



Glasgow City Council

Environment Sustainability and Carbon Reduction City Policy Committee

Report by Executive Director of Neighbourhoods, Regeneration & Sustainability

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UPDATE ON THE CIRCULAR ECONOMY ROUTE MAP AND ACTION PLAN

Purpose of Report:

To provide Committee with an update on the Circular Economy Route Map and Action Plan.

Recommendations:

The Committee is asked to:

- 1) Note the contents of this report;
- 2) Continue to support the work of Neighbourhoods, Regeneration & Sustainability (NRS) in promoting the transition to a citywide circular economy.
- 3) Note that further updates will be provided on an annual basis.

Ward No(s):

Citywide: ✓

Local member(s) advised: Yes No consulted: Yes No

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1 Introduction

- 1.1 In December 2020, Glasgow City Council approved the [Circular Economy Route Map and Action Plan](#) which aims to guide a change in city-wide economic practices from the current linear system of the throwaway society. As a result, it addressed the need to move away from the “take-make-dispose” model to a circular system of quality, reuse and durability. The action plan focused on a range of stakeholders including the Council, private sector and civil society.
- 1.2 A wide scale consultation was undertaken to identify stakeholders that would play a pivotal role in the development and implementation of the circular economy in the city. This was carried out in collaboration with [OECD](#), the [Glasgow Chamber of Commerce](#) and [Zero Waste Scotland](#). Over 50 interviews were conducted throughout 2020. These interviews helped shape the OECD document [Case Study on the Circular Economy in Glasgow](#) which was launched on 11 November 2021 during the UN COP26 Climate Conference.
- 1.3 The Route Map’s ten year vision is intended to enhance awareness of sustainable practices, promote a message of considered consumption and provide a challenge to the current wasteful consumerist practices that exist in society and have been recently sharply highlighted at the UN COP26 Climate Conference.
- 1.4 As a result of the wide reach of circular economy principles, embracing this approach offers Glasgow a unique opportunity to:
 - Reduce carbon emissions,
 - Drive green economic growth,
 - Identify opportunities to help regenerate communities,
 - Encourage the growth of the sharing economy,
 - Support job creation and skills development,
 - Champion employment and career opportunities in renewables,
 - Develop and nurture local sustainable businesses,
 - Improve recycling and re-use practices,
 - Develop a more sustainable and circular public procurement strategy,
 - Contribute locally to more sustainable forms of global stewardship.

2 Implementation of the Circular Economy Action Plan

- 2.1 Using the Circular Economy Action Plan has been important to create a strong foundation for action across 2021. The Route Map has been recognised by many cities, organisations and networks as one that is striking and progressive and has proven to be an inspiration.
- 2.2 The Circular Economy Action Plan was divided into six themes to capture the different economic sectors occurring throughout the city. This framework acknowledged the relevant organisational influence that each of the stakeholders can exert on the proposed transition to a circular economy. Each

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of the stakeholders were consulted before these themes were allocated to secure their buy in and participation.

2.3 The Action Plan was broken down into the following six themes, comprising 31 actions;

- i. **Policy:** Identifying strategic policy work that would prioritise and enable a coordinated circular approach at a wider city and national level.
- ii. **Planning:** Recognising that city planning frameworks can play a major role in influencing how the built environment can transition towards more circular activities.
- iii. **Production:** Alignment with sustainable and circular methods in the manufacturing and production sectors will have a substantial impact, not only on the manner in which products are sourced and assembled, but also in the future dissolution and reuse of those materials.
- iv. **People:** A critical aspect of the transition towards more sustainable practices should have a focus on positively impacting our citizens, advancing their opportunities and offering the building blocks to create resilient and secure community wealth building projects and careers.
- v. **Private:** The influence of the private sector on developing circular and sustainable work practices is undeniable. The engagement work carried out by the Glasgow Chamber of Commerce indicates a willingness of private enterprise to engage with the circular economy. This has to be translated into widespread uptake of circular activities by business in the city.
- vi. **Public:** The public sector in Glasgow plays a significant role in developing a narrative and organisational approach to sustainable work practices. With a substantial procurement budget, influence over the planning system, and an operator of large scale assets such as the road network; the city administration has the potential to have a transformative impact on the city in terms of embedding the circular economy.

3 Action Plan Updates

3.1 There has been significant progress undertaken across all six Action Plan themes since the publication of the strategy in December 2020. A detailed breakdown of progress of each action is provided in Appendix 1.

3.2 Some key highlights have been captured below:

- i. **The launch of the Sustainable Glasgow Business Charter:** Launched in June 2021, the Charter has been developed to enable organisations to demonstrate commitment to circularity, radically reduce their carbon emissions and support a sustainable green recovery.
- ii. **Knowledge exchange on Circular construction and textiles:** this has included Glasgow joining the [H2020 EU CIRCulT](#) project in June 2020. Glasgow City Council have also held a series of city wide discussions and hosted a workshop on circular textiles in June 2021.

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- iii. **Innovation around Embodied Carbon:** The City Council have been working to consider embodied carbon locally via participation with the global CNCA network, this project commenced in April 2021.
- iv. **Embedding Circular practices:** The “Sauchiehall Street Precinct” Avenues project has focused on how to embed more circular practices. Currently working on a proposal to salvage 9000m² of materials from the redevelopment for re-use on future roads or civic realm projects in the City.
- v. **Reuse Projects:** The implementation of the [Community Calling](#) project, in partnership with the charity [Hubbub](#). Hubbub have salvaged, repaired and re-issued over 500 devices to digitally excluded citizens across Glasgow. This project is still ongoing and has just won the gold medal at the Covid Response Awards in the IT/Digital category.
- vi. **Circular Procurement:** The City Council is working on assessment of our internal procurement practices. An exercise is currently being undertaken across November/ December 2021, using the Scottish Government Procurement Prioritisation tool.

4 Next Steps

- 4.1 Work will continue on the Circular Economy Action Plan with a number of actions due to commence in 2022.
- 4.2 The continuing success of action on the Circular Economy requires the continued input of commitment and resources from the city council as well as city stakeholders. This will also involve a crucial turning point in behavior change which we should support through ongoing communication and engagement.
- 4.3 The need to engage all stakeholders will be supported by the work of the Thriving Cities Initiative (TCI) led by C40 cities. This initiative was launched during the UN COP26 Climate Conference and will continue with a series of workshops mid-2022 to consolidate efforts to create an action pathway to reduce consumption based carbon emissions.
- 4.4 Progress on the Circular Economy Action Plan will be tracked on a quarterly basis through a developing Climate, Resilience, and Sustainability governance model, with annual updates being presented to committee.

5. Policy and Resource Implications

Resource Implications:

Financial: There are no direct financial implications arising from the report.

Legal: The report raises no legal issues.

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Personnel: The Circular Economy Routemap and Action Plan is managed within existing resource in the Sustainability team.

Procurement: The purchase of commodities is currently being assessed using the Scottish Government's Procurement Prioritisation Tool, to consider how to embed more circular principles.

Council Strategic Plan: The report supports the following strategic themes and outcomes:

A Sustainable and Low Carbon City

- **Priority 64:** Improve the city's cleanliness and recycling rates and residents' satisfaction with these issues.
- **Priority 67:** Become a carbon neutral city by 2037, reviewing our energy carbon masterplan in 2019, and investigating membership of international networks, the Carbon Neutral Alliance and C40.

Equality and Socio-Economic Impacts:

Does the proposal support the Council's Equality Outcomes 2021-25? Please specify. This work is generally supportive of all equality outcomes, specifically 1. and 8.

1. An increased proportion of people with protected characteristics are supported to enter employment or training.

8. Service users with protected characteristics are provided with targeted improved and more accessible information about the services provided by the Council family.

What are the potential equality impacts as a result of this report? Positive Impact. An EQIA screening was undertaken during the development of the Circular Economy Routemap and Action Plan.

Please highlight if the policy/proposal will help address socio-economic disadvantage. The Circular Economy Route map proposes a sustainability focused approach whereby the environment, commerce and society are considered fully with positive opportunities and outcomes sought in each aspect. The overarching theme throughout the Route Map is one of inclusion and justice in an effort to tackle

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the climate and ecological emergency while also bridging the gap on deep socio-economic and health inequalities in the city.

Climate Impacts:

Does the proposal support any Climate Plan actions? Please specify: The Circular Economy Routemap and Action Plan will have a significant positive impact upon the environment by actively raising awareness and educating citizens and staff members about the need to reduce unnecessary consumption. This update report will reinforce this endeavor.

What are the potential climate impacts as a result of this proposal? A reduction in unnecessary consumption of materials across the city and a shift away from the traditional linear economic model.

Will the proposal contribute to Glasgow's net zero carbon target? Yes, this proposal will positively contribute to Glasgow's net zero carbon target.

Privacy and Data Protection Impacts: None

6 Recommendations

6.1 The Committee is asked to:

- 1) Note the contents of this report;
- 2) Continue to support the work of Neighbourhoods, Regeneration & Sustainability (NRS) in promoting the transition to a citywide circular economy.
- 3) Note that further updates will be provided on an annual basis.

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Appendix 1

Circular Economy Action Plan Update

Action Plan Theme: People

1. Glasgow City Sustainability /Circular Charter: To promote, raise awareness and enhance the Circular Glasgow movement in Glasgow.

The Sustainable Glasgow Citywide Charter has been developed to enable organisations to demonstrate commitment to circularity, radically reduce their carbon emissions and support a sustainable green recovery. This was taken forward by the [Sustainable Glasgow](#) partnership and now incorporates targets for improvements for the signatories which will be audited by Deloitte.

2. Monitoring and Evaluation – Develop metrics and indicators to assess circularity in the City.

To monitor the development of the circular economy in Glasgow it was recognised there needs to be a suite of indicators to measure progress. Discussions are ongoing with Zero Waste Scotland to develop metrics and indicators and it is agreed that these will likely be established on a national scale through the [Scottish Cities Alliance](#).

3. Collaboration – Continue to form global, European, National and regional metropolitan partnerships and alliances in order to broaden influence towards a more circular economy.

As part of the development of the Route Map it was considered necessary to build formal partnership and collaborations through knowledge sharing and mayoral covenants with partner cities to strengthen circular economy commitments. This is a requirement to enable a positive climate impact on a global basis and avoid working in isolation thus losing valuable experience and guidance from international partners.

The Route Map is strongly supported by the national zero-waste agency, Zero Waste Scotland. Assistance has been provided in various project areas especially within the working groups for the textile and construction sectors.

Along with our partners in the [Ellen MacArthur Foundation](#) , the foremost global not-for-profit advisory agency on the circular economy, the [Danish Business Authority](#), [Leader Lab](#), The [World Circular Economy Forum](#) and the cities of Copenhagen, New York, Toronto and Amsterdam, Glasgow was a key participant in the [Circular Innovation City Challenge](#) from January to June 2021. There were five winners selected from 130 submissions that was centred on digital solutions. The council has been in discussions with the winners to establish how these solutions can be incorporated into the organisation to add value to council services

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From December 2020 to April 2021 Glasgow worked closely with [Arup](#) and the [UK Government's Foreign and Commonwealth Development Office](#) (FCDO) based in the Embassy in Madrid to host a series of discussion seminars based on the circular economy. This is the second such project that Glasgow and the FCDO collaborated on and this was attended by 50 partner cities and organisations over three sessions.

Throughout 2020 and 2021 the OECD have been working with Glasgow to help develop Route Map and then to advise on the wider governance for the city in terms of understanding the gaps in establishing a circular economy. This has been developed in their [Case Study](#) document.

It is acknowledged that Glasgow's ability to impact will be larger as part of a bigger bloc of cities and organisations. Therefore, the signing of the [Circular Cities Declaration](#) in April 2021, following committee approval, further embeds the principles of circularity within a series of defined commitments.

Further partnership working is also being developed with [ReLondon](#) (formerly London Waste and Recycling Board) who are leading on best practice around circular construction and to enhance the relationship between Glasgow by providing support, experience and knowledge exchange around the textile sector also.

In addition to these areas, collaboration work around Horizon 2020 bids with the city of Hamburg and peer review work with Dublin City Council and the Government of the Republic of Ireland have been important in building international relations. This has been further enhanced by the involvement of [Circle Economy](#) from the Netherlands and colleagues from [Scottish Development International](#) in the Copenhagen and Geneva offices.

Glasgow have also been invited to join the Ellen MacArthur Foundation Partner City Network, this is recognition of the strong position the city has taken with the publication of its Circular Economy Route Map. The membership status conferred on the city will be formally confirmed in early 2022.

Action Plan Theme: Planning

4. Circular Construction Statement – create a circular construction framework for all construction projects within the city including the implementation of the “Circular Economy Statement”.

The Action Plan required to support the development of a circular construction framework, and Circular Economy Statement to be applied across all future construction proposals in the city. There have been early discussions and knowledge sharing with colleagues in the planning section of NRS.

Further discussions are planned to align the circular economy requirements with both local planning conditions and the forthcoming Fourth National Planning Framework for Scotland which currently under consideration in the Scottish Parliament for 120 days from 10 November 2021.

Consultation has concluded on ReLondon's revised [Circular Economy Planning Statement](#) and is under consideration as a primary tool in planning guidance for the Mayor's office. Through Glasgow's partnership with London on the [CIRCulT](#) project

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further assistance has been offered to help develop a planning statement relevant for Glasgow.

[The Academy](#) which has been launched recently by ReLondon can offer support for capacity building and awareness raising throughout the planning sections to bring education courses circular activities to Glasgow. Similarly Zero Waste Scotland are available to help in staff training around aspects like digitisation and material passports.

5. Reuse of Construction Materials – Investigate opportunities to develop a system for the city-wide recovery and reuse of materials. This will include providing storage facilities for reclamation materials for construction purposes within the city limits.

The Sustainability team has been investigating opportunities to develop a system for the city-wide recovery and reuse of materials. The intention is to provide storage facilities for reclamation materials for construction purposes within the city limits. There have been ongoing obstacles to formally creating this space, which was initially to be sited at the Kilgarth Landfill legacy site in North Lanarkshire, and discussions have recommenced to finally identify a suitable location for storage.

Ongoing dialogue with the project team responsible for the Sauchiehall Street Precinct Avenues project have been productive and there is a proposal to salvage the 9000m² of materials for re-use on future roads or civic realm projects. This circular use of materials is directly relevant to a “Public Procurement” project the Sustainability Team and Corporate Procurement are currently undertaking with the Ellen MacArthur Foundation.

Work has been ongoing throughout 2020/21 with various groups in the city to create connections to facilitate sharing of resources. Most notably the Sustainability team has been working with not-for-profit organisations such as [ReSet Scenery](#) and the [Circular Arts Network](#) as well as [Creative Scotland](#) around the salvaging, sharing and reusing of materials from films, TV, stage and music events in Glasgow. A central storage facility has been sought by the Sustainability team to increase the intake of waste materials and the impact of these initiatives. To date the properties offered from the council’s internal estate have been unsuitable, however this search will continue.

6. EU H2020 CIRCuIT Project – Provide updates and learning outcomes from knowledge gained through participation in the EU H2020 CIRCuIT Project.

Glasgow is currently in partnership with ReLondon on the Horizon 2020 EU CIRCuIT project. This is multi city project across Europe with 31 participating organisations and 12 follower cities, including Glasgow. There are many aspects to circular construction being developed currently and the first summit for sharing information was unfortunately curtailed by Covid-19 concerns and moved to a virtual space.

Some of the main focus areas of the [CIRCuIT](#) project are:

- Urban mining and reverse cycles - the reuse and recycling of materials;
- Extending building life through transformation and refurbishment;
- Designing for disassembly and flexible construction to make reuse, recycling, transformation and refurbishment easier.

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ReLondon are keen to help Glasgow develop policy strategies on these aspects as well as providing updates and learning outcomes from knowledge gained through their leading participation.

7. Circular Forums – Host a series of forums to support collaboration, knowledge, and best practice in a series of sectors including:

City Construction Forum: Commitments to participate in the construction forum have been gathered from Zero Waste Scotland, Glasgow University, Strathclyde University, Glasgow Caledonian University, the City of Glasgow College, Construction Scotland Innovation Centre, Developing the Young Workforce, Young Enterprise Scotland, a series of multi-national construction firms, the Ellen MacArthur Foundation and ReLondon.

The forum will centre on topics such as understanding and tackling embodied carbon, knowledge exchange across the construction community, upskilling of architects, designers and contractors to construct and design whilst prioritising the reuse of materials through modular planning, diagnosis, sorting and recovery of site resources.

This forum will now commence in early 2022.

Circular Textiles Forum: The textiles forum commenced in May 2021 with a foundation seminar organised by the Sustainability team and Glasgow University. This was followed with a workshop which was attended by 30 major stakeholders in the textile industry. The workshop allowed the decisions to be made on the upcoming themes for the forum.

It is intended to run a series of forum workshops until mid-2023 based on specific themes and taking evidence and opinion from a series of citywide, national and international stakeholders. This will culminate in a strategic textiles policy for the Glasgow. Currently there is a substantial participation list covering all actors within the sector and being supported most notable by Glasgow University, Zero Waste Scotland, ReLondon and the Ellen MacArthur Foundation.

Action Plan Theme: Production

8. Remanufacturing – Support and develop the remanufacturing sector across the City.

The Circular Economy Route Map makes a commitment to support and develop the remanufacturing sector across the city. Meetings have taken place with various groups including Zero Waste Scotland, the [Scottish Institute of Remanufacturing](#) and [Circular Communities Scotland](#) to explore areas where this can be supported by the city council. This is ongoing with projects and project funding applications being considered to activate this sector.

Meetings with ReLondon about the re-use of construction materials has resulted in the connection being made with the steel remanufacturer [EMR Group](#) who have recently expanded into Glasgow and are exploring the possibility of opening a steel remanufacturing facility in the city. There is an understanding that demolition materials that are currently lost to waste and could be diverted to be salvaged by EMR for future

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construction purposes. There is a willingness to have that amenity local to the city to reduce transport emissions and the carbon savings from a remanufacturing plant would be significant. Work is ongoing connecting EMR with other operators in the construction industry to enhance this circular activity.

9. Repair/maintain – Support and develop the repair and maintenance of products with a set of initiatives targeting reskilling and material exchange.

It was the intention to initiate three pilot projects to support the delivery of a culture of repair and maintain. These projects should support development in the SME, community, and education sectors.

To date one project has been commenced within the repair sector. The [Community Calling](#) project has been undertaken in partnership with the charity [Hubbub](#). Hubbub have managed to salvage, repair and re-issue over 500 devices to citizens in Glasgow who were digitally excluded. This project is ongoing and has just won the gold medal at the Covid Response Awards in the IT/Digital category.

Legislation around the Right to Repair in the UK was passed in July 2021, this means that that manufacturers will have to make repair information and spare parts available for repairs for up to ten years for some new white goods and televisions. Manufacturers have been granted a two year window to realign their processes to suit this legislation. This now bring the UK into step with the EU after the same legislation was passed in March 2021.

10. Reuse and Sharing - Support and develop the reuse and sharing sector. Promote the benefits of reuse and support local actors.

Our circular partner Hubbub are currently assisting the [Glasgow City Health and Social Care Partnership](#) to establish five [Community Fridges](#) in city, this will help combat food waste and also tackle food poverty. This sharing initiative is well established in Europe and Hubbub have created a similar initiative across England and Wales. This project has been designed as not disrupt the hard work in developing of the council's Pantry scheme which has been developed over the past few of years along with the [Scottish Pantry Network](#).

The Sustainability team and Hubbub are discussing a [project](#) based on recycling, upcycling and reuse. This would mirror the work done in Leeds and Swansea to impact those cities' recycling rates but also to help establish connections and sources of materials for the sharing and repair economy. This type of project cuts across internal silos within the council and creates a clearer understanding of policies and their implications.

As stated in the Action Plan the Sustainability team and Zero Waste Scotland undertook a project to develop a central municipal storage facility for reuse of domestic household waste items, electronics and textiles. This would be similar to the facility that [Amsterdam](#) use for textile collection and distribution. The request for facilities was unsuccessful, however, as the properties offered from the council's internal estate were unsuitable.

The Sustainability team, ApparelXchange and our partners in the Glasgow City Health and Social Care Partnership collaborated on a funding bid to support education tackle the stigma of poverty for primary schools by sharing and reusing clothing and costumes

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to ensure inclusivity for the children. Unfortunately this community renewal funding bid was unsuccessful, however plans will be pursued wherever possible.

11. Packaging and Waste Reduction – support and promote the reduction of disposable packaging use, aligned to Extended Producer Responsibility.

Initial proposals to identify the nature of the waste being produced by the council family have been impacted by the Covid-19 pandemic, which curtailed opportunities to develop a coherent approach. This will be revisited in 2022.

Legislation around packaging and packaging waste and the introduction of [Extended Producer Responsibility](#) has been subject to a formal period of consultation which concluded in June 2021 with the full UK Government response due to be published in March 2023.

12. Open and Accessible Estate – Support the opening of vacant and unused GCC estate/ GCC property portfolio in order to provide space for circular innovation and start-ups.

The Action Plan identified that unused estate within the council portfolio should be activated for circular or sustainable opportunities instead of lying redundant. The practicalities around this kind of intervention have proven to be complex. An audit was conducted and various properties were identified with numerous organisations interested in relocating to these empty premises. However, despite intensive work across departments and organisations this has failed to open up any vacant property or indeed gain access to any derelict land.

As part of the OECD [Case Study on the Circular Economy in Glasgow](#) this aspect of using vacant and derelict property and land is critical to the establish the transition to a fairer and more sustainable economy. This would certainly create more inclusive, stable and reasonable opportunities for community groups and social enterprises who currently are having to operate in a commercial market.

13. Circular Kick Starter Fund – Create an annual financial support fund for circular economy start-ups.

Due to the constraint on resources the Sustainability team has been unable to create an annual financial support fund for circular economy start-ups, to provide seed funding. In-kind support has been given to our community and social enterprise partners providing advice and connections.

14. Grassroots Circular Project Support – Providing an element of shelter to circular projects that are fledgling and may not survive without support.

It was the intention of the Action Plan to provide an element of shelter to those circular projects that are fledgling and may not survive without additional support. Due to constraint on resources this has not been possible.

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15. Last Mile Delivery – support and develop a “Last mile low carbon delivery service” into the city centre

The Action Plan identified an opportunity to support and develop a “Last mile low-carbon delivery system” into the city centre. This has been discussed by our partners in [TRL](#) (formerly the Transport Research Laboratory) through the [ECO Stars Fleet Recognition Scheme](#) that we operated in the city, and have done so since 2014. The Sustainability team and TRL will conduct a research paper in 2022 to identify the challenges and opportunities around this type of project. It is intended that community distribution hubs could be ideal opportunity for job creation, community wealth building with an added benefit of reducing congestion and emissions in the city streets.

At the Sustainable Glasgow Landing Site on the Broomielaw during COP26 UPS, the delivery group, showcased the different types of vehicle they could deploy as a last mile delivery solution.

The draft [Transport Strategy for Glasgow](#) which underwent a period of public and stakeholder consultation from 18th October to 3rd December 2021 indicates that the movement of goods is a vital part of any city. In Glasgow, around 27,000 tonnes of goods are moved around every day (and that does not include parcel deliveries). Almost all goods will use the road network at some point in their journey, sharing road space with others. Transport Scotland has policy aspirations to increase the proportion of freight moved by rail, and regional planning policy advocates strategic freight transport hubs. Glasgow City Council can support these aspirations, as well as aim to support lower carbon transportation of goods within the city, particularly last-mile deliveries.

Action Plan Theme: Private Sector

16. Facilitate Closed Loop Circularity – develop potential linkages across the business community, opening up data on waste streams with a view to creating closed loop material and waste flows in the City.

This aspect of the circular economy is crucial; developing potential linkages across the business community by opening up data on waste streams with a view to creating closed loop material and waste flows in the city will fundamentally create circularity and sustainability. Work has been ongoing to establish a virtual exchange business platform across the business community to “match-make” waste streams with material inputs. This information would inform a database of materials and support material flow across the city. Discussions with a highly successful operation, [The Upcycl](#), from Aarhus, Denmark facilitated by Scottish International Development has opened the possibility to create a similar scheme in Glasgow. Discussions were around ownership and a franchising model. According to the OECD this is an important aspect to normalise the ideas around the sharing and re-use economy.

The [Circular Innovation City Challenge](#), a digital and data based challenge offered creative solutions to drive the circular economy forward in Glasgow. One of the five winners was [Topolytics](#) who have developed [WasteMap](#) which can, in real time, identify on a graphical basis quantities, quality and destination of waste being moved around Glasgow. Capturing this data would allow businesses, social enterprises, co-operatives to source materials and help to create markets and develop industrial symbiosis with the city. Topolytics have been introduced to the council digital team and will be presenting their solution to the Sustainable Glasgow partnership, for the purpose of making the

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partners aware of the kind of data that would make this software incredibly impactful for Glasgow.

17. Circular Events – develop a fuller understanding of the material and waste streams associated with events.

Glasgow is renowned as an event destination and as such there is a commitment in the Action Plan to develop a fuller understanding of the material and waste streams associated with events. This will include an assessment of carbon impact from the different events. This work has begun in collaboration with the [DF Concert](#) group who worked with the Carbon Reduction team to create a carbon baseline for the TRNSMT weekend at Glasgow Green.

Work is ongoing with Glasgow Life's procurement group to achieve the most sustainable and circular approach to the upcoming [Cycling World Championships](#) that will take place in Glasgow 2023. This will include details around how Glasgow Life sources material, promotes re-use, sharing and there is a conscious consideration for the dissolution of the event and the destination of materials afterwards.

18. Food and Drink – develop a city-wide scheme supporting those businesses that support sustainable, healthy, low carbon and local produce as part of a resilient city covid-19 response.

The Covid-19 pandemic has had a disproportionate effect on the hospitality industry, therefore much of the intended work around this sector has been delayed until restrictions ease.

There is a focus on food waste and the detrimental impact it has on the climate, especially when it is not disposed of in the correct manner. Therefore, two initiatives have been championed around this topic, firstly there is programme being rolled out into schools regarding the food waste in Glasgow's educational establishments called Waste Warriors. This will empower children to monitor, measure and develop interventions around food waste, while Zero Waste Scotland and the Sustainability team help with the educational and scientific reasoning behind the project.

The second project is promoted by [Circular Glasgow](#) around the COP26 conference which challenged restaurants to use as much of their waste as possible to create a new menu item from the scraps. This was called [Plate Up for Glasgow](#) and was a successful in-road into changing some of the mentality around food and its value.

ReLondon has recently published a [report on food waste](#) during the COP26 conference in association with Circle Economy and it has uncovered some stark data around the issue. In discussion with Zero Waste Scotland it was agreed that the London figures may be comparable to Glasgow on a pro-rata basis and it would be advisable to seek further guidance and learning from ReLondon and Circle Economy on ways to translate their learnings to Glasgow.

Allied to the food and drinks sector is the impact that discarded packaging, containers and wrappers have on the city streetscape. Recently the Sustainability team asked circular partner [Hubbub](#) to assist in a drone litter analysis of the city. This project, fully funded by Starbucks, provided a high tech solution to capture an understanding of litter in the city. The work carried out by [Ellipsis](#) identified individual items of litter, quantities,

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types of materials, and locations to allow the Resource and Recycling group to plan relevant and targeted interventions.

Innovation around food growing has been high on the agenda with the Sustainability team and especially around the topic of vertical farming. There has been two lengthy attempts made to introduce a vertical farm, one project funded by the Scottish Government for £100,000 which failed because there were no suitable council premises offered within the required timescale and latterly when no derelict land was offered. This project has now been passed to [Invest Glasgow](#) to resolve. In the meantime, the Sustainable Glasgow Landing Site at the Broomielaw during COP26 introduced the vertical farm demonstrator that the Sustainability team organised with [Intelligent Growth Solutions](#).

19. Reskilling and Upskilling our Circular City (RUCC) – creating capacity through the delivery of partnership projects with business, community and public sector to provide training and reskilling in the guiding principles and building blocks of the circular economy.

There has been no significant advancement on this Action.

Covid-19 restrictions has removed the possibility of classroom work, training, or skills building at close quarters. The Sustainability team recognises the importance of creating capacity through the delivery of partnership projects with business, community and public sector to provide training and reskilling in the guiding principles and building blocks of the circular economy. Circular Glasgow is best placed to take responsibility on this topic and early discussions with them have taken place to request a training package to be developed.

Dublin City Council and the Government of the Republic of Ireland are keen to learn and share experiences and have expressed an interest in helping to build a training programme. It is vital that those entering the programme will gain some form of career progression, whether that is apprenticeship or some form of meaningful employment.

Once restrictions ease the Repair Café will be able to host various training opportunities, the Sustainability team has committed to supporting this community empowerment element around logistics and venues.

20. City Doughnut – develop a detailed analysis of Glasgow’s social and ecological boundaries.

The international climate group [C40 Cities](#) and Glasgow City Council are currently participating in the [Thriving Cities Initiative](#) project. This will develop and build upon a hugely valuable City Portrait provided by [Glasgow University](#) which will help deliver a [City Doughnut](#) profile that baselines and quantifies the social foundation and ecological ceiling for Glasgow.

This is a great opportunity to work with the experts at C40 and the [Doughnut Economics Action Lab](#) to deliver on a specific and high profile action from the Route Map. The project will concentrate on the issue of “Consumption Based Emissions” and will entail a wide reaching stake holder engagement process across academia, community change-makers and council officers to deliver an action pathway for Glasgow. It is hoped that Glasgow University’s GALLANT project will feed into this project over the next two years.

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Action Plan Theme: Public Sector

21. Circular Energy and Carbon Reduction – Ensure that projects emerging in the forthcoming LHEES support and encourage circularity principles.

Work is ongoing on the [Local Heat and Energy Efficiency Strategy](#) (LHEES) which will bring forth recommendations around decarbonisation of heat and energy across the Built Environment.

The Sustainability team has been discussing with [Construction Scotland Innovation Centre](#) (CSIC) to develop an audit of the Glasgow City Council estate and establish a materials catalogue which will help to identify the carbon embodied within the city assets. This will allow Glasgow to make informed and evidenced decisions around future estate planning. One of the winners of the [Circular Innovation City Challenge](#), [Concular](#) have met with the Sustainability team and can provide software and blockchain resources to enable this to take place. The City Council has a working climate arrangement with Berlin and they have been working closely with Concular, it has been proposed that a pilot project across both cities to establish an asset strategy may be an interesting initiative.

The Sustainability team has been participating in the [Carbon Neutral Cities Alliance](#) project called [Dramatically Reducing Embodied Carbon in Europe](#). This project aims to foster widespread adoption of ambitious local, national and regional policies that will reduce embodied carbon and increase the uptake of bio-based materials in the built environment in Europe. Dramatic embodied carbon reduction and increased use of biobased materials is required to mitigate further climate breakdown, requiring changes to what we build and where, how projects are chosen and delivered, and how materials are made, recycled and utilised. The Finnish consultant [One Click LCA](#) has performed a policy gap analysis on GCC strategies and has produced an overarching report to create closer alignment between these policies. There is also an opportunity for further capacity building internally through this CNCA project.

Glasgow also recently became a member of the [UK Green Building Council](#). This is an important step as the UKGBC has now published its [Net Zero Whole Life Carbon Roadmap](#) which could have a significant impact on embodied carbon in Glasgow's built environment and the decisions taken for the future city.

22. Circular Education – promote the concept of circularity, sustainability and responsible consumption to young people.

It is vital that the concepts of circularity, sustainability and responsible consumption are articulated to young people. The Route Map recognises the need to support education providers to embed the principles of the circularity into knowledge and understanding across early years, primary and secondary schools. This is successfully achieved through workshop and collaboration projects such as [Venture Jam](#) that require participation and a level of ownership from the children.

A relationship has been developed with the Sustainability team, [Construction Scotland Innovation Centre](#) (CSIC) and [Developing the Young Workforce](#) (DYW) to explore the introduction of a secondary school education course focusing on digitisation preparation for the construction sector. There is possibility to access external funding to help bring this to life. Skills learned from this type of course as being transferrable across sectors.

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There are a number of projects under development currently with different age cohorts being considered to raise awareness around consumption, waste and reskilling. Food waste is an enduring problem in schools and as stated above Zero Waste Scotland and the Sustainability team are currently delivering a project called [Waste Warriors](#) in 5 primary schools building a sustainable approach from the food waste data captured by work done by school children and their teachers. The hope is to minimise this waste and to retain and compost scraps for regrowing in edible gardens providing fresh and, homegrown and nutritious food. And, the Sustainability team are also promoting an accreditation certificate scheme from [Surfers Against Sewage](#) to challenge single use plastic in primary schools.

Carbon Literacy training has taken place throughout the council family and this is being rolled out to the Sustainable Glasgow partnership.

[The Ellen MacArthur Foundation](#) and Zero Waste Scotland have indicated that further capacity building opportunities can be accessed through their resources and there may be further options to have in-house officer training once the Covid-19 restrictions begin to ease.

23. & 24. Sustainable and Circular Procurement – Review existing internal sustainable procurement working group / Work to undertake a baseline mapping exercise of sustainable procurement activity across the council.

Procurement will have a substantial impact on the council influencing circular principles within our suppliers and contractors. Glasgow is conscious that using the public pound to ensure sustainable and considered choices will positively affect the types of products and services accessed by our organisation and raise the profile of sustainability amongst our external partners.

Training courses are underway to build capacity within the Corporate Procurement section that will arm our officers with an understanding of sustainability and circularity across many diverse sectors. Zero Waste Scotland are providing training to local authorities on public procurement and Glasgow City Council is participating in a 12 month procurement project with the Ellen MacArthur Foundation City Network. This project will look at the circular procurement opportunities around a major civic realm construction scheme in the city centre and help to provide a template for future operations.

Work has begun on the review of sustainable procurement requirements by the existing internal sustainable procurement working group to ensure this is fit for purpose. This work is revising the sustainability tests within the procurement prioritisation tool provided by the Scottish Government. Each separate commodity is being updated to take account of the council's position on the Climate and Ecological Emergency Declaration, the Circular Economy Route Map and any associated policy or agreements to ensure this is reflected within the tests being asked of external suppliers. This will help the procurement team and officers raising contracts to evaluate and determine how best to embed key principles of sustainability and circularity into current procurement requirements.

This work requires to be extended beyond Corporate Procurement to the other procurement groups that exist within the council family.

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25. Biodiversity and Ecological Emergency Work – support greening of unused vacant and derelict land to create carbon sinks and open up space for community enterprise.

Accessing unused vacant and derelict land has proven to be a complex task. There is a willingness to open up this redundant land for many purposes including growing and for business opportunities.

In a project called, [Urban Transitions Alliance](#), with the international sustainability group [ICLEI](#) the Sustainability team is working with to uncover different policy and funding toolkits to activate vacant and derelict land for urban food growing. This is a collaborative network of cities such as Buffalo, Dortmund, Pittsburgh and Essen brought together in a peer to peer knowledge sharing project. This scheme combines multiple benefits by transforming food value chains. Cities catalyse environmental goals while improving food security among other social and economic co-benefits. [Pittsburgh's Vacant Lot Toolkit](#) presents a novel strategy for designing urban food systems and rehabilitating urban spaces, including site selection criteria and implementation rules. This allows Glasgow to consider these mechanisms in line with the newly published [City Food Plan](#).

The Sustainability team, in collaboration with our colleagues in Landscape Design, have also worked with schools and teachers and businesses to introduce local growing and education around indigenous plant selection to enhance biodiversity.

26. Just Transition – Ensure that the principles of the Just Transition are included in any key circular action to enact a positive impact.

There has been no significant advancement on this Action, however, the announcement of the £30bn [Greenprint for Investment](#) will have an impact on the circular economy in Glasgow and will have a Just Transition embedded at its core.

27. Healthcare – following the original recommendations of the Glasgow Circle Scan report, develop and support more circular practices in this sector.

The Covid-19 pandemic restrictions are causing a delay in any work on this Action. It is recognised that public health implications have to take priority. Therefore, the waste impact around the health care services are a difficult aspect to influence at the moment, especially as the requirements for disposal are paramount.

Glasgow is the lead authority in the West of Scotland on the healthcare commodity within the procurement prioritisation tools. As such there is an opportunity to influence re-use, sharing, repair and sustainable sourcing of many of the items being purchased by a significant number of local authorities and also the NHS. This revision of the procurement commodities is underway to enhance the levels of sustainability and circularity.

28. Social Economy Vision – support and encourage a culture where the city council plays a combined part as employer, commercial partner, investor and enabler within the city economy.

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This vision has been discussed with the progressive think-tank Common Weal to depict Glasgow and especially the role of city council and Scottish Government in a Social Economy vision document for Glasgow.

A positive narrative is one of the most important aspects of the circular economy transition to allow the concepts to be embedded. This will include key case studies, opportunities and best practice in community investment and expanding the principles of Community Wealth Building for a more social, circular, inclusive and innovative economy.

29. Circular City Platform – support proactive citywide circular action, by the creation of an online circular platform to connect all organisations and individuals across Glasgow working in the sustainable and circular arena.

Initially this project was tied into the Hamburg Horizon 2020 bid that failed in February 2021. The main focus of Glasgow's workpackage in the H2020 bid was in partnership with Copenhagen City where connections between organisations and individuals actors in sustainable and circular projects throughout the city would be mapped and act as an online major material sharing hub (this would align with Action 16). Something similar has been done in Edinburgh in a collaboration with Edinburgh City and [Changeworks](#) where they have created an impressive interactive [ReUse Map](#).

The digital based [Circular Innovation City Challenge](#) has offered the chance to create a platform with a group from Barcelona who have been extremely successful throughout Spain bringing the concepts around sustainability and circularity to life through gamification. Their app [Go Zero Waste](#) was one of the five winners of the digital challenge.

To develop and create an online Circular City platform will require funding, at the moment the Sustainability team has no dedicated budget to activate this type of project. Discussions are ongoing with a social enterprise about providing in-kind support to develop a system to connect circular economy, social enterprises, and sustainable businesses, this is intended to be a catalyst for targeted community benefits and increased local participation from our citizens.

30. Circular Economy Communications Strategy – develop an ongoing communications campaign to raise awareness of the circular economy, impart knowledge and understanding to impact behaviour change and consumer choice.

Work is ongoing to develop a communications campaign to raise awareness of the circular economy, impart knowledge and understanding to impact behaviour change and consumer choice.

This has resulted in one communications officer post being filled to specifically promote the sustainable projects in Glasgow through various social media channels. There is information now being hosted on the [Sustainable Glasgow](#) website, including an overview of the circular economy and the [Sustainable Glasgow Charter](#) (see Action 1).

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31. COP 26/Creative Circular Arts – Arts and culture challenge to create artwork that is a city response to the climate change conference incorporating circularity.

Arts and culture can create works that define a city's response to the climate emergency and help to raise the concerns to citizens. The Sustainability team explored various ways of supporting arts while ensuring re-use, sharing and circularity was incorporated. An art installation called [Hope](#) designed by Steuart Padwick and facilitated by Clyde Gateway was erected at Cunningar Loop, the design was to be constructed as an echo to the old forge chimney stacks from the east end of the city. The materials used in the final design are all sustainable and reclaimed. However, due to the restrictions around the conference one piece of anticipated artwork had to be postponed. This was in collaboration with Queens University Belfast who have been developing a new sustainable, polymer concrete that can be 3D printed from waste materials.

In another project it was decided to integrate the development of Glasgow's [Quiet Urban Spaces](#) under the work being carried out for the [EU Environmental Noise Directive](#) and Action 31 to create artworks from waste materials. Artists from the Glasgow School of Art, the community group [Friends of Garnethill Green Space](#), [McLaughlin and Harvey](#) the construction company, [FES](#) the electrical contractor and the Sustainability team have used circular methods to create an installation to mark Scotland's first Quiet Urban Space. This installation has been funded by the Scottish Government as part of annual grant funding for sustainable interventions to tackle road traffic noise.

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