

ANNEX 1

Mitigation

Theme	Ref	CCLLES Action	Led by:	Resources	Impact (To)	Start Yr	Actions Required in 2017/18	Progress in Q2 Jul-Sep (2018/18)	RAG
Cross Cutting	M1	Consider how best to use spatial plans and related levers in order to achieve compliance with GM's current and 2020+ low carbon aspirations, and advocate increasing well-connected, dense urban development.	GMCA PHE Teams	GMCA revenue	Long: 1 million	2016	Continue to provide technical and policy input to Greater Manchester Spatial Framework for low carbon and environment,	Continued activity to review energy/carbon policy, District Heating Policy and natural environment. Resource provided through EA on each working group. UKGBC also advising on energy/carbon policy on best practice approach. UKGBC also working on Core Cities building standards project which will inform GMSF.	G
Energy	M2	Undertake detailed master-planning and design a long term energy infrastructure plan and map for Greater Manchester through the Energy System Catapult's Smart Systems and Heat Programme.	GMCA Env Team, DECC, ESC	ETi/GMCA Funding	Long: 1 million	2016	Provide support to the Bury Energy Path Network Pilot and, if appropriate, consider its wider implementation across Greater Manchester.	Presentation on emerging energy model given to GM Energy Group. Further model runs to be undertaken between now and November and then engagements event held with local stakeholders. This work will tie into the Mayor's Green Summit.	G
Energy	M3	Deliver a large-scale demonstrator of smart heat systems within Greater Manchester to test and explore the viability of the Masterplan.	GMCA ESC, DECC	DECC, ERDF	5,000	2016/8	Define the scope and scale of a large scale demonstrators linked to the ERDF SUD call for project funding while ensuring climate risk impacts are understood and mitigated	There have been 5 submissions to DCLG in response to the ERDF call. These encompass domestic, whole house retrofit and end to end energy system demonstrators. We will undertake readvertisement of the call to encourage more applications.	G
Energy	M4	Deliver current pilot of heat pump installation in social homes, supporting tenants with the change, and extend pilot to deploy a wider demonstration of integrated heat pumps, heat networks and demand aggregation in domestic dwellings to provide a financially viable offer to private landlords and owners.	GMCA Env Team, NEDO, Hitachi, & landlords	NEDO, DECC, Hitachi, ALMOs	3,600	2015	Extend monitoring of existing NEDO funded pilot. Scope, develop and define delivery of an extended demonstrator through ERDF in conjunction with external partners (i.e. Energy Systems Catapult).	The data collection exercise is has been agreed with Hitachi with data collection proposed to be extended. Discussions continue with NEDO partners and beyond to extend and re-invigour the installed assets.	G
Energy	M5	Deliver existing PV projects and establish a pipeline of local authority-lead photovoltaic installations	LAs and LCPDU	Cap Ex Inv Fund	183,300	2015	Further establish PV installation programme for local authorities.	No further installations have been completed however ERDF submissions and other projects do include PV within them.	A
Energy	M6	Complete Local Authority lead onshore wind assessments and deliver a programme of onshore wind investments. Identify and progress alternative electricity generation including biomass, hydro etc.	LAs, Peel & GMCA	Cap Ex, Inv Fund	88,000	2016	Support the development of communal ground source heat pump and hybrid solutions from feasibility to business case and deployment. Explore and identify alternative low carbon energy generation solutions, including lobbying for onshore wind where appropriate.	3 RSLs have received support through an ERDF SUDs submission, which is pending a decision to proceed from DCLG. The GM Environment Team along with ESC colleagues continue to use tools available to inform and influence decision processes.	G

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Energy	M7	Reach financial close on Mcr Civic Qtr project. Complete business case work on projects currently in or just completed feasibility stage	LAs, LCPDU	ERDF Inv Fund, Cap ex, ELENA,	180,000	2017	Reach financial close on the Mcr Civic Qtr, Trafford City Gateway and Mcr St John's projects. Complete business case development work on projects where feasibility stage complete or in progress, and support deployment of the Low Carbon Fund to support commercialisation of these projects. Undertake Regional Centre mapping.	<u>Civic Quarter</u> - Financial close / start of construction programmed for March 2018, followed by circa 18 month build. <u>Manchester Piccadilly</u> - detailed design and business case complete October 2017. <u>Trafford Gateway</u> - current best estimate of start of construction Q1 2019. <u>Manchester OPEN</u> - detailed design and business case consultancy support procurement complete, kick off September 2017, completion March 2018. <u>Manchester St Johns</u> - business case complete, PDU supporting with project funding. Estimated start of construction Q2 2018.	A	
Energy	M8	Review existing research, assess the potential for and continue to promote deployment of alternative small, mid and commercial heat energy across GM. If viable, develop appropriate schemes.	LCPDU, Local Authorities	Cap Ex, Inv Fund	340,200	2017	Complete feasibility for water source heat pump application at Salford Charlestown Investigate water source heat generation.	Charlestown feasibility work completion October 2017.	G	AT? In AB abser
Energy	M9	Complete business case for Stockport, Rochdale and Oldham LED lighting. Introduce graphene product into programme. Upgrade traffic signals.	LAs LCPDU, TfGM	ELENA, Salix	117,300	2015	Reach financial close on the Stockport LED project and complete the business case for Rochdale and Oldham	PDU providing support to Stockport Street Lighting through ELENA. Outline programme is to reach financial close by Oct/Nov 2017, with start on site by Dec 2017/Jan 2018.	G	
Energy	M10	Deploy a smart distribution system (DMS) with dedicated communication network for the whole ENW network by 2018 and deliver a £50 million programme of smart network changes and integrated storage pilots to promote connection of decentralised energy, and deploy smart meters for gas and electricity.	ENWL, Schneider GMCA, MCC, Carbon Co-op, retailers	Private Sector ENWL, OFGEM, EU Horizon	495,600	2016	Complete the rollout of DMS SCADA system. Complete the SMART Streets and RESPONF Programmes. Increase resources to support SM rollout.	tbc	G	
Energy	M11	Expand and extend community energy partnership initiatives across the whole of Greater Manchester	GMCA – Oldham MBC	DECC, GMCA capacity	Enabling	2016	Deliver INTERREG COALESCCE project over 4 years - 7 partners - to boost community energy sector in GM	COALESCCE Semester 1 is complete. Findings of interviews with community energy organisations/suppliers/installers and consultants in GM collated. Semester 2 now underway with an analysis of the local and national policy landscape influencing the community energy sector and exploring of the training and educational offer to the sector.	G	

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Energy	M12	Develop alternatives to existing energy systems, including hydrogen and other storage initiatives	GMCA, Universities, Viridor	EU Funds and UK Research	Enabling	2016	Support the development and delivery of storage initiatives across GM buildings and energy sectors and work with MMU on Hydrogen Fuel Cell Project.	2 commercial scale storage projects are being developed, with smaller scale domestic projects (15-30 units per project) also being developed across multiple districts	G
Energy	M13	Seek to identify and accelerate energy generation schemes that the private sector and community groups could bring forward	GMCA Env Team	GMCA, DECC	Enabling	2017	Support deployment of Low Carbon Fund to facilitate delivery of generation schemes	Kick off meeting with fund manager 19th September.	G
Buildings	M14	Work with commercial building owners and major occupiers to increase commercial building retrofit e.g. through access to finance and improving transparency of real energy performance.	LAs, Private sector partners	GMCA cap ex Revenue & ERDF	30,200	2016	Influence and support deployment through Evergreen 2	Tbc	A
Buildings	M15	Introduce and facilitate a locally-delivered education programme for commercial building owners, investors and financiers on investment risks arising from poor energy/environmental performance, and the business case for delivering improvements	GMCA and UK Green Buildings Council	GMCA revenue	Enabling	2016	Host a Commercial Buildings event and define and if appropriate develop a Low Carbon Buildings Award for GM.	Further consideration of a commercial building award and/or workshop still to be developed. An event is taking place in October in conjunction with UKGBC to promote domestic retrofit. Local SMEs are invited to this.	A
Buildings	M16	Identify and deliver programmes to replace poorly performing building stock with low carbon development, particularly where this can also address ill health, poverty and productivity challenges.	GMCA	ERDF, Inv Fund	MID: 250,000	2017	Identify new routes/new vehicles to accelerate new housing development.	TBC	A
Buildings	M17	Identify and deliver programmes to develop low carbon stock and energy efficient infrastructure particularly on previously used and brown field land	GMCA/LA Districts/Planning & Housing	ERDF, Inv Fund	MID: 250,000	2016	Consider as part of GMSF consultation and local plan development. Identify pilot energy generation and storage projects on local authority owned land.	GMSF Allocations being revisited and concept plans being developed. Where there are opportunities to maximise infrastructure these will be considered (particularly new district heating networks).	A
Buildings	M18	Complete existing and support the delivery of future national domestic energy efficiency and fuel poverty schemes e.g. ECO. Work with Health colleagues to establish new schemes and initiatives.	GMCA, ECO, DECC, Health	ECO, Landlords, Health	31,900	2015	Launch a Local Energy Advice Programme for GM. Provide an ECO and ECO Flexibility Eligibility Offer for GM. Assist Health and Housing Colleagues in the development of a Home Improvement Agency model.	LEAP has been successfully piloted in Tameside. Proposal for LEAP has been approved by the CA. 8 of the 10 GM LAs will be utilising LEAP, the programme is scheduled to be rolled out Sept/Oct 2017.	G
Buildings	M19	Seek agreement to develop and deliver a £6 million Salix matched recycling fund for energy efficiency in Local Authority owned buildings	GMCA LCPDU	SALIX, local authorities	84,600	2015	Influence key decision makers to obtain approval to establish a 0% recycling fund capable of supporting energy and utility efficiency measures.	No progress in Quarter	A

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Buildings	M20	Work with partners on similar programmes in schools and other public sector estates.	LCPDU, Public sector	SALIX, public sector match		2016	Coordinate the delivery of energy efficiency school programmes.	No further update from the districts on their progress.	R
Buildings	M21	Consider a campaign to better enforce existing building standards, licensing and regulation across Greater Manchester's building stock	Local authorities	GMCA and LA revenue	MID: 1 million	2018	Consider sustainable design as part of GMSF consultation. Investigate potential for a Core Cities approach to unified building standards around planning/raising awareness.	Resource is being provided from GM Environment team to feed into UKGBC building standards project. Meetings held with UKGBC	A
SCP	M22	Support businesses, organisations and people to be more resource efficient by doubling the impact of resource efficiency support to SMEs, and develop complimentary services within the existing offer	BGH	ERDF	125,000	2016	Ensure the new Carbon Reduction Project can deliver the high number of business assist and realise the CO2 savings, this will include deployment of the small scale capital grants programme	4 Quick win workshops have been delivered in Stockport, Bolton, Wigan and Salford, a further 2 carbon reduction and 2 LCEGS sector events have been held attracting ~ 100 delegates	A
SCP	M23	Increase the sustainability of the waste collected from homes, by Reducing Void capacity within the Municipal Waste Collection System, Increasing the value of recyclates / energy removed from the waste stream and Increasing kerbside collection recycling rates by communication, reducing residual waste capacity/void space and proportionate enforcement to contribute to an overall Greater Manchester recycling rate of 50%.	GMWDA	GMWDA budget	121,700	2016	GMWDA Behavioural Change & Communications Strategy to be implemented which focuses on key areas to work with our partners to increase recycling, reduced contaminate and pilot new schemes to raise awareness	A review of key areas within the Communication Strategy, including contamination, campaigns and education services is reaching conclusion. Work is on-going on the road-map to 60% recycling rate and phase 1 of the waste composition analysis is due to commence in October.	G
SCP	M24	Improve shared services by developing Household Waste Recycling Centres to increase recycling, composting and Diversion from Landfill, to 81.3% in 2015/16, 82% in 2016/17 and 85% in 2017/18. Undertake targeted campaigns to around 10% of GM households	GMWDA	GMWDA budget		2015	Develop new ways of working at the HWRCs to increase recycling, composting and diversion from landfill	With the Authority exiting its PFI Contract, work is on-going both in relation to the run-off contract (next 18 months) and in the re-procurement of new waste services (from April 2019) to increase both diversion and recycling rates.	A
Natural Capital	M25	Plant 3m trees across Greater Manchester by 2035 as part of the City of Trees, to create shade, manage water and sequester carbon.	CoT, LAs, MAG	Grant, Private	50,000	2015	Continue tree planting programme with a focus on water management. Deliver Defra schools tree planting project. Secure resources to develop GM Tree and Woodland Strategy. Continue to develop City Forest Park. Fundraise for city centre tree project. Developing Green Connections and how best to engage public.	Delivery in progress of Prestwich High Street SuDS enabled street tree project. Upper catchment tree NFM planting project for Crompton Moor being developed. Major GI seminar for development professionals – 19th September.	G

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Natural Capital	M26	Improve the management of our key CO ₂ sinks, targeting activity on our key habitats – such as lowland and upland peat bogs	NCG partnership	NCG partnership	20,000	2016	Agree with EA next steps for Natural Course project and opportunities to use Natural Course external assistance budget.	Carbon Landscape project to be launched 28.09.17. Irwell catchment partners developing peatland restoration projects in response to recent DEFRA funding opportunities. City of Trees and partners developing restoration project at Crompton Moor.	A
Sector & Skills	M27	Use inward investment activities to attract businesses most likely to deliver carbon efficient GVA growth, by meeting Greater Manchester's resource and service needs with the least carbon footprint	BGH / MIDAS	Revenue budget	Enabling	2015	Investment Proposition Material to be developed for Heat Networks and Smart Grid Offers.	A tender has been let to develop the investment propositions	G
Transport	M28	Deliver new infrastructure to cut emissions, including Cross City Bus, Leigh Salford Manchester Busway, Rail Electrification and Cycling Infrastructure expansion and optimise use of new metrolink lines	TfGM	TfGM cap ex	120,120	2015	Renewals planned for multiple Metrolink lines.	<ul style="list-style-type: none"> • Metrolink patronage on track to hit 40m by the end of the calendar year • TPL extension ahead of schedule • Bolton Interchange; completion certified on main construction contract. • Effective travel demand management around Northern industrial action, Bolton blockade and Moses Gate collapse. • Stockport interchange in early design phase. • Wigan - Saddle Gyratory cycle consultation recieved very positive response. £2.1m scheme. 	G
Transport	M29	Reducing Emissions from Buses on Key Urban Corridors by setting minimum standards for bus vehicles using the Cross-city Bus Infrastructure and future bus priority schemes, Identify cost-effective ways of accelerating the replacement of pre Euro IV buses and seek to establish consistent bus emissions standards across GM	TfGM	TfGM revenue	MID: 0.2 million	2015	The Bus Services Bill gained Royal Assent during April, which will allow the elected Mayor of Greater Manchester to consider significant changes to the way bus services are managed.	<ul style="list-style-type: none"> • EV Bus Shudehill Trial. • Oxford road scheme launch in September • £3.3 million for bus stop upgrades for GM – GD3 • 27% increase in busway patronage on 2016 	G
Transport	M30	Stimulating the uptake of ULEVs, by making the case for funding to stimulate deployment of electric vehicles, aiming to have 40,000 registered in GM by 2020, and investigate the potential to introduce joint procurement and common travel policies for GM's public sector	Local Authorities, TfGM	TfGM and local authority revenue	282,570	2016	<p>GMEV commercialisation expected to be completed this year.</p> <p>Further funding from DEFRA targeted at specific fleets expected later this year. Outcomes from National AQ strategy expected, discussions around additional funding</p>	<p>Over 1800 registered vehicles, top four districts approaching 250 vehicles.</p> <p>GMEV network usage recovering over summer, dip due to contractor miscommunication.</p>	G

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Transport	M31	Demonstrate the potential of alternative fuel transport, aiming to achieve regionally/nationally compatible solutions	TfGM, Universities	INTERREG,	enabling	2017/8	Plans to submit bids to ERDF to contract a hydrogen station at the airport. Encourage uptake of H vehicles at the airport and local businesses - DHL & Amazon.	Low emission HV study commenced in Sept. Go Ultra Low EV public event and business briefings planned for Q3.	G
Transport	M32	Work with local authorities to set stricter emission standards for taxis and consider clean air zones	TfGM, Las	TfGM & LA revenue	5,000	2016	Understand baseline of taxi standards and gain vehicle fleet data from all LAs., Propose universal GM standard going forward in a report. Aim to secure funding from OLEV for ULEV taxi subsidy and infrastructure. Consider outcomes of national AQ strategy regarding taxis and support available for alternative fuels.	Since DEFRA report on Air Quality ('UK plan for tackling roadside nitrogen dioxide concentrations') investigation and discussions on response has been renewed. Paper submitted to CA, approval to investigate further joint working on standards. Bolton now entering review. Further meetings with LEVC, possible future event in Q3 to promote new electric hackney cab.	G
Transport	M33	Reducing emissions from heavy good vehicles by developing a freight and logistics strategy which will include supporting new rail or canal-served distribution centres, subject to planning conditions.	TfGM, Key freight co's	TfGM revenue and cap ex.	MID: 0.5 million	2016	Retiming trials to potentially take place at city centre sites. This will reduce pollution and congestion and reduce the number of vehicles required. Introduce delivery service plans at Local authority sites.	Retiming discussions with major retailers, Sainsburys, Morrisons and Co-op. Co-op interested in trialling re-timed deliveries into the City Centre towards the end of 2017.	A
Transport	M34	Implement mechanisms on the Key Route Network to reduce congestion and improve journey time reliability	TfGM, freight co's	TfGM	183,700.00	2016	Programme of Highways Maintenance obtained from LHA for 17/18	Congestion Plan report approved by in August. Consultation to run until the end of November with publication of congestion plan 31 Jan 2018.	G

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Cross Cutting	E1:	Develop a Climate Change Strategy for 2020+, supported by clear Targets and Plans compliant with international commitments.	GMCA Env Team, LCH.	GMCA revenue,	2018	Begin development of GM Environment Strategy (incl Climate Change) as outcome of Mayor's Green Summit	A GM Environment Charter will be developed in the run up to the Mayor Green Summit. This will form the basis of the post 2020 strategy.	G
Cross Cutting	E2:	Lobby government for greater local determination of national funds for power and heat generation, distribution, innovation, storage, demand response and reduction.	GMCA Env Team	GMCA revenue	2016	Provide input to GM Devo Deals and lobbying on national budgets.	Discussions to be held with ESC and BEIS on the development of an energy innovation zone and energy hub, working in collaboration with other LEPs in the region	G
Cross Cutting	E3:	Develop costing methodologies and investigate the potential for GM financial instruments (e.g. green bonds) to stimulate commercial property retrofit activity, and related infrastructure investment	LCPDU	GMCA revenue	2017	Remain open to opportunities to secure additional Financial investment. Investigate innovative infrastructure investment as part of Urban Pioneer project.	Urban Pioneer project plan actions for creating a Natural Capital Investment Plan scoped in more detail out including identifying key decision makers and mapping governance arrangements building on the work delivered by the UoM MiniLab.	G
Cross Cutting	E4:	Develop a comprehensive low carbon, climate change and water evidence base to inform the Greater Manchester Spatial Framework	GMCA Env Team	GMCA and EA revenue	2016	Continue to support development of the GMSF through enhanced evidence as the plan is revised over the next year.	Further work developed on natural environment targets and net gain approach with GMEU. Further work taking place to inform master planning of strategic sites. Scope being developed with NE to prioritise accessible green spaces baed on ANGSt standards. Strategic Flood Risk Assessment started by consultants.	G
Cross Cutting	E5	Review the GM and Treasury Cost benefit analysis tool to identify climate change and carbon costs, impacts and benefits	GMCA Env Team, Core Cities, DECC	DECC	2016	Complete an update of the Cost Benefit Analysis model for Treasury Green Book to include Energy efficiency and carbon reduction.	A draft updated model is being produced by the GM Research Team. The mini-lab (Uni of Manc) have been inputting into this. A draft model will be ready in Oct for further review internally and with stakeholders.	G
Cross Cutting	E6:	Identify and implement emissions trajectory planning and project impact tools in order to inform and establish robust long term targets and priorities for Greater Manchester	GMCA Env Team	WRI, Tyndall, GMCA	2016	Deliver Scatter Programme to define a low carbon trajectory to 2050 to support Mayor's Green Summit	Scatter procurement proposal agreed and work commenced on delivery	A

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Energy	E7	Build a business case for and, if viable, develop and operate a municipal energy company and supplier licence for Greater Manchester to strengthen the link between local spend and local investment	GMCA, LCPDU	GMCA revenue & Investment	2015	Explore the potential options for a GM Energy Enterprise which can deliver socio-economic benefits to GM at least risk/cost. Develop Virtual Private Wire approach to encourage links between local electricity generators and users.	Formal derogation request from ENW to Ofgem for VPW using Civic Quarter Heat Network as a pilot project was rejected. Civic Quarter team and ENW working to develop an alternative mechanism for rewarding local generation.	G
Energy	E8	Subject to viability, establish a UK-wide district energy procurement agency to support the cost effective development and delivery of heat networks.	LCPDU	BEIS	2015	Develop DEPA business case and project proposal with suitable and willing organisation specialising in procurement.	Work continuing through engagement with existing procurement framework provider - meeting planned for October 2017 to develop business plan further.	G
Energy	E9	Encourage the development of commercial and community-lead energy, including wind, heat, biomass, PV, hydro-energy and other renewable and low carbon projects through supportive planning policies and facilitated access to funding and advice.	GMCA Env Team, LAs and Partners	BEIS, DCLG (ERDF)	2018	Encourage suitable commercial and community-led energy projects to come forward for ERDF/Low Carbon Investment Fund funding.	1 Expression of interest has been submitted the ERDF focusing on community energy.	G
Energy	E10	Encourage the wider uptake of renewables in the domestic, private and wider public sector through power purchase agreements, finance and connection innovation	LCPDU	Energy Co revenues	2017	Utilise existing programmes to influence and support further development of renewable projects (i.e. SSH, ERDF SUDS). Launch a clean tariff switching campaign in 2017-18.	Energy Systems Catapult continue to collaborate with GM to develop large scale projects under the Smart Systems and Heat programme.	G
Buildings	E11	Lobby for changes to development viability assessments to ensure that occupant best value is better integrated into decision-making	GMCA	GMCA Revenue	2017	Explore options to trial through One Public Estate	No progress this quarter	A
Buildings	E12	Develop new models for deploying retrofit in domestic housing stock.	GMCA Env Team, Health	GMCA Revenue	2016	Explore potential domestic finance mechanisms to enable householders to finance energy efficiency works.	Utilising the new LEAP model for deploying retrofit in fuel poor households across GM.	G

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Buildings	E13	Develop a clear financial and policy framework to accelerate and increase low carbon opportunities being realised in new build and refurbishment activities	GMCA Environment Team	GMCA Revenue	2018	Define enhanced building standards in GMSF and assess what support developers need to achieve these. Work with National bodies to inform national policy.	Work is continuing to develop suitable policy for GMSF, working with UKGBC and looking at the work of authorities outside of GM	G
Buildings	E14	Use financial Instruments to bring derelict, previously used land back into productive use for low carbon development and energy efficient infrastructure and replace poorly performing stock	Core Investment Team	GM Investment Fund, ERDF	2017	In the absence of opportunities to undertake this through ERDF funding, further investigation of other potential financial instruments is required	No progress this quarter	A
Sustainable Production and Consumption	E15	Develop toolkits and guidance to assist businesses in improving the activities of their supply chain with the aim of reducing emissions from heavy goods vehicles.	TfGM	TfGM	2016	Tbc	Tbc	Tbc
Sustainable Production and Consumption	E16	Increase the efficiency of resource use within Local Authorities and wider GM public sector by Ensuring that Social Value clauses are included in Public Contracts, and that they are monitored and enforced	Business Growth Hub, Public Authorities.	GM Env Team, BGH	2017	Support GM SMEs to respond to tenders using GMCA Social Value Procurement Framework. Investigate the environmental benefits (resource efficiency, resilience and adaptation) which are being delivered through the LA adoption of the SV framework.	The Business Growth Hub continues to deliver textbook tendering masterclasses to GM SMEs as well as Environmental, Leadership and Workforce development support to strengthen the social value of potential local suppliers and increasing their capacity and capability to secure LA contracts.	A
Sustainable Production and Consumption	E17	Investigate and if practical support the development of a sustainable Food Board for Greater Manchester	GMCA, Stockport	Feeding GM grant	2016	Support Good Food Greater Manchester steering group and assess strategic fit against new GMCA portfolios.	Good Food Greater Manchester steering group continues to operate. Support is now being provided via MMU and Jam and Justice programme. Website to be developed.	G
Natural Capital	E18	Identify funding to support Natural Deal skills development.	NCG, Skills and Employment Partnership	Tbc	2018	Review existing programme in Lancashire and consider future funding options.	Initial green skills proposal considered by LCH Education and Skills Task group on 12th September with a recommendation to report back to LCH at next meeting.	G

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Transport	E19	Change Travel Behaviour by introducing the 'get me there' smartcard system across tram, bus and train, Introduce an integrated fares system across all modes in Greater Manchester	TfGM	TfGM	2016	TBC	Get me There card launched: Over 1000 16 to 18 get me there cards have now been issued and other new products launched.	G
Transport	E20	Encourage home and off-site working through improved Wifi and broadband use	TfGM	TfGM, Digital Funding	2018	Role transferred. TfGM role completed	Role transferred. TfGM role completed	B
Transport	E21	Work with other agencies such as the DVSA, Universities and the Police to develop interventions which encourage safe and sustainable distribution	TfGM, DVSA, Police	INTERREG bid	2016	Work with other agencies such as the DVSA, Universities and the Police to develop interventions which encourage safe and sustainable distribution	University of Manchester implementing CLOCS accreditation across all sites, particularly university expansion sites. TfGM implementing and testing on Metrolink renewals framework. Further discussions with DVSA. Two HGV/VRU fatalities in Q3. Taskforce -funding required for GMP officers.	A
Sector & Skills	E22	Provide specialist business support to drive growth in companies in the LCEGS sector. Support others to diversify into the sector, delivering positive GVA impacts and helping to reduce their carbon emissions. Include expanding virtual networks to build understanding of local capabilities and serve as a directory of suppliers for local procurement.	BGH	ERDF	2015	Continue to deliver the sector development service through the Business Growth Hub; this service ends in 2018 there is therefore a need to identify additional resources to enable this work to continue	A further 15 companies have joined the network which now runs popular quarterly networking events. Of these ~100 SMEs have received dedicated support creating 31 jobs in GM and helping to develop 4 new to firm products enabling them to grow their businesses.	G

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Sector & Skills	E23	Promote and exploit the existing low carbon sector, by Monitoring and measuring the overall growth of the sector in terms of jobs, sales and companies and raising the profile of the LCEGS sector in GM – e.g. via case studies, impact reports, GIS maps, research reports, virtual network	BGH/NE	ERDF	2016	Refresh the LCEGS Sector analysis produced in 2013/14 and promote its finding to GM and National Stakeholders	The LCEGS survey is now complete with a PR campaign planned for next quarter. There are 42,000 employed in the Sector with annual sales of £6bn across 2,400 companies. A recent District Heating event attracted over 50 delegates and MIDAS are currently developing an inward investment proposition for the sector.	G
Sector & Skills	E24	Exploit and promote the cutting edge research developed by our universities and harness the innovations that arise from it, including implementing an eco-innovation projects.	GMCA Env Team, Universities	ERDF, Horizon, EPSRC, INTERREG,	2016	Encourage suitable academic-led energy projects to come forward for ERDF. Explore opportunities for collaborative research to support policy development.	MMU have been successful in bidding for funding for the Hydrogen Centre of excellence. A number of other bids are pending decision.	G
Sector & Skills	E25	Ensure that apprenticeship and training targets are met by procured GM delivery partners, identifying the skills demands that will be required to deliver the low carbon and transitional investments planned for GM;	SEP, GM Chamber	EU Funding, potentially European Social Fund	tbc	TBC	See separate paper for progress	Tbc
Sector & Skills	E26	Work with colleges, universities and training providers to articulate needs for skills development in the GM low carbon economy, and bid for funding to deliver affordable training on low carbon building design specifically for the SME design / build sector	SEP, GM Chamber, GMCA	European Funding, potentially European Social Fund, revenue	2016	TBC		Tbc

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Sector & Skills	E27	Undertake Specific skills, competencies and training, and workforce analysis, to ensure that the right skills in the right volume are being brought forwards to deliver a low carbon economy. Prioritise CPD for existing trades to ensure that low carbon technologies can be promoted and installed, and professional and managerial competencies to identify and include carbon factors in decision making	SEP, GM Chamber, GMCA, LCH Board partners	European Funding, potentially European Social Fund, revenue	tba	Identify suitable resources to deliver this action.	No progress in quarter	G

Adaptation

Theme	Ref	Action	Led by:	Resources	Start Yr	Action Req'd in 2017/18	Progress in Q2 Jul-Sep (2017/18)	RAG
Cross Cutting	A1	Deliver Natural Course: LIFE Integrated Project to reform how catchment delivery is managed and accelerate delivery of water quality and management issues in-line with EU Water Framework Directive	EA, GMCA, UU, RT & NE	EU LIFE IP Funding and Comp ££	2015	Map Ecosystem Service opportunities across R Irwell catchment. Develop Actions to tackle diffuse urban pollution. Produce synergies report and catchment management plans. On-going River Irwell catchment ecology project. Develop proposals for Phase II of Natural Course.	TEP/Vivid Economics commissioned to deliver ESS opportunities assessment. Inception meeting on 13th September followed by initial stakeholder workshop 26th September. Project completion planned end of January 2018. Methodology for outfall survey work on River Irk developed. Scoped projects to review governance within GM water sector and evaluation of water risks associated with industrial estates project. On-going catchment ecology work by GMEU.	G
Cross Cutting	A2	Deliver RESIN Integrated Project which will put in place tools and evidence to support enhanced climate change resilience – acting as an overarching resource to inform and support many of the actions listed below	GM Environment Team, UoM, EA	EU RESIN project funding, EA capacity	2015	Continue delivery of RESIN Project	TFGM engagement continues - data harvested to support transport asset focussed risk assessment Desk studies on GM baseline around policy, research, stakeholders complete www.resin-cities.eu/resources/gm-baseline/ 2 stage crit infra GM risk assessment underway, due completion Dec 17	G
Cross Cutting	A3	Embed Natural health outcomes in GM Public health activity and wider commissioning and provisioning activity	PSR Team, GMCA Policy	GMCA revenue	2018	identify and bring together key stakeholders in public health to raise the profile of nature based interventions, investigate the potential for holding a joint workshop, support delivery of GM H&WB Strategy and work with Directors of Public Health to support LPAs on planning decision making.		G
Energy	A4	Review key energy infrastructure to assess its vulnerability to a changing climate	ENW/ GM Resilience	ENWL budget, RESIN	2017	work collaboratively with energy utility providers to understand their current vulnerability of the local energy infrastructure and consideration of future flood risk within this.		Tbc

Adaptation

Theme	Ref	Action	Led by:	Resources	Start Yr	Action Reqd in 2017/18	Progress in Q2 Jul-Sep (2017/18)	RAG
Energy	A5	Assess the impact of weather extremes on the energy balance, to ensure that it is integrated into demand forecasting and capacity planning	ENW, GM Resilience	ENWL revenue	Tbc	TBC - Use action from A4 to assess impact of changing climate on energy balance/demand forecasting		Tbc
Energy	A6	Strengthen the system to support priority customers during extreme weather incidents, especially where these result in power outages	ENW, GM Resilience	ENWL Cap ex	Tbc	TBC		Tbc
Energy	A7	Consider the development of tariffs which support vulnerable users during periods of extra power demand for heat and cooling	LCPDU (GMEC)	Energy Co revenues	2016	In the absence of a fully licenced supply company, complete due dilligence on the current ESCO market and the GM requirements for a ESCO in domestic market.	Discussions continue with key market entities to explore options which provide the capability of supporting GMs requirements for an ESCO in the domestic market. These include models which include aggregagation, DSR and grid services using trading desks and alike.	G
Buildings	A8	Embedding resilience of building stock to a changing climate via developing guidance and pilots	GMCA Policy	EA/GMCA capacity	2016	Inform future itterations of both the GMSF and planning guidance documents.	Draft GMSF policies appropriately covers resilience. To be revisited during plan revisions.	G
Buildings	A9	Integrate responses to extreme weather into key public building management systems and staff communications	GMCA Policy, Civil Contingencie s	RESIN	2018	Work collaboratively with Civil Contingencies Unit and GMCA HR Teams to define and implement protocols	not yet started	TBC
SCP	A10	Integrate climate adaptation advice into the green growth programme	GMCA/BGH	RESIN	2017	In the absence of ability to integrate adaptation into green growth programme (ERDF ineligible) consider alternative mechanisms to provide SME advice on adaptation.	not yet started	R

Adaptation

Theme	Ref	Action	Led by:	Resources	Start Yr	Action Reqd in 2017/18	Progress in Q2 Jul-Sep (2017/18)	RAG
Natural Capital	A11	Develop GM's natural environment evidence base and local priorities and consider as part of the production of GM Spatial Framework	GMEU	GMCA revenue	2016	Drafting of the ecological framework policy and supporting evidence and key diagram/map. Explore whether any amendment to the GM phase 1 habitat survey to supporting no net loss is required. Addition of targets for urban greenspace (partly relating to the city of trees) and mapping of existing accessibility to green space.	Progress update provided at last NCG meeting on 19th July on work to examine how more specific targets for the 'natural environment' could be identified for Greater Manchester. Officers were asked to feedback their comments to Gareth Bruff by the end of August 2017. GB to feedback at next meeting in November.	G
Transport	A12	Identify key risks to transport infrastructure posed by increased incidence of flooding and heat as part of Transport Strategy and Planning	TfGM	TfGM / RESIN	2017	To be undertaken as part of the RESIN Project	Workshop held with transport colleagues. Spatial data provided to UoM. See update (point 1) for Action 2 above	G
Transport	A13	Integrate requirements for shelter from extreme weather and heat into building design and transport systems as part of a sustainable design guide.	TfGM	TfGM, EU funds	2016	TfGMs internal environmental implementation plan has a requirement on project teams to review and assess the design guide and sustainable assesment tool regarding adaptation measures.	Bolton Interchange opened; incorporating ETFE, a sedum living roof and air source heat pumps to efficiently control heat inside, plus rainwater harvesting system.	G
Transport	A14	Strengthen traveller notification systems to ensure that they respond to weather risks more effectively, including air pollution risks.	TfGM	TfGM	2016	To be completed by end of 2017	Discussion with AirText operations in South East. Discovery phase of Air Quality website begun.	G

Culture and Communication

Theme	Ref	CLESS Action	Led by:	Resources	Start Yr	Action Required 2017/18	Progress in Q2 Jul - Sep (2017/18)	RAG
Cross Cutting	C1	Operate a Low Carbon Hub Board, with supporting groups and networks.	GMCA Env Team	GMCA revenue	2012	Operate a Low Carbon Hub Board, with supporting groups and networks and undertake a review to assess fit for purpose	LCH Board and sub groups have operated normally within the quarter	G
Cross Cutting	C2	Publish disclosures as part of our external commitments e.g. Carbon Disclosure Project, Compact of Mayors, Under 2 MOU, and Integrated Covenant of Mayors on their international websites.	GMCA Env Team	GMCA revenue	2013	Publish Disclosures and ensure annual reporting requirements are met	Greater Manchester has been notified that it has retained its Covenant of Mayors compliance in 2017	G
Cross Cutting	C3	Maintain a suite of Key Performance Indicators and Operational Progress Measures to provide a transparent basis for performance analysis	GMCA Env Team	GMCA revenue	2016	Provide input of the review of indicators for GMS and GMSF	Input has been provided on GMS indicators/	G
Cross Cutting	C4	Encourage organisations across GM to boost the carbon literacy of their employees via corporate schemes and the GM Carbon Literacy Project.	Carbon Literacy	EU, Partners	2016	For all key employers to become Carbon Literate via sector and area-based consortia. To use employer take-up as a catalyst for widespread educator and community take up, and the creation of a GM low carbon culture	Launch of first area-based CL consortium - led by Paul Dennett in Salford. Planning for first Faculty-wide CL at Salford Uni. 6.5K CL certificates now issued. Support for GM interfaith climate event at Manchester Cathedral. Further dissemination of GM-founded CL approach across the UK and overseas.	A
Cross Cutting	C5	Maintain and regularly update a comprehensive online resource of articles, news, documents and reports, including quarterly progress reports and an Annual Performance Report	Accountable Bodies, GM Env team	GMCA revenue	2016	Maintain online news, document and event library and increase awareness and accessibility of information within public domain. Collate and publish Annual Performance Report.	Ongoing. Twitter: Tweets 430; tweet impressions 154K; mentions 147; new followers 93; profile visits 3557.	G
Cross Cutting	C6	Seek to operate a communications, awareness and pledge initiative, and provide updates on key issues and action via social media, signposting followers to the initiatives and actions of others.	GMCA Env & Mayor Teams	GMCA revenue	2016	To manage a programme of 'listening' events leading up to the culmination of a regional 'Green Summit' as requested by the Mayor. To continue to increase visibility of LCH news via social media and online resources. To progress a Special Communications Interest Group from LCH Board Orgs.	Green Summit: Panel due to meet 15/09/17; press release drafted; consultation questions drafted; venues researched. Waiting for outcome of panel meeting to move forward on 'First Tier' consultation events. Communications Task and Finish Group yet to be arranged.	A
Cross Cutting	C7	Work with experts to develop an evidence base and related resources to support planning officers develop policy and implement measures which enable occupants to adopt low carbon, climate resilient lifestyles	GMCA Env & Planning Teams	GMCA revenue	2017	Support MCC on the dissemination of their Green Infrastructure Internal Database to the 10 local authorities and wider stakeholders.	Database disseminated to Districts.	G
Energy	C8	Develop and refine our approach to tenant engagement on carbon reduction based on social research conducted as part of the NEDO integrated heat pump and ICT platform trials and digital support training	Landlords, GMCA Env Team,	NEDO, Landlord revenue	2016	Completed for NEDO project. Bid for EU funds with UoM to establish further research to inform policy		B

Culture and Communication

Theme	Ref	CLESS Action	Led by:	Resources	Start Yr	Action Required 2017/18	Progress in Q2 Jul - Sep (2017/18)	RAG
Energy	C9	Publish and maintain detailed information on the Energy Network, and provide regular updates on our projects, performance and Plans.	Electricity North West.	ENWL	tba	TBC		TBC
Energy	C10	Seek to use the development of energy trading to provide a new, more direct engagement with organisations and individuals across GM	GMCA	GMCA revenue	2018	Not yet started	Not yet started	TBC
Energy	C11	Run and participate in heat networks engagement and communication activities, including conferences.	LCDPU	DECC, HNDU	2016	Continue with participation at heat network engagement and communication events	PDU presented at various events including: - Growth Hub supply chain event; - GM energy/sustainability workshop; - Local Authority Energy Systems.	G
Buildings	C12	Develop an initiative which raises awareness of the links between domestic building quality, health and fuel poverty	GMCA Env & Health	Tbc	2016	Assist GM Health and Housing Colleagues in the development of a GM HIA model.	Provided assistance to GM Research Team/Health colleagues on the HIA work via the mini-lab. This has helped in an initial CBA report.	G
SCP	C13	Operate a green growth pledge to engage businesses on resource efficiency, promoting a wider awareness of climate change and the issues and opportunities affecting them	BGH	ERDF	2015	Continuer to promote the Green Growth Pledge to Business Growth Hub clients and integrate and promote via the Social Value Guide to suppliers the Growth Company is developing.	92 organisations have now made the Green Growth Pledge, over 75% of which are GM SMEs. The Green Intelligence bulletin continues to attract new readers, currently there are over 1,900 subscribers, nearly 700 of which are SMEs	G
SCP	C14	A consortia of BBC North, Peel, ITV and other key media organisations will continue to promote the ALBERT+ standard for programme making, and continue to implement their shared employee engagement initiative, extending it to new organisations.	Media Consortia	Private Sector	2016	To further embed ALBERT+ as UK broadcast industry standard practice and to use influence of the consortium to accelerate Carbon Literacy in GM employers and educators	Active support for the new Salford Carbon Literacy Consortium. Keynote statement from BBC re CL as a employability asset. Support for University of Salford Arts & Media Faculty in their development of CL	G
Natural Capital	C15	Engage communities in Natural Capital activities as a mechanism to connect them with nature and understand the role of Natural Capital in combatting climate change and its impacts.	LAs, NCG	Life IP, GMCA revenue	2017	Development and delivery of a targeted communications campaign 'connecting people with nature' which brings together the key natural environment stakeholders and their initiatives being delivered across Greater Manchester. Continue to deliver River Irwell catchment ecology project, led by GMEU. Explore opportunities to engage volunteers in recording local water quality through Natural Course diffuse urban pollution Action.	Website development brief sent out to consultants for quotes with a deadline for receipt 22nd September. Commission to be completed by the end of December. Following discussion at the NCG meeting in July further discussions will be held with UofM and LWT to ensure joined up working on website development for the MEMO and My Wild City projects.	G

Culture and Communication

Theme	Ref	CLESS Action	Led by:	Resources	Start Yr	Action Required 2017/18	Progress in Q2 Jul - Sep (2017/18)	RAG
Transport	C16	Continue to offer an extensive Travel Choices programme, to encourage people to switch more of their journeys to sustainable transport and to better manage their journeys and vehicle choices.	TfGM	TfGM Revenue	2015	Travel choices programme delivering advice and incentives to employees, jobseekers, apprentices and pilot education project. Aim to recruit 100 new businesses to Business Travel Network, to over 650; 325 action plans; 30 businesses with accreditation standard; 1500 discounted tickets and 300 refurbished bicycles for apprentices.	29 new businesses recruited to network (to 670), 3 new action plans (to 308). 3 grants approved for £40,000 (July-August). New PTP contract started. Schools pilot started'	G
Transport	C17	Work with the industry and customers to raise awareness and actively promote sustainable distribution	TfGM	TfGM revenue	2016	Work with the industry and customers to raise awareness and actively promote sustainable distribution	Wider engagement with industry planned in upcoming months with Freight Forum and other events. DSPs being promoted to businesses and public sector.	G