

Design Risk Assessments		Hazards and Risks Register					<div><div>KODA</div><div>CIVIL & STRUCTURAL ENGINEERS</div></div>					
Client Name :											Bury Council	
Project :											Ash Grove Alternative Provision (AP) Academy	
Project No:											240171	
Revision											P01	
Date of Last Review:		19.09.2026		This Designer's Hazard Register has been prepared in accordance with the Construction (Design and Management) Regulations 2015, and using the principles of E.R.I.C and A.L.A.R.P.								
Risk No.	Risk Owner	Work Activity/Element	Risk Identified	Design Considerations	Progress/Action Taken (Current Status)	Final Design Option	Period	Potential Risk	Residual Risk	Control Measures/Further Action to be taken		
(NOTES - hidden when printed)	to record when the issue was added	Brief Description of works activity	Description of risk identified	Hazards / Risk / Time / Approvals / Installation / construction / buildability / operation and maintenance. Costs / VFM			Construction, Occupation, Demolition.	High Medium Low	High Medium Low			
1	Designer / Contractor	Variable made ground, foundation bearing and suspended ground floor	Foundations bearing in made ground or inconsistent strata could suffer total or differential settlement; unsupported excavations or local soft zones could endanger operatives and destabilise the structure.	Made ground is approximately 0.40m to 2.65m thick, with deeper weak organic soils in the north-east and bedrock depth varying across the site. Foundations must reach competent natural cohesive strata or bedrock. A conventional ground-bearing slab is unsuitable.	Phase II investigation and structural philosophy reviewed. Foundation layout, founding levels and local treatment remain subject to detailed design and formation inspection.	Reinforced-concrete pad foundations taken to a consistent competent formation, supporting a suspended 250mm reinforced-concrete ground slab with 525mm perimeter boot thickenings; local piling or ground treatment where verified necessary.	Design / Construction / Occupation	High	Low	Inspect and approve every formation before concrete placement. Remove soft, loose, organic or rubble material and replace with approved lean mix or mass concrete. Coordinate proof drilling, remediation and any local piled solution; record foundation depths and as-built treatment.		
2	Designer / Specialist Contractor	Coal-mining legacy and residual ground instability	Undetected shallow workings, seams, voids or mine entries could cause collapse, subsidence or loss of support beneath buildings and highways.	Coal seams were identified between approximately 11.30m and 27.30m. Although boreholes found no direct evidence of workings, residual instability remains and proof drilling and grouting are recommended below buildings and highways in the northern and western areas.	Coal-mining investigation completed. Specialist remediation scope and Mining Remediation Authority agreement remain outstanding.	Specialist-designed proof drilling and grouting in the identified northern and western zones, coordinated with foundations and highways; no southern stabilisation unless further evidence changes the assessment.	Design / Construction / Occupation	High	Low	Appoint a qualified mining-remediation specialist. Agree the scope with the Mining Remediation Authority. Maintain a coal-mining engineer watching brief during earthworks and excavations; stop locally if voids, coal, depressions, unusually deep fill, buried structures or mine-entry indicators are encountered.		
3	Designer / Contractor	Ground gas, contamination and asbestos in made ground	Ground gas could enter the building; lead, PAH contamination or chrysotile asbestos could expose workers and future users during earthworks or through landscaped areas.	Initial monitoring indicated CS1, but shallow coal and potential faulting lead the later mining assessment to recommend precautionary CS2 protection unless further monitoring demonstrates otherwise. Near-surface lead, PAH and trace chrysotile asbestos were recorded.	Investigation completed. Gas protection basis, hotspot delineation and remediation strategy require confirmation before construction.	Continuous CS2 gas protection unless justified otherwise by further monitoring, coordinated with penetrations and quality assurance; targeted remediation and suitable clean cover to landscaped and playing-field areas.	Design / Construction / Occupation	High	Low	Prepare and approve the remediation strategy and earthworks method statements. Protect workers, segregate and dispose of affected material lawfully, verify clean-cover depths, detail gas-membrane penetrations and joints, and inspect and validate the installed system before covering.		
4	Contractor	Shallow groundwater, excavation support and water control	Seasonally variable groundwater and seepage could flood excavations, undermine formation, trigger side collapse or create unsafe access and uncontrolled discharge.	Groundwater was encountered locally and shallow levels were recorded in some standpipes. Excavation support, water control and construction sequencing must suit actual conditions.	Groundwater observations are available; contractor methodology and temporary works design remain to be completed.	Sequenced excavations with designed support and controlled dewatering, maintaining competent formation and safe access.	Construction	High	Low	Confirm seasonal groundwater conditions before excavation. Provide designed support or safe batters, edge protection and inspection. Use controlled pumping and approved discharge; prevent softening of formation and re-inspect after flooding or prolonged exposure.		
5	Designer / Steelwork Contractor	Steel frame erection and temporary stability	The two-storey steel frame could become unstable or collapse before permanent bracing, floor diaphragms and foundations form a complete load path.	Permanent stability relies on vertical steel bracing in both principal directions and on first-floor and roof diaphragms transferring lateral actions to the braced bays.	Bracing strategy defined in principle. Connection design, erection sequence and temporary stability system remain contractor-designed.	Permanently braced S355 hot-rolled steel frame erected in a planned sequence with temporary restraint maintained until the diaphragm and all stability connections are complete.	Design / Construction	High	Low	Steelwork contractor to provide erection method, temporary stability design and sequence. Install and inspect holding-down bolts, bracing and connections before releasing cranes or temporary restraints. Do not remove temporary works until KODA's permanent load path is complete and verified.		
6	Designer / Precast Specialist	Precast hollowcore lifting, bearings and diaphragm action	Heavy planks may fall, rotate or become unstable during lifting and installation; inadequate bearings, ties, cores or topping reinforcement could prevent the completed floor or roof acting as the designed diaphragm.	The first floor and roof use 200mm hollowcore planks with 100mm structural screed topping. The specialist is responsible for unit design, plank layout, lifting, bearings, temporary stability and installation methodology; KODA details ties and diaphragm reinforcement.	Structural concept established. Specialist plank design and coordinated interface details remain outstanding.	Specialist-designed hollowcore system with verified bearings, lifting points and temporary restraint, plus coordinated broken-out core, topping, transverse and steel-to-plank tie reinforcement.	Design / Construction / Occupation	High	Low	Obtain specialist design and installation information before fabrication. Coordinate openings and services. Use an approved lift plan, exclusion zones and temporary restraints. Inspect bearings, cores, ties and reinforcement before topping pour; prohibit premature loading until required concrete strength is achieved.		
7	Designer / Specialist Contractors	Robustness, tying and disproportionate collapse	Discontinuity in horizontal or vertical ties at steel, precast, perimeter, column-splice, base or foundation interfaces could allow local damage to propagate into disproportionate collapse.	The building is Consequence Class 2b. Effective internal, peripheral and vertical tying and a continuous load path are required through the frame, precast planks, structural topping, column splices, bases and foundations.	Robustness strategy defined in principle; detailed tie forces and interfaces require coordinated design.	A continuous CC2b tying system connecting the steel frame, hollowcore diaphragms, perimeter details and foundations.	Design / Construction / Occupation	High	Low	Record the robustness strategy and tie forces on the design information. Allocate each interface to a named designer, coordinate calculations and details, and inspect reinforcement, anchors, splices and connections before concealment.		
8	Designer / Specialist Contractors	Contractor-designed elements and interface coordination	Incompatible assumptions or missing design responsibility across connections, base plates, precast units, temporary works, SFS, curtain walling, masonry supports, roof deck, lift, barriers and anchors could cause local failure or unsafe erection.	The philosophy identifies these elements as contractor-designed and dependent on coordinated loads, movements, tolerances, fire, durability and support conditions.	Design responsibility schedule and final specialist submissions are to be completed.	Coordinated specialist designs based on a common set of loads, reactions, movements and interface details, with defined review and approval hold points.	Design / Construction / Occupation	High	Low	Maintain a design responsibility matrix and specialist-submission schedule. Issue current loads and movements, check interfaces and tolerances, resolve clashes, and prohibit fabrication or installation before accepted calculations, drawings and product data are available.		
9	Designer / Client / M&E Designer	Incorrect or late loading information	Uncoordinated room use, partitions, plant, water tanks, PV, services or roof changes could overload members, planks, connections or foundations and lead to excessive vibration or deflection.	Outline loads include classrooms 3.0kN/m² plus tanks, PV, services or roof changes could overload members, planks, connections or foundations and lead to excessive vibration or deflection.	Preliminary load schedule established; final equipment, tank, PV and service loads and locations require confirmation.	Structure designed to an approved, room-specific loading plan with concentrated loads, dynamic effects and support zones clearly identified.	Design / Construction / Occupation	High	Low	Client, architect and M&E designer to confirm final uses, layouts, weights, centres of gravity, maintenance loads and vibration criteria before design freeze. Refer all subsequent changes to the structural engineer and mark permissible loads in the handover information.		