

Project Sustainability Matrix: Design Stage Overview			
Royal Berkshire Archives Extension		Location: 9 Coley Avenue, Reading, RG1 6AF Project team: Client: West Berkshire Council Architect: Quattro Design Architects MEP: Proair Consultants Structures/Civil: KRP Sustainability: Method Consulting Main Contractor: TBC	
Management, Procurement and Process 	Health and Wellbeing 	Energy 	Water and Flooding 
The building user has been regularly consulted and involved in project discussions. The appointed contractor shall operate with an ISO 14001 certification covering their main operations. Consideration of construction site impacts: - Contractor will monitor and set targets for energy use, water consumption and delivery/waste transportation as a result of all construction process. - Contractor will implement best practice pollution prevention policies in line with PPG6. - A CCS score of at least 39 will be targeted by the main contractor, demonstrating responsible construction management. Building User Guides and Training Schedules will be developed for both non-technical building occupiers and technical facilities managers to ensure efficient and successful operation. For at least the first 12 months after handover, aftercare support will be provided, energy/water consumption will be monitored, and commissioning will occur.	Internal and external lighting will provide adequate illuminance levels. The internal lighting layout is appropriately zoned and will have manual switches for occupant control. A high level of indoor air quality will be maintained through the use of low VOC-emitting finishes and a mechanical ventilation system supplying fresh air. Safety and security measures have been included in the design: - 2no. IP65 colour CCTV cameras - Vandal resistant access control card reader - IP65 keypad to strong room There will be a no-smoking outdoor amenity area with seating for building users to enjoy. Due to the nature of the building as an unoccupied storage space, the need for high levels of daylighting, view out and glare control is not relevant.	The building has been designed to meet Part L energy regulations and is expected to have an EPC A rating. - Sub-metering will be in place for power and lighting in the new extension, and will be connected to the BMS. Energy efficient lighting: - Internal lighting will be connected to PIR sensors. - External lighting shall be photocell and time clock controlled, automatically dimming 10 minutes after last activation. Clean and renewable energy will be generated on-site with an extensive rooftop PV array. No unregulated energy consuming systems will be present in the extension. Supply and extract ductwork will be thermally insulated. Due to the storage of archives, the internal environment must be sensitively controlled which prevents the use of natural ventilation.	No sanitary facilities or WC areas have been included in the new extension which is to be unoccupied and therefore no additional water will be consumed. The only unregulated water use will be irrigation for planting, and this will be met solely via precipitation. The development is located in flood zone 1, at low risk of flooding by rivers, sea, groundwater or reservoirs. A site-specific drainage plan with SuDS has been produced: - New storm drains to mitigate flood risk - 12m long underground attenuation system to minimise surface water run-off.
Materials and Supply Chain 	Waste and Pollution 	Sustainable Transport 	Land Use and Ecology 
Specification of sustainable products is prioritised: - Materials with Environmental Product Declarations - Materials with responsible sourcing certification e.g. ISO 14001, BES 6001. - All timber will be FSC/PEFC certified Embodied Carbon Life-Cycle Assessment modelling is to be conducted to assess the environmental impact of the development and identify potential carbon reduction options. Durable and resilient construction by design to minimise the need for maintenance, repair and replacement: - Robust reinforced concrete frame - Hard-wearing steel doors	Pre-Demolition Audit to be conducted, identifying opportunities for material re-use and recycling, including potential to re-use the existing steel staircase. Waste minimisation during construction: - Target set of no more than 13.3m³ / 11.1 tonnes of construction waste produced per 100m² - Dedicated areas for the separation and collection of construction waste for recycling. - Clear signage and toolbox talks on-site - Suppliers to collect delivery packaging 80% of non-hazardous construction waste will be diverted from landfill. Existing bin store - Development will not contribute to an increase in operational waste. No use of natural gas for heating/hot water in the new extension. Low-GWP refrigerant (R-32) to be used. External luminaires to comply with the Government's light pollution policy and automatically dim/switch off when not activated. Noise attenuators specified to AHUs to minimise noise pollution from the rooftop plant area.	Car travel reduced through appropriately located development. Site is located in close proximity to multiple public bus stops serving various different routes. Site has a WalkScore of 83 with proximity to a range of local amenities: - Food outlet, ATM and outdoor space within a 500m walk. - 10 minute walk to local High Street Existing covered cycle storage for visitor and staff use.	The disruption and degradation of high-ecological value undeveloped/greenfield land has been avoided as the development will be on existing hard landscaping. The existing site is not contaminated and therefore no remediation is required. An Ecologist has conducted a survey of the site, identifying the current ecological value and possibilities for ecological enhancement. Overall ecology loss will be minimised - The removal of one tree will be compensated by the planting of two trees on the site boundary. To ensure that local ecology remains considered post-handover, a Landscape and Ecology Management Plan which covers the first five years after completion will be produced for the building user.