

Network Rail

**170248 Headbolt Lane New
Station GRIP 4**

**Appendix 2A: Outline Construction
Environmental Management Plan**

170248-ARU-REP-EEN-000017

Final | August 2021

This report takes into account the particular instructions and requirements of our client.

It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

Job number 276736

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1 Outline Construction Environmental Management Plan

This document comprises the Outline Construction Environmental Management Plan (CEMP) which has been prepared on behalf of Network Rail ('the Applicant') to support a detailed planning application for the development of Headbolt Lane station, car park and associated railway line works submitted under the Town and Country Planning Act (TCPA).

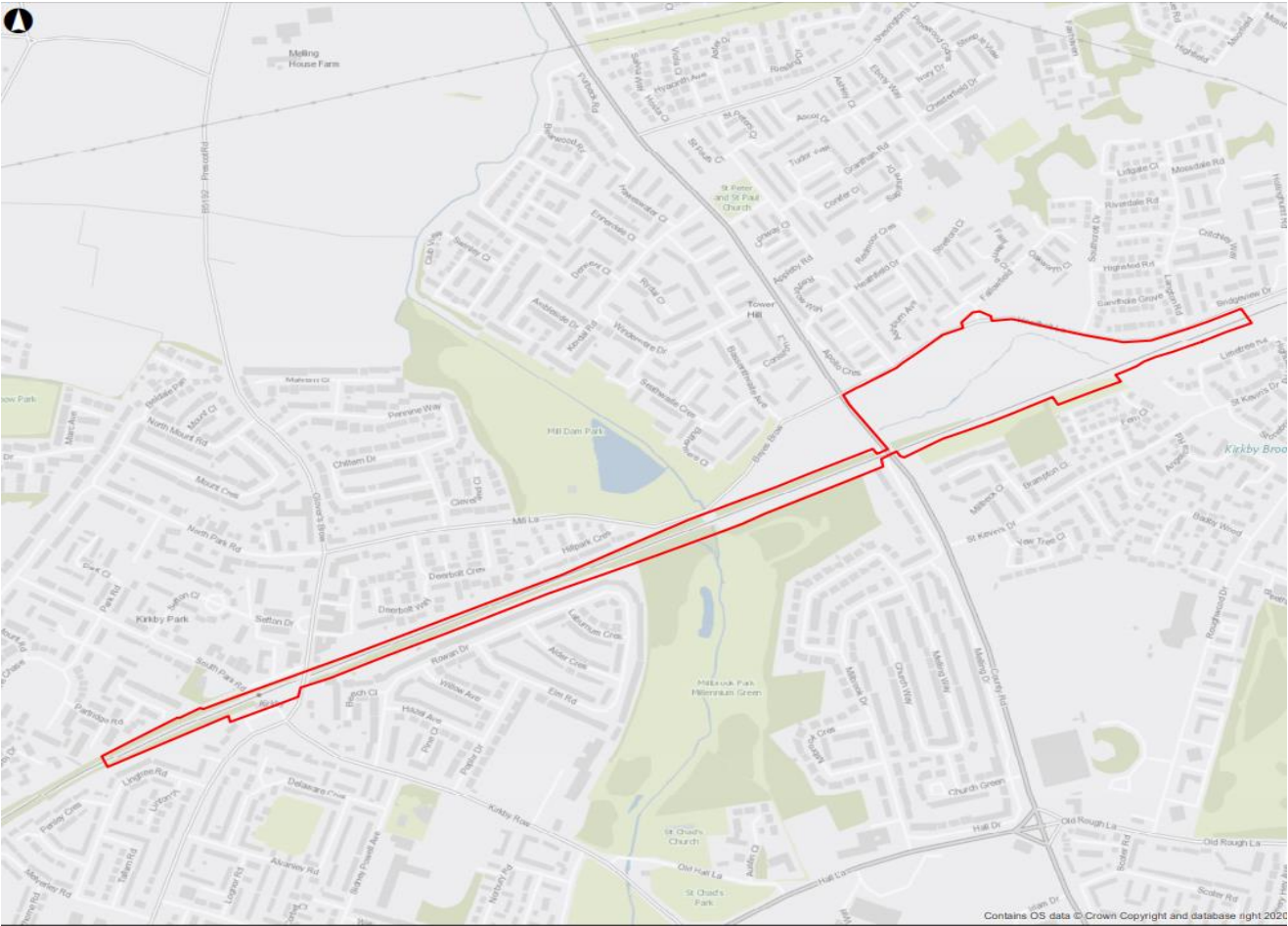
1.1 The Site

The extent of the proposed Scheme site is approximately 10 hectares (ha) and is shown in Figure 1. For the purposes of this ES, the site is divided into the two following areas:

- the station and car park (an area of 5.9 ha); and
- the railway corridor (an area of 4.1 ha).

A detailed description of the proposed Scheme site is contained in ES Volume I, Chapter 2: Scheme Description.

Figure 1: Site location plan



1.2 The Proposed Scheme

The proposed station and car park comprises the following elements:

- a new station located on land at Headbolt Lane;
- a new 300 space car park and associated structures (signage, waiting shelters and car park lighting) and to service the new station;
- bulk supply point and substation to accommodate electrification of rail corridor upgrades and for the new station;
- new vehicular and pedestrian access including two footbridges over Kirkby Brook and a road bridge to access each section of the car park; and
- associated landscaping.

Works to the railway corridor comprises the following:

- railway line upgrade to a twin track and associated infrastructure to extend the Merseyrail electrification to the proposed station (including the extension of the existing third line electrification network and a new substation); and
- decommissioning works to the existing Kirkby Station.

Construction of the proposed Scheme is due to commence immediately following grant of planning permission and the proposed Scheme is anticipated to be fully operational in Q1 2023.

A detailed description of the proposed Scheme is contained in Chapter 2: Scheme Description.

1.3 The Purpose and Structure of this CEMP

This document presents a framework for the CEMP, which is a document designed to highlight the key environmental constraints and receptors and the measures that will be implemented throughout the construction phase to protect those receptors and minimise environmental impacts. The detailed CEMP will be produced for the proposed Scheme following approval of detailed and reserved matters applications and the appointment of the contractor(s).

Potential environmental impacts during the construction phase of the proposed Scheme have been identified through the EIA process. These potential impacts are reported in the ES, which has been submitted along with the outline planning application for the proposed Scheme. In addition, a range of ‘standard’ or best practice mitigation and construction management measures were assumed as part of the assessment methodologies presented within a number of the technical chapters within the ES (Chapters 4-10) and it is assumed these will be implemented during construction of the proposed Scheme, including for some technical chapters this framework CEMP. This framework CEMP demonstrates how these commitments in the ES will be implemented during the construction phase. It also sets out the monitoring and auditing activities that should be

undertaken to demonstrate that such mitigation measures are carried out and that they are effective.

In addition to the environmental topics assessed in the EIA, this outline CEMP also includes mitigation from other planning documents e.g. the WFD Assessment (document ref. no.: 170248-ARU-REP-EEN-000022) and Heritage Desk Based Assessment (document ref. no.: 170248-ARU-REP-EEN-000021) where mitigation is included relevant to the construction phase.

This document provides a suggested structure for the CEMP, some preliminary information relevant to the CEMP, and indicates what additional information might be included under each sub-section within the final CEMP, which will be produced by the contractor(s) selected to deliver the proposed Scheme.

The detailed CEMP will be produced in line with this framework document following receipt of planning consent and would be agreed with the Local Authority in advance of starting the enabling works on the Site. The need for a detailed CEMP to be produced in this manner is likely to be a requirement of the planning conditions, should the outline planning application be granted permission.

This framework CEMP covers the principal construction activities envisaged at the time of outline planning application. The final scope will be determined through consultation with the Local Authority and other relevant regulatory authorities. The key elements of the CEMP will include:

- an overview of the proposed Scheme and associated construction programme;
- prior assessment of environmental impacts (through the EIA);
- reduction of potential adverse impacts through design and other mitigation measures;
- monitoring of effectiveness of mitigation measures;
- corrective action procedure; and
- links to other complementary plans and procedures.

In summary, the CEMP will identify how commitments made in the EIA will be translated into actions on the Site and includes a schedule from implementing the actions through allocation of key roles and responsibilities.

The contractor(s) will be responsible for working in accordance with the environmental controls documented in the CEMP. The overall responsibility for implementation of the CEMP will lie with the Applicant.

The CEMP will be designed with the objective of compliance with the relevant environmental legislation and the mitigation measures set out within the ES (both the embedded mitigation assumed within the assessments, and project specific mitigation required as a result of anticipated impacts. It should be read alongside any Construction Method Statements (which are to be produced by the appointed contractor(s)) and the ES submitted in support of the detailed planning application.

Finally, it is noted that the proposed Scheme is likely to be built out over a number of phases and through a number of separate construction projects. Therefore, a number of detailed CEMPs may be produced, with each relate to a particular phase of construction works and/or a construction contract. This Framework CEMP provides the basis for the detailed CEMP.

2 The Construction Phase

2.1 Overview of the Proposed Scheme

The proposed Scheme is summarised in Section 1.2 above and described in more detail in ES Chapter 2: Scheme Description of Volume I of the ES.

Any additional construction licences, permits or approvals that are required will be listed in the detailed CEMP, including any environmental information submitted in respect of them.

2.2 Construction Programme

It is anticipated that the construction of the proposed Scheme will commence in Q4 2021 and take approximately 18 months to complete.

Construction activities would include the following phases:

- preliminary works and site establishment;
- earthworks;
- civil engineering work;
- rail systems works within the railway corridor; and
- buildings and substation construction.

Construction will generally operate Monday-Friday between 08:00-18:00 and Saturday 08:00-13:00, with no working on Sundays or bank holidays, however, during rail blockades, which are required to facilitate construction of certain aspects of the proposed Scheme, there will be some night -time working and instances where construction working hours will operate on a 24 hours a day, for seven days basis. The instances where working will be out of the general operating hours can be seen below including the works proposed and equipment used, (however exact equipment will be confirmed in the detailed CEMP):

- January 2022- March 2022- de-vegetation works (weekday daytime and Sunday daytime working hours utilising chainsaws and Road Rail Vehicles (RRVs));
- March 2022-May 2022- installation of kingpost retention piles, which will consist of Sunday day time working hours (close to residential receptors) and midweek night-time working (for works away from residential receptors) these works will use RRVs and excavators with piling equipment;

- May 2022- June 2022- embankment widening works which will consist of Sunday day time working hours (close to residential receptors) and midweek night-time working (for works away from residential receptors) these works will use RRV and rollers and other compacting equipment;
- June 2022- works to Underbridge 56, (24 hour working over Bank Holiday weekend and will include use of cranes, RRVs and concrete pumps);
- July to August- Underbridge 55 works; (24 hour working and will include use of excavators, breakers, cranes, RRVs and compaction equipment); This will also include Permanent Way installation involving RRVs haulage trains and compaction equipment
- August to December- Permanent Way installation (Saturday/Sunday 2030-0530 only and will use RRVs); and haulage trains and compaction equipment
- January /February- connect up and commission the Proposed Scheme (3-week blockade working 24 hours a days and will use RRVs and compaction equipment).

2.3 Site Context

2.3.1 Surrounding Area

The proposed station and car park is situated on an area of green space off Headbolt Lane (Grid Ref: SJ 41308 99815). The proposed station and car park is bound to the north and east by Headbolt Lane, to the south by the railway line and to the west by the A506. The proposed station and car park lies approximately 900 m north-east of the centre of Kirkby (shown in Figure 2.1). The area of the proposed station and car park is approximately 5.9 ha.

2.3.2 Nearby Sensitive Receptors

Key environmental constraints and nearby receptors are shown on Figure 2.

Notable receptors in the area include residential properties. There are large housing estates to the north of Headbolt Lane, adjacent to the proposed station and car park site and to the south, adjacent to the existing railway line. There are also residential properties located directly adjacent to the existing Kirkby Station and to the south and north of the railway line between the existing Kirkby Station and the proposed station at Headbolt Lane.

There are 18 designated heritage assets within 1 km of the proposed Scheme boundary, the closest of which are:

- six Listed Buildings associated with St Chad's Church and grounds and St Chads Park, notably Church of St Chad (Grade II* Listed Building) located approximately 750 m to the south-west of the proposed station and car park site; and

- Carter Arms Public House Waverley House (Kirkby Conservative Club) and 1 and 3 Mill Lane (Grade II Listed Buildings) are located adjacent to the existing Kirkby railway station.

Kirkby Brook/Mill Brook Local Wildlife Site (LWS) is a non-statutory ecological designated site which is located adjacent to Simonswood Brook situated below the existing elevated railway line and runs through the proposed station and car park site. One further non-statutory ecological designated site is located within a 2km of the proposed scheme is Northwood Forest Hills LWS which is located approximately 640 m to the east.

The habitats recorded on site are relatively common and widespread and support commonly occurring botanical species comprising semi-improved neutral grassland, tall ruderal, scrub, amenity grassland, bare ground and running water.

Kirkby Brook runs through the proposed station and car park site and is designated by the Environment Agency as a main river. Kirkby Brook feeds directly into Simonswood Brook which is located approximately 300 m to the west of the proposed station and car park.

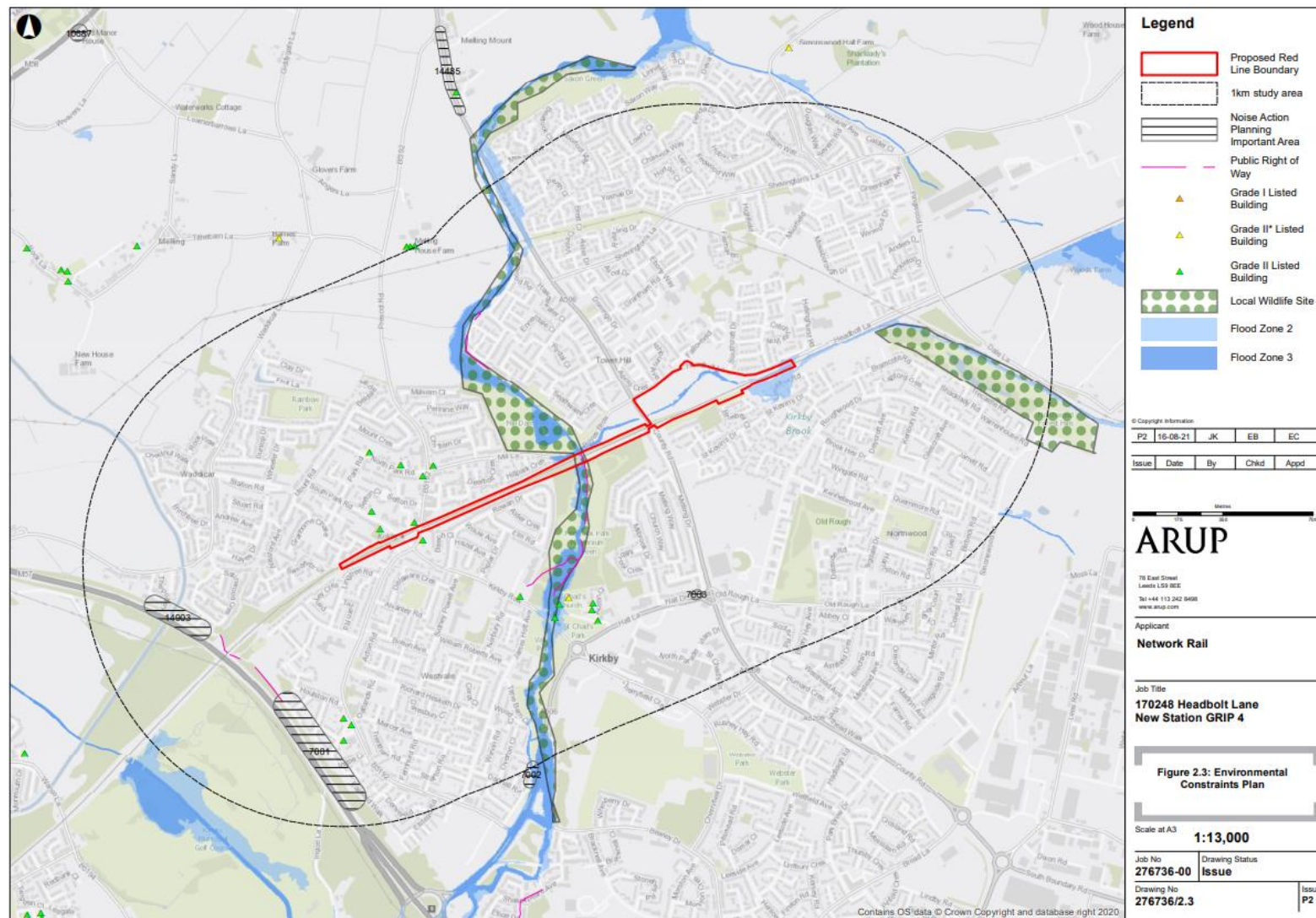
Simonswood Brook is a designated Water Framework Directive (WFD) waterbody (GB112069060630), has a classification of Moderate (Ecological score of Moderate and Chemical score of Fail) and flows under the existing railway bridge (Underbridge 56). There are areas of Flood Risk Zones 2 (between a 1 in 100 and 1 in 1,000 annual probability of river flooding) and 3 (1 in 100 or greater annual probability of river flooding) on the land immediately adjacent to Kirkby Brook within the proposed station and car park site. The rail corridor is situated entirely within Flood Zone 1 (land assessed as having a less than 1 in 1,000 annual probability of river flooding).

There are two historic landfills within 1 km of the proposed Scheme boundary; Bank Lane site, located adjacent to the A506 (Bank Lane) approximately 600 m to the north of the proposed railway corridor works and Stopgate Lane located at Simonswood Industrial Estate approximately 980 m to the east of the proposed station and car park site.

The Environment Agency classifies the land beneath the entire proposed Scheme as a Principal Bedrock Aquifer, an aquifer which can provide a high level of water storage and may provide water supply and/or base river flow on a strategic scale.

The entire proposed Scheme is located within a groundwater Source Protection Zone (SPZ) 3, with several abstractions located to the north and south. The nearest groundwater abstractions are located approximately 2 km to the north of the rail corridor.

Figure 2: Environmental constraints plan (to scale at A3)



2.4 Construction Traffic/ Site Access

Construction traffic will be advised to follow the M6, leaving at Junction 26 towards Liverpool on the M58. Construction traffic will then leave the M58 at Junction 1 onto Maghull Lane and travel south along the A506 until reaching Headbolt Lane. This route can also be used by construction traffic travelling easterly from Liverpool along the M58.

The intent for construction traffic using these routes is to minimise transport travelling through Kirkby town centre and Westvale to avoid disruption.

A Construction Traffic Management Plan (CTMP) will be prepared by the contractor and consulted upon with the Knowsley Council's highways department and other highways consultees to ensure that the access design accords with Knowsley Council's design guide and the impact of additional vehicular traffic can be mitigated effectively. The CTMP will also set out monitoring requirements as well as roles and responsibilities.

2.5 Lighting and Security

Construction temporary site lighting is proposed to enable safe working on the construction site in hours of darkness. Construction temporary lighting will be arranged so that glare is minimised outside the construction site.

2.6 Site Waste Management

In order to control the waste generated on the Site during preparation and the construction and remediation phase, the contractor will separate the main waste streams on the Site, prior to them being taken to a waste facility for disposal.

A Site Waste Management Plan (SWMP) will be developed, which will specify the waste streams to be estimated and monitored and goals set with regards to the waste produced. The production of the SWMP will be the responsibility of the contractor and subject to agreement with the Local Authority.

All waste to be removed from the Site will be undertaken by fully licensed waste carriers and taken to licensed waste facilities.

2.7 Environmental Management

The contractor will be required to have a certified ISO 14001 Environmental Management System (EMS). The detailed CEMP will be prepared in accordance with the EMS and other Compliance Obligations relevant to the project, such as Network Rail's NR/ENV/015 Environmental and Social Minimum Requirements, including Permits, Licenses and Consents.

The detailed CEMP will include an Environmental and Social Risk Assessment (ESRA) which will identify applicable environmental constraints, risks and opportunities, including topics which have not been assessed in the EIA but that

require best practice or precautionary working methods to ensure compliance with statutory requirements.

3 Management and Mitigation Plan

This section of the outline CEMP sets out the mitigation and management measures to be included as a minimum in the CEMP(s). It also illustrates how the monitoring strategy will be set out and the responsible party identified for each mitigation/ enhancement measures or monitoring requirement.

Table 1: Mitigation and management measures to be included in the CEMP

Topic	Potential Impact	Embedded Mitigation & Site Specific Mitigation	Monitoring Requirements	Responsibility
Traffic & Transport	Impact on the local highway network from construction traffic	The volume, type and frequency of construction CTMP	To be confirmed in detailed CEMP and CTMP	To be confirmed in detailed CEMP and CTMP
		Construction times and hours of operation with respect to construction vehicle movements to minimise travel during the AM and PM peak periods to be detailed in the CTMP	To be confirmed in detailed CEMP and CTMP	To be confirmed in detailed CEMP and CTMP
		Suitable construction vehicle routes to be detailed in the CTMP	To be confirmed in detailed CEMP and CTMP	To be confirmed in detailed CEMP and CTMP
Air Quality	Construction Dust	General Measures - Develop and implement a Stakeholder Management Plan that includes community engagement before works commences on-site; - Display the name and contact details of person(s) accountable for air quality and dust issues on the Site boundary. This may be the environment manager/engineer or the site manager and - Display the head or regional office contact information (if applicable). - Develop and implement a Dust Management Plan (DMP), which may include measures to control other emissions, approved by the Local	To be confirmed in detailed CEMP	To be confirmed in detailed CEMP

Topic	Potential Impact	Embedded Mitigation & Site Specific Mitigation	Monitoring Requirements	Responsibility
		Authority. The level of detail will depend on the risk and should include as a minimum the highly recommended measures in this document. The desirable measures should be included as appropriate for the site. Site Management - Record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner, and record the measures taken; - Make the complaints log available to the local authority when asked; - Record any exceptional incidents that cause dust and/or air emissions, either on- or offsite, and the action taken to resolve the situation in the log book; and - Hold regular liaison meetings with other high-risk construction sites within 500 m of the Site boundary, to ensure plans are co-ordinated and dust and particulate matter emissions are minimised. It is important to understand the interactions of the off-site transport/deliveries which might be using the same strategic road network routes. Monitoring - Undertake daily on-site and off-site inspection, where receptors (including roads) are nearby, to monitor dust, record inspection results, and make the log available to the local authority when asked. This should include regular dust soiling checks of surfaces such as street furniture, cars and window sills along Riverside drive within 20 m of the Site boundary, with cleaning to be provided if necessary; - Carry out regular site inspections to monitor compliance with the DMP, record inspection results, and make an inspection log available to the local authority when asked; - Increase the frequency of site inspections by the person accountable for air quality and dust issues on-site when activities with a high potential to		

Topic	Potential Impact	Embedded Mitigation & Site Specific Mitigation	Monitoring Requirements	Responsibility
		produce dust are being carried out and during prolonged dry or windy conditions; and - Consider whether dust deposition, dust flux, or real-time PM10 continuous monitoring is required and agree with the Local Authority. Where possible commence baseline monitoring at least three months before work commences on-site or, if it is a large site, before work on a phase commences. Further guidance is provided by IAQM on monitoring during demolition, earthworks and construction. Preparing and Maintaining the Site - Plan site layout so that machinery and dust causing activities are located away from receptors, as far as possible; - Erect solid screens or barriers around dusty activities or the Site boundary that are at least as high as any stockpiles on-site; - Fully enclosed site or specific operations where there is a high potential for dust production and the Site is active for an extensive period; - Avoid site runoff of water or mud; - Keep site fencing, barriers and scaffolding clean using wet methods; - Remove materials that have a potential to produce dust from site as soon as possible, unless being re-used on-site. If they are being re-used on-site cover as described below; and - Cover, seed or fence stockpiles to prevent wind whipping. Operating Vehicle/Machinery and Sustainable Travel - Ensure all vehicles switch off engines when stationary - no idling vehicles; - Avoid the use of diesel or petrol-powered generators and use mains electricity or battery powered equipment where practicable;		

Topic	Potential Impact	Embedded Mitigation & Site Specific Mitigation	Monitoring Requirements	Responsibility
		• Impose and signpost a maximum-speed-limit of 15 miles per hour (mph) on surfaces and 10 mph on unsurfaced haul roads and work areas (if long haul routes are required these speeds may be increased with suitable additional control measures provided, subject to the approval of the nominated undertaker and with the agreement of the local authority, where appropriate); • Produce a Construction Traffic Management Plan to manage the sustainable delivery of goods and materials, as well supporting sustainable travel (public transport, cycling, walking, and car-sharing) of construction staff. • Operations • Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction, e.g. suitable local exhaust ventilation systems; • Ensure an adequate water supply on the Site for effective dust/particulate matter suppression/mitigation, using non-potable water where possible and appropriate; • Use enclosed chutes and conveyors and covered skips; • Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use fine water sprays on such equipment wherever appropriate; and • Ensure equipment is readily available on site to clean and dry spillages and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods. Waste Management • Avoid bonfires and burning of waste materials. Measures Specific to Demolition		

Topic	Potential Impact	Embedded Mitigation & Site Specific Mitigation	Monitoring Requirements	Responsibility
		- Ensure effective water suppression is used during demolition operations. Handheld sprays are more effective than hoses attached to equipment as the water can be directed to where it is needed. In addition, high volume water suppression systems, manually controlled, can produce fine water droplets that effectively bring the dust particles to the ground; - Avoid explosive blasting, using appropriate manual or mechanical alternatives; and - Bag and remove any biological debris or damp down such material before demolition. Measures Specific to Earthworks - Re-vegetate earthworks and exposed areas/soil stockpiles to stabilise surfaces as soon as practicable; - Use Hessian, mulches or trackifiers where it is not possible to re-vegetate or cover with topsoil, as soon as practicable; and - Only remove the cover in small areas during work and not all at once. Mitigations Specific to Construction - Avoid scabbling (roughening of concrete surfaces) if possible - Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out, unless this is required for a particular process, in which case ensure that appropriate additional control measures are in place. - Ensure bulk cement and other fine powder materials are delivered in enclosed tankers and stored in silos with suitable emission control systems to prevent escape of material and overfilling during delivery. - For smaller supplies of fine powder materials ensure bags are sealed after use and stored appropriately to prevent dust. Measures Specific to Trackout		

Topic	Potential Impact	Embedded Mitigation & Site Specific Mitigation	Monitoring Requirements	Responsibility
		• Use water-assisted dust sweeper(s) on the access and local roads, to remove, as necessary, any material tracked out of the Site. This may require the sweeper being continuously in use; • Avoid dry sweeping of large areas; • Ensure vehicles entering and leaving sites (if applicable) are covered to prevent escape of materials during transport; • Inspect on-site haul routes for integrity and instigate necessary repairs to the surface as soon as reasonably practicable; • Record all inspections of haul routes and any subsequent action in a site log book; • Install hard surfaced haul routes, which are regularly damped down with fixed or mobile sprinkler systems, or mobile water bowsers and regularly cleaned; • Implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud prior to leaving the Site where reasonably practicable); • Ensure there is an adequate area of hard surfaced road between the wheel wash facility and the Site exit, wherever site size and layout permits; and • Access gates to be located at least 10m from receptors where possible.		
Noise & Vibration	Construction site noise	Best practical means (BPM) mitigation will be implemented to control construction noise and vibration at source. Such measures as required by the Control of Pollution Act (CoPA) are summarised below: • Hours of working to be planned, taking into account the nature of land use in the areas concerned and duration of the work; • Working hours limited to eMonday to Friday: 08:00 – 18:00; Saturday: 08:00 – 13:00; and on Sunday and bank holiday no noisy working (other than special works subject to prior agreement with KMBC).	To be confirmed in detailed CEMP	To be confirmed in detailed CEMP

Topic	Potential Impact	Embedded Mitigation & Site Specific Mitigation	Monitoring Requirements	Responsibility
		- Where practicable, quiet working methods should be employed, including the use of the most suitable plant, and suitably sized plant; - Haulage vehicles should not access the site outside of day time periods; - Equipment should be switched off when not required; - Internal haul routes should be well maintained and avoid steep gradients; - The drop height of materials should be minimised; - Plant and vehicles should be started up sequentially rather than simultaneously; - Broadband (i.e. White noise) reversing alarms should be used rather than tonal alarms; - The siting of plant should be considered to avoid noise being directed towards dwellings; and - Noise barriers in the form of temporary hoarding, stacks of materials such as bricks, timber or top soil, should be used to provide screening to nearby sensitive receptors.		
Ecology	Potential loss of, or disturbance to, habitats, protected species and breeding birds.	The following documents and standard best practice guidelines will be adhered to during the construction: - Construction Environmental Management Plan (CEMP); - Pollution Prevention Guidelines; - Embedded mitigation prescribed in Chapter 5: Air Quality; - Embedded mitigation prescribed in Chapter 6: Noise & Vibration; and - Embedded mitigation prescribed in the Light Obtrusion Assessment - Programming Site/vegetation clearance outside the bird nesting season (March – August) to avoid impacts on breeding birds.;	To be confirmed in detailed CEMP and LEMP	To be confirmed in detailed CEMP and LEMP

Topic	Potential Impact	Embedded Mitigation & Site Specific Mitigation	Monitoring Requirements	Responsibility
		• Inspection of UB56 Millbrook Bridge from a Mobile Elevating Work Platform (MEWP) by a licenced bat ecologist a minimum three months prior to construction activities.; • Provision of Site toolbox talks and training to all Site personnel prior to construction so that all personnel are aware of the key requirements of the CEMP.; • Presence of an ECoW on-site during implementation of key mitigation measures.; • Procedures for a call out service of the appointed ECoW during construction works.; • Preparation of specific Method Statements detailing best practice working methods to avoid adversely impacting ecological features on-site; and. • Application of Site-specific mitigation measures to reduce dust emitting activities. A Landscape and Ecology Management Plan (LEMP) (see document 170248-ARU-REP-EEN-000024) has been developed to ensure that proposed enhancement and creation of habitats are maintained post-construction.		
	Impacts of additional lighting and noise during construction on-site will	• All lighting will be directed on equipment only and directed away from suitable foraging habitat such as retained scrub and trees.; • The lights used for construction will be set at a low illumination levels (brightness) or as low as possible whilst maintaining a safe working environment.; • Upward lighting will be minimised to reduce light pollution.; • The height of the lighting columns will be limited to reduce light spillage.; • Noise screens will be used where possible.;	To be confirmed in detailed CEMP	To be confirmed in detailed CEMP

Topic	Potential Impact	Embedded Mitigation & Site Specific Mitigation	Monitoring Requirements	Responsibility
		- Machines will be turned on sequentially to reduce the impact of sudden noises; . - Plant will be turned off when not in use; and. - Ensure silencers are fitted to exhausts.		
Landscape and Visual Impact Assessment	Impacts to retained vegetation and proposed planting	The following measures will be implemented to help mitigation visual impacts: - providing suitable protective fencing to existing trees and other vegetation that are to be retained in line with the recommendations in BS5837: Trees in relation to design, demolition and construction; - providing an Arboricultural Method Statement, based on the Arboricultural Impact Assessment and in line with BS5837: Trees in relation to design, demolition and construction; - site supervision by a qualified Arboricultural Clerk of Works (ArbCoW) during the construction phase to ensure that measures to protect retained vegetation are carried out in line with the recommendations in BS5837; and - site supervision by a qualified Landscape Clerk of Works (LCoW) during the implementation of the landscape scheme, including the built up soil in areas to receive planting as well as at tree and shrub planting. It is advisable to ensure appropriate quality of plant material and plant handling. This will improve the successful establishment of the proposed landscape.	To be confirmed in detailed CEMP	To be confirmed in detailed CEMP
Flood Risk	Flood Risk	The Contractor will consult with the EA and the Local Lead Flood Authority and other relevant risk management authorities on areas at risk of flooding and make appropriate use of the EA Floodline flood warning service for works within areas at risk of flooding. During construction, the contractor should adhere to industry standard practice working methods and mitigation measures set out in the relevant Construction Industry Research and Information Association (CIRIA) publications, the EA's	To be confirmed in detailed CEMP	To be confirmed in detailed CEMP

Topic	Potential Impact	Embedded Mitigation & Site Specific Mitigation	Monitoring Requirements	Responsibility
		Pollution Prevention Guidelines (PPG) (withdrawn in 2015) and their replacement series Guidance for Pollution Prevention (GPPs). These plans, methods and measures (specifically GPP1, GPP2, GPP5 GPP21, GPP22, GPP26 and PPG6) would reduce the likelihood of flooding during construction.		
Ground Conditions	Inhalation of soil-derived dust (which may contain contaminants such as metals, asbestos fibres, PAH) by construction workers and adjacent site users.	Dust generated from areas of contaminated soils during dry weather is a potential means for migration of contaminants to both site workers and adjacent site users. Dust suppression measures are presented in the air quality section above. Use of appropriate site controls, abatement measures and monitoring will mitigate against potential risks.	To be confirmed in detailed CEMP	To be confirmed in detailed CEMP
	Generation of airborne asbestos fibres from asbestos-containing soils and asbestos-containing materials (ACMs) presenting a risk via inhalation to construction workers and adjacent site users.	Although ACMs have not been identified in the GIR, there is still potential that it may be present in site soils. It is likely that the greatest potential risks will be during excavation and processing of the infill materials, when they are disturbed and may allow fibres to be released into ambient air. Therefore, works will need to be carried out by a suitably qualified experienced contractor and employ methods to control risks to on-site workers and adjacent site users.	To be confirmed in detailed CEMP	To be confirmed in detailed CEMP
	Exposure of construction workers to infill and groundwater (which may contain contaminants such as asbestos, metals, PAH) via dermal	Contractors working on the Site will require appropriate Health and Safety briefings on the types of contaminants known to exist on-site and the possibility of unexpected contamination. Procedures should be in place in the event that unexpected contamination is encountered. Contractors should be provided with personal protective equipment (PPE) appropriate for the contamination expected.	To be confirmed in detailed CEMP	To be confirmed in detailed CEMP

Topic	Potential Impact	Embedded Mitigation & Site Specific Mitigation	Monitoring Requirements	Responsibility
	contact, ingestion, and inhalation of vapours.			
	Exposure of soils during removal of existing hardstanding and increased potential for leaching and infiltration into groundwater	Sequencing of the earthworks to minimise the amount of soil exposed at any one time.	To be confirmed in detailed CEMP	To be confirmed in detailed CEMP
WFD	General Good Practice Guidance	Pollution Prevention Guidelines (PPG) and Guidance for Pollution Prevention (GPP). The PPG/GPPs listed below are of particular relevance to the proposed scheme: PPG1: Understanding your environmental responsibilities - good environmental practices; PPG 3: Use and design of oil separators in surface water drainage systems; GPP 5: Works and maintenance in or near water; PPG 6: Working at construction and demolition sites; GPP 8: Safe storage and disposal of used oils; PPG 18: Managing fire water and major spillages; GPP 21: Pollution incident response planning; and GPP 22: Dealing with spills.	To be confirmed in detail in WFD Assessment	To be confirmed in detail in WFD Assessment
	Control of sediment runoff	Best practice will be adopted in line with GPP 5 ¹ to minimise the risk of silt pollution to nearby watercourses during construction activities.	To be confirmed in detailed CEMP	To be confirmed in detailed CEMP

¹ NRW, NIEA, & SEPA (2018), *Guidance for Pollution Prevention: Works and maintenance in or near water: GPP 5.*

Topic	Potential Impact	Embedded Mitigation & Site Specific Mitigation	Monitoring Requirements	Responsibility
		This will involve the identification of potential sources and pathways to Kirkby Brook and Simondswood Brook in the WFD catchment Simonswood Brook, and the River Alt in the WFD catchment Alt US Bull Bridge, and the application of appropriate measures, where necessary, to avoid or control silt runoff. this may include: • seeding or covering exposed ground and sediment stockpiles; • only removing vegetation from areas that need to be exposed in the near future; • minimising the amount of time soil stockpiles are exposed for; • all plant and wheel washing to be carried out in a designated area at least 10 m from any water body or surface drain; • runoff to be collected in lagoons or settlement tanks (or similar) to allow suspended solids to settle and be removed to appropriate levels before discharge to the nearby watercourse; • any runoff water containing silt or other pollutants to be treated appropriately before discharge back to the water environment.		
	Spillages	A pollution risk assessment will be carried out for the proposed site ahead of construction, considering both the storage and transportation of materials used. A pollution incident response plan (see GPP 21²) is to be compiled to identify the specific measures needed to reduce the likelihood of a spillage happening, and to minimise the impact of any spills that may occur.	To be confirmed in detailed CEMP	To be confirmed in detailed CEMP

² NRW, NIEA, & SEPA (2017), *Guidance for Pollution Prevention: Pollution Incident Response Plans: GPP 21*.

Topic	Potential Impact	Embedded Mitigation & Site Specific Mitigation	Monitoring Requirements	Responsibility
	Managing contamination risk	The site history and previous ground investigation data suggest that the made ground beneath the site may contain a range of contaminants including localised areas of asbestos and Polycyclic aromatic hydrocarbons (PAHs). Whilst it is not anticipated that the geo-environmental risks at the proposed scheme pose a risk to the water environment appropriate controls and good practice measures should be implemented through the construction contractors CEMP. This should include further ground investigation to help inform a detailed risk assessment, remediation options appraisal and remediation strategy (if appropriate) and inspection of materials for any evidence of further contamination. Should any further evidence of contamination be identified this should be further assessed and tested as appropriate to enable any required additional controls/works to be determined. Such measures should mitigate potential environmental impacts associated with the potential mobilisation of contaminated soils at the site during construction.	To be confirmed in detailed CEMP	To be confirmed in detailed CEMP
	Minimising disturbance	Appropriate measures should be included within the work method statements to reduce potential environmental impacts of in-channel and marginal construction activities. This should include measures to: • minimise the footprint of any in-channel works as far as reasonable possible to reduce the degree of physical disturbance of the riverbed and banks; • reinstate any impacted marginal habitats where necessary; reduce associated noise, vibration, and any artificial lighting impacts where possible; and • control the timing of works so that any in-channel works are programmed to take place outside of sensitive times of year for juvenile fish and migratory fish.	To be confirmed in detailed CEMP	To be confirmed in detailed CEMP
	Biosecurity	Good biosecurity practices are vital for preventing the spread of invasive non-native species and pathogens such as waterborne fish diseases. Measures should be adopted so that the construction activities do not lead to the spread of invasive non-native species or pathogens.	To be confirmed in detailed CEMP	To be confirmed in detailed CEMP

Topic	Potential Impact	Embedded Mitigation & Site Specific Mitigation	Monitoring Requirements	Responsibility
		All site personnel and site visitors should be informed that Japanese knotweed is present within the vicinity of the proposed scheme and that they are jointly responsible for preventing its spread/impacts. They should be made aware of what this species looks like, so they can avoid it where possible and take appropriate actions. Biosecurity measures will be in place to prevent the spread of Japanese knotweed throughout the construction area. This will include clearing and disinfection of (but not limited to): all equipment; footwear; clothing; vehicle parts (wheels, tracks, buckets); pumps; pipework; any other equipment in contact with the watercourse of river banks.		
Heritage	Impacts to original structures forming part of the Liverpool and Bury railway line	Photographic building recording of Underbridge 55 and 56 prior to the start of work	To be confirmed in detailed CEMP	To be confirmed in detailed CEMP
	Impact to buried remains associated with Tanpit House and Mercer's Delf quarry and any other previously unrecorded archaeological remains located within the proposed station site	Archaeological evaluation carried out across the Headbolt Lane site to test the presence, nature, extent and significance of remains of Tanpit House and any other previously unrecorded archaeological remains, as well as inform any further mitigation required.	To be confirmed in detailed CEMP and WSI	To be confirmed in detailed CEMP and WSI

4 Monitoring

4.1 Checking and Corrective Action

4.1.1 Monitoring

To meet the requirement of the CEMP, environmental monitoring of the proposed Scheme and its impacts will be undertaken throughout the construction phase. In particular, the following requirements of the CEMP will be closely monitored:

- licences and approvals;
- air quality and dust monitoring;
- noise and vibration monitoring; and
- groundwater monitoring.

As part of the monitoring process the contractor will allocate a designated Environmental Site Officer (ESO), who will be present on the Site throughout the construction process and when new activities are commencing. The ESO will observe the Site activities and report any deviations from the CEMP in a log book, along with the action taken and general conditions at the time. The Applicant will be informed of any deviations from the CEMP as soon as possible following identification of such issues. The ESO would also act as day-to-day contact with Local Authority and other regulatory agencies such as the EA.

During construction, the ESO will conduct daily walkover surveys to ensure all requirements of the CEMP are being met. Action from these surveys will be documented on an Environmental Action Schedule, discussed with the Site Foreman for programming requirements and issued weekly for actioning.

The Environmental Manager/ Project Manager will arrange regular formal inspections to ensure the requirements of the CEMP are being met. After completion of the works, the ESO will conduct a final review.

4.1.2 Records

The Environmental Manager/ Project Manager will retain records of environmental monitoring and implementation of the CEMP. This will allow provision of evidence that the CEMP is being implemented effectively. Their records will include:

- Environmental Action Schedule;
- licenses and approvals;
- results of inspections by Environmental Manager/ Project Manager;
- other environmental surveys and investigations; and
- environmental equipment test records.

The CEMP will be updated as necessary, with a full review as required throughout the construction period.