

Summons to attend meeting of Full Council



Date: Tuesday, 16 July 2019

Time: 5.00 pm

Venue: The Council Chamber - City Hall, College Green,
Bristol, BS1 5TR

To: All Members of Council

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Date: 11 July 2019



Agenda

9. Climate Emergency - The Mayor's Response

Annex attached

(Pages 3 - 14)

Signed



Proper Officer
Monday, 8 July 2019



Annex 1: Cross Party Working Group Suggestions to Achieve Carbon Neutrality January 2019

Area	No	Councillor suggestion	Summary	Some delivery underway?	Scale of funding * blank = unknown	Key barriers to delivery
Transport						
Active travel	1	Prioritise an increase in walking and cycling, including segregated routes	<ul style="list-style-type: none"> Local Cycling and Walking Investment Plan (LCWIP) is currently being developed and will consult in the summer. This will then inform development of walking and cycling strategies in the region and potential bidding opportunities. No funding for scheme delivery currently in place, the plan will provide a basis on which to bid for funding Bristol is completing the delivery of a transformational package of cycle infrastructure improvements called the Cycle Ambition Fund worth £10m Bristol also supports a range of initiatives to get people on their bikes such as managing the Bristol Family Cycling Centre. This facility provides opportunities for people of all ages and abilities to try cycling and last year welcomed 12,355 people through their doors. 	Yes	£20 per person / £10,718,140 per annum (increases year on year with population growth)	<ul style="list-style-type: none"> Funding Capacity
	2	Connect neighbourhoods cut off by busy roads	<ul style="list-style-type: none"> Most routes already have pedestrian crossings. Routes that don't generally cannot have them for any number of physical reasons. May require downgrading of roads or significant investment. Send Transport specific locations where this is an issue. 	No		<ul style="list-style-type: none"> DfT guidance Physical restrictions Funding for delivery and maintenance
	3	Introduce large scale cycle parking as in Copenhagen	Depends on resources and locations available. Cycle parking is currently distributed around the city, some locations could be made denser with investment, and hubs could be provided in some locations where suitable. Planning approval would be required on a site by site basis.	No	£5 - 10million	<ul style="list-style-type: none"> Land availability Funding
	4	Make areas of the city car free	<ul style="list-style-type: none"> Removal of cars is challenging, however, a similar result can be achieved by removing through routes and making streets and areas access only. In residential areas the traffic cell approach seeks to make short trips within the cell more difficult and longer through specific road closures and bans through movements across the cell so that traffic remains on major roads. Pedestrianisation of the Old City is being explored Easton Safer Streets sought to restrict traffic through introduction of a traffic cell Dutch style approach and the scheme will start shortly. 	No	£50m+ for city centre scheme	<ul style="list-style-type: none"> Funding
BCC / Bristol Waste Fleets	5	Fully electrify BCC and Bristol Waste Company fleets	<ul style="list-style-type: none"> The entire Bristol Waste collection fleet is currently being upgraded to Euro 6 compliance. There are now 20 EVs in the BCC vehicle fleet. The charging infrastructure is currently at capacity, so no new EVs can be purchased. Are working with Energy Services to increase this. Currently replacing fleet vehicles with more energy efficient petrol, these will typically be in service for 5 years from purchase. BCC need to future proof their sites to enable an EV infrastructure which supports a fleet transition from conventional engines to electric. 	Yes		<ul style="list-style-type: none"> Charging infrastructure Funding Technology

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	6	Promote fleet tracking technology, both on BCC & BWC vehicles and more widely, in order to track driver behaviour to improve efficiency and identify the most fuel efficient routes	<ul style="list-style-type: none"> • BWC are getting trackers on all new vehicles, to be rolled out over the next 3 years. • Approx. 90% of BCC fleet (over 400 vehicles) have tracking devices fitted. • Vehicles have technological capability to detect and report on inefficient driving style and to plan efficient routes. • There is no corporate driver training to teach efficient driving styles, but BCC are investigating e learning module. • Responsibility for drivers is held by individual managers and not centralised, so any training would need to come from individual budgets and would require a coordinated corporate approach to effect driver required behaviour change and efficient route planning. 	Yes		<ul style="list-style-type: none"> • Lack of coordinated corporate approach • Need a programme to inform driver managers • Funding for driver training
	7	Reduce/remove council parking spaces in the city centre to reduce the overall parking supply and discourage people from driving.	<ul style="list-style-type: none"> • This would reduce the Council's income. Funding for 5 years is requested to enable mitigation of the loss of revenue so removal of say 200 spaces in the central area could require a payment of £5m. • There is some opportunity to look at removal of parking through developments that then cover the cost of losing the parking over 5 years. • Removal of on street and multi-storey spaces would impact the public and local businesses. 	No	If lost revenue is replaced, millions	<ul style="list-style-type: none"> • Loss of revenue • Impact on local economy
Electric vehicles	8	Introduce a scrappage scheme for older diesels	<ul style="list-style-type: none"> • Modern engines are more efficient than older ones, so a scrappage scheme would lead to a slight reduction in carbon emissions. The main benefit would be a reduction in NOX, not CO2 • No funding is available for a scrappage scheme, and central Government is not supportive of these. • On average, petrol cars have higher CO2 emissions than diesel 	No	£40m plus	<ul style="list-style-type: none"> • Lack of funding
	9	Facilitate roll out of EVs through improved charging infrastructure	<ul style="list-style-type: none"> • Go Ultra Low West is funding 120 charging points and 4 rapid charging hubs. 	Yes		<ul style="list-style-type: none"> • Suitable locations for on-street charging • Funding
	10	Require Hackney Carriages and private hire vehicles to be EVs through licencing. May need scrappage as an incentive	<ul style="list-style-type: none"> • All 'new to fleet Hackney Carriages' to be ULEV if replacing an existing carriage, must be Euro 6. All new Hackney Carriage licensees will be ULEV. • All "new to fleet Private Hire" to be petrol or better • Rolling wall of compliance will phase out older Euro Standard vehicles • The above measures will have a minimal effect on CO2 emissions, as are intended to reduce NOX. • Incentive scheme providing new ULEV HC's with free licencing; free Temple Meads Permit and Free Certificate of Conformity over 3 years • 4 (Serving 8 bays) rapid charging, taxi-only, units to be installed at Stapleton Road by March 2020 • See no.8 re scrappage scheme 	Yes	For incentive scheme circa £350,000, for Taxi charging points £499,999	<ul style="list-style-type: none"> • Funding • Locations for charging points
Other	11	Promote biodiesel produced from waste coffee for use in buses, BWC and hauliers. Can be mixed with normal diesel without need for retrofit	<ul style="list-style-type: none"> • First Bus are a commercial operation that is not controlled by BCC, they are already investing heavily in biofuel buses. • Coffee-derived diesel would provide no benefit to air quality • Coffee waste could be added to existing processes for methane production 	No	<ul style="list-style-type: none"> • For promotional campaign • Costs may be higher than traditional diesel 	<ul style="list-style-type: none"> • Technology
Policy	12	Scrutinise new road building proposed in the Transport Strategy in light of 2030 target	JLTP is currently out to consultation, results will inform final plan and carbon emissions targets will be taken account of	Yes	Nil	<ul style="list-style-type: none"> • Housing delivery requires new infrastructure to support it
	13	Implement the Transport Strategy	Transport Strategy will be taken to cabinet for approval in Summer 2019 - funding will then be sought to implement its actions	Yes	£10 - £15 billion	<ul style="list-style-type: none"> • Funding • Time to deliver

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Public transport	14	Improve public transport / explore funding as per C40 cities / clean up Bristol buses	New buses being ordered and significant investment being made in retrofitting existing fleet. Investment to "kick start" orbital routes or additional supported services could make a difference	Yes	Phase 3 is 166 buses for £2.44M	• Funding
	15	Work with the bus companies to improve bus engine specifications. Move towards electric/hydrogen/biofuel	<ul style="list-style-type: none"> • First Bus have committed to purchasing biofuel buses and converting their fleet to Euro VI compliance. This is in part funded by a government grant (£4m) and First Bus investment (£30m). • We have also secured £5m to retrofit around 250 existing buses. The whole fleet should be Euro VI compliant by 2020/21. Improved engine efficiency will lead to a reduction in carbon emissions. 	Yes	£39m	<ul style="list-style-type: none"> • Funding • Technology
	16	Develop rapid mass transit networks	• Initial feasibility and full feasibility study have been completed. We are now moving towards the Strategic Outline Business Case which will be followed by the OBC and FBC if each stage is successful and approved.	Scoping	£1 - 5 billion	<ul style="list-style-type: none"> • Funding • Time to deliver • Physical and logistical delivery issues
	17					
	18	Free public transport for under 18s	Under 18s benefit from half price fares. No funding available for this, and could require additional bus provision	No		<ul style="list-style-type: none"> • Funding • Bus capacity
Rail	19	Apply pressure to Network Rail and train operators to open new stations faster. Lobby central Government to prioritise local rail infrastructure	Strategic rail board in place that allows authorities to work closely with the rail industry and apply pressure on scheme priorities. Metrowest projects are enabling the opening of new stations	Yes	Nil	• Central Gov
	20	Invest in safety, lighting and signage to improve local stations	Ongoing as stations are upgraded, further funding is being sought through WECA to update additional stations	Yes	Not known	<ul style="list-style-type: none"> • Reliant on rail industry to deliver • Funding
	21	Increased freight on local rail lines to deliver to local areas	Rail lines are already used of freight for longer distance operations. We have been in discussions with a company to see if local rail could be used for more localised freight but are still awaiting a detailed proposal from them so no progress at present.	Scoping		<ul style="list-style-type: none"> • Network capacity • Business interest
Schools	22	Prevent driving around schools (especially inner city) during school hours to improve air quality for children and discourage driving	Being scoped in line with no-idling zones, including investigating potential to deliver 'School Streets'	Scoping	Not known	<ul style="list-style-type: none"> • Funding • Traffic Regulation Orders
Shipping	23	Work closely with Bristol's port and neighbouring LAs to drive carbon neutral agenda forward	We have no control over the port as it is a private entity but we work with all stakeholders and neighbouring authorities to push our carbon agenda	Yes	Nil	• Reliant on Port to deliver
	24	Increase use of the city's waterways for transit, both public and freight	Limited scope for this use. The floating harbour is speed limited due to the potential impact of waves on the walls and existing uses such as house boats etc. 4mph limit reduces effectiveness as a route for moving people or goods	No	Not known	<ul style="list-style-type: none"> • Speed restrictions • Lack of operators • Business buy in
Hubs	25	Implement transport hubs, especially around stations	<ul style="list-style-type: none"> • Work is ongoing to develop the Temple Meads masterplan which will enable greater connectivity between buses and trains and improve walking and cycling provision. Some work on going to improve legibility of local stations. • Refer to suggestion 3 	Scoping	£3 - 4 million	<ul style="list-style-type: none"> • Need to work with rail industry to deliver improvements to the train station • Funding
Energy / Heat						
Renewable energy generation	26	Enable Energy Services to make best use of offers received from Leap Prospectus / support Energy Company to maximise benefits	Cabinet approved the City Leap Energy Partnership Cabinet Report on 2 April 2019 to progress with the set-up of a joint venture with a Strategic Partner. The Energy Service are progressing work to ensure potential benefits are being maximised	Yes	£1 billion	
	27	Explore alternative renewable generation options as below:				

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Page 6	28	a) geothermal	BCC has received BEIS HNDU funding to carry out further heat network feasibility studies. This will include the assessment of geothermal (particularly old mine workings) in the Easton and Bedminster areas.	Scoping		<ul style="list-style-type: none"> • Technology • Geothermal energy • Finance
	29	b) wave	The Energy Service has reviewed the potential of Wave Energy Converters in the Bristol Channel and Severn Estuary and found that this is not viable as with the current efficiency of wave energy converters, there is not sufficient wave energy resource in the Bristol Channel and Severn Estuary.	No		<ul style="list-style-type: none"> • Technology • Wave energy • Finance
	30	c) tidal lagoons	No delivery at present. Following the failure to secure a strike price at the Swansea Bay Tidal Lagoon site, all tidal lagoon developments are on hold across the country. The Bristol Channel and Severn Estuary has the 2nd largest tidal range in the world. Were current circumstances to change, we could see large scale developments at proposed sites close to Cardiff/ Newport and Bridgewater Bay	No	£1.3 - £10 billion	<ul style="list-style-type: none"> • Large investment costs • Lack of proven technology • Lack of strike price • Cheaper alternatives
	31	d) air and ground source heat pumps	The Energy Service proposes to operate a GSHP powered heat network at the Alderman Moors housing development. The model could be replicated and expanded.	Yes		<ul style="list-style-type: none"> • Finance: unable to progress new qualifying schemes without clarity on support mechanisms after RHI ends in March 2021 • Capacity • To install heat pumps in older buildings, significant improvements would need to be made to their air-tightness, which would require further funding
	32	e) clean gas	<ul style="list-style-type: none"> • The council's own gas contracts, with Bristol Energy, are 10% renewable green gas supplied from Geneco at Avonmouth. This makes a small contribution to the council's carbon reduction targets, supports two local businesses, and is an example of the circular economy (the feedstock is sewage and food waste from Bristol). The council accounts for less than 1/3 of consumption with the rest supplied to schools and council housing • 100% green gas could be procured at contract renewal in autumn 2020 but would cost the council an additional 5%-10% uplift over standard supply (c£100k-£200k) 	Yes	c.£2m p.a. (of which 10% is renewable, c. 6GWh)	
	33	f) use old coal mines for geothermal energy generation.	Investigating potential feasibility work to commission the British Geological Survey to look at geothermal potential in the city, including mine storage	Scoping		<ul style="list-style-type: none"> • Technology • Finance
	34	Extend district heating (with a clean heat source) across the city	We have plans in place and will be taking every opportunity to expand the heat network and connect to low carbon heat sources, e.g. water source heat pumps, supported by new policies such as zero carbon heat. City Leap will provide the level of investment needed to support the delivery of the heat network	Yes		<ul style="list-style-type: none"> • Finance: For connection to clean heat sources, unable to progress new qualifying schemes without clarity on support mechanisms after RHI ends in March 2021 • Capacity
	35	Progress heat connection from Avonmouth to the heat network	This work is ongoing in collaboration with South Glos Council to identify the most appropriate route, project costs and which Northern Bristol heat network clusters could be served by the strategic heat network	Yes		Finance
	36	Give grants for micro home energy generation	<ul style="list-style-type: none"> • Looking at ways of improving the attractiveness of solar PV/battery systems as part of smart energy systems under City Leap & REPLICATE. • Running a small trial in BCC social housing this year with Bristol Energy to better understand financial business case. • Council could consider part/fully funding in its own housing stock (c10,000 properties at a cost of c£80m - possibility of partly funding this from private investment through City Leap) • Affected by Government ending the Feed in Tariff 	Yes	£400 million	<ul style="list-style-type: none"> • Significant Government funding required • Engagement - long-term supply contract for sale of solar units • Finance - project capital cost to be around 2.5% • Legal - costs to sign up individual roof lease and PPA • No planned replacement of the FIT

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Page 7	37	Promote solar panels - especially to lower incomes households through a revolving loan	<ul style="list-style-type: none"> Looking at ways of improving the attractiveness of solar PV/battery systems as part of smart energy system under City Leap & REPLICATE. Running a small trial in BCC social housing this year with Bristol Energy to better understand financial business case. Council could consider part/fully funding in its own housing stock (c10,000 properties at a cost of c£80m - possibility of partly funding this from private investment through City Leap) Affected by Government ending the Feed in Tariff for PVs and RHI for Solar Therman 	Yes		<ul style="list-style-type: none"> As 34 • Long payback periods make a revolving loan fund unfeasible unless zero interest Significant Government funding required Engagement - long-term supply contract for sale of solar units Finance - project capital cost to be around 2.5% Legal - costs to sign up individual roof lease and PPA Replacement of the FIT
	38	Encourage embedded generation & storage / Local generation & storage by council, businesses & homes:	<ul style="list-style-type: none"> Commercial behind-the-meter battery pilot project at City Hall. Going out to tender in April to analyse energy flows and response to pricing signals. Looking to develop commercial offer as part of City Leap HRA solar / battery pilot. Out to tender in July. To test end-user behaviours and develop investable financial model ahead of City Leap. BCC could consider part funding (c10,000 properties would cost c£80m in total, reduce tenants' electricity bills by around 2/3rds and may be able to bring in private investment under City Leap to part fund) The REPLICATE project, working with the UoB has 10 Tesler Batteries which it will be installing in up to 10 of the Smart Homes which opt for Solar PV. 	Yes	£75 million	<ul style="list-style-type: none"> Site finding - city wide engagement required. Private sector buildings have complex tenancies Revenues - need to aggregate sites to maximise earnings, so more difficult in short-term
	39	Car ports in car parks with solar panels to power EV charging / sell back to the grid (as in Nottingham)	<ul style="list-style-type: none"> Scoping as part of City Leap: Current Market testing with local supply chain and costed options. Unviable as a retrofit, with no Feed-in Tariff and off-taker. Will need to be built alongside an EV hub - major opportunity to do as part of new P&R sites being considered. 	Scoping	£500k	<ul style="list-style-type: none"> Suitable locations. Lack of Feed in Tariff Funding
	40	Waste to energy: Promote further development of waste to energy where environmentally beneficial / Invest in anaerobic digestion facilities	<ul style="list-style-type: none"> Part of City Leap - have already begun discussions with Bristol Waste about anaerobic digestion We will explore and enable where possible the provision of heat from Energy Recovery Centres to use existing heat, and the development of small localised Anaerobic Digestion sites (this is very tricky with AD) for supplying heat Creation of new energy from waste centres could not be considered a low carbon solution 	Scoping		<ul style="list-style-type: none"> Funding Guaranteed volume of food waste feedstock
	41	Look at the potential to offer business rate concessions for people who generate their own power.	Would impact adversely on BCC finances	No		<ul style="list-style-type: none"> Legislation Loss of revenue
	42	Generate hydrogen using spare energy from wi	<ul style="list-style-type: none"> Highly inefficient process and limited applications for H2 at the present time Potential to re-visit if substantial excess wind power is installed under City Leap 	No		<ul style="list-style-type: none"> Technology Lack of spare power Funding
	43	Use the floating harbour as a hydrogen reserve	Floating Harbour to be used as a heat store for the heat network	No		<ul style="list-style-type: none"> Capacity Technology
	44	Use the harbour as a water source heat pump / tidal lagoon	<ul style="list-style-type: none"> Progressing with plans for WSHPs in Floating Harbour Not appropriate to use as a tidal lagoon due to impacts on other users of the harbour 	Yes		<ul style="list-style-type: none"> Capacity Funding Technology
Smart energy, demand and storage	45	Smart energy infrastructure: Invest in battery storage and grid upgrades / Use batteries in electric vehicles to provide additional energy storage	See 36	Yes		

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Page 8	46	Easton as the Smart City demonstrator: Roll out the Smart City demonstrator	<p>The existing REPLICTE project works with people to explore how technology could help to tackle certain issues in the area and create the clean energy system of the future and includes the following strands:</p> <ul style="list-style-type: none"> • Smart homes and Energy Demand Management System - installation of SMART white goods • Energy efficiency retrofit • Connection to district heating • Installation of community PV • Installation of EV charge points and operation of an EC car club • E bikes • On demand shared transport • Use of Travel West Journey Planner • Use of a parking app • Citizen sensing • A smart city platform <p>As part of the project, we will explore what is scaleable and how to do this over the next 18 months.</p>	Yes		<ul style="list-style-type: none"> • Funding • Capacity
	47	Ensure that Western Power Distribution are fully integrated into the Bristol decarbonisation plan	WPD are official partners in City Leap and have been attending Partnership Board meetings on a regular basis for the last year or so	Yes	Nil	
	48	Launch a Bristol Green Energy Innovative Finance ISA – tax free investment in solar	Will be examined as part of a broad range of potential sources of investment once the City Leap Strategic Partner is known and can have their input	Scoping		
	49	Support action to ensure that Bristol becomes a 'Smart Energy City' through smart metering	Part of City Leap	Scoping		
Housing						
Energy efficiency	51	Scale up investment in domestic energy efficiency inc. older properties/ promote and extend Warm Up Bristol / establish low cost revolving loan system	<ul style="list-style-type: none"> • Part of City Leap: Revolving loan established with Wessex Loan pot. 4% loan for any customer and 0% loan for those in fuel poverty • Warm up Bristol has been extended and is currently delivering REPLICATE retrofit - minimum 240 homes receiving energy efficiency retrofit in Easton, Ashley and Lawrence Hill • Have just won funding from Warm Homes Fund to replace some energy intensive electric storage heaters with first time gas central heating • The above schemes will only reach a tiny proportion of Bristol's homes. Domestic energy efficiency is a key area where significant carbon savings can be achieved and an unprecedented scale of investment is required to realise these 	Yes	£300m+	<ul style="list-style-type: none"> • Vast number of properties which require retrofit • Significant investment is required. Government funding is limited to households in fuel poverty • Reluctance / inability of home owners to invest in energy efficiency measures • Skilled workforce and supply chain to deliver scaled up delivery • Lack of Government policy
	52	Expanded support for private sector landlords to improve the energy efficiency of their homes	<ul style="list-style-type: none"> • Limited support is available to private sector landlords who own F or G EPC rated private rental properties. The total grant pot is £200k. • The majority or privately rented homes do not have high EPC ratings, so significant investment is required to improve these, with no funding apart from the above being available 	Yes	£100 million	<ul style="list-style-type: none"> • Landlords do not want to engage • Financial barriers • Potential for evicting tenants post upgrades • Lack of staff resource to enforce new MEES requirements
	53	Investigate a programme to require owners of large buildings to complete energy audits and retrofit (as in New York)	<ul style="list-style-type: none"> • Trading Standards are currently responsible for enforcing regulations regarding commercial energy efficiency which are due to become more stringent over time. The Energy Service can support compliance platforms e.g. • Arbnco for EPC assessments. • MEES came into effect in 2018 for all new builds, all buildings to follow in 2021 	No		<ul style="list-style-type: none"> • Government legislation • Enforcement capability • Finance

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House building	54.a	Ensure new Council housing and houses built through the new housing company have in-built energy generation and exemplary energy efficiency standards such as Passivhaus	<ul style="list-style-type: none"> • BCC HRA development programme is developing primarily new council housing and to date we have completed over 100 new homes on a rolling programme. • We have a further 3 schemes on sites and 13 further schemes in the development process which will come through the planning process in the 2019-20 financial year. Of the new homes completed we have built around 40 Passivhaus properties, but these have proven to be a challenge terms of increased capital costs, understanding by the contractor and supply chain on how to build these type of homes 	Yes	£0.5 - £20 million on each project (dependent on size of housing project)	<ul style="list-style-type: none"> • Use of modern new technologies are not the norm for occupiers so take up of properties could be affected • Supply chain • Skilled workforce
	54.b	Ensure new Council housing and houses built through the new housing company have in-built energy generation and exemplary energy efficiency standards such as Passivhaus	Goram Homes is committed to building policy compliant homes. The new local plan, if adopted would be required to build all new homes to be zero carbon from 2021.	No		<ul style="list-style-type: none"> • Funding subsidies to reduce installed costs • Mechanisms that capture occupier's utility savings to reduce installed costs – as otherwise there is no way for developers to recover installed costs, and property values don't increase proportionally with implementing energy measures (i.e. can't recoup through sales)
Page 9	54.c	Ensure new Council housing and houses built through the new housing company have in-built energy generation and exemplary energy efficiency standards such as Passivhaus	<p>BCC Housing Delivery includes developing land held by the general fund for housing projects, typically major projects. BCC have sought Outline Planning prior to disposing of major sites/securing a development partner Projects in the design process include:</p> <ul style="list-style-type: none"> - Hartcliffe Campus, up to 350 homes. Outline planning secured prior to site being sold to RP partnership Proposal includes communal GSHPs to meet 20% onsite renewables/heat network policy requirements - Hengrove Park, up to 1500 homes. Energy Strategy identifies biomass/gas CHP fuelled heat network as potentially financially viable. - Romney House 268 homes. Outline energy/sustainability strategy commits development to achieving adopted policy of 20% renewables, heat hierarchy, etc. Goram Homes. - Constable and Crime Up to 81 homes. Strategy identifies ways to meet adopted policy - Glencoyne Square in Southmead. Up to 300 homes. Strategy is to use communal GSHPs to meet heat network/hierarchy and 20% renewables requirement for these first 120 units. 	Yes		<ul style="list-style-type: none"> • Approach of 'rent a roof' PV schemes (i.e. where measures were provided on a buy-back lease) have left many stranded unable to re-mortgage or sell, so even if above mechanism was implemented, it would need to address this barrier in the mortgage market and perception of leases impacting buyers/sellers • RHI not confirmed beyond March 2021 means uncertain/unviable business cases for renewable heating solutions (triggering financial viability caveat of existing adopted planning policy)
	54.d	Ensure new Council housing and houses built through the new housing company have in-built energy generation and exemplary energy efficiency standards such as Passivhaus	BCC Property function in Housing Delivery do land transactions with Registered Providers (RPs). These are land sales, and so cannot include requirements (e.g. going beyond adopted planning policy, etc.) as this would trigger a procurement process for works/services. Once land is sold, it is somewhat outside of BCC control (beyond planning process, conditions of sale and our partnership working via Bristol Homes West). When promoting/selling sites, BCC officers advise RPs to review adopted sustainability policies and recommend they chat to planners on how to meet the policy.	Yes		
	54.e	Ensure new Council housing and houses built through the new housing company have in-built energy generation and exemplary energy efficiency standards such as Passivhaus	Recent April Cabinet approved Affordable Housing Grant Programme that included up to £10k per rented or shared ownership unit on schemes delivered principally on private land to achieve BCC heat hierarchy requirements - available at BCC's discretion for Registered Providers (RPs), Community Land Trusts (CLTs) and Community Led Housing (CLH). CLTs and CLH have to meet certain criteria to be able to access this grant	Yes	£57 million	

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Planning	55	Planning requirement for 100% onsite renewable energy generation / Implement proposed 100% emissions reduction target in Local Plan once adopted	<ul style="list-style-type: none"> Local plan evidence base indicates 100% on-site renewables / 100% on-site CO2 emission reduction not feasible, so a combination of on-site and off-site measures is required to achieve 100% emission reduction. Local plan review second consultation draft launched in March 2019 containing draft policy CCS2, requiring 100% CO2 emission reduction for new buildings through: <ul style="list-style-type: none"> - 10% through on-site energy efficiency; - 35% through on-site energy efficiency and renewables; - financial contributions to carbon offsetting to offset the remaining regulated and unregulated CO2 emissions. Alternative PassivHaus route to compliance; lower emission reduction target of 20% where feasible for conversion of existing buildings. 	Yes		Local plan statutory process: <ul style="list-style-type: none"> Publication for representations, examination in public, adoption.
	56	Introduce a zero emissions standard for all new buildings built in the city, enforced through the local plan.	As 52	Yes		Local plan statutory process: <ul style="list-style-type: none"> Publication for representations, examination in public, adoption.
	57	Lobby central Government to give more powers to enforce Local Plan requirements	No response received			
	58	Resource additional Planning Officers to ensure carbon commitments are delivered	No response received			
	59	Further work to ensure energy efficiency performance of buildings is as designed	No response received			
Development						
Planning	61	Promote green, blue and cool roofs	Local plan draft policy CCS3 on adaptation to a changing climate promotes green/blue infrastructure with multifunctional benefits in relation to climate change adaptation. This includes the use of living roofs.	Yes	N/A	Local plan statutory process: <ul style="list-style-type: none"> Publication for representations, examination in public, adoption.
	62	Promote fossil-free construction sites e.g. through a charter. Enforce on BCC projects to set an example	<ul style="list-style-type: none"> Local plan draft policy CCS4 on resource efficient and low impact construction promotes materials with lower environmental impact and the reuse of demolition material Enforcing a higher standard on BCC projects would be beyond the scope of planning policy 	Yes		
BCC Buildings						
Energy efficiency	64	Retrofit energy efficiency systems in BCC buildings and Council housing / optimise BCC energy use / maximise installation of solar panels	The Energy Service administers the £1.8m Salix capital programme, which invests into council assets. Recent examples include LED lighting for car parks, streetlights and Bristol Museum. Work is underway for the Bottleyard studios.	Yes	£1.8 million revolving loan scheme	<ul style="list-style-type: none"> Funding Staff resource
	65	Campaign to BCC staff to promote energy efficient use of buildings	The Energy Service is developing new arrangements for heating in council buildings with the intention of reducing corporate energy demand. Ultimately, staff in core buildings have little control over building energy demand in core buildings as temperatures, lighting etc. are all centrally rather than locally operated.	N/A		
Renewable energy generation	66	Install rooftop solar on all BCC property and arrays on unproductive Council land. Consider extending to private housing	100 roof-top arrays already complete. 1.8MW solar farm complete. Looking at other commercial sites e.g. private sector roofs and other local authority land. Objective to maximise generation through City Leap investment	Yes	£40 million	<ul style="list-style-type: none"> Legal: Private sector engagement (landlord/tenant split) Technical: Finding high energy users that can be connected with private wire Funding

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Area	No	Councillor suggestion	Summary	Some delivery underway?	Scale of funding * blank = unknown	Key barriers to delivery
	67	High profile 'quick win' project e.g. drain City Hall	About to install battery in City Hall as a demand side response demonstrator. The specific project of solar in the CH moat is unlikely to be viable	Yes	£100k	For solar PVs in moat: <ul style="list-style-type: none"> • Shading • Risk of vandalism • Maximum potential size of the array too small
Business and Industry						
Engagement	68	Develop a public awareness campaign to engage and encourage businesses / partners to play their part / mobilise support for carbon neutrality goal	An engagement plan is currently being developed, but no funding or staff resource to deliver at present	Yes	£300k	<ul style="list-style-type: none"> • Funding • Capacity
Policy	69	Investigate ways to incentivise, encourage and force change e.g. feasibility of loans, business rate flexibility and mandatory energy auditing	See 50 and 39	No		
Waste						
Circular economy	70	Push hard the zero waste and circular economy ambitions / Targets for 2030: Review and extend the recycling and landfill BWC targets	BCC will look to work with BWC and commercial partners to promote within Bristol. We are an enabler and it is not happening at the moment and is not a priority for this year, but will assist where possible	No		Funding
Food	71	Continue work towards becoming a Gold Sustainable Food city	<ul style="list-style-type: none"> - Project due to launch early May 2019, website and comms plan in development to tie in with this date - Work taking place under the following themes: <ul style="list-style-type: none"> • Reduce and recycle our food waste • Improve our wider food environment through better quality catering and procurement and buying more from food producers in our region • Address food vulnerabilities, ultimately striving for 'zero hunger' • Encourage more cooking from scratch with fresh seasonal ingredients • Increase the amount of food growing in our city that happens in a nature-friendly way • Connect up and work together as a stronger Bristol Good Food Movement - We need to become a national exemplar in two of our six food system change areas. Our ambitions are to i) become a Zero Food Waste City and ii) improve Bristol's wider food environment through catering and procurement - Deliverables are demonstrating evidence of achieving the outcomes agreed with the SFC Board. - Evidence to be submitted in Autumn 2020 	Yes		Funding
	72	Work with businesses, schools and communities to reduce avoidable food waste, encourage reuse and promote sustainable diets	<ul style="list-style-type: none"> • Businesses: Part of Going for Gold as Food Waste is one of our two proposed areas of excellence Communities: 'Slim My Waste, Feed My Face' campaign rolled out across city to get people to use their food waste bins. • More work to be done on food waste reduction as part of Going for Gold as Food Waste is one of our two proposed areas of excellence 	Yes		<ul style="list-style-type: none"> • Funding • Capacity
	73	Some organisations already compost their food waste on-site, reducing mileage on collection. Promote more of this. If they don't have the facilities could investigate localised collection if any social enterprises were interested (e.g. Sims Hill, City Farms).	As BCC could not provide this facility, would require an organisation to come forward to provide	No		

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Plastics	74	Make Bristol single-use plastic free	<p>Within BCC - Work has been split into two phases.</p> <p>Phase 1 has successfully involved taking measures to reduce single use plastic in City Hall, including removal of single use coffee cups from the Cash Hall cafe; replacing plastic bottles and water cups in the Cash Hall with glass alternatives; installing a plumbed in water fountain on the first floor and removing water coolers from meeting rooms.</p> <p>Phase 2 is being launched now, this involves making similar (yet tailored) changes in other BCC venues and places we have influence; improving recycling performance and clarity of recycling signs in council offices; removing other single use items such as plastic cutlery; developing a guidance document / policy on single use plastic</p> <p>City-wide: development of deposit scheme for a Bristol cup and Bristol lunchbox - in very early stages - needs help to get it off the ground.</p> <p>Significant change in Government legislation would be required to deliver this</p>	Yes		• Central Government legislation required
	75	Through collective purchasing power, put pressure on city organisations and major vendors to reduce packaging		No		• Beyond BCC scope
Recycling	76	More promotions like Slim My Waste. If BWC finances are tight could look at external funding, e.g. from landfill trusts.	Further ongoing investment into waste reduction initiatives such as slim my bin will be done on an ongoing basis based on business cases justifying their continuation. We will look for external funding where possible	No		• Funding
Food						
Food	77	Promotion of reduced meat eating	<p>Work underway in eating out environment, but nothing in the eating at home environment.</p> <p>- Bristol Eating Better (BEB) Award (BCC led) - encourages food businesses to take action to improve health and sustainability of their food offers, including actions requiring them to consider replacing meat with ingredients such as lentils, chickpeas, quinoa and vegetables which are healthier, and to include some vegetarian and vegan options on their menus.</p> <p>- Flexitarian Bristol (not BCC led) - improving access to exciting non-meat choices in food outlets across the city, supporting producers and consumers to switch to less and better meat, and campaigning for the council to face up to the healthy sustainable dietary convergence in both advocacy and procurement.</p>	Yes		
Food	77	Promote the use of local produce in food outlets, especially BCC's and chains (as these are likely to have large mileage on their deliveries)		No		• Beyond BCC scope
Food	77	Set up a purchasing consortium to buy more sustainable products for smaller businesses that would struggle to source them cost effectively alone. Could be used for alternatives to single use plastic, local food produce, etc. See Greater Manchester.		No		• Beyond BCC scope
Communications						
Schools	78	Link in with schools, colleges, etc. for educational purposes to help make the case for why the 2030 work is needed	Is included in the engagement plan (under development), but currently no resource to deliver			• Funding • Capacity
Engagement	79	BCC to work in partnership to set up a website and social media campaign to provide a focus for lifestyle changes / lead a broad public engagement campaign	Is included in the engagement plan (under development), but currently no resource to deliver	No	£3k	• Funding • Capacity

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Area	No	Councillor suggestion	Summary	Some delivery underway?	Scale of funding * blank = unknown	Key barriers to delivery
Other						
Investment	80	Investigate solar bonds and a Bristol Green ISA. Ask Bristol Community Energy to expand their bond scheme?	Will be examined as part of a broad range of potential sources of investment once the City Leap Strategic Partner is known and can have their input	Scoping		<ul style="list-style-type: none"> Funding Legislation
Blockchain carbon offsetting	81	Offsetting residual carbon emissions through forest conservation. Liverpool is seeking to do this through a blockchain project with the Poseidon Foundation. Could do internally and promote externally for other partners to use.	We've reviewed this scheme and are unconvinced of its merits. Whilst blockchain technology may solve the problem of verification, carbon offsetting via tree planting/ forest conservation is problematic in terms of timescales, permanence and driving behaviour change. It could have a role in terms of dealing with residual emissions in a scenario where we are much closer to carbon neutrality, because we would be more confident that resources would not be diverted from other projects such as energy conservation and renewable generation.	No		
Collaboration	82	Work closely with neighbouring authorities and WECA	Monthly meetings are held with officers from neighbouring West of England authorities	Yes		None
Collaboration	83	Join the Carbon Neutral Cities Alliance or similar	In response, we have now joined the Carbon Disclosure Project. This brings the benefits of networking with many cities worldwide, and providing access to their emissions monitoring and carbon reduction plans. CDP has two dedicated UK officer to support with reporting, and is developing a number of projects which will help deliver our aims, including a citizen engagement programme in partnership with UK100 cities	Yes	Nil	None
Research	84	Refresh Bristol Stern report	<ul style="list-style-type: none"> We have a study which sets out our baseline carbon emissions (2016) and to charts a trajectory to 2030 under both a business as usual and ambitious scenario. We hope to commission a second study which will identify the actions needed to close the gap to achieve carbon neutralit The Leeds based author of the report would be willing to update the Mini Stern report, which would cost around £30k 	No	£30k	Funding
Wood burning stoves	85	Ban / restrict wood burning stoves	Licenced premises inspections could include checks on the fuels used in open fires, but would require legislative change	No		<ul style="list-style-type: none"> Do not have legal powers to inspect fires in domestic properties Would require staff resource to implement
City greening	86	Reforestation of river margins	This approach should be defined as part of a coordinated approach to the city's Green Infrastructure (GI) - see 87	No		<ul style="list-style-type: none"> Funding Legislation
City greening	87	Algal farming on walls of buildings and rooftops / install living walls, green roofs on bus shelters etc. / plant trees and other vegetation by roadsides	Highways Maintenance only has current budget for maintenance of existing vegetation and trees, however vertical gardens and green walls are being explored as an opportunity to design out graffiti and vandalism, reducing cleaning budget.	No		<ul style="list-style-type: none"> Funding
Highway	88	Recycle plastics as a building material (bricks) or in the repair of highway surfaces	The whole industry is waiting on the outcomes of a trial being completed in Cumbria before progressing.	No		<ul style="list-style-type: none"> Technology Funding
Resilience	89	Protect and expand our blue/green infrastructure, promote SuDS and high quality soils	We are currently scoping a Blue Green Infrastructure Strategy to determine the resources that would be required. The objective would be to provide a clear and consistent approach for protecting the existing GI network, whilst enhancing and extending GI in the city on public and private land. If approved the key deliverable would be a city GI Strategy which included a Supplementary Planning Document (SPD) status. The GI Strategy would address issues including our response to the 25 Year Plan, Net Gain/ Natural Capital Accounting and Ecological Networks.	No		<ul style="list-style-type: none"> Policy Funding
Policy						
	90	Ensure One City Business Plans prioritise 2030 carbon neutrality across all work streams	Will be led by the Environment Board once established	Yes		

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	91	Make Eco Impact Assessments for new projects more meaningful	Would require funding for either a tool to estimate carbon emissions of projects, or consultant time to estimate individually. We are investigating this as part of the development of a carbon budget to sit alongside our financial budget. We would need to commission consultants to estimate carbon emissions of new projects	Scoping		<ul style="list-style-type: none"> • Funding • Capacity
	92	Develop detailed action plan with KPIs to measure	Development of the action plan will be led by the Environment Board - will operate at a City level rather than BCC	No		
	93	Implement a full climate budget as per Oslo's practice	BCC intend to produce a Carbon Budget to sit alongside the annual financial budget. To make this meaningful, we would need to commission consultants to quantify the carbon impact of projects. We would also need to deliver suggestion 89	Yes		<ul style="list-style-type: none"> • Budget • Staff capacity