

## Carbon Impact Assessment Dashboard Tool (v1.1)

Nottingham City Council (NCC) has taken the ambitious aim of becoming the first UK carbon neutral city, setting itself the target to achieve this by 2028. On the 13th January 2020, Nottingham City Council acknowledged the scale of this challenge by declaring a Climate and Ecological Emergency at Full Council, recognising the immediate action required to achieve sustainable carbon neutrality. A key objective in Nottingham's Carbon Neutral Action Plan is to develop a 'carbon neutral by design' ethos where everything that is proposed includes carbon reduction considerations/activities as a matter of course. This means that if you develop or change a policy, project, service, function, or strategy, you need to identify the impact of the activity regarding the climate. Our preferred method for doing this is by conducting a Carbon Impact Assessment. This is similar to a risk assessment, or an equalities impact assessment; it is a structured report showing:

- What effects our activities have on the climate (mainly through our emissions of greenhouse gasses) and what we are doing to reduce these effects.
- What impacts a changing climate may have on our services and functions and what actions we will take to become more resilient and less vulnerable.

Use the 'cheat sheet' to the right hand side on the Input tab for quick instructions, and the Categories Guidance and Scoring Guidance tabs for further guidance on these. Full guidance can be found in the accompanying Guidance Notes document.

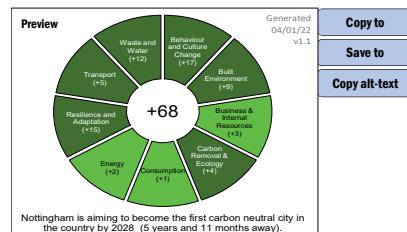
This Carbon Impact Assessment Dashboard (CIAD) has been adapted by Nottingham City Council from Chesterfield Borough Council's (CBC) climate change impact assessment tool. CBC has developed this tool for internal use, and supplied this tool "as is" with no warranty of any kind under a Creative Commons attributional, non-commercial licence.

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Report Name	Draft Nottinghamshire and Nottingham Waste Local Plan
Report date	18th January 2022
Report author	Karen Shaw
Project Notes	The Dashboard demonstrates that the plan scored particularly well in the Behaviour and Culture Change category with a score of 17 out of a possible 20. It also scored strongly in the resilience and adaptation category with a score of 15. The overall
Export filename	Draft Nottinghamshire and Nottingham Waste Local Plan CIAD 18th January 2022.png



Category	Impact	Notes / justification for score / existing work (see guidance sheet or attached notes for more information)	Score (-5 to +5)
Behaviour and Culture Change	Communication & engagement	The Waste Needs Assessment and ambitious targets contained in the draft plan as well as the strategic and DM policies are a major climate benefit.	+5
Behaviour and Culture Change	Wider influence	working jointly with Nottinghamshire County Council, the process of preparing this plan and the supporting waste needs assessment has allowed us to understand complex waste issues and challenges and set aspirational targets	+4
Behaviour and Culture Change	Working with communities	The Plan explains the impacts of all aspects of waste as they relate to climate change therein raising public/community awareness	+4
Behaviour and Culture Change	Working with partners	consultation with statutory bodies, stakeholders and the community has and will continue to shape this document to the benefit of all	+4
Built Environment	Building construction	Proposed strategic and DM policies promote the use of sustainable building techniques and technologies. Ambitious targets of 95% for recycling and recovery of construction and demolition waste support this further	+4
Built Environment	Building use		+4
Built Environment	Switching away from fossil fuels	The Plan promotes heat recovery from waste results in less of a reliance on fossil fuels	+1
Business & internal resources	Developing green businesses	The Plan promotes the incorporation of green technologies in existing and new waste facilities however does not directly support green businesses not applicable	-
Business & internal resources	Marketable skills & training		-
Business & internal resources	Sustainability in business	The Plan promotes the circular economy ie keeping resources in use for as long as possible, extracting the maximum value from them whilst in use, then reusing and regenerating products and materials at the end of their useful life. Wste disposal is bottom of the waste hierarchy. Therefore the plan supports sustainable waste solutions.	+2
Business & internal resources	Material / infrastructure requirement	The plan promotes the more efficient use of waste as a resource.	+1
Carbon Removal & Ecology	Carbon storage	The Plan seeks to secure additional landscaping as part of any development potentially increasing carbon storage.	+1
Carbon Removal & Ecology	Biodiversity & Ecology	The Plan seeks to achieve biodiversity net gain as set out in its strategic and DM policies, more specifically Strategic Policy 4 - Climate Change , DM3 - Design of New and Extended Waste Management Facilities and DM5 - Protecting and Enhancing Biodiversity.	+3
Carbon Removal & Ecology	Bee friendly city	The Plan seeks to achieve biodiversity net gain as set out in its strategic and DM policies, more specifically Strategic Policy 4 - Climate Change , DM3 - Design of New and Extended Waste Management Facilities and DM5 - Protecting and Enhancing Biodiversity.	+3
Carbon Removal & Ecology	Carbon offsets	The Plan promotes waste incineration to generate heat therefore increasing carbon	-3
Consumption	Food & Drink	The ambitious targets set out in the plan for recycling of food packaging reduces carbon.	+1
Consumption	Products	not applicable	
Consumption	Services	not applicable	
Consumption	Local and low-carbon production	not applicable	
Energy	Local renewable generation capacity	The Plan promotes heat recovery for use in district heating.	+1
Energy	Reducing energy demand	The strategic and DM policies contained in the Plan promote energy efficient/sustainable building techniques and low carbon technologies.	+1
Energy	Improved energy storage	not applicable	
Resilience and Adaptation	Green / blue infrastructure	Proposed Policy SP4-Climate change promotes the use of SuDs and designing facilities to include measures to deliver landscape enhancement and biodiversity gain. Such measures should contribute to the wider network of green infrastructure across the county (e.g. green roofs)	+3
Resilience and Adaptation	Natural flood management	Proposed policy DM2-Health, Wellbeing and Amenity seek to promote the protection of water quality and resources and flood risk management.	+3
Resilience and Adaptation	Drought vulnerability	Proposed Policy SP4-Climate change promotes the use of SuDS, water efficiency and adaptive responses to the impacts of excess heat and drought.	+3
Resilience and Adaptation	Flooding vulnerability	Proposed policy DM2-Health, Wellbeing and Amenity seek to promote the protection of water quality and resources and flood risk management. Proposed Policy DM7 - Flood Risk and Water Resources seeks to ensure that there are no unacceptable impact on the integrity and function of floodplains and there is no increased risk of flooding on the site or elsewhere.	+3
Resilience and Adaptation	Heatwave vulnerability	Proposed Policy SP4-Climate change promotes adaptive responses to the impacts of excess heat.	+3
Transport	Staff travel requirement	Proposed Policy DM12 - Highways Safety and Vehicle Movements/Routing will require a Transport Statement and Travel Plan to be submitted where appropriate to promote sustainable modes of transport.	+1
Transport	Decarbonising vehicles	Proposed Policy SP4 - Climate Change seeks to ensure that all new or extended waste management facilities are located, designed and operated so as to minimise any potential impacts on climate change. It also promotes the introduction of sustainable modes of transport, low emission vehicles, travel plans, in order to contribute to lowering the carbon footprint	+1
Transport	Improving infrastructure	Proposed Policy DM8 - Public Access seeks to protect public rights of way including cycle networks.	+1
Transport	Supporting people to use active travel	Proposed Policy DM1 - General Site Criteria promotes the location of smaller, community scale facilities such as bring sites (bottle banks) within easy walking distance of residents or at sites that people are already likely to visit such as shopping centres, supermarkets, leisure centres, village halls etc	+1

### Cheat Sheet

- We are looking at the effects of **this decision** (not our past performance, or actions that represent future decisions)
- We are looking at the **whole impact** of the decision (regardless of geographical location or organisational boundary)
- We are only looking at the **climate impact** - other impacts, and social, economic, wellbeing measures are recorded elsewhere.
- We need to stay **accessible**. Click on the "copy alt-text" button above and then paste the result into the alt text box for your infographic in word. [Click here for a guide](#)
- Your report must include some explanation as well as the infographic. **If the decision will have consequences past 2028 you must say so in your report.**
- While there are no other specific rules for writing the summary, some of the things you may want to discuss include:
  - What are the biggest costs and benefits of this activity in terms of the climate?
  - Are there things that we will have to include in future iterations of this action – do you have a recommendation?
  - Are there measures already included in your plan to minimise the costs and maximise benefits with respect to climate change?
  - Are there other costs and benefits which are outside the scope of the CIAD? For example, does the project have high value in terms of economic or social benefit which outweighs the climate cost? Is this a valuable climate action which has a cost elsewhere?
  - What are your ambitions for this activity – what is technically feasible and what do you think we should be aiming for?
  - If we were to carry out the activity in the best possible way for the climate, what would that look like?
  - What method(s) if any are available to monitor our climate performance on this activity? This might include internal data (electricity bills, mileage claims etc.) or an external verification process. Is this feasible? If not, why not?

[Click here to go to tutorial on adding alt text](#)

Transport	Reduced need to travel	proposed Policy DM1 - General Site Criteria promotes the location of smaller, community scale facilities such as bring sites (bottle banks) within easy walking distance of residents or at sites that people are already likely to visit such as shopping centres, supermarkets, leisure centres, village halls etc. It also seeks to ensure that they are within reasonable reach of our main urban areas in order to minimise the distance waste has to travel for disposal.	+1	<ul style="list-style-type: none"> <li>What are the constraints which stop you doing more? Time, money, expertise, political support, partner buy in, something else?</li> </ul> <p>If you get stuck, please contact <a href="mailto:climatechange@nottinghamcity.gov.uk">climatechange@nottinghamcity.gov.uk</a></p>
Waste and Water	Single-use plastic	The Plan considers waste a resource to be re-used, recycled and then recovered. The need to address climate change means the re-use and repair more and an end to single use plastics. The waste hierarchy indicates that landfill is the least favoured option.	+3	
Waste and Water	End of life disposal / recycling	The Waste Needs Assessment and ambitious targets contained in the draft plan as well as the strategic and DM policies are intended to significantly increase recycling across all sectors.	+5	
Waste and Water	Waste volume	The Waste Needs Assessment and ambitious targets contained in the draft plan as well as the strategic and DM policies are intended to significantly reduce waste volumes across all sectors whilst recognising there will be growth in the economy and in number of households.	+3	
Waste and Water	Water use	<b><i>The Plan seeks to ensure the use of water resources efficiently in order to minimise the effects of climate change.</i></b>	+1	
Other	Other 1			
Other	Other 2			
Other	Other 3			
Other	Other 4			

If an impact could reasonably be added in more than one place, then it is up to you to decide where it should go. It will then be included in the calculation, however just include it once to ensure you are not double-counting impacts.

Category	Impact	Notes & examples
Behaviour and Culture Change	Communication & engagement	Does this activity increase awareness of climate change, and our actions to address climate change issues? Does it challenge climate change disinformation, and can we back up what we say with good quality published science? Conversely, is this activity embarrassing from a climate point of view? Is there a climate cost to a positive action that we are delivering for other reasons? Is this reasonable and justifiable?
Behaviour and Culture Change	Wider influence	Does this activity result in us gaining authority on a climate change issue, could we be a clear example to other local authorities, are we leading on this? A negative outcome would be us missing opportunities, failing to engage with the wider conversation, or re-inventing existing work.
Behaviour and Culture Change	Working with communities	Does this activity help build awareness, willingness, and skills in our communities to address climate change? Does it have a cost or benefit in terms of our relationships with community groups?
Behaviour and Culture Change	Working with partners	Are we taking steps in this activity to ensure that we are working with partners with similar values to ours in relation to climate change? Is this activity expanding or limiting our work with partners more generally?
Built Environment	Building construction	How is the building constructed? Positive impacts would include retrofitting existing buildings rather than demolition and replacement, construction using low carbon materials (e.g. low concrete, additional timber) to high standard (BREEM [Building Research Establishment Environmental Assessment Method], Passivhaus etc.) the inclusion of high grade insulation, low carbon heating, and microgeneration technologies. Negative impacts would generally be business as usual construction techniques. This is distinct from the building use impact in that it is about the fabric of the building rather than how the building is used. If it is not clear whether an impact should be in this category or the building use category below, simply choose one, and make sure you don't report an item in both categories.
Built Environment	Building use	How is the building used? Positive impacts would include encouragement of low-carbon living and travel. This could be provision of bicycle storage, water fountains, recycling bins, automatic lighting, or passive cooling etc. Negative impacts would include removal or omission of one or more of these modifications, or alterations that discourage low carbon use (removal of cycle storage for example). If it is not clear whether an impact should be in this category or the construction category above, simply choose one, and make sure you don't report an item in both categories.
Built Environment	Switching away from fossil fuels	Does this activity involve an increase or decrease in static fossil fuel technologies (transport is covered later). For example, replacement of an existing gas boiler with a heat pump of an equivalent rating would be a positive score. Installation of new fossil fuel systems represents a negative score in this category (even if they are more efficient than existing systems)
Business & internal resources	Developing green businesses	Does the activity explicitly support the development of green businesses? This impact covers businesses which are focussed on delivering green technologies, research, services etc. NOT simply an existing business implementing incremental changes to established processes and supply chains (which would be counted under sustainability in business below). Examples might be development of a new business installing solar panels, providing energy audits, or manufacturing EV charging points. Negative scores would reflect adverse effects on these businesses
Business & internal resources	Marketable skills & training	Does this activity provide training to individuals and businesses in improving their climate change performance, or in developing marketable green skills? For example, this might include land management, waste reduction, low carbon construction, microgeneration technologies etc. Negative effects are unlikely in this category, but could include closure of a local training provider
Business & internal resources	Sustainability in business	Does this activity support businesses in applying best practice and sustainable solutions in their existing business model and supply chains? This must be a quantifiable shift in business practice to reduce climate impact (rather than a high score simply because the business is involved in some form of low carbon technology – this would be included under the developing green businesses heading). Examples of this might be successful application to a new certification scheme (FSC, PEFC, ISO 14001 etc.) a switch to a less carbon intensive manufacturing process, successful applications to government decarbonisation schemes etc.
Business & internal resources	Material / infrastructure requirement	Does this activity result in us using more or less of our existing infrastructure, supplies and council resources? Will this have an indirect impact on the climate change impact of other services? Are we taking the appropriate steps to ensure that we are using the minimum necessary resource, and that it is at the highest possible environmental standard? Is there a clear constraint stopping us from doing more?
Carbon Removal & Ecology	Carbon storage	Does this project result in a net increase or decrease in carbon storage? This might be land based or through building management practices, for example use of negative emission technologies. Land carbon storage is likely to be directly correlated with the amount of timber (or mature trees) on the site, but may also be affected by peat use as a horticultural medium. Remember trees take a long time to grow (!), so simply replacing a mature tree with a newly planted one would still result in a loss of carbon.
Carbon Removal & Ecology	Biodiversity & Ecology	Does this activity help or hinder the natural world's ability to cope with climate change? Are we creating, destroying, or modifying habitats? Are we joining up species rich areas or cutting that connectivity? Are there measures we could be taking to minimise the damage of our activities?
Carbon Removal & Ecology	Bee friendly city	Does this activity help or hinder having a Bee Friendly city?
Carbon Removal & Ecology	Carbon offsets	Does this activity help offset residual citywide emissions from hard to reduce sources?
Consumption	Food & Drink	Are we working to ensure that we specify lower carbon options when we buy in food and drink? Typically, we want to use food that is less land and carbon intensive to produce, process, and transport. This means we should ideally be reducing red meat and dairy consumption, and keeping supply chains as short as possible (i.e. buying locally produced food where possible). How is the food packaged? Is it wrapped in foil or plastic? Are we increasing the quantities we buy, or decreasing?
Consumption	Products	Are we increasing overall consumption of products or decreasing them? External businesses providing products have their own carbon emissions. Is the product absolutely necessary? Does the supplier have an environmental policy? Is it better than their competitors? Are we maximising existing resources?
Consumption	Services	Are we increasing overall consumption of services or decreasing them? External businesses providing services have their own carbon emissions. Does this activity increase or decrease our indirect emissions created by relying on these services? Is the service absolutely necessary? Does the supplier have an environmental policy? Is it better than their competitors?
Consumption	Local and low-carbon production	Are we working to ensure we increase local and low-carbon production, or reduce the consumption of high carbon products?
Energy	Local renewable generation capacity	Does the activity include changes to local capacity for renewable electricity / heat generation? This might include solar PV panels, heat pumps, biomass boilers, wind turbines, micro-hydro etc. Negative effects would include decommissioning of local capacity, e.g. building on an existing solar farm.

Energy	Reducing energy demand	Does the activity change overall energy demand? This might include installation of more efficient systems, or management to allow reduced heating or lighting energy demand. A negative score would represent a net increase in heating or lighting energy demand.
Energy	Improved energy storage	Does the activity improve the capacity to store local low carbon energy?
Resilience and Adaptation	Green / blue infrastructure	This includes changes to the value of green / blue infrastructure in the built environment (excluding wider land use which is included below). Impacts may include habitat creation within a building (nesting boxes or a green roof for example) the introduction of street trees or sustainable drainage from a development. These are measures which are implemented with good building design but are not necessarily part of the building itself. Negative impacts would include habitat loss, impermeable drainage surfaces etc.
Resilience and Adaptation	Natural flood management	Is this activity reducing or increasing the risk of flooding due to changes in land use? Rough vegetation, woodland, and artificial flood storage areas will decrease the risk, impermeable surfaces, open ground, and drainage directly into watercourses will increase it. Are there modifications we could make to the activity to improve its performance?
Resilience and Adaptation	Drought vulnerability	By 2050 we expect drier summers. How vulnerable is the activity to drought? (High vulnerability is a low score; low vulnerability would be a higher score)
Resilience and Adaptation	Flooding vulnerability	By 2050 we expect the biggest rainfall events to be up to 20% more intense than current extremes (peak rainfall intensity). Average winter rainfall may increase by 23% on today's averages. This means that at their highest, the flow in watercourses could be 30% greater than current extremes. How vulnerable is the activity to flooding both from rivers and surface water? (High vulnerability would result in a negative score, whilst low vulnerability would result in a positive score)
Resilience and Adaptation	Heatwave vulnerability	By 2050 we expect summer daily maximum temperature may be around 3.7°C higher compared to average summer temperatures now. Winter daily maximum temperature could be 2.9°C more than the current average, with the potential for more extreme temperatures, both warmer and colder than present. How vulnerable is the activity to heatwaves? (High vulnerability would result in a negative score, whilst low vulnerability would result in a positive score)
Transport	Staff travel requirement	Does this activity mean that staff will need to travel more or less? Can this be reduced? Can we modify the project to change the mode of transport (public transport, cycling, walking, remote working etc.) If not, why not?
Transport	Decarbonising vehicles	Does this activity increase or decrease the use of fossil-fuelled vehicles? This may include decarbonisation of vehicles (e.g. shift to renewable fuels).
Transport	Improving infrastructure	Does this activity increase or decrease the opportunities within the city for low carbon forms of travel? This may include increased provision of paths, cycle storage and repair facilities, lighting on public rights of way etc. Conversely, does this activity make active forms of travel more difficult? Does it divert traffic, or block access, does it result in a net loss of training and facilities.
Transport	Supporting people to use active travel	Does the activity provide support for people to use active forms of travel (mainly cycling and walking). This may include training and improvements to general health and fitness. Removal of any of these services would result in a negative score.
Transport	Reduced need to travel	Does this activity increase or decrease the need to travel in the city? This may include redesigning processes to decrease travel needs, increasing load factor, increasing vehicle efficiency
Waste and Water	Single-use plastic	Nottingham City Council are committed to phasing out single-use plastic where possible by 2023. Does purchase of this product increase or decrease our reliance on single-use plastic? Is there an effective alternative? What does the supplier pack the product in?
Waste and Water	End of life disposal / recycling	Do you expect this activity to increase or decrease the <b>proportion</b> of waste which is recycled? Does it increase the amount of mixing of otherwise recyclable material? Does it make recycling easier and more efficient?
Waste and Water	Waste volume	Will this activity increase or decrease the <b>total volume</b> of waste?
Waste and Water	Water use	Does this activity reduce water demand? E.g. through improving the efficiency of the water supply and water treatment, behaviour change. Conversely, does it increase total water demand?

All scores are based on an estimate of impact on a sliding scale from -5 to +5, based on the landmarks in the table below.  
 Remember you can use any values between -5 and +5 (including half points). For further guidance see the accompanying guidance notes document.

Score	Definition
-5	<p>A major climate cost which affects the whole of NCC and our neighbours, the entire city, or which will continue for at least a decade.</p> <p>This might be a decision which has one or more of the following:</p> <ul style="list-style-type: none"> <li>• A serious impact on our ability to become carbon neutral by 2028</li> <li>• A significant impact increasing emissions at a city level</li> <li>• A long-term increase in city emission of more than 100 tonnes of carbon dioxide equivalent per year (approximately 450,000 miles of petrol car travel)</li> <li>• A substantial reduction in our ability to store carbon or manage climate change adaptations within the city (felling woodland for example.)</li> </ul>
-3	<p>A significant climate cost which affects the whole of NCC, an entire ward (or equivalent), or which lasts longer than five years.</p> <p>For example:</p> <ul style="list-style-type: none"> <li>• A multi-year project with a large energy requirement</li> <li>• A significant increase in waste through refurbishing a large number of buildings</li> <li>• A permanent or long-term increase in city emissions of more than 10 tonnes of carbon dioxide equivalent per year (approximately 45,000 miles of petrol car travel)</li> <li>• A substantial reduction in our ability to store carbon or manage climate change adaptations within the city, e.g. building on a greenfield site.</li> </ul>
0	No measurable effect. Negligible change.
3	<p>A significant climate benefit which affects the whole of NCC, an entire ward (or equivalent), or which lasts longer than five years.</p> <p>For example:</p> <ul style="list-style-type: none"> <li>• Installation of renewable energy generation capacity within NCC buildings</li> <li>• Reduction of fleet use, or reduced requirement for fossil fuel powered vehicles.</li> <li>• A permanent or long-term decrease in city emissions of more than 10 tonnes of carbon dioxide equivalent per year (approximately 45,000 miles of petrol car travel)</li> <li>• A substantial increase in our ability to store carbon or manage climate change adaptations within the city, e.g. the development of a natural flood management scheme.</li> </ul>
5	<p>A major climate benefit which affects the whole of NCC and our neighbours, the entire city, or which will continue for at least a decade.</p> <p>This might be a decision which has one or more of the following:</p> <ul style="list-style-type: none"> <li>• A significant reduction in emissions that requires no additional emissions to realise ('no regrets' change)</li> <li>• A project or decision which could be considered an exemplar project for other local authorities</li> <li>• A significant project decreasing emissions at a city level</li> <li>• A long-term decrease in our emission levels of more than 100 tonne of carbon dioxide equivalent per year (approximately 450,000 miles of petrol car travel)</li> <li>• A substantial increase in our ability to store carbon or manage climate change adaptations within the city (planting more than 1ha of woodland for example).</li> </ul>