



Expert Panel

Technical Assessment Synopsis  
Report

European Green Leaf Award 2020

April 2019

[ec.europa.eu/europeangreenleaf](https://ec.europa.eu/europeangreenleaf)

## **Acknowledgements**

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The Secretariat also assists with PR activities related to the European Green Leaf Award through the European Green Capital Award website, Facebook, Twitter and LinkedIn pages, and through various communication channels such as brochures, press releases, newsflashes and film clips etc.

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# 1 INTRODUCTION

Europe's cities are recognised as the engines of the European economy, providing jobs and services, and serve as hubs that catalyse creativity and innovation. Cities are the living environment for 72% of all Europeans with this percentage expected to rise to 80% by 2050. They possess potential such as economic growth, innovation and employment opportunities<sup>1</sup>. However, they are facing ever increasing challenges, with regards to the environment and social cohesion.

The European Green Capital and European Green Leaf Awards are underpinned by European Policy supporting sustainable urban planning and design. The Awards support the goals set out most recently in the Urban Agenda for the EU-Pact of Amsterdam, signed in 2016, and prior to this the 7<sup>th</sup> Environment Action Programme (EAP), as adopted in 2013.

## **The Urban Agenda for the EU - Pact of Amsterdam**

Following a public consultation process in 2014, the Urban Agenda for the EU was launched in May 2016 with the EU Member States agreement on the Pact of Amsterdam. The Urban Agenda for the EU aims to address the challenges faced by cities and also to fully exploit the potential of cities by integrating the urban dimension into EU policies. The EU Urban Agenda also aims to promote cooperation and partnerships between member states, the European Commission, European institutions, cities and other stakeholders in order to stimulate growth, liveability and innovation in the cities of Europe through:

1. Better Regulation: Improving the development, implementation and evaluation of EU legislation;
2. Better Funding: Ensuring better access to and utilisation of European funds; and
3. Better Knowledge: Improving the EU urban knowledge base and stimulating the sharing of best practices and cooperation between cities.

The Urban Agenda for the EU outlines a number of priority themes, which are important to achieve the smart, green, and inclusive growth of urban areas. Many of the themes outlined align with the indicators and topic areas assessed in the EGC and EGL Awards, including; Urban Mobility, Circular Economy, Climate Adaptation, Air Quality, Energy Transition and Sustainable Use of Land and Nature-Based Solutions.

Thematic Partnerships representing various governmental levels and stakeholders are the key delivery mechanism within the Urban Agenda for the EU.

The Partnerships analyse challenges and bottlenecks to recommend implementable actions in the form of an Action Plan to be finalised within two years after the start of their work.

The Partnerships are now beginning to deliver results and put actions in place. All the latest information on the partnerships can be found here: <https://ec.europa.eu/futurium/en/urban-agenda>.

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<sup>1</sup> <http://urbanagendaforthe.eu/wp-content/uploads/2015/12/EU-Urban-Agenda-factsheet.pdf>

The Urban Agenda for the EU will contribute to the implementation of the UN 2030 Agenda for Sustainable Development, notably Goal 11 'Make cities inclusive, safe, resilient and sustainable' and the global 'New Urban Agenda' as part of the Habitat III process.

### **7<sup>th</sup> Environment Action Programme (EAP)**

The Commission commenced the 7<sup>th</sup> Environment Action Programme (EAP)<sup>2</sup> in 2013 which sets out a strategic agenda for environmental policy-making with nine priority objectives to be achieved by 2020. It establishes a common understanding of the main environmental challenges Europe faces and what needs to be done to tackle them effectively. This programme underpins the European Green Capital Award (EGCA) in relation to policies for sustainable urban planning and design.

Protecting and enhancing natural capital, encouraging more resource efficiency and accelerating the transition to the low-carbon economy are key features of the programme, which also seeks to tackle new and emerging environmental risks and to help safeguard health and welfare of EU citizens. The results should help stimulate sustainable growth and create new jobs to set the European Union on a path to becoming a better and healthier place to live.

Cities play a crucial role as places of connectivity, creativity and innovation, and as centres of services for their surrounding areas. Due to their density, cities offer a huge potential for energy savings and a move towards a carbon-neutral economy.

Most cities face a common core set of environmental problems and risks, including poor air quality, high levels of noise, greenhouse gas (GHG) emissions, water scarcity, contaminated sites, brownfields and waste. At the same time, EU cities are standard setters in urban sustainability and often pioneer innovative solutions to environmental challenges. An ever-growing number of European cities are putting environmental sustainability at the core of their urban development strategies.

The 7<sup>th</sup> EAP sets the target of meeting local, regional and global challenges by enhancing the sustainability of cities throughout the European Union and fixes the goals that by 2020 a majority of cities in the EU are implementing policies for sustainable urban planning and design.

### **European Green Capital and European Green Leaf Awards**

With over two thirds of Europeans now living in urban areas, cities across Europe are presented with problems related to energy consumption, pollution, waste management, housing, unemployment, transport, and water conservation. By showcasing the achievements of European cities in tackling these issues, the European Green Capital and European Green Leaf Awards aim to lead by example and inspire others to take action.

A highlight of our recent award cycles is that the nominees for both awards have been from the four corners of Europe with north, south, east and western cities represented. This is a sure sign that the European Green Capital and European Green Leaf Awards idea has truly taken root. The diversity of experiences that these nominees bring shows that there are many and varied paths to becoming a modern Green city.

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<sup>2</sup> <http://ec.europa.eu/environment/action-programme/>

It is important to reward cities which are making efforts to improve the urban environment and move towards healthier and sustainable living areas. Progress is its own reward, but the satisfaction involved in winning a prestigious European award spurs cities to invest in further efforts and boosts awareness within the city as well as in other cities. Award winners act as ambassadors for change, leading by example to showcase that any city can be a green and modern city by sharing examples of good practices.

The winning EGC cities to date include: Stockholm in 2010, Hamburg in 2011, Vitoria-Gasteiz in 2012, Nantes in 2013, Copenhagen in 2014, Bristol in 2015, Ljubljana in 2016, Essen in 2017, Nijmegen in 2018, Oslo in 2019, and Lisbon in 2020. All are recognised for their consistent record of achieving high environmental standards and commitment to ambitious goals. The EGCA Award is open to cities with more than 100,000 inhabitants.

Due to interest from smaller cities and building on the success of the EGCA the need to create a competition for cities of a smaller size was identified by the European Commission in 2014. This competition now exists as the 'European Green Leaf' (EGL) Award. The EGLA is open to towns and cities with 20,000-100,000 inhabitants, in order to recognise their environmental achievements, create citizen awareness and to encourage other cities of a similar size to grow greener. In December 2014 the inaugural 2015 European Green Leaf call opened to over 500 cities from EU Member States, Candidate Countries and Iceland, Liechtenstein, Norway and Switzerland.

The winning cities to date include: Mollet del Vallès, Spain and Torres Vedras, Portugal in 2015/2016, Galway, Ireland in 2017, Leuven, Belgium and Växjö, Sweden in 2018, and Cornellà de Llobregat, Spain and Horst aan de Maas, Netherlands in 2019.

## 1.1 EUROPEAN GREEN LEAF AWARD

As mentioned in Section 1, the EGLA was borne out of the success of the EGCA and the need to recognise towns and cities of a smaller size, i.e. cities with a population of 20,000 and up to 100,000.

The objectives of the European Green Leaf Award are to:

- a) To recognise towns and cities that demonstrate a good environmental record and commitment to generating green growth;
- b) To encourage towns and cities to actively develop citizens' environmental awareness and involvement;
- c) To identify towns and cities able to act as a 'green ambassador' and to encourage other towns and cities to progress towards better sustainability outcomes.

In order to be eligible for the EGLA 2020 competition a town/city must have met the following criteria:

- Be located in an EU Member State, EU Candidate Country, Iceland, Liechtenstein, Norway or Switzerland.
- All towns/cities from the countries listed above must have 20,000 and up to 100,000 inhabitants at the date of application.
- In countries where there is no city with more than 20,000 inhabitants, the largest city is eligible to apply.



- In this context a 'city' is understood to be an urban area and an administrative unit governed by a city council or another form of democratically elected body.
- Previous winners may not apply for a period of ten years after they have been awarded a 'European Green Leaf'.
- In any given year, cities can apply for either the European Green Capital Award or European Green Leaf Award, but not both at the same time.
- The signatory should be the Mayor or highest ranking city representative, authorised by national law to legally represent the city.

The overarching message of the EGLA is to communicate locally that European citizens have a right to live in healthy urban areas. Cities are encouraged to improve the quality of life for their citizens and reduce their impact on the global environment.

The EGLA is presented on an annual basis by the European Commission as an award recognising 'Towns and Cities, Growing Greener!'. The 2020 EGLA competition cycle was launched by the European Commission on the 31<sup>st</sup> of May 2018 and the call for applications from eligible cities was open until 18<sup>th</sup> October 2018.

An expert panel of environmental specialists independently assess the applications and propose a shortlist of finalist applicant cities to present to the Jury. The Expert Panel carried out a technical assessment of each of the six environmental topic areas (detailed in Section 2.3) and provided a ranking of the twelve applicant cities together with qualitative comments on each application. This ranking is the result of a joint assessment from the two experts assigned to each topic area (further details on this procedure are provided in Section 2).

An independent Jury has been selected for EGLA, comprising the same member organisations as the EGCA Jury. The shortlisted cities are invited to present a communication strategy substantiated by action plans on how they intend to fulfil their year as EGL 2020, should they win. The EGLA shortlisted city presentations to the Jury will take place on 19<sup>th</sup> June 2019 in Oslo, Norway. Shortlisted EGLA cities are invited to present to the Jury on the following topics:

1. The city's overall commitment, strategy and enthusiasm as conveyed by the presentation.
2. The city's efforts to communicate to citizens and the citizens' engagement in environmental activities.
3. The city's potential to act as a 'green ambassador', promoting good practice and spreading the EGL concept further.

Based on the proposals from the Expert Panel and information presented to the Jury, the Jury will make the final decision and select the city or cities to be awarded the title of European Green Leaf 2020. The winner(s) will be announced at the EGCA and EGLA Awards Ceremony in Oslo (Norway), on the 20<sup>th</sup> June 2019.

The full details on the competition process were set out in the published Rules of Contest<sup>3</sup> for this competition cycle, Section 2.1.

## **1.2 AIM OF THIS REPORT**

This Technical Assessment Report provides an overview of the approach to this competition. It presents the technical assessment of the Expert Panel for each of the 12 applicant cities, which forms the basis for shortlisting the cities. This is presented per topic area per city for transparency of the overall process.

An additional information package detailing the good practice across the six topic areas taken from the cities' applications will also be prepared and uploaded to the European Green Leaf Award website.

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<sup>3</sup> [http://ec.europa.eu/environment/europeangreencapital/wp-content/uploads/2012/06/EGCA\\_EGLA\\_Rules\\_of\\_Contest.pdf](http://ec.europa.eu/environment/europeangreencapital/wp-content/uploads/2012/06/EGCA_EGLA_Rules_of_Contest.pdf)

## 2 TECHNICAL ASSESSMENT PROCEDURE

### 2.1 RULES OF CONTEST

A 'financial incentive' of €75,000 for each winner of the EGL title (max. 2 winners per cycle) was introduced in the EGLA 2019 competition cycle, and this has been maintained for the 2020 EGLA competition. With the introduction of the financial incentive, *Rules of Contest* were published. The formal requirements for the applicants to follow were set out in the Guidance Note and Section 3.1.2 of the Rules of Contest:

- The full application shall be written in one of the official languages of the European Union;
- Candidate cities shall answer all the questions and complete all sections of the Application Form. In the event that a question cannot be answered, reasons should be given;
- For the pre-selection stage, applications shall adhere to the word limits indicated per section of the Application Form. Any words above the specified limit will not be taken into account and may leave application responses incomplete. Text included in the captions, and heading (titles) of graphics/images/tables will not be included in the word count. These shall not exceed 20 words. Text included in the body of graphics/tables will be included in the word count;
- There is a limit of graphics/images/tables to be provided per Topic Area and Good Practice section of the Application Form that should be adhered to;
- For the pre-selection stage, applicants shall submit their application in word document format in the official EGLA 2020 application form and upload through the application portal on the European Green Capital Award website. An additional pdf file may be provided if desired.

### 2.2 APPLICANT CITIES FOR EGLA 2020

A total of 12 eligible cities applied for the EGLA 2020 competition. Of these, all 12 submitted valid applications. Details of the 2020 applicants are included in **Table 2.1** and **Figure 2.1**.

Of the 12 cities evaluated, 6 are signatories of the Covenant of Mayors (CoM) and 11 of the eligible countries from across Europe are represented. The smallest city by population is Oliveira do Hospital in Portugal with a population of 20,855, while Limerick in Ireland has the largest population of 94,192.

**Table 2.1 - Details of Applicant Cities (presented in alphabetical order)**

	City	Country	Inhabitants	Signatory of the CoM
1	Avignon	France	92,130	No
2	Kaposvár	Hungary	62,446	Yes
3	Lappeenranta	Finland	72,872	Yes
4	Limerick	Ireland	94,192	Yes
5	Mairena del Alcor	Spain	23,222	Yes
6	Mechelen	Belgium	85,789	Yes

	City	Country	Inhabitants	Signatory of the CoM
7	Oliveira do Hospital	Portugal	20,855	No
8	Svishtov	Bulgaria	37,761	No
9	Szentes	Hungary	27,266	No
10	Valmiera	Latvia	22,961	No
11	Viana do Castelo	Portugal	88,725	Yes
12	Vranje	Serbia	73,944	No

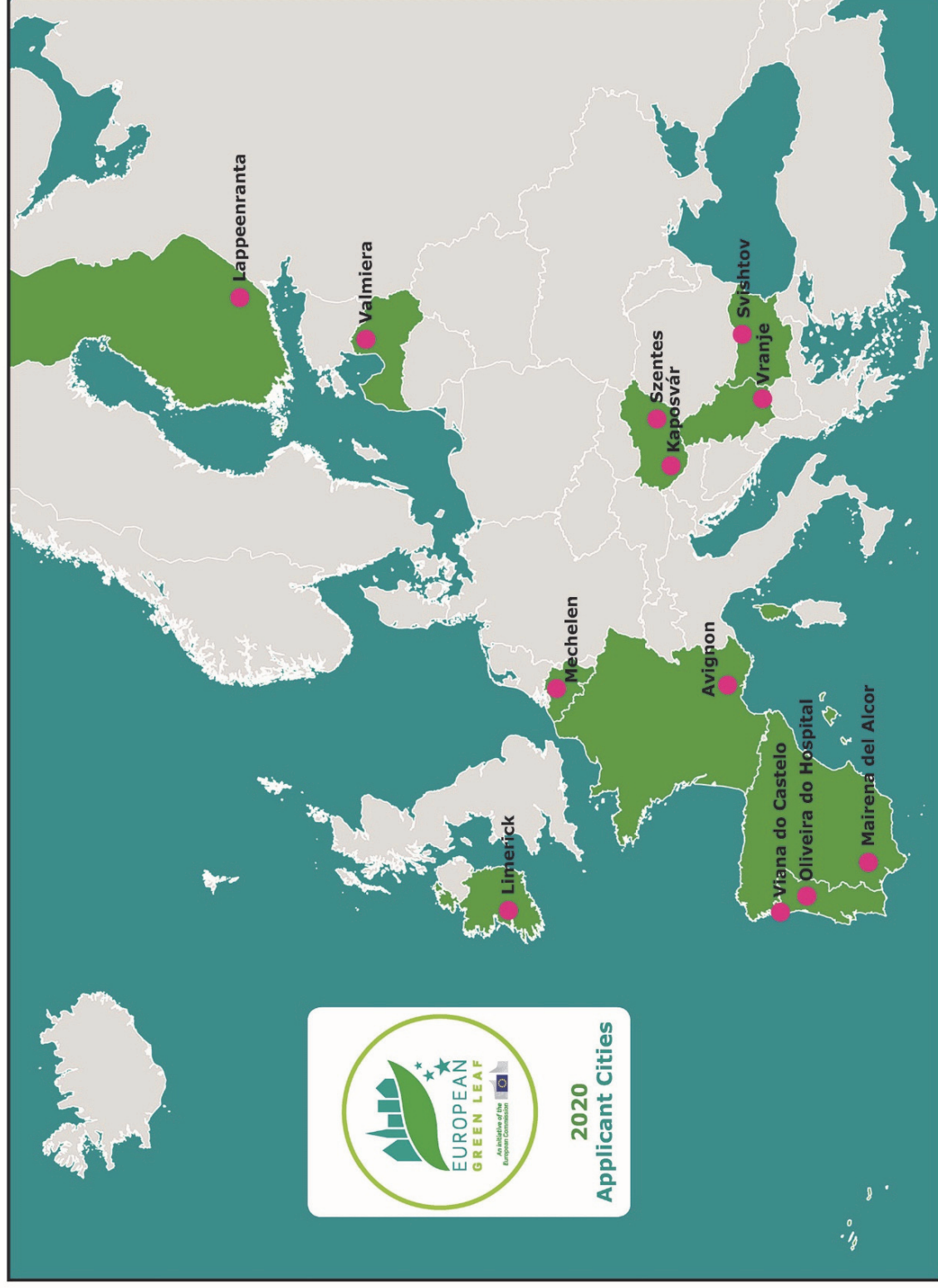


Figure 2.1 - Map of European Green Leaf 2020 Applicant Cities

## 2.3 SIX ENVIRONMENTAL TOPIC AREAS

The selection of the European Green Leaf 2020 is based on the following six topic areas:

1. Climate Change & Energy Performance
2. Sustainable Urban Mobility
3. Nature, Biodiversity and Sustainable Land Use
4. Air Quality and Noise
5. Waste and Circular Economy
6. Water

The topic areas were broadly developed on the basis of the 12 indicators used to assess the EGCA with many of the EGCA indicators combined to produce a smaller number of ECLA topic areas. In addition to this the application form for ECLA is more qualitative in comparison to the EGCA application form.

## 2.4 APPLICATION FORM

The 2020 ECLA Application Form is made up of 3 sections as presented in **Table 2.2**.

**Table 2.2 - ECLA 2020 Application Form Format**

Section	Description
Section A	City Introduction and Context
Section B	Topic areas 1-6 (as per Section 2.3 above) Within each Topic Area there are 2 sub-sections: <ul style="list-style-type: none"> <li>▪ Current Situation and Strategic Approach</li> <li>▪ Citizen Participation and Public Awareness</li> </ul>
Section C	Good Practices

Section A: The 'City Introduction & Context' section provides valuable insight and context to the Expert Panel into the history and background of the city and the challenges faced.

Applicants are required to answer Section B for each of the six Topic Areas. This provides applicants with the opportunity to describe the *current situation and strategic approach* in the city for the relevant topic area. Applicants are also required to explain how this situation has been achieved. This should be done by presenting background information, key objectives, targets, data, numerical information, figures, graphics, budgets etc. and achievements/benefits from implementation of measures.

For *Citizen Participation & Public Awareness* the focus is on campaigns undertaken by applicants, public consultation, awareness raising campaigns and events, stakeholder participation, school education and forums. This section should also discuss and outline the benefits of awareness projects.

It should be noted that Section B is the only section which counts towards the ranking.

Section C of the EGLA Application Form provides the Expert Panel with a valuable insight in to what the applicant considers as good practice within their town or city. This section also forms the basis of the good practice resource package prepared each year.

A copy of the EGLA 2020 Application Form is attached in Appendix A.

A guidance note was provided for the 2020 EGLA competition to assist cities in developing their application. A background check of applicant cities was not carried out as part of the EGLA technical assessment. However, this will be carried out in advance of the Jury Meeting.

## 2.5 TECHNICAL ASSESSMENT EXPERT PANEL

The Technical Assessment Expert Panel consists of 12 experts who bring internationally recognised expertise to the process within each of the topic areas. The experts also evaluate the EGCA. Profiles for each of the experts are in Appendix B.

**Table 2.3 - Expert Technical Assessment Panel**

	Topic Area	Expert	Title
1	Climate Change and Energy Performance	Dr. Matthew Kennedy	Head of Strategy and Business (International Energy Research Centre), Ireland
		Ms. Vesna Kolega	Independent Consultant, Croatia
2	Sustainable Urban Mobility	Dr. Ian Skinner	Director, Transport and Environmental Policy Research, United Kingdom
		Mr. Alex Minshull	Innovation and Sustainability Service Manager, Bristol City Council, United Kingdom
3	Nature, Biodiversity and Sustainable Land Use	Mr. David Jamieson	Parks, Greenspace & Cemeteries Manager, City of Edinburgh Council, and Director, Greenspace Scotland, United Kingdom
		Ms. Nathalie Cecutti	Expert in research funding with the head of the Research Department, Ministry for an ecological and Solitary Transition, Paris-La Defense, France
4	Air Quality and Noise	Mr. Joan Marc Craviotto Arnau	Air Quality Project Manager at Barcelona City Council, Spain
		Dr. César Asensio	Researcher at the Instrumentation and Applied Acoustics Research Group of the Technical University of Madrid, Spain
5	Waste and Circular Economy	Mr. Warren Phelan	Technical Director, Waste, Energy & Environment, RPS, Ireland
		Mr. Marc Okhuijsen	Co-founder and owner Zonnova BV, Director at RéciproCité, The Netherlands

	Topic Area	Expert	Title
6	Water	Mr. Christof Mainz	Senior/First Officer at the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU), Bonn, Germany
		Ms. Birgit Georgi	Urban and Adaptation Expert, Founder of 'Strong Cities in a Changing Climate', Germany

## 2.6 TECHNICAL ASSESSMENT PROCEDURE

### 2.6.1 Pre-selection Screening

In accordance with Section 4.3: Pre-selection of the Rules of Contest, the Secretariat validated the eligible applications for compliance with the criteria set out in Section 3 of the Rules of Contest. Compliant applications were issued to the Expert panel for technical evaluation.

### 2.6.2 Primary Technical Review

Each Expert was required to assess each application based on its own merit and rank all applications against each other within each topic area. In the course of the primary technical review, each expert read only Section A and their relevant Topic Area in Section B of the application. Each topic area has two sub-sections: part a and part b, where part a carries 60% of the weight while part b carries a weighting of 40%.

### 2.6.3 Ranking Criteria

Experts use a defined ranking system. Under this ranking system a position of 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup> etc. is applied to each city per topic area. Since there were 12 applications to be evaluated, each city was ranked from 1<sup>st</sup> as the best to 12<sup>th</sup> the weakest. It is important to note that these are not quantitative scores but rankings.

### 2.6.4 Co-evaluation

The EGLA technical assessment was carried out as a co-evaluation process. All Expert Panel members assessed their respective topic area and then discussed and agreed a combined final ranking and commentary for all applicants with their partner co-evaluator. This exercise provides a robust quality check of the assessment process. Where the two experts differ on a ranking, they must work together to reach a consensus. The final ranking and comments are a combination of both reviewers' assessments.

### 2.6.5 Conflicted Application

In the event of a conflicted application, where an expert cannot complete an unbiased assessment of an application for personal or professional reasons, a suitable external expert is identified by the EGLA



Secretariat to complete both the primary technical review and the peer review of the conflicted application. There was no conflict of interest raised in the 2020 EGLA competition.

#### **2.6.6 Background Check**

As part of the EGLA process a high-level background check is carried out by the European Commission on all shortlisted cities to identify if any are in breach of environmental legislation or do not meet European reporting requirements. This background check is not presented to the Expert Panel during the technical assessment process. It is provided to the Jury in advance of the Jury Meeting and their deliberations on selecting the title winner(s).

### 3 TECHNICAL ASSESSMENT RESULTS

Based on the technical assessment results, the Expert Panel has proposed to shortlist as finalists the following three cities (presented in alphabetical order) for European Green Leaf 2020:

#### Lappeenranta – Limerick – Mechelen

The Commission will invite these three cities to the next stage of the evaluation process.

The Expert Panel's detailed ranking for the shortlist of finalist cities in all six topic areas is detailed in **Table 3.1**.

**Table 3.1 - Technical Ranking of Shortlisted Cities for European Green Leaf Award 2020**

Topic area/Applicant City	Lappeenranta	Limerick	Mechelen
Climate Change & Energy Performance	1	2	4
Sustainable Urban Mobility	2	3	1
Nature, Biodiversity & Sustainable Land Use	3	2	1
Air Quality & Noise	3	1	2
Waste & Circular Economy	2	4	1
Water	1	4	3
Total Combined Ranking	12	16	12

## 4 TECHNICAL ASSESSMENT

### 4.1 FINALIST CITY SUMMARIES

#### 4.1.1 Lappeenranta

Lappeenranta is a municipality located in south-eastern Finland with its urban centre situated on the shore of Lake Saimaa. This location makes it the region's main centre for tourism. The municipality has 72,872 inhabitants and covers a total area 1,724 km<sup>2</sup> of which 290 km<sup>2</sup> is water.

The municipality has four district centres of which the largest is its central urban settlement. Lappeenranta is known as the International University City in Finland, with approximately 6,000 students attending the LUT University (Lappeenranta University of Technology). Lappeenranta is one of the main growth centres in Finland. The city is known as the Commercial Centre of South-East Finland and the meeting point of the EU and Russia, being approximately 200 km away from both Helsinki and St. Petersburg. The municipality is also a key centre for the pulp and paper industry.

The municipality is involved in a large variety of national and international projects, which focus on emissions reduction, energy usage, and the discharge of nutrient loads to Lake Saimaa.

Lappeenranta has been nominated twice, in 2014 and 2016, as Earth Hour Capital of Finland by WWF (World Wildlife Fund). In 2016, the Association of Finnish Local and Regional Authorities awarded the city for its long-time campaign and actions against climate change. Lappeenranta was also the world's first city to start using only EKOenergy certified electricity with zero emissions.

#### 4.1.2 Limerick

Limerick City is located in the west of Ireland, approximately 200 km from the country's capital, Dublin. Limerick is an ancient city that has developed on the banks of the River Shannon, with a history that stretches back to its establishment by the Vikings as a walled city in 812 AD. Its subsequent charter in 1197 makes it older than the city of London. It is Ireland's third largest city with a population of 94,192 and covers an area of 59 km<sup>2</sup>.

Today, Limerick is undergoing an economic and cultural renaissance led by Limerick City and County Council (LCCC). Over €1 billion in enterprise and investment infrastructure is being invested as part of the Limerick 2030 vision. This vision is a 20-year economic and spatial plan developed by LCCC, which will have a transformative effect on the economic, environmental and social fabric of the city.

Limerick is transforming itself into the country's first Digital City with the integration of a number of public services; the creation of smart homes; smart buildings; energy districts and smart neighbourhoods.

The city is Ireland's first National City of Culture and has previously been shortlisted for the European Capital of Culture due to its rich cultural life, vibrant and historic venues, and lively festival scene. Limerick is home to 20,000 students, with three third level institutions, including a world-class university, located in the city. The city is also a foreign investment hotspot as its available housing,

high educational standards and employment opportunities make it ideal for both families and young professionals.

### 4.1.3 Mechelen

Mechelen, Belgium, is located in the heart of Flanders, between Brussels and Antwerp, with both cities reachable within 20 minutes. The city developed on the River Dijle and was built on wetlands, and so water management has always been a focus of the city. The city has a diverse population of 85,789 inhabitants, with 27.5% of the population from non-Belgian roots. Mechelen Mayor, Bart Somers, was awarded the 2016 World Mayor Prize which is in part as a result of the diversity in place within the city.

The city has seen a revival in the last decade, leading to a growth in population and economy. This is in part due to strong investments by the city. Due to its location, the city is an ideal operational base for business, attracting many companies to the area. Mechelen has a strong manufacturing, creative and innovative sector. Since 2010, the number of companies grew from 5,000 to almost 6,000.

The city is one of five art cities in Flanders, featuring more than 300 historical buildings and three UNESCO heritage sites. In 2017, Mechelen was awarded the Best Belgian Local Government Award based on the city's public services. The city has different goals, such as climate neutrality, diversity, and child-friendliness but emphasises co-creativity and participation through annual citizen meetings and participatory projects to achieve these goals. City partners are also involved in smart city development through 'citylabs'.

## 4.2 FINALIST CITY TECHNICAL ASSESSMENTS

### 4.2.1 Lappeenranta Technical Assessment

#### 4.2.1.1 Climate Change and Energy Performance

Ranking	Experts
1	Dr. Matthew Kennedy Ms. Vesna Kolega

Lappeenranta has introduced a clear inventory and method of data collection regarding energy consumption through their 'BACKnet-system'. This has shown emissions were reduced by 40% in 2016 compared to the baseline year of 1990 and over 85% of all fuels used in the city in 2017 were of renewable origin (11,800 GWh).

The city has a clear strategy for decarbonisation with benchmarks for 2021 and 2033. Decoupling between emissions and economic growth is part of this strategy. Past developments include wood/biopower plant for district heating and CO<sub>2</sub> neutral electricity resulting in significant emissions reductions. Existing actions include the installation of solar and wind power plants. There are welcome efficiency agreements between municipalities and the government with quantified savings (20.5 GWh from 2009-2016). There is clear local/regional differentiation. The application is heavily focused on wood-based renewable energy and little attention is given to adaptation approaches or transport measures.

Innovative thermal imaging has been used to examine houses and strengthen retrofitting, with homeowner engagement via questionnaires for collecting data on these houses. A 'Greenreality' brand is being used to engage businesses and consumers. The mode of dissemination includes digital platforms with consumer calculators and advisory services for sustainable energy awareness and change across homes/buildings. This gives the consumer access to clear quantifiable metrics on the possibility of using thermal or solar energy and the associated cost differences between solutions as well as payback periods. Encouragement of microgeneration and city carnival events are being used to stimulate public engagement. The levels of community consultation in the process and participation in the development of initiatives are not made clear in the application.

#### 4.2.1.2 Sustainable Urban Mobility

Ranking	Experts
2	Dr. Ian Skinner Mr. Alex Minshull

Lappeenranta has an excellent vision that aims to deliver carbon-neutral, sustainable mobility, while maintaining the centre of Lappeenranta as a vibrant, dense and 'car independent' place to be. This is translated into a series of actions that will help to deliver this vision. However, it would be good to understand how the public have been engaged in the development of the vision and related measures.

In recent years, the use of public transport in the city has increased significantly because of vast improvements to the system and campaigns to promote the use of public transport. The aim is for there to be carbon-neutral public transport in the city by 2025, while the public transport strategy aims to jointly plan land use and public transport, as well as developing long-distance connections.

Given the ambition of the city's vision to improve urban mobility, it would have been good to learn more about the approach to improving the environmental performance of urban freight deliveries and the measures that are being put in place to actively discourage the use of the car.

#### 4.2.1.3 Nature, Biodiversity and Sustainable Land Use

Ranking	Experts
3	Mr. David Jamieson Ms. Nathalie Cecutti

Lappeenranta has close access to extensive urban forests and wetlands which gives residents a strong bio-rich green space network. The city's new plans to further improve the local ecology, including control of the spread of non-native invasive plants, suggests that Lappeenranta is not taking their green abundance for granted, rather, the city is establishing a strategic approach to the protection and management of its natural assets.

It would be useful to learn about how habitats and species are recorded and monitored in-and-around Lappeenranta. On-going monitoring will help determine the Green Plan's success in conserving and enhancing nature.

The application would be improved if it explained how the authorities design and manage the urban green network to counter the impacts of urban growth. For instance, describing how the city ensures retention of the quantity and quality of its green spaces given that a significant amount of highway penetrates the municipality.

#### 4.2.1.4 Air Quality and Noise

Ranking	Experts
3	Mr. Joan Marc Craviotto Arnau Dr. César Asensio

Lappeenranta enjoys excellent air quality as WHO (World Health Organisation) standards are met at all monitoring stations. The city's monitoring network is very wide considering its size, and so they can collect a lot of useful data to track changes in air quality. The city has introduced road maintenance measures to reduce dust emissions in springtime, which is very positive. Furthermore, the city appears to be in the process of adopting tools defined in the Environmental Noise Directive.

Although Lappeenranta has not produced a strategic noise map, or at least has not mentioned as such, in 2015 the city undertook a survey, which included the mapping of quiet areas. Following this, the city is currently in the process of developing a systematic noise protection plan. The city addresses noise management in the different phases of urban planning, as well as in building processes, these being fundamental for future urban acoustics.

In terms of public awareness and citizen commitment, some initiatives could be undertaken by the city. For example, it would be interesting to include air quality information on the city's website and to promote educational related programmes in schools. It is also considered necessary to improve actions aimed at improving public awareness and participation, both in relation to the effects of noise on people's health and in relation to the protection and promotion of quiet areas.

The application could have been further enhanced by the inclusion of more information on local constraints and pollution sources.

#### 4.2.1.5 Waste and Circular Economy

Ranking	Experts
2	Mr. Warren Phelan Mr. Marc Okhuijsen

The City of Lappeenranta presented a clear application; however, the application would have benefited from the inclusion of data on progress made so far. A regional waste company, Etelä-Karjalan Jätehuolto Oy (EKJH), is responsible for the treatment and management of waste in Lappeenranta, however, the municipality guides the company in terms of integrated policy in the area. A wide range of fractions are being recycled and reused, including the breakdown of materials for reintroduction in to production processes.

The city is working with different European projects to find solutions for a more circular economy, including the use of side stream materials from the mining and forest industry in the production processes. The city has included Green Procurement in its own procurement guidelines. Guides developed have been based on guidance from the National MOTIVA Agency. The city is also involved in a national industrial symbiosis project which is coordinated by Motiva.

Awareness raising regarding waste in Lappeenranta is carried out by EKJH and is further supported by the city. Activities include cleaning campaigns held twice a year and a competition centred on applicants developing ideas for products which could be made from side stream materials. The city's response demonstrates how citizens are working together with the city, through school programmes and projects, including the CIRCWASTE project, a seven-year LIFE IP project 2016-2023, that promotes efficient use of material flows, waste prevention and new waste and resource management concepts.

#### 4.2.1.6 Water

Ranking	Experts
1	Mr. Christof Mainz Ms. Birgit Georgi

Lappeenranta provided all the relevant requested data in its application and showed its full compliance with relevant legislation. The city provided an overview of its groundwater protection plan and a new 'state of the art' waste water treatment plant to be operational by 2022-2026 (2023 mentioned in the introduction) which will have very strict limits on nutrients, microplastics and micropollutants (pharmaceuticals).

Information on some public awareness raising campaigns was provided that demonstrated clear objectives and long-term planning. Among those, the Jässi single house waste water treatment information service and the communication of long-term lake restoration projects are particularly notable.

However, the ecological status of water bodies is either bad or just sufficient. Nevertheless, the large restoration projects mentioned (river/lake rehabilitation) will be beneficial to improving this status. For the 'new' waste water treatment plant, there seem to be inconsistencies with information provided regarding planning renewal, whereas at the same time the existing plant is in full compliance with EU legislation. Lastly, while citizens information is provided, less is mention in terms of participation.

Overall, in relation to this topic area, Lappeenranta's application was of high quality due to all requested data being provided, positive activities demonstrated and public awareness raising campaigns being mentioned. In addition, the application mentioned long-term strategies.

## 4.2.2 Limerick Technical Assessment

### 4.2.2.1 Climate Change and Energy Performance

Ranking	Experts
2	Dr. Matthew Kennedy Ms. Vesna Kolega

Limerick presents a 1990 base year and strategy to 2020 across two scenarios (Business as usual/extra measures). There is no indication of the city's progress to this plan since 2010. Mitigation actions include photovoltaic (PV) installations (40 kW) and retrofitting. Energy efficiency improvements of 20% are mentioned but these are not quantified by sector. Future strategies include the Horizon 2020 lighthouse strategy for positive energy buildings (2.1 GWh energy from renewable energy with a community exchange). Some attention is given to sustainable transport (electric vehicles) but no details are included on the success of the modal shift strategy. Welcome attention is given to flood risk adaptation strategies and there is a positive link included between national strategies and local actions.

The primary focus of the municipal agency (Limerick Clare Energy Agency) is working on driving engagement strategies across local, regional and national events which focus on technology specific training and dissemination. This includes a mix of energy, transport and adaptation measures. The Horizon 2020 project will target open innovation and mechanism, including in trading. Welcome attention is given to sustainable transport, including bespoke cycling festivals and the impacts of the annual car free day on the city. What is unclear is the role of active citizen participation across these initiatives.

### 4.2.2.2 Sustainable Urban Mobility

Ranking	Experts
3	Dr. Ian Skinner Mr. Alex Minshull

Limerick has actively improved infrastructure for walking, cycling and public transport and has actively engaged with local businesses, schools, campuses and individuals to encourage them to use these modes more. This has included working with large employers to develop workplace travel plans that contain realistic targets for modal change. There are plans to continue this work.

Given the city's plans to focus on facilitating and promoting sustainable transport, it would be interesting to know what the city was doing to improve the environmental performance of urban freight deliveries in the city and to actively discourage car use.

A Transport Strategy for the city is currently under development, the focus of which will be sustainable transport. It would be interesting to know the extent to which stakeholders are being involved in the development of the strategy, as well as in the development of the many other measures that the city has been putting in place.



#### 4.2.2.3 Nature, Biodiversity and Sustainable Land Use

Ranking	Experts
2	Mr. David Jamieson Ms. Nathalie Cecutti

It is encouraging that Limerick is now looking to manage some of its green spaces in a more naturalistic manner. The urban re-wilding pilots are an excellent way to kick-start the process and learn from the outcomes before wider roll-out. Employing a botanist to monitor species and ecological community change is a particularly helpful addition to the programme.

Limerick integrates land use planning, landscape and biodiversity conservation very well at several scales. Given that the city has been delivering a Biodiversity Strategy since 2012, it would have been helpful to include information on the status of species and/or habitats, and any changes in these since its implementation.

The 'Living Limerick' programme is a useful means to capture citizen engagement, and the Green Schools initiative is a strategic way to educate children in environmental matters. It is important that both schemes continue to grow and that residents are encouraged to get involved via events, activities, and on-the-ground volunteer projects.

#### 4.2.2.4 Air Quality and Noise

Ranking	Experts
1	Mr. Joan Marc Craviotto Arnau Dr. César Asensio

The existing Irish monitoring network does not have a monitoring point located in the city of Limerick and subsequently Limerick demonstrates its commitment to improving its air quality on its own with the acquisition of particle and gas monitors. This initiative is most welcome as this is a basic requirement within a city to enable them to effectively manage their air quality. From the monitoring data provided, it is evident that the city enjoys good air quality parameters. However, when providing air quality data, the year in which the data has been collected should be referred to. Moreover, if the monitors have been measuring less than a year (in the case of gases) this should be noted, as the emissions in a city are not linear within a year and partial data may lead to misinterpretation of results. Also, it would be interesting to see the city promote public engagement measures.

The city offers grants to carry out thermal upgrades at homes and is encouraging people to leave their cars at home by providing better cycling, walking and public transport infrastructure with the aim of reducing household emissions. The information provided regarding sources of pollution, including the main emitters, transport and domestic heating, was appreciated.

Although not obliged to do so, Limerick has applied the Environmental Noise Directive guidelines in the city through the development of noise maps and action plans. The city has been updating them every five years, continuously monitoring the acoustic environment, analysing trends, and assessing the effectiveness of the actions undertaken. During this process, Limerick has been able to identify shortcomings and seek solutions, improving its own simulation capabilities, and implementing a noise

monitoring network that allows models to be adjusted and validated, as well as obtaining better communication with citizens. In addition, it outlines its clear intention to its citizens in the preparation of action plans. Finally, it is noteworthy that Limerick has planned to address the management of quiet areas in the city.

Overall, Limerick has made very efficient use of the space available in the application form to clearly show its commitment to managing environmental noise in the city, however, a brief description on mitigation actions undertaken or planned should have also been included.

#### 4.2.2.5 Waste and Circular Economy

Ranking	Experts
4	Mr. Warren Phelan Mr. Marc Okhuijsen

In Limerick City, the waste collection system is well developed. A kerbside waste collection is managed by private sector organisations under a waste collection permitting system which is administered nationally and enforced locally by the City's Environment section. The city operates a three-bin system with separate collections of residual, dry recyclables and organic wastes. The kerbside system is supported by other drop off recycling facilities in the city.

Limerick city is part of the southern region for waste prevention management and planning. The Southern Region Waste Management Plan 2015-2021 sets out the targets, policies and actions to improve the waste management in the city. In the plan targets are defined to prevent waste, improve recycling and divert waste from landfill supported by specific objectives. The provision of supporting data on past and current performance with regard to prevention, reuse, or recycling would have benefited the application further.

The city has set up and operates as the lead authority in the regional waste management office. The office is responsible for achieving the objectives of the waste plan and implementing policy actions. The staff in the regional office include a dedicated waste awareness officer who has responsibilities to deliver waste prevention and behavioural campaigns supporting measures to reduce and reuse waste. In addition, the waste offices run an Eco-merit programme to improve the environmental performance of businesses and public sector organisations.

It is not made clear in the response how the city implements the policies of regional plans in to their own programmes or what actions they are taking to run their own programmes. The relationship between waste management and industries is not mentioned, nor is Green Public Procurement.

In terms of citizen participation and public awareness, the city has carried out a strong variety of behavioural campaigns to engage with citizens and local stakeholders on waste and resources. This includes the clean-up day by TLC (Team Limerick Clean-up), the Conscious Cup Campaign, the #RunReuseRefill, and the Limerick Going for Gold programme. Furthermore, the response provided illustrates a strong involvement of the inhabitants of Limerick and their organisations.

#### 4.2.2.6 Water

Ranking	Experts
4	Mr. Christof Mainz Ms. Birgit Georgi

Limerick's application provided a general overview of waste water and drinking water without providing details on their compliance. The city's application is noted for providing good awareness raising campaigns through school programmes, such as the 'Think before you Flush' and 'Why Value Water' campaigns, as well as having a media campaign. However, it was unclear whether these campaigns are city activities or national activities. The city noted in their response that strategic and investment plans are subject to extensive public consultation. Furthermore, there was interaction between Limerick and the Industrial Development Department, which will ensure that any future upgrades to waste water infrastructure consider future development or expansion plans of the Industrial Development Department.

However, it was considered that too much information was provided on waste water, drinking water and public activities and that the level of Limerick's direct involvement was not fully described. It was noted that there were just general future goals included in the response for waste water, besides the upgrade of treatment plant by 2024, and that no action was taken on the moderate ecological status under the WFD (Water Framework Directive), no metering of drinking water and no further action regarding reduced water leakage, beyond the 30% mentioned, was referenced.

Overall, in relation to this topic area, Limerick's response was of good quality. Section 6a is of medium quality due to it lacking in technical standards on water loss and waste water treatment. In Section 6b, the application was noted for some excellent campaigns and public consultation. However, the application was difficult to assess for waste water and for water supply as they are managed by a national utility since 2013. As a result, neither the good or the bad of recent years in these areas could be attributed to the city.

### 4.2.3 Mechelen Technical Assessment

#### 4.2.3.1 Climate Change and Energy Performance

Ranking	Experts
4	Dr. Matthew Kennedy Ms. Vesna Kolega

Mechelen's action plan (2013-14) has quantifiable results across sectoral measures, supported by inventory. There is no analysis or explanation of actions post-2014. The application presents a catalogue of actions by sectors, with a focus on mitigation measures and consumer engagement. Emissions reduction across sectors is demonstrated, especially in the residential sector, but an increase in emissions from transport is shown. Future strategy is based on challenging mobility growth. Some narrative on the factors influencing the increased mobility would help in the application. No focus on adaptation approaches or on the greening of infrastructure was included. Positive initiatives in the city include heat mapping and sustainable finance for homeowners. The role of citizens in contributing to emissions reductions across sectors is not presented.

Additional details on the Mechelen Klimaatneutral campaign would be welcome. The resident's energy expert group is a novel initiative that can be replicated. The role citizens play in the MOBI model is not clear. Are they directly involved in shaping the various initiatives or just recipients of the schemes? For example, are they directly involved in shaping the engagement with the school's campaign/climate-newspaper or is it driven solely by the municipal staff members? The Municipality is providing data on the awareness of consumption. However, few indicators are provided.

#### 4.2.3.2 Sustainable Urban Mobility

Ranking	Experts
1	Dr. Ian Skinner Mr. Alex Minshull

Mechelen has a transport strategy, although it is not clear what principles and objectives guide its implementation or to what extent its citizens and stakeholders were involved in its development. Having said that, the city has implemented a wide range of relevant measures, including on sustainable urban freight and shared mobility, thereby demonstrating its commitment to sustainable mobility.

The city actively reduces car use in the city centre and in its other car free zones and is planning to go further in relation to parking policy and in relation to the regulations that it applies to new urban developments, e.g. provision for car sharing and bike parking.

The municipality has an excellent set of engagement and awareness raising measures, including in relation to sustainable logistics.

#### 4.2.3.3 Nature, Biodiversity and Sustainable Land Use

Ranking	Experts
1	Mr. David Jamieson Ms. Nathalie Cecutti

Mechelen's approach to biodiversity conservation and sustainable land use management is very coherent and well implemented. Having idealised objectives within plans and strategies, the city provides a clear direction for strengthening the green/blue network, whether by associated development, direct ownership and management or citizen engagement.

More information on the status of local wildlife would have been helpful to gain a sense of progress made with the city's nature conservation programmes. Also, it would be interesting to know how local farming links with urban needs, and what are the production and consumption relationships between the city and the neighbouring villages.

The relationship between the city authorities and Natuurpunt is realising significant engagement benefits. Opportunities for learning and involvement in nature, food-growing and other improvement programmes are also plentiful and bode well for sustaining an active citizenry.

#### 4.2.3.4 Air Quality and Noise

Ranking	Experts
2	Mr. Joan Marc Craviotto Arnau Dr. César Asensio

In terms of air quality, Mechelen complies with EU legislation. Nonetheless, the city wants to progress further and meet WHO standards by implementing a range of measures across different sectors including mobility, residential, and industry. The city's measures in terms of mobility are impressive and the city's participation in the Groundtruth 2.0 project, in which citizens from four European and two African countries have collaborated in measuring black carbon concentrations, has been of great value. However, the lack of detail provided does not allow further assessment as to whether this tool was applied only to air quality or if it also included noise.

Mechelen did not outline how it is or plans to implement the guidelines of the Environmental Noise Directive in the city, although, they appear to have assessed noise in the city through the development of a noise map. However, no reference is made to action plans and quiet areas in the application. Furthermore, no details were included that would have provided insight into the city's acoustics strategy.

With regard to noise from transport and industry, some actions are briefly described, but they show no objectives or assessment of effectiveness, so it appears that their possible effectiveness would be the result of chance and not of planning. On the contrary, the city does seem to have defined a strategy regarding the noise produced by nightlife and recreational events, although, more detail on this would have been beneficial. However, Mechelen does mention citizen participation in the drafting of a 'party charter', which is positive.

The multiple actions outlined regarding public awareness and citizens engagement are very welcome, as is the new air monitoring station mentioned. In addition to air quality assessments, the data collected from the monitoring station could be of further benefit to the city if data collected can also be used to inform the public.

#### 4.2.3.5 Waste and Circular Economy

Ranking	Experts
1	Mr. Warren Phelan Mr. Marc Okhuijsen

Mechelen provided a complete response with the use of clear graphics, figures and images. The city's response shows a commitment to move waste management up the hierarchy with a focus on recycling, reuse, repair and prevention. The city has a clear and ambitious strategy for their transition to a circular economy which sets it apart.

Mechelen is investing in the transition to a circular economy with a focus on citizen involvement and entrepreneurialism. Mechelen uses all parts of the city as a living lab and has appointed a circular

economy officer highlighting the importance it places on the transition away from traditional management models.

The city supports and collaborates with social enterprises, citizens and businesses to promote reuse, repair and the sharing economy. The range of progressive measures are particularly impressive and include a second-hand shop 'kringloopwinkel ecoso', repair cafés, library for tools (Klusbib), green pee, food savers. It is also involved in a circular textile project to improve the collection and reuse of garments. Overall the city's projects make it a leader in this field.

The city's waste collection is particularly impressive with the kerbside collection of 6 different types of waste available to citizens. This includes the separate collection of plastics which was introduced in 2010. The kerbside system is supported by other collection infrastructure including home composting, recycling parks, and mobile recycling units. The city is providing a comprehensive system for the collection of wastes which helps to ensure a strong recycling culture.

The city's awareness raising activity was well described, demonstrating several good practices and the use of different stakeholders such as the Children Community Council, Compost Masters, and public green godfathers and godmothers.

#### 4.2.3.6 Water

Ranking	Experts
3	Mr. Christof Mainz Ms. Birgit Georgi

Mechelen provided an overview of the impressive re-opening of seven old city canals in the last decade and highlighted its high efforts to reduce water consumption and loss. Additionally, the city outlined its efforts to prevent droughts and flooding in the city through natural infiltration mechanisms such as green roofs.

The city's application is noted for these measures and for their effort on awareness raising campaigns on rational water use, a campaign set to be strengthened, and for their use of websites and social media. In addition, the city's need for public participation for water resilient cities projects was noted.

However, the application did not provide some of the requested data. Data for metering, water loss through leakage, drinking water, compliance with the UWWTD (Urban Waste Water Treatment Directive), and sludge was not provided. In addition, the application explained the increase of water consumption in 2015 but did not provide any information for 2016 and 2017. It was noted that there was a high level of waste water treatment claimed, which was not justified by the graphs provided. In addition, the application made general statements without providing technical explanations for example 'above average percentage of people connected' or 'very good rate of individual waste water treatment'. Furthermore, many rivers and waterways (>95%) are noted as bad or moderate ecological condition and no further goals or plans to improve this situation was given. Lastly, the information on the infrastructure leakage index was unclear.

Overall, in relation to this topic area, Mechelen's application was of good quality. The application had some good activities on water issues although it focused too much on waste water, and drought and

flooding. No goals or planning was described to improve the existing situation, especially for the situations regarding river quality and connection rates.

## **APPENDIX A**

### **APPLICATION FORM FOR THE EUROPEAN GREEN LEAF AWARD 2020**





# European Green Leaf Award 2020

## Application Form

Please complete your submission for the EGLA 2020 Award in this Application Form. **All sections must be answered** and all questions should be addressed. In the instance that an applicant cannot provide an answer to a question, reasons must be provided in the relevant section.

Text included in square brackets *[EXAMPLE]* should be deleted and replaced with the applicant's response to each respective section. Do not delete the questions in the application form.

Please note, The 'City Introduction and Context' section does not form part of the overall assessment however it is a key component of the application and therefore must be completed. This section sets the scene for the application as a whole in the context of historical, geographic, socio-economic and political constraints, contentious infrastructure/environmental projects and initiatives, and provides the Expert Panel with a clear insight into the factors influencing the city's development and environmental quality.

All six Topic Areas carry equal weight. Within each Topic Area, part a carries 60% of the weight while part b carries a weighting of 40%.

Word exceedances will not be accepted and applicants must complete the Word Count Check at the end of the Application Form to verify that their response is within the word limits set out. This Word Count Check is a tool for cities to check that word exceedances have not occurred and ensure that answers are not left incomplete.

Applicants must read the Guidance Note before completing their application and consult this document while undertaking their responses.



## Application Form for the European Green Leaf Award 2020

### Section A: City Introduction and Context

**Use this section to provide an overview of the city and provide context to the items that are addressed in Sections B and C.**

Give an overview of your city including its population, surface area, population density, geographical location, some historical and economic background (e.g. GDP, €/capita), notable features and any other factors which have influenced or will influence the environment of the city and its surrounding area.

What are the key environmental challenges the city faces (or has addressed in the recent past)? Make reference to the city's infrastructure (transport, water and drainage, buildings, parks etc.). If appropriate, mention any significant legal proceedings on environmental issues.

Please describe the services provided by the municipality relevant to the Topic Areas in Section B. The aim of this section is to assist in understanding the responsibilities of the city, its controls and the ability of the city to act and effect change.

**Please include an up to date map of the city and a maximum of one additional image i.e. a maximum of two images in total including the map. The map should show the layout of urban areas, geographical and other features, across the city.**

**(max. 600 words and two graphics or images as detailed above)**

*[INSERT RESPONSE TO CITY INTRODUCTION AND CONTEXT HERE]*



# Application Form for the European Green Leaf Award 2020

## Section B: Topic Areas

- Please note you must complete ALL topic areas in this Section.
- Section B is used in the evaluation/ranking process. Please read the accompanying EGLA Guidance Note carefully in advance and during the preparation of your EGLA application.
- Please note all six Topic Areas carry equal weight. Within each Topic Area, part a carries 60% of the weight while part b carries a weighting of 40%.

### Topic Area 1: Climate Change and Energy Performance

*Note: Your answers to sub-sections 1a and b together must not exceed a total of 600 and 300 words respectively (i.e. 600 word limit for sub-section a and 300 word limit for sub-section b). A total of six graphics, images or tables may be included in Topic Area 1.*

**Note: It is important to address Climate Change (mitigation and adaptation) and Energy Performance equally in the response.**

#### 1a – Current Situation and Strategic Approach

Please outline the present situation, e.g. the relevant infrastructure and systems that are in place. The aim of this section is to show how the present situation has been achieved and what kind of measures or programmes have been implemented so far. You may include information on any relevant disadvantages or constraints resulting from historical, geographical and/or socio-economic factors. Please describe developments that have taken place over the last five to ten years. Comment on which measures have been most effective.

Please add relevant background information, performance statistics, dedicated budgets or innovative forms of financing and key outcomes (e.g. greenhouse gas emissions, adaptation to climate change, renewable energy, energy efficiency etc.). Please also state clearly what year the data provided relates to.

**If data or figures are not available at a local level please state this in the application.**

Please outline your city's overall approach to improve Climate Change and Energy Performance. Please include:

- Principles that have governed the development of the plan/programme;
- Key Objectives and Targets (e.g. estimated reduction in greenhouse gas emissions; measures to increase resilience to the impacts of climate change);
- If available, please compare the specified targets of greenhouse gas emissions or renewable and energy efficiency for e.g. 2020 with past trends.
- Highlight the need for further projects/measures/initiatives and expected benefits from its implementation.

Where plans/programmes have been developed at regional and national level it is important to provide information on how these are implemented at the city level.



## Application Form for the European Green Leaf Award 2020

### **Word Limit - 600 Words**

*[INSERT RESPONSE TO PART A HERE]*

### **1b – Citizen Participation and Public Awareness**

Please mention any public awareness, citizen engagement or stakeholder participation undertaken in your city in the areas of Climate Change and Energy Performance.

Focus on campaigns, events or activities such as:

- (a) Public awareness: awareness raising activities including advertising and media, campaigns and events;
- (b) Stakeholder/citizen participation: public consultation, school education, open dialogue, stakeholder groups/forums, working groups, implementation partnerships, joint ventures with local businesses, etc.

Where possible show the connection between this section and the previous section i.e. 1a and 1b.

Please identify the target audience and any achieved or expected benefits.

### **Word Limit - 300 Words**

*[INSERT RESPONSE TO PART B HERE]*



## Application Form for the European Green Leaf Award 2020

### Topic Area 2: Sustainable Urban Mobility

**Note: Your answers to sub-sections 2a and 2b together must not exceed a total of 600 and 300 words respectively (i.e. 600 word limit for sub-section a and 300 word limit for sub-section b). A total of six graphics, images or tables may be included in Topic Area 2.**

#### 2a – Current Situation and Strategic Approach

The aim of this section is to outline the current situation in the city and make it clear how this has been achieved. The response should mention relevant strategies and plans (including a Sustainable Urban Mobility Plan (SUMP) or equivalent (in force or in revision)), measures that have been implemented and any tangible results

Please make clear the relevant principles that underlie any plan or strategy. Where plans/programmes have been developed at a level above the city level i.e. regional, national etc. it is important to provide information on the plans/programmes and how they impact on the city and/or are implemented at the city level.

Please ensure the response mentions the following measures that:

- Promote and encourage public transport, cycling and walking; reduce car use;
- Improve the environmental performance of freight;
- Promote the use of shared mobility and alternative fuels.

#### **Word Limit - 600 Words**

*[INSERT RESPONSE TO PART A HERE]*

#### 2b – Citizen Participation and Public Awareness

Please mention any public awareness, citizen engagement or stakeholder participation undertaken in the city in the area of Mobility.

Focus on campaigns, events or activities such as:

- (a) Public Awareness: awareness raising activities including advertising and media, campaigns and events;
- (b) Stakeholder/Citizens Participation and engagement: public consultation, school education, open dialogue, stakeholder groups/forums, working groups, implementation partnerships, joint ventures with local businesses etc.

Please identify the target audience.

#### **Word Limit - 300 Words**

*[INSERT RESPONSE TO PART B HERE]*



# Application Form for the European Green Leaf Award 2020

## Topic Area 3: Nature, Biodiversity and Sustainable Land Use

**Note: Your answers to sub-sections 3a and 3b together must not exceed a total of 600 and 300 words respectively (i.e. 600 word limit for sub-section a and 300 word limit for sub-section b). A total of six graphics, images or tables may be included in Topic Area 3.**

**Note: It is important to address Nature, Biodiversity and Sustainable Land Use equally in the response.**

### 3a – Current Situation and Strategic Approach

Please outline your city's approach to Nature, Biodiversity and Sustainable Land Use. What are the key objectives and targets of the city for Nature, Biodiversity and Sustainable Land Use? These may include:

- Conservation and protection measures;
- Green infrastructure;
- Plans of projects to support the conservation of wild bees and pollinators;
- Increase and improvement of parks and green spaces;
- Sites of special interest for biodiversity,
- Connectivity of green and blue areas;
- Integrated planning and managing city expansion and growth; and
- Dealing with contaminated land etc.

Where plans/programmes have been developed at regional and national level it is important to provide information on how these are implemented at the city level.

Please provide details of the percentage of the population living within 300 metres of a green area open to the public and percentage of green areas open to the public in the city.

#### **Word Limit - 600 Words**

*[INSERT RESPONSE TO PART A HERE]*

### 3b – Citizen Participation and Public Awareness

What public awareness, citizen engagement or stakeholder participation campaigns are undertaken in your city to foster Nature, Biodiversity and Sustainable Land Use? These may include:

- Campaigns, events or activities such as advertising and media, campaigns and events;
- Public consultation, school education, dialogue, stakeholder groups/forums, working groups, implementation partnerships, joint ventures with local businesses etc.;
- Who is the target audience and what benefits have been achieved or are expected?

Please show the connection between sections 3a and 3b.



## Application Form for the European Green Leaf Award 2020

**Word Limit - 300 Words**

*[INSERT RESPONSE TO PART B HERE]*



# Application Form for the European Green Leaf Award 2020

## Topic Area 4: Air Quality and Noise

**Note: Your answers to sub-sections 4a and 4b together must not exceed a total of 600 and 300 words respectively (i.e. 600 word limit for sub-section a and 300 word limit for sub-section b). A total of six graphics, images or tables may be included in Topic Area 4.**

**Note: It is important to address Air Quality and Noise equally in the response.**

### 4a – Current Situation and Strategic Approach

Please outline the current situation regarding air quality (at a minimum information on NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub>) and noise and mention related measures, projects and initiatives that have been put in place. Information on any relevant historical, geographical and/or socio-economic factors or constraints which have had an impact on air quality and the acoustic environment should also be described. Please describe trends in terms of pollutant emissions and ambient air concentrations of pollutants and noise that have taken place over the last five to ten years. Any trends which have been identified and any measures which have been most effective should be discussed

Please support information by providing relevant background information, including any performance statistics, dedicated budgets or innovative forms of financing and key outcomes. Highlight why the project/measure/initiative is needed and any achieved or expected benefits from its implementation.

Specific measures such as air pollution reducing actions and noise management tools such as noise maps, acoustic zoning, noise exposure data, management of quiet areas etc. are of interest.

**If data or figures are not available at a local level please state this in the application.**

Describe the short and long term objectives for air quality and noise and the proposed approach for their achievement. Emphasise to what extent plans are supported by commitments, budget allocations, and monitoring and performance evaluation schemes.

Please include:

- Background (include principles that have governed the development of the plan/programme);
- Key objectives and targets (e.g. city's contribution towards reducing NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> concentrations, noise action plans, foreseen reduction in the share of population exposed to noise, actions to maintain, extend, or improve urban quiet areas etc.);
- Information on the air quality in relation to the EU air quality standards (e.g. days /per year) and EU noise exposure standards.

Where plans/programmes have been developed at regional and national level it is important to provide information on how these are implemented at the city level.

#### **Word Limit - 600 Words**

[INSERT RESPONSE TO PART A HERE]

### 4b – Citizen Participation and Public Awareness





## Application Form for the European Green Leaf Award 2020

Please mention any public awareness campaigns, citizen engagement or stakeholder participation undertaken in your city related to Air Quality and Noise.

Focus on campaigns events or activities such as:

- (a) Public awareness: awareness raising activities including advertising and media, campaigns and events;
- (b) Stakeholder/citizens participation: public consultation, school education, open dialogue, stakeholder groups/forums, working groups, implementation partnerships, joint ventures with local businesses etc.

Where possible show the connection between this section and the previous section i.e. 4a and 4b.

Please mention the target audience and any achieved or expected benefits.

**Word Limit - 300 Words**

*[INSERT RESPONSE TO PART B HERE]*



# Application Form for the European Green Leaf Award 2020

## Topic Area 5: Waste and Circular Economy

**Note: Your answers to sub-sections 5a and 5b together must not exceed a total of 600 and 300 words respectively (i.e. 600 word limit for sub-section a and 300 word limit for sub-section b). A total of six graphics, images or tables may be included in Topic Area 5.**

**Note: It is important to address Waste Management and Circular Economy within the response.**

### 5a – Current Situation and Strategic Approach

- a) Outline your city's current waste management system describing prevention activities, collection and treatment infrastructure in place.

In your response include a brief statement on the development of the waste system focusing on progress in collections, recycling and diverting waste away from landfill and/or incineration. Describe measures such as waste prevention, material reuse, repair, green public procurement or industrial symbiosis which the city is engaged in.

Data which demonstrates and supports the progress made should be included in the response.

- b) Briefly describe the city's strategy or plan for the management of waste and the transition to a circular economy providing information on the key objectives and targets. Include details of how the city waste plan or strategy interacts with other city plans or programmes.

**If data or figures are not available at a local level please state this in the application.**

Where plans or programmes have been developed at a level above the city level i.e. regional, national etc. it is important to provide information on the plans or programmes and how they impact on the city and/or are implemented at the city level.

**Word Limit - 600 Words**

*[INSERT RESPONSE TO PART A HERE]*

### 5b – Citizen Participation and Public Awareness

Describe citizen engagement or public awareness activities undertaken in your city in the waste and circular economy area. Include details for both:

- (a) Public activities such as campaigns, events and advertising which raise awareness of waste issues; and
- (b) Stakeholder activities such as citizens participation, school education programmes, forums, engagements with local businesses etc.

For referenced examples identify the target audience and any achieved or expected benefits. Where possible connect these activities to the current approach to waste management outlined in Section 5a.



## Application Form for the European Green Leaf Award 2020

**Word Limit - 300 Words**

*[INSERT RESPONSE TO PART B HERE]*



## Application Form for the European Green Leaf Award 2020

### Topic Area 6: Water

**Note: Your answers to sub-sections 6a and 6b together must not exceed a total of 600 and 300 words respectively (i.e. 600 word limit for sub-section a and 300 word limit for sub-section b). A total of six graphics, images or tables may be included in Topic Area 6.**

**Note: It is important to address Water and Waste Water Management equally in the response.**

#### 6a – Current Situation and Strategic Approach

Please outline the present situation, e.g. the relevant infrastructure and systems that are put in place to implement your city's Water and Waste Water Management Plans and Programmes. The aim of this section is to make clear how the present situation has been achieved. You may include information on any relevant disadvantages or constraints resulting from historical, geographical and/or socio-economic factors. Please describe developments that have taken place over the last five to ten years. Comment on which measures have been most effective.

Please provide any relevant performance statistics useful to describe the present including:

- Urban and domestic water consumption per capita;
- Proportion (%) of water losses from the distribution network;
- Proportion (%) of urban drinking water supply subject to water metering;
- Proportion (%) of population connected to the waste water collecting system and waste water treatment plants;
- Ecological status of water bodies receiving the city effluent;
- Water reuse and sludge management.

Please clearly state the status of the city in relation to compliance with the requirements of the UWWTD. Highlight why the project/measure/initiative is needed and any achieved or expected benefits from its implementation.

**If data or figures are not available at a local level please state this in the application.**

Please mention any plans and/or programmes for improved water and waste water management. Please include:

- Define the priorities in water and waste water management plans;
- Principles that have governed the development of the plan/programme;
- Key objectives and targets (describe/specify measures to be implemented);
- Where possible please outline the objectives and targets set/proposed and compare against the figures provided in this section describing the present situation (i.e. expected improvements in water consumption, water losses, etc.).

Where plans/programmes have been developed at a level above the city level i.e. regional, national etc., it is important to provide information on the plans/programmes and how they impact on the city and/or are implemented at the city level.

**Word Limit - 600 Words**



## Application Form for the European Green Leaf Award 2020

*[INSERT RESPONSE TO PART A HERE]*

### **6b – Citizen Participation and Public Awareness**

Please mention any public awareness, citizen engagement or stakeholder participation undertaken in your city in the areas of Water and Waste Water Management.

Focus on campaigns, events or activities such as:

- (a) Public awareness: awareness raising activities including advertising and media, campaigns and events;
- (b) Stakeholder/citizens participation: public consultation, school education, open dialogue, stakeholder groups/forums, working groups, implementation partnerships, joint ventures with local businesses etc.

Where possible show the connection between this section and the previous section i.e. 6a and 6b.

Please mention the target audience and any achieved or expected benefits.

**Word Limit - 300 Words**

*[INSERT RESPONSE TO PART B HERE]*



## Application Form for the European Green Leaf Award 2020

### Section C: Good Practices

- Please note that the Good Practice section is not taken into consideration during the evaluation process.
- This section is for additional information only and will help in the compilation of any European Green Leaf 2020 Good Practice Factsheets or Case Studies, as appropriate.
- Please note that at least one good practice must be completed.

**Note:** The descriptions of your good practices must not exceed a total of 450 words and nine graphics, images or tables.

Please summarise up to three good practices that demonstrate how your city is improving its environmental record and is committed to generating new jobs linked with producing a better environment.

The Good Practices nominated should already be briefly mentioned in the corresponding topic areas in Section B of the application form. Please describe the proposed Good Practice in more detail here.

Please also explain why you have selected the good practice described.

#### Good Practice 1

Word Limit 150 words & 3 graphics, images, tables etc.

Topic area: [INSERT NAME OF RELEVANT TOPIC AREA(S) HERE]

[INSERT RESPONSE HERE]

#### Good Practice 2

Word Limit 150 words & 3 graphics, images, tables etc.

Topic area: [INSERT NAME OF RELEVANT TOPIC AREA(S) HERE]

[INSERT RESPONSE HERE]

#### Good Practice 3

Word Limit 150 words & 3 graphics, images, tables etc.



# Application Form for the European Green Leaf Award 2020

Topic area: *[INSERT NAME OF RELEVANT TOPIC AREA(S) HERE]*

*[INSERT RESPONSE HERE]*

## Application Form Word Count Check

Please complete the below word count check for Sections A, B and C of the Application Form.

As per the Guidance Note (Annex 4 of the Rules of Contest), the word count includes text in graphics/tables and the body of text. The word count excludes text found in the original application form (i.e. question text etc.) and captions (within the given limit of 20 words).

Section A	Number of words in graphics/tables	Number of words in body of text	Total number of words in graphics/tables and body of text	Max. words
				600
Section B	Number of words in graphics/tables	Number of words in body of text	Total number of words in graphics/tables and body of text	Max. words
1a				600
1b				300
2a				600
2b				300
3a				600
3b				300
4a				600
4b				300
5a				600
5b				300
6a				600
6b				300
Section C	Number of words in graphics/tables	Number of words in body of text	Total number of words in graphics/tables and body of text	Max. words
1				150
2				150
3				150



# Application Form for the European Green Leaf Award 2019

## Application Form Checklist

Did you complete Section A?

Yes      No

Did you complete Section B?

Yes      No

Topic areas:

- |             |     |    |
|-------------|-----|----|
| 1. a and b? | Yes | No |
| 2. a and b? | Yes | No |
| 3. a and b? | Yes | No |
| 4. a and b? | Yes | No |
| 5. a and b? | Yes | No |
| 6. a and b? | Yes | No |

Did you complete Section C?      Yes      No

At least one good practice must be completed.

Did you complete the 'Word Count Check'?      Yes      No

**A response must be included for all of the above. If all of the items are not completed the application will be invalid.**

Did you adhere to the word limit for all sections?

Yes      No

Did you adhere to the image limit for all sections?

Yes      No



## **APPENDIX B**

### **EXPERT PANEL PROFILES**

## Topic Area No. 1 – Climate Change & Energy Performance

**Expert: Dr. Matthew Kennedy, Head of Strategy and Business, International Energy Research Centre, Ireland**

Dr. Matt Kennedy is Head of Strategy and Business in the International Energy Research Centre, an Irish Government supported energy research centre. He was previously National Delegate (Energy) for Horizon 2020 for Ireland and led Energy R&D for the Irish Government's Sustainable Energy Authority of Ireland. Matt held the position of Special Advisor on energy and climate issues.



Matt was lead EU Negotiator for energy technology transfer at the UNFCCC's international climate change negotiations (COP21) and was a member of the UNFCCC's Technology Executive Committee (TEC) responsible for providing mitigation and adaptation technology policy advice to the UN Conference of the Parties.

Matt was Chair of UNEP's Climate Technology Centre and Network, Copenhagen, Chair of the IEA's Renewable Energy Technology Deployment Technology Collaboration Programme, Paris, and the Chair of the Programme Board of the Renewable Energy and Energy Efficiency Partnership (REEEP), Vienna.

Matt holds a PhD from the School of Engineering of Trinity College Dublin, and Masters' degrees from NUI Galway and University College Dublin.

**Expert: Ms. Vesna Kolega, Independent Consultant, Croatia**

Vesna Kolega obtained her BSc and MSc at the Faculty of Electrical Engineering and Computing, University of Zagreb, Croatia and has 27 years of experience in the field of sustainable energy, particularly sustainable energy urban planning. With 2 years at the Croatian Power Utility Institute, 14 years at Energy Institute Hrvoje Pozar, 8 years at North-west Croatia Regional Energy Agency and most recently 3 years as an independent consultant.



In her role as a member of the European Commission (EC) Joint Research Centre Working Group for Development of EU official methodologies for development, implementation and verification of Sustainable Energy Action Plans (SEAPs) of Cities and Municipalities, she supported numerous municipalities in joining the EC initiative Covenant of Mayors (CoM), both technically and organisationally, to fulfil all their commitments.

Vesna has been project coordinator of numerous strategic energy planning documents at national, regional, county and municipal level (with more than 30 SEAPs according to CoM methodology including SEAPs of 6 European capital cities: Podgorica, Pristina, Sarajevo, Skopje, Tirana and Zagreb). She previously worked as national coordinator of the first Croatian National Energy Programme for the Improvement of Energy Efficiency in Buildings which was established by the Croatian Government in February 1997 and ran until May 2008.

Furthermore, Vesna has an in-depth knowledge of energy legislation from her experience as the member of the Croatian negotiation team for EU access – Chapter 15: Energy and Environment, member of numerous working groups for transposition of EU energy policies and legislation into the

national legislative framework, author of numerous position papers and different analyses of energy legislation and policies.

Throughout her professional career, as an engineer, researcher, projects coordinator, head of different departments, and finally an independent consultant, Vesna has been fully dedicated to sustainable energy and environmental protection as the most important imperative of the 21<sup>st</sup> century.

## **Topic Area No. 2 – Sustainable Urban Mobility**

**Expert: Dr. Ian Skinner, Director of Transport and Environmental Policy Research, United Kingdom**

Ian Skinner is an independent researcher and consultant with over 20 years of experience in undertaking research and consultancy projects focusing on the environmental impacts of transport.

His PhD from University College London was on the implementation of sustainable transport policies in South East England and he has also undertaken research at the University of Kent on the external costs of transport.



Since his PhD, Ian has worked at the Institute for European Environmental Policy (IEEP) and AEA (now Ricardo Energy & Environment) before founding TEPR in 2009. Ian's work focuses on the development, assessment and evaluation of sustainable transport policies for national and international organisations. Much of Ian's work has been undertaken at the European level for the European Commission, which has involved evaluations and impact assessments of various EU transport and environmental policies.

Ian has also drafted reports for UNEP, WHO and UNECE in the context of THE PEP (Transport, Health and Environment Pan European Programme) on jobs in sustainable transport, the most recent of which was presented at the 'Environment for Europe' Ministerial Conference in Batumi, Georgia in June 2016.

**Expert: Mr. Alex Minshull, Innovation and Sustainability Service, Bristol City Council, Bristol, United Kingdom**

Alex Minshull is based in Bristol, United Kingdom, where he leads Bristol City Council's Innovation and Sustainability Service. His responsibilities include the City Council's smart city, climate change and air quality programmes.

He studied for his environmental science degree at Southampton University and for his master's degree in the energy and environmental aspects of architecture at the Centre for Alternative Technology.



Alex has worked as sustainability professional for over 20 years, in the private and public sectors, as well as volunteering with environmental NGOs.

At the Environment Agency (England) he produced integrated river catchment management plans and advised on urban development to achieve environmental protection within the Midlands region of

England. In later years at the Environment Agency, and then at Bristol City Council, he implemented new environmental management systems, secured ISO14001 and Eco Management and Audit Scheme accreditation, and delivered significant improvements in environmental performance of these organisations.

Since 2006 his role has focused on the sustainable development of the city of Bristol and he has managed professionals working on a range of sustainability issues including, urban development, water, food, energy, electric mobility, climate change and air quality. He has worked to create effective partnerships between the city council and other organisations, including universities, businesses and environmental NGO's, bringing together their different capabilities to create a more sustainable city.

He has been involved with the European Green Capital Award since it began. He led Bristol's bids to become European Green Capital, being shortlisted twice and securing the Award for the year of 2015. Alex is passionate about the role of cities in leading the transition to a sustainable world and in cities working together to accelerate the transition. He has shared the learnings from Bristol with many cities across Europe, and across the globe.

### **Topic Area No. 3 – Nature, Biodiversity and Sustainable Land Use**

**Expert: Mr. David Jamieson, Parks, Greenspace & Cemeteries Manager, City of Edinburgh Council, and Director of Greenspace Scotland, United Kingdom**



Based in Scotland, David is responsible for managing Edinburgh's public parks and greenspace network, including the city's nature reserves, woodlands, allotments, cemeteries and urban forest. As head of Edinburgh's Parks Service he has secured a number of green accolades for the city, including winner of Britain in Bloom, Entente Florale Gold Medal, Eurocities, COSLA Gold Medal for Service Innovation & Improvement, the UK's Best Parks, Grounds and Horticultural Service Team award, and Fields in Trusts' Best UK Landowner.

Having led the development and implementation of Edinburgh's Nature Conservation Strategy, Urban Forestry Strategy, and Biodiversity Action Plan, he is presently directing the Edinburgh Living Landscape initiative in partnership with local universities, wildlife trust, botanic garden and green space trust. This is an innovative ecosystems approach to urban open space management, bringing nature closer to people's homes and work-places.

David is also Director and chair of the national charity, greenspace scotland, championing the value of green space to government and other decision-makers. As a chartered ecologist and environmental manager, with degrees from Stirling, Heriot-Watt and Huddersfield universities, his career has ranged across the public, academic and voluntary sectors. In recent years he has also been a director of Volunteer Development Scotland, BTCV Scotland, Oatridge Agricultural College and the Falkirk Environment Trust – promoting volunteering as a means for positive social and environmental change.

As well as being the Expert Panel member for Nature and Biodiversity, David is also a UK-level judge for Britain in Bloom and assessor for Green Flag Award, the two largest green award programmes in Great Britain. This gives him insight into current best practice in green space management, urban ecology, community-driven environmental initiatives, and sustainable development.

**Expert: Ms. Nathalie Cecutti, Expert in research funding with the head of the Research Department, Ministry for an ecological and Solitary Transition, Paris-La Defense, France**



Nathalie Cecutti is an expert in research funding with the head of the Research Department at the Ministry for the Ecological and Inclusive Transition in France.

Prior to that, from 2011 to 2017, she was head of Future Horizons for the Sustainable Development Unit, Ministry for the Ecological and Inclusive Transition. She is the Ministry's state chief architect and urban expert for public futures and specialises in living spaces, buildings, cities and land use.

Nathalie qualified as an architect from Nancy University and latterly obtained a Certificate in Strategic Foresight from the University of Houston.

She is a high-level European expert for the 2020 Horizon programme ('The Port of the Future', expert panel member 2017), led a foresight Ministerial programme 'Sustainable Land Use 2030' and contributed to the evolution of discussion about future sustainable cities and places in France and Europe. Nathalie is keenly interested in developing better human metropolis' within their natural blue and green areas and is the author and co-author of many publications in her field of expertise.

#### **Topic Area No. 4 – Quality of Air & Noise**

**Expert: Mr. Joan Marc Craviotto Arnau, Air Quality Project Manager at Barcelona City Council, Spain**



Joan Marc Craviotto Arnau is an Air Quality Project Manager in Barcelona City Council, where he has worked since 2009. He has a degree in Industrial Engineering from the Polytechnic University of Catalonia and a postgraduate degree in Air Quality Management and Atmospheric Pollution Control from the University of Santiago de Chile.

In his role as Air Quality Project Manager for Barcelona City Council, Joan Marc has gained extensive experience in managing air quality issues at city level. He undertakes air quality assessment and provides technical and policy advice in the field of air quality. He has also contributed to the development and assessment of the city's emission inventory and takes responsibility for the air quality modelling and monitoring for the City of Barcelona. Furthermore, Joan Marc steers the design and implementation of important measures to abate air pollution.

Joan Marc is a key contributor to the air quality public awareness campaign for the City of Barcelona. He is committed to sharing knowledge and raising awareness of environmental issues related to air quality. He engages with and promotes scientific research to increase the knowledge of the air quality dynamics in the city of Barcelona and is a regular speaker and attendant at air quality conferences, congresses and workshops.

**Expert: Dr. César Asensio, Researcher at the Instrumentation and Applied Acoustics Research Group of the Technical University of Madrid, Spain**

Dr. César Asensio has a B.Sc. in Telecommunication Engineering, M.Sc. in Acoustics Engineering in Industry and Transport and a PhD in Acoustics Engineering.



He has vast experience in environmental acoustics including noise modelling, strategic noise mapping and noise monitoring in cities, industry and transport infrastructures. He was nominated by Spain as technical expert to be part of the CNOSSOS-EU Technical Committee (Common Noise Assessment Methods), which aimed at improving the consistency and comparability of noise assessments results across the EU Member states. CNOSSOS-EU defined a methodological framework that formed the basis for the amendment of Annex II of Directive 2002/49/EC of the European Parliament and of the Council relating to the assessment and management of environmental noise in Europe.

César is highly committed to environmental noise research and information dissemination, aiming to raise the awareness of public administrations, citizens and other stakeholders about the risks that community noise can pose to public health. He is particularly interested in the influence that non-acoustic factors have on the response of citizens to noise, as well as in the exploitation of new technologies and smart city capabilities in the management of environmental noise.

**Topic Area No. 5 – Waste and Circular Economy**

**Expert: Mr. Warren Phelan, Technical Director, Waste, Energy & Environment, RPS Group Ltd., Ireland**

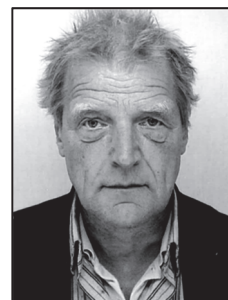
Warren Phelan is a Technical Director with the Waste, Energy and Environment Section of RPS. Warren is a Chartered Waste Manager and a Chartered Civil Engineer with a Masters degree in Engineering Science from University College Dublin.



Warren has over 18 years' experience in the waste and resource management sector developing specialised skills in waste strategy, plans, capacity and data analysis. Warren is a leading waste planner and has recently acted as project manager for the local authorities of Ireland overseeing the delivery of the national waste management plans whose underlying strategy is based on delivering better resource efficiency and stimulating circular economy principles. Working for the European Commission Warren has developed a passion for circular economy models and the transformation underway in businesses and cities across Europe.

Warren is Engineer's Ireland representative on the National Waste Forum Group and Construction Waste Resource Group. At home Warren is a member with local community and environmental groups which work to improve the health of the citizens and environment of their town.

**Expert: Mr. Marc Okhuijsen, Co-founder and owner Zonnova BV, Director at RéciproCité, The Netherlands**



Marc is an independent consultant specialising in the application of ecological principles to spatial and energy-related initiatives for urban sustainability, with a specific focus on social relationships between partners from different sectors.

Marc runs his own company, RéciproCité and works with several different consortia, including BOnDS, a cooperative organisation he co-founded in 2013, through which specialist SMEs work together for the sustainable development and resilience of the City of Breda, Netherlands, and its surroundings. With BOnDS Marc developed the largest privately-owned crowd-funded PV solar farm in the Netherlands. Nowadays BOnDS uses its expertise far beyond the city borders.

Marc has extensive experience developing and managing EU funded cooperation projects. These have included projects in the area of water management, suburban and rural land use, Maglev transport systems and social energy cooperatives. The most recent projects support circular economy approaches, involving symbiotic industrial energy systems in business innovation zones and the use of bi-directional shared e-cars in different European cities. With BOnDS, Marc is also an assessor for the Green Destination Award and Quality Coast Award in the south of the Netherlands and for ECOXXI with FEE International.

Marc originally studied Biology and Physical and Social Geography at Fontys University. He started his career at the Dutch Ministry of Agriculture, Nature and Fisheries where he worked in the late 1980s on the creation and implementation of the national and provincial structure plans for the Primary Ecological Networks (EHS and GHS) and then on the integration of urban areas into these major networks.

In 1993 Marc was appointed City Ecologist, City of Breda, later becoming Sustainability Coordinator, Head of the Department of Habitat-Environment and then Senior Strategist - Sustainable City Development until 2014. Whilst at Breda he participated in a 10-year project on the urban regeneration of the Metropolitan Municipality of Ekurhuleni, South Africa, worked for several years with the French *Ministère de l'Écologie, de l'Énergie du Développement Durable et de l'Aménagement du Territoire* on the specification of the sustainable city in their 'Projet urbain' and was the main speaker at several conferences in Europe on practical approaches for sustainability in cities. Marc has an excellent overview of eco-innovation and green growth in the European context, having supported Breda's commitment to the Aalborg Charter and later initiatives such as the Covenant of Mayors.

## **Topic Area No. 6 – Water**

**Expert: Mr. Christof Mainz, Senior/First Officer at the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU), Bonn, Germany**



Christof Mainz is a civil engineer specialised in the environment and water sector. In May 2017 he commenced working at the Directorate for Water management at the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) in Bonn, Germany.

Prior to his current position, he worked at the European Commission in Brussels (2011-2017) and at the regional Ministry for the Environment in Düsseldorf, North Rhine-Westphalia



(1998-2011). While working at the European Commission's Directorate General for the Environment (DG ENV), within the unit responsible for the Marine Environment and Water Industry, his main responsibilities were linked to several EU Water Industry Directives and their relationship with other EU legislation and policy areas, as well as supporting EU actions on innovation in the water sector, such as strategies for water reuse and resource efficiency. Prior to this, he worked in different regional administrations on technical checks and monitoring of urban waste water treatment plants.

**Expert: Ms. Birgit Georgi, Urban and Adaptation Expert, Founder of 'Strong Cities in a Changing Climate', Germany**

Birgit Georgi is a freelance expert in the areas of climate change adaptation, environment and integrated urban development. She has a deep and broad integrated understanding of the urban environment and sustainability due to her long-standing professional experience in these fields for more than 25 years.



From 2007-2017 she worked with the European Environment Agency, initially as Project Manager for urban issues, and, since 2011, on climate change adaptation relating to cities and transport. Among Birgit's key contributions to the sector are the assessment reports; 'Urban Adaptation to Climate Change in Europe' (2012 and 2016), 'Adaptation of transport to climate change in Europe' (2014), and 'Quality of life in Europe's Cities and towns'.

Birgit was responsible for developing the interactive map book on urban vulnerability, the Urban Adaptation Support Tool, and the numerous case studies related to cities of the European Climate Adaptation Platform Climate-ADAPT. She supported the Commission in developing the Mayors Adapt initiative and its integration into the Covenant of Mayors for Climate and Energy. Birgit also organised the annual networking and learning event: Open European Day Resilient Cities. She has worked as an adviser for several EU projects such as PLUREL, SUME, RESIN and is a frequent speaker and moderator at many events on her topics.

Birgit's experience is complemented by her work at the German Federal Environment Agency from 1991-2007 where she developed action plans and supervised projects in the fields of sustainability planning, biodiversity, environmental management and sustainable transport. The scope ranged from local demonstration projects in Germany and other European countries to international activities, e.g. technical support in the framework of the UN Convention for Biological Diversity and as national contact point for the UNECE Programme, THE PEP.