Introduction
The science is unequivocal: the climate and biodiversity emergencies are real and we are beginning to experience their impact. In October 2018, the International Panel on Climate Change (IPCC) published a Special Report on Global Warming which set out with devastating clarity the impact that a rise of 1.5°C in global temperatures will have on the world. The IPCC stated that there remains a window of only one decade for us to make the radical changes needed to halt the warming of our planet and in doing so save millions of lives, protect our natural world and change the way we live for the better.

The changes we need to make in the coming decade are substantial, but we believe that they can be hugely beneficial to all of our people - urban, rural, young and old. We in the Green Party have been learning about the solutions to climate breakdown for 40 years. We know that climate action has to be at the heart of all our policies. This means that our housing policy delivers warm, affordable houses in strong and vibrant communities; our transport policy ensures that those communities can access zero or low carbon, affordable and reliable transport options; and our energy policy greatly reduces our costly emissions by ramping up renewables while also giving us complete energy security for future generations. We will deliver this change.

This is what sets us apart from other parties. Politicians from traditional parties can no longer think of climate action as an optional extra, tagged on to a ‘business as usual’ manifesto. They must stop ignoring the huge cost of inaction on climate change. Ireland will have to pay an annual bill of €275m in carbon fines and credits to make up for missing our 2020 emissions targets. These penalties, which will only increase in the years to come, could be used to retrofit our housing stock, build safe and segregated cycling infrastructure or build critical flood defences in places like Cork, Galway and Dublin.

This policy document sets out a pathway which, if implemented immediately, will transform Ireland from climate laggard to climate leader.

1.0 Ireland’s Emissions
Ireland has the third highest emissions of greenhouse gas in the EU, with our per capita carbon output more than double the rate in Sweden.1 Despite commitments to cut emissions by 20% by 2020, we have only achieved a paltry 1% reduction. Without significant intervention it is increasingly likely that we will fall well short of our international emission reduction commitments for 2030 as well.

The European Commission is proposing an increase in the overall EU CO2 emissions target to a 50-55% reduction by 2030. Ireland needs to set at least that level of ambition if we are to achieve near decarbonisation by 2040. At a minimum, this will require a 7.6% per annum reduction in annual emissions for the next decade. The outgoing government, for all of their talk of climate action, propose a 2% reduction in their ‘All of Government Climate Action Plan’.

Ireland can gain an economic advantage by trying and testing new low-carbon solutions, but we need to start the process now. One of our first tasks will be to work with the European Commission to advance the National Energy and Climate Action Plan for 2030. Within the first 100 days in government, we will also implement the Climate Action (Amendment) Bill to strengthen the powers of the Climate Change Advisory Council and introduce new five-year climate budgets. We will rapidly progress our environmental legislative agenda that was blocked by the outgoing Fine Gael led government. This will involve enacting our Waste-Reduction Bill and our Just Transition Bill, as well as progressing policy positions put forward in Dáil Motions, including in forestry and public transport.

2.0 A Just Transition
Fairness and equality must be at the heart of our decision making on the journey to becoming a low carbon society. We have a responsibility to protect those at risk of job losses and the most vulnerable members of our society.

Climate action presents an opportunity. The resources required to tackle climate change, if properly and adequately mobilised, can serve to improve our quality of life. Climate action can help to promote sustainable development, create new jobs and build communities. By following a community led development framework, climate action can address local priorities and tackle inequality, which will in turn accelerate positive climate outcomes.

We will enact our Just Transition Bill in the first 100 days of Government. The bill will establish a

new Just Transition Commission and mediation service which will work within a new form of social partnership, bringing affected communities, trade unions, businesses, climate transition experts and government together to see how we can overcome obstacles to a fair transition to the low carbon economy.

3.0 Energy

3.1 Energy Efficiency

To hit our targets, we need to reduce our overall energy demand. We will publish a new National Energy Efficiency Action Plan to deliver improvements in energy efficiency over the next decade. A key part of this plan will be to retrofit our residential buildings which account for 35% of our total final energy consumption. This is a significant undertaking. The estimated cost of retrofitting 1.7 million homes is in the region of €50 billion over 20 years. Our proposal for funding this project is to use European Investment Bank finance to harness a small fraction of the €100bn of private capital that is invested in Ireland every year. This will be supplemented by a substantial programme of public investment in retrofitting of the social housing stock, which will deliver savings on the fuel allowance and the household benefits package.

There are a number of non-financial barriers to progress. Chief among these is a lack of expertise and oversight of the process. We will establish a network of county and regional energy agencies, similar to the Tipperary Energy Agency, to ensure that it runs smoothly. We will also develop the necessary skills base by training up the 20,000 workers required to establish a fully-functioning retrofit industry. In addition to insulating and air-tightening our housing stock, these workers will replace the vast majority of oil-fired central heating systems that are currently used to heat some one million homes with heat-pump or renewable alternatives over the next decade. These measures would be transformative for households experiencing difficulty with their energy bills and would place fuel equality at the forefront of policy change.

3.2 Energy Supply

The key to this new energy revolution will be to balance the changing demand for energy with the variable supply that will come from our abundant renewable resources. Ireland has a comparative advantage in this energy revolution that is taking place across the world due to the extent of wind power available to us and the relatively low population density on our island. The cost of photovoltaic power has fallen 90% since 2010 and the cost of wind power has fallen 40% over the same period. The average cost of renewable power is now below the wholesale price of electricity and new advances in battery storage and in other renewable technologies is going to provide further impetus to the transition.

To make the most of these opportunities we will plan for the development of 5GW of offshore wind in the Irish sea by 2030 and 30GW of floating offshore wind resources from the Atlantic and Celtic seas by 2040. To store our plentiful renewables we will develop a new ‘power to gas’ infrastructure to convert renewable electricity to hydrogen. Surplus wind energy can also be traded across European energy markets as part of a North Seas Offshore electricity grid.

Just as important as large scale energy projects such as offshore wind are initiatives at the micro-level. Most importantly, we will empower communities and households to install 700,000 rooftop solar PV systems in Irish homes and on 55,000 commercial premises by 2030. This will provide for 5% of our electricity needs. It will be achieved by direct installation on public buildings and by changing building regulations to promote the installation of PV panels during any major renovation. We will remove the current limits of 50%/12m2 of roof space for solar panels and will enable households to sell surplus renewable energy back to the grid to allow communities to benefit from leading the transition to a low carbon economy. We will develop a Community Energy Strategy to facilitate community ownership of energy within a distributed grid.

With these changes underway, we will be able to reduce our reliance on fossil fuels. We will end the importation of fracked gas from other countries. Ireland’s territory and will stand firmly against the extraction of all fossil fuel sources anywhere in Ireland’s territory and will stand firmly against the importation of fracked gas from other countries. We will also introduce regulations to mandate large industrial users of energy to transition to zero carbon fuel sources and develop carbon capture technologies in their production processes within the next decade.

4.0 Transport

Transport is by far the largest source of energy-related CO2 emissions in Ireland. In 2018 it was responsible for 40% of the total. It is also the sector where CO2 emissions have grown the most since the end of the recession in 2012[2]

Investing in transport is the opportunity of a
generation to improve our quality of life and to tackle climate change. We will overhaul Ireland’s fragmented transport system, making public transport a real option for the vast majority of people, in both urban and rural settings, and ending our reliance on fossil fuels.

The only way to do this is to redress the imbalance in how we spend our transport budget. The current National Development Plan (Project Ireland 2040), which was drafted without any consideration of climate change, commits a staggering €5.7 billion to national road schemes. These roads only serve to bring more cars into our already congested cities and deprive Irish people of the fast, comfortable and accessible public transport services they need. Analysis by the Department of Transport estimates that the cost of traffic congestion in Dublin alone could rise to over €2 billion per year by 2033. The NDP is even more absurd when we consider the penalties we are already incurring as a direct result of our failure to reduce our emissions in line with international agreements.

In line with international recommendations, we will overhaul how we budget for transport in Ireland by doubling investment in public transport, securing 10% of the capital land transport budget for walking and 10% for cycling.

### 4.1 Walking

The recent increase in public transport usage relative to car usage is encouraging, but the reduction in pedestrian numbers is a cause for concern. We need more investment in pedestrian infrastructure to make our cities, towns and rural areas safe and comfortable to get around on foot.

We will empower local authorities to appoint Street Officers to actively patrol communities to ensure that the public realm is accessible to all. To speed up walking, we will introduce new regulations to reduce pedestrian signal waiting times to a maximum of 30 seconds and ensure that all pedestrians have enough time to cross the road. We will also roll out a ‘safe routes to school’ programme to make it safer for children to make their own way to school and implement school clean air zones that will restrict car access.

Unlike in many other countries, zebra crossings cannot be laid down without installing flashing Belisha beacons making them considerably more expensive. We will legislate to remove this requirement to promote the proliferation of zebra crossings in towns and cities around the country. This will happen in tandem with a major programme of urban renewal and the development of greenways to make both urban and rural areas more pleasant to walk in.

### 4.2 Cycling

Safe, fast and accessible cycle routes are critical for the transformation of our urban and rural transport systems. To promote cycling we will progress the National Cycle Policy Framework, which was adopted by a previous Government in 2009 but was never implemented. We will ensure that every Local Authority has a high-quality cycling policy and implements best practice when investing in cycling infrastructure.

We will improve cycle safety by introducing a programme of bicycle maintenance and safe cycling education in schools; making cycle safety a core part of the driving test; retrofitting dangerous junctions; and ensuring that all new Heavy Goods Vehicles are designed to standards which improve cycle safety. Under our policy, all trucks will have to be fitted with sensors, audible turning alarms, extra mirrors and side-safety bars to improve safety for cyclists and other vulnerable road users.

To enhance cyclists’ speed and mobility we will adopt common practices from other European countries. One such policy is to allow cyclists to turn left on a red light while giving way to passing traffic and to pedestrians crossing on a green man. Another common policy is to allow contra-flow cycling on certain sign-posted, low-traffic one-way streets. We will programme traffic lights to give cyclists a head start, where appropriate, and deliver ‘green waves’ for cyclists on heavily cycled routes.

We will also improve the overall connectivity of our transport system by developing bike-and-ride facilities and ensuring that trains have space to store bikes. Another important part of the puzzle is to keep cycle costs low. The Green Party was responsible for introducing the successful Bike-to-Work scheme, and we will increase the €1,000 spend limit to facilitate the purchase of e-bikes.

### 4.3 Investing in a World Class Public Transport System

The cornerstone of our public transport policy is a massive extension and upgrading of the rail network, including the electrification of existing lines and the development of light rail systems in Cork and Galway. We have a vision for a connected Ireland in which rail transport is a real option for most people in rural Ireland. We will therefore prioritise a review of derelict train lines throughout the country with a view to revitalising and reopening some routes. We will also set out a timetable and work programme for commuter rail improvements in Galway, Limerick, Cork and Waterford City.
Improvements are also required in Dublin and its commuter belt. Among the upgrades we consider particularly important are the following:

› the northern commuter line from the existing end of the DART network in Malahide past Drogheda;
› the line from Heuston past Hazelhatch and completion of this line between Inchicore and Park West;
› the line from Connolly past Maynooth;
› the Kildare Route Project Phase 2 and the Navan Railway Line (extension from M3 Parkway).

We will also progress various other infrastructure projects such as the construction of the Metro North from North of Swords to the South of Ranelagh Luas station and initiate an immediate review of the three options for extending the Metro further South from there. We will advance the appraisal, planning and design of the Luas to Bray, Lucan, Poolbeg, and Blanchardstown (via Finglas). Finally, we will reconsider the case for the underground DART Interconnector between Spencer Dock and Inchicore.

Another key element of our public transport policy is bus transport, particularly in rural Ireland. A lack of public transport coupled with virtually no cycling or walking infrastructure means that people living in towns and villages across rural Ireland are left with no option other than the private car. We believe that it is possible to create a Rural Bus Network which would provide an affordable, reliable way to get around in rural Ireland. The recently introduced bus network in Kilkenny City is an excellent example of such a route, with two bus routes running every 30 minutes Monday to Saturday and hourly on Sundays. This service could be replicated in cities and large towns across the country with the right planning and investment. We also plan to scale up the Rural Transport Programme (Local Link) and reverse the decision to charge for the Primary and Post-Primary Schools Transport Schemes.

In our cities we will continue to support and engage with the BusConnects project and its ongoing consultation with communities to ensure that facilitating walking and cycling and creating a quality environment are primary goals of the project.

In addition to electrifying our rail network, we support the roll out of electric and low-emission hybrid bus fleets. This would greatly improve air quality in our towns and cities and would help to store energy generated from variable renewable sources.

### 5.0 Land-Use

#### 5.1 Agriculture

The agricultural sector, its outputs, supporting structures and stakeholders are at the heart of creating a sustainable society and a successful national economy. At the core of this sector, which is so fundamental to our national identity, is our farming community. The current system of farming is not working for farmers, the climate or the economy. We will reform the system to improve farm incomes, reduce greenhouse gas emissions and boost our biodiversity. The key mechanism for achieving this change is reform of the Common Agricultural Policy. We will make sure that farmers are well paid to look after the land. This will involve a move away from intensive agricultural production towards forestry, silvopasture, horticulture, agri-tourism and organic farming.

In addition to the CAP, we will direct national-level policies towards the same aims. We will expand the Organic Farming Scheme to support producers of cereals, fruits, vegetables, legumes and other plant-based outputs. We will also oversee a substantial increase in funding for sustainable horticulture and redirect grant funding towards farm-to-fork supply chain activities.

#### 5.2 Forestry

We have low levels of forest cover compared to our European counterparts, and we need to address this shortfall. Ireland has ideal conditions for forestry, so why are we not utilising this valuable resource to its fullest? The current government target is to plant 15,000 hectares per year, but in practice the actual planting rate is falling well short of this target, currently at around 6,500 ha per annum.³

Now is the time to implement a bold and ambitious plan for Ireland’s forestry sector. Forests serve multiple and interrelated social, economic and environmental functions. Besides providing jobs, income and raw materials to the traditional timber industry, forests continuously sequester

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carbon as they grow and accumulate biomass. Products made from forest biomass store carbon and can provide a substitute for carbon intensive products such as plastic, concrete and steel.

We want to achieve a minimum 20,000 ha per annum in close to nature-continuous cover forestry. This means a move away from a narrow vision of 30 year clear-fell cycle to a permanent woodland approach that would provide greater and more diverse social, environmental and economic benefits to society as a whole. We aim for a target of 30% tree coverage by 2050.

We will implement this policy by developing a new afforestation programme which will start with the payment of a special planting premium to 120,000 farmers around the country. This would incentivise the planting of one hectare of woodland on their farm which will act as a carbon store, help promote wildlife corridors and provide a future fuel source for the household.

5.3 Restoring our Peatlands

The restoration, rewetting and rewilding of the peatlands which make up 20% of our land area can help protect insect and bird life as well as storing carbon. Undisturbed peatlands accumulate carbon from the air at a rate of up to 0.7 tonnes per hectare per year. In Ireland peatlands are estimated to store 1,085 Mega tonnes (Mt) of carbon, this corresponds to 53% of all soil carbon stored in the island of Ireland on just 16% of the land area. We need to draw up a comprehensive Land Use Plan to begin the transformation of this land to a valuable carbon sink. In government, we will stop burning peat for electricity and prevent the resumption of industrial peat extraction following the High Court’s striking down of Fine Gael’s regulations purporting to exempt it from planning permission. We will charge Bord na Móna with undertaking a major programme of restoring bogs in its ownership, and the maintenance of privately owned peatlands will be incentivised through reform of the CAP.

6.0 Closing the Loop: Waste reduction and the Circular Economy

6.1 Waste Reduction

Globally, we now produce nearly 300 million tons of plastic every year, half of which is for single use, after which it is thrown away. More than 8 million tons of plastic is dumped into our oceans every year. Ireland is the top producer of plastic waste in Europe; generating an average of 61kg per person every year - almost double what the UK produces. Furthermore, we cannot recycle this waste in Ireland. Up until 2017, when the Chinese government closed its market for waste, we were exporting up to 97 per cent of Irish plastic to China. We cannot continue to generate such unmanageable levels of waste.

We have been pushing for the Dáil to legislate for measures to help tackle our waste problem, in particular plastic waste. Our Waste Reduction Bill would go a long way to tackling the problem of single use plastic waste in this country. In government we will swiftly enact our Waste Reduction Bill to reduce the use of single use plastics and provide a nationwide deposit and return scheme for beverage containers.

We do not regard mass burn incineration as a sustainable technology. We therefore propose to discontinue plans to build incinerators anywhere in Ireland. This method of waste treatment simply creates an incentive for waste creation and a centralisation of operation, neither of which are sustainable.

6.2 Moving to a Circular Economy

A key part of addressing our climate and biodiversity crises is changing the way we consume: that means moving away from the linear economy and the ‘take-make-dispose model’ of consumption and moving to a circular economy.

The Netherlands is leading the way in moving towards a circular economy, and has put three key goals at the heart of making this move:

- Ensuring production processes use raw materials more efficiently, so that fewer are needed.
- When new raw materials are needed, using sustainably produced renewable (inexhaustible) and widely available raw materials, like biomass – raw material made of plants, trees and food waste. This will reduce dependency on fossil fuel resources, and is better for the environment.
- Developing new production methods and designing new products to be circular.

The Dutch are currently implementing an action plan that will lead to a 50% reduction in raw materials consumed by 2030 and a waste free economy by 2050. But this can only be achieved, as the Dutch government has pointed out, if the same changes are being made internationally. We will learn from models of best practice and work with experts both at home and abroad to implement measures to move Ireland from a linear economy to a circular one. This will be done by developing a stronger recovery industry, reducing
imported goods, and developing an associated manufacturing industry.

To follow the lead of the Netherlands, we will develop and implement a National Circular Economy Plan. This will involve strengthening and expanding the role of the Rediscovery Centre - the National Circular Economy Centre - to deliver training and education across the country on the transition to a circular economy. We will seek to balance landfill levies with incineration levies to ensure the highest rates of waste reduction, reuse and recycling. Only in this way can society move towards a circular economy which is the basis for a truly sustainable future. We would seek to end reliance on incineration by 2040. Finally, we will promote the circular economy by exempting repair and reuse services from VAT.