

2021/22 Annual capital efficiencies report

Introduction

This is the first annual report of the pan TfL Capital Efficiency Programme (CEP), covering the financial year 2021/22. It sets out how we have delivered on the milestones contained in our Capital Efficiency Plan, together with the efficiencies realised during the year.

Efficiency is one of the 'four pillars of value for money' used by TfL, the others being economy, effectiveness and equity. The objectives of the CEP are to:

- Allow us to deliver better outcomes within a given financial envelope, getting us closer to delivering the objectives in the Mayor's Transport Strategy;
- Demonstrate to industry and our supply chain that we are serious about working together to improve how we deliver and how we work together;
- Provide transparency in our capital delivery performance to stakeholders.

Our CEP initial report stated that our annual reporting will include:

1. Confirmation of the efficiency target and whether anything has happened that should result in a change to that target (for example, if Government found it necessary to change the level of funding available to TfL from the original indications during the 5-year period this could impact on TfL's ability to deliver efficiencies)
2. Details of each "banked" and "evidenced" efficiency with the total value of efficiencies achieved to date
3. The value of "claimed" efficiencies that have not yet completed validation (if any are outstanding at the time of the report)
4. Case studies and other supporting metrics
5. Commentary on milestones actions and initiatives that have been delivered
6. Details of "efficiency to be found" targets embedded in the latest Budget/Business Plan
7. It will also include a forward look of the level of efficiencies that the workstreams are working towards achieving and the level of business-as-usual efficiencies, together with an indication of the status of the plans.

These are set out below:

1. Efficiency target range

In our Capital Efficiency Plan, we targeted a five-year efficiency profile from 2021/22 to 2025/26. Recognising that initiatives will take time to impact on costs, the profile ramps up with a target range in each year.

This ambition was informed by benchmarking against other asset intensive organisations in the UK that have similar regulatory frameworks, similar supply chains, and operate in a similar macroeconomic context. These ranges are based on existing embedded efficiencies combined with the impact of our initiatives, as well as ambitious value engineering and risk-release challenges. A range better represents the uncertainties in our future planning and assumptions.

During 2021/22, TfL has continued to be subject to funding uncertainty, which in turn creates significant risk to achieving efficiencies in two main ways:

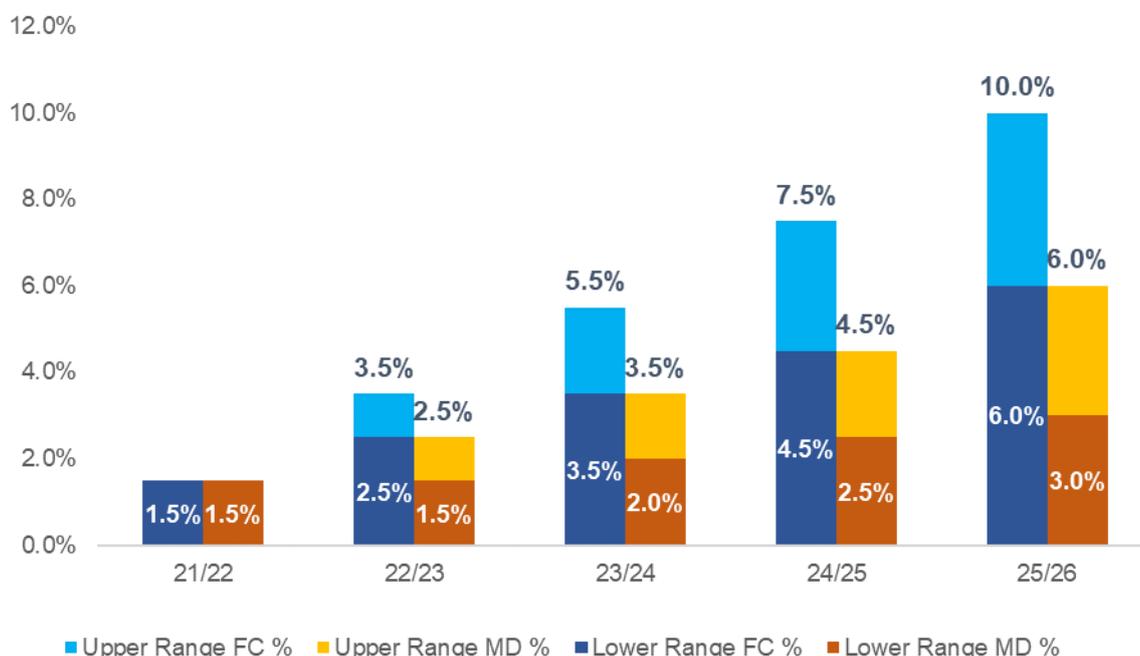
- **Long term planning:** It is recognised that certainty in planning and funding creates an environment conducive to efficient investment. The DfT’s 2013 paper ‘Action on Roads’ stated, “Certainty will enable savings of up to 20% on maintenance and improvement work”, while 2018 research by the Railways Industry Association stated that ‘boom & bust’ work profiles cause a 30 per cent increase in the cost of infrastructure. The Government has acknowledged that the funding certainty afforded to other transport infrastructure operators such as Network Rail and National Highways can enable savings of some 10 to 15 per cent on maintenance and improvement work.
- **Impact of project / scope reductions:** If TfL has to reduce its forecast capital expenditure then it will limit how much efficiency can be delivered. In the simplest terms, the same percentage efficiency will deliver a lower financial saving if the capital programme is smaller. However, the impact is likely to be greater than that. Efficiencies will disproportionately target expenditure that is less committed or at an early stage of the lifecycle, as this is where the opportunity lies. However, these are also the areas of the capital programme that are more likely to be removed or de-scoped due an overall reduction in capital funding.

In November 2021, due to a lack of longer-term funding certainty, TfL moved to a “Managed Decline” scenario for budgeting, which restricted expenditure to committed enhancements and only the most essential renewal projects. Our CEP report already made clear that if TfL’s future business plan contained significantly less activity (e.g. Managed Decline) then the efficiency target presented in the original plan would no longer be valid and would lead to a significantly lower percentage and pound saving.

In addition, a number of efficiencies that had already been identified related to projects which had to be terminated as a consequence of the reduced funding being available and hence are no longer realisable.

Furthermore, DfT have indicated that they are only able to provide certainty of capital funding for up to three years beyond 2021/22 and therefore targets are now only appropriate to this time horizon. TfL has previously indicated the percentages in Figure 1 as more appropriate in a Managed Decline scenario; the shorter the horizon of funding certainty and the later this funding certainty is provided the lower the likely level of efficiencies that will be deliverable.

Figure 1: TfL Capital efficiency indicative targets – Financially Constrained and Managed Decline scenarios



2. Total value of efficiencies evidenced

“Evidenced” efficiencies are those TfL has achieved and can substantiate. In some cases, action taken results in changes to several future years costs, hence values are shown over the five-year period.

£m	21/22	22/23	23/24	24/25	25/26	5 year total
Evidenced efficiencies achieved	38	17	(4)	(6)	(6)	39

The breakdown of the “Evidenced” efficiencies by Business Area is below.

£m	21/22	22/23	23/24	24/25	25/26	5 year total
London Underground	5	3	0	0	0	8
Surface Transport	11	0	0	0	0	11
Major Projects	13	16	(5)	(6)	(6)	13
Professional Services	8	(2)	0	0	0	7
Total Evidenced Efficiencies Achieved	38	17	(4)	(6)	(6)	39

The individual efficiencies that make up this total and their supporting evidence are set out in the private paper. The evidence submitted is proportional to the size of the efficiency as set out in our Capital Efficiency Plan.

Some of the efficiencies achieved during the year have delivered reductions (or increases) against future years spend levels, and these reductions have been incorporated into the latest projections/budgets for future years. Some efficiencies which lead to savings in the total cost of a multi-year project, may increase the spend value in a particular year, which explains the “negative” efficiency values in some parts of the above table.

In addition, TfL identified a number of efficiencies which were subsequently “eroded”.

£m	21/2	22/2	23/2	24/2	25/2	5 year total
<i>Efficiencies identified subsequently eroded</i>	26	20	(0)	0	0	46

“Eroded” efficiencies are those that were identified but subsequently “lost” - for example where the project making the efficiency was terminated. The values in the table are driven by additional third party income for existing scope obtained by Growth Fund projects subsequently terminated.

3. Total value of claimed efficiencies

£m	21/22	22/23	23/24	24/25	25/26	5 year total
"Claimed" efficiencies	4	12	21	2	11	51

“Claimed” efficiencies relate to risk release for projects which have not completed, particularly in major projects. It would be premature to count such reductions as evidenced efficiencies at this stage. TfL’s definition of efficiency requires projects to complete before risk release can be evidenced as an efficiency – as unforeseen risks may subsequently arise resulting in an increase in risk budget. Also included above are £1m for efficiencies achieved in 2021/22 where sufficient supporting information could not be obtained in time for this report.

4. Commentary on milestones set out in our CEP report

TfL seeks to deliver efficiencies both from CEP Efficiency workstreams, and business as usual activities, as set out in the table below. Some workstreams will deliver cashable efficiencies directly, others will improve efficiency indirectly.

Categories		
Project controls		Indirect
Investment Planning		Indirect and Direct
Benchmarking		Indirect and Direct
Accountabilities and Governance	Workstreams aligned to efficiency initiatives	Indirect
Commercial		Direct
Engineering		Direct and Indirect
Access		Direct
Value engineering		Direct
Process improvement	Aligned to business as usual efficiency activities	Indirect and Direct
Risk management		Direct
Internal resourcing		Direct

Some CEP workstreams will provide a greater direct cashable contribution than others.

- The workstreams with likely lower (or nil) cashable savings are still critical to our improvement because they create the right conditions and environment for success but are considered less likely to result in directly attributable savings. For example, the benchmarking workstream will highlight efficiency opportunities, but those opportunities will likely be enabled through other workstreams e.g. commercial, access, risk.
- Furthermore, many of the workstreams will only impact on projects not yet in delivery. For example, to meet efficiency targets, projects in their early stage will likely have to deliver greater percentage saving against their forecast than projects already in construction will need to deliver.

4.1 Project controls

This workstream is not anticipated to directly deliver cashable efficiencies itself but will help identify and enable efficiencies for BAU and other workstreams to deliver.

TfL has mature processes for controlling projects (Pathway) but there is a recognition that universal adoption across the business is increasing over time. This workstream's intent is to improve the scrutiny and focus on project decisions at each stage of the lifecycle, particularly those in the early stages, by delivering the initiatives as set out below.

How will this make us more efficient? Having poorly controlled projects may lead to unnecessary costs – with projects not being stopped (or paused) where and when appropriate, or scope not being adequately controlled.

Temporary special measure - a series of Independent Pathway review checks

A review was conducted of the gate control / checks with the intent to improve adherence to Pathway and ensure efficiency opportunities were being maximised via the initiative.

Autumn 2021

Delivery summary: The outcome was to update the gate checks through a gate quoracy review (tailored quoracy matrix) which focused on balancing the need for priority and efficiency with ensuring the right scrutiny by the right people to enable quality decision making around the life of the project.

Achieved

Standardised change control

The intent of this milestone was to implement standardised change control process across capital delivery to manage risk and cost through project lifecycle.

Autumn 2021

Delivery summary: A consistent and standardised change control process was designed, validated by the business, and approved at Investment Group and launched in line with the forecast plan.

Achieved

Performance Measurement Baseline

Implement performance measurement baseline for *significant* London Underground and Surface Transport capital project and programmes (and links to budget baseline).

Winter 2021

Delivery summary: This milestone was achieved around the specific application to significant projects in the specified timescale There were elements of inefficiency in terms of the level of specificity highlighted and efforts are ongoing (with the below milestone) in order to effectively standardise this measure more broadly and reduce manual intervention in the process as much as possible.

Achieved

Implement performance measurement baseline for *all* London Underground and Surface Transport capital project and programmes (and links to budget baseline). **Winter 2022**

This effort is scheduled for delivery later this year, however work has already commenced and is currently in an early feasibility stage and is on track for delivery later this year. **In progress**

4.2 Investment planning

The existing initiatives in this workstream, below, will indirectly improve efficiency and were designed to ensure that we start the right projects and consider all available delivery options at the outset. There are improvements to be made around ensuring that projects are fit for our needs and outcomes and developing a clear pipeline of schemes for each outcome / portfolio.

How will this make us more efficient? A great opportunity for efficiency – at both a programme and individual project level - is before initiation. Getting this stage right is critical as we can prevent the wrong interventions being started at all, and ensure we have the right projects with the right requirements.

The largest element of cashable efficiencies expected to arise from this workstream is from a future review of project risk budgets, particularly around risk allocation at initial phases of a project, which is still being defined. As risk reductions are only evidenced on completion of a project, it may be some time before material cashable reductions are reported from activity to date.

Developing strategic investment outcomes

The intent of this initiative was to develop single set of strategic project outcomes, to which we can link benefit measures and use to evidence the impact of programmes/portfolios in aggregate benefit terms, and show progress toward strategic objectives as outlined in the Long-Term Capital Plan and Mayor's Transport Strategy **Autumn 2021**

Delivery summary: The Strategic Outcome Framework (SOF) has successfully launched and has now been used as a key input to the enhancement prioritisation work for the 22/23 budget. Work will now focus on how it can be embedded into existing processes. **Achieved**

Decision Making and Guidance / Value for Money policy & guidance Streetscape

Delivery summary: Upon review it was determined that the scope of the initiative was closely linked and, in some areas would duplicate the work being conducted around the quoracy initiative in the Project Controls workstream. This initiative therefore underwent change control, and the remaining scope focus was placed on ensuring VfM in design guidance (Streetscape) as per original CEP report. The revised scope is therefore to update the Streetscape guidance in and take proposed draft to the Streetscape Review Group for approval in Summer 2022. **Winter 2021**
Underwent change control (reduction in scope)

Pipeline Planning & Requirements

Roll-out consistent pipeline planning approach across all portfolios (based on Healthy Streets model) and develop longer term asset pipeline to better manage work banks

Spring 2022

Delivery summary: This initiative was de-scoped in November 2021 when TfL moved to a 'Managed Decline' capital position. This is because 'Managed Decline' constrained TfL expenditure and therefore accelerated the need for Capital functions and Programme Directors to review and re-prioritise the work-banks as necessary under the funding agreement, impacting opportunities and longer-term pipeline planning.

Underwent change control (de-scoped)

Prioritisation & Optimisation

Using the strategic outcomes (see above) develop and refine portfolio prioritisation / optimisation model

Summer 2022

Delivery Summary: The Strategic Outcome Framework has been used to refine the portfolio prioritisation during 22/23 budget setting. Work will now focus on developing a more comprehensive process ahead of business planning in summer 22.

Partly complete, further refinements expected in Summer 2022

4.3 Benchmarking

The main element of direct efficiencies expected to arise from the workstream is the “pounds in the ground” element which directly drives the setting of savings targets. Some CEP workstreams will contribute to improvements in the “£ in the ground” metric as will some BAU efficiencies. Efficiencies will only be counted against one workstream or BAU to avoid double counting.

Benchmarking would ideally be done for all activities within the project lifecycle – reviewing our schedules, methodologies, construction approaches, standards etc. As well as against specific metrics – unit costs, whole life costs and pounds in the ground. These initiatives will set a clear place for benchmarking in investment decisions as well as standardise activity across the organisation.

How will this make us more efficient? Data is key to informing project decisions. TfL's current benchmarking data is disparate and could be better coordinated and shared to inform decisions across the organisation, indirectly leading to efficiency.

Benchmarking process & resource review

Identify our benchmarking responsibilities (and resource required to meet this)

Autumn 2021
(review launch)

Delivery summary: Review completed, recommended outcomes were to focus on 3 key areas: People, Technology and Process.

Achieved

Reporting good practice

While good practices occur that lead to efficiency savings these are not always automatically logged and shared for others to learn from.

Autumn 2021

Delivery summary: Area created in the online *Knowledge Portal* for publication, sharing and access to good practice reports. Significant case studies to be presented at periodic Capital Improvement Group.

Achieved

Accessible benchmarking data

Single accessible store of all available benchmarking data, reports and lessons learnt

Autumn 2021
(approach agreed)

Delivery summary: Area created in Knowledge Portal for staff request and store benchmarking reports, data, lessons learnt

Achieved

Transport Infrastructure Efficiency Strategy (TIES)

Work with other transport infrastructure organisations to share data and best practice to drive down costs

Spring 2022

Delivery summary: Collaboration with TIES is underway and is a continuous process. In-flight collaborative benchmarking on whole-life costing, performance benchmarking, forecasting of asset investments, etc with member organisations.

Achieved & ongoing

4.4 Accountabilities and Governance

This workstream is not expected to directly lead to cashable efficiencies, but the improvements below are expected to lead to efficiencies being realised by both other CEP workstreams and BAU activities.

How will this make us more efficient? In the Capital Efficiencies Plan, it was identified that by clarifying accountabilities and decision-making responsibility we can speed up our processes and ensure that the right people are involved at the right time which would in turn make projects run smoother and allow problems to be better managed when they arise. The introduction of a new executive structure in February 2022 caused a holistic review of TfL's governance to take place which includes investment governance, business rhythm and reporting and delegated authority, alongside other governance forums such as performance and operations. The executive restructure has required that the output of this workstream, whilst completed, is held for implementation whilst the wider organisational governance is reviewed. This is appropriate so that the entire governance regime is reviewed to ensure that all facets of this function are optimised and aligned for the needs of the business.

Delegated authority

Autumn 2021

Assess scope for reintroducing delegated authority (both formal i.e., spend and informal) across the organisation – and training required to successfully implement.

Delivery summary: A combined authority matrix has been developed proposing consistent delegated authority levels across TfL for spend.

Achieved

Reporting on capital investment performance

Review our existing periodic, quarterly, and annual investment performance reporting processes (incl. our approach to managing risk) and top-down business rhythm to ensure reporting provides decision makers with the right information in a succinct manner.

Autumn 2021

Achieved

Delivery summary: Current reporting processes have been mapped by the PMO team with improvements to business rhythm proposed and socialised across stakeholder groups as a result.

Investment governance framework

Review the scope of TfL's investment governance groups and forums to ensure clearly defined remits and the right data inputs and outputs to enable more efficient decision making.

Winter 2021

Achieved

Delivery summary: The scope of TfL's investment governance groups has been reviewed with 12 recommendations made regarding the structural, knowledge, authority and digital aspects of governance, proposals included for changes to 'level-specific' forums which introduce delegated authority

and updated remits for forums, underpinned by an improved business rhythm.

4.5 Commercial workstream

The Commercial workstream captures all the benefits achieved by procurement and commercial teams. These include items like “cost avoided” which do not count as efficiencies. However, there is potential for efficiencies delivered by this workstream to be claimed by BAU teams. Therefore, to avoid double counting, values stated against this workstream may understate its contribution.

No commercial milestones are due at this point, however the workstream is mobilised and in-flight for conducting an opportunity assessment with outputs being consolidated to inform key areas of focus and prioritisation.

As noted last year, commercial activity spans the full project lifecycle from initiation to project close. We aim to maximise the value we get out of our supply chain partners and have the right market, procurement, contract, and relationship strategies to drive business outcomes and create the right commercial environment for efficient delivery.

The initiatives in this workstream will review all elements of our commercial lifecycle approach and how they interact with other CEP workstreams to ensure we are delivering the best value for money.

How will this make us more efficient? The vast majority of our capital expenditure is delivered through the supply chain and therefore the workstream is recognised as a key impact opportunity area for increasing our direct efficiencies.

Supplier Relationship Management (SRM) pilot

Delivery summary: SRM early engagement has been scoped and key suppliers selected and validated with TfL Exec Leads identified. Focus is on engagement and collating internal intelligence to identify themes/initiatives across the relationships for prioritisation and delivery.

Autumn 2022

In progress

Estimating

Build out our estimating processes across capital schemes, benchmark data quality and use of common systems to improve should-cost modelling and estimate maturity, increase budget confidence.

Autumn 2022

Delivery summary: Estimating exists across different teams and is not uniformly performed across functions. There is an effort underway to address inconsistent approaches within Estimating capability within TfL, by transferring process ownership to one area of remit (Supply Chain Director – Capital). Transformation is planned to create two distinct teams from the existing capability (Cost Planning & Cost Intelligence)

In progress

Cost management and reporting

A review of current cost management practices across TfL to increase standardisation, harmonising processes, creating clear lines of accountability, and improving cost controls

Autumn 2022

Delivery summary: Workstream will collaborate with the Project Management Office and will optimise around standardisation to support the Capital function.

Mobilising

Opportunity Assessment

Delivery summary: The purpose of this effort is for Procurement & Commercial delivery partner to conduct an Opportunity Assessment via a 6-8 week sprint with production of review / report with recommended key areas of focus / opportunities to explore in OPEX & CAPEX.

Autumn 2022

**In progress
(underwent
change control
– new scope)**

4.6 Engineering workstream

The Engineering workstream seeks to generate efficiencies both directly e.g. by reducing the charges made to projects by the Engineering function and indirectly e.g. through better access to information. In addition, care is being taken to avoid double counting between Capex Efficiencies and Opex efficiencies, given that many engineers off-charge most of their time to capital projects.

How will this make us more efficient? This work will help us reduce the cost of projects through pragmatic application of requirements and standards, collaboration with the supply chain and timely handover into operational use. Digital engineering will give us better data and insight to make the right decisions faster. This can particularly impact costs through challenging requirements and value engineering; and increased digitalisation will enable further efficiencies in future years.

Engineering resource

Key Make vs Buy strategies documented

Autumn 2021

Delivery summary: Strategies have been documented and focus is now on longer term strategic resourcing to ensure we deliver efficient engineering outcomes.

Achieved

Digital Engineering

Deliver an asset data and digital strategy to make consistent, informed whole-life cost decisions and become a data-driven, digital business.

Winter 2021

(digital agenda agreed)

Delivery summary: The asset data and digital strategy has been developed and our Delivery partner has completed final draft of the Digital Blueprint. This is a key step towards making consistent, informed whole-life cost decisions and become a data-driven, digital business.

Achieved

Roll-out of **self-service Resource Tool** (currently on trial within TfL's Major Projects Directorate) within TfL Engineering

Spring 2022

Delivery summary: Completed with launch of 'SmartCore' in February 2022. This is a key enabler for the delivery of efficient engineering outcomes and the effective allocation of internal capability.

Achieved

Engineering standards

Trial and business case for standards digitisation

Spring 2022

Delivery summary: Business case being developed and on plan to complete in Spring period.

In progress

4.7 Access workstream

The workstream was separated into Roads and Rail elements, as access for each is controlled differently with bespoke nuances to manage effectively and appropriately. It is expected to deliver cashable efficiencies directly through reducing costs of delivering project outcomes.

The Roads Access team have completed their work via a software tool which is enabling multiple works to be combined saving "lane access charges" and other costs, which are now capable of being separately identified and reported. Efficiencies are expected to start to flow from the start of 2022/23. The value of direct efficiencies achievable depends both on the level of project spend on roads projects and the extent to which it is possible to combine works.

The Rail Access team have a longer-term programme as Access bookings are fixed some 18 months in advance, and while the Capital Improvement Group have approved revised approaches these will take time to deliver cashable efficiencies. The level of efficiencies possible to achieve is very dependent on volumes of particular types of work such as Track replacements and signalling upgrades (although all kinds of works can then attempt to piggyback on those closures). However, note that BAU activity has managed to save £1.8m from combining track possessions in 21/22 ahead of this new approach.

This workstream is designed to deliver improvements in how we book, schedule, and manage access to our network for all capital and maintenance activity. We can leverage significant efficiencies by exploring the use of longer closures that combine multi-discipline works, as well as making better use of our limited engineering hours through planning and controls.

How will this make us more efficient? Access to the road and track network is one of the most important commodities on a transport project, but we may not use this resource in the most productive way possible, therefore adding cost to delivery.

Maximising working hours

Review opportunities to fully utilise productive time within existing working/engineering hours and build case for extended hours

Autumn 2021

Delivery summary Roads – review conducted. Efficiency opportunity identified and to be explored via the lane rental scheme through the 22/23 programme of works.

Achieved

Delivery summary Rail – review conducted alongside blockades and closure review. Workstream team looking at opportunities to pilot / test but will take detailed planning.

Reduce overbooking

Incentivise delivery teams to avoid over-booking closures - develop/track utilisation metric

Autumn 2021

Delivery summary Roads: not in scope for initiative.

(commence metrics review)

Delivery summary Rail: Upon deep dive discussion the initiative was not taken forward as this is historically a cultural / behavioural issue to address. Timely and appropriate processes are in place, but adherence to them in different areas of operational functions is the local improvement requirement.

De-scoped

Integrated access

Review opportunities for completing more projects as part of one closure including maintenance activities. Introduce Senior Responsible Officer (SRO) for closures

Delivery summary Roads – review conducted; enhancement opportunities identified for more effective use of the Playbook tool to enable maximising working hour windows.

**Autumn 2021
(commence review)**

Delivery summary Rail – folded this opportunity review into the Closures and Blockades initiative work (see below).

Achieved

Note - SRO role not taken forward. Clear duties and co-ordination requirements under CDM regulations make clear roles and responsibilities within a given project.

Blockades policy

Intent of the initiative was to reassess our blockades policy/approach to consider efficiency benefit from longer closures, including comparisons to other agencies.

Delivery summary Roads – – review conducted; enhancement opportunities identified for more effective use of the Playbook tool to enable maximising working hour windows

Autumn 2021

Delivery summary Rail – longer term blockades, weekend closures, extended engineering hours and larger sections of network possessions to be explored. Intent is review pipeline works to identify appropriate opportunities to test in the field.

Achieved

Conduct end-to-end Access Planning Operating Model Lifecycle Review (Rail only)

Following workstream deep-dive discussions a new scope was developed to complete an end-to-end review of the Access Planning Operating Model. The intent of the initiative is to explore the planning lifecycle and Access Ecosystem through a wider, holistic lens (rather than symptomatic / tactical level of above initiatives).

April 2022

In progress

Delivery summary: This review is currently underway, with recommendations due to be finalised by the end of April 2022. The recommendations will enable exploration and endorsement of potential improvements / pilot opportunities.

**Underwent
change control
(new scope)**

5. “Savings to be found” targets in TfL’s latest Budget

At the time of writing, TfL is yet to have confirmed Government funding for the complete 2022/23 financial year. The current funding settlement period expires on 24 June 2022. The TfL Budget assumes a further c.£0.9bn of funding is provided by Government for the remainder of 2022/23.

Without funding certainty, efficiency targets have not been finalised. However, TfL is continuing to seek efficiencies both via the CEP Efficiency workstreams described in this report, together with business-as-usual activities.

6. Forward look

Without funding certainty beyond 24 June 2022, it is not possible to have a clear view on the level of capital efficiencies that can be delivered as the capital programme itself is not certain.

Therefore, the “forward look” element of the report has been deferred. However, it remains clear that the larger the capital settlement and the longer the period of funding certainty, the greater the potential to deliver capital efficiencies.