Introduction

Virgin Media O2 Joint Venture

Virgin Media O2 ("the Joint Venture" or "VMED O2") launched on 1 June 2021, a 50:50 joint venture between Liberty Global and Telefónica SA, which brought together Virgin Media's operations in the United Kingdom ("UK") ("Virgin Media") with O2 Holdings' operations in the UK ("O2 Group"). The Joint Venture issued its initial Green Bond Framework on 11 June 2021 ("the Initial GBF"). The Initial GBF was developed ahead of the Joint Venture forming – a period in which legal restrictions prevented O2 Group and Virgin Media from developing a sustainability programme for the newly combined operations – and as such, the focus of the Initial GBF was on Virgin Media's already existing sustainability strategy, the Meaningful Connections Plan.

Once the transactions to form the Joint Venture closed, VMED O2 began a review of the existing programmes with the aim of establishing a single sustainability strategy for the Joint Venture's combined operations ("the VMED O2 Sustainability Strategy"). It was acknowledged in the Initial GBF that, once the VMED O2 Sustainability Strategy was put in place, the Initial GBF would be reviewed and, where necessary, amended. The expected outcome was that this revision would identify additional Eligible Green Projects for VMED O2, as well as revision to the governance arrangements. The VMED O2 Sustainability Strategy, Virgin Media O2's Better Connections Plan (discussed below), was launched by VMED O2 on 24 May 2022 and this document sets out the revised Green Bond Framework for VMED O2.

Virgin Media O2 in the UK

Virgin Media O2 offers four multi award-winning services across the UK: mobile, broadband internet, video and fixed telephony services.

Our mobile network is operated under the O2 brand and is a leading U.K. mobile network operator ("MNO") whose primary business is providing mobile telecommunications and related services. Under our premium O2 brand, we offer a comprehensive range of mobile services and products to consumer and business customers, including mobile voice, messaging and data services, sales of handsets, tablets, wearable devices and other hardware, WiFi services, security services, cloud services, digital payment services, certain fixed-line services for businesses, Internet of Things ("IoT") service and products and insurance products. Through its digital loyalty programme, Priority, O2 offers its customers a range of exclusive deals and perks and this programme was extended to our fixed-line customers in November 2021.

In addition to its offerings under its premium O2 brand, we also seek to access additional customer groups through, for example: (i) our wholly-owned Mobile Virtual Network Operator ("MVNO") giffgaff; (ii) our joint venture MVNO with Tesco to operate Tesco Mobile; and (iii) other MVNOs such as Sky Mobile, Lycamobile and Manx Telecom.

Our fixed-line network delivers the fastest widely-available broadband internet speeds to homes and businesses. We're expanding this through continued investment in our Project Lightning programme, which has seen our network footprint reach an additional 2.8 million premises so far to pass 15.7 million UK premises overall. We have also invested to bring next-generation gigabit speeds to our entire broadband internet network by the end of 2021, making us the UK's largest gigabit operator, and have committed to a fibre to the premise ("FTTP") upgrade of our existing network by 2028.

Our interactive video service brings live TV, thousands of hours of on-demand programming and the best apps and games to customers through a set-top box, as well as on-the-go through tablets and smartphones. We are also one of the largest fixed-line home phone providers in the UK.

Virgin Mobile is a MVNO offering innovative services with 5G connectivity. Through Virgin Media O2 Business we support entrepreneurs, businesses and the public sector, delivering a range of mobile and fixed-line connectivity offerings and tailor-made services.

Risk Management at Virgin Media O2

At VMED O2, risk management is a key consideration in our day-to-day activities. Our employees, partners and suppliers all have a responsibility to identify, manage and report risk, in accordance with our stated risk management policy, framework, and process. VMED O2 has implemented a new Group-wide risk management framework which combines the best elements of the previous Virgin Media and O2 frameworks, applies core principles from COSO and ISO31000 standards, and is tailored to the VMED O2 Group. The framework enables the business to consistently identify, assess, manage and monitor risks across the enterprise and escalate priority risks that could adversely affect the future success of VMED O2. The most significant risks to the business are presented to the Executive Management Team at regular intervals each year for discussion, validation and direction, as well as being reported to the Audit Committee at regular intervals for further oversight and assurance.

The key environmental risks are associated with climate change - including the continued availability of renewable energy and the potential for heating and floods to impact the delivery of our services. Identified risks for online safety are managed through our age verification and content classification procedures. In 2020, new risks relating to the current global health pandemic and its effect on our supply chain have been recorded. In addition, our management systems for ESG practices such as environment, health & safety, business continuity and anti-bribery and corruption ensure we continually monitor the legal and regulatory requirements applicable to us and apply these requirements to our operations and change activities.

Virgin Media O2's Better Connections Plan

Launched in May 2022, VMED O2's Better Connections plan underscores our commitment to make our business even better for people and the planet. Our purpose, people and products will power stretching new goals to reduce our impact on the climate, eradicate e-waste, and connect the disconnected:

- Enabling a zero-carbon future: we will use our digital know-how and infrastructure to help create a zero-carbon future, faster.
- Accelerating a circular economy: we will champion a zero waste and more circular technology sector, where material is valued and kept in use - again and again.
- Connecting the disconnected: we will boost digital inclusion, so that everyone can stay connected to the people they love and the services they rely on.
- Building a better business: we will create a leading inclusive workplace where everyone can be their best, proudly uphold our values, and get involved with local communities.

Enabling a zero-carbon future

To prevent the worst impacts of climate change, we will all need to change the way we live and work - for the better, and for good. At VMED O2, we believe that technology can play a pivotal role in the shift towards a decarbonised future, and have set two key goals to guide our climate action:

1. Greener Business – we are targeting net zero carbon in our full value chain, including our operations, products and supply chain, by 2040 (with interim targets for 2025 and 2030).
2. Zero-carbon future – we will help accelerate the UK's transition to net zero by using our products and services to help our customers avoid the use of 20 million tonnes of CO_2.

To keep us on track, assess our progress and make sure we always act in line with climate science, we're partnering with industry experts, organisations and coalitions - including the Science Based Target initiative's ("SBTi") Net-Zero Standard and The Carbon Trust's Route to Net Zero Standard.

As well as mitigating our own climate impact, we're also providing the connectivity foundations for smart cities, smart metering and autonomous vehicles that could save up to 20 million tonnes of carbon by 2025. To help small and medium businesses reduce their carbon emissions, we've launched a Net Zero Hub in partnership with the British Chambers of Commerce. And we'll continue to educate and inform our customers about how they can live lower-carbon lives through our TV platform, advertising, venues and partnerships.

Accelerating to a circular economy

We believe that bold action needs to be taken to combat the growing problem of electronic waste. We're pledging to reduce the huge numbers of devices that end up in landfill every year by extending the life of the devices we sell and encouraging the reuse of products and raw materials. Our 2025 circularity targets are:

1. A zero waste future – we are targeting zero waste operations and products.
2. Circular by design – we will enable 10 million circular solutions and actions to help customers tackle e-waste.

We'll take a 're-use first' approach to our branded products and reduce our reliance on virgin raw materials in new products; make sure that 100% of customer packaging for own-branded products is widely recyclable and contains zero single - use plastic; and reuse or recycle 100% of all returned customer and network equipment.

We'll also seek to improve awareness of e-waste - and how customers can tackle it by recycling, rehoming old devices or buying second-hand through schemes such as O2 Recycle, Like New (refurbished devices), or our take back scheme for routers and set-top boxes.

Help eradicate data poverty

Our Better Connections plan sets out our ambitions to help eradicate data poverty, boost digital skills and improve digital literacy - connecting the disconnected across the UK so that everyone can participate in a digital society. Our aims are centred around three key 2025 targets:

1. Connect one million digitally excluded people through free and affordable connectivity programmes, tariffs and services.
2. Improve the digital literacy of one million people so they can access essential online services.
3. Digitally empower one million unpaid carers, to improve their lives and make caring easier.

To raise awareness of data poverty, and take steps to make access to data fairer, we established the UK's first ever National Databank in July 2021 with the Good Things Foundation. We've since launched Tech Lending Community Hubs - connecting community groups with data, devices and support - and our Community Calling scheme rehomes old smartphones, together with a year's worth of free data, to those in need.

We are also aiming to improve the digital literacy of one million people through tailored training that will help provide the digital skills and confidence needed to access essential online services. A national network of 5,000 digital inclusion hubs, co-ordinated through the Online Centres Network, will empower local communities in deprived areas to tackle exclusion and inequity.

Finally, our ongoing partnership with Carers UK will shine a spotlight on the mental health and wellbeing of unpaid carers and focus on developing the best digital tools to support them and make caring easier.

A better way to do business

At VMED O2, we believe that how we do business matters. We're determined to champion inclusive, equitable values, create a great place to work, and ensure our partners and suppliers uphold our stringent ethical and environmental standards.

Our new diversity, equity and inclusion strategy, All In, has four 2027 ambitions to increase workplace inclusion:

1. To have equal representation of women and men in our senior leadership team.
2. To have driven forward progress for gender parity – including all gender identities and expressions.
3. 25% of the organisation will be from underrepresented ethnic groups.
4. 15% of the leadership team will be from underrepresented ethnic groups.

We'll introduce more family-friendly policies and offer support and flexibility to all employees so they have everything they need to be their best – both at work and in their personal lives. Employees can also play a greater role in the places they live through our Take 5 scheme which offers five paid volunteering days a year, with the ambition to support 1 million people in communities across the UK by 2025.

Building on our ethical sourcing expertise and using our spend to improve sustainability and social impact within our supply chain is also a key focus: we'll ensure that all major purchases commit contractually to defined sustainability requirements and aligned carbon reduction goals.

Green Bond Framework

To support its Better Connections Plan, VMED O2 has adopted this revised and updated Green Bond Framework ("the 2022 Framework"), under which VMED O2 can issue Green Bonds to finance or refinance projects of VMED O2, enabling VMED O2 to meet its environmental objectives. The 2022 Framework is aligned with the Green Bond Principles 2021 ("the GB Principles") administered by ICMA, which are a set of voluntary guidelines that recommend transparency and disclosure and promote integrity in the development of the green bond market.

The 2022 Framework is presented through the following key pillars:

- Use of Proceeds
- Process for Project Evaluation and Selection
- Management of Proceeds
- Reporting
- External Review

The 2022 Framework outlines the commitments made by the Joint Venture with respect to any Green Bonds in issue or that will be issued.

Use of proceeds

VMED O2 will (re)finance Eligible Green Projects ("VMED O2 Eligible Green Projects") that support VMED O2's transition to a net zero carbon and zero waste future for the UK. An amount equal to the net proceeds from the issuance of Green Bonds can be used to refinance existing projects and expenditures, in accordance with the eligibility criteria outline below, with a lookback period of up to 36 months from the issue of the Green Bonds.

In addition, VMED O2 intends to fully allocate an amount equal to the net proceeds from the issuance of Green Bonds to the financing and refinancing of VMED O2 Eligible Green Projects, as defined in this 2022 Framework, no later than 36 months after the issue of the Green Bonds.

A list of VMED O2 Eligible Green Projects that may be considered by Virgin Media O2 is shown below, together with the alignment to the Sustainable Development Goals ("SDG") adopted by the United Nations:

GB Principles category	VMED O2 Eligible Green Projects	SDG Alignment
Energy efficiency	Network transformation (fixed-line & mobile) that result in energy efficiency as set out below. This list may be further updated as technologies and other circumstances evolve. • Rollout of full-fibre and fibre-rich networks, implementing DOCSIS[1] 3.1, and investment in mobile 4G & 5G networks to underpin the UK's digital revolution and connectivity, enabling smart cities, smart homes and smart transport systems • Achieving target of PUE <1.5 for data centres through our data centre energy efficiency and free cooling programme known as OREO (overall room energy optimisation) • Rolling out digital fixed-line telephony (VOIP) in place of traditional copper-based systems, driving energy efficiencies • LED swap-outs in technical and people sites • Virtualisation of network delivering energy efficiency benefits • Electrical power monitoring systems for the network • Improvements in supporting network infrastructure, including cooling optimisation, smart management, intelligent lighting, automation maintenance • Effective Life Cycle management of electrically powered Network, Technical site and IT assets Purchase of more power efficient Customer Premises Equipment (CPE) compared to baseline prior models (CPE purchases also drive Circular Economy benefits including (i) increasing the recycled content in manufacture and (ii) maximising end of life recycling). Finance the development and implementation of products and services based on Internet of Things, big data and/or artificial intelligence, which aim at energy efficiency and conservation of natural resources. Potential technologies include financing of hardware, software and innovation, such as: • New IoT connectivity with technologies including Narrowband-IoT, which is a Low Power Wide Area ("LPWA") network technology and can facilitate increase energy efficiency, improve network coverage and enhance the duration of batteries. *Excluding any applications for fossil fuel technologies*	(SDG 7 Affordable and Clean Energy) (SDG 9 Industry, Innovation and Infrastructure) (SDG 11 Sustainable Cities and Communities)
Renewable energy[2]	• On-site renewable power generation from sources such as solar and wind to reduce grid dependency and increase security of supply e.g. solar PV installations on technical sites	(SDG 7 Affordable and Clean Energy)

Clean transportation	• Switching fleet to electric vehicles and hybrid vehicles that comply with a 50gCO_2/km threshold (fleet over 4,000 vehicles at 31 December 2021). • Electric vehicle charging points at offices and at other sites with staff.	
Circular economy adapted products, production technologies and processes	• Electrical product take-back, repair and refurbishment to enable the reuse of customer products	

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(1) DOCSIS - Data Over Cable Service Interface Specification

(2) Where VMED O2 controls the bill, it purchases 100% of the power for its mobile and fixed-line network from renewable sources. These ongoing operating expenses are not considered eligible expenditure. If and when VMED O2 enters into medium to long term power purchase agreements (PPA) that support the construction of incremental generating capacity, this position may be re-assessed.

Process for project evaluation and selection

As part of the integration following the formation of the Joint Venture, VMED O2 has established an Environmental Steering Committee ("the Environmental SteerCo"). The Environmental SteerCo has assumed the responsibilities of the Better for the Planet committee ("the BftP Committee") cited in the Initial GBF with regard to overseeing the selection of VMED O2 Eligible Green Projects in accordance with the eligibility criteria described above.

The Environmental SteerCo is comprised of senior representatives from relevant operational teams and supported by the Sustainability and Finance teams. It is chaired by VMED O2's Head of Environment, Climate and Nature and attended by VMED O2's Chief Technology Officer, a member of VMED O2's Leadership Team.

The Environmental SteerCo's terms of reference set as its purpose to act as a sub-committee of VMED O2's Sustainability and Responsible Business committee in managing the environmental aspects of VMED O2's business. The Environmental SteerCo will manage all decisions regarding the delivery of VMED O2's environmental strategy, communications plans and project prioritisation in addition to acting as the steering board for key environmental projects. The Environmental SteerCo represents key areas of the VMED O2 business delivering and benefitting from these environmental projects.

The Environmental Steerco's meets on a bi-monthly basis and its responsibilities include:
1. Supporting the development and delivery of VMED O2's environmental strategy, including communication of the environmental strategy to internal and external stakeholders;
2. Our Environmental Management system;
3. Key environmental projects and related Executive OKRs (Objectives Key Results);
4. Green Bond financing.

With regard to the fourth item, the Environmental SteerCo has delegated the review and approval of proposed allocations of spend on VMED O2 Eligible Green Projects to a "Green Bond sub-group". The Green Bond sub-group is drawn from the Environmental SteerCo membership, with the Green Bond Registrar and a Treasury representative also included as invited participants. The Green Bond sub-group meets at a minimum bi-annually for:

1. the review and approval of proposed allocations of eligible spend, including deciding on the inclusion of spend on new eligible projects;
2. the review and approval of the periodic Allocation and Impact Reporting;
3. monitoring of the project portfolio for outcomes outside of the 2022 Framework's eligibility criteria;
4. the annual monitoring of the continued eligibility of the VMED O2 Eligible Green Projects as set out in this 2022 Framework; and
5. following circulation for review and comment to the Environmental SteerCo, the final review and approval of any revisions to the Green Bond Framework.

The Green Bond sub-group notifies the Environmental SteerCo of decisions made and provides feedback on its activities to the Environmental SteerCo at the latter's regular bi-monthly meetings.

Management of proceeds

An amount equal to the net proceeds of any Green Bonds raised under this Framework will be allocated by the Joint Venture to finance or refinance VMED O2 Eligible Green Projects, as per the eligibility criteria and project selection process outlined above.

Such allocation will be reflected in VMED O2's internal records by the use of a Green Bond Register. The Green Bond Register will be administered by the Green Bond Registrar, a member of VMED O2's Finance team. Proposals for the allocations of eligible spend will be subject to the review and approval of the Green Bond sub-group prior to their inclusion in the Green Bond Register.

 Any portion of the net proceeds that has not been allocated to VMED O2 Eligible Green Projects will be managed in accordance with VMED O2's standard liquidity management practices, whereby funds may be invested in bank accounts, money market deposits or institutional money market funds that meet high credit quality standards.

If for any reason a project in the portfolio cease to be eligible, the proceeds initially allocated shall be reallocated to another VMED O2 Eligible Green Project, based on the same process. Replacement of the project(s) will be done on a best effort basis within a reasonable period of time

Reporting

The Joint Venture will make available reports covering allocation of the net proceeds to the VMED O2 Eligible Green Projects and reports on the impact of the VMED O2 Eligible Green Projects. The reporting will be made available within one year from the issuance of any Green Bonds and will be updated annually as at a calendar year- end reporting date until full allocation of the Green Bond. The reporting will be on an aggregate basis, at the level of the project portfolio. It will be available on the Joint Venture's website news.virginmediao2.co.uk and will include:

Allocation reporting

- Total amount allocated to the VMED O2 Eligible Green Projects Portfolio, reported by project category
- Share of net proceeds used for financing vs. refinancing
- Balance of unallocated proceeds (if any)

The Joint Venture intends to engage their external auditor to review the reporting of the allocation of proceeds towards VMED O2 Eligible Green Projects.

Determining the pound sterling equivalent of non-functional currency proceeds and eligible expenditure.

VMED O2's functional currency for financial reporting purposes is pounds sterling (GBP). VMED O2 has issued, and may in the future issue, Green Bonds in currencies other than GBP. VMED O2 may also incur eligible spend in currencies other than GBP, which will be reflected in VMED O2's accounting books and records at GBP equivalent amounts. Where this occurs, VMED O2 will follow its existing accounting policies with regard to foreign currency translation in determining the GBP equivalent of such non-functional currency items when determining the net proceeds of any Green Bond issue or the GBP equivalent amount of eligible spend for allocation purposes.

Impact reporting

On a best effort basis, the Joint Venture intends to report on the environmental impacts achieved by funded VMED O2 Eligible Green Projects. The impact reporting will include a description of VMED Eligible Green Projects and impact metrics such as those listed below measured at the level of the overall business. Where relevant, information may be provided on data reporting, and impact assessment methodologies, to increase transparency. VMED O2 will, on a best-efforts basis, align the reporting with the project approach described in ICMA's Handbook on a Harmonised Framework for Impact Reporting.[1] Impact indicators may include:

Eligible Green Projects category	Examples of impact indicators
Energy Efficiency	• Tonnes of CO2e (scope 1 and 2) per Terabyte data for fixed-line and mobile networks • Tonnes of CO2e (scope 1 and 2) per Fixed-line customer and mobile connection • Tonnes of CO2e (scope 1 and 2) for VMED O2's combined operations • Electricity use (kWh) per Terabyte data for fixed-line and mobile networks • kgCO2e per CPE unit (energy in use)
Renewable Energy	• Annual GHG emissions reduced/avoided in tonnes of CO2 equivalent
Clean Transportation	• Percentage of electric vehicles out of total owned and leased vehicle fleet at most recent year end • Number of clean vehicles deployed (e.g. electric)
Circular economy adapted products, production technologies and processes	• Numbers of CPE (Set top boxes & modems) returned, re-used or re-cycled per annum

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[1] [June 2021 version of ICMA's Handbook: Harmonised Framework for Impact Reporting](#)

External Review

VMED O2 UK Financing I PLC has engaged an external verifier, Sustainalytics, to review this 2022 Framework. Sustainalytics has provided an independent Second Party Opinion on the Framework's environmental credentials and its alignment with the Green Bond Principles. This document will be available on VirginMediaO2's website news.virginmediao2.co.uk, along with the Framework.

On an annual basis, an external auditor (KPMG or any subsequent external auditor) will perform a limited assurance review of the allocation of proceeds towards VMED O2 Eligible Green Projects as at the year end as provided in the annual allocation report. This limited assurance review will also include review of the impact reporting metrics for the year.

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