	Reduce air quality degradation	X	X	X	Benefit	Benefit	Benefit		Green travel plan during construction phase. Encourage car sharing, public transport etc	Benefit	Benefit	Benefit
Other (please specify)												
Other (please specify)												

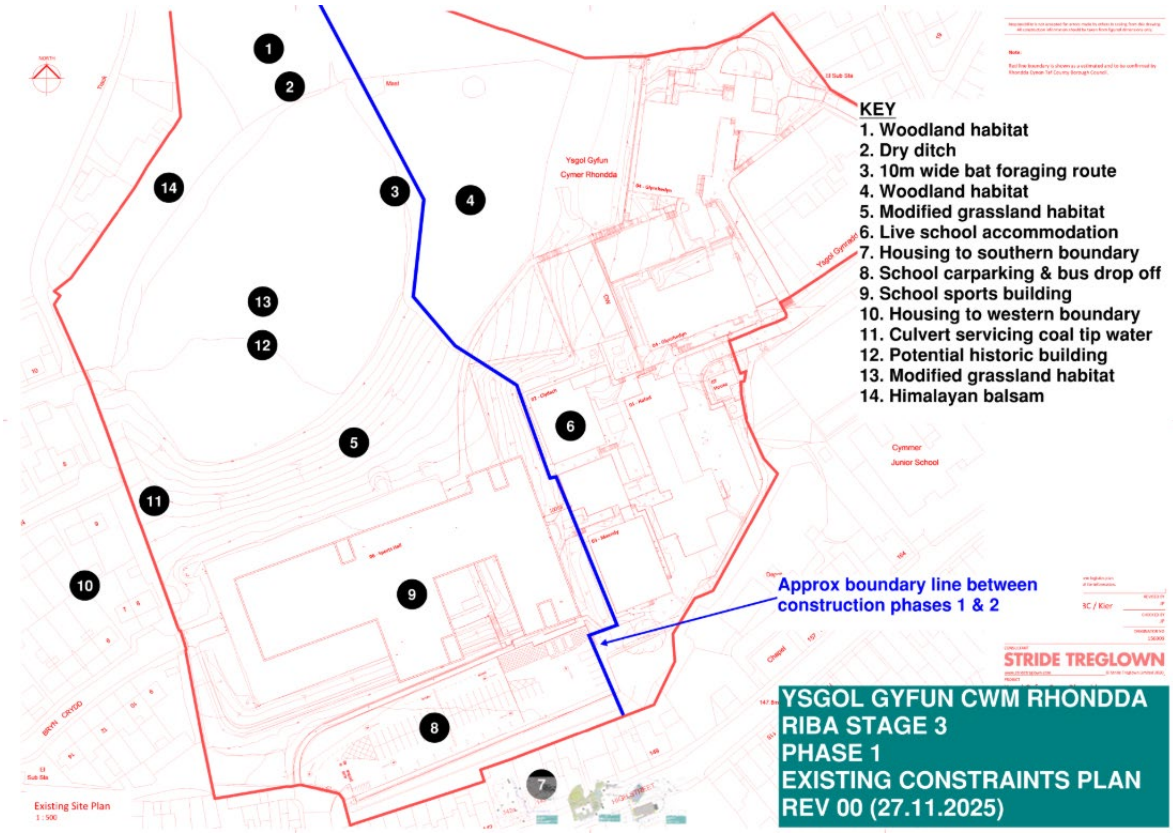
Materials												
Use of timber	Importing illegally harvested timber	X		X	Likely	Short term	Medium	CS05-GR-017 Timber Purchasing	Procure FSC certified timber only. Sub-contractor compliance to be ensured via POMA.			

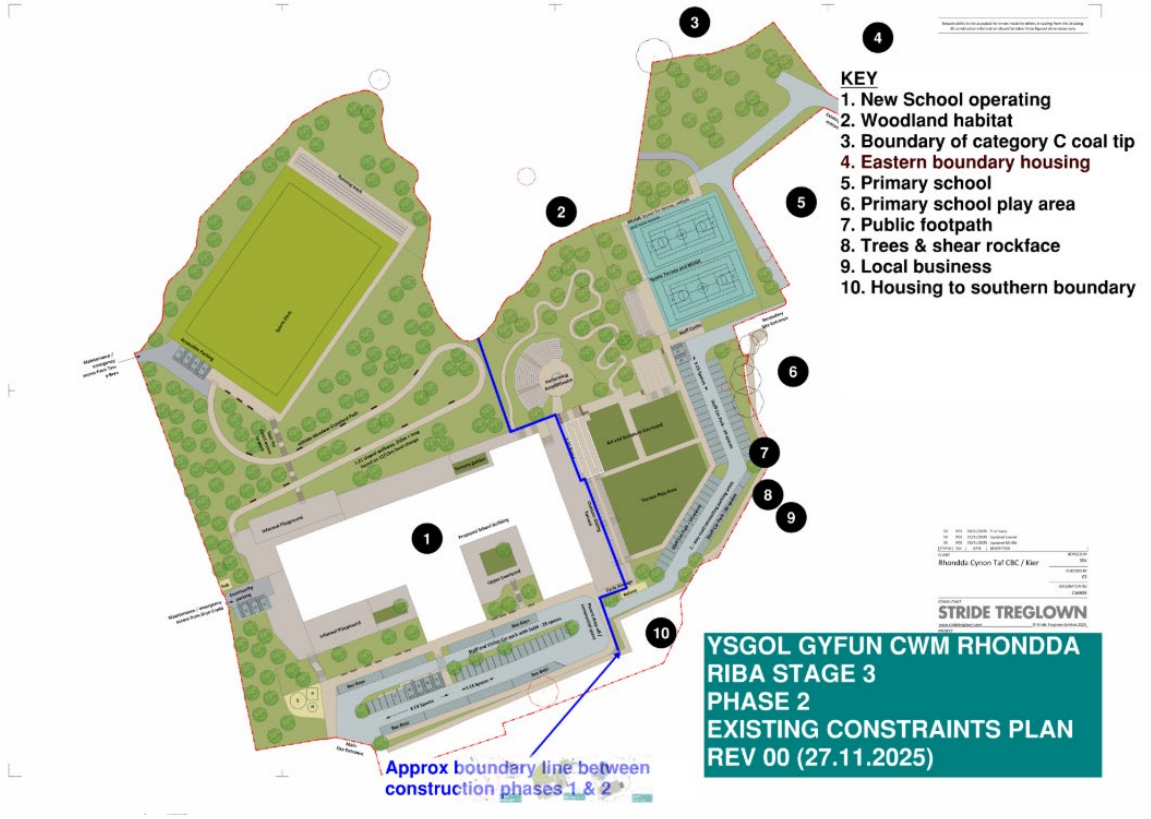
BREEAM Specifics									**Applicable / not applicable**			
Monitor energy consumption	Man03 - 2 credits	X	X	X	Benefit	Benefit	Benefit	BREEAM 2018 Manual	*Applicable*	Benefit	Benefit	Benefit
Monitor water consumption		X	X	X	Benefit	Benefit	Benefit	BREEAM 2018 Manual	*Applicable*	Benefit	Benefit	Benefit
Monitor site transport		X	X	X	Benefit	Benefit	Benefit	BREEAM 2018 Manual	*Applicable*	Benefit	Benefit	Benefit
Prepare a schedule of commissioning and testing	Man04 - 1 credit	X			Benefit	Benefit	Benefit	BREEAM 2018 Manual	*Applicable*	Benefit	Benefit	Benefit
Measure the post-construction air quality pre-occupancy for the following:	Hea02 - 1 credit	X			Benefit	Benefit	Benefit	BREEAM 2018 Manual	*Applicable*	Benefit	Benefit	Benefit
Formaldehyde must not exceed 100ug/m3 averaged over 30 mins		X			Benefit	Benefit	Benefit	BREEAM 2018 Manual	*Applicable*	Benefit	Benefit	Benefit
TVOC must not exceed 500ug/m3 over 8 hours		X			Benefit	Benefit	Benefit	BREEAM 2018 Manual	*Applicable*	Benefit	Benefit	Benefit
Implement control measures if exceedences identified.		X			Benefit	Benefit	Benefit	BREEAM 2018 Manual	*Applicable*	Benefit	Benefit	Benefit

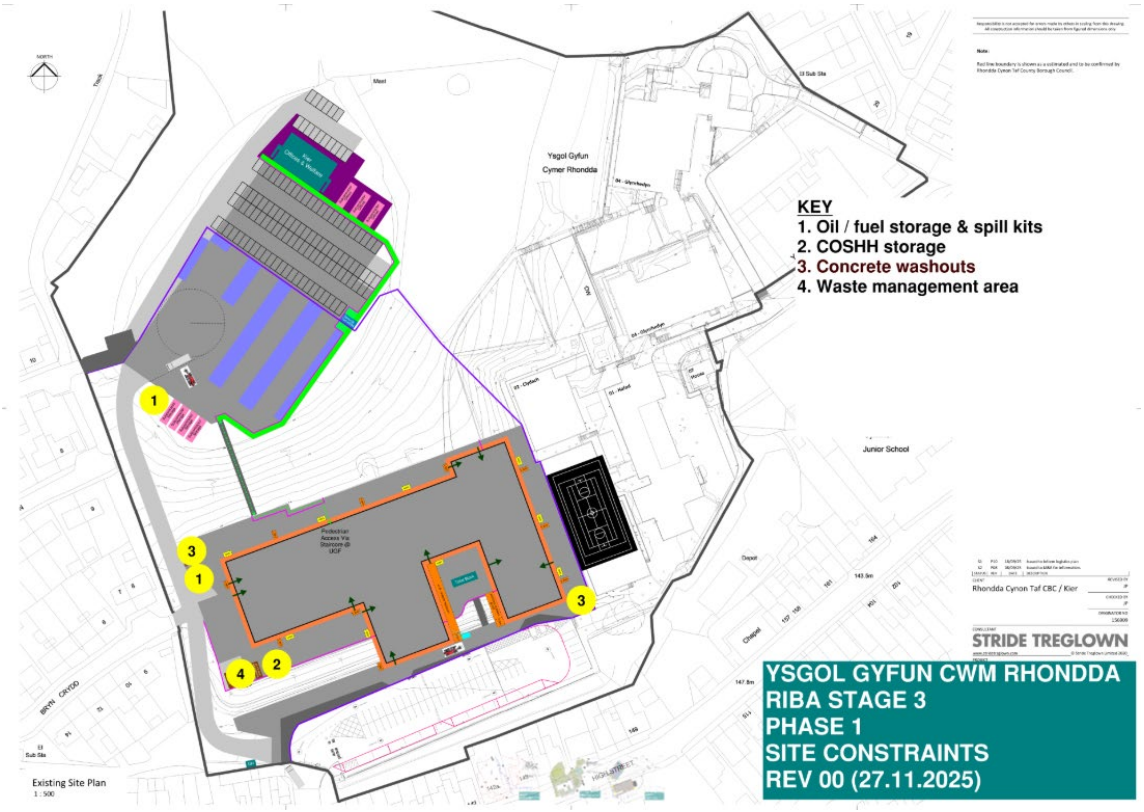
Schedule II - Site Constraints Layout Plans

Consideration has been given to the following where applicable:

Areas prone to flooding
Existing drainage (storm water = blue, foul water = Red; combined = Red 'C') - update plan as required to include newly installed live drainage
Interceptors
Neighbours adjacent to site boundary
Oil and fuel storage
COSHH storage
Spill kits
Concrete wash water management location and method
Wheel wash
Areas or hotspots of known contamination
Boreholes and surface waters, e.g. rivers, streams and reservoirs, lagoons and attenuation ponds
Discharge points, e.g. when operating pumps
Waste management areas
Recycled / reused materials areas (including quantities)
European protected species (EPS)
Protected trees, hedgerows and on-site BNG areas
Listed / protected Construction and structures
Invasive plants
Standing heritage and listed Construction
Archaeological areas, e.g. watching brief, trial trenches and open area excavations




KEY
1. New School operating
2. Woodland habitat
3. Boundary of category C coal tip
4. Eastern boundary housing
5. Primary school
6. Primary school play area
7. Public footpath
8. Trees & shear rockface
9. Local business
10. Housing to southern boundary
Approx boundary line between construction phases 1 & 2
Rhondda Cynon Taf CBC / Kier
STRIDE TREGLOWN
YSGOL GYFUN CWM RHONDDA
RIBA STAGE 3
PHASE 2
EXISTING CONSTRAINTS PLAN
REV 00 (27.11.2025)


KEY
1. Oil / fuel storage & spill kits
2. COSHH storage
3. Concrete washouts
4. Waste management area
Ysgol Gyfun Cymer Rhondda
Junior School
Existing Site Plan
Rhondda Cynon Taf CBC / Kier
STRIDE TREGLOWN
YSGOL GYFUN CWM RHONDDA
RIBA STAGE 3
PHASE 1
SITE CONSTRAINTS
REV 00 (27.11.2025)

Schedule III - Design Decisions

Design Decisions – Ysgol Gyfun Cwm Rhondda	Y / N
Reclaimed products or components have been specified	Y
Materials from demolition and / or other work phases have been incorporated into the design *Examples: Bricks and tiles to be reused, soils to be reused, stonework to be reused, architectural features, e.g. large coping stones to be reused as bench seating in landscaped areas.*	Y
The design, form and layout have been simplified *Examples: Size and position of window and door openings to suit whole brick / block / plasterboard dimensions.* *Room sizes to match plasterboard dimensions, identical grids to allow for formwork reuse.* *Designing out basements, raising formation levels, soil stabilisation, displacement piling or mini piles.*	Y
Components have been designed for off-site manufacture *Examples: Precast edge / ground beams / manholes.* *Prefabricated toilet / bathroom / kitchen pods, prefabricated service runs / risers, pre-packaged plant rooms, etc.*	Y
Designed as a process of assembly rather than construction	Y
Wet trades have been designed out	Y
Materials known to contain a high recycled content have been specified	Y
Materials and products are suitable for their application *Example: Floor tiles and wall finishes are not under / over specified.*	Y
Locally sourced and / or rapidly renewable materials have been specified *Example: Cork, linoleum and Grown in Britain (GiB) timber.*	Y
Using products with lower embodied water and / or carbon	Y
Low energy light fittings have been specified	Y
Low / zero carbon technologies have been specified	Y
High specification thermal insulation will be used	Y
Thermal modelling undertaken	Y
Effective ventilation systems used to reduce energy loss	Y
User control is carefully considered to ensure a healthy environment as well as allowing efficient energy use	Y
Rain / Grey / black water harvesting has been specified	Y
Low flow rate fittings have been specified	Y
Design adaptable for a variety of purposes during its life span	Y
Building elements and components can be maintained, upgraded or replaced without creating waste	Y
Design incorporates reusable / recyclable components and materials	Y
Building elements / components / materials easily disassembled	Y

Schedule IV - Aggregates Declarations, Material & Waste Movement Tracker

Insert completed GU03-GR-061 Recycled Aggregated declaration for QP Recycled Aggregate
Insert GU08-GR-086 Materials & Waste Movement Tracker for soils and recycled aggregate and MMP movements
Insert U1 or P19 onto our reporting tool RIO.

These documents will be inserted once available

Schedule V - CL:AIRE Materials Management Plan and Qualified Person Declaration Receipt

(Site will require a Materials Management, which will be appended here once available)

Schedule VI – Resource Efficiency Management Plan

Project Targets

The following targets are in place for this project:

Mandatory
Optional

Tick to confirm this page is complete ☐

Target type	Target	Target set by	Metric ⓘ	Actuals
Sustainablilty Scheme ⓘ	BREEAM	RCT County Borough Council		
Non-hazardous construction waste	170-200	Kier Construction	tonnes	
Non-hazardous demolition waste	TBC	Kier Construction		
Non-hazardous excavation waste	1000	Kier Construction	tonnes	
All waste volume/ tonnage ⓘ	3000	Kier Construction	tonnes	
Diversion from landfill - Construction (Non-hazardous)	95%	Kier Construction		
Diversion from landfill - Demolition (Non-hazardous)	95%	Kier Construction		
Diversion from landfill - Excavation (Non-hazardous)	95%	Kier Construction		
Diversion from landfill - all waste (Non-hazardous)	95%	Kier Construction		
Construction waste in tonnes per GIFA	11.1 tonnes/100m2 GIFA	Kier Construction	tonnes	
Construction waste in m3 per GIFA	13.3m3/100m2 GIFA	Kier Construction	m^3	
Construction waste in t/m2 GIFA		Kier Construction		
Potable Water consumption	5223	Kier Construction	m^3	
Water discharge	TBC	Kier Construction		
Water abstraction	TBC	Kier Construction		
Water recycled	TBC	Kier Construction		
Fuel consumption	TBC	Kier Construction	litres	
Electricity consumption (BREEAM)	3,915,000	Kier Construction	kWh	
Total carbon dioxide emissions	TBC		kgCO2e/project value	
Total transport-related carbon emissions (BREEAM)	TBC	Kier Construction	kgCO2e	
Total distance travelled	TBC	Kier Construction	km	
Waste sent to social enterprise	TBC	Kier / Community Wood Recyc.	tonnes	
Premanufactured elements	TBC			
Upfront carbon	TBC		kgCO2e /m 2	
Operational carbon	TBC		kWh/m 2 year	
Circular economy/ material re-use	TBC			
Delivery of construction materials - distance travelled	130,500		km	
Removal of construction waste - distance travelled	43,500		km	
Other				

RESOURCE EFFICIENCY - Waste & Materials

The tables below describes the decisions taken at pre-construction to minimise all waste in line with the Project and Kier target benchmarks

Tick to confirm this page is complete

Please select the resource efficiency measures applicable for your project

Type of action	Minimisation Decision	RIBA stage of consideration ⓘ	Action Owner	Intended results	Carried out by (name of individual)	Included	Decision status	Efficiency of the measure
Site Set Up	Construct permanent roads early utilise demolition arisings	4: Technical design	Project manager	Eliminate / reduce excavation and subsequent use of materials / generation of wastes	Nick Hamersley	No	Not implemented	Demolition waste diverted from landfill
Site Set Up	Incorporating site haul roads in the permanent design	4: Technical design	Project manager	Eliminate / reduce excavation and subsequent use of materials / generation of wastes	Nick Hamersley	No	Not implemented	Demolition waste diverted from landfill
Site Set Up	Use a geotextile under roads and walkways	4: Technical design	Project manager	Reduce waste of aggregates through settlement	Nick Hamersley	No	Not implemented	Retained stone and compaction an installed to meet design criteria
Site Set Up	Segregate packaging waste on site	5: Manufacturing & construction	Project manager	Improve reporting for packaging waste that will lead to waste reduction	Nick Hamersley	No	Not implemented	Challenging trades on waste minamisation
Design	Reduce excavation depth	4: Technical design	Design manager	Eliminate / reduce excavation and subsequent use of materials / generation of wastes	Mark Lewis	No	Not implemented	
Design	Undertake Design Out Waste Workshop at preconstruction	4: Technical design	Pre-Construction Manager	Design out waste at RIBA stage 4 or before	Mark Lewis	No	Not implemented	Use of on site crushed waste and diverted from landfill.
Design	Use three-dimensional building information modelling (BIM) and full coordination of models	4: Technical design	Design manager	Avoid design errors and subsequent material wastage	Mark Lewis	No	Not implemented	Checked by all team prior to construction.
Design	Amend design to optimise re-use of existing building elements	4: Technical design	Design manager	Reduce waste and new material requirements	Mark Lewis	No	Not implemented	reuse demolitions materials
Design	Unistrut to be pre-cut and brought to site to size	4: Technical design	Design manager	Reduce waste from unistrut	Mark Lewis	No	Not implemented	MEP contractor to order most eccomonic lengths, and cutting lists.
Design	Specify the use of mechanical fixing	4: Technical design	Building Services	Building elements and components can be maintained, upgraded or replaced without creating excessive	Luc Blackmore	No	Not implemented	
Design	Ductwork to be pre-lagged	4: Technical design	Building Services	Eliminate waste from pipework lagging	Luc Blackmore	No	Not implemented	In MS MEP contractor to incorporate offcuts into works
Design	Prevent design of brickwork/façade by hand laid bricks with alternative design	4: Technical design	Design manager	Minimise waste from bricks	Mark Lewis	No	Not implemented	All openings and panel designed to brick dimensions
Design	Pre-demolition audit undertaken to establish which existing building elements can be reused on / off site, e.g. roof tiles, bricks, stone	4: Technical design	Pre-Construction Manager	Reduce waste and new material requirements	Mark Lewis	No	Not implemented	Pre demolition audit carried our at stage 4
Design	Incorporate existing structures and materials into the design (stone, bricks, insulation etc)	4: Technical design	Pre-Construction Manager	Reduce waste and new material requirements	Mark Lewis	No	Not implemented	Demolition crush used as sub base
Design	Salvage and re-use furniture and other items for site set up	4: Technical design	Project Manager	Reduce waste and new material requirements	Nick Hamersley	No	Not implemented	Second hand furniture used in sie accomodation/welfare
Design	All insulation is cut to size off site (roof, MEPH, floor, walls)	4: Technical design	Design manager	Reduce waste from insulation	Mark Lewis	No	Not implemented	
Design	Implement strategy for pre-manufacture / MMC (Choice Factory)	4: Technical design	Design manager	Off-site prefabrication of construction elements will reduce waste volumes generated on site	Mark Lewis	No	Not implemented	MMC strategy set at stages 2, 3 & 4
Design	Pre-fabricated door sets including cut to size door frames off site	4: Technical design	Design manager	Off-site prefabrication of construction elements will reduce waste volumes generated on site	Mark Lewis	No	Not implemented	All internal doors are bought as door sets
Design	Pre-fabricated steel frame	4: Technical design	Design manager	Off-site prefabrication of construction elements will reduce waste volumes generated on site	Mark Lewis	No	Not implemented	Steel frame pre fabricated off site
Design	Pre-fabricated furniture	4: Technical design	Design manager	Off-site prefabrication of construction elements will reduce waste volumes generated on site	Mark Lewis	No	Not implemented	All furniture pre assembled off site
Design	Pre-fabricated wall panels / cladding panels	4: Technical design	Design manager	Off-site prefabrication of construction elements will reduce waste volumes generated on site	Mark Lewis	No	Not implemented	
Design	Pre-fabricated mechanical and electrical installations	4: Technical design	MEPH Manager	Off-site prefabrication of construction elements will reduce waste volumes generated on site	Luc Blackmore	No	Not implemented	
Design	Pre-fabricated bathroom, kitchen, toilet, cell pods	4: Technical design	Design manager	Off-site prefabrication of construction elements will reduce waste volumes generated on site	Mark Lewis	No	Not implemented	
Design	MEPH cupbards / risers	4: Technical design	Building Services	Off-site prefabrication of construction elements will reduce waste volumes generated on site	Luc Blackmore	No	Not implemented	
Design	Design for standard plasterboard sizes, or identify bespoke sizes for manufacture	4: Technical design	Design manager	Off-site prefabrication of construction elements will reduce waste volumes generated on site	Mark Lewis	No	Not implemented	
Design	Use a plasterboard design service	4: Technical design	Design manager	Off-site prefabrication of construction elements will reduce waste volumes generated on site	Mark Lewis	No	Not implemented	
Design	Standardised ceiling grid design	4: Technical design	Design manager	Ceiling tile grids have been designed to minimise tile cutting	Mark Lewis	No	Not implemented	
Design	Improve engineering quality of soils through lime stabilisation	4: Technical design	Design manager	Eliminate / reduce the volume of soil and stones that need to be removed from site	Mark Lewis	No	Not implemented	
Design	Reduce trench depths	4: Technical design	Design manager	Eliminate / reduce the volume of soil and stones that need to be removed from site	Mark Lewis	No	Not implemented	Ensure invert level of drainage at shallowest viable level.
Design	Optimise design to incorporate site won soils (cut and fill, positioning, creating SuDS etc)	4: Technical design	Design manager	Re-use on site soil and minimise soils disposed off site	Mark Lewis	No	Not implemented	Site won soils used for soft landscaped areas if appropriate
Design	Use displacement piling technique / mini piles	4: Technical design	Design manager	Eliminate / reduce the volume of soil and stones that need to be removed from site	Mark Lewis	No	Not implemented	
Design	Re-use existing piles and foundations	4: Technical design	Design manager	Reduce the volume of material required for piles and foundations	Mark Lewis	No	Not implemented	Not viable for this project
Design	Landscape modelling software used to develop an efficient cut and fill strategy	4: Technical design	Design manager	Eliminate / reduce the volume of soil and stones that need to be removed from site	Mark Lewis	No	Not implemented	Carried out by civil enigneer
Design	Utilise sacrificial single-sided shutter on vehicle inspection pit to miminise concrete volume and excavation waste	4: Technical design	Design manager	Reduce materials required and therefore reduce potential for waste	Mark Lewis	No	Not implemented	Miminise concrete volume and excavation waste
Design	Finished floor level raised and power floated rather than screeded	4: Technical design	Design manager	Remove the need for screeding on site reducing screed waste	Mark Lewis	No	Not implemented	
Design	Use standard systems and repeated elements, e.g. Euroclad	4: Technical design	Design manager	Increase opportunities to re-use off cuts	Mark Lewis	No	Not implemented	Euroclad panels
Design	Building designed to standard material dimensions	4: Technical design	Design manager	Simplify construction method to reduce off-cuts / waste	Mark Lewis	No	Not implemented	Brick dimensions used
Design	Structural elements to remain exposed to minimise finishing trades	4: Technical design	Design manager	No additional finishes applied to these elements, so wastes relating to these trades are eliminated	Mark Lewis	No	Not implemented	Workshop steelwork left exposed
Design	Amend design to retain soils on site	4: Technical design	Design manager	Intended reuse of material on site	Mark Lewis	No	Not implemented	Site won soils used for newsoft landscaping
Design	Produce an estimate for waste disposal costs (number of skips)	4: Technical design	Commercial Lead / QS	Reduce cost of waste	Joseph Clark	No	Not implemented	Material purchase orders have minimal wasteage allowances. Sub-
Design	Plasterboard design service implemented for packages over £1m	4: Technical design	Commercial Lead / QS	Reduce plasterboard waste	Joseph Clark	No	Not implemented	Sub-Contractor is vigilant with off cuts and they are also providing their
Design	Specific waste minimisation measures have been included in the project specifications	4: Technical design	Design manager	Minimise waste within each trade package at preconstruction stage	Mark Lewis	No	Not implemented	
Design	Design & specify products and materials with closed loop & take back schemes (plasterboard, flooring etc)	4: Technical design	Design manager	Minimise waste from new materials by sending back to the producer	Mark Lewis	No	Not implemented	Plasterboard take back scheme to be used
Design	Design & specify products and materials with packaging take back schemes	4: Technical design	Design manager	Minimise waste from packaging	Mark Lewis	No	Not implemented	
Design	Design across projects where possible (re-use of materials such as carpets, raised flooring, temporary doors)	4: Technical design	Design manager	Reduce waste from material re-use on other sites	Mark Lewis	No	Not implemented	
Materials	Concrete/groundworker to utilise waste concrete for minor temproary works (pedestrain road crossings etc)	4: Technical design	Commercial Lead / QS	Minimise concrete waste from construction activities	Joseph Clark	No	Not implemented	
Materials	All the key trades have provided a waste forecast. Groundworker / Concrete / Dry Lining / Carpentry	4: Technical design	Commercial Lead / QS	Waste forecast will confirm if waste reduction target can be achieved	Joseph Clark	No	Not implemented	
Materials	Engage the use of a Packaging Analysis consultant to implement packaging reduction initiative	4: Technical design	Commercial Lead / QS		Joseph Clark	No	Not implemented	
Materials	Site have storage of spare/unused/off cuts of materials for on site re-use by all	5: Manufacturing & construction	Site Manager	Minimising waste and encourage re-use	Nick Hamersley	No	Not implemented	Pre Start Health & Safety breifed prior to commencement
Materials	Material efficiency strategy established in line with BREEAM and included in this REMP	4: Technical design	Design manager	DREAM material strategy will optimise materials and reduce waste	Mark Lewis	No	Not implemented	In place in accordnace with BREEAM strategy
Materials	Strategy in place for re-using/repurposing all the temporary fire doors	4: Technical design	Commercial Lead / QS	Eliminate waste from temporary doors	Joseph Clark	No	Not implemented	
Materials	Materials, e.g. bricks, blocks and timbers will be kept off the ground by using pallets or timber bites	5: Manufacturing & construction	Site Manager	Reduce damage to materials due to improper storage	Nick Hamersley	No	Not implemented	Biosite booking system - Bricks to be wrapped
Materials	Where practicable, materials will be unloaded where they are required	5: Manufacturing & construction	Site Manager	Reduce damage to materials due to improper storage	Nick Hamersley	No	Not implemented	
Materials	Where required, provide secure storage / lay-down areas for construction materials	5: Manufacturing & construction	Site Manager	Reduce damage to materials due to improper storage	Nick Hamersley	No	Not implemented	
Materials	Pre-load correct quantities of the required materials in work areas	5: Manufacturing & construction	Site Manager	Reduce damage to materials due to improper storage	Nick Hamersley	No	Not implemented	
Materials	Timber doors, window frames, etc. to remain wrapped in a dry location until installation	5: Manufacturing & construction	Site Manager	Reduce damage to materials due to improper storage	Nick Hamersley	No	Not implemented	
Materials	Implement a 'just-in-time' delivery system for construction materials	4: Technical design	Project manager	Reduce waste caused through double handling and improper storage of materials	Nick Hamersley	No	Not implemented	minimum on site storage, delivery's arranged for the work zones only.
Materials	Produce aggregate from demolition in line with *Quality Protocol for the Production of Aggregates.* (For Scotland *see: SEPA*	4: Technical design	Project manager	Reduce demolition materials removed from site and / or the import of virgin aggregates	Nick Hamersley	No	Not implemented	Demolition material tested and certification obtained for reuse
Materials	Reuse of site won aggregates	4: Technical design	Pre-Construction Manager	intended reuse of material on site	Mark Lewis	No	Not implemented	Demolition crush used as backfill
Materials	Reuse of site won soils (under MMP/Waste exemption)	4: Technical design	Pre-Construction Manager	intended reuse of material on site	Mark Lewis	No	Not implemented	Site won soils if suitable to be re-used in soft landscaping
Materials	Salvage and retain site accomodation office furniture for future use	4: Technical design	Project manager	Eliminate this specific, bulky waste stream	Nick Hamersley	No	Not implemented	Reuse furniture from previous sites
Materials	Hire site accomodation office furniture	4: Technical design	Pre-Construction Manager	Eliminate this specific, bulky waste stream	Mark Lewis	No	Not implemented	Including in accomodation order
Materials	Initiative to reduce packaging materials, e.g. takeback schemes or reusable packaging	4: Technical design	Commercial Lead / QS	Eliminate / reduce packaging wastes	Joseph Clark	No	Not implemented	
Materials	Timber and metal stillages for all trades collected by trades	4: Technical design	Commercial Lead / QS	Eliminate waste from transport	Joseph Clark	No	Not implemented	
Materials	Strategy to donate items to local charities / colleges etc	4: Technical design	Project manager	Repurpose materials and products to support social value initiatives	Nick Hamersley	No	Not implemented	Implemented through CSR stragegy
Materials	Implement a strategy for all trade contractors taking back their excess materials at the end of the project - include in trade contract	4: Technical design	Commercial Lead / QS	Minimise waste of perfectly fine materials at the end of the project	Joseph Clark	No	Not implemented	All pallets and packaging is to be removed from site by the SC
Construction methods	Install porous materials only after building is fully weathertight	4: Technical design	Building Services	Minimise waste from water leaks	Luc Blackmore	No	Not implemented	
Construction methods	Use a reusable hoarding system, e.g. Hoard-It, or similar	4: Technical design	Project manager	Reduce wastes by selecting a durable hoarding system	Nick Hamersley	No	Not implemented	Counterweighted hoarding used to elimate waste
Construction methods	Use pre-cast chambers for drainage system	4: Technical design	Commercial Lead / QS	Avoid in-situ concrete pours and associated waste	Joseph Clark	No	Not implemented	Reduce risk of not being able to do works on site due to weather
Construction methods	Use existing road construction to form temporary hardstanding	4: Technical design	Project manager	Eliminate the importation of aggregates and subsequent disposal	Nick Hamersley	No	Not implemented	use of on site crushed waste from demolition
Construction methods	Trenches to be sheeted rather than battered to	4: Technical design	Site Manager	Reduce excavated wastes	Nick Hamersley	No	Not implemented	
Construction methods	System shuttering to be used wherever practicable	4: Technical design	Temporary Works	Eliminate timber shuttering wastes	Nick Hamersley	No	Not implemented	
Construction methods	Incorporate crane bases and haul roads into permanent structure	4: Technical design	Temporary Works	Eliminate subsequent generation of stone waste	Nick Hamersley	No	Not implemented	
Construction methods	Drylining subcontractor to supply materials, skips and bins	4: Technical design	Commercial Lead / QS	Encourage the use of off-cuts and careful material handling and storage to reduce waste	Joseph Clark	No	Not implemented	
Construction methods	Waste timber to be used, where practicable, to construct ramps and steps to aid site safety, etc	4: Technical design	Site Manager	Reduce the volume of timber waste generated on site through re-use	Nick Hamersley	No	Not implemented	
Construction methods	Subcontract packages to include standard requirements which are reviewed before orders are placed	4: Technical design	Commercial Lead / QS	Prevent over ordering and subsequent wastage	Joseph Clark	No	Not implemented	
Procurement	Logistics contractor to sign up to minimal waste generation with incentive to reduce waste	4: Technical design	Commercial Lead / QS	Minimise waste	Joseph Clark	No	Not implemented	
Other (specify)	Other (specify)			Other (specify)				
Other (specify)	Other (specify)			Other (specify)				
Other (specify)	Other (specify)			Other (specify)				

Resource efficiency measures - WATER

The tables below detail the measures that will be taken and have been considered to improve resource efficiency for this project.

Tick to confirm this page is complete ☐

Please select the resource efficiency measures you have selected on the project to achieve the targets

Type of action	Minimisation Decision	RIBA stage of consideration ⓘ	Action Owner	Intended results	Carried out by (name of individual)	Included	Decision status	Efficiency of the measure
Compliance	All site accommodation & welfare to be organised through contacting: accommodation@kier.co.uk adhering to CS01-CON019 Site Accommodation & Welfare Units	4: Technical design	Site Manager	Eliminate / reduce use of potable water & identify leaks	Nick Hamersley	No	Not implemented	Kier preferrred supplier used as per kier standard working well
Compliance	Having separate meters for welfare/accomodation and site	5: Manufacturing & construction	Site Manager	Measure potable water	Nick Hamersley	No	Not implemented	All water metered and recorded monthly working well
Opportunity	Adhere to minimum standard GU01-CON-066 Minimising Water Use on Site	5: Manufacturing & construction	Project Manager	Eliminate / reduce use of potable water	Nick Hamersley	No	Not implemented	Sensor taps, used in all areas, dishwasher only used when full.
Compliance	Implement FOR-CON-0624 Water management plan	5: Manufacturing & construction	Site Manager	Minimise leaks	Nick Hamersley	No	Not implemented	Water Management plan in place and install monitored to ensure no issues - no waste noted
Other	Use leak detection systems (e.g. those supplied by WyseGroup)	5: Manufacturing & construction	Site Manager	Eliminate unnecessary use of potable water	Nick Hamersley	No	Not implemented	
Other	Use boot wash that uses rainwater or recirculates water	5: Manufacturing & construction	Site Manager	Eliminate / reduce use of potable water	Nick Hamersley	No	Not implemented	
Other	Construct / use existing roads to avoid spreading mud around the site	4: Technical design	Project Manager	Eliminate need for wheel wash	Nick Hamersley	No	Not implemented	delivery and collection areas on hard standings
Other	Abstract water from boreholes to use for dust suppression etc.	4: Technical design	Site Manager	Eliminate / reduce use of potable water	Nick Hamersley	No	Not implemented	
Other	Construct / use existing roads to avoid spreading mud around the site	4: Technical design	Project Manager	Reduce potable water used for wheel washing and road cleaning	Nick Hamersley	No	Not implemented	delivery and collection areas on hard standings
Other	Install a waterless wheel wash (non-clay soils only), e.g. Rhino EcoRamp or a sensor controlled wheelwash that recirculates water and / or have efficient spraying mechanisms (misting/atomising)	5: Manufacturing & construction	Site Manager	Eliminate / reduce use of potable water	Nick Hamersley	No	Not implemented	
Other	Use water efficient road sweepers that recirculate water and / or have efficient spraying mechanisms, e.g. a hydraulic spinning system	5: Manufacturing & construction	Site Manager	Reduce use of potable water	Nick Hamersley	No	Not implemented	Forklift attachment to sweep road surfaces
Other	Sweep paths and gutter instead of hosing	5: Manufacturing & construction	Site Manager	Eliminate / reduce use of potable water	Nick Hamersley	No	Not implemented	
Other	Use plant and equipment with efficient dust suppression systems, e.g. misting systems	5: Manufacturing & construction	Site Manager	Reduce use of potable water	Nick Hamersley	No	Not implemented	Used in demolision and worked well
Other	Isolate water flow as soon water turns clear when commissioning pipes and systems	5: Manufacturing & construction	Site Manager	Reduce use of potable water	Nick Hamersley	No	Not implemented	In line with comissioning needs
Other	Undertake sequential flushing, dry flushing, sub-valving when commissioning systems, swimming pools, etc	5: Manufacturing & construction	Project Manager	Reduce use of potable water	Nick Hamersley	No	Not implemented	
Other	Measure and report on abstration	5: Manufacturing & construction	Site Manager	Record on non-potable water	Nick Hamersley	No	Not implemented	All water metered and recorded monthly working well
Other	Specify water efficient taps, toilets etc in site office/welfare	4: Technical design	Site Manager	Reduce use of potable water	Nick Hamersley	No	Not implemented	
Other	Implement simple gravity fed rainwater system for toilets		Site Manager	Eliminate (if using harvested rainwater) / minimise use of potable water	Nick Hamersley	No	Not implemented	
Other	Put non-essential activities needing water on hold		Site Manager	Eliminate / reduce use of potable water	Nick Hamersley	No	Not implemented	
Other	Harvest rainwater for use on site	5: Manufacturing & construction	Site Manager	Eliminate / reduce use of potable water	Nick Hamersley	No	Not implemented	
Other	Measure and report on non-potable water use	5: Manufacturing & construction	Site Manager	Record water abstracted	Nick Hamersley	No	Not implemented	All water metered and recorded monthly working well
Design	Minimise paint colour changes to avoid the need to wash tools	5: Manufacturing & construction	Design Manager	Reduce use of potable water	Mark Lewis	No	Not implemented	
Design	Avoid screed through higher tolerance and finishing specification for concrete slabs	5: Manufacturing & construction	Design Manager	Eliminate use of potable water to mix and cool screed	Mark Lewis	No	Not implemented	
Design	Specify the use of precast edge / ground beams	4: Technical design	Design Manager	Eliminate the use of potable water	Mark Lewis	No	Not implemented	
Demolition Methods	Re-circulate water when undertaking hydro-demolition or grit blasting	5: Manufacturing & construction	Site Manager	Reduce use of potable water	Nick Hamersley	No	Not implemented	
Construction Methods	Preform openings designed in prefabricated sections	4: Technical design	Design Manager	Reduce use of potable water during core and diamond drilling	Mark Lewis	No	Not implemented	Large openings preformed
Construction Methods	Apply screed in early morning, late evening or out of hours (subject to authorisation) for natural cooling	5: Manufacturing & construction	Project Manager	Reduce use of potable water for damping	Nick Hamersley	No	Not implemented	
Construction Methods	Do not allow concrete wagons to wash chutes on site	5: Manufacturing & construction	Project Manager	Eliminate the use of potable water	Nick Hamersley	No	Not implemented	concrete pump used
Construction Methods	Use concrete wagons with integrated wash-out collection tanks to return wash water for re-use at the supplier's batching plant	5: Manufacturing & construction	Project Manager	Reduce use of potable water	Nick Hamersley	No	Not implemented	
Construction Methods	Use Mudtech BlueRinse System (wash water is re-circulated for further washing of concrete chutes)	5: Manufacturing & construction	Site Manager	Reduce use of potable water	Nick Hamersley	No	Not implemented	Worked well
Construction Methods	Restrict the volume of wash water when using Siltbuster RCW Unit, Big pHil or Conquip Washout System (maximum of 15 litre per wash)	5: Manufacturing & construction	Site Manager	Reduce use of potable water	Nick Hamersley	No	Not implemented	
Construction Methods	Clean tools, vehicles etc with buckets of water (not running water)	5: Manufacturing & construction	Site Manager	Reduce use of potable water	Nick Hamersley	No	Not implemented	
Construction Methods	Use of proprietary wash systems, e.g. Dulux Envirowash to clean brushes (water-based paints only)	5: Manufacturing & construction	Site Manager	Eliminate (if using harvested rainwater) / minimise use of potable water	Nick Hamersley	No	Not implemented	
Construction Methods	Use spray plaster instead of traditional plaster	4: Technical design	Commercial Lead / QS	Eliminate use of water in plastering	Joseph Clark	No	Not implemented	
Construction Methods	Avoid planting and subsequent irrigation in heat of day (water early morning or evening)	4: Technical design	Site Manager	Minimise use of potable water	Nick Hamersley	No	Not implemented	
Construction Methods	Undertake planting at optimum time of the year (autumn/winter)	4: Technical design	Project Manager	Minimise use of potable water for irigation	Nick Hamersley	No	Not implemented	all planting undertaken during planting season as landscape architects specification
Other (specify)	Other (specify)		Other (specify)	Other (specify)				
Other (specify)	Other (specify)		Other (specify)	Other (specify)				
Other (specify)	Other (specify)		Other (specify)	Other (specify)				

Resource efficiency measures - ENERGY & CARBON

The tables below detail the measures that will be taken and have been considered to minimise energy and carbon for this project.

Tick to confirm this page is complete ☐

Please select the resource efficiency measures you have selected on the project to achieve the targets

Type of action	Minimisation Decision	RIBA stage of consideration ⓘ	Action Owner	Intended results	Carried out by (name of individual)	Included	Decision status	Efficiency of the measure
Compliance	All site accommodation & welfare to be organised through contacting: accommodation@kier.co.uk adhering to CS01-CON019 Site Accommodation & Welfare Units	4: Technical design	Site Manager	Reduce energy consumption and GHG emissions	Nick Hamersley	No	Not implemented	
Compliance	All directly procured HVO to be procured through Sunbelt	4: Technical design	Site Manager	Reduce energy consumption and GHG emissions	Nick Hamersley	No	Not implemented	
Compliance	All projects must complete the Construction Carbon Calculator and reflect changes in the prelims	4: Technical design	Project Manager	Reduce energy consumption and GHG emissions	Nick Hamersley	No	Not implemented	
Compliance	Direct temporary electricity grid connection contracts must be organised through Planet First & priced as early as possible the in PCSA	4: Technical design	Project Manager	Reduce energy consumption and GHG emissions	Nick Hamersley	No	Not implemented	
Compliance	Install electric car charging points via Drax when connected to the grid supply	4: Technical design	Site Manager	Reduce on / off-site fuel use and GHG emissions	Nick Hamersley	No	Not implemented	
Compliance	Have a separate meter for welfare/accomodation and site	5: Manufacturing & construction	Site Manager	Measuring electricty consumption	Nick Hamersley	No	Not implemented	All metered and recorded monthly
Opportunity	An LCA carbon assessment has been undertaken	3: Spatial coordination	Project Manager	Measure carbon	Nick Hamersley	Yes	Implemented	
Opportunity	On site renewable energy is being used on the project (lighting, permanent cabins, security cameras etc)	4: Technical design	Project Manager	Reduce energy consumption and GHG emissions	Nick Hamersley	No	Not implemented	
Opportunity	Recycled steel frame	4: Technical design	Design Manager	Reduce carbon emissions	Mark Lewis	No	Not implemented	% Recycled content
Opportunity	Cement replacement used in the design (Kier decision)	4: Technical design	Design Manager	Reduce carbon emissions	Mark Lewis	No	Not implemented	
Opportunity	Considerable reduction of concrete on site (floor depth, wall thickness etc)	4: Technical design	Design Manager	Reduce carbon emissions	Mark Lewis	No	Not implemented	
Opportunity	Fibre used in structural topping in lieu of steel reinforcement	4: Technical design	Design Manager	Reduce carbon emissions	Mark Lewis	No	Not implemented	
Opportunity	Recycled materials being specified (raised access panels, re-use of structure)	4: Technical design	Design Manager	Reduce carbon emissions	Mark Lewis	No	Not implemented	
Opportunity	Incorporate renewable energy into design	4: Technical design	Design Manager	Reduce carbon emissions	Mark Lewis	No	Not implemented	PV roof mounted panels
Opportunity	Heat or ground source heat pump for the site accomodation	5: Manufacturing & construction	Project Manager	Reduce energy and carbon from heating and cooling	Nick Hamersley	No	Not implemented	
Opportunity	Flywheel added to generator	5: Manufacturing & construction	Project Manager	Reduce fuel use from generator	Nick Hamersley	No	Not implemented	
Opportunity	Solar battery charging	5: Manufacturing & construction	Site Manager	Reduce energy and carbon emissions	Nick Hamersley	No	Not implemented	
Opportunity	Electric plant used on site (telehandler, excavator, cranes, mewps, etc)	5: Manufacturing & construction	Project Manager	Reduce energy consumption and GHG emissions	Nick Hamersley	No	Not implemented	Electric MEWPs and concrete mixer
Opportunity	Electric concrete wagon to deliver the concrete on site	5: Manufacturing & construction	Project Manager	Reduce carbon emissions	Nick Hamersley	No	Not implemented	
Opportunity	Measurable energy implemented for site welfare/accomodation	5: Manufacturing & construction	Project Manager	Reduce energy consumption and GHG emissions	Nick Hamersley	No	Not implemented	All metered and recorded monthly
Opportunity	Site to be 100% diesel free (biofuel or 100% electric)	5: Manufacturing & construction	Project Manager	Reduce energy consumption and GHG emissions	Nick Hamersley	No	Not implemented	Forklift HVO
Other	Develop a Green Travel Plan, e.g. encourage and promote car sharing, subcontractor crew buses and use of public transport, EV charging with direct electricity supply, showers for cyclists etc.	4: Technical design	Site Manager	Reduce on / off-site fuel use and GHG emissions	Nick Hamersley	No	Not implemented	
Other	Where practicable, use local suppliers and workforce	4: Technical design	Design Manager	Reduce on / off-site fuel use and GHG emissions	Mark Lewis	No	Not implemented	
Other (specify)	Other (specify)		Other (specify)	Other (specify)				
Other (specify)	Other (specify)		Other (specify)	Other (specify)				
Other (specify)	Other (specify)		Other (specify)	Other (specify)				

Materials Re-use and Closed Loop Schemes

Include below the closed and open loop schemes that will be included in the project.
Update with actuals every months

Tick to confirm this page is complete ☐

Please refer to the below guidance if required:

- To know if you material is a waste: What is waste?
- Kier Construction Closed Loop Schemes Guidance: Closed Loop Schemes
- To record donated items on your project: Record of donations

Product	EWC Code	Forecast (m3)	Forecast (t)	Actuals (m3)	Actuals (t)	No. of items	Cost (£)	Owner
Closed Loop Schemes ⓘ								
Kenny Waste - Plasterboard	17 08 02							
BG - Plasterboard	17 08 02							
Protec - Plastic floor covering	17 02 03							
Proguard Correx - plastic floor covering	17 02 03							
Kingspan - Insulation	17 06 04							
Rockwool - Insulation	17 06 04							
Tarkett Flooring - Tile and Flooring	20 01 11							
Batt Cable Drum Collection - Wood	17 02 01	100%						
Cleaveland Cable Company - Wood	17 02 01							
Re-used Materials & Products ⓘ								
Pallets		100%						
Stillages		100%						
Recycled Aggregates (under QP)								
Furniture								
Soils (under MMP or WFD)		0						
Bitumous Mixtures (under MMP)		0						
Inert materials (under MMP)		0						
Incinerator Bottom Ash Aggregates (IBAA) under RPS 247		0						
Other								
Total		3	0	0	0	0	0	0

Waste Forecast and Actuals

The table below details the expected types and quantity of waste for the project including how it will meet the project targets
To produce the forecast, please use the below waste forecast, the Construction Waste Portal, or another method as agreed with your Environmental Manager/Advisor/Sustainability Coordinator.
For a specific trade package, a forecast for construction waste (section D) can be issued to the trade contractor for completion
The actual waste figures will be generated by RIO and inputted every 3 months by the BU Sustainability Coordinator

Tick to confirm this page is complete ☐

CONSTRUCTION

Input order quantities for the below materials. Conversion factors for Tonnage are from SEPA

Waste Stream	EWC Code	Order quantity (m3)	Order quantity (t)	Wastage rate	Estimated waste (m3)	Estimated waste (t)	Actual waste (m3) ⓘ	Actual waste (t) ⓘ	Difference (m3) ⓘ	Difference (t) ⓘ
Non-Hazardous										
Bricks	17 01 02		0		0	0			0	0
Tiles and ceramics	17 01 03		0		0	0			0	0
Concrete	17 01 01		0		0	0			0	0
Inert (not soils)	17 01 07		0		0	0			0	0
Inert (glass)	17 02 02		0		0	0			0	0
Metals	17 04 07				0	0			0	0
Plasterboard	17 08 02		0		0	0			0	0
Plastic (excl. packaging)	17 02 03		0		0	0			0	0
Timber (excl. packaging)	17 02 01		0		0	0			0	0
Floor coverings (soft)	20 01 11		0		0	0			0	0
Insulation materials	17 06 04		0		0	0			0	0
Bituminous mixtures (roof etc)	17 03 02		0		0	0			0	0
Packaging materials	15 01 06		0		0	0			0	0
Mixed construction waste	17 09 04		0			0			0	0
									0	0
									0	0
Total Non-Hazardous Construction Waste					0	0	0	0	0	0

Hazardous Waste	EWC Code	Estimated waste (m3)	Estimated waste (t)	Actual waste (m3) ⓘ	Actual waste (t) ⓘ	Difference (m3) ⓘ	Difference (t) ⓘ
Oils	13 01 13*	0	0			0	0
Other		0	0			0	0
Total Hazardous Construction Waste		0	0	0	0	0	0

Project GIFA in m2 8,888

BREEAM Construction Resource Efficiency

Wst 01	per 100m2	
	m3	Tonnes
1 credit ≤	13.3	11.1
2 credits ≤	7.5	6.5
3 credits ≤	3.4	3.2

Project BREEAM Waste Forecast

Total Construction Waste in m3	0
m3 per 100m2	0.00
Total Construction Waste in tonnes	0
Tonnes/100m2	0.00

BREEAM Credit Targeted:	#VALUE!
BREEAM Credit Achieved:	#VALUE!

DEMOLITION

Input volumes from pre-demolition audit if available

Waste Stream	EWC Code	Estimated waste (m3)	Estimated waste (t)	Actual waste (m3) ⓘ	Actual waste (t) ⓘ	Difference (m3) ⓘ	Difference (t) ⓘ
Non-hazardous							
Bricks	17 01 02		0			0	0
Tiles and ceramics	17 01 03		0			0	0
Concrete	17 01 01		0			0	0
Inert (not soils)	17 01 07		0			0	0
Metals	17 04 07		0			0	0
Plasterboard	17 08 02		0			0	0
Plastic (excl. packaging)	17 02 03		0			0	0
Timber (excl. packaging)	17 02 01		0			0	0
Floor coverings (soft)	20 01 11		0			0	0
Insulation materials	17 06 04		0			0	0
Furniture	20 03 07		0			0	0
Bituminous mixtures	17 03 02		0				
Total Non-Hazardous Demolition Waste		0	0	0	0	0	0
Hazardous							
Insulation materials containing asbestos	17 06		0			0	0
Inert containing hazardous substances	17 01		0			0	0
Glass, plastic, wood containing hazardous substances	17 02		0				
Total Hazardous Demolition Waste		0	0	0	0	0	0
TOTAL DEMOLITION WASTE		0	0	0	0	0	0

EXCAVATION

Input volumes from cut and fill

Waste Stream	EWC Code	Estimated waste (m3)	Estimated waste (t)	Actual waste (m3) ⓘ	Actual waste (t) ⓘ	Difference (m3) ⓘ	Difference (t) ⓘ
Non-hazardous							
Soils & Stones	17 05 04		0			0	0
Bitumous mixtures	17 03		0			0	0
Concrete	17 01 01		0			0	0
Other			0			0	0
Hazardous Waste							
Soil and stones including hazardous substances	17 05 03*		0			0	0
Bitumous mixtures	17 03 01*		0			0	0
			0				
TOTAL EXCAVATION WASTE		0	0	0	0	0	0

MODULAR/PREMISES

Product	EWC Code	Estimated waste (m3)	Estimated waste (t)	Actual waste (m3) ⓘ	Actual waste (t) ⓘ	Difference (m3) ⓘ	Difference (t) ⓘ
Canteen/Office Waste	20 03 01		0			0	0
Road Sweeping arisings	20 03 03		0			0	0
Septic Tank waste	20 03 04	0	0			0	0
TOTAL PREMISES WASTE		0	0	0	0	0	0

Waste Management Options

In the table below, please include the waste management options and their respective % of diversion from landfill.

This can be for mixed construction and demolition waste or for specific waste streams if these have been segregated on site

Tick to confirm this page is complete ☐

Work Phase	Waste type	Onsite/offsite	Reduce ⓘ (%)	Reuse ⓘ (%)	Direct recycle ⓘ (%) Closed loop / open loop	Recovery ⓘ (%)	Energy recovery ⓘ (%)	Landfill ⓘ (%)	Exemption
Demolition	Mixed construction and/or demolition waste (17 09 04)	Onsite						0	
		Offsite							
Excavation	Soil and stones other than those mentioned in 17 05 03 (17 05 04)	Onsite							
		Offsite							
Construction	Mixed construction and/or demolition waste (17 09 04)	Onsite							
		Offsite							
Premises	Canteen/Office/Adhoc waste (20 03 01)	Onsite							
		Offsite							
Construction		Onsite							
		Offsite							
		Onsite							
		Offsite							
		Onsite							
		Offsite							
		Onsite							
		Offsite							
		Onsite							
		Offsite							
		Onsite							
		Offsite							
		Onsite							
		Offsite							
		Onsite							
		Offsite							
		Onsite							
		Offsite							

Training & Communication

Training requirements have been identified and included in the Project Environmental Management Plan.

The following types of training will/ have been undertaken with all relevant members of staff and supply chain, covering any aspects of this REMP, including, compliance, targets and resource efficiency measures.

This record can be used to demonstrate training to be added to Thrive (Social Value).

For BREEAM projects (Man 03 credit), provide records of training provided to site operatives to ensure they are trained for the tasks they are undertaking

Tick to confirm this page is complete ☐

Training Log

Date	Topic of training	Company	No. of attendees	Trained by	Type of training	On site or online	Reason for training / comment

Waste Duty of Care

Tick to confirm this page is complete ☐

Waste duty of care will be undertaken in line with Kier Environmental Guidance Note GU03-GR-065 Waste Duty of Care

GU03-GR-065 Waste Duty of Care

Records of the following will be uploaded to RIO by Trade Constractors and Kier

- Waste carriers Licences
- Disposal site permits
- Waste transfer notes and hazardous waste consignment notes for all waste movements and will be retained in accordance with the relevant legislation

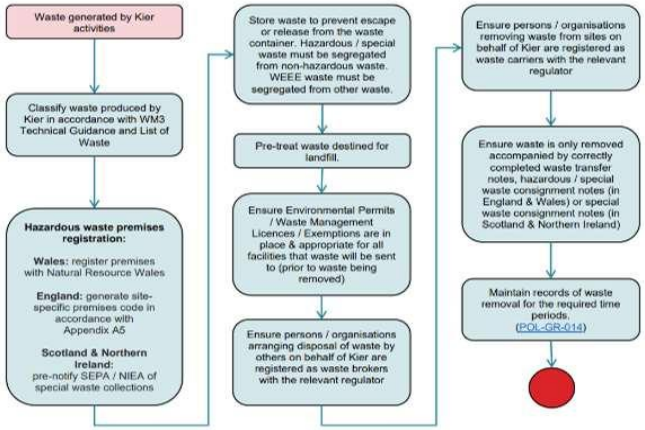
Duty of Care Requirements as per GU03-GR-065

- Prevent the escape of waste that is under Kier control, and to store it safely and securely
- Prevent waste causing harm to the environment
- To transfer waste only to registered waste carriers for deposit at an authorised facility
- To provide a completed waste transfer note (or hazardous / special waste consignment note)
- To ensure waste is deposited only at facilities that hold a suitable permit or licence

Subcontractors that remove waste from Kier premises in their own vehicles must be registered waste carriers.

Subcontractors that source their own waste skips / containers must provide details of waste carriers and waste facilities they use, and the associated registration certificates / permits to Kier

Duty of Care Compliance Process



Waste Exemptions & Licences

References of waste exemptions, licences and material management plans will be included in the project Environmental Management Plan.

Documentation will be kept in the project sharepoint page including the material trackers to ensure compliance.

Trade Contractor Construction Waste Forecast

The table below includes the details of the expected types and quantity of waste for the nominated package of works.
Please complete based on expected quantities of materials and all appropriate resource efficience measures included in the supply and installation.

Project:	Ysgol Gyfun Cwm Rhondda
Package:	All
Trade Contractor:	All
Date	20/07/2026

CONSTRUCTION

Waste Stream	EWC Code	Estimated waste (m3)	Estimated waste (t)
Non-Hazardous		TBC	TBC
Bricks	17 01 02	0	
Tiles and ceramics	17 01 03	0	
Concrete	17 01 01	0	
Inert (not soils)	17 01 07	0	
Inert (glass)	17 02 02	0	
Metals	17 04 07	0	
Plasterboard	17 08 02	0	
Plastic (excl. packaging)	17 02 03	0	
Timber (excl. packaging)	17 02 01	0	
Floor coverings (soft)	20 01 11	0	
Insulation materials	17 06 04	0	
Bituminous mixtures (roof etc)	17 03 02	0	
Packaging materials	15 01 06	0	
Mixed construction skips	17 09 04	0	
Total Non-Hazardous Construction Waste		0	0

KIER

RECORD OF DONATION

Project:	Ysgol Gyfun Cwm Rhondda
Date of Donation	
Description of the donation	
Receiving Organisation (name and address)	
Job title/responsibility	
What will the donation be used for?	
Estimated cost / positive social value impact	
Kier Donor Name (print)	
Kier Donor Title/Responsibility	
Kier Donor Signature	
Kier Donor Signature	
Receiver Name (print)	
Receiver Signature	
Receiver Title/Responsibility	
Receiver Signature	

Schedule VII – Social Value

KIER

Ysgol Cwm Rhondda £60m

	Evidence is a mandatory requirement. Any data input without supporting evidence will not be included in our internal reporting, cabinet office reporting or annual reports. This will have a detrimental impact on our business now and in the future. **Reports for this project - TOM's Report for RCT , WG Sustainable Communities for Learning KPIs, Internal Thrive, WG Toolkit (on Completion)**					
COSTS	**SOCIAL VALUE KPI COMMITMENTS**	**Project target**	**Evidence required**	**Achieved this month**	**Achieved to date**	**Achieved to date as %**
NA	**IM32:** Work placements - in education/non-education - minimum of five day work placement. Includes T-Levels.	12	Provide evidence of the length of work experience, such as start and completion dates and evidence of the beneficiary's name and postcode, as well as placement agenda/timetable, letter from school etc.			
NA	**IM26:** Number of apprentices created	11	Provide employee details if Kier (including employee number) or Supply Chain report including name, job, length of contract, hours per week and postcode.			
NA	**IM49:** The value of contracts awarded in £ to charities, social enterprises and voluntary organisations (VCSE)	£15,000	Can include supply chain such as a cleaning company or printing business. Also organisations working with social purpose e.g The Trussell Trust. Provide a receipt or invoice.			
NA	**IM106A:** Hours on educational engagement	60	Site visits, class assemblies, presentations etc. Include details such as email confirmation, photos, presentation, agenda and an estimate of the number of students engaged.			
NA	**IM109A/IM110A:** Hours spent volunteering	60	Use of Kier volunteer days. Maximum of two paid days per colleague per year. Include volunteer day request form or email confirmation of volunteering activity. Also includes volunteers from Supply Chain and Consultants.			

Needs to go into subcontract orders	No. of local people directly employed on the contract up to 12 months following contract award.	60				
Needs to go into subcontract orders	No of apprenticeships lasting a minimum of 1 year for people residing in the local community that will be started during the contract.	15				
£1,000	No. of staff hours spent on local school and college visits e.g. delivering careers talks, curriculum support, literacy support, safety talks.	800				
NA	Number of weeks upskilling existing staff (FTE) on recognised vocational qualification training programmes that will start during the Contract period.	225				
£1,000	Provision of expert business advice to Local MSMEs or Community Groups	400				
NA	Total amount (£) spent in full outsourced sub-contracting work through the Local supply chain for the duration of the Contract.	£41,500,000				
NA	Support in the Locality for suppliers and community groups to promote climate change and carbon reduction initiatives.	192				
£3,000	Donations or support towards initiatives aimed at specific Local environmental and biodiversity conservations and sustainable management projects.	64				
£10,000	Initiatives to be taken to tackle homelessness (supporting temporary housing schemes, etc.)	£10,000				
NA	Initiatives taken or supported to engage people in health interventions (e.g. stop smoking, obesity, alcoholism, drugs, etc.) or wellbeing initiatives in the community, including physical activities for adults and children.	96				
£2,000	Mental Health campaigns for staff on the contract to access mental health programmes	64				
NA	No. of hours of support into work provided to unemployed people through career mentoring, including mock interviews, CV advice, and careers guidance	£200				
NA	No. of hours of support into work provided to care leavers through career mentoring, including mock interviews, CV advice, and careers guidance	80				

nA	No. of weeks spent on meaningful work placements or pre-employment course; 1-6 weeks student placements (unpaid)	40				
NA	No. of weeks (6 - 52 weeks) work experience opportunities or pre-employment course to support young people (16 - 25) following a career qualification framework	12				
£4,000	Equipment or resources donated to third sector and civil society organisations (£ equivalent value). This could be during the contract period or immediately after.	£4,000				
4,000	Initiatives aimed at reducing crime (e.g. support for local youth groups, lighting for public spaces, etc.)	£4,000				
NA	Initiatives to be taken to support older, disabled and vulnerable people to build stronger community networks (e.g. befriending schemes, digital inclusion clubs)	80				
NA	Initiatives to be taken to support disadvantaged young people and their families. If you are responding to this measure please detail time in hours and/or money to be donated.	96				
NA	Donations or volunteering time to be provided to third sector, local community project groups or Council administered community funds. If you are responding to this measure please detail time in hours and/or money to be donated.	96				
£4,000	Support and investment provided for people to learn and use Welsh (e.g. interactions and signage). If you are responding to this measure please detail time in hours and/or money to be donated.	64				
£4,000	Support and investment provided for people to get involved in Welsh cultural events, arts, sports and heritage activities. If you are responding to this measure please detail time in hours and/or money to be donated.	40				
£40,000	Innovative measures relating to one of the 7 'Wellbeing Goals' to be delivered on the contract - these could be e.g. co-designed with stakeholders or communities.	320				