Safety, Sustainability and Human Resources Panel

Date: **15 November 2023**

Item: **Implementation of the Corporate Environment Plan - Capital**

This paper will be considered in public

1 Summary

1.1 In September 2021, we published our Corporate Environment Plan (CEP) which sets out our approach to supporting the Mayor's target of a net zero carbon London by 2030 and delivering our existing environmental commitments, as set out in the Mayor's Transport Strategy and London Environment Strategy.

1.2 This paper provides an update on key metrics and ongoing progress against our CEP and Green Strategy, within Capital.

2 Recommendation

2.1 **The Panel is asked to note the paper.**

3 Background

3.1 Capital's purpose is to build and drive whole life asset outcomes. Since the last update to the Panel, Capital has been formally established as a new Chief Officer Group incorporating Capital Projects Delivery, Project Management Office, Construction Management and Engineering and Asset Strategy. A new Director of Engineering and Asset Strategy was also appointed, who has taken on responsibility for Environment on behalf of the Capital leadership team.

3.2 The CEP published in 2021 sets out our future approach to improving our organisational performance. It is a forward-looking plan with a focus on the environment strand of sustainability, providing more detail on our ambition, targets and plans.

3.3 The CEP framework and ambitions are structured around five environmental themes: Climate Emergency, Air Quality, Green Infrastructure, Sustainable Resources and Best Environmental Practices.

3.4 Our CEP is underpinned by actions required to “make it happen”. This includes the need to:

(a) make it a core part of our culture, advocated by leaders and championed in every team;

(b) incorporate into standards, specifications, contracts and management systems; and

(c) deliver through business planning, asset management and procurement.

3.5 In addition to the CEP, we launched our TfL Green Strategy and roadmap in July 2023. Both the CEP and Green Strategy set out our environmental ambitions, what success looks like, and the actions we will take through our operations, maintenance and construction activities. This forms the detailed environmental pillar of our sustainable development approach, as well as being a core part of our 2023 TfL Strategy.

3.6 The TfL Green Strategy prioritises three themes from our CEP: Reduce carbon emissions and adapt to climate change; improve air quality; protect, connect and enhance green infrastructure and biodiversity. These three themes form the main structure of this paper, along with the broader actions undertaken to ‘make it happen’. The other two themes from the CEP (sustainable resources and best environmental practice) are covered throughout the paper where appropriate.

4 Making It Happen

4.1 To deliver on our environmental ambitions highlighted in the CEP, we have undertaken a number of pan-capital actions noted in this section.

Establishing our Governance

4.2 This year we have stepped-up our commitments and plans to drive forward the Green agenda within Capital:

(a) New Capital ‘Green' Scorecard Measures and Green Milestones introduced:

(i) ten-fold increase in the weighting of ‘Green’ metrics - from two per cent in 2022/23, now increased to 20 per cent in 2023/24;

(ii) metric for percentage of Capital workforce who have completed Carbon Literacy Training;

(iii) metric for green capability upskilling;

(iv) metric for green improvement milestones achieved; and

(v) Capital Environment Improvement Plan created to detail the plan for delivery of the Green scorecard this year;

(b) Capital leadership “Green” meeting initiated; and

(c) Capital Environment Steering Group created to guide capital environment workstreams related to the new green metrics.

Creating Dedicated Teams

4.3 We have established the need for a dedicated 'Environment and Sustainability Engineering' team to help accelerate the delivery of environmental improvement projects and grow our functional capability – upskilling, standards and tools. A new Head of Environment and Sustainability Engineering was recently appointed and the team is being formed.

4.4 Furthermore, a new Net Zero matrix team is being formed and will have three key accountabilities:

(a) ensuring net zero projects are designed, developed and delivered to plan;

(b) building and initiating a pipeline of net zero projects; and

(c) providing wide-spanning visibility of all activity through reporting on the 'Virtual Net Zero Programme'.

Capital is playing a leading role in this.

Launching our Capital Green Skills Plan

4.5 We have produced a Green Skills Plan, tailored for the needs of teams across Capital. This builds upon the success of Carbon Literacy Training: 20 per cent of Capital has now attended the training, including the Capital senior leadership team.

4.6 The Plan sets out a definition of an 'Environment Competent' colleague linked to an 'Essential' Environment Training list tailored for colleagues' role within Capital, whether they are in Project Delivery, Project Management Office, Construction Manager or Engineering and Asset Strategy. It includes the need to update competency schemes, including the Engineering Assessment Framework and Project Engineering Accreditation Scheme, to bolster or add new environment competencies.

Delivering our Safety, Health and Environment (SHE) Improvement Plan - Environment Quarter

4.7 To increase environmental awareness within Capital and equip our teams with knowledge of how to apply environmental processes in delivery, over 20 events were delivered between May and July 2023. Each month focused on a CEP theme (Managing Carbon – climate mitigation, Biodiversity and Green Infrastructure, Flood Risk, Climate Change Adaptation).

4.8 This formed part of our SHE Business Improvement Plan, the second quarter dedicated to the theme of "Making Environment as Business as Usual".

4.9 The events included introductory webinars, training webinars, and panel debates with various subject matter experts and key stakeholders. All events were well attended with 150 to 350 attendees per event. The webinars were recorded, which will contribute towards our library of environmental training material. These are available to colleagues across TfL as well as colleagues in Capital.

Collaborating with the Sustainability Staff Network Group

4.10 TfL's Sustainability Network Group raises awareness on issues and opportunities around sustainability, fosters exploration of possible solutions, supports colleagues to overcome challenges and celebrates successes along the way.

4.11 The network has also partnered and supported areas of the business in their work to increase awareness around climate change and sustainability. For example, a continuous collaboration has been put in place with our Engineering and Asset Strategy Directorate and the wider Capital. In May 2023, joint events were organised around the theme of making carbon management part of business as usual.

Digitising the Environmental Evaluation (EE) process

4.12 EE is mandated as part of our project management framework. The EE process is to identify and assess the environmental risks and opportunities delivered through our projects/schemes. The EE process will be codified in the form of a digitised tool, which will go live towards the end of 2023. The digitised tool has provided the opportunity to refresh the EE assessment questions to lock in delivery of Green roadmap and CEP aims and objectives throughout the project lifecycle. The digitisation will also make the tool easier to use, improve reporting and allow easier tracking of actions.

Setting our Environmental Asset Management Objectives

4.13 The Environment Asset Management Objective is one of six objectives used to assess and measure all of TfL's Assets against the Levels of Service framework.

4.14 Over the past year our Asset Strategy team, working with key subject matter experts, have matured the Environment Asset Management Objective to measure the Assets and Networks performance against Decarbonisation, Climate Change Adaptation and most recently developed a new Green Infrastructure measure. These three metrics and the Asset and Network performance have been fed into the scenario analysis to support the development of the 2024 Business Plan and will be used to help inform the prioritisation of the asset renewals budget.

Creating and Centralising an Environment Opportunities List (EOL)

4.15 Our Engineering and Asset Strategy team has created a new EOL, which brings together initiatives from across TfL that could contribute to achieving Net Zero carbon in our operations by the end of December 2030. Each opportunity has been assessed to enable prioritisation for Business Planning and to flag items requiring further development for future years.

4.16 The EOL also captures opportunities for climate change adaptation, with work ongoing to develop these for assessment. The EOL Working Group tracks progress of actions to improve maturity identified in the EOL and ensures that the asset specific/group strategies and sub strategies reflect the opportunities captured.

Updating Contract Templates with Environmental Requirements

4.17 We have improved our environment contract requirements templates, referred to as Works Information in an NEC contract. For the first time, will have a single consistent set of templates that will be used across all our projects/schemes that implement best environment practice, are aligned to our Green Strategy and are scalable; tailored to the risks and opportunities presented by our projects.

4.18 Through engagement with our supply-chain, these new templates represent a major step forward to ensure that we are bringing our supply-chain along with us on our journey to continually improve our environmental performance.

Driving Environmental Performance through our Standards

4.19 Our Engineering Standards are being reviewed to reduce the environmental impacts of our assets:

(a) this year, an engineering standard (S1068) has been updated to ban new fossil fuel heating systems across the London Underground estate;

(b) a new engineering standard (S1802) is being produced on Flood Risk Management and Sustainable Drainage Systems (SuDS) making SuDS the default drainage solution on projects; and

(c) a “Standards Environment Impact Scoring Matrix” has been produced to identify the standards with the highest potential to improve environment outcomes and prioritise their update.

5 Reduce Carbon Emissions and Adapt to Climate Change

5.1 This section outlines key actions undertaken by Capital to tackle the climate emergency – reducing carbon emissions from our activities and ensuring we are ready for the impacts of climate change.

Net Zero 2030 Operations

5.2 We are playing a key role in TfL’s net-zero operations carbon by 2030 ambition, leading and supporting a number of workstreams:

(a) **Remove Fossil Fuel Consumption**

(i) Buildings Decarbonisation

We are developing plans to remove fossil fuel consuming equipment from our operational buildings and improve energy efficiency. We have carried out feasibility work, funded through the Low Carbon Skills Fund, to generate heating decarbonisation plans at 14 operational buildings

across eight sites. Work is now underway to understand the best delivery route for each of these buildings. We have launched a tender for feasibility studies for a further group of operational buildings which will feed into our pipeline of projects;

(ii) Bus Electrification

We are supporting the Chief Operating Officer's Bus Directorate to achieve a zero-emission bus fleet.

- We own and lead development of the Bus Vehicle Specification, ensuring low emission, inclusive and accessible, and safe vehicles serve our customers.
- We are delivering zero-emission bus infrastructure, including power connections to bus garages and high-powered Pantograph chargers at bus stands and stations. We have completed installation at Crystal Palace and will complete the final point of connection at Orpington in the coming weeks ready for testing, commissioning and bringing into service.
- Our Vehicles engineering teams are working with our Power engineering and Asset Strategy teams to explore the use of TfL's Private Power Network to distribute power to bus garages.
- We assure and monitor technology trials, including the tram to be operated on route 358, the trial of 20 Hydrogen buses, and the repowering of a new Routemaster bus from a hybrid to battery electric vehicle;

(b) Improve Energy Efficiency

(i) Traction Power Network Energy Efficiency group

This year we have established a group of subject matter experts and asset strategists to develop and progress traction energy efficiency opportunities across the network.

After the successful delivery of sub-surface railway's re-sectionalisation project, which enables more energy from regenerative braking to be used by other trains (over 5.5 GWh per year of energy saved), we have now initiated a project to look at re-sectionalisation of the Northern line traction network, which would result in over 4 GWh per year of energy savings;

(ii) Reduced Speed Escalators

We are assessing the potential to optimise the speed of escalators at some of our London Underground stations to reduce energy demand and generate carbon and cost savings. We have conducted a trial at two stations which confirmed an energy demand reduction with speed reduction and are progressing plans for a pilot scheme at four stations to further strengthen this data, before we consider the viability of a wider roll-out; and

(iii) Neasden Depot Energy Efficiency

We are incorporating 'low carbon green' technology into the design to include LED lighting and other energy efficient products. This is part of Capital's heavy maintenance facilities works at Neasden Depot, a new staff accommodation block is being built for over 200 staff.

Compared to the use of diesel fuel construction equipment, this represents a 99 per cent reduction in CO_2 emissions (172 tonnes of CO_2);

(c) **Maximise Local Renewables**

(i) Solar - Private Wire

We are developing plans to work with a partner who will deliver new, local, solar farms connecting directly into our energy network.

We have conducted a market engagement exercise to gather feedback on our draft plans and projected timescales from industry partners. The findings from this exercise are being incorporated into updates to key project documentation and plans, with the aim of launching a tender in the near future;

(ii) Waste Heat

We are developing plans to work with partners to deliver schemes that use waste heat from the London Underground network to generate energy.

Feasibility work has identified nine sites across the network that offer strong potential. We have developed a procurement strategy and continue to develop designs for one of these sites as a pilot scheme.

We have published outline information for all nine sites on the Greater London Authority (GLA) Heat Map and continue to engage with enquiries for further information from potential delivery partners; and

(iii) Neasden Depot Solar Cells

The new building design incorporates solar photovoltaic cells on the roof to generate electricity and reduce the carbon footprint of the building. This forms part of Capital's heavy maintenance facilities works at Neasden Depot, a new staff accommodation block is being delivered for over 200 staff.

Infrastructure Carbon

5.3 Capital has collaborated with the Chief Safety, Health and Environment Officer's teams to establish carbon management processes, governance, and tools in keeping with industry standard Carbon Management Guidance (PAS2080:2023). This includes:

(a) launching the TfL carbon management process in the SHE Management System, as well as Carbon Management Training;

(b) updating contractual templates to embed our carbon management process into the supply chain – noted previously;

(c) launching our Capital Carbon Leads Forum in 2023. The Forum facilitates carbon reduction in Capital project delivery, helping make carbon reduction business as usual. The forum will particularly focus on building up whole life carbon assessments across Capital projects, especially where there are gaps in our current data. Relevant programmes now have appointed Carbon Leads to drive forward changes; and

(d) creating a new product within our project management framework, Pathway, called the Carbon and Resource Plan to facilitate the reduction of whole life carbon emissions, energy consumption and waste production through the application of carbon, energy and waste reduction hierarchies. This applies to all relevant Capital projects impacting assets.

5.4 Fossil Fuel Free Construction Plant and Equipment

(a) Neasden Depot Heavy Maintenance Facility (HMF): no fossil-fuel based plants were used on site during demolition works. As part of Capital's HMF works at Neasden Depot, this involved demolition within the depot lifting shed. Our project team worked with the Principal Contractor to ensure all plant utilised on site was electrically powered. This included dumpers, excavators and breakers. This prevented the release of carbon emissions from fossil-fuel powered plant being used, and also avoided the requirement to set up an exhaust ventilation system within the depot shed.

(b) Old Street Roundabout: construction works were delivered without the use of diesel equipment. This was achieved by contractors utilising electric battery powered equipment (such as battery powered breakers, electric tracked barrows, electric pallet truck) and Hydrotreated Vegetable Oil (HVO) fuel which resulted in 14 tonnes of CO2 saved compared to using regular diesel. All construction site welfare facilities were electrically powered, further reducing carbon emissions;

(c) Barking Riverside Extension: 99 per cent of CO2 emissions reduced from construction equipment. The Barking Riverside Extension project started using HVO fuel for construction site equipment in February 2021. Since then, approximately 63,000 litres of HVO fuel were used.

West London Depot Development Programme – Sustainability

5.5 Capital's West London Depot Development Programme is responsible for delivering vacant possession of Lillie Bridge Depot (for the Earl's Court development) and the Bollo Lane development sites. This involves relocating train stabling and other business activities to receiver sites at Parsons Green, Chiswick Park, Acton Works and Ruislip Depot.

The programme is currently at feasibility stage and is putting sustainability at its heart, for example:

(a) programme Carbon Literacy Training target set at 100 per cent;

(b) programme Carbon Management Training target set at 100 per cent;

(c) Sustainability Lead in place to help lead and manage efforts;

(d) Environmental Evaluation and Carbon and Resource Plans in place for all projects – programme level baseline to be collated;

(e) carbon integrated in Buildings Information Modelling Strategy;

(f) carbon and sustainability outcomes embedded into works information;

(g) sustainability scoring criteria and evaluation in place for tender;

(h) supply chain and client organisation engagement to set out challenging but realistic sustainability targets;

(i) included building decarbonisation and provision of zero-emission fleet to support rollout of these; and

(j) draft Sustainability Strategy in place setting out sustainability targets such as:

(i) zero emission sites;

(ii) zero waste to landfill;

(iii) biodiversity net gain and climate adaptation measures;

(iv) plastic free sites; and

(v) innovation (low carbon materials, innovative construction techniques etc).

Beckton Depot DLR – Carbon and Solar

5.6 To facilitate the stabling of 54 new DLR B23 trains at Beckton Depot, a significant amount of work is taking place to reconfigure and expand the sidings. Where possible, TfL have adopted the use of composite (plastic) sleepers throughout the new Southern Sidings, providing a more sustainable solution than traditional concrete thus reducing embedded carbon.

5.7 In addition, the Rolling Stock Replacement Programme will be constructing a new maintenance facility building where the new roof space will provide the opportunity for 400 new solar panels. At peak output, these cells will provide all low voltage power for the new building and a proportion of low voltage power for existing facilities.

5.8 We intend to utilise the Mayor's Green Finance Fund to enable this opportunity.

Surrey Quays Station Upgrade Project – Carbon

5.9 The Surrey Quays Station Upgrade Project, which will provide a new second station entrance and step-free access, is currently at detailed design stage. We are actively engaged with the project's Contractor and Lead Designer to explore carbon reduction opportunities in relation to both design and construction methodology/proposals.

Electric Vehicle Infrastructure Delivery (EVID)

5.10 Latest Department for Transport figures for October 2023 show that London had almost 17,000 public charge points, of which almost 1,000 were rapid or ultra rapid. Since then, Zap-Map data for November 2023 shows that this number has

now reached well over 18,000, over a third of the UK's total charging infrastructure

5.11 In December 2021, TfL published the Electric Vehicle Infrastructure Strategy . In the document, the 'most likely' modelling scenario suggests London will need between 40,000 to 60,000 electric vehicle charging points by 2030, of which, up to 4,000 would be rapid or ultra rapid chargers .The proportion of electric vehicles this infrastructure would support could result in a reduction of carbon dioxide emissions of between 1.5 and 2.6 million tonnes per year by 2030. We are leading EVID, the TfL delivery programme, to deliver and bring into service a share of those sites on the TfL Road Network and GLA land.

5.12 The project awarded its first contract for delivery of the 39 bays (Batch 1) in May 2023 and has now submitted its first designs and planning applications. Batches 2 and 3 will be awarded in November 2023 so there will be 100 bays under delivery contracts by the end of the 2023.

Climate Change Adaptation Plan

5.13 The first TfL wide Adaptation Plan was published in March 2023 with support from Capital. Our ambition is to keep our staff and customers safe while providing sustainable, reliable and attractive services. This applies both to our operational networks, capital projects and programmes, and our property portfolio. The Adaptation Plan includes a target to deliver 5,000sqm of catchment draining into SuDS each year.

5.14 Capital will be integral to the delivery of this target and shall continue to work closely with the SHE team on how this will be delivered.

5.15 In this last year, our Asset Strategy team and the SHE team have aligned the Environment Opportunities List and the Adaptation Plan actions, with the help of workshops held for the highest risk asset areas in TfL.

6 Improve Air Quality

6.1 This section outlines key actions undertaken by Capital to reduce emissions of harmful air pollutants from our activities, for the benefit of our customers and staff.

6.2 **Non-Road Mobile Machinery Emissions (NRMM)**

(a) NRMM Register for TfL Projects

Exhaust fumes from NRMM such as excavators and generators are a significant contributor to London's air pollution. NRMM used within the NRMM Low Emission Zone (LEZ) should meet the applicable emissions standards and compliance with these standards should be demonstrated by using the GLA's NRMM Register. However, the Register could originally only be used by development projects that had obtained town planning consents. It could therefore not be used by most TfL projects, as these are undertaken under Permitted Development Rights. In liaison with the GLA's Air Quality Team the NRMM Register has now been updated so it has a separate area which can be used to track and demonstrate compliance with

the applicable emissions standards for the NRMM used on TfL projects/contracts. Guidance on the use of this parallel system has been generated and briefed out to TfL's Highways Maintenance Contractors who are now in the process of registering onto the system and uploading the details of their NRMM. The use of the Register will soon be rolled out further to include other TfL development projects and contractors;

(b) Old Street Roundabout Project construction site NRMM 'Excellent'

In November 2022, a NRMM audit was undertaken at Old Street Roundabout Project construction site, by a specialist unit at Merton Council, working on behalf of the GLA and London Borough Councils. The contractor, Morgan Sindall, received an 'Excellent' certificate, for protecting neighbourhood air by using low-emission machinery, including electric plant, demonstrating compliance with NRMM requirements and the application of environmental and sustainability best practice; and

(c) Collaboration with suppliers

TfL colleagues continue to meet with suppliers and have hosted regular 'Supplier Keeping in touch' days. The most recent environment-related session, in February 2023, was on the topic of NRMM on construction sites. Discussions included compliance with the GLA's requirements and suppliers sharing their own case study examples and achievements with each other. The session was well-received by all who attended and there was a resounding agreement that construction sites need to be low and zero-emission to be able to provide significant public health benefits.

Ultra Low Emission Zone (ULEZ) Delivery

6.3 On 25 November 2022 the Mayor confirmed the expansion of the ULEZ London-wide from 29 August 2023 to help achieve air quality legal limits and World Health Organisation guidelines for air quality, enabling five million more Londoners to breathe cleaner air. The expansion is forecast to reduce nitrogen oxides (NOx) emissions from cars and vans in outer London by 10 and seven per cent respectively, and reduce PM2.5 emissions in outer London from cars by nearly 16 per cent.

6.4 Our Capital delivery team was accountable and responsible for the delivery of the entire scheme. Our approach to maximise 'reuse and repurpose' not only ensured on-time delivery but reduced the amount of construction work, materials used, and waste produced:

(a) combining ULEZ signs with existing LEZ signs avoided the need for over 700 additional signs;

(b) optimising sign design to reduce loading enabled 90 per cent of signs to be mounted on existing infrastructure, reducing the need for new signposts and associated construction work; and

(c) reviewing maintenance and implementation liabilities, and lessons learnt, meant the majority of new ULEZ cameras were able to be installed on existing traffic signal infrastructure..

Zero-Emissions Buses

6.5 As noted previously, Capital's TfL Engineering and Asset Strategy is supporting the Chief Operating Officer's Bus Directorate to achieve a zero-emission bus fleet by providing Engineering specifications and technical authority for zero-emission vehicles and infrastructure.

6.6 The transition to zero-emission buses supports the reduction of harmful emissions in the capital. Engineers also support ongoing emissions monitoring of current fleet vehicles.

6.7 The Bus Opportunity Charging (Route 358) project trials opportunity charging infrastructure on a London bus route. This will enable TfL to better compare options for providing high-mileage zero-emission bus routes in order to de-risk and inform TfL's long-term zero-emission bus strategy. The selected bus route (Route 358) is from Orpington to Crystal Palace and 25km long and with a mixture of delivery challenges that we have now investigated and learned from. In the last year, the project has completed installation at Crystal Palace and will complete the final point of connection at Orpington in the coming weeks, ready for testing, commissioning and bringing into service.

7 Protect, Connect and Enhance Green Infrastructure and Biodiversity

7.1 This section outlines the key actions undertaken by Capital to protect, connect and enhance our green infrastructure and biodiversity on our estate.

Green Infrastructure and Biodiversity Plan

7.2 We are supporting the development of the first TfL wide Green infrastructure and Biodiversity plan.

7.3 Our ambition is to protect, connect and enhance our green infrastructure including biodiversity, habitats and ecosystem services across our entire estate. This applies both to our operational networks, capital projects and programmes, and our property portfolio. Biodiversity Net Gain (BNG) is a way to contribute to the recovery of nature while developing land, by making sure that habitats are in a better state than they were before development.

7.4 BNG is a new legal requirement under the Environment Act 2021. From January 2024 new developments within the planning system, as well as Nationally Significant Infrastructure Projects, will be required to deliver at least 10 per cent BNG.

Biodiversity Net Gain trial at South Harrow Sidings

7.5 The South Harrow Sidings project, which is part of the Piccadilly line Upgrade Programme within Capital, has provided an opportunity to enhance the land adjacent to the site, which is designated as a Site of Importance for Nature Conservation and Metropolitan Open Land. The design demonstrated a 48 per cent Biodiversity Net Gain for the project is achievable. This is subject to finalisation of the implementation scope and maintenance plans which are currently under review. This project is acting as a pilot project for the implementation of a process for embedding BNG in projects across TfL.

Sustainable Drainage Systems

7.6 We have developed a new Standard (S1802) 'Civil Engineering – Flood Risk Management and Sustainable Drainage Systems' to address the Green Strategy's climate change adaptation theme and ensure our assets are prepared for increasing rainfall in future. This dedicated standard focuses on flood risk management and employment of SuDS. In particular, it now requires SuDS as the default drainage solution for flood risk management and surface water drainage. SuDS have been and continue to be developed across a number of TfL sites. This includes solutions such as rain gardens, green roofs, permeable pavements and tree pits.

7.7 A current example of this is Capital's heavy maintenance facilities works at Neasden Depot where a new staff accommodation block is being built for over 200 staff. The Capital project team is incorporating permeable paving and bio retention sustainable drainage measures into the design.

Surrey Quays Station – Green Roof

7.8 The Surrey Quays Station Upgrade Project, which will provide a new second station entrance and step-free access, has introduced a green wildflower roof into the detailed design for the new entrance.

Old Street Roundabout – Green Roof, Trees and SuDS

7.9 The Old Street Roundabout project, including improvements to the sub-surface and retail area, has installed a green roof on the newly constructed main station entrance along with new trees and planting in a rain garden on the south-western side of the junction. The project will additionally be installing two further rain gardens with further trees and low-level planting in the new peninsula area along with extensive SuDS provisions across the scheme.

Northern Line Extension – BREEAM

7.10 The Northern line Extension project achieved a 'Very Good' BREEAM (Building Research Establishment Environmental Assessment Method) status for Battersea Power Station Underground station and a 'Good' status for Nine Elms station.

7.11 BREEAM is the world's longest-established method of assessing, externally rating, and certifying the sustainability of buildings, and although the Underground stations are not typical buildings, the completion and achievement of BREEAM

demonstrates that these projects have assessed their sustainability issues, resulting in improved sustainable design principles.

Mayor's Transport Strategy (MTS) Tree Planting Target

7.12 We have a MTS target to increase our street trees by one per cent annually.

7.13 Last year Engineering and Asset Strategy helped Asset Operations deliver the planting of 453 street trees, around 1.8 per cent increase, across the network by providing the technical support for location and species selection.

Wildflower verges

7.14 In 2023, Engineering and Asset Strategy assisted Asset Operations in the expansion of our wildflower verges by 7.4 hectares to almost 13 hectares.

List of appendices to this report:

None

List of Background Papers:

TfL Sustainability Report, Corporate Environment Plan and Climate Change Adaptation Plan: https://tfl.gov.uk/sustainability

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