



Action Plan Review Year 2, 2021-2022

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1. Introduction

2021 proved to be another exceptionally challenging year for Planet Earth. The world was still reeling from the effects of Coronavirus, it also was the seventh warmest on record with, yet again, a range of devastating extreme weather events across the globe – such as record-shattering temperature of 50°C in Canada, deadly flooding in Asia and Europe, as well as drought in parts of Africa and South America.

Tackling climate change is, at the best of times, a huge and complex issue, and circumstances such as the economy and political upheaval add a layer of unprecedented difficulty. However, it is still imperative that we all act now to do all we can despite the pressures we face. The scale of change needed to limit global heating to under 1.5°C remains a significant challenge for all of us.

This review represents the second year of implementing the eight-year citywide action plan has been completed to deliver the shared ambition to make Nottingham the first UK City to be carbon neutral by 2028. The plan consists of over 250 actions which focuses on:

- Reducing the amount of CO₂ produced as far as possible in the city in key themes such as transport and the built environment;
- Capturing carbon and offsetting residual greenhouse gas emissions that cannot be removed entirely through means such as more tree planting;

- Ensuring the city is resilient and adapted to the effects of climate change both physically and socially;
- Ensuring nature, biodiversity, and our green spaces are protected, maintained, and enhanced;
- Changing the way, we behave and live our lives so all who live, work, and visit the city are contributing to reducing their carbon footprints as much as possible; and
- Ensuring the city becomes a better place to live, with more opportunities to live a healthier life with improved economic, social, and cultural benefits for all.

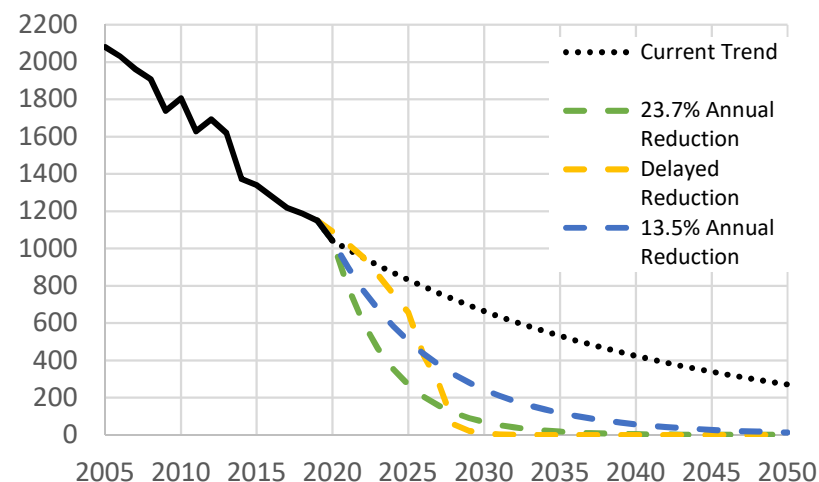
2. Nottingham's Carbon Emissions

a. Summary

The latest 2020 CO₂ emissions dataset produced by the Department for Business, Energy and Industrial Strategy (BEIS)¹, show that Nottingham produced **1.041m tonnes of CO₂e² in 2020**. The city has reduced its overall CO₂ emissions (since 2005) by **49.96%** and reduced its per capita emissions by **57.7%**.

The City showed a **9.4%** decrease from 2019 to 2020, just above the national average reduction of 9.2% and significantly higher than the city's previous average annual reduction rate of **4.16%**.

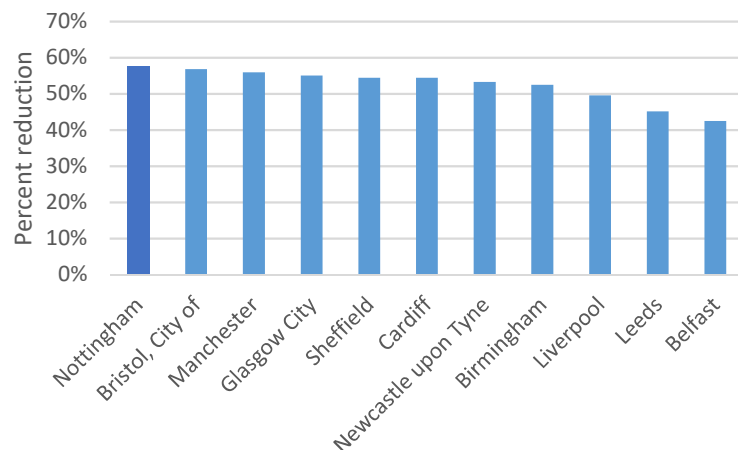
The following graph illustrates the change in emissions since 2005 with the latest emissions (black line). Also, shown is the annual emissions reductions needed to stay within Nottingham's carbon budget (blue dotted line) or meet the city's carbon neutral target in 2028 (green dotted line).



Nottingham's is within the top 10% of all UK local authorities for the percentage of emissions reductions achieved between 2005 and 2020. During this period, Nottingham has also achieved the highest per capita carbon emissions percentage reduction of any of the core cities as shown in the following graph:

¹ [UK local authority and regional greenhouse gas emissions](#)

² CO₂e is defined as the number of metric tons of CO₂ emissions with the same global warming potential as one metric ton of another greenhouse gas



As a city, Nottingham would need to reduce our carbon emissions by just over one million tonnes of CO₂e to meet the 2028 ambition, equating to a **23.7% or more** decrease each year between now and then.

b. Emissions Reduction Modelling

The City Council have been using ClimateView to model emissions projections towards the city's carbon neutral target. The emissions modelling captures trajectories if all the actions in the CN28 action plan were delivered, in addition to known or expected upcoming local and national policy also being delivered. The emissions modelling also includes interdependencies with other actions, estimated in the same way, for example related to grid decarbonisation.

Through ClimateView, a 'bottom-up' emissions inventory for Nottingham was created. This allows us to monitor the impacts of action plan delivery more easily against Nottingham's emissions and provides greater insight to inform action development and delivery. ClimateView was used to help quantify emissions in the CN28 action plan, and how these collectively, with their interdependencies, contribute to the city's carbon neutral target.

This work has fed into this year's CN28 action plan review - particularly for the Transport, Built Environment, and Energy Generation themes to look at what further actions may be needed to maximise emissions reductions.

3. CN28 Action Plan 2021/22

The CN28 action plan is considered as a fluid and flexible document, allowing us to embrace and react to any changes or developments in technology, policy, and more. It is reviewed and amended on an annual basis to ensure it remains contemporary and able to deliver the ambition. The plan is divided into several themes designed to address carbon reduction, carbon removal, biodiversity and ecology, and resilience and adaptation.

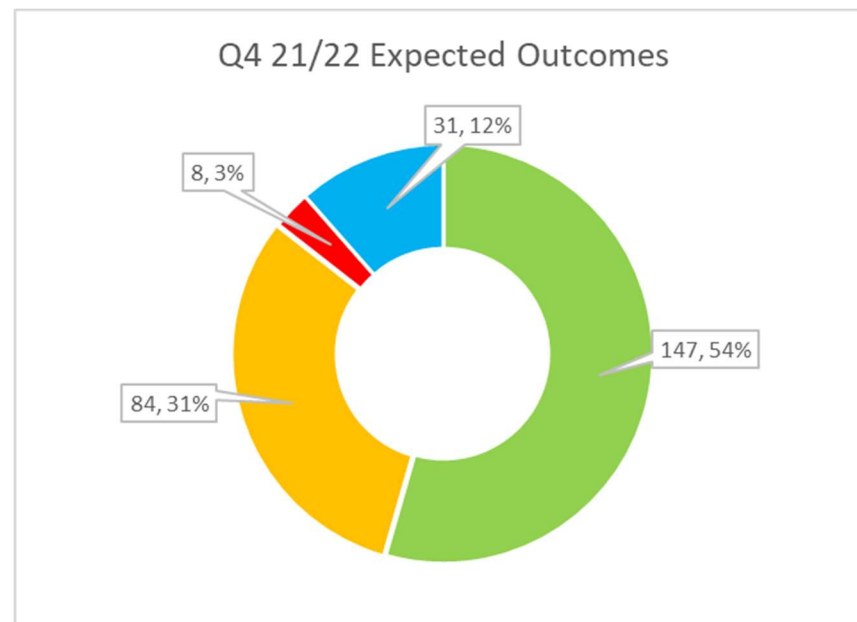
This report is the second of these annual reviews, the first of which concluded that some actions required revision to ensure the ambition target of 2028 is more likely to be met. New actions were also introduced for this reason.

The plan is managed closely by an internal City Council Implementation Group which meet monthly. Each theme is led by a senior City Council officer who reports on the actions on a quarterly basis. These quarterly reports are presented to the CN28 Board which currently is chaired by Councillor Sally Longford, the Executive Portfolio Holder responsible for Energy, Environment and Waste Services. This in turn, is presented to the external Nottingham Green Partnership for input and comment.

a. Delivering the Action Plan in 2021/22

The 2021/22 plan had 239 actions. Of these, 147 (54%) were expected to achieve their planned outcomes and targets ('green' rating). Proportionally this was slightly down on last year. There was a slight decrease in the proportion of actions (84 actions [31%]) where there is some concern that they will not meet their expectations without further resources or intervention ('amber')

and 8 (3%) were predicted to miss their targets completely ('red'), an increase on 2020/21. 12 more actions were completed this year taking the total to 31 (12% of all actions) (See Appendix b):



b. Key Achievements in 2021/22

Despite the challenges of dealing with aftermath of the COVID pandemic the overall pressure on the City Council's finances, notable achievements have been made to help continue the downward trend of CO₂ emissions.

- Nottingham was considered as one of the top 100 world cities for climate action (Carbon Disclosure Project [CDP] – see section 8)
- Over 50% of the City Council’s vehicle fleet is now ULEV (Ultra Low Emission Vehicles) which includes eight e-RCVs (Refuse Collection Vehicles), The e-RCVs alone will save over 200t CO₂e per year
- Nottingham has the highest number of EV (Electric Vehicle) charge points per head of population for any UK core City and well above the national average³, with 81 recently installed at the new Broadmarsh Car Park, the most for a single site in the UK so far
- 30% of buses operating in the city are biogas or electric.
- £15m of government funding was secured for 78 new electric buses and charging infrastructure for Nottingham City Transport (NCT)
- 200 e-scooters are available for hire in the city and is the most used scheme in the country
- Several traffic calming and road closure schemes are now in place to encourage more walking and cycling, particularly close to schools
- 46% of Hackney carriages (‘black cabs’) and 69% of private hire taxis are now ULEV. Work began on installing a wireless vehicle charging facility on Trent Street

- A city-wide streetlight replacement programme started in April 2022 estimated to save 850t CO₂ per year when completed
- 94% of new build social housing properties are now Energy Performance Certificate (EPC) rated A-C
- 9,000 new trees were planted in last 12 months and over 24,000 planted since 2019/20
- Nottingham Trent University (NTU) and University of Nottingham are ranked as in the top five universities in the world for sustainability⁴
- Nottingham Universities Hospital NHS Trust launched their NHS Green Plan to become net zero by 2040 in April 2022
- Free carbon literacy training was offered to Nottingham City businesses as part of a collaboration between the Nottingham BID (Business Improvement District) and NTU.

4. Working in Partnership

Achieving carbon neutral by 2028 is something that cannot be achieved by one organisation alone. The City Council is responsible for approximately 2% of the City’s CO₂ emissions so it is imperative that all business, organisations, workers, residents, and visitors to the City play their part. Key to this is collaboration and the City Council is at the heart of this.

The City Council works with key City partners through the well-established Nottingham Green Partnership which was 30 years

³ [Electric vehicle charging device statistics: July 2022](#)

⁴ [UI GreenMetric World University Rankings 2021](#)

old this year having formed in 1992. The partnership, chaired by Richard Barlow, a senior partner at Browne Jacobsen Solicitors, consists of over 20 City organisations and businesses, works across the City to develop, share, and encourage businesses and organisations to work together to deliver carbon reduction strategies.

In 2020, the City Council started the 'We Support CN28' campaign for businesses. This allows any Nottingham based business or organisation to show its support for the CN28 ambition by signing up to the pledges outlines in the City's Carbon Neutral Charter. The City Council then work with them on an ongoing basis to help explore ways in which they could reduce their carbon footprint and visibly promote them as a supporter of CN28. As of July 2022, 41 organisations were signed up and are follows:

Arup
Blu72
Boots-Walgreen
Browne Jacobsen
Canal & River Trust
Creative Quarter
CPMG Architects
East Midlands Ambulance Service
East Midlands Chamber of Commerce
Finastra
Hockley/Green Hustle
Jigsaw24
Left Lion
Meadows Ozone Energy Services
Nottingham BID

Nottingham City Transport
Nottingham College
Nottingham Motorpoint/Ice Arena
Nottingham Playhouse
Nottingham Trent University
Notts Fire & Rescue
Notts Police
Print4
Renewal Trust
Reach Separations
Ridewise
Roadgas
Romano's Caterers Ltd
Scape
Shop Zero
Sneinton Market Traders
Soul & Flare
Source Bioscience
Southwold Primary School and Early Years Centre
Stewarts of Trent Bridge
Sygnature Discovery
The Pythian Club
Tramlink (NET)
University of Nottingham
VASO Glass Straws Ltd.

5. Awareness & Information

The monthly CN28 newsletter now has over 1,800 subscribers providing news, tips, and advice on reducing carbon emissions in

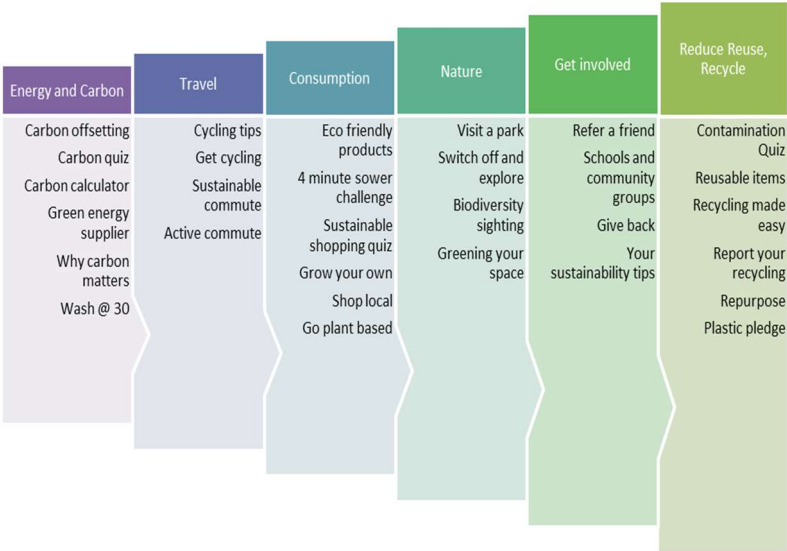
the workplace and at home. The City Council extensively uses social media to get key messages and information across as well as setting challenges to encourage people to change their habits in often fun and engaging ways. To date, [CN28 on Twitter](#) has over 1,300 followers and 700 follow the [CN28 Facebook page](#).

6. Green Rewards

The City Council is working in partnership with other Nottinghamshire district councils to develop and promote citizens use of a sustainability and wellness app called Green Rewards, created by [Jump](#), which is designed to encourage carbon reduction behaviours through a reward scheme.

Both Universities in Nottingham also have their own platforms through Jump for students and staff.

The app was launched in October 2021 and has been successfully rolled out with over 3,700 Nottingham and Nottinghamshire households signed up and engaging in sustainable behaviours. In this time, users have logged over 62,250 individual actions equating to over 148,000kg CO2 avoided. These are themed as follows:



Since October 2021, topical themes have been explored at pertinent times of the year. So far this has included COP26 and Sustainability Action Week where educational materials were provided in an interactive format. The app has been approved internally for a second 1-year contract to continue the project. City Council officers will focus on increasing citizen sign up and getting exciting rewards from local businesses to keep app users engaged.

7. Green Light In The City

The Green Light in The City (GLiTC) project started in 2021 and is formed around a partnership across Nottingham to develop ‘pop-up’ spaces in empty retail premises in shopping areas which provide a focus for creativity and engagement with City residents

and visitors with key local issues particularly those in relation to climate change and sustainability.

The partners in the project include ChalleNGe, Green Meadows, Ignite! Futures, LeftLion, the City Council, Nottingham Festival of Science & Curiosity, Nottingham Trent University and the University of Nottingham.

The core aims of GLiTC are:

- Raise awareness, promotion, and engagement with green issues and how they affect us individually and locally
- Encourage community and creative partnerships to get involved and create opportunities for workshops, events, and talks
- Consider ideas of how to live differently in the future
- Highlight inspiring work that is happening locally to tackle the climate crisis.

To coincide with COP26, the United Nations' key Climate Change Conference held in Glasgow in November 2021, the first pop-up opened in a vacant retail space in Nottingham City Centre and focused on climate change with an emphasis on green issues, sustainability and helping Nottingham achieve its ambition to be carbon neutral by 2028. The project ran until February 2022.

The space provided a mix of permanent and interactive activities for all ages. There was a programme of interactive activities and workshops addressing a wide variety of climate and environmental research, with opportunities for already

established community groups and creative practitioners who used the space for running relevant events and workshops. The project also provided opportunities for volunteers and students, enabling them to gain valuable experience in public engagement. During its three months of opening, over 900 people visited, culminating in being part of the City's Night Light celebrations.

8. Carbon Disclosure Project (CDP)

Each summer, following the end of each year of delivery, the City Council compile and submit an annual disclosure on Nottingham's climate progress to CDP⁵. This international questionnaire helps to identify and monitor major risks, opportunities and sources of emissions that need to be accounted for. It uses the international Common Reporting Framework, aligning reporting requirements of multiple international initiatives in one place. Nottingham is also a signatory of the Global Covenant of Mayors for Climate and Energy, Race to Zero and Race to Resilience initiatives.

These initiatives and leading global best practice were used to help inform and review the City and Council's own action plan and progress.

In last year's CDP submission (2021), Nottingham was **scored as an A list City, one of only 95 cities globally to achieve this top rating from over 1000 reporting their climate progress**. A further 10 UK cities also achieved this highest score. CDP A List Cities are proving their climate leadership through concerted and effective action to mitigate and adapt to climate change.

⁵ [Carbon Disclosure Project](#)

9. CN28 Action Plan Theme Reviews 2021/22

I. Carbon Reduction

CO₂ is produced naturally by plants and animals as well as through natural earth processes such as volcanic eruptions. However, the burning of fossil fuels by humans has created an imbalance in the atmosphere resulting in an increase in CO₂ along with other greenhouse gases such as methane. This is causing global heating by having an insulating effect on the Earth and resulting in dangerously rising temperatures and is having far-reaching, long-lasting and, in many cases, devastating consequences for planet Earth.

We can see the effects of global heating happening in real time in many places. Ice is melting in both polar ice caps and mountain glaciers. Lakes around the world, are warming rapidly in some cases faster than the surrounding environment. Animals are changing migration patterns and plants are changing the dates of activity such as trees budding their leaves earlier in the spring and dropping them later in the autumn.

Key to Nottingham contributing to reducing global heating and achieving carbon neutrality is the ability to reduce the amount of CO₂ put into the atmosphere as much as possible. The action plan seeks to deliver this across six key themes:

- a. **Transport**
- b. **The Built Environment**

- c. **Energy Generation**
- d. **Water**
- e. **Waste**
- f. **Consumption.**

a. Transport Theme

A third of the City's CO₂ emissions in 2020 came from transport in the City which is still dominated by vehicles that run on fossil fuels i.e., petrol and/or diesel. The number of electric vehicles on the road has seen a significant increase in the year and now account for over 18% of new cars registered in the UK by the end of 2021 compared to 3.2% in 2019.

This key theme aims to reduce transport emissions by encouraging mode shift away from cars to public transport and active travel modes, constraining traffic growth and congestion levels, and promoting the use of electric vehicles.

i. Summary

Nottingham transport emissions have decreased 15% since 2019 (along with all local authorities) – largely due to restrictions on travel due to the pandemic). It is still the 2nd largest sector for emissions in the City behind domestic buildings (34.6%).

Nottingham has one of the best and well used public transport networks outside of London with the tram system and its fleet of modern, low carbon buses. However, the City's public transport continues to be affected by the coronavirus pandemic with the use of public transport still not up to the levels compared to the start of the pandemic in March 2020, but we are still seeing high car traffic volumes.

The Transport theme had 59 actions of which seven were completed during 2021/22 and 63% of these are on track to be delivered compared to 71% in 2020/21.

ii. Achievements

- Transforming Cities Fund schemes completed or underway – bus priority, public transport real time information, single and multi-operator contactless payments, and cycle and pedestrian corridor improvements.
- Future Transport Zone programme – planning started for real time traffic and journey time monitoring sensor network, new travel planning data platform encouraging switch to public transport and active travel, and e-mobility hub in Trent Basin area.
- Active Travel Fund – cycling and walking corridor schemes delivered, School Streets schemes introduced to make it safer and easier for people to regularly walk, cycle and scoot to school.
- Levelling Up Fund (Greener Streets) – funding announced for upgrading the remaining streetlights

in the City to low-energy LED standards and further expansion of the City's community electric vehicle charging network into residential areas with limited off-street parking.

- Continued expansion of the electric vehicle charging network across the D2N2 region.
- e-scooter trial extended
- Bus Service Improvement Plan submitted, and indicative funding announced for NCT to replace their existing midi bus fleet with zero emissions vehicles.
- Cleaner taxi fleet – all fleet now ULEVs (Ultra Low Emission Vehicles) or Euro 6 compliant

iii. Case Study

Electric vehicle charging network expansion

In 2021/22 the number of installations expanded following the Covid pandemic so that by the end of March 2022 there were 450 charging sockets operational in the D2N2 region. 90 of these were rapid 50 kW charging points and 360 were fast 7 kW charging points. There were 47,376 individual charging sessions in 2021/22, with 59% of these sessions on a rapid charging point.

City sites opened included Clifton South Park and Ride and Castle Boulevard. In addition, 128 sockets were operational in City Council car parks, including 81 in the new Broadmarsh car park. Nottingham now ranks in

the top 20% nationally for the number of charge points per person and rapid charge points.

New charge point funding is being pursued through the Local Electric Vehicle Infrastructure (LEVI) Fund.

iv. Plan Review

A key consideration this year has been the devolution deal being worked on by Nottinghamshire and Derbyshire councils which will include an increased transport settlement. To achieve further significant reductions in transport emissions, Government policy change will be needed, e.g., increased transport capital funding, vehicle excise duty changes, incentives to switch to electric vehicles. The Covid pandemic has had a very damaging impact on public transport and development work on NET extensions still is on hold due to financial pressures. Due dates for some indicators extended to reflect revised scheme programmes.

The review of the theme concluded that minor change was needed except for alignment of some of the due dates with the emerging transport funded programmes.

b. The Built Environment Theme

Nottingham has over 135,000 domestic properties of which around 26,000 are social housing. The City's homes and buildings are the largest source of CO₂ emissions in the City. Nottingham's housing and non-domestic building stock poses a key challenge in the approach to sustainable carbon neutrality, with many homes built pre-1980 and with poor insulation, and fossil fuel heating being widespread.

i. Summary

Key actions in the theme are centred on reducing carbon emissions from the built environment, principally by improving new development and retrofitting existing properties.

There were 40 actions in this theme this year of which four were completed and 55% were considered as on track to be delivered by their target date.

ii. Achievements

- Established the first Carbon Neutral Review Panel in the UK to review the sustainability credentials of proposed new developments, first meeting imminent.
- Updated the Design Quality Framework to include a Passive Design Guide, and a draft Carbon Neutral Design Guide.

- Low Carbon in New Development Interim Planning Guidance subject to consultation and now adopted.

iii. Case Study

Low Carbon in New Development Interim Planning Guidance

The Low Carbon in New Development Interim Planning Guidance is now in operation and requires developers of major developments to submit a statement setting out how their development contributes to the sustainability themes set out in the Interim Guidance.

Although the Interim Guidance has not been in operation for long, there are some examples of developments which are significantly improving their sustainability credentials.

One example is land at Prospect Place, Nottingham, a residential development of 36 dwellings currently under consideration.

This development is expected to deliver an overall minimum reduction in annual regulated carbon emissions of approximately 76% in comparison to the standard requirements.*

The design guide aims to:

- *Provide thermally efficient buildings looking to exceed building regulations*

- *Utilise renewable technologies most suitable for this specific development*
- *Utilise energy efficient and/or low energy equipment and fittings*
- *Achieve SAP "A" rating for all properties on this development.*
- *Utilise solutions that, as far as possible, reduce or eradicate future fuel poverty scenarios for residents*
- *Utilise solutions that minimise, or eradicate as far as possible, the use of fossil fuels in accordance with the expected Future Homes Standards criteria which could state that new homes should not be connected to the gas network system, effectively preventing the installation of gas fired boilers in new homes from 2025.*

*Approved Document Part L1A 2013 of the Building Regulations.

iv. Plan Review

Most actions stay unchanged in the theme. A major new action has been added to reflect the large-scale housing retrofitting programme being rolled out across the City. Some actions have been amended to make them more deliverable and some deleted as they are no longer appropriate or are duplications.

c. Energy Generation Theme

Where we get our energy to power and heat our homes and businesses is critical to reducing CO₂ emissions. A proportion of the City's energy already comes from low carbon and renewable sources in the City boundary itself. This includes solar and 'energy from waste' produced via the district heating network. However, this proportion needs to increase significantly if we are to reach the CN28 ambition.

i. Summary

This theme is centred on the development of shared vision for energy generation in the City to align with current national policies. This will enable effective decarbonisation of the City Council's estate and maximisation of opportunities to develop innovative effective projects to reduce CO₂ emissions across the City.

Of the 39 actions in the theme, 51% are considered as on track with four actions completed so far. This reflects the uncertainty in being able to deliver some actions due to their reliance on external funding being available.

ii. Achievements

- Between 2005 and 2020, Nottingham's electricity consumption reduced by 30% (domestic and non-

domestic), non-domestic electricity consumption reduced by 38.5% and domestic electricity consumption reduced by 14.3%

- In 2020, solar generation in Nottingham is 21.7 GWh. This has increased by 78% since 2014, with an average year-on-year increase of 9%. However annual increases in generation would need to be circa 50% to reach 559 GWh by 2028.
- Total renewable generation in Nottingham has increased by 110% between 2014 and 2020; however still totals just 38 GWh
- The Green Homes Grant Scheme roll out has seen progress towards installation of solar panels and other measures for private homes across the City
- Effective Partnership working combined with funding from warm homes fund has delivered energy efficiency advice and support to citizens experiencing fuel poverty across the City
- Funding secured for a further 298 social homes for decarbonisation measures through SHDF (Social Housing Decarbonisation Fund) wave 1
- Innovative Vehicle-To-Grid (V2G) CleanMobil Energy project progressing successfully at Eastcroft Depot

iii. Case Study

Broadmarsh Car Park Solar Panel Array

An installation of 720 solar panels on the roof of the new state-of-the-art Broadmarsh Car Park, Bus Station and Central Library is helping to power the building and support Nottingham's carbon neutral targets. This

installation complements other innovative technologies including the largest number of EV charge points in any singular building so far in the UK. The system started generating electricity in October 2021.

During one day in June, the solar panel array generated 818 kWh of clean electricity. This is enough electricity to supply 83 domestic homes with electricity all day, or to fully charge an electric Nissan Zoe from an empty battery 37 times!

iv. Plan Review

16 actions have had revised wording and/or revised due dates to give clarity as to the outcome being sought and to align with current policies. Four have been deleted and there are new actions to implement the new Nottingham City Local Area Energy Plan and investigate the City's heat networks.

d. Waste Theme

In 2021/22, Nottingham recycled, reused, or composted an estimated 24.9% of its domestic waste, and is still one of the lowest for any core City in the UK. However, only 10% of the City's waste ends up going to landfill with the rest going to be incinerated.

i. Summary

The waste theme in the action plan has 20 actions of which only two (10%) were considered as likely to achieve their outcomes. There is some concern that extra regulations on waste to be introduced in the next year, such as food waste collection, will place further strain on the ability to deliver the actions in this theme.

Work this year has focussed on developing a new waste strategy for the City, replacing the one adopted in 2010, and support options on collections choices & charging policies.

ii. Achievements

- Throughout the year new households or residents who sign up to pay Council Tax receive a 'how we recycle in Nottingham leaflet'
- Continued to work closely with management agencies of flats and shared complexes to ensure they understand the City Council's waste policy,

their residents receive a specific communal recycling leaflet.

iii. Case Study

Shaping a new Local Waste Plan

The City Council have been working with Nottinghamshire County Council to prepare a new Joint Waste Local Plan for the area. Once adopted, this new plan will form the land use planning strategy for waste development within the county up to 2038. A central consideration of the plan is to ensure it provides all sections of Nottinghamshire's and Nottingham's communities an opportunity to shape its vision. This is vital as the plan will take us into the 2030s and therefore will play a significant role in helping us achieve the City's carbon neutral goals.

The first stage consultation was completed in 2020 and involved an informal consultation to show potential future issues that may arise and workable solutions to these. Using this feedback, and with supporting evidence collected on the future need for recycling and waste sites, a draft plan was then developed.

In spring 2022 residents, stakeholders and other interested parties were invited to comment on this draft document. This provided further opportunity for a wide range of views and ideas to be heard from across all areas of the local community.

iv. Plan Review

There is significant pressure on the City Council's waste service due to a lack of resources. Therefore, work on two actions will be suspended to 2023/24 to allow a thorough review of the resources needed to deliver them successfully in the future. Others have had their completion dates extended consequently.

e. Water Theme

The water we use to do our laundry, clean our dishes and hose down our cars all have a surprising and unnoticed impact on the climate as it requires energy to get to our homes and businesses; the more water we use, the more energy is used so the more carbon is produced.

i. Summary

This theme aims to reduce water consumption across Nottingham City via a Water self-supply license (WSSL) which continues to be the only in-house operating model in the market. Awareness raising and best practice sharing with citizens and businesses alongside the process of leak detection activities. In addition, it includes the implementation of water efficiency measures via Water Efficiency Loan Scheme (WELS). In 2021/22, just over half of the nine actions were considered as likely to achieve their outcomes.

ii. Achievements

The water theme and most of its actions are heavily linked to business as usual. Work continued throughout the pandemic to respond to consultations and changes in the market that have never been seen to keep the license. However, due to reduced staff resources, WELS projects have not been progressed this budget year, so the focus has been on developing a pipeline of works and increasing performance levels which are linked to keeping the City's license. A key highlight this budget year has been to transfer a part of City schools onto the WSSL allowing us to widen our impact of its work and reduce consumption further. There are now 315 water meters as part of the WSSL.

iii. Case Study

Water Self Supply for Schools

To date, no schools have been included on the water self-supply license due to regulatory requirements regarding invoicing and payments of retailer bills. In late 2021/early 2022 an assessment of schools' portfolio was undertaken in partnership by the Compliance and Consultancy Team and the Utilities Team and activity was undertaken to create a new payment system that matched the rest of the portfolio to allow for the schools to be added into the license.

In March 2022, the first round of schools was successfully transferred into the retailer portfolio

allowing us greater control over consumption. Preparatory works have begun to allow the continuation of this expansion with a second phase in early 2022/2023.

This, alongside reduction in consumption, is hoped can work towards greater information awareness raising and partnership working with education colleagues to further reduce water waste and inform students of the importance of water reduction.

iv. Plan Review

Many of the actions are now included in 'business as usual' processes and so three actions are being deleted and two will be amended to be better fit for purpose for the coming years.

f. Consumption Theme

What we buy as goods or services has a carbon impact due to their embodied emissions, resulting from their manufacture and transportation. For instance, meat and dairy are considered as 'high carbon' foods due to the amount of CO₂ that is created in the production of them. Therefore, this theme seeks to reduce the amount of embodied carbon in the goods and services we consume, and develop behaviours, processes, and ways of working that seek to reduce this significantly.

Often this constitutes the majority of an organisation's carbon footprint. In the case of the City Council, this is well over three quarters of its total carbon footprint.

i. Summary

In 2021/22, there were 27 actions in the theme of which 15 (55%) expected to be fully delivered currently. This reflects the comparative lack of resources available in the City Council to effectively manage them currently.

ii. Achievements

- Joint food network established with Public Health partners and regular meetings now established to progress this work
- Growth Hub low carbon adviser delivered an event in partnership with the Procurement Team in March 2022 to encourage city SMEs (who trade in the low carbon sector) to be proactive and engage with the procurement portal for contracts
- A continuation of NTU student placements, supporting progression of footprint mapping and vermiculture for schools
- The City Council's Public Health team was engaged to renew the development of the Food Strategy for the City along with key partners and stakeholders as part of the new Eating and Moving for Good Health Strategy

- The Growth Hub Advisers introducing decarbonisation diagnostics and support when engaging with Small, Medium Enterprises (SMEs)
- National pilot project with FareShare and Sainsbury's to turn food surplus into meals for vulnerable residents through the Loxley House kitchen facility
- Ongoing partnership with University of Nottingham and Nottingham Trent to work with students on their final year research projects. We can gain insights into how people view different biodiversity measures and how beneficial they are to the city.

iii. Case Study

School Meals 'Green Menu & Marketing Award'

Nottingham City Council's catering team won a national accolade for championing environmental issues through school meals the 'Green Menu & Marketing Award' at the annual LACA Awards for Excellence 2021, which aim to celebrate the success of caterers providing school meals.

Schools, parents and pupils have been engaged through a series of newsletters and posters. Numerous statements and testimonials were received which showed the impact of these programmes and how they have directly influenced pupils' choices.

Councillor Eunice Campbell-Clark, portfolio holder for schools at the City Council, said: “We understand that a huge part of our ambitious carbon-neutral plans is around engaging the younger generation so they can take forward these changes into the future. Pupils are not only choosing to eat healthier but understanding why this is important as part of wider global climate-change action”.

“Our pupil suggestion boxes, and school council focus groups will provide ongoing feedback and refinement of our menus, so that the gradual move to more vegetarian dishes being chosen by pupils will be achieved.”

iv. Plan Review

There is a concern that the internal resources available are currently insufficient to manage and deliver the actions effectively. This will be addressed in 2022/23, In the meantime, actions expected to be delivered in 2022/23 have been subsequently revised to be delivered in 2023/24 instead.

A new action has been added to develop a process by which carbon impact considerations are included in all Council purchases below £25k.

II. Ecology and Biodiversity

Climate change is resulting in reduced biodiversity, reduced habitats, and pressure on all natural and green spaces. The pandemic showed how important our green spaces are in helping us connect with nature, provide peace and solace from the challenging times, as well as critically playing a significant role in the reduction of climate change impacts for plants and animals.

This chapter therefore has actions to enhance biodiversity provision within the City of Nottingham through working with partners both internally and externally.

a. Summary

This section had 14 actions this year of which 64% were considered as expected to meet their targets.

b. Achievements

- Completed habitat mapping and biodiversity opportunity mapping for the City
- Expanded the Bee Friendly Initiative to include further sites across the City
- Procured consultants to complete the large-scale woodland and wetland project which will be delivered next year
- Worked with departments across the City Council to form a Biodiversity Net Gain (BNG) focus group to discuss the mechanism and delivery of BNG within the City Council

- Ongoing partnership with University of Nottingham and Nottingham Trent to work with students on their final year research projects. This allows insights to be gained into how people view different biodiversity measures and how beneficial they are to the City
- Working with the planning department and developers to implement the Biodiversity Supplementary Planning Document (SPD) and encourage further biodiversity measure
- There are bee-friendly sites being developed in every ward in the City.

c. Case Study

Habitat and biodiversity opportunity mapping

The City Council procured a consultant to complete the habitat mapping work and they used a mix of techniques, survey work on the ground and remote sensing data collection.

This has allowed maps of all the green spaces to be developed within the City and classify them into broad habitat types. Using this data, a map has been created of where there are opportunities for further habitat creation/enhancement to increase biodiversity and create better corridors for wildlife within the City. This work will feed into the Future Parks Strategy for the City and help us to target where habitat improvements are best placed to have the greatest impact and improvement within the City.

It will also help feed into other legislation and into the Local Nature Recovery Strategy being prepared for the County.

d. Plan Review

It is proving difficult to progress some actions and the aim to increase green space due to conflicting themes and land use, specifically with transport and highways where land take is occurring from green spaces and being used to expand the 'grey' environment for busways, cycle ways etc.

One action to 'Encourage sustainable and nature-friendly development beyond the levels mandated by legislation' has been deleted as the new increased legislation through the Environment Bill. Therefore, increasing above the mandated levels is likely to bring questions surrounding economic viability from developers.

III. Carbon Removal

Removing the residual CO₂ from the atmosphere is undertaken in conjunction with carbon reduction activities as there will be a certain number of residual emissions that cannot be removed entirely from Nottingham's emissions. This can be achieved through local carbon sequestration, use of negative emission technologies, and 'carbon offsetting' through, currently, the planting of thousands of trees across the City.

a. Summary

There were 12 carbon removal actions in the plan of which 10 (83%) were on track to be delivered.

b. Achievements

- 24,000 trees planted in the last 3 years and 11,000 scheduled to be planted in the next planting season.
- Undertaken several Tiny Forest and Blossoms Tree planting
- Sponsor a Tree programme launched for the public and businesses to sponsor trees
- Partnership with Nottingham Open Spaces Forum for them to plant 80 oak trees in school grounds with more than half completed.
- 1st round of the Tree Giveaway where over 2000 trees were provided to the public and community groups. 2nd round being planned for late 2022 where aim is to give away 1,000 trees.
- 'Streets For People' Funding approved which will allow the City Council to remove stumps and plant trees across the City.

c. Case Study

Tiny Forests

One of the projects that was delivered was the planting of five 'Tiny forests.' Three of these were in partnership with Earthwatch and were fully funded by them.

Earthwatch will monitor the growth of the trees and record the amount of carbon being sequestered because of the Tiny Forest. This data is then used to help record the carbon sequestered from the City's Tiny Forests created and promote this locally.

The creation of the Tiny Forests enthused volunteers from Nottingham and beyond. Creating Champions who help to look after and water the Tiny Forests.

d. Plan Review

Minor change was needed to these actions. Some have had their due dates amended and some ownerships confirmed to ensure the right officer is assigned to provide updates on delivery.

IV. Resilience and Adaptation

The City needs to adapt and become resilient to the extremes of weather and climate that we are facing now and in the future is critical to not only protect the fabric of the City but the health and well-being of all who live here. Flooding, extreme heat and cold episodes are becoming increasingly frequent as the climate changes.

The vulnerable and underrepresented members of the City's communities are often affected disproportionately by these effects so we must have strategies to ensure they are not affected as far as we can. The effects of climate change are also scary so need to

look after the mental health of the City as much as possible can too.

a. Summary

The plan had 22 actions in 2021/22 to address adaptation and resilience. 73% of these were considered as on track to be delivered.

b. Achievements

- Considerable progress made in the delivery of an Adaptation and Resilience Strategy, with extensive literature review and stakeholder mapping complete (Phase 1 and 2). On track for completion in 2023.
- Partnership retrofit sustainable drainage (SuDS (sustainable drainage systems)) project at Quorn Grove delivered, with Haydn Road SuDS scheme underway. These contribute to surface water management and carbon sequestration.
- Climate change and adaptation integrated as part of the Design Quality Framework and the delivery of Carbon Neutral Design guide and Informal Guidance on reduction of carbon in new residential and commercial developments.
- Model of Tottle Brook has been produced by the City Council to better understand fluvial risk in this catchment
- Model of River Leen has been produced by Environment Agency, with long term strategy work underway.

c. Case Study

Quorn Grove Rain Garden

Several locations in the City's Berridge ward have flooded previously due to sewer and surface water flooding. A pocket of land owned by THE CITY COUNCIL was identified as an opportunity to remove surface water from the existing network, utilising existing greenspace on Quorn Grove to reduce downstream pressures and introduce new habitat. It was agreed that there were no other suitable uses for this land, which allowed Severn Trent Water (STW) to progress with a scheme to adapt the space to store water (retrofitting of a sustainable drainage system).

STW have now delivered a project which has turned the plot into a rain garden. This is a shallow depression with a granular (rocky) bed which stores water from the houses and roads, slowing the flow to pipes downstream, as well as introducing several specialist plant species which diversifies the habitat.

d. Plan Review

Five actions have been completed or no longer will be continuing into 2022/23. The majority remain unchanged as have been considered appropriate to deliver the objectives. A small number have had their anticipated completion dates extended to allow the work to develop further. New actions will be created out of the key development of the Adaptation and Resilience strategy throughout 2022/23.

V. Behaviour and Culture Change

This chapter of the plan has a wide range of actions aimed at changing the behaviour, culture, and attitudes towards climate change of organisations and citizens etc through improved awareness, training, and engagement. It also looks to ensure the work is reported, monitored, and managed robustly and effectively both within the City Council and with its partner organisations.

The ambition to be carbon neutral by 2028 is one for the whole City and many of the actions needed to achieve this will involve some form of public engagement or behaviour change. Through communications and engagement activities both internally and externally, the City Council can provide leadership, but not ownership of CN28, empowering local citizens and organisations to act.

a. Summary

This diverse chapter had 25 actions in 2021/22 of which seven (28%) were considered as unlikely to deliver their objectives and two were completed.

b. Achievements

- The City Council achieved bronze level Carbon Literate Organisation accreditation from the Carbon literacy Trust

- CN28 Engagement Strategy and CN28 Communications & Marketing Strategy have been written and are currently going through internal approval processes before development of associated action plans
- A series of focus groups with researchers at Nottingham Trent University have been undertaken, with a view to investigate attitudes and behaviours towards climate change and CN28. Findings expected in summer 2022
- The Commonplace public engagement website was live between February and May 2022, asking citizens what changes they would like to see to fight climate change. The top three priorities, according to respondents, were energy consumption, transport, and nature. 71% felt climate change should be a priority for Nottingham, with 72% believing there are things they can do things to help tackle climate change. Findings will inform the development of a new CN28 website and be used in CN28 social media and newsletter articles
- The number of organisations making pledges for the We Support CN28 campaign has increased, with ongoing work to develop the scheme to facilitate a network for best practice sharing between the organisations
- Following the easing and eventual removal of Covid-19 restrictions it has been possible to utilise in person engagement opportunities, such as Sustainability Action week at UoN, a workshop with Ignite! at the Wells Academy, Primary Parliament, and Green Light in the City to meet the public, have conversations and receive feedback on CN28.

c. Case Study

Primary Parliament and CN28

CN28 has been embedded in the ongoing Primary Parliament programme for year 5 and 6 pupils. The pupils' autumn 2021 meeting, hosted at the Council House, had a focus on climate change and COP26, hearing about what is happening and finding out about research into possible climate solutions from University of Nottingham PhD students.

They used this new knowledge to consider what climate issues were important to them and how they would like to address these, bringing this together to design their own workable solutions, such as robot bins that remind people how to recycle correctly.

They presented their ideas to a councillor as part of a Q&A session with some of the designs highlighted at the Green Light in the City space (see Section 8) following the event.

d. Plan Review

This year's review resulted in most actions being revised to reflect the dynamic nature of the need to engage, inform and understand all who live, visit or work in the City need around climate change. The review focused on improving and developing engagement, communication and marketing exercises as well exploring ways to better reflect partnership working, climate change modelling and reporting. This resulted in six actions being deleted

for 2022/23 onwards and two new actions starting around working with the Nottingham Green Partnership and developing the City Council staff's Carbon Literacy skills.

10. 2022/23 Action Plan Preview

The review process looked critically at what had been achieved and what was needed in the subsequent year to be delivered to keep the ambition to achieve carbon neutrality by 2028 on track.

This year, the City Council undertook some detailed modelling (see section 3) needed to achieve the ambition to be carbon neutral by 2028. Delivery this year will take this into account as the City looks to accelerate efforts even further towards 2028.

To achieve the necessary energy consumption and subsequent emissions reductions, modelling suggests a need to significantly increase the rollout of solar panels to be installed on both commercial and domestic properties. In addition, further renewable generation would be needed, potentially outside the City boundary and/or further reductions in electricity consumption. The Council and the City will be working closely on achieving these in the years to.

Usage of public transport is still a concern with levels still down on pre-pandemic times and this will mean redoubling efforts to encourage people back on buses,

trams and trains as well as adopting more active travel choices of walking, cycling, and e-scooter.

The worsening cost of living crisis, spiralling energy prices and the continued threat of COVID will make 2022/23 another challenging year for the City in keeping its climate ambitions on track. It is worth noting that as costs (fuel, food, energy etc) increase, usage and consumption tends to fall so benefiting carbon emissions levels.

Key to our ambition, will be the increasing involvement of the wider city and its organisations and recognising the contributions from wider than the City Council. The City Council will therefore work with our Nottingham Green Partnership and its 'We Support CN28' partners to achieve this.

The coming year will also see the significant development of the new combined authority with Derbyshire, Nottinghamshire and the City Councils of both Derby and Nottingham. This could have lasting and beneficial effects and impacts on how climate change is tackled right across the region.

Key actions planned to be delivered in 2022/23 include:

- Development of a new city partner reporting process to showcase carbon reduction work from right across the city
- Significant cycle facility development through the Active Travel Fund, Capability Fund and Transforming Cities programme

- A New Workplace Travel Grant scheme providing grants for employers for sustainable transport measures
- Modification of the City Centre Clear Air Zone to ensure that only the cleanest delivery vehicles will be able to access the City centre
- Investigation of a suite of measures to mitigate the carbon impact of freight and last mile delivery
- Further deployment of integrated on and off-street vehicle charging infrastructure in City Council operated car parks
- Continuation to convert the City Council's fleet and taxi fleet to ULEV
- Development a City Centre strategy for greener economic development
- Hold further energy advice clinics
- Further housing retrofit schemes through Green Homes Grant (GHG), and Social Housing Decarbonisation funding
- A draft Carbon Neutral 'Supplementary Planning Document' (SPD) for new building development
- A new City Council procurement strategy
- Development of a new primary substation for the City
- A new City-wide Waste Strategy

- Trial with University of Nottingham involving Biochar deployment as a carbon removal technology
- A new Climate Resilience & Adaptation Strategy
- Publication of Parks Biodiversity mapping work
- Creation of a new wetland at Ventnor Rise abandoned allotments site
- New CN28 engagement, communications, and marketing strategies
- 'Hello Lamp Post' project to raise awareness and interest in CN28 and climate change issues
- Further roll out of carbon impact assessments in the City Council's decision making.

The action plan for 2022/23 and the changes made following the review are detailed in Appendix a.

11. For further information

For further information on Carbon Neutral Nottingham 2028 click [here](#) or Email climatechange@nottinghamcity.gov.uk

12. Appendices

a. Action Plan 2022/23

Key

BLUE – completed, **GREEN** – no change, **AMBER** – reworded/recoded, **BROWN** – deleted/suspended, **YELLOW** – due date altered, **DARK GREEN** – New

CARBON REDUCTION Transport Theme

01 Objective - To reduce the need to travel, particularly by car, within the city boundaries

Action	Review Findings
CN TRA 001a NCC & NCH implement smarter working practices to implement home working or smarter working initiatives	Completed
CN TRA 001b NCC encourage other employers to implement home working or smarter working initiatives	Completed
CN TRA 002 Encourage employers to use shared hubs and new technology which will reduce the need to travel	Split into 2 new actions = <i>CN TRA 002.01 Encourage employers to use shared hubs and new technology which will reduce the need to travel</i> <i>CN TRA 002.02 Encourage NCC workforce to use shared hubs and new technology which will reduce the need to travel</i> Due Date – June 2024

Action	Review Findings
CN TRA 003a Ensure that new developments promote walking	Recode to CN TRA 003.01
CN TRA 003b Ensure that new developments are within easy reach of high quality public transport and within easy reach of high quality Cycle Network routes	Recode to CN TRA 003.02
CN TRA 004 Partners work across D2N2 to offer greater connectivity over the region	No change
CN TRA 005 Work with voluntary sector organisations to encourage the shift away from the use of the private cars	No change
CN TRA 006 Government use fiscal policy to incentivise home working	No change
CN TRA 007 Government double the proportion of DfT capital funding delegated to LAs	Wording - Government increase the proportion of DfT capital funding delegated to LAs
CN TRA 008 Government review vehicle excise duty in order to encourage a switch to sustainable forms of transport	No change

02 Objective - To increase the uptake of active travel and availability of safe and green walking/cycle networks

Action	Review Findings
CN TRA 009 Develop and publish a LCWIP for the D2N2 area with Local Enterprise Partnership support	No change
CN TRA 010 Prioritise the development of a high quality cycling network and secure cycle parking in Nottingham and beyond	Due Date – March 2028
CN TRA 011 Secure ongoing funding to support education, co-design and engagement to help commuters and visitors feel safe to make the switch to walking and cycling	Due Date – March 2028
CN TRA 012 Work with schools/employers to encourage all to travel by walking and cycling where possible inc. Car Free Days, Clean Air Days and other events, in conjunction with communities and voluntary orgs	No change
CN TRA 013 Provide grants for employers to encourage their employees to commute to work by cycling through the workplace travel grant	Delete – duplication of CN TRA 060
CN TRA 016 Government provide support for investment into cycling and walking infrastructure and complementary promotional activities	No change

03 Objective - To increase in the quality, accessibility and frequency of public transport for all

Action	Review Findings
CN TRA 017 Promote the use of the most sustainable forms of public transport in the city, demonstrate value for money and journey time savings	No change
CN TRA 018 Actively seek to expand the tram network to cover more of the city and conurbation of Nottingham	No change
CN TRA 019 Invest in real time Public Transport information through on-street variable message signs and mobile devices	Due Date – June 2024
CN TRA 020 Run the link bus network using 100% electric buses linking key points to areas not served by the commercial network	No change
CN TRA 021 Improve bus infrastructure and priority measures	Due Date – March 2028
CN TRA 022 Expand Public Transport networks in partnership with public transport operators and large employers	No change
CN TRA 023 Work with drivers and operators to ensure that we have a cleaner hackney carriage and private hire fleet	No change
CN TRA 024 Develop a MaaS platform in partnership with public transport operators and service providers of shared transport solutions	No change
CN TRA 025 Invest in ticketing integration rolling out new ways to pay for public transport	No change
CN TRA 026 Government agree to electrification of the Midland Mainline rail link into Nottingham and enable more accessible, affordable and frequent services	No change
CN TRA 027 Government provide support for investment into public transport	No change

04 Objective - To create a clean system for freight to enter and move around the city

Action	Review Findings
CN TRA 028 Investigate freight consolidation centres in the city to reduce freight journeys by road	No change
CN TRA 029 Modify the City Centre Clear Zone to ensure that only the cleanest delivery vehicles will be able to access the city centre	No change
CN TRA 030 Encourage freight organisations to make the switch to electric vehicles and promote the use of cargo-bikes for final stage deliveries	No change
CN TRA 031 Investigate the potential for extra-urban freight consolidation centres - transfer to electric freight vehicle into the city	No change
CN TRA 032 Investigate the use of drones and other alternative technologies for smaller deliveries	No change
CN TRA 033 Encourage the transport of goods and freight onto rail	No change

Action	Review Findings
CN TRA 034 Government review vehicle regulations particularly looking at refrigeration in transport and how this can be made cleaner	No change
CN TRA 035 Government provide legislative support for alternative delivery systems e.g. drones	No change

05 Objective - To reduce and better manage demand of traffic on the City's streets

Action	Review Findings
CN TRA 036 Understand impacts of road user and congestion charging e.g. an emissions-based parking tariff policy for public and internal NCC parking charges, occupancy-based parking signposting, review all WPL scheme exemptions and discounts	No change
CN TRA 037 Promote the park and ride facilities and investigate expansion to other areas of the city and county	Due Date – June 2028

06 Objective - To provide high quality infrastructure across the city which enables low emission and low carbon transport

Action	Review Findings
CN TRA 038 Expand the D2N2 electric vehicle charging network across the region	No change
CN TRA 040 Deploy integrated on and off-street vehicle charging infrastructure in NCC operated car parks	No change
CN TRA 041 Develop a ULEV procurement framework	No change
CN TRA 042 Introduce incentives for residents and businesses to make the switch to ultra-low emission vehicles. e.g. helping taxi drivers with licensing costs for new EVs and try before you buy schemes	No change
CN TRA 043a Work with LEP in linking the network of vehicle charge points across the region (public and HGV)	Recode to CN TRA 043.01
CN TRA 043b Work with LEP to understand and coordinate the potential role and requirements of hydrogen as a transport fuel	Recode to CN TRA 043.02
CN TRA 044 Work with the local DNO, Western Power Distribution, to address power supply constraints in parts of the city	Delete – duplication of CN ENG 022
CN TRA 045 Explore opportunities for maximising the potential for transport along the river and canal network	No change
CN TRA 046 Government provide funding for local authorities to implement measures that support their Road to Zero Strategy ambitions	No change
CN TRA 047 Government implement green number plate changes so that zero emission vehicles can more clearly be identified	No change

Action	Review Findings
CN TRA 048 Government provide clear and coordinated communications campaigns to help raise public awareness, alongside providing incentives to switch the ULEV vehicles to aid the switch from petrol/diesel vehicles.	No change
CN TRA 049 Government invest in more research in innovative on street charging solutions	No change
CN TRA 050 Government introduce changes in planning policies for electric vehicle charge points in new developments	No change
CN TRA 052 Government require charge point suppliers to provide contactless payment options and support interoperability (roaming) across networks (powers under the Autonomous Vehicles Bill)	No change
CN TRA 062 Review the V2G pilot and assess viability of further roll out	Delete – reassigned to Energy Generation theme as CN ENG 043

07 Objective - To shift to ULEVs, investigate additional demand management measures to encourage shared travel and introduce new technology solutions

Action	Review Findings
CN TRA 054 Introduce new technology and use smart cities developments to improve the efficiency of the transport network	Due Date – June 2024
CN TRA 055 Open NEVS to help establish a network of ULEV maintenance workshops	No change
CN TRA 056 Transition NCC and NCH operational and grey fleet to ULEV	No change
CN TRA 057 Develop local electric car club/car sharing schemes and investigate applications/communications to support greater uptake	No change
CN TRA 058 Work with NTU and UoN to identify opportunities for research into clean transport technology	No change
CN TRA 060 Work with city employers on making changes to their fleet, travel plans and ways to help employees switch to ULEVs and e-bikes for personal use	Wording - Work with city employers on making changes to their fleet, travel plans and ways to help employees switch to ULEVs, cycles and e-bikes for personal use
CN TRA 061 Work with key public sector organisations to investigate demand and capacity for accommodating greater numbers of ULEVs	Due Date – June 2024

CARBON REDUCTION

The Built Environment Theme

01 Objective - To have all heating from low carbon and/or renewable heating sources

Action	Review Findings
CN BEN 001 Work with partners to provide information and materials to educate and engage citizens and businesses with low carbon sources of heating	No change
CN BEN 002 Investigate the requirements for large scale installation of low carbon sources of heating (air/ground/water source heat pumps), using council owned homes as a test bed in partnership with NCH, grid operators and supply chains	Wording - Roll out retrofit at scale across Council properties, and investigate scaling low carbon sources of heating (air/ground/water source heat pumps)
CN BEN 003 Promote incentives for low carbon heating such as the RHI and investigate additional finances/funding opportunities for low carbon heating, including Heat or Energy as a Service models	Delete
CN BEN 003.01 Promotion of Green Homes Grant and other similar schemes	<ul style="list-style-type: none"> Wording - Deliver and maintain the roll-out of retrofit in private homes using Green Homes Grant and other similar schemes Due Date – Dec 25 Recode to CN BEN 045
CN BEN 003.02 Maintain a funding recording system which looks for funding opportunities	Recode to CN BEN 046
CN BEN 004 Expand on D2Grid's exploration of mine-water for heat	Delete
CN BEN 005 Undertake heat mapping exercises for ground, water, air, waste heat and other sources for low carbon heating, considering locally appropriate scale of infrastructure	No change

Action	Review Findings
CN BEN 006 Investigate approaches for local low carbon heating provision to domestic and commercial customers, attracting investment and supporting the local economy with commercial opportunities	<ul style="list-style-type: none"> Wording - Investigate approaches for local low carbon heating provision commercial customers, attracting investment and supporting the local economy with commercial opportunities Due Date – Dec 23

02 Objective - To enforce regulations effectively to monitor and encourage energy efficiency standards and improvements

Action	Review Findings
CN BEN 007 Enforce private rented and non-domestic Minimum Energy Efficiency Standards regulations	No change
CN BEN 008 Review and evaluate the potential of an 106 agreements or allowable solutions mechanism for developers to pay into when a certain high level of energy efficiency of buildings is not able to be met in the development and use this for carbon saving projects	No change
CN BEN 009 Investigate setting up a pre-application advice service in regards to carbon statements for future developments	No change
CN BEN 010 Implement compliance in existing core strategy policies for all new development proposals	No change
CN BEN 011 Stay up to date with government policies that may help shape and enforce energy efficiency improvements in buildings	No change
CN BEN 012 Promote awareness and understanding of Energy Performance Certificate for domestic and commercial properties to foster greater action in the city	No change
CN BEN 013 Stay up to date and help promote an emerging Carbon Neutral Supplementary Planning Document which may require developers to produce carbon statement	No change
CN BEN 014 Support the launch of Co-Place	No change
CN BEN 015 Support and implement any Government regulations to set a high level of energy efficiency in buildings as standard	No change
CN BEN 043 Develop a Carbon Neutral Design Guide for the Design Quality Framework	No change

03 Objective - To have greater and more frequent citywide uptake of energy efficiency technologies both commercial and domestic

Action	Review Findings
CN BEN 016 Increase the number of EnergieSprong Household retrofits in partnership with NCH	No change
CN BEN 017 Investigate the potential for funding sources to develop our approach to affordable net zero energy retrofits	Delete
CN BEN 018 Contribute to making household retrofits commercially viable through creating local sites for retrofit material and ensuring sufficient skills and infrastructure is in place, as well as attracting investment in future retrofit measures	No change
CN BEN 019 Capitalise on available funding and expand ECO measures where appropriate	No change
CN BEN 020 Address over 50,000 solid wall or inadequately insulated properties across the city	No change
CN BEN 021 Regenerate areas of the city with more energy efficient and climate smart buildings	No change
CN BEN 022 Prioritise building new builds on council land to a high energy efficiency (e.g. Passivhaus Standard / AECB Standard), including NCH properties, ensuring they are built to a 'carbon neutral' standard	<i>Wording - Prioritise building new builds on council land to a high energy efficiency Standard, including NCH properties, progressing towards a 'carbon neutral' standard</i>
CN BEN 023 Investigate the implementation of offset carbon intensity for construction of new council buildings e.g. KgCO2e/m2	No change
CN BEN 024 Develop Council strategies to help influence and shape the movement towards improved energy efficiency within the built environment e.g. Housing Strategy	No change
CN BEN 025 Ensure the Council's own estate's energy efficiency is maximised through invest to save practices, such as using SALIX financing	No change
CN BEN 026 Engage and collaborate with large public and private sector organisations to improve the energy efficiency of their buildings	No change
CN BEN 028 Explore the possibility of trusted vendor approaches and frameworks for suppliers to domestic and commercial customers	Delete

04 Objective - To help businesses and citizens reduce energy demand from buildings

Action	Review Findings
CN BEN 029 Inform citizens and businesses across the city on energy saving measures through developing materials and engagement e.g. local pop-up stalls, with the aim to also reduce fuel poverty	No change
CN BEN 030 Provide information and engage with citizens and organisations to encourage switching to renewable energy tariffs	No change
CN BEN 031 Explore the potential to empower action through 'gamification'	Delete
CN BEN 032a Work with key partners to use procurement approaches to encourage suppliers to report on their operational emissions	Recode to CN BEN 032.01
CN BEN 032b Establish a public-facing citywide energy and carbon ratings scheme for businesses	Recode to CN BEN 032.02

05 Objective - To maximise the uptake of low-cost technologies to reduce the demand for energy across all buildings

Action	Review Findings
CN BEN 033 Ensure low cost technologies such as LED lighting are rolled out across the council estate, including parks and open spaces, as well as included in new developments, to reduce energy use	Wording – Ensure, where feasible, low cost technologies such as LED lighting are rolled out across the council estate, including parks and open spaces to reduce energy use

06 Objective - To minimise emissions in construction of new buildings and through procurement

Action	Review Findings
CN BEN 035 Trial the open-source Embodied Carbon in Construction Calculator (EC3) tool	No change
CN BEN 036 Investigate available tools to incorporate whole-life costing into procurement process with support from finance where relevant	Wording - Investigate available tools to incorporate whole-life costing into procurement process with support from finance where appropriate to the tender

Action	Review Findings
CN BEN 037 Include carbon reduction into procurement specification and set appropriate minimum standards	Wording - Include carbon reduction into procurement specification and set appropriate minimum standards where appropriate to the tender
CN BEN 038 Measure Scope 3 emissions impacts of current construction approaches and procurement	No change
CN BEN 039 Promote more sustainable materials for new constructions based on the BREEAM tool	No change
CN BEN 040 Develop and support, with NCH, localised offsite manufacturing for new build and retrofit	Delete
CN BEN 041 Influence regional procurement frameworks	No change
CN BEN 042 Undertake research with partners to facilitate a local circular economy for material reuse in construction to reduce emissions, costs and improve sustainability	No change

CARBON REDUCTION

Energy Generation Theme

01 Objective - To have a vision of how the energy system would ideally look to align energy development and secure funding

Action	Review Findings
CN ENG 001 Align to smart city strategy and maximise the use of local generation through technology	<ul style="list-style-type: none"> Wording - Maximise the use of local energy generation through alignment with the smart city strategy Due Date - June 2023
CN ENG 002 Embed decentralising energy generation and reducing carbon dioxide emissions from energy in existing core areas of compliance within planning policy	Completed

Action	Review Findings
CN ENG 003 Align FPA Parks and Heritage Strategy to 2050 to deliver aspects of the vision and attract funding as part of service redesign through the exploration of national and local policy and specialist consultant advice	<ul style="list-style-type: none"> • Wording - Align FPA Parks and Heritage Strategy to 2050 to the shared energy vision • Due Date - June 2023
CN ENG 004 Align to national objectives on clean growth and decarbonisation	Delete
CN ENG 005 Develop an energy strategy and a new citywide energy steering group	Delete. Replace with new action CN ENG 042
CN ENG 006 Create common and/or aligned energy plans with neighbouring local authorities and partners to create a joined up and consistent approach under the D2N2 Energy Strategy	<ul style="list-style-type: none"> • Wording - Work with adjacent LAs, partners etc to develop local energy generation on periphery of city for use in the city • Due Date - June 2028
CN ENG 007 Support an active and visible community of energy discussion and working groups to tackle energy challenges collectively	No change
CN ENG 008 Work with partners to understand the potential for low-carbon hydrogen gas in the distribution network for heating and hot water provision	No change
CN ENG 009 Government devolve funding into local energy infrastructure and capacity building	Due Date - June 2023
CN ENG 042 Implement Nottingham City Local Area Energy Plan (LAEP)	New for 22/23

02 Objective - To expand local low carbon sources of energy within the city

Action	Review Findings
CN ENG 010 Install solar PV on all viable NCC properties and encourage uptake across the city	No change
CN ENG 011 Undertake a viability survey at all existing sites (inc. structures in Parks) to potentially accommodate further solar PV wherever possible with shared surplus income towards sustaining parks and open spaces	No change
CN ENG 012 Investigate the potential for expanding the District Heat Network and smaller neighbourhood district heating schemes	Delete – duplication of existing action in Waste Theme

Action	Review Findings
CN ENG 012.01 Investigate the potential for expanding the Council's District Heat Network	See above
CN ENG 012.02 Investigate the potential for smaller neighbourhood district heating schemes	See above
CN ENG 013 Investigate mine water as a heat source	Completed – Q1 21/22
CN ENG 014 Increase local renewable electricity generation and map out the potential across buildings and sites, particularly in conjunction with research and other public sector partners	<ul style="list-style-type: none"> • Wording - Map out the potential to increase local renewable electricity generation and across buildings and sites, particularly in conjunction with research and other public sector partners • Due Date - June 2022
CN ENG 015 Identify areas of the city that would not practically go onto the heat network and model potential technologies for example heat pumps	Delete.
CN ENG 016 Invest in low carbon generation assets within the D2N2 region to increase regional manufacturing supply for local consumption	Wording - Work with EM combined authority to invest in low carbon generation assets within the D2N2 region to increase regional manufacturing supply for local consumption
CN ENG 017 Explore the opportunities for anaerobic digestion to produce clean energy e.g. electricity and biogas, deal with waste, and produce resources	No change
CN ENG 018 Explore the potential for local water source heat pumps	No change
CN ENG 019 Through engagement with citizens and partners, develop information and guidance materials through different media to facilitate greater uptake of renewable energy generation	Due Date - June 2023

Action	Review Findings
CN ENG 020 Government remove/refine current regulation which causes significant barriers in re-enforcing the network ahead of need	<ul style="list-style-type: none"> Wording - Government remove/refine current regulation which causes significant barriers in re-enforcing the energy network ahead of need Due Date - June 2023
CN ENG 021 Government remove/refine current ceiling pricing rules on the amount companies can earn from charges to use the networks set by Ofgem	Due Date - June 2023
CN ENG 022 Government invest strategically, and work closely with the DNO, in order to meet growing demands as new technology and green priorities mean more of a move to electricity for transport and heating	No change

03 Objective - To improve the capacity to store local low carbon energy

Action	Review Findings
CN ENG 023 Increase electricity storage on council properties to allow maximum use of locally generated energy	No change
CN ENG 024 Investigate the potential of parks and open spaces sites for local storage	Wording - Investigate the potential of parks and open spaces sites for local electricity generation and heat storage
CN ENG 025 Increase electricity storage locally, through communicating benefits, understanding financial and business cases	Wording - Encourage non-public sector businesses to investigate feasibility of electricity storage locally, through consultation and advice

Action	Review Findings
CN ENG 026 Increase thermal storage e.g. hot water and ground inter-seasonal storage for greater maximisation of local energy generation	Wording - Investigate the potential for thermal storage e.g. hot water and ground inter-seasonal storage for greater maximisation of local energy generation
CN ENG 027 Investigate the potential of caves for energy storage	No change

04 Objective - To have a stable and secure energy system that maximises energy from local diverse mix of low carbon sources

Action	Review Findings
CN ENG 028 Improve the resilience and coordination of the Council's energy systems to manage demand response which is sensitive to weather conditions and local energy needs	No change
CN ENG 029 Create a roadmap and platform for private, municipal, co-operative and community developments to align in one energy system	Wording - Investigate the potential for creating a roadmap and platform for private, municipal, co-operative and community developments to align in one energy system
CN ENG 030 Government develop a nationally smarter grid to make energy assets work together, with timely rollout and engagement for smart meters	No change
CN ENG 041 Switch Council energy supplier to a 100% green/renewable tariff	Wording - Move the Council's energy supply to a zero emissions electric tariff and explore a green gas tariff

05 Objective - To enable the city to be a test bed for new energy generating technologies

Action	Review Findings
CN ENG 031 Frame challenges in Innovation Gateway to ensure difficult problems can be met with new solutions	Completed June 2022
CN ENG 032 Participate in Domestic Mission UKRI trial with carbon neutral challenges to SME market	Completed Q3 21/22
CN ENG 033 Develop 'Living Lab' - new sustainability and energy impact research initiatives co-designed with citizens and organisations	<ul style="list-style-type: none"> Wording - Develop 'Living Lab' - new sustainability and energy impact research initiatives co-designed with citizens and organisations Due Date - June 2025
CN ENG 034 Be an innovative testbed city for new technologies e.g. micro-wind, fuel cell, pumped storage	Wording - Be an innovative testbed city for new energy technologies e.g. micro-wind, pumped storage
CN ENG 035 Government provide nationally available funding to drive the national low carbon agenda at a city level which the City Council can access	No change
CN ENG 043 Review the V2G pilot and assess viability of further roll out	New – moved from Transport Theme

06 Objective - To ensure low carbon energy is affordable and accessible to all

Action	Review Findings
CN ENG 036 Reduce energy poverty with support from sister organisations e.g. RHE, Enviroenergy, NCH and Nottingham Energy Partnership	Wording - Reduce energy poverty with support from sister organisations e.g. Enviroenergy, NCH and Nottingham Energy Partnership

Action	Review Findings
CN ENG 037 Increase community and cooperative energy projects in partnership with NCH	Wording - Increase community and cooperative energy projects in partnership with other organisations
CN ENG 038 Explore the potential for time of use tariffs and energy as a service model	No change
CN ENG 039 Government enable access to appropriate nationally available funding, incentives and access to finance, to support affordable energy generation for all	Due Date - June 2023

CARBON REDUCTION

Waste Theme

01 Objective - To reduce the total volume of waste generated through the use of technological and behavioural changes

Action	Review Findings
CN WAS 001 Undertake citywide behavioural change initiatives and information campaigns to provide a greater understanding of waste issues, where local waste goes and best practices to reduce the volume of waste and how to recycle correctly	No change
CN WAS 002 Promote initiatives to reduce waste across the city, such as Love Food, Hate Waste, #Refill and #Longlivethelunchbox campaigns, alongside increasing water fountains across the city to reduce single use plastic waste	No change
CN WAS 003 Explore developing repair and reuse facilities, workshops and skill sharing across the city including NCH project to explore viability of reuse of unwanted but serviceable items	<ul style="list-style-type: none"> Suspended to 23/24 Due Date – June 24
CN WAS 005 Explore the opportunities of an initiative with social enterprises to tap into the funding to help change behaviours and/or delivering fuel from waste	No change
CN WAS 006 Work with research and industry partners to create innovative solutions for separating and using waste materials in construction and infrastructure	Completed Q4 20/21
CN WAS 007 Develop citywide information and engagement to support citizens and businesses with a transition to zero-waste approaches	No change

02 Objective - To reuse, reduce, recycle and use more waste for energy and eliminate it from landfill

Action	Review Findings
CN WAS 008a Investigate using food waste for anaerobic digestion to provide energy as an alternative to Eastcroft Energy from Waste	<i>Recode to CN WAS 008.01</i>
CN WAS 008b Develop a plan for kerbside food collection in line with national strategy for 2023	<i>Recode to CN WAS 008.02</i>
CN WAS 009 Explore the potential to expand the District Heating network to more properties across Nottingham, using more energy from energy-from-waste plants	<i>No change</i>
CN WAS 010 Investigate ways to eliminate the remaining 7% of waste going to landfill and implement into council policy	<i>No change</i>
CN WAS 011 Conclude an investigation in to alternative ways of collecting and disposing recyclable materials from homes and businesses, in order to maximise the quality and quantity of recyclable materials collected, in particular understanding the cost and benefits	<i>No change</i>
CN WAS 012 Encourage organisations and businesses across the city to use re-usable cups for staff, retail and events	<i>No change</i>
CN WAS 013 Work with partners to support and promote the development of repair cafes, centres and groups, including skills-share and swap shops	<ul style="list-style-type: none"> <i>Suspended to 23/24</i> <i>Due Date – June 24</i>

03 Objective - To have better waste management and ownership through effective regulations and policy

Action	Review Findings
CN WAS 014 Keep up to date with national policies on waste and seek to contribute and influence new waste regulations	<i>No change</i>
CN WAS 015 Investigate expanding waste collection services e.g. food collections	<i>Completed Q4 20/21</i>
CN WAS 016 Progress the Joint Waste Local Plan with Nottinghamshire County Council	<i>No change</i>
CN WAS 017 Explore with partners the development of innovative evidence-based approaches to target and tailor recycling/waste management campaigns	<i>No change</i>
CN WAS 018 Government to provide financial support for a new waste system infrastructure and initiatives and provide clarity on future waste arrangements to tackle waste issues	<i>No change</i>
CN WAS 019 Government to support or regulate greater levels of reusable and recyclable packaging, in line with national Waste Strategy principles	<i>No change</i>

CARBON REDUCTION

Water Theme

01 Objective - To improve the efficiency of the water supply and water treatment to reduce water demand

Action	Review Findings
CN WAT 001 Investigate and introduce water efficiency within Council buildings through WELS inc. rainwater harvesting, grey water systems, flow regulators, water efficient toilets and showerheads and any related water treatment	Wording - Undertake Water Efficiency Loan Scheme (WELS) projects across internal estate.
CN WAT 002 Carry out baselining exercise of potential sites with water leaks, and seek to undertake in-depth assessment of water leaks at those sites	Completed
CN WAT 003 Provide water to the Council's estate through water self-supply, helping the council work towards more accurate billing and monitoring, helping to reduce water usage	No change
CN WAT 004 Work with water supply companies to help identify water leaks across the city	Wording - Work with the regional water supply company to help identify water leaks across the city
CN WAT 005 Work with Nottingham partners to understand how Green and Blue infrastructure can be better used to manage water	No change
CN WAT 008 Via water self-supply operations identify non-standard consumption and identify leaks across the estate and resolve with wholesaler	No change

02 Objective - To improve behaviours to reduce water demand

Action	Review Findings
CN WAT 006 Provide information on the best practices to reduce water consumption, helping to improve understanding of the issues and solutions to better water management, reducing bills and carbon emissions	No change
CN WAT 009 Undertake internal marketing campaigns to promote water efficiency and develop on existing PowerPoints for electricity and gas and add water for leisure centres and libraries	Replace with 2 new actions – CN WAT 009.01 & .02
CN WAT 009.01 Undertake internal awareness campaigns to promote water efficiency	New
CN WAT 009.02 Undertake external awareness campaigns to promote water efficiency	New

Action	Review Findings
CN WAT 010 Work with wholesaler to respond to and promote engagement with communications and action plans in addition to any campaigns they run	No change
CN WAT 011 Build relationships with NHS colleagues and work to promote water efficiency within health care establishments i.e. care homes, assisted living homes, QMC, CHN working in partnership to share best practice and share knowledge	Delete

CARBON REDUCTION Consumption Theme

01 Objective - To increase local and low-carbon production

Action	Review Findings
CN CON 001a Develop a food strategy for Nottingham	<ul style="list-style-type: none"> • Recode to CN CON 001.01 • Due date – June 2024
CN CON 002 Increase the range of edible fruits, flowers and vegetables in Council owned parks, rooftops, and open spaces	No change
CN CON 003a Reduce use of fertilizers by increased use of locally produced compost and local allotment growing	<ul style="list-style-type: none"> • Recode to CN CON 003.01 • Due date – June 2024
CN CON 005 Work with schools, universities, colleges and other institutions to encourage and support sustainable entrepreneurs	No change
CN CON 007 Develop a package to improve the efficiency of schools' catering equipment, and switch to electric sources to allow for carbon neutral catering	Due date – June 2024
CN CON 010a Encourage local cooperative, community owned and other collaborative ventures to foster more effective use and sharing of resources	<ul style="list-style-type: none"> • Recode to CN CON 010.01 • Due date – June 2024
CN CON 011 Develop proposals for encouraging and incubating businesses that can deliver low-carbon goods and services to develop in or relocate to Nottingham	Wording - Encourage and incubate businesses that can deliver low-carbon goods and services to develop in or relocate to Nottingham

02 Objective - To reduce consumption of high carbon products

Action	Review Findings
CN CON 012 Develop education and outreach programmes to reduce meat consumption/increase plant based diets within Catering Services	<i>Due date – June 2024</i>
CN CON 013 Create full greenhouse gas footprint for catering functions to identify biggest emissions areas	<i>Due date – June 2024</i>
CN CON 014 Work with partners to reduce the carbon impact and overall sustainability of food choices, for example meat and dairy	<i>Due date – June 2024</i>
CN CON 015 Explore carbon reduction opportunities in procurement, by getting suppliers to present lifecycle/carbon assessments and look to adopt appropriate standards	<i>Due date – June 2024</i>
CN CON 016 Ensure sustainable consumption campaigns and interventions e.g. Green Rewards are more effective through recognising and addressing existing inequalities	<i>No change</i>

03 Objective - To reduce local waste and link all remaining waste to energy, composting and a circular economy

Action	Review Findings
CN CON 008 Explore ways of providing a near carbon neutral catering provision across the city council's services	<i>Due date – June 2024</i>
CN CON 021 Enable more citizens and businesses to understand how to reduce their food waste through buying, storing, preparation and cooking	<i>Due date – June 2024</i>

04 Objective - To encourage more low carbon cooking and meals

Action	Review Findings
CN CON 023 Explore adoption of Green Kitchen Standard/Food for Life	<i>No change</i>
CN CON 025 Expand carbon neutral kitchen and refill campaign	<i>No change</i>
CN CON 026 Explore the adoption of tools (e.g. EATS - Environmental Assessment Tool for School meals) to help engage school staff (and potentially students) with creating low-carbon meals through consideration of ingredients, food miles and cooking methods	<i>Due date – June 2024</i>
CN CON 029 Align to national days of action to reinforce the message of collective action	<i>No change</i>

05 Objective - To reduce the carbon emissions of city events and improve their sustainability

Action	Review Findings
CN CON 027 Introduce a deposit scheme at all Nottingham City Council events to reduce single use plastic	No change
CN CON 030 Identify options for improving the sustainability of city events	No change

06 Objective - To develop sustainable tourism

Action	Review Findings
CN CON 031 Develop clear standards for leisure, tourism and accommodation venues	No change

07 Objective - To buy and procure sustainably, and maximise existing resources

Action	Review Findings
CN CON 032 Investigate available tools to incorporate whole-life costing into procurement process	Due date – June 2024
CN CON 033 Raise awareness through training in NCC on need to reuse internal resources and goods wherever possible	Due date – June 2024
CN CON 034 Review, update and launch a new Business Charter with a strong environmental focus	Delete.
CN CON 037 Work with partners and networks in the city to develop supplier engagement days through procurement activities to support SMEs across all sectors to become more sustainable and low carbon in their operations	Wording - Work with partners and networks in the city to support SMEs across all sectors to become more sustainable and low carbon in their operations
CN CON 040 Develop a process by which carbon impact considerations are included in all Council purchase decisions under £25k	New

CARBON REMOVAL

01 Objective - To offset residual citywide emissions from hard to reduce sources

Action	Review Findings
CN CAR 002 Investigate the use of parks and open spaces to offset carbon for individuals and local businesses emissions	<i>No change</i>
CN CAR 003 Ensure Open and Green Spaces are sustainable through the new 25 year strategy and offer diverse, bee friendly habitats , including offering training for bee friendly gardens and establishing 'bee hotels' through NCH	<i>No change</i>
CN CAR 004 Use offsetting practices (e.g. tree planting) as an educational opportunity for local residents and schools about the issues we face and the available solutions	<i>No change</i>
CN CAR 005 Explore creating a climate offset fund through implementing an internal offset charge for council run events	<i>No change</i>
CN CAR 006 Promote schemes to allow homeowners and organisations to access trees and seeds for gardens and premises	<i>No change</i>

02 Objective - To participate and actively encourage national research/investment into negative emission technologies

Action	Review Findings
CN CAR 007 Investigate possible partnerships with academic institutions and local business to generate funding for the exploration of negative emission technologies	<i>No change</i>

03 Objective - To improve land and building management practices to better retain carbon e.g. within soil and reduce particle air pollution

Action	Review Findings
CN CAR 008 Explore the opportunities and feasibility for urban greening (e.g. street trees), tree planting and green roofs/walls and promote them through the new Biodiversity Supplementary Planning Documents	<i>No change</i>
CN CAR 009 Promote local scale offsetting as a normal function of future planning processes	<i>No change</i>
CN CAR 010 Implement Future Parks Accelerator Parks and Heritage Strategy to 2050 to include, for example, maximum carbon sequestration through detailed tree/meadow planting/growing, rewilding, soil management, waterways and wetland planning	<i>No change</i>

Action	Review Findings
CN CAR 011 Seek to adopt the biodiversity, green and open spaces supplementary planning document to ensure a consistent approach for developers to take up protection and enhancement measures of key biodiverse areas	<i>No change</i>
CN CAR 012 Investigate the potential for using Supplementary Planning Documents to maximise carbon sink potentials	<i>No change</i>
CN CAR 013 Research the carbon released during developments on green spaces and how to mitigate the impacts through on site and off site interventions, whilst understanding the green benefits	<i>No change</i>

RESILIENCE AND ADAPTATION

01 Objective - To ensure adaptation to climate change has a strong foundation in future policies

Action	Review Findings
CN REA 001 Include adaption for heatwaves and floods in Land and Planning policies documents	<i>Due Date - June 2028</i>
CN REA 002 Integrate adaptation thoroughly into the new citywide Resilience and Climate Change Strategy	<i>No change</i>

02 Objective - To reduce risk of flooding to properties and infrastructure

Action	Review Findings
CN REA 003 Better protect homes and businesses across Nottingham that are exposed to flood risk	<i>Due Date - June 2028</i>
CN REA 004 Acknowledge flood risk and flood management in all new developments in high flood risk areas	<i>Completed</i>
CN REA 005 Through development opportunities, seek to open up main rivers and create wetlands, natural flood defences and urban drainage, as supported by the Local Plan and Biodiversity Supplementary Planning Document	<i>No change</i>
CN REA 006 Work with partners and organisations to conduct in depth flood risk mapping across Nottingham e.g. NTU and Environment Agency	<i>Due Date - June 2028</i>
CN REA 007 Ensure Emergency Plans are adapted to reflect the changing risk through the Local Resilience Forum	<i>Due Date - June 2028</i>
CN REA 008 Explore and encourage innovative technologies and natural interventions (Blue and Green infrastructure) to reduce flood and heat risk within urbanised areas	<i>Due Date - June 2028</i>

Action	Review Findings
CN REA 009 Maintain highways and other assets, removing blockages, to reduce the risk of surface water floods	No change
CN REA 010 Government to increase the available funding for flood risk management to meet the growing need for action, particularly related to surface water flooding	Completed Q4 2022

03 Objective - To ensure all core City Council services are adaptable to a changing climate

Action	Review Findings
CN REA 011 Improve knowledge and understanding of how the Council is affected by extreme weather events in terms of providing its services and its financial impact	No change
CN REA 012 Investigate historic claims information and damages that arise from the impacts of severe weather events, mapping any trends to help inform future actions and understanding	Completed June 2022
CN REA 013 Develop Council and service level plans for adapting to climate change	No change
CN REA 014 Work with partners and other local authorities to help evaluate and develop suitable tools to help understand impacts to council service areas	Due Date - June 2028

04 Objective - To understand the current and future impacts of extreme weather events and climate change, with an in-depth knowledge of the most vulnerable citizens

Action	Review Findings
CN REA 015 Establish a methodology with partners to undertake a full citywide vulnerability assessment for extreme weather events and future climate change scenarios	No change
CN REA 016 Identify those most at risk from extreme weather events, such as heat waves and develop mitigating actions	No change
CN REA 017 Assist marginalised and vulnerable groups to become more resilient and deliver educational engagement programme with target communities	No change
CN REA 018 Conduct an LCLIP for Nottingham, to help understand the impacts on citizens and businesses, building a citywide picture of current impacts	Completed Q4 2022
CN REA 023 Develop and implement a city wide climate justice strategy	Delete (now included in CN REA 002)

05 Objective - To create resilience to climate change in communities and business

Action	Review Findings
CN REA 019 Work with citizens across Nottingham to ensure those most vulnerable and at high risk to severe weather events are on the priority service register and have signed up to alerts e.g. flood risk alerts	<i>No change</i>
CN REA 020 Work with businesses across the city to help them develop business continuity plans in response to climate change and extreme weather events	<i>No change</i>
CN REA 021 Work with residents and communities to empower them to become more resilient to current and future climate change impacts, including the use of simple interventions	<i>No change</i>

ECOLOGY AND BIODIVERSITY

01 Objective - To identify more, better, bigger, joined habitat network

Action	Review Findings
CN ECB 001 Identify sites for additional tree planting, relaxed mowing, wildflower growth, hedge planting through opportunity mapping, helping to create diverse habitats in Council owned parks and open spaces	<i>No change</i>
CN ECB 002a Identify sites which meet the criteria for Local Nature Reserve designation to expand protected sites' network	<i>Recode to CN ECB 002.01</i>
CN ECB 002b Select strategic sites that need protection from current or future pressure from development or loss	<i>Recode to CN ECB 002.02</i>
CN ECB 003 Update Phase 1 habitat mapping and biodiversity opportunity mapping to understand development opportunities and future habitat options for the open space network outlined in open and green space plans	<i>No change</i>
CN ECB 004 Work in partnership with the Nottinghamshire Biodiversity Action Group and other stakeholders to build future resilience of habitats and species and identify habitats for carbon sequestration	<i>No change</i>
CN ECB 014 Investigate the feasibility of introducing more ambitious projects for habitat creation	<i>No change</i>

02 Objective - To increase woodland cover in appropriate places and managing sustainable woodlands

Action	Review Findings
CN ECB 005 Update Nottingham's Urban Forestry Strategy including the assessment of existing woodlands, with understorey planting and expansion programmes introduced where necessary	No change
CN ECB 006 Sustainably manage existing woodland and prevent its degradation	No change
CN ECB 007 Work with partners to identify sites for woodland creation and promote tree planting across privately owned land, schools and businesses	No change

03 Objective - To install innovative natural features to developments, as per the Biodiversity SPD

Action	Review Findings
CN ECB 008 Support the Biodiversity SPD by including biodiversity enhancements to all developments, ensuring net gain in biodiversity	No change
CN ECB 009 Consider green roofs, green walls, and sustainable urban drainage systems, in new developments	No change
CN ECB 010 Identify aspirational projects for small scale wetland creation, biodiversity enhancement opportunities and natural flood defences	No change
CN ECB 011 Encourage sustainable and nature friendly development beyond the levels mandated by legislation	Delete

04 Objective - To contribute towards improved crop production and plant propagation through having a Bee friendly city

Action	Review Findings
CN ECB 012 Introduce phased implementation of bee friendly projects that have been identified across Nottingham's parks and open spaces, this includes rewilding, shrub, tree and bulb planting and seeding	No change
CN ECB 013 Work with partner organisations to encourage developers, businesses, schools and private homeowners to become pollinator friendly	No change

BEHAVIOUR & CULTURAL CHANGE

Engagement

Action	Review Findings
CN BCC 001 Carry out mapping of key stakeholders to enable behavioural and cultural change, building on existing mapping and identifying gaps in key stakeholder contacts	<ul style="list-style-type: none"> Wording - Carry out annual mapping of key stakeholders to enable behavioural and cultural change, building on existing mapping and identifying gaps in key stakeholder contacts Due Date - June 2028
CN BCC 002 Develop a communication and marketing strategy, including a plan of ongoing activity which encourages and supports new carbon reduction ideas	Wording - Develop a CN28 communication and marketing strategy and action plan
CN BCC 003 Develop a CN28 engagement strategy and action plan	No change
CN BCC 004 Make carbon reduction part of all existing city and council planning processes. Internally through the Council Plan, Departmental Business Plans, Service Plans and Individual Performance Plans	Wording - Make carbon emission reduction part of key Council planning processes such as the Council Plan, Service Plans and individual performance reviews
CN BCC 005 Enable ideas, knowledge and collective intelligence to be effectively captured	Delete
CN BCC 006 Carry out community energy/sustainability mapping	Delete
CN BCC 007 Recruit, develop and support a group of Carbon Reduction Champions from within and without the council	Delete. Replace with CN BCC 007.01 & CN BCC 007.02
CN BCC 007.01 Establish a group of 'Carbon Reduction Champions' within the Council	New for 22/23. See above
CN BCC 007.02 Establish a group of 'Carbon Reduction Champions' external to the Council	New for 22/23. See above

Action	Review Findings
CN BCC 008 Engage young people across the city to raise awareness, generate ideas and promote behaviour change	<ul style="list-style-type: none"> Wording - Engage with groups of young people across the city to raise awareness, generate ideas and promote behaviour change Due Date - March 2023
CN BCC 011 Deliver internal communications and development activity which supports the mind-set change required to promote innovative thinking and problem solving, in particular encouraging colleagues to explore ways to fund carbon reduction activity	Delete. Replace with CN BCC 011.01 & CN BCC 011.02
CN BCC 011.01 Deliver a range of communications and marketing activities, campaigns etc to develop the awareness, understanding and knowledge of CN28 within the Council	New for 22/23. See above
CN BCC 011.02 Deliver a range of communications and marketing activities, campaigns etc to develop the awareness, understanding and knowledge of CN28 in the City	New for 22/23. See above
CN BCC 013 Develop the awareness and understanding of CN28 through a range of engagement and communications activities	<ul style="list-style-type: none"> Wording - Deliver a range of engagement and awareness activities, campaigns etc to develop fuller understanding and knowledge of CN28 both in the city and within the Council Due Date - June 2028
CN BCC 014 Change the style and venue of meetings to be more engaging for partnerships and community/business to creatively address key challenge	Delete.
CN BCC 015 Develop new forms of external democratic involvement with the carbon neutral agenda	Due Date - March 2023

Funding

Action	Review Findings
CN BCC 009.01 Review current asset portfolio and work with partners towards divestment from any fossil fuel related investments	No change
CN BCC 009.02 Advise in campaign for divestment of the Nottinghamshire LGPS	No change
CN BCC 010 Drive behaviour change to identify appropriate ways to support and incentivise internal carbon reduction or offsetting projects	Completed.
CN BCC 011 Deliver internal communications and development activity which supports the mind-set change required to promote innovative thinking and problem solving, in particular encouraging colleagues to explore ways to fund carbon reduction activity	Delete. Replace with CN BCC 011.01 & CN BCC 011.02

Governance

Action	Review Findings
CN BCC 012 Establish a flexible and dedicated internal project team to work across and with all appropriate Council services led by its Energy Services	Completed Q3 21/22
CN BCC 013 Develop the awareness and understanding of CN28 through a range of engagement and communications activities	Moved to Engagement Theme
CN BCC 016 Develop a 'carbon neutral by design' ethos where everything that is proposed includes carbon reduction considerations/activities as a matter of course	Wording - Develop a 'carbon neutral by design' ethos where everything that is proposed in the Council includes carbon reduction considerations/activities as a matter of course e.g. introduction of CIAs, planning application reviews
CN BCC 017 Develop a process by which all Council service plans include a consideration of the carbon impact of their activities	Completed
CN BCC 025 Develop a new city partner reporting process to showcase carbon reduction work from right across the city	New

Monitoring

Action	Review Findings
CN BCC 018 Produce an annual assessment of Nottingham's emissions against pathway projections	<i>No change</i>
CN BCC 019 Undertake an annual review of whole CN28 action plan	<i>No change</i>
CN BCC 020 Undertake annual reporting to the CDP Climate and Environment Reporting Platform for Cities	<i>No change</i>
CN BCC 021 Produce an annual report on Nottingham City Council's greenhouse gas emissions	<i>Due Date - June 2028</i>
CN BCC 022 Establish a suite of KPIs to routinely report delivery of the CN28 action plan objectives and targets	<i>Due Date - March 2023</i>
CN BCC 023 Utilise ClimateView and incorporate into action plan progress reports	<i>No change</i>

b. Completed Actions up to end of 2021/22

The Built Environment Theme
Developed Council strategies to help influence and shape the movement towards improved energy efficiency within the built environment e.g. Housing Strategy
Implemented compliance in existing core strategy policies for all new development proposals
Maintained a funding recording system which looks for funding opportunities
Promotion of Green Homes Grant and other similar schemes
Stay up to date with government policies that may help shape and enforce energy efficiency improvements in buildings
Supported the launch of Co-Place
Carbon Removal
Promoted schemes to allow homeowners and organisations to access trees and seeds for gardens and premises
Energy Generation Theme
Embedded decentralising energy generation and reducing carbon dioxide emissions from energy in existing core areas of compliance within planning policy
Framed challenges in Innovation Gateway to ensure difficult problems can be met with new solutions
Investigated mine water as a heat source
Participated in Domestic Mission UKRI trial with carbon neutral challenges to SME market
Behaviour & Culture Change
Developed a process by which all Council service plans include a consideration of the carbon impact of their activities

Established a flexible and dedicated internal project team to work across and with all appropriate Council services led by its Energy Services
Worked with Notts ICS to develop their NHS Green Plan
Resilience & Adaptation
Acknowledged flood risk and flood management in all new developments in high flood risk areas
Conducted an LCLIP for Nottingham, to help understand the impacts on citizens and businesses, building a citywide picture of current impacts
Government increased the available funding for flood risk management to meet the growing need for action, particularly related to surface water flooding
Investigated historic claims information and damages that arise from the impacts of severe weather events, mapping any trends to help inform future actions and understanding
Transport Theme
Developed a ULEV procurement framework
Explored opportunities for maximising the potential for transport along the river and canal network
Government implemented green number plate changes so that zero emission vehicles can more clearly be identified
Government introduced changes in planning policies for electric vehicle charge points in new developments
Invested in ticketing integration rolling out new ways to pay for public transport
Investigated the use of drones and other alternative technologies for smaller deliveries
Opened NEVS to help establish a network of ULEV maintenance workshops
Ran the link bus network using 100% electric buses linking key points to areas not served by the commercial network
Waste Theme
Investigated expanding waste collection services e.g. food collections

Worked with research and industry partners to create innovative solutions for separating and using waste materials in construction and infrastructure

Water Theme

Continued to undertake leak assessment when water reads are gained to ensure leaks are detected and resolved swiftly