EPM tES$_{v7}$ Environmental Sustainability Project Tracker

Tracker Guidance

The EPM tES Environmental Sustainability Project Tracker is intended to be a basket of targets for project teams.

These targets must each be addressed and explanations for any derogations or areas which are not applicable must be supplied to the Environmental Sustainability Team.

When completing this document the guidelines below should be followed:

- If the associated BREEAM credits are not being targeted an explaination should be given. Schemes which are not BREEAM certified should still aim to achieve compliance with the tracker.
- This document outlines the base targets for projects however, it is recommended that stretch targets are agreed with the Design Teams.
- There are certain areas where targets should be agreed with the relevant internal contact, the Environmental Sustainability Project Officer should be copied into all correspondence with these individuals.

Contact details can be found in the table below:

Area	Contact	Email	Telephone
Environmental Sustainability Project Officer - Tracker Document	Helen Cutts	helen.cutts@manchester.ac.uk	0161 275 0354
Energy/Water	Tony Small	tony.small@manchester.ac.uk	0161 275 4943
Travel	Julia Durkan	julia.durkan@manchester.ac.uk	0161 275 0343
Operational Waste	Simon Atkinson	simon.atkinson@manchester.ac.uk	0161 306 5963
Maintenance	Phil Lord	philip.lord@manchester.ac.uk	0161 275 2252
History & Heritage	James Hopkins	james.hopkins@manchester.ac.uk	0161 306 3075

- All derogations must be explained within the tracker document. Once approved all rows must be hidden and not deleted

- If additional project specific targets are required the following referencing system should be used: AD-ES/UO1, AD-ES/UO2 etc.
- DEFRA 2012 carbon conversion factors are used however please use current date conversion factors at time of completion.
- Planning Policy correct as of December 2013, this should be updated as necessary.

Status:

1. On Track: Progress being monitored	2. Unlikely: Work ongoing, additional work/studies/strategies required	3. Derogation: With details provided

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PROJECT NAME:	
EPM tES v7 Owner:	

The University of Manchester has made a strategic commitment towards environmental sustainability, targeting a reduction in carbon emissions of 40% by 2020. To ensure the principles of environmental sustainability are embedded across all our business operations, the University has produced this Environmental Sustainability Project Tracker (EPM tESv7) specific for new builds and major refurbishments for use during design and construction. A separate checklist for building use and aftercare will be issued by the University at the appropriate time. EPM tESv7 should be read in conjunction with the following UoM guidelines and policies:

1. EPM PM7 - Code of Practice for Design Teams;
2. The Environmental Sustainability
Plan to 2015
3. The Carbon Management Plan

Where appointed EPM tESv7 should be completed by the Environmental Sustainability Advisor (ESA) for the project. The ESA is responsible for compiling relevant information and ensuring actions are completed by the relevant project team members. Where an ESA is not appointed the Project Manager should contact the Environmental Sustainability Project Officer. EPM tESv7 must be completed* at the following key stages:-

Key Project Stages	*RIBA Equivalent*
Preparation/Brief	*Stage 0-1*
Concept Design	*Stage 2*
Developed Design	*Stage 3*
Technical Design/Production	*Stage 4*
Construction	*Stage 5*
Completion	*Stage 6*
Operation	*Stage 7*

*** EPM tES v7 must be signed off by the University's Head of Environmental Sustainability before progressing to the next key stage.**

Project Team Members			
Name	Organisation	Role / Responsibility	Timescale on Project (Start/Finish)

Please add on new team members as and when they join the team during project progression

Project Description
Main implications/impacts of project

ENERGY

	TOPIC	AIM	INDICATOR	TARGET	Minimum BREEAM Credit Targeted	ACTIONS & PROGRESS	PRIMARY RESPONSIBILITY	STATUS
ES/UO 1	**Whole of Life Costing**	To ensure that all design options that will have an effect on operational energy use are considered by the design team and UoM in the context of whole life cost rather than capital cost alone.	Presentation of options to UoM	Whole of life costed options to be presented to the University for the following design items: - HVAC servicing strategies - Glazing types and areas - Building fabric insulation levels *Options can be presented 'informally' to UoM in line with the progression of the design.*			MEP / QS	1
ES/UO 2	**Reduction of Regulated Carbon Emissions**	To ensure that reductions in carbon emissions go beyond the regulatory minimum standards.	Carbon reduction beyond Part L	**X**% reduction beyond Criterion 1 of Part L 2013			MEP	1
ES/UO 3	**Air Tight Building**	To ensure a high build quality resulting in an air tight building.	Air tightness test	Air tightness of 3(m3/hr)/m2 at 50Pa			ARCH / MEP	1
ES/UO 4	**Operational Carbon Target**	To reduce the total building carbon emissions in line with the HEFCE requirements and the University's carbon management plan.	Total CO_2 emissions target	**X** kgCO2/m2			MEP	1
ES/UO 5	**Renewable Energy**	To ensure that all renewable energy options are considered in detail, by the design team and UoM.	Renewable energy feasibility study	Provide UoM with a robust feasibility study at Stage 2 considering all renewable energy options. Study to provide whole of life costs / payback periods and pros and cons of each technology.			MEP / QS	1

WATER and DRAINAGE

	TOPIC	AIM	INDICATOR	TARGET	Minimum BREEAM Credit Targeted	ACTIONS & PROGRESS	PRIMARY RESPONSIBILITY	STATUS
ES/UO 6	**Water Usage**	To reduce the total demand of potable water.	% reduction against baseline performance	Reduce predicted water consumption by a minimum of **X**% against the BREEAM notional baseline.			ARCH	1
ES/UO 7	**Sustainable Urban Drainage (SUDs)**	To reduce storm water run-off and minimise negative environmental impact.	• Drainage calculations for pre and post development; • Minimise impervious area	1. Ensure that the new design has no greater run-off from the site than pre development following EA guidance; 2. Investigate potential of using permeable surface.			ARCH	1

WASTE and MATERIALS

	TOPIC	AIM	INDICATOR	TARGET	Minimum BREEAM Credit Targeted	ACTIONS & PROGRESS	PRIMARY RESPONSIBILITY	STATUS
ES/UO 8	**Recycling Facilities for operation**	To provide waste recycling infrastructure/facility for better management	• Site plan showing designated recycling area in development; • No individual waste bins for offices to be provided.	1. Provide internal and external recycling facilities for the following 3 waste streams: plastic bottles, cans and paper; 2. Allow for future segregation of food waste for composting; 3. Adopt an acceptable signage and alternative method to encourage the use of more centralised recycling points.			ARCH	1
ES/UO 9	**Construction Waste Management**	To reduce construction impact	• Site Waste Management Plan • Demolition Recovery Index • Quantities of waste (wt./vol.) for landfill/reuse/recycling, as demonstrated by waste logs and waste transfer certificates /receipts	1. Produce a Site Waste Management Plan; 3. Achieve a construction waste recovery/recycling rate of 75% by weight as a minimum with an aim to exceed 80%.			CONTRACTOR	1
ES/UO 10	**Recycled Materials**	To encourage the use of recycled and secondary aggregates, thereby reducing the demand for virgin material and optimising material efficiency in construction	• Calculations and supporting documentation to demonstrate a recycled content (based on materials cost).	At least 25% of the total value of construction materials derived from recycled and reused content in the products and materials used.			CIVIL / CONTRACTOR	1
ES/UO 11	**Sustainable Sourced Timber**	To ensure the specification of responsibly sourced timber for building element	• Chain of custody certificates for FSC certified	All timber to be FSC certified			ARCH / CONTRACTOR	1

TRANSPORT

	TOPIC	AIM	INDICATOR	TARGET	Minimum BREEAM Credit Targeted	ACTIONS & PROGRESS	PRIMARY RESPONSIBILITY	STATUS
ES/UO 12	**Cycle Parking**	Providing sufficient and user friendly cycle facility	• Cycle provision • Shower provision • Drying room provision	Minimum Requirements: * If existing cycle stands will be out of use due to construction works, replacement stands should be provided. * Cycle stands should be provided near the entrance of the building -1 space per 10 staff/students. This can be shared with Public Realm. (ideally 20 stands (40 spaces) as near to the entrance as possible). Additional Targets: *Canopy over the cycle stands * Shower / Changing / Drying facilities			Sustainability / ARCH	1
ES/UO 13	**Pedestrian and Cycle Access**	Enhance pedestrian safety and encourage walking and cycling	pedestrian and cycle access	Priority given to pedestrian and cycle access with high quality demarcated routes and signage/markings.			ARCH	1

BREEAM, POLLUTION and CONSTRUCTION

	TOPIC	AIM	INDICATOR	TARGET	Minimum BREEAM Credit Targeted	ACTIONS & PROGRESS	PRIMARY RESPONSIBILITY	STATUS
ES/UO 14	**BREEAM**	To achieve BREEAM accreditation as a recognised sustainability benchmark method	• BREEAM Certificate - interim at Design - final at Post Construction	BREEAM Excellent			BREEAM ASSESSOR	1
ES/UO 15	**Pollution**	Reduce impact on air quality and climate impact	• GWP/ODP refrigerants and insulants; • NOx level	1. Low GWP/ODP refrigerants and insulants 2. NOx: < 100mg/kWh delivered space heating and water energy			MEP	1
ES/UO 16	**Water Pollution**	Reduce impact on water quality	• Reduce water pollution to site drainage; • Adequate measures to drainage system to prevent the escape of chemicals to natural watercourses	1. Appropriate water pollution prevention systems (Pollution Prevention Guideline 3 and the SUDS manual); 2. Where the building has chemical/liquid gas storage areas, shut-off valves are fitted to the site drainage system to prevent the escape of chemicals to natural watercourses (in the event of a spillage).			ARCH / MEP	1
ES/UO 17	**Construction Site Impacts**	To reduce negative environmental impact of construction activities	• Monitor, report and set targets for CO2, energy and water consumption during construction. • CCS certificates	1. Monitoring logs for energy and water displayed graphically on site ; 2.Make policies to reduce this and pollution; 3. Considerate Constructors score of at least 32.			CONTRACTOR	1

BIODIVERSITY

	TOPIC	AIM	INDICATOR	TARGET	Minimum BREEAM Credit Targeted	PRIMARY RESPONSIBILITY	STATUS
ES/UO 18	**Biodiversity**	Enhance site ecology	Provision of landscaping that will enhance local biodiversity, local species, pollen-rich species	**Project specific target dependant on available area of landscaping**		ARCH	1
ES/UO 19	**Green roof**	Use of green roof to reduce surface water run off and enhance biodiversity	Green roof area	1. Green roof area 2. New species introduced		ARCH	1
ES/UO 20	**Open space**	To create a suitable microclimate for public realm	Public realm design to consider wind, light, and climatic conditions	1. At least a desktop wind microclimate study to inform design of open space; 2. Consider sun path, shading, overshadowing effect.		ARCH	1

CLIMATE CHANGE

	TOPIC	AIM	INDICATOR	TARGET	Minimum BREEAM Credit Targeted	ACTIONS & PROGRESS	PRIMARY RESPONSIBILITY	STATUS
ES/UO 21	**Climate Change Impact and Resilience**	To improve climate resilience and adaptation capacity	Examine impact of extreme events of heat wave and flooding	Climate resilience report to include: 1. all critical services and plant; 2. predicted hours of future summertime overheating (at least 2050s climatic projections); 3. flood risk that address predicted impact of climate change			MEP	1

POST OCCUPANCY EVALUATION

	TOPIC	AIM	INDICATOR	TARGET	Minimum BREEAM Credit Targeted	ACTIONS & PROGRESS	PRIMARY RESPONSIBILITY	STATUS
ES/UO 22	**Post Occupancy Evaluation**	Carry out Post Occupancy Evaluation	• Post construction monitoring records and where applicable corrective actions • At least 36 months POE after handover	1. Undertake Post Construction Audit (PCR); 2. Undertake POE for **12 / 36** months;			ARCH / MEP / CONTRACTOR / UoM	1

COMMUNICATION and RESEARCH

	TOPIC	AIM	INDICATOR	TARGET	Minimum BREEAM Credit Targeted	ACTIONS & PROGRESS	PRIMARY RESPONSIBILITY	STATUS
ES/Com 23	**Environmental Sustainability Information**	Communication with building users throughout the design, construction and operation process	• Specification of display/ demonstration areas / Website page	1. A prominent area to be provided which allows for the provision of Environmental Sustainability information, through an interactive display 2. Create a project page on the University website.			MEP / ARCH / UOM	1
ES/Com 24	**In-house expertise**	Incorporate Living Labs Projects / Draw on in-house research knowledge base	• Minutes from meetings with the University of Manchester staff to show communication	Draw on in-house expertise where applicable and/or input from the research knowledge base			ARCH / MEP / UoM	1