The Green Construction Board GCB BUILDINGS ENERGY TASKGROUP – SUMMARY OF RECOMMENDATIONS FOR EXISTING BUILDINGS* IN RESPONSE TO 2030 'MISSION'

Incentive	s and other unvers				
 Area-based regener- package improveme Fiscal incentives for requiring compliance funding condition; Finance packages to Loan Guarantees for enabling deep retroi National consumer a efficient renovation 	ation plans: based on passport/stock profiles; ints with Training + Employment opportunities deep retrofit eg reduced Stamp Duty/VAT e with protocols and verified outcomes as a leverage private and institutional investment; social landlords/ revolving retrofit funds/ fit – all compliant with standard protocols awareness programme on benefits of energy ie health, regeneration, skills + employment	 Renovation passport part of priving the priving state of the pr	roperty marketing requirement gy storage through fiscal/tariff buildings to 'Paris-proof' standard dies d on research outcomes ie y performance prediction and nainstreamed and space-optimised	 Fiscal incentives for valida Net positive retrofits to b (eg net exporters to grid) Live retrofit package com and cost options online ba Renovation Passport profit 	ted Net Zero upgrades enefit from fiscal bonus parison, installer ratings ised on Building les
Research	and Technology D	evelopment			
 Define data requirer including building er input data from EPC Generate benchmar archetypes/ typolog Generate Whole Ho package interventio Determine boundar technology systems; hybrid/hydrogen sys Identify skills gaps for training for upskillin 	ments for Building Renovation Passports hergy performance based on exg datasets eg s/Smart Meter eg disaggregated energy loads ks of current building performance of different ies through 'Passport' data protocols use packages (deep and staged) based on ns and predicted energy + emissions reduction y Coefficients of Performance for building including further research on heat pumps; stems and their distribution; storage systems or installation/ commissioning and develop g and re-skilling	 Develop and test industrialiser Standard Renovation Plans thr cost profiles and whole life pe Smart meter evolution into 'H quality information, Relative H temperature, room temperatu Develop peak demand predict management: differentiated ta Validate systems efficiencies of interoperability; benchmark en Energiesprong/net zero packa stock; case studies on techniq 	d renovation packages and validat rough performance evaluation with rformance/embodied energy calcs ome Hub': dataset including air lumidity, HW usage, ambient ure, disaggregated energy loads etw ion techniques to support demand ariffs; interoperability requirement if MVHR/ heat pumps + nergy efficiency of home appliance ges completed on up to 10% of ues, outcomes and cost model	 Live energy use info online National energy managem account data loads, electr 1 25 	e nent planning taking int ic car charging
Requiren	nents for Policy and	d Legislation			
 Set out National Ret plans and Building R Set out national Hea energy efficiency pro opportunity and hea Regulation proposal buildings stock inclu performance and en 	rofit Plan 2020-2050 based on area-based enovation Passports/ data protocols t + Energy strategy based on stimulus to ogramme for regeneration, employment Ith benefits; enhanced demand reduction s based on enhanced data profile of existing ding current and proposed total energy hissions reductions	 Set out model Thermal Energy proof' criteria for different bu Require submetering for all bu unregulated use +minimum TI Require Primary Energy and ca Set systems energy efficiency Require peak load prediction a Require evidence of adaptatic 	y Demand limits in kWh/m2 ie 'Pari ilding typologies for approvals uildings differentiating regulated/ ED levels required for property sale arbon intensity calculations performance criteria and demand profile nn resilience/ overheating mitigatic	 Require performance veri Require Primary Energy lin including all energy use Set peak demand limits to management and local en 	fication of kWh/m2 limi mits compliance ie o enable energy ergy planning

* for Background information to these Recommendations see over

and/or standard required at point of sale/letting

MAY 2020 LS

To respond to the second part of the Buildings 'Mission', on existing buildings, between December 2018 and February 2020 the Green Construction Board held two multi-stakeholder Retrofit Roundtables. Notes from the Roundtables, and summary Board reports on buildings Retrofit in May and September 2019, were reviewed and discussed at meetings of the Green Construction Board and are available as background to these Recommendations (on request). The BEIS team and Construction Products Association (supporting GCB) were consistently represented and participated. These recommendations were adopted at the Green Construction Board meeting on 14th May 2020 to be put forward to BEIS as their response, and to coincide with, and inform, current calls for green stimulus policies which deliver short and long-run economic multipliers after the 2020 COVID-19 pandemic.

Note: Since the Board was established in 2011, existing buildings' retrofit has been a consistent priority in our work and outputs include commissioning in 2013 a scoping report on an "Existing Buildings Support Mechanism"; and in 2015 commissioning and supporting the "Solid Wall Insulation" report by the then Chief Construction Advisor Peter Hansford.

Referenced above:

"Notes of Retrofit Roundtable held at BEIS on 12th December 2018"

"Board Paper: Report and suggested Retrofit Action Plan" May 2019

"Board Paper: Priorities for addressing the Energy Efficiency of our existing buildings" September 2019

"Notes of Expert Roundtable on Retrofit for Net Zero Carbon – the issues of Energy Supply and Demand Reduction" co-hosted with UCL Energy Institute February 2020