Energy	Transport	Food Systems	Waste	Green Spaces & Green Infra-structure

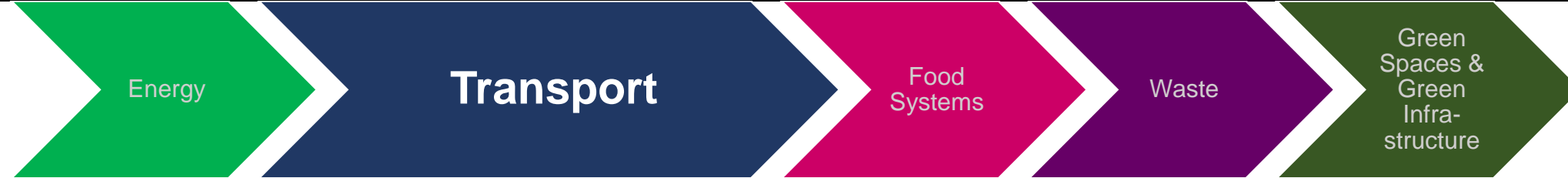| Vision	Ideas	Cobenefits	Council's Role	Progress to Date
• Eliminate on-site combustion for heating homes, businesses and water through improving efficiency and reducing carbon intensity of fuel. • The council will radically improve energy efficiency within its corporate and housing portfolios through deep retrofit and high-performance new build. • With energy consumption minimised, on-site renewable energy generation from e.g. solar PV is able to generate a good proportion of the council's energy requirement, with Power Purchase Agreements from other renewable generators providing the balance.	• The redeveloped Perceval House should be designed and built to be as carbon neutral as possible. • Expand low carbon district heating networks in the borough. • As the emission factors of electricity reach parity with gas, natural gas heating and hot water systems will be replaced or made more efficient with ground/air/water heat pumps. • Strengthen our planning policy so that all new developments are built to be as carbon neutral as possible. • Increase communication and education so local businesses and residents are aware of the	• Improved Air quality through cleaner energy sources, increased ventilation and building fabric, and incorporation of greening methods (such as green roofs and walls) into regeneration projects. • Fewer disruptive maintenance visits to council housing • A growing low carbon sector creates jobs and opportunities for Ealing residents to reduce poverty and increase incomes, a Future Ealing outcome. • Meets Future Ealing targets for apprenticeships and empowering residents seeking career changes and upskilling.	• Leadership • Regulation • Policy Setting • Incentivising • Signposting • Communications • Procurement • Planning • Planning Enforcement • Housing Asset Management • Maintenance/Repair/Voids • Housing Regeneration • Building Control • Sustainability/Energy Manager • HR	• Viability Studies on fabric-first regeneration (EnergieSprong, EnerPhit, Airspace transformation) • Integrating Energy Efficiency measures into routine maintenance and Handy Person visits • Replacing lighting with LED and motion-controlled lighting • Taking part in the Mayor's Energy for London energy company (begins Dec 2019) • Upgrading Ealing's street lighting to LED, decreasing electricity consumption by more than a half. • Installing 288.53kWp solar PV capacity at Ealing's Corporate sites,

	importance of carbon reduction and the steps needed to achieve it. • Switch off/power down days • The Council should be seeking to gradually increase the EPC rating of its own buildings through energy efficiency upgrades. • Divest from fossil fuels in pension schemes • Renewable generation capacity should be maximised throughout the borough, including on the Council's own buildings, schools, shopping centres and other available roof spaces. Policy should ensure that all new developments, even single units, will require maximum renewables generation capacity. • Where carbon emissions cannot be decreased further through reduction or efficiency measures, borough emissions will be offset through investment in renewable generation capacity outside of the borough.	• Fuel poverty alleviation through energy efficiency measures, lower energy costs achieved through collective switching programs, and behavioural counselling to ensure that residents understand how best to use their heating controls • Energy efficiency improvements to the Council's own buildings have many co-benefits such as thermal comfort, improved lighting levels and elimination drafts which can be significant improvements for staff and service users in the buildings. This can make a real contribution towards the Future Ealing outcome of children and young people fulfilling their potential at sites serving children. • Increased flexibility in ways of working, telecommuting, homeworking can improve wellbeing and staff morale • Minimising carbon emissions from the Council's own buildings		capable of generating 269,000kWh electricity a year • Installing solar PV at 500 Council owned domestic properties • Using the RE:FIT programme to improve the energy efficiency of Perceval House and Ealing Town Hall, saving 3GWh a year and £1.2m overall spend. • Upgrading boilers and heating controls to modern, energy efficient systems at sites across the corporate portfolio, saving around a third gas consumption each time.

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		reduces Ealing's environmental footprint, a Future Ealing outcome and leading by example provides a pathway for the rest of the borough. • With appropriate policy and support there could be an industrial boost to the UK from being one of the early movers in some key sectors (e.g. engineering for low-carbon technologies, carbon capture and storage), with potential benefits for exports, productivity and employment.		

Appendix 1. October Cabinet Report – Draft Strategy Matrix

Energy	Transport	Food Systems	Waste	Green Spaces & Green Infra-structure

Vision	Ideas	Cobenefits	Council's Role	Progress to Date
• Reduce the dependency on motorised vehicles by moving trips, particularly the shorter ones, to active travel using more sustainable modes (walking, cycling and public transport) through behaviour change. • Electrify all new cars and vans (or use a low-carbon alternative such as hydrogen) and expand charging infrastructure to include innovative energy storage. • Minimise flying, especially long-haul, where possible. Opting for rail or non-combustible fuel public transport options, where possible.	• Improve cycling facilities across the borough including segregated lanes, enforcement of no-stopping on cycle lanes, more and secure cycle parking. • Replace fleet cars with electric vehicles and other low carbon technology, replacing vans and HGVs where possible, serving as a driving force in encouraging and incentivising borough-wide fleet replacement. • Continue to utilise commercial partners to implement EVCPs, as this lessens the financial risk to the council • Plant trees and hedges at the sides of roads to capture pollutants, mitigate road run off and	• Replacing ICE vehicles with electric and hydrogen powered vehicles will be an immediate improvement in air quality and respiratory health for residents. • Electric vehicles with large enough batteries and sufficient recharging infrastructure provide a superior driving experience, including a quieter journey and with significantly lowered health impacts as compared to ICE vehicles. • Electric vehicles currently benefit from capital subsidies and lower fuel and vehicle taxation. Each of these may be phased out in the long run as electric vehicles	• Leadership • Regulation • Policy Setting • Incentivising • Signposting • Communications • Transport Planning • Highways • Parking • Parks • Procurement • Planning • Planning Enforcement • Regulatory Services • Housing Regeneration • Building Control • Sustainability/Energy Manager • HR	• 20mph borough • EV charging points – 130+ (May 2019) • Parking charges commensurate with vehicle emissions • Cycle library & cargo bike hire schemes • Cycle training – adults and children • Successful bid to update our understanding of critical drainage areas in Ealing (SUDs) • Flexible working encouraged as part of the New Ways of Working strategy

	prevent flooding on transportation routes. • Install Sustainable Urban Drainage Systems (SUDS) or swales on roads to mitigate flood risk and the environmental effects of stormwater and rainwater runoff, including drainage of emissions from internal combustion engine (ICE) travel into the water table. • Encourage remote working and flexible working hours to reduce travel to and from offices, as well as non-peak time travel. • Enforce planning policy requiring cycling parking and EV charge points on all new developments including homes to encourage the transition to EVs throughout the borough. • Create car-free estates, increased walkability and pedestrianisation of communities, emphasising biodiversity and the urban ecosphere in both new builds and regeneration projects.	reach cost parity. By 2050, the Climate Change Commission expect the shift to low-carbon options like electrification to cut the annual costs of UK transport by around £5 billion. That can be achieved while maintaining transport's tax contribution and allows for the costs of charge-points and other infrastructure. Increased modal transportation will contribute both to improved air quality and increased health in those taking part in active transport, including cycling and walking. • Sustainable transportation reduces noise pollution, impact on the built and natural environment, and requires less infrastructure maintenance than vehicle travel. • The UK cycle industry is worth three times more than the UK steel industry and employs twice as many people. Cycling related		

	- Restructure cycle lanes to be more visible, segregated, and safer for cyclists and motorists alike. - Promote cargo cycles as an alternative to motorised delivery scooters, targeting recent uptick in food delivery services. - Increase the number of car-free days, pedestrianising main thoroughfares in the borough, allowing only buses and emergency vehicles. - Introduce work-place parking charges, congestion charging and/or emission based road charging, recycling funds into active travel and public transport initiatives. - Require all taxis to be EVs through a licensing program. - Ensure that all buses operating within the borough are either electric or hydrogen fuel (used making electrolysis powered by renewable energy) through the	businesses currently generate at least £5.4 billion for the UK economy each year, and they sustain 64,000 jobs. - Traffic congestion will be lessened as modal transportation increases and carpooling and sharing become more embedded into urban settings, minimising time lost during travel, reducing traffic noise and GHG emissions, and increased health of travellers. - Decreased reliance on fossil fuels and displacement of existing import networks from unstable global regions through the promotion of biofuels and electric vehicles will result in a safer global market and healthier environment as carbon intense oil extraction is reduced. - A substantial number of people are employed in the formal and informal public transport sector. A shift to public and shared transport modes is likely to generate additional		

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Buses Act to work in partnership with existing bus companies.

- Repair and update pedestrian walkways, increasing uniformity of surfaces over cobblestones/pavers, to increase safety and accessibility. Increase safe crossing points for pedestrians.
- Create car-free residential areas as part of filtered permeability schemes (bollards which close roads to vehicle traffic using bollards, but which allow cyclists and pedestrians to cross and can be lowered for emergency vehicles).
- Expand Ultra Low Emission Zones (ULEZs) in town centres, minimising or banning deliveries during the day or on low air quality warning days.
- Create "Mini-ULEZs" around schools, where possible, to minimise vehicle traffic during school hours.
- Support introduction of shared taxi/on demand

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employment opportunities in this sector.

- Focusing on sustainable transport and tackling congestion can create a better place to do business.
- Mitigation strategies that foster multi-modality are likely to foster improved access to transport services particularly for the poorest and most vulnerable members of society. Improved mobility usually helps provide access to jobs, markets, and facilities such as hospitals and schools.

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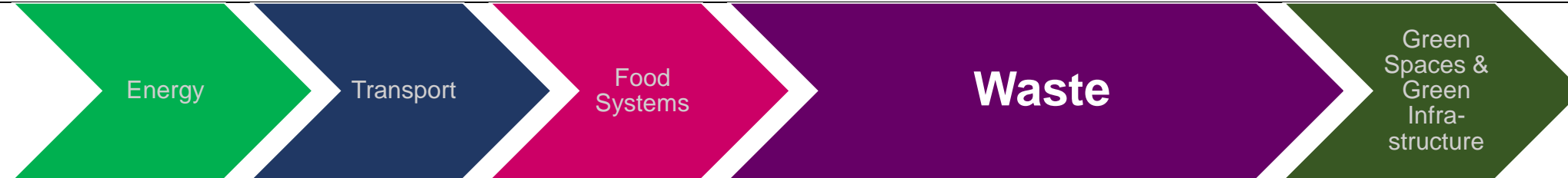|				
	bus services for accessing local services and businesses. • Discourage idling vehicles and loitering through expanded reporting networks and public information campaign. • Oppose expansion of air travel and airports within local plans.			

Appendix 1. October Cabinet Report – Draft Strategy Matrix

Energy	Transport	**Food Systems**	Waste	Green Spaces & Green Infra-structure

Vision	Ideas	Cobenefits	Council's Role	Progress to Date
• Ealing residents and businesses will strive for zero food waste and choose to eat within the EAT-Lancet Commission's Planetary Health Diet to contribute to the global 1.5-degree climate target. • Locally grown food will be plentiful and accessible to all residents to purchase or help produce.	• Rethink allotment management to enhance, protect and give more people access to food growing. • Review open spaces for opportunities for community food growing and orchards; support local communities to lead; connect to Transform Your Space to access support • Require all new developments to give access to food growing through the provision of allotments or community gardens. • Use only peat-free compost. • Ensure all publicly procured food meets criteria that supports the Planetary Health Diet.	• Local food production contributes to the Future Ealing outcome of helping residents to stay active, healthy and independent. Nearly a fifth of parents say that they regularly go without food to ensure that their children have enough to eat, according to Public Health research. Providing opportunities to grow food locally can provide access to fresh, healthy food for everyone. • Small scale, locally produced food can support biodiversity • Food growing programmes contribute to community building by providing places to learn, exchange information and take pride in the	• Leadership • Policy Setting • Signposting • Communications • Parks • Procurement • Planning • Planning Enforcement • Housing Regeneration • Schools – Ealing Learning Partnership	• New orchards have been created, notably through the Hanwell and Norwood Green Orchard Trail. • Supporting and working to sustain existing and new food growing provisions with organisations, such as the Horsenden Farm, Ealing Transition and Ealing Allotment Partnership.

	- Expand access to market for local food suppliers by encouraging more farmers markets and direct connections to local businesses. - Support food distribution organisations currently operating in the borough to ensure local connections between Ealing businesses and Ealing residents in need. - Communications and community engagement: provide robust information on home composting; provide information on the Planetary Health Diet; encourage home grown food growing with information and workshops; work with Ealing Transition and other local "friends" groups to support food growing across communities	outcomes. This directly relates to Future Ealing outcome of a clean and great place to live. - Local small-scale farming supports small business and directly relates to the Future Ealing outcome of growing the economy, creating jobs and opportunities. - Excess food that is redistributed can help tackle food poverty and hunger in disadvantaged communities. This directly contributes to the Future Ealing outcome to help residents to stay active, healthy and independent. - Eliminating food waste from our waste stream greatly reduces carbon emissions released when food decomposes.		

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| Energy | Transport | Food Systems | **Waste** | Green Spaces & Green Infra-structure |

Vision	Ideas	Cobenefits	Council's Role	Progress to Date
• Ealing's overall waste tonnage will be minimised due to a reduction in avoidable waste generation and an effective circular economy, within and outside of the borough. • Recycling rates will be maximised with end of life plastics diverted from incineration and degradable materials such as food waste and paper diverted entirely from landfill. • Ealing's waste collection fleet will strive to be zero emission and circular economy, for example. hydrogen fuelled vehicles fuelled by hydrogen derived from food waste biomethane. Smart collection systems will minimise fleet journeys.	• Examine the potential for reducing the carbon emissions of Ealing's waste collection fleet and the circular economy opportunities for the fuel. • Increase the capacity and reach of Ealing's circular economy including seeking circular economy statements from all major planning applications, shops selling salvaged building materials, furniture restoration and repair workshops and swap shops. • Enact robust measures to prevent litter and particularly plastics, from entering our waterways. Single-use plastic use will be minimised and plastic packaging in use will have been produced to be recycled easily.	• Carbon reduction, waste reduction, increased recycling and quality of recycling all reduce Ealing's environmental footprint and make Ealing a clean and high-quality place people want to live in – a clear Future Ealing outcome. • Clean and healthy spaces can play a role in discouraging anti-social behaviour, contributing towards the Future Ealing outcome of reducing crime and making residents feel safe. • Expansion of the reuse/circular economy sector creates jobs and opportunities for Ealing residents, another Future Ealing outcome.	• Leadership • Regulation • Policy Setting • Incentivising • Signposting • Communications • Street Services • Procurement • Planning • Economic Regeneration • Regulatory Services • Sustainability • Highways • Transport Planning	• Recycling rate of over 50% and on target to reach 60% by 2022. • Second best recycling rate in London • Over 7,000t food waste diverted from landfill in 2018 and anaerobically digested to biogas to produce clean electricity and soil fertiliser. • LATCO Vehicles will be ULEZ compliant as a first step

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	• Local reprocessing for all appropriate material streams to minimise the transport emissions associated with reprocessing. • Reduce plastic consumption including supporting incentives for zero/ reduced plastic packaging for shops and restaurants; banning some single use plastic items such as bags and straws; adult learning cooking classes to show how easy it is to cook from scratch rather than purchasing packaged meals. • Minimise food waste and maximise recycling of unavoidable food waste including commercial food waste recycling; support unused food to distribution hubs and food banks. • Ensure the Council leads from the front, including minimising waste; maximising recycling and banning single-use plastics from council facilities and events.	• Zero emission vehicles have benefits for local air quality, improving the health and wellbeing of residents, contributing to the Future Ealing outcome of a clean and high-quality place to live.		

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	- Increase awareness on reducing, repairing and reusing as well as recycling; business recycling; recycling in schools; Love Food Hate Waste and how to recycle better to reduce contamination. - Support reprocessing capacity including anaerobic digestion for the production of biogas locally or nearby to reduce the emissions associated with transport.		

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Energy	Transport	Food Systems	Waste	**Green Spaces & Green Infrastructure**

Vision	Ideas	Cobenefits	Council's Role	Progress to Date
• The council and residents will create and maintain high quality, climate resilient open spaces. Green spaces of all sizes will provide carbon storage, water retention, urban cooling and habitats that enhance biodiversity.	• Restore habitat on a large scale to create or improve biodiversity corridors. Look at opportunities along waterways and identify keynote species as indicators of healthy habitats and biodiversity. • Scale up tree planting (2017 data shows 43,947 council-owned trees; representing a 2.7% canopy cover) • Expand wildflower meadows and rough grassland management schemes to store carbon and reduce emissions associated with grounds maintenance • Measure the full carbon storage of parks • Implement pocket parks through street closures • Eliminate the approval of crossovers into gardens to	• High quality green spaces benefit physical and mental health within communities. Parks, allotments, cemeteries and conservation areas encourage active lifestyles and community connections. This relates directly to the Future Ealing outcome of helping residents to stay active, healthy and independent. • According to Defra's Climate Change Plan, if everyone had access to sufficient green space, the benefits associated with increased physical activity could save the UK health system £2.1 billion per year. • Green spaces work hard as "green infrastructure" – providing clean and cool air and retaining water after rainfall. Greening cities will help communities deal with	• Leadership • Policy Setting • Communications • Parks • Planning • Sustainability • Highways • Transport Planning	• Ealing has 8.4 square kilometres of parks and green spaces, 15% of the total borough area and an average of 1.97 ha per 1,000 people. • Introduction of 200,000m² of flowering meadows in Parks and Housing sites • Sourced £375k funding and started delivering the Greenford to Gurnell project to improve access to nature and increase biodiversity through wetland habitat and tree planting. • Planted more than 50,000 trees through Trees for Cities partnership agreement • Introduction of multiple SUDS schemes to capture and retain rain and ground water in Parks.

	protect habitat in front garden; support the restoration of paved gardens to expand habitats • Planning applications: maintain a policy of no net loss of green space; apply a local urban greening factor to increase new green amenities rather than no net loss position, clear ask • Communications and community engagement: develop a schools' curriculum to support the protection of green spaces in the borough; maintain close relationships with Ealing Wildlife Group and Ealing Transition to generate community ownership and action; create a street warden programme to promote urban greening and resident responsibility for verges, pocket parks and other localised green spaces. • Promote and deliver the installation of green roofs through planning policy and retrofitting council buildings.	fluctuations in temperature, especially as our temperatures increase. Greening the boroughs streets and town centres contributes to the Future Ealing outcome of creating a clean and great place to live. • Research from Yale University evidenced that an increase in the number of trees related to a decrease in violent and property crime. This supports two FE outcomes to reduce crime and help residents to feel safe and to keep young people safe. • Ealing's green spaces hold tremendous value to sustaining biodiversity. According to the World Health Organisation, human health depends upon ecosystem products and services (such as availability of fresh air, water, food and fuel sources) which are fundamental to good human health. The borough's green spaces provide numerous spaces for local food growing, which contributes to reducing "food miles" – and therefore carbon - associated with food production.		• Wetland planting has also been introduced to increase the variety of habitats and biodiversity.