Consultation Response from: KC Environmental Health (Pollution & Noise Control)		
2026/91312 Heckmondwike Hub Bus Station, Royle Fold, Heckmondwike, WF16 0HW		
Discharge of details reserved by conditions 9 (Remediation Strategy), 11 (Validation Report) and 13 (landscaping) on previous permission 2022/92471 for redevelopment of Heckmondwike Bus Station including a new concourse building with waiting room, Changing Places WC, driver offices, 6 No. bus stands, landscaping, and associated works		
Date Responded: 23/07/2026	**Responding Officer: KB**	**Responding Ref: WK/202615900**

Our comments relate to matters within the remit of Environmental Health only.

The applicant has applied to discharge Conditions 9 (Remediation Strategy) and 11 (Validation Report) on the previous permission (2022/92471). Condition 9 (Remediation Statement) was successfully discharged on 2nd October 2024 as part of previous application 2024/91722 (Our Ref: WK/202431157). We are now able to provide comment on Condition 11 (Validation Report).

Condition 11 – Validation Report

For the purpose of discharging condition 11 (Validation Report), several documents have been received and will be reviewed separately.

- Letter dated 15th May 2025 from GeoDyne Geotechnical & Environmental Consultants. Re: Royle Fold Bus Hub, Heckmondwike – Gas Membrane Validation Report (Ref: 44277/BP.
- WSP Technical note | RE: Materials Management – Acceptability of IBAA as backfill in drainage trenches dated 20 November 2025.
- Groundworks Validation Report by Evolve Geo-Environmental dated 30th September 2025. Ref: EGE-24-08-07-05

The reports include some geotechnical information, which is outside the remit of Environmental Health, this consultation response therefore only relates to the land contamination aspect of the reports.

We have read and reviewed the reports and make the following observations.

Letter dated 15th May 2025 from GeoDyne Geotechnical & Environmental Consultants. Re: Royle Fold Bus Hub, Heckmondwike – Gas Membrane Validation Report (Ref: 44277/BP.

The new Royle Fold Bus Hub (Heckmondwike Hub) development required ground gas protection measures due to ground conditions classified by others as Characteristic Situation 2 (CS2) in accordance with BS 8485:2015+A1:2019. Independent verification of the installed gas protection system was undertaken by GeoDyne Ltd.

The following membrane systems were installed:

- Juta GP5 Gas Barrier Membrane installed within the central building footprint.
- Juta Titanbond Membrane installed around the perimeter and beneath footings where construction requirements dictated a pre-applied membrane solution.

GeoDyne confirm that both products comply with the performance requirements of BS 8485:2015+A1:2019 and are considered suitable for use within a CS2 gas protection scenario.

Membrane validation inspections on two occasions (24th April 2025 and 28th April 2025). The second visit was a completion inspection. The inspections included assessment of membrane continuity and coverage, welded and taped joints, service penetrations and sealing details, repairs to any defects identified during installation and an overall assessment of the installation quality and compliance with the Ground Gas Verification Plan.

During installation, six minor defects were identified, including punctures, cuts, weld defects and capillary failures. All defects were repaired by PAGEO using approved membrane repair methods and were subsequently inspected and accepted by GeoDyne.

GeoDyne concluded that the gas membranes appeared to have been appropriately installed and, based on the areas inspected, were generally in accordance with the Ground Gas Verification Plan and provided continuity of the gas protection system.

It was noted by GeoDyne that some service ducts were intended to receive smaller service pipes at a later construction stage. These ducts should be appropriately sealed (e.g. with closed-cell expanding foam or an approved sealing system) to prevent them acting as pathways for ground gas ingress into the building.

Comments
The installed membrane system was independently inspected and validated by GeoDyne. Subject to the continued protection of the membrane and appropriate sealing of future service duct penetrations, the gas protection measures have been found to be suitable and acceptable for the development. Based on the professional opinion of the report author, we are satisfied with the validation of the validation of the gas membrane.

WSP Technical note | RE: Materials Management – Acceptability of IBAA as backfill in drainage trenches dated 20 November 2025. Ref: 70097732

During the remediation and enabling works, approximately 350m³ of imported Type 1 material, comprising Incinerator Bottom Ash Aggregate (IBAA) sourced from Ferrybridge, was brought to site for use beneath the bus hub building and within drainage trenches. Following geotechnical assessment, the material was found unsuitable for use beneath the building and was removed from those areas. However, approximately 28.5m³ remains on site located primarily within drainage trenches and positioned under areas of hardstanding. No IBAA material is located within landscaped areas or soakaway systems.

WSP confirm that the material was placed in accordance with the requirements of Environment Agency Regulatory Position Statement (RPS 247) for the use of IBAA as pipe bedding, including limits on volume, trench dimensions, groundwater protection and location constraints. Two composite samples of the imported material (ES1 and ES2) were tested. Lead, nickel and zinc exceeded the conservative verification criteria for imported materials. However, all results remained significantly below the verification criteria for site-won material reuse under a commercial land-use scenario, which was considered more representative of

the bus station development. In addition, no asbestos fibres were detected. There was no significant hydrocarbon contamination identified. Phenols, PAHs and VOCs were generally below laboratory detection limits and there were no reports of visual or olfactory evidence of contamination.

WSP completed a human health risk assessment that concluded that the retained IBAA material poses a low risk to human health because contaminant concentrations are below commercial-use criteria, material is confined beneath hardstanding and direct exposure pathways are effectively broken by the completed development.

Consideration to controlled waters was also made and given the limited volume of material, its encapsulation beneath hardstanding and the site's low sensitivity, WSP assessed the risk to controlled waters as low.

Comments
Further to a review of the information included in the WSP Technical Note, we would concur with the professional opinion and the conclusion that there is a low risk to human health. The imported IBAA material is considered acceptable to remain on site.

Groundworks Validation Report by Evolve Geo-Environmental dated 30th September 2025. Ref: EGE-24-08-07-05

The Groundworks Validation report was prepared to verify that the ground preparation and construction work beneath the new bus hub building were completed in accordance with the project requirements and were suitable for the proposed development.

The works included the removal of existing materials and unsuitable ground beneath the building footprint, the installation of approved replacement fill materials, independent inspection, monitoring and verification during construction and validation testing and reporting to demonstrate compliance with the project specification.

Imported materials used beneath the bus hub building were sourced from Harrycroft Quarry (Tarmac) and were tested prior to use on site. Laboratory testing confirmed that no asbestos fibres were detected, no significant contamination was identified and the imported materials satisfied the acceptance criteria specified for use within the development.

Construction activities were monitored throughout April 2025, with inspections, testing and verification undertaken by specialist contractors and testing organisations on behalf of the contractor, RG Carter.

A photographic record was maintained showing filling, compaction and testing activities during the works.

The verification process confirmed that the required testing and inspection frequencies were achieved and that all imported materials were acceptable for use on site.

Evolve concluded that the earthworks and associated verification activities beneath the bus hub building had been carried out in accordance with the project requirements and were suitable for their intended use.

Comments
A review has been undertaken of the available verification documentation against the requirements of the WSP Remediation Strategy (October 2023) prepared for the Heckmondwike Bus Hub redevelopment. The remediation strategy identified ground gas protection as the principal remediation requirement, together with management of potentially contaminated made ground, materials management, verification of imported materials, and validation of completed remediation measures.

Summary
The verification reports that we have received demonstrate that the primary remediation objectives have generally been implemented and validated.

The Remediation Strategy required installation of Characteristic Situation 2 (CS2) gas protection measures comprising a gas-resistant membrane in conjunction with a structural barrier and independent verification of the installation. Independent verification undertaken by GeoDyne confirmed that gas protection membranes were installed, inspected and validated. Minor installation defects were identified, repaired and re-inspected, and the completed system was considered suitable for the required CS2 protection standard.

The Remediation Strategy required appropriate management and verification of imported and reused materials. The subsequent Materials Management assessment documented the use of imported IBAA material, quantified the volume remaining within drainage trenches and concluded that the material posed a low risk to human health and controlled waters and was acceptable to remain in situ. This demonstrates compliance with the strategy's materials management objectives.

The strategy required testing and verification of imported materials and validation reporting. The Groundworks Verification Report by Evolve confirmed that imported materials were tested and accepted for use, no asbestos or significant contamination was identified, and independent validation confirmed compliance with the project specification.

The Remediation Strategy specified that soft landscaped areas should comprise a geotextile demarcation layer; and a minimum 300mm thickness of verified clean cover soils (locally deepened within tree pits). There was also a requirement that these works be validated through inspection, testing and verification monitoring. We would request that confirmation of the soft landscaping cover-system be provided or that we are informed that due to the final design and landscaping arrangements that this requirement was not applicable.

Recommendations

Environmental Health have reviewed the submitted information and request that information to support the confirmation of the soft landscaping cover-system validation requirements is submitted to support Condition 11.