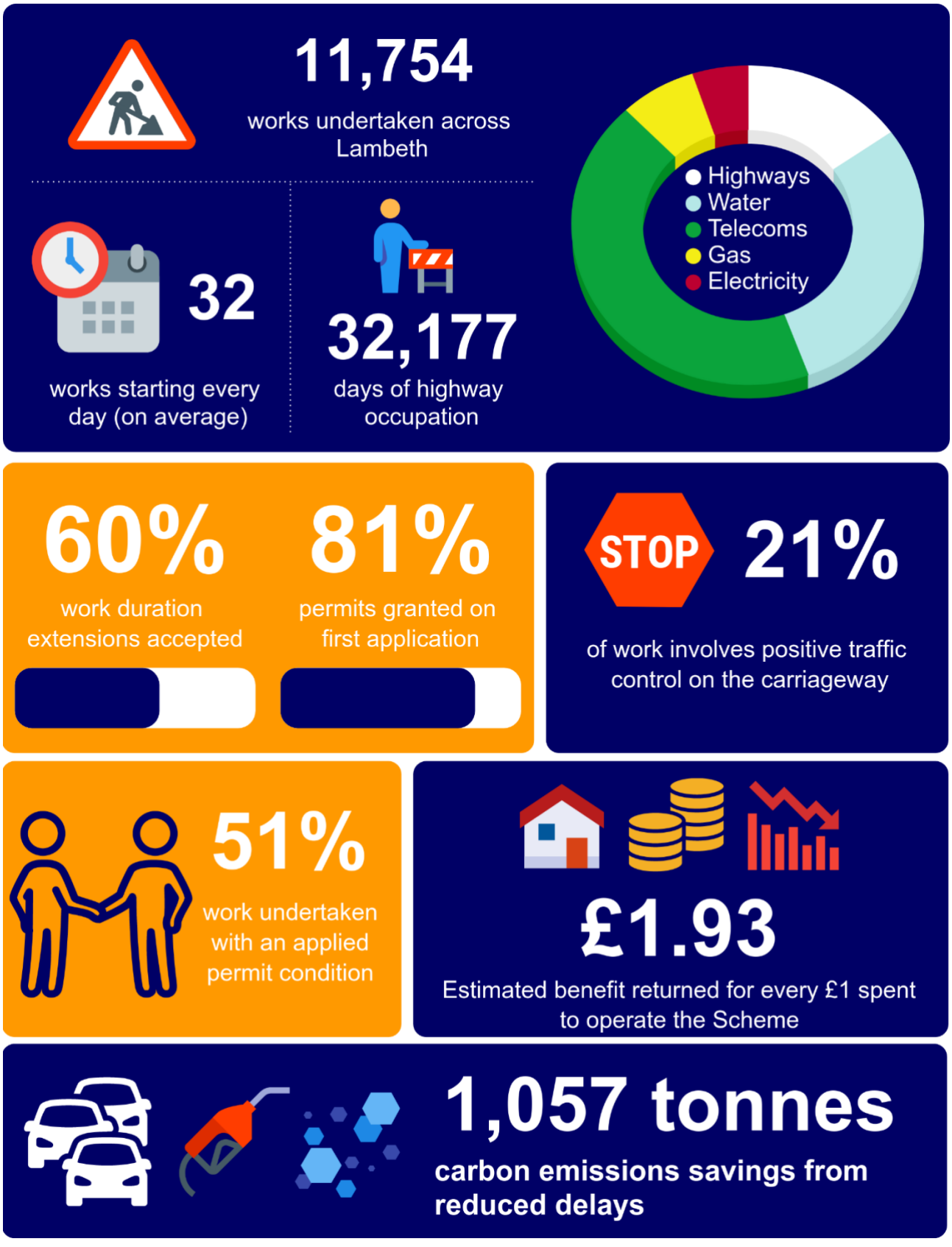
Lambeth

London Permit Scheme
Year 12 Evaluation

Document Content

Key Findings

Figures shown are based on averages over Scheme years 10 to 12



Introduction

The role of a permit scheme

In 1991 the New Roads and Street Works Act (NRSWA) placed a duty on the Council, as a highway authority, to coordinate activities (works) of all kinds on the highway under the control of that Authority.

In 2004 the Traffic Management Act (TMA) and associated secondary legislation widened the NRSWA coordination duty. The scope of this increased duty has the following main considerations and Part 3 of the TMA allows for an Authority [the Council] to introduce a permit scheme to support the delivery of this duty.

The powers under a permit scheme enable the Council to take a more active involvement in the planning and coordination of works, from the initial planning stages through to completion. This includes:

- organisations book occupation for work instead of giving notice, essentially obtaining a permit for their works;
- any variation to the work needs to be agreed, before and after works have started, including extensions to the duration;
- the Council can apply conditions to work to impose constraints; and
- sanctions with fixed penalty notices for working without a permit or in breach of conditions (of the permit).

These powers enable a Council to deliver a more effective network management service, through the increased capability to control the planning and undertaking of work across their network.

In September 2011 the Council introduced the **London Permit Scheme** (the Scheme). The latest iteration of the scheme was brought into legal effect through an Order created by the Council under the provisions of the Traffic Management Permit Scheme (England) Regulations.

Regulatory requirement for a permit scheme evaluation

Permit Scheme Regulation states that permit schemes [should] be evaluated following the first, second and third anniversary of the scheme's commencement and then following every third anniversary.

The regulation further states that, in its evaluation, the Permit Authority [Council] shall include consideration of:

- whether the fee structure needs to be changed in light of any surplus or deficit;
- the costs and benefits (whether or not financial) of operating the scheme; and
- whether the permit scheme is meeting key performance indicators where these are set out in the Guidance.

This report has been developed by an external consultant, Open Road Associates, for the Council to provide an evaluation for the 4th anniversary of the scheme, Year 12, and includes the provisions set out within the regulations.

The regulations reference key performance indicators set out in Statutory Guidance. Annex A of the Guidance contains a list of Key Performance Indicators. Annex B of this report contains the performance indicator results for each permit scheme year (as available).

Executive summary

This evaluation covers the three-year period between 2020/21 and 2022/23 of the operation of the London Borough of Lambeth Council's Permit Scheme. Lambeth's Permit Scheme was introduced on 5th September 2011, which made Lambeth one of the first authorities to adopt a Permit Scheme under the London Permit Scheme (LoPS) and has maintained a well-run Scheme ever since its inception. Lambeth was also part of the original LoPS Work Task Force and Operational Committee.

The London Borough of Lambeth is an inner London borough situated in south London. The borough lies along the south bank of the River Thames and shares boundaries with the boroughs of Croydon, Merton, Southwark, Wandsworth, Westminster and Bromley.

Lambeth is long but small in width, about 2.5 miles wide and 7 miles long and is home to around 300,000 people. It is home to many diverse communities. It includes the popular cultural hub of the South Bank, the bustling street markets of Brixton, the open spaces of Clapham and Streatham Commons and the exciting regeneration of Vauxhall. The borough is rich in history and is very well connected, close to central London and the City.

The road network is comprised of 54.7km of A roads and 327.9km of minor roads. Of these, around 31km are Red Routes and Strategic Road Network, which is controlled and maintained by Transport for London.

The above factors contribute to the council having to maintain an extremely busy road network, 24 hours a day, 7 days a week, which has to be managed and balanced against the ever-increasing demands placed on the network and the surrounding infrastructure.

As a result, Lambeth places Network Management as one of its most important functions, which is demonstrated in a number of areas on the way it takes the lead on several network management functions.

The key highlights of this report are as follows:

- 2,634 days of disruption saved over the course of the three years covered by this report as a result of collaborative working.
- A very low number of deemed permits for both Lambeth's own works and statutory undertaker works, demonstrating a pro-active approach to network management.
- A consistent amount of applications received in time, coupled with a reduction in the number of early start requests for all works promoters, indicating an improvement of planning and pre-start assessments and engagements.
- An increase in the amount of collaborative working sites in the borough, indicating Lambeth's willingness to work together with works promoters to reduce disruption in the borough and carbon emissions in the area.
- A reduction in the amount of road closures used to carry out works in Lambeth, lowering the overall disruption to road users in the borough.
- An increase in the number of works being undertaken on Lambeth's traffic-sensitive streets.

The number of days saved through collaborative working in Lambeth is an excellent barometer of the willingness and proactivity of Lambeth's Network Management team to lessen the disruption caused by Street and Road Works in the borough. Lambeth remains one of the frontrunners for promoting collaboration on its highway network, pushing boundaries and maintaining excellent relationships with works promoters to enable its goals. This measure remains one of the best ways to demonstrate the benefits of operating a permit scheme. Without such a scheme in place this would not be possible.

The number of deemed permits in the 3-year period continues to be very low and Lambeth's Network Management team are consistently looking to respond to permits well within the statutory timelines to allow for works promoters to receive responses early to enable effective planning of works where possible.

The consistent high percentage of applications being received in time, coupled with the reduction in the number of early start requests, shows that works are being planned more effectively and indicates the consistency of Lambeth's Network Management team that promoters are aware of its requirements when assessing permit applications.

The increase in the number of works being undertaken on Lambeth's traffic-sensitive streets presents a big challenge to the authority, as it means that road users on these routes are becoming increasingly affected by disruptive works and Lambeth may seek to introduce a Lane Rental Scheme to it's network as a result to look at incentivising works promoters to reduce works durations and disruption as a consequence.

Analysis of Applications

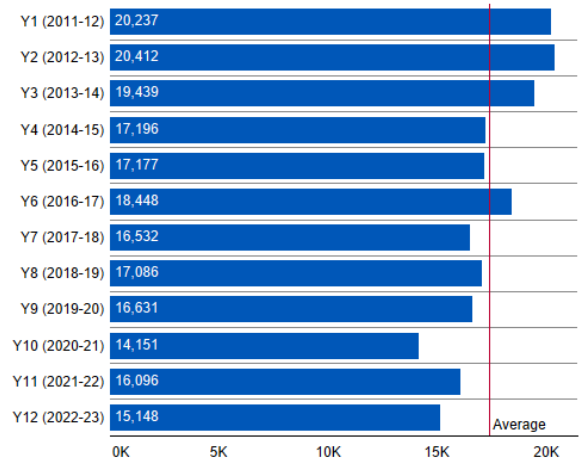
Applications for work

All **registerable works** require an application to the Council to obtain a permit. Prior to the introduction of the permit scheme, the Council was notified of these works.

Throughout this evaluation the term **application** refers to both the initial notice or permit application and the three-month advance notice application (PAA) for a Major work, unless stated otherwise. Non-statutory forward planning notices are excluded from analysis.

Applications received

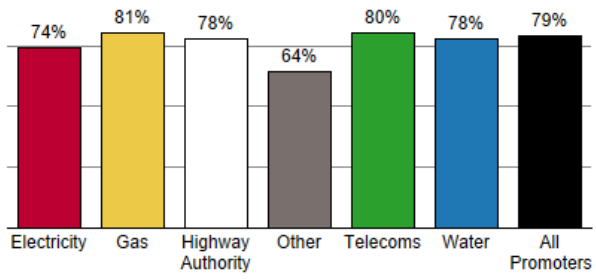
The chart below shows the volume of applications received per Scheme year.



Not all applications for work result in an actual work, with many phases being cancelled or superseded.

% of applications used for work (last 3 years)

The chart below shows the proportion (% of total) of applications for planned work that result in a work (undertaken) for Scheme years 10, 11 and 12 by Promoter sector.



Application lead time

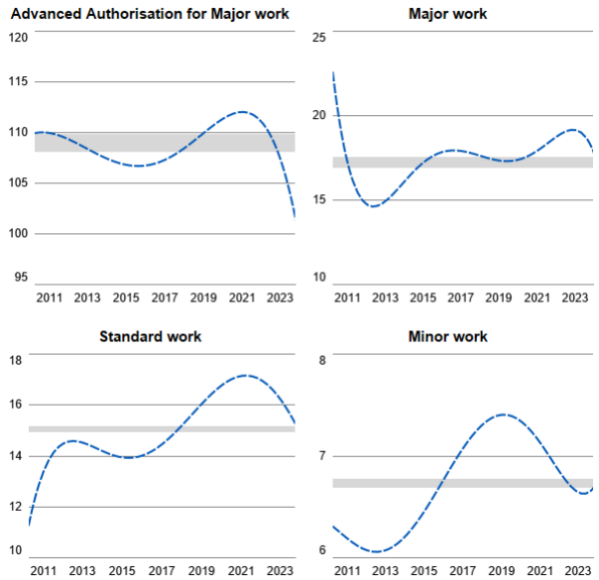
For the Council to effectively carry out the coordination of works, including the advanced publicity of works, it is essential that applications are submitted with sufficient lead time based on the work category, as set out within legislation.

- Major and Standard work requires an application lead time of 10 working days prior to the proposed work start date.
- Minor works require 3 working days lead time.

Immediate works can be submitted after works start and must be received within 2 hours of works start or by 10:00 on the next working day if started outside of non-working hours.

Applications lead time per work category

The charts below show the average lead time (grey-band) with a 95% confidence level and polynomial trend (blue-dotted-line) for each work category based on all applications over Scheme years 1-12.

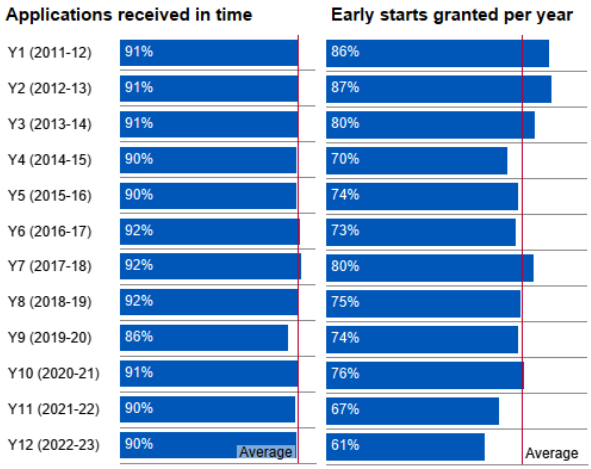


When an application for planned work is not received in time this is referred to as an “early start” as the Promoter wishes to start within the prescribed lead time.

The Council can choose to grant, or refuse, this application allowing the work to commence with “an early start”.

Applications for planned work received in time and early starts granted

The charts below show the following measure per Scheme year: [left] the proportion of initial applications received in time (of total received) for planned work (excluding Immediate work), in accordance with the minimum lead time, and [right] the proportion of applications received not in time that were granted by the Council (as a % of total received).



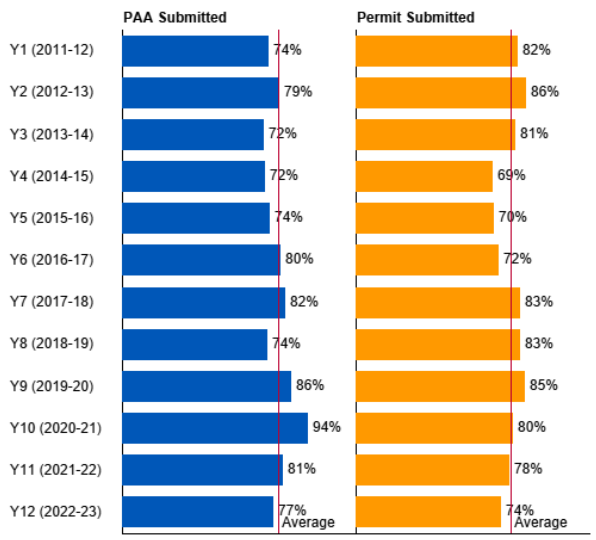
Analysis of Coordination

Response to applications

For a permit scheme to be effective the Council must process and respond to each application. Where the Council accept an application, this is granted. Where the Council do not accept an application, or want to make changes to the proposed work, it is refused, and a response code (based on a set of national codes) **must** be provided.

Responses to applications

The chart right shows [left] PAA applications and [right] permit applications granted by the Council as a proportion of the total received. PAAs and permits that were cancelled or superseded before a response was given have been removed from this analysis.



Reasons for refusals

The chart below shows the response codes used on rejected applications in Scheme years 10 to 12. A refusal can contains more than one reason and therefore code.

	Y10 (2020-21)	Y11 (2021-22)	Y12 (2022-23)	Total (3 Years)
Lack of traffic management approval [RC40]	987	1,190	1,272	3,449
Other reason [RC50]	811	1,208	1,325	3,344
Coordination issues [RC30]	169	432	399	1,000
Location issues [RC22]	206	338	408	952
Incorrect recipient [RC21]	218	189	258	665
Missing conditions [RC11]	151	218	240	609
Early start agreement [RC42]	28	200	169	397
Incorrect details [RC20]	84	86	61	231
Conflicting information [RC23]	81	88	61	230
Missing information [RC10]	53	93	76	222
Excessive duration [RC44]	71	59	47	177
Traffic management details [RC12]	7	2	6	15
Timing of works [RC32]	3	4	2	9
Incorrect traffic management [RC41]	2	1	2	5
NRSWA Section 58 restriction [RC43]	0	0	3	3
Clash of works [RC31]	0	0	0	0
Collaboration opportunity [RC33]	0	0	0	0

Changes during the life of a permit

Processing permit applications provides an opportunity for the Council to undertake their network management duty, with an aim to reduce the potential disruption of the work. The sections below show analysis of changes to permits during the planning stage - between the initial application and work start - based on the content of the notices received and issued.

This analysis should demonstrate the ability to use the Scheme for coordination, through changes being made to a permit. The analysis considers changes to four key areas:

(1) proposed duration

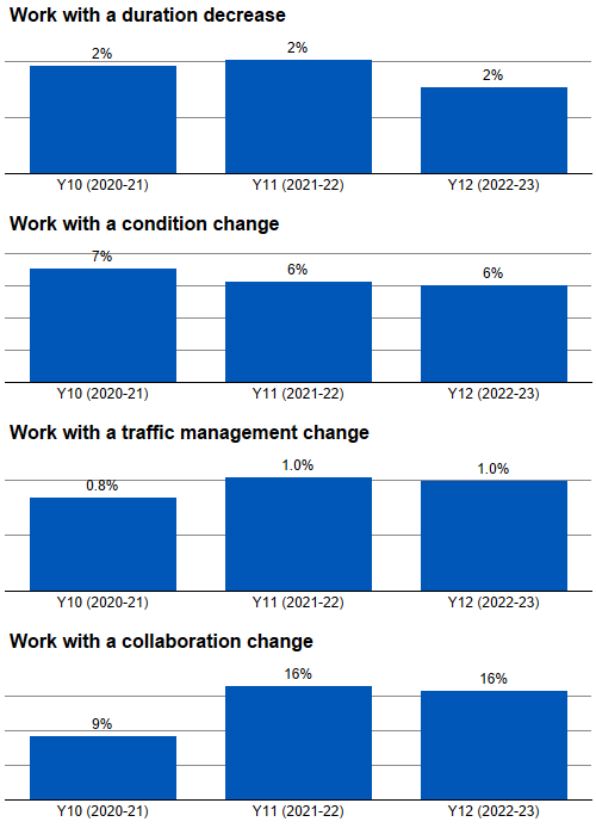
(2) permit condition (where a work had a condition applied)

(3) traffic management

(4) Collaboration (where a work was undertaken with a form of collaboration)

Changes to work during the planning stage

The charts right show the proportion of work (% of total) where a change was made to a permit during the planning stage (planned work only) in Scheme years 10 to 12 based on the measures detailed in the section above.



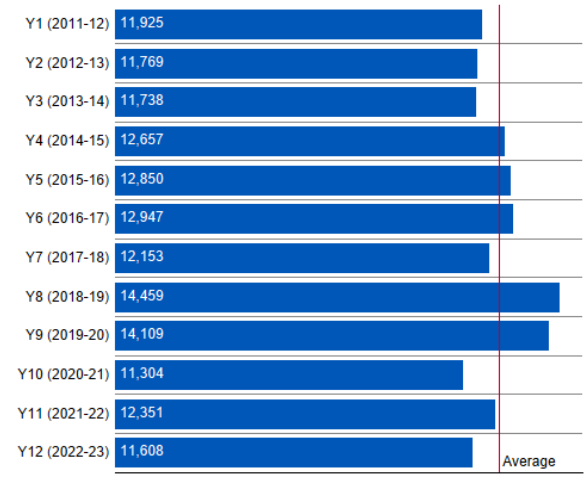
Analysis of Work

Work undertaken

Works are treated as 'undertaken' when they have reached a stage of 'in progress', *i.e. work has started.* Not all applications for work or where a permit has been obtained (granted) result in work undertaken. On average 77% of applications received result in an actual work, with the reminder cancelled or superseded.

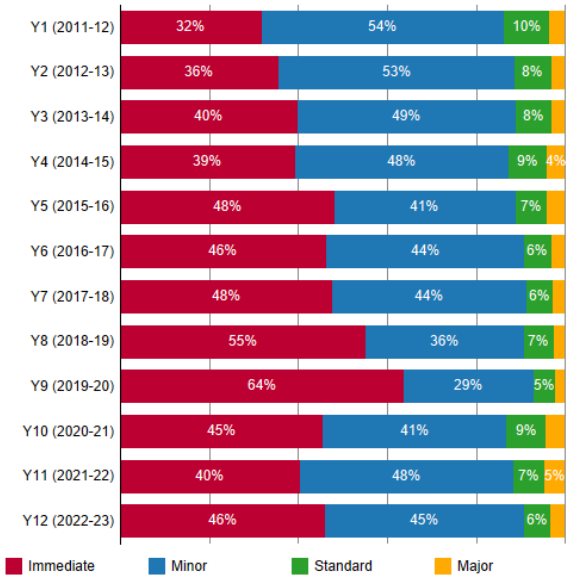
Work undertaken

The chart below shows the volume of work undertaken per Scheme year.



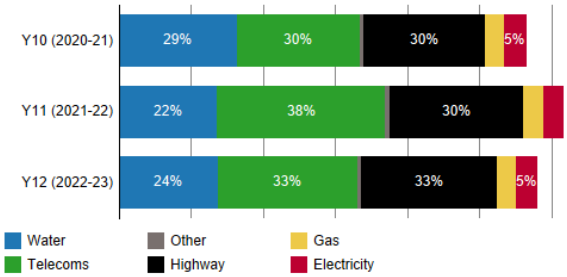
Work undertaken by work category

The chart below shows the proportion of work undertaken per Scheme year delineated by work category (colour legend).



Work undertaken by sector

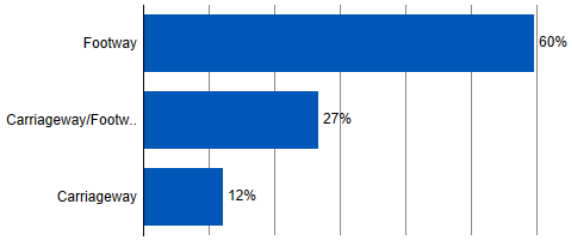
The chart below shows work undertaken in Scheme years 10 to 12 delineated by sector (colour legend).



Work is undertaken across all different sections of the highway, not just the carriageway. Since the July 2020 the location of work has been recorded on permits.

Work location

The chart below shows the recorded location for work undertaken in Scheme years 10 to 12.

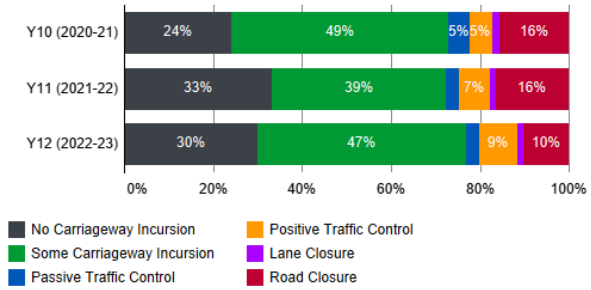


Traffic management

All works must be undertaken using an appropriate form of traffic management (control) to ensure work is undertaken safely - for those undertaking the works as well as the road user, *including pedestrians, cyclists and in particular the needs of disabled people and vulnerable groups.*

Traffic management used for work

The chart below shows traffic management (colour legend) for all works undertaken as a proportion of the duration (days) in Scheme years 10 to 12.



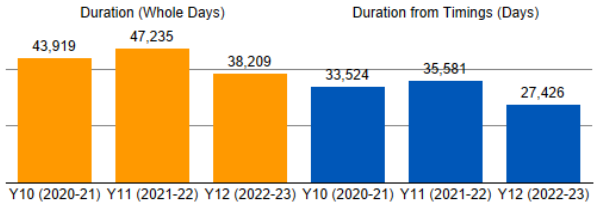
Work duration

Analysis of work duration is based on works undertaken only. Durations are typically calculated in whole calendar days. Typically, a work will not take the whole day so detailed analysis should be in actual times (minutes).

Since the introduction of Street Manager in 2020 there is a more accurate record of actual start and stop times for their works. This allows analysis based on the timing of work.

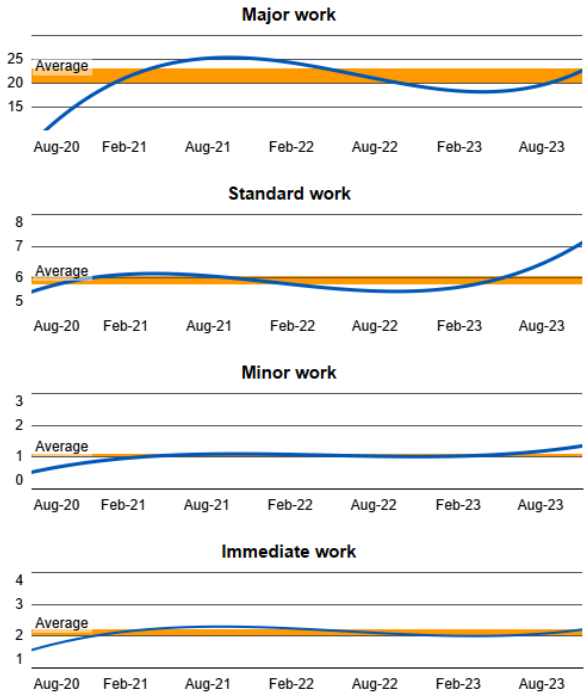
Duration of work (whole days)

The chart below shows the total duration of work per Scheme year calculated by [left] whole calendar days and [right] actual timings of work (minutes aggregated to days).



Average duration and trend

The charts below show an average duration (blue-line) with trend (orange-band) for the four work categories across Scheme years 10 to 12. The average and trend are calculated using the actual duration. Average duration is shown with a 95% confidence level distribution. The trend is based on a polynomial model with 3+ degrees or variation.

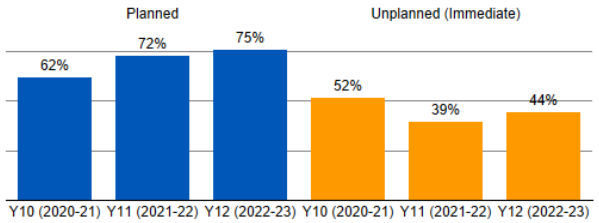


Work on traffic-sensitive streets

The Council can designate a street as traffic-sensitive, based on criteria set out within regulations, to ensure streets with specifically higher traffic flows have greater consideration, especially with the coordination and control of work. These designations contain timings for when the flow is estimated to be at the defined levels for traffic-sensitivity.

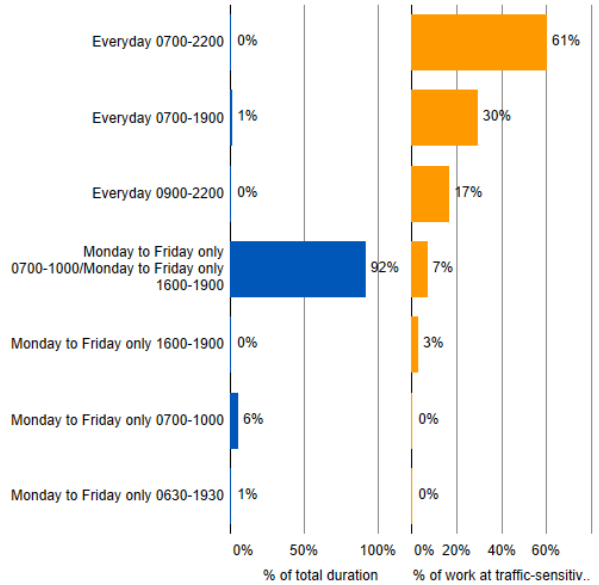
Work at peak times on traffic-sensitive streets

The chart below shows the proportion of work (% of total) undertaken on the carriageway of streets with a traffic-sensitivity designation where there was occupation of the highway during the designated traffic-sensitive time at any time of that designation. Only works in Scheme years 10 to 12 are included.



Work at traffic-sensitive times

The chart below shows the following measure for works on the carriageway of traffic-sensitivity designated streets within each designated timing [left] the proportion (% of total) duration for all works; and [right] the proportional (% of total) duration of work undertaken on traffic-sensitive streets at traffic-sensitive times for that timing designation. Only works in Scheme years 10 to 12 are included.



Work exceeding agreed duration

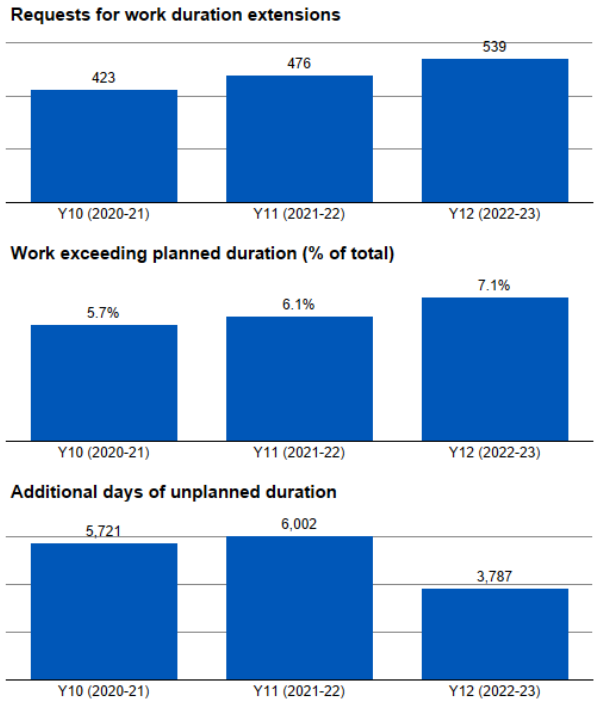
Works that exceed their agreed duration can create significant coordination issues and can apply a 'domino effect' on work programmes and the potential need to reschedule or revoke other active or planned works that may clash with adjacent over running works.

For this evaluation a work exceeding the agreed duration is identified when a work's **actual duration** is exceeded by the **proposed duration**. The duration of the unplanned duration is measured in **calendar days using the timing of the work.**

Promoters may request a work extension whilst works are in progress, which can be granted or refused by the Council. Further analysis on the applications for work extensions and the Council's response to these extensions can be found in the Analysis of Permit Variations section (next page).

Works exceeding planned duration

The charts below show the following measures per Scheme years 10 to 12 [top] the total number of works undertaken where the actual duration exceeds the planned duration; [middle] the proportion of all works undertaken (% of total) that exceeded the planned duration; and [bottom] the additional duration (calendar days) of days not planned for.



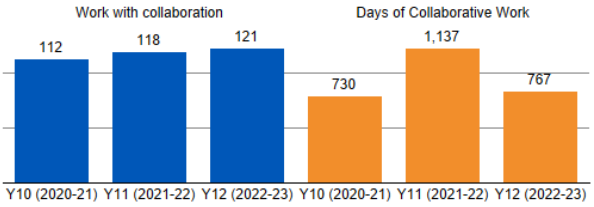
Collaborative works

One of the most effective methods for the Council to reduce the potential disruption is for Promoters to collaborate their works, thereby undertaking work on the same section of the highway at the same time.

Collaboration between Promoters is recognised as an industrywide challenge, with limited opportunities and practical limitations within work delivery constraints, resource schedules and methodology.

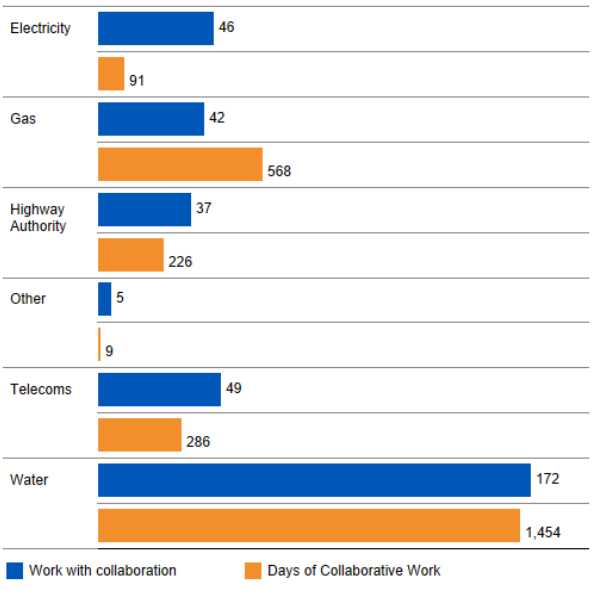
Works with a form of collaboration

The charts below show [left] the number of works with a form of collaboration and [right] the total days of the work per Scheme years 10 to 12.



Works with a form of collaboration by utility

The chart below shows the following measures by Promoter sector in Scheme years 10 to 12: [top blue bar] work with a form of collaboration and [bottom orange bar] the total days of work under a form of collaboration.



Analysis of Permit Variations

Variations to permits

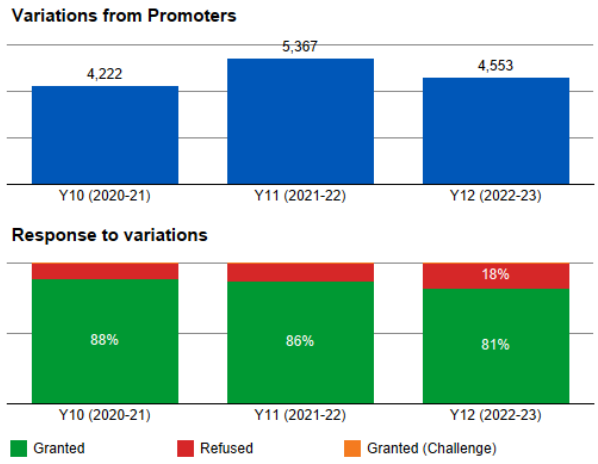
Both regulations and the Scheme includes a provision for the Council to vary or revoke a permit Therefore, a permit variation (*change request or alteration as named in Street Manager)* can be issued either by the Promoter for the Council to grant or refuse, or by the Council to the Promoter as an imposed change.

There are many reasons why variations are issued from either Promoters or the Council. Promoters issue variations for one of three changes:

- **Permit modification** where a Promoter is responding to a permit modification request (refusal) from the Council.
- **Promoter change request** where a permit has been granted and the Promoter wants to vary the permit.
- **Promoter imposed change** where a Promoter wants to vary a permit that has not been granted.

Variations from Promoters

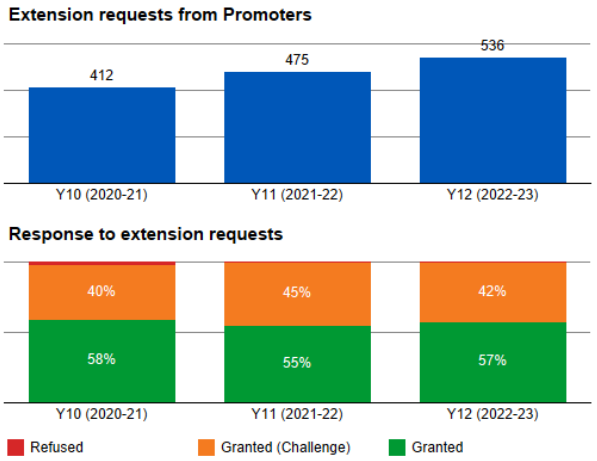
The charts below show the following measures per Scheme years 10 to 12 [top] permit variations (excluding work extension) issued by Promoters and [bottom] the proportion of these variations granted (% of total). Applications that were cancelled or superseded before a response was given are excluded.



Promoters can also submit a **work extension request** where they want to change the proposed end date of work once a work has commenced.

Work duration extension request

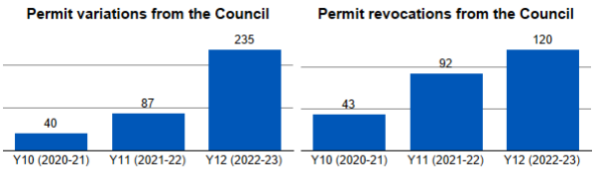
The charts below show the following measures per Scheme year: [top] requests for work duration extensions; [bottom] the % (of total) responses to requests for duration extensions from the Council.



The Council can also issue a **Highway Authority imposed change** where they want to make a change to the permit. The Council can also revoke a permit where the work cannot take place or should be stopped and closed down if in progress.

Variations and revocations issued by the Council

The chart below shows the following measures per Scheme years 10 to 12 [left] the volume of permit variations from the Council and [right] permit revocations issued by the Council.



Analysis of Permit Conditions

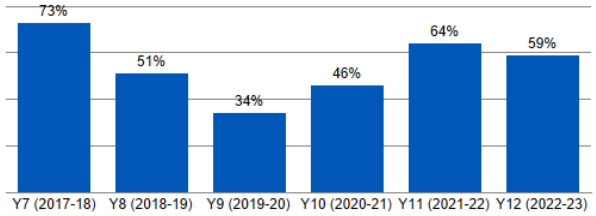
Use of permit conditions

The permit application process allows the Council to apply or amend conditions (within categories defined in Statutory Guidance). The use of conditions is a primary benefit of a permit scheme.

It can be impracticable to determine the criteria for a work and whether a condition could, or should, have been applied or not. In addition, it is not always possible to determine the effect of the condition or an outcome that can be quantified. **This analysis does not include conditions that apply to all permits, *e.g. displaying a permit number on site*, only those that can be applied to a permit.**

Work with an applied permit condition

The chart below shows the proportion of work undertaken with an applied permit condition (% of total) per Scheme years 7 to 12.



Conditions applied by type

The chart below shows conditions applied, by their type, to work undertaken per Scheme years 7 to 12.

	Y7 (2017-18)	Y8 (2018-19)	Y9 (2019-20)	Y10 (2020-21)	Y11 (2021-22)	Y12 (2022-23)
Road space available to traffic [NCT06a]	6,721	4,981	3,202	3,629	4,963	4,193
Date and times [NCT02a]	5,927	4,420	3,086	2,121	3,357	2,951
Road occupation [NCT05a]	5,113	4,882	3,278	2,374	2,086	1,693
Removal of materials or plant [NCT04a]	3,316	633	134	49	100	58
Storage of materials or plant [NCT04b]	354	311	109	860	770	336
Specified traffic control [NCT08a]	411	390	332	363	550	541
Advanced publicity [NCT11b]	222	218	205	858	533	324
Work methodology [NCT10a]	789	698	236	152	177	110
Traffic management changes during work [NCT09a]	821	589	265	47	43	191
Extended working hours [NCT02b]	581	506	196	184	130	236
Road closure [NCT07a]	278	264	203	368	452	317
Traffic management arrangements [NCT09b]	97	127	54	31	87	108
Removing temporary signals [NCT09c]	157	96	68	61	80	106
Manual traffic control [NCT08b]	23	30	26	42	69	61
Environment noise control [NCT12a]	22	21	36	22	73	51
Changes to traffic management arrangements for Major work [NCT09d]	0	0	0	0	2	156
Ancillary activity information [NCT03]	0	0	0	0	0	17
Exceptional circumstances [NCT13]	0	0	0	0	0	0

Benefits of conditions applied

It is difficult to effectively delineate work where a condition could *or may* be applied as relevant elements of the work are not specified within the data for analysis, *such as whether the work involved surplus spoil or materials or required a specific work methodology.*

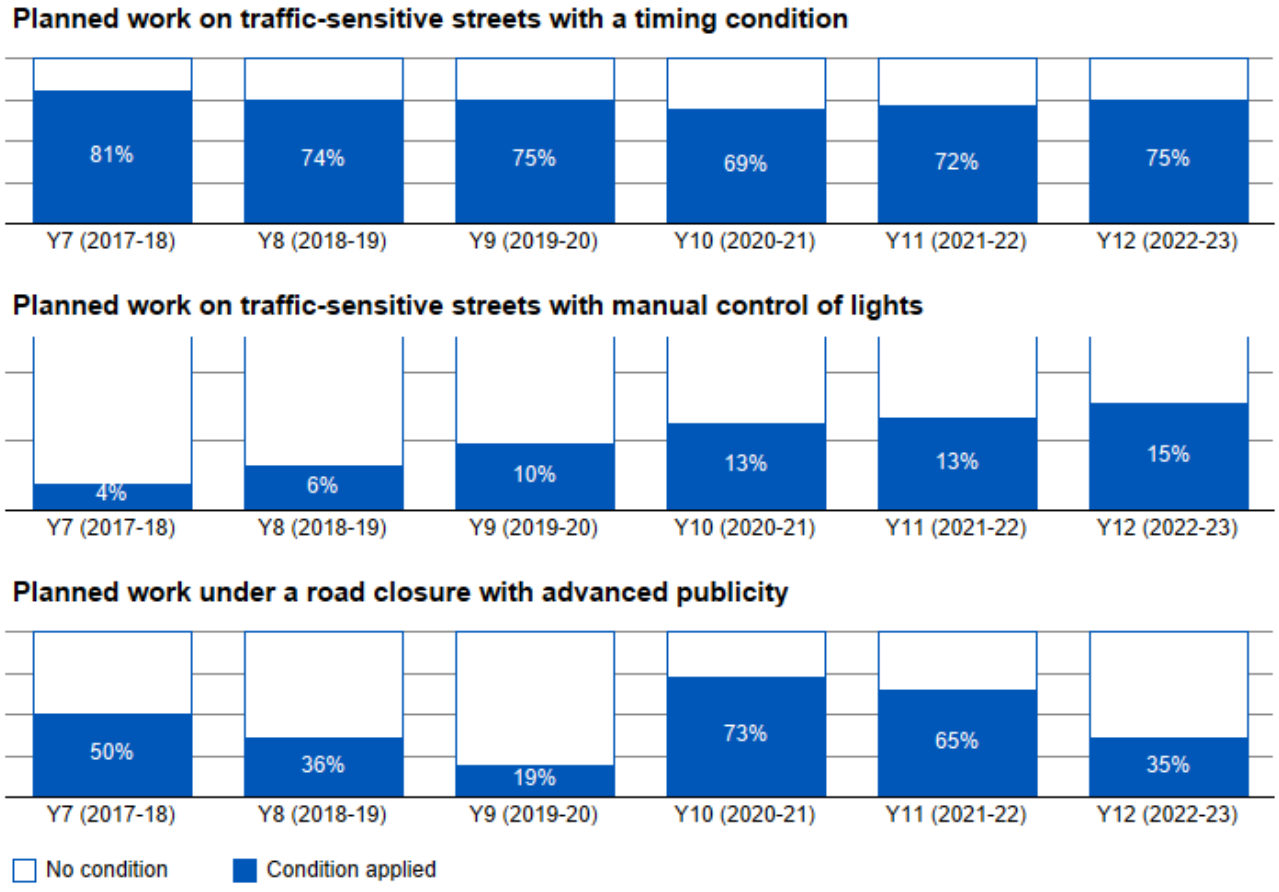
There are however a few indicators that can be used to identify whether conditions are being applied to good effect, and therefore of benefit to the road user. These include:

Planned work outside traffic-sensitive times (on a traffic-sensitive street) with a timing condition (NCT2a) to ensure compliance to this arrangement;

- Work at traffic-sensitive times (on a traffic-sensitive street) involving temporary traffic lights with a condition (NCT8b) to manually control the lights at specified times, *typically peak traffic times; and*
- Planned work under a road closure with advanced publicity of the work.

Conditions applied to work scenarios

The charts below show the proportion of work (% of total) with an applied condition based on the defined scenarios (above) per Scheme Years 7 to 12.



Analysis of Permit Compliance

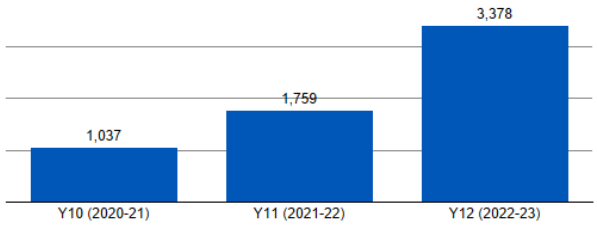
Permit compliance inspections

Under a permit scheme the Council can undertake additional inspections during work for permit compliance to ensure that (a) work is being undertaken with a valid permit and (b) in accordance with the stated conditions (as applicable).

The Council recorded any permit compliance failures during their live site inspections.

Live site inspections

The chart below shows the volume of live site inspections recorded per Scheme years 10 to 12.

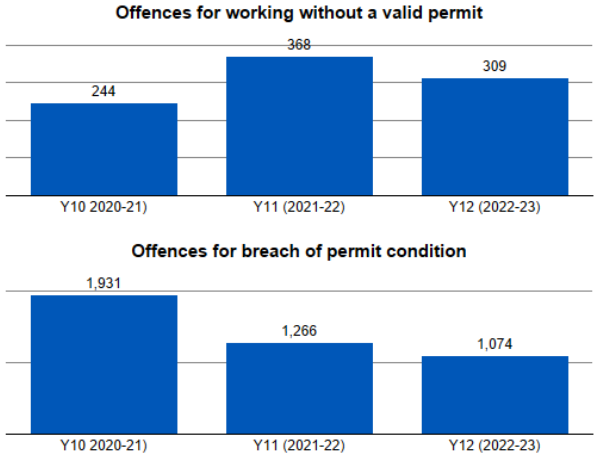


Permit offences

A permit scheme introduced two new offences, with financial penalties for statutory undertakers, where there is a failure to comply with either of these.

Permit offences issued to Promoters

The charts below show the number of offences issued to Promoters (not withdrawn) per Scheme years 10 to 12 for [top] working without a permit and [bottom] breach of permit conditions.



Reason for permit offence

The chart below shows the reasons provided in the breach of permit conditions offence issued to Promoters in Scheme years 10 to 12.

	Y10 2020-21)	Y11 (2021-22)	Y12 (2022-23)
Display of permit number [NCT11a]	857	645	506
Road space allowed [NCT5a]	270	53	19
Changes to traffic management [NCT9a]	7	2	2
Environment - noise control [NCT12a]	5	0	0
Dates and times [NCT2a]	4	0	0
Advanced publicity [NCT11b]	0	0	1

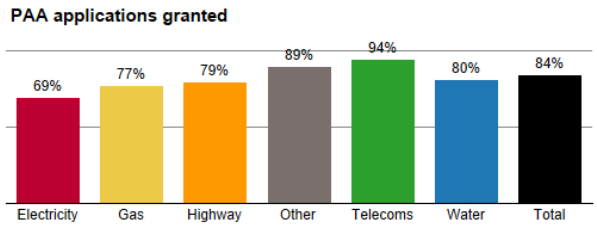
Analysis of Parity Treatment

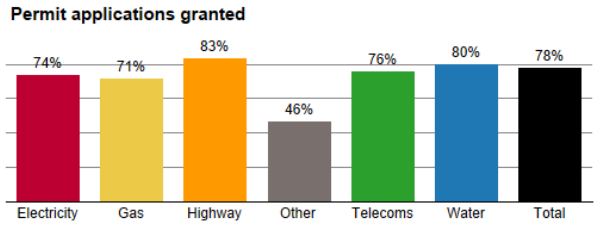
Section 40: Non-discrimination of the Permit Scheme Regulation state that the Council must apply the regulations (Parts 5 and 6) *without any discrimination between different classes of application for permits or for provisional advanced authorisation*. Statutory Guidance defines this further a **parity treatment** with *each permit application received are treated equally regardless of the works' promoter* .... and [Highway] *works will be treated in the same way as any undertaker (except that they are not liable for the fees or sanctions).*

Measuring parity treatment considers specific measures for each sector across Scheme years 10 to 12 (combined).

Applications granted

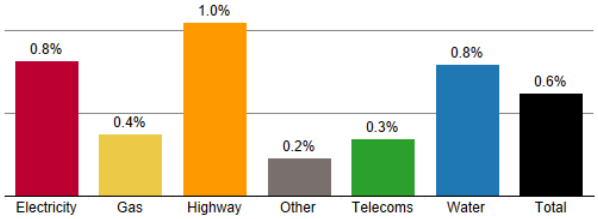
The charts below show applications granted (as a % of total received) by sector. The analysis excludes applications deemed (granted), superseded or cancelled before a response was given.





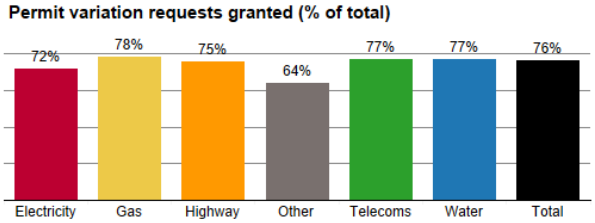
Applications deemed

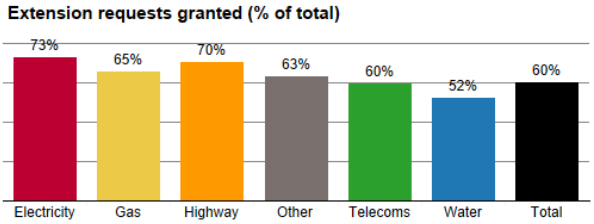
The chart below shows the % (of total) PAA and permit applications that were deemed (granted) by sector. The charts do not include applications superseded or cancelled before a response could be given.



Permit variations granted

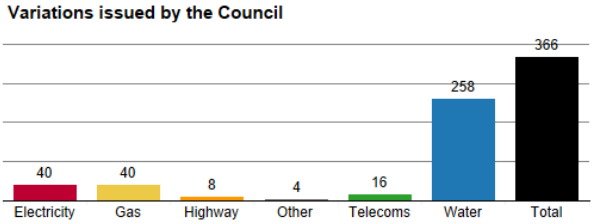
The charts below show permit variation applications granted (% of total) by sector for [top]) requests for extensions and [bottom] other variations. The analysis excludes applications deemed (granted), superseded or cancelled before a response was given.

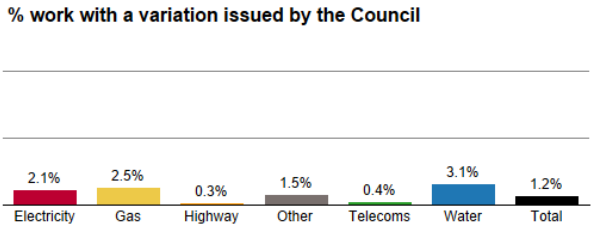




Authority issued variations

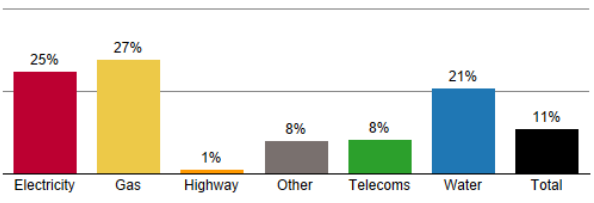
The chart below shows the following measures by sector [top] the number of variations issued to Promoters from the Council; and [bottom] the % of work undertaken with a variation issued by the Council.





Work with a live site inspection

The chart below shows the number of works (% of total) with a live site inspection by sector.



Equality Impact Assessment

The Equality Act 2010 introduced the Public Sector Equality Duty, which requires all public bodies, including councils, to have due regard to the need to:

- Eliminate unlawful discrimination, harassment and victimisation and other conduct prohibited by the Act;
- Advance equality of opportunity between people who share a protected characteristic and those who do not; and
- Foster good relations between people who share a protected characteristic and those who do not.

In consideration to this Duty an **Equality Impact Assessment** aims to prevent discrimination against people who are categorised as being disadvantaged or vulnerable within society. An Assessment will therefore:

- Demonstrate due regard for the provisions of the Public Sector Equality Duty;
- Identify possible negative impacts of decisions on individuals and **groups with protected characteristics** and plan mitigating action accordingly; and
- Identify additional opportunities to advance equality within policies, strategies, and services.

The table (below) shows **protected characteristic groups** with a potential impact and the nature of any impact to that group from the operation of a permit scheme.

The only group with a perceived impact is Disability, which is considered a positive impact as under a permit scheme the Council can further ensure work is carried out in consideration to the needs of **all vulnerable road users.**

It is recommended that the Council continue assessing the role of the permit scheme to meet the Councils Public Sector Equality Duty.

Protected Characteristic Group	Potential for Impact	Positive or Negative Impact
Disability	Yes	Positive
Gender reassignment	No	Not applicable
Marriage or civil partnership	No	Not applicable
Race	No	Not applicable
Religion or belief	No	Not applicable
Sexual orientation	No	Not applicable
Sex (gender)	No	Not applicable
Age	No	Not applicable

Analysis of cost and benefit

Review of income from permit fees

The Permit Scheme Regulations allows the Council to charge a fee to recover the prescribed costs for the administration of a permit, a provisional advanced authorisation, and the variation (alteration) of a permit. These fees are applied to statutory undertaker works only, not for work for road purposes (highway authority work).

The regulations require that the Council (as a permit authority) consider whether the fee structure needs to be changed in light of any surplus or deficit, to only recover the prescribed costs. The table below shows the income and recoverable cost per year.

Year	Income £	Cost £
Y10 2020/21	522,984	688,127
Y11 2021/22	839,757	742,475
Y12 2022/23	703,769	837,899

Across the three years of analysis, the Council incurred a deficit of -£201,992 (income – recoverable cost). As the permit fee levels are already at the maximum allowed under the regulations, the Council are unable to make any changes to the permit fee level and recover this deficit.

Impact of work

The societal impact of each work is estimated based on impact calculations derived from the **QUeues And Delays at ROadworks** (QUADRO) model taking account of local traffic flow for different types of road (refer to Evaluation methodology).

Whilst this impact is estimated, it should be accepted as a robust indicator of overall impact. Considering QUADRO is predicated only on carriageway impact, and a large volume of work also impact other forms of traffic, this indicator could be considered very conversative.

The table below provides the estimated impact of work per Scheme year for work impacting the carriageway only. This forms the basis of the overall economic appraisal.

Year	Impact £
2020/21	11,719,811
2021/22	14,747,691
2022/23	7,075,404

Cost-benefit-analysis

A cost-benefit analysis (CBA) provides a framework within which the impacts of a scheme can be compared against the cost of setting up and operating the scheme.

Historical works data provides a basis on which to evaluate the impact of works on motorists and the local economy, and to review the value of the scheme against the actual costs and revenues of operations of the scheme since implementation.

The approach to the CBA is as follows:

- Identify the scale and characteristics and quantify the scale of societal impact these works will have had to the residents and local economy, using the most detailed information available;
- Estimate the reduction in impact resulting from the permit scheme and quantify the social benefit of this reduction;
- Quantify the costs of operating the permit scheme; and
- Undertake the cost benefit analysis to determine the benefit to cost ratio and net present value delivered by the scheme.

Further detail on the appraisal methodology is detailed within Annex A.

Appraisal Results

The cost benefit analysis takes the benefits and costs from each year of operation and projects these into the future to provide a 25-year appraisal period as per DfT Guidance. The cost and benefit streams are discounted using the standard discount rate of 3.5%, meaning that near term costs The results of the cost benefit analysis are set out in the table below.

Appraisal Metric	Value
Net Present Benefit of Scheme	£17,787,539
Net Present Cost of Scheme	£9,204,125
Net Presented Value of Scheme	£8,583,414
Benefit to Cost Ratio	1.93

The benefit to cost ratio (BCR) is a measure of value-for-money exhibited by a scheme. With a BCR of 1.93 the permit scheme can be defined as delivering greater benefit than it costs and classified as 'Value for Money'.

An analysis of monetised costs and benefits includes costs and benefits which are regularly or occasionally presented in monetised form in transport appraisals, together with some where monetisation is in prospect. Refer to table below.

Noise	
Local Air Quality	
Greenhouse Gases	1,506,560
Journey Quality	
Physical Activity	
Accidents	1,295,566
Economic Efficiency: Consumer Users (Commuting)	6,847,242
Economic Efficiency: Consumer Users (Other)	10,270,863
Economic Efficiency: Business Users and Providers	310,413
Wider Public Finances (Indirect Taxation Revenues)	2,443,104
Present Value of Benefits (see notes) (PVB)	17,787,539
Broad Transport Budget	9,204,125
Present Value of Costs (see notes) (PVC)	9,204,125
OVERALL IMPACTS	
Net Present Value (NPV)	8,583,414
Benefit to Cost Ratio (BCR)	1.93

There may also be other significant costs and benefits, some of which cannot be presented in monetised form. Where this is the case, the analysis presented does NOT provide a good measure of value for money and should not be used as the sole basis for decisions.

Carbon Emissions

A component to the costed benefits is a reduction in carbon emissions. These emissions savings are driven by more efficient vehicle movements, and the avoidance of the 'stop-start' movements associated with works. QUADRO places a monetary value on emissions savings by applying a 'cost of carbon' to the amount of carbon generated because of works, such as additional fuel due to idling, or diversions.

Taking the average calculated works impact, the carbon emission generated by works within the area (as calculated within QUADRO) are valued at £670,974 (2010 prices), which represents around 6% of overall work impact cost.

The implied carbon emissions attributable to works in the area amounts to 9,512 tonnes. This amounts to around 5% of total vehicular emissions on local roads in area. The improved efficiency of works under the permit scheme means that the scale of carbon emissions generated because of works may be expected to be reduced post-scheme implementation.

In line with the broader assumptions about permit scheme impacts, adopting the national permit scheme evaluation evidence as the basis for the reduction in works duration, scheme implementation would lead to estimated carbon emission savings of 1,057 tonnes CO2 per year. To set this emission saving in context, using the typical emissions of new cars sold in the UK currently, this reduction amounts to an equivalent saving of over 880,000 annual car kms.

Annex A: Evaluation methodology

Period of analysis

Throughout this evaluation there is a reference to "**years"**. Unless stated otherwise, these reference Scheme operational years where the first year of the Scheme (Year 1) is between September 2011 and August 2012 (inclusive).

Defining Promoters

Within this evaluation Promoters can be defined by their sector, *e.g. water*. The Promoter type Highway Authority is included in this definition, *as works for road purposes*.

The sector Other includes other organisations who need to undertake work on the highway, *such as Network Rail.*

Source data for analysis

This evaluation uses data collected from both Street Manager and the Council's system to process and record works. The data collected contains the content of notifications (events) sent between Promoters undertaking work, *such as utility companie*s, and the Council.

Analysis of these notifications enables the Council to produce metrics for performance indicators and further measures. For some measures aggregating data for analysis does not provide an accurate picture of the results, for example for the analysis of duration for all work categories can provide a falsely inflated picture of changes over time.

This evaluation therefore may delineates the measures into sub-categories, *such as works category*, to provide a more accurate result and trend.

Many of the measures contained in this evaluation were analysed to ensure accuracy in the results. This level of analysis may not be included within this evaluation report; however, it should be accepted than any findings presented have been tested for certainty and any anomalies investigated and defined.

Work phases

In this evaluation work is analysed in logical phases. A work is typically identified by a work reference number, which often applies to multiple phases of work, for example a work reference number may contain the following individual phases:

- work with a temporary reinstatement;
- follow-up work changing the temporary reinstatement to a permanent reinstatement;
- defect work to rectify a fault with the permanent reinstatement.

To logically delineate work phases, a phase is identified from the initial application through to work completion notices within the same work reference. Therefore, the analysis shown for work in this evaluation is for a work phase, *i.e. the total works undertaken are the total work phases undertaken*.

Duration analysis and adjustment

Analysis of works duration is calculated using the dates provided within the work start and work end notifications, inclusive of these dates. As would be expected within a significant data-set from multiple different organisations spurious data can be found, such as work end dates before a work start date therefore giving a negative duration, or work with an incorrect year, thereby giving a significantly high duration. Whenever possible, these anomalies are identified and removed from the analysis to provide a more realistic result.

Since the introduction of the DfT's digital service, Street Manager, and associated regulatory changes in July 2020 it is possible to determine the timings more accurately and reliably from the works data. This means a work duration can be calculated by minutes instead of whole days. As such, analysis using Street Manager derived data provides a more realistic insight and result.

Analysis of total duration based on the notice dates (whole calendar day) and notice times shows that there can be noticeable differences between these two types of measure. For this evaluation, analysis of work duration and trend is predominantly based on timings. Any variations to this approach will be clearly defined in the report.

Economic cost-benefit-analysis

Appraisal methodology

A cost-benefit analysis (CBA) provides a framework in which the impact of a scheme can be compared against the cost of setting up and operating the scheme. Annual evaluation of the Permit Scheme CBA provides opportunity to review the value of the scheme with the benefit of the outturn scheme operating costs and revenues, updated estimates of the societal impact of work and to compare this not operating a permit scheme.

The approach to the permit scheme CBA is as follows:

- identify the scale and characteristics and quantify the scale of societal impact these works will have had to the residents and local economy;
- estimate the reduction in impact resulting from the permit scheme and quantify the social benefit of this reduction;
- identify the cost of setting up and operating the permit scheme; and
- undertake the cost benefit analysis to determine the benefit to cost ratio and net present value delivered by the scheme.

The societal impact of each work is estimated based on impact calculations derived from the **QUeues And Delays at ROadworks** (QUADRO) model. Originally QUADRO was developed for the DfT and designed to assess and monetize the impact of delays due to works. QUADRO is currently maintained by National Highways.

QUADRO captures loss of time to travellers, increased vehicle operating costs because of idling in queues and/or diversion, vehicle emissions and accident impacts. Impact modelling is based on local traffic flow data (within the Council's boundary), disaggregated by road type, to provide locally relevant impact values.

Promoter Costs

In addition to the costs of operating the permit scheme, it is important to recognise that there are costs borne by works promoters also in operating under the permit scheme. These will include:

- Permit Fee costs which represent a business cost to the promoter.
    - Within the CBA this is treated as a business cost to the promoter, netted from overall scheme benefits. However, the transaction is effectively a transfer payment between promoter and the Council, so the payment is treated as a revenue and is subtracted from scheme operating costs.
- Additional administration costs in complying with the permit scheme.
- Costs related to changes in working practices such as greater use of traffic management or off-peak and weekend working.

Detailed promoter cost data has not been available, but in line with evidence gathered from other permit scheme evaluations and adopted as the default assumption in the National Permit Scheme Evaluation, an estimate of 20% of local authority operating costs relating to Statutory Undertaker works has been applied.

Assessing the scale and impact of work

To ensure the most rigorous analysis for the CBA, the Street Manager data from the most recent complete year has been used as the basis for estimating works impact costs and permit scheme benefits.

For the purposes of the CBA, works are disaggregated by type of traffic management, which has important implications on the scale of impact of those works on highway users. The remainder of the work involved no incursion into the carriageway and has been assumed to have no impact on road users. It should be noted that this is a conservative assumption as even non-carriageway works are likely to incur some impact, whether road users or on wider society.

The estimated impact of the works with incursion into the carriageway have been modelled using the QUeues And Delays and ROadworks (QUADRO). QUADRO was originally developed for the DfT and designed to assess and monetize the impact of delays due to works. Whilst no longer hosted by the DfT, the QUADRO model continues to be maintained, under the responsibility of National Highways, and is considered the most appropriate tool to quantifying the impact of works for this evaluation.

Having developed costs for every work type, each work within the data used for this evaluation has been assigned an impact cost, according to its characteristics and the duration of the work taken from the more robust data contained within Street Manager. This provides highly granular results, especially when compared with the typical aggregated CBA approach adopted in other scheme evaluation documents. The modelled impact of typical works forms the basis of the benefits calculation.

These impact estimates include the following elements:

- Road user travel time (delay caused to consumer and business as a result of works)
- Road user vehicle operating costs (the impact of delay and diversion on vehicle operating costs for consumers and business)
- Accident costs
- Emissions costs (resulting from congested conditions and diversion)
- Indirect tax revenue (increased tax revenue to the exchequer because of higher fuel consumption)

Whilst QUADRO covers most of the standard monetised elements of work impact, an off-model adjustment was made to account for reliability impacts. DfT guidance recommends that this be captured through application of an uplift to journey time costs/benefits. The recommended uplift factor is 10-20%. A factor of 15% has been adopted for this evaluation to be consistent with this recommendation.

Quantification of benefit of permit scheme

The benefits of the permit scheme are expected to be achieved through more efficient and better managed work events taking place compared to the patterns observed before scheme implementation. Relating observed changes directly to the scheme is complicated by the range of factors which influence work occurrences. For the CBA, the comparative scenario is one in which the permit scheme had not been implemented and is therefore by its very nature hypothetical and unobservable.

A national evaluation of permit scheme impacts was commissioned by the DfT in 2017[1]. This study adopted a rigorous cross region evaluation of the observed pattern of roadworks under authorities with and without permit schemes.

It concluded that the impact of work was typically 6.4%, which aligned closely with the default assumption of 5% works impact reduction previously adopted in assessments (DfT Permit Scheme Evaluation Guidance, 2016).

[1] permit-schemes-evaluation-report

Transport for London's analysis submitted for the London Permit Scheme (LoPS) application assumes a work impact reduction of 10%. Therefore, to ensure the most rigorous assessment of the impact of the permit scheme for an inner London Borough, the TfL assumption of 10% reduction has been paired with the impact cost estimate derived from the works.

The cost benefit appraisal requires that scheme benefits are appraised against scheme costs over the whole appraisal period, which in this case is recommended as being 25 years in the DFT permit scheme appraisal guidance.

Consequently, the benefits are projected forward over subsequent years, with impacts and benefits increasing in real terms to reflect growth in values of time, vehicle operating costs, accident savings and emissions costs.

Scheme Operating Costs

Having established scheme benefits, these must be set against scheme costs to determine value for money. Permit scheme costs elements include the following:

- Setup costs
- Scheme operating costs (staff, consultants, maintenance/running costs)
- Scheme capital costs – IT equipment, software etc

Importantly, the permit scheme costs included within the appraisal are the additional costs of operating the permit scheme above those incurred previously incurred in delivering the council duties regarding work applications. By considering the incremental costs, this fairly compares the 'with permit scheme' scenario with the 'business as usual (i.e. no permit scheme) scenario.

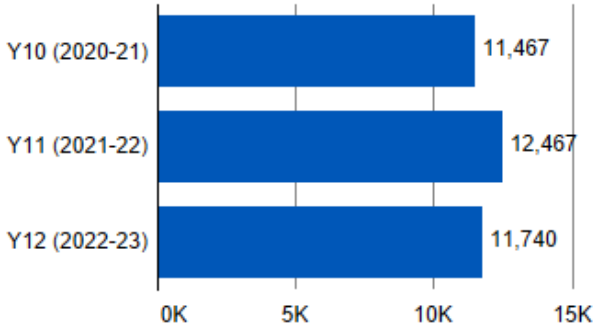
Whilst the scheme has now been running for several years, the appraisal focuses on the projected costs of operation over the coming years, to align with the benefit estimate.

The operating costs of the permit scheme principally relate to the additional internal staff resources required to process permit applications and additional operating factors to administer the permit scheme, such as finance payment and reconciliation, performance and evaluation.

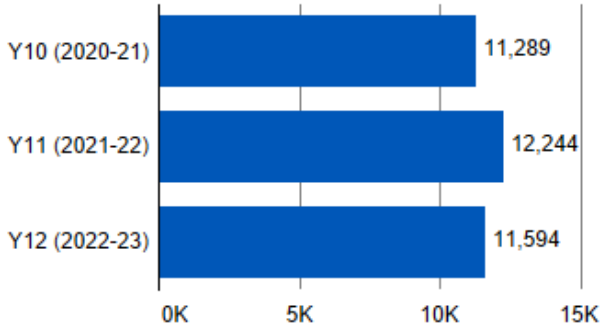
Annex B: HAUC Performance Indicators

The charts below show the HAUC Performance Indicators for Scheme years 10 to 12

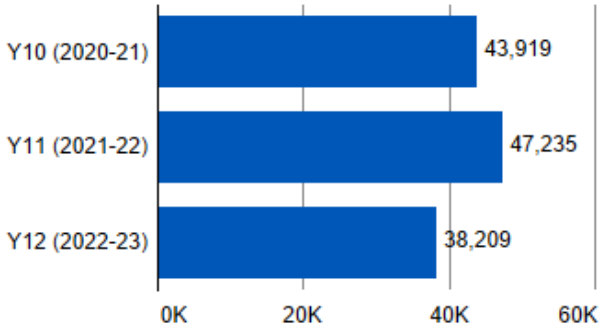
TPI 1 Works Phases Started (Base Data)



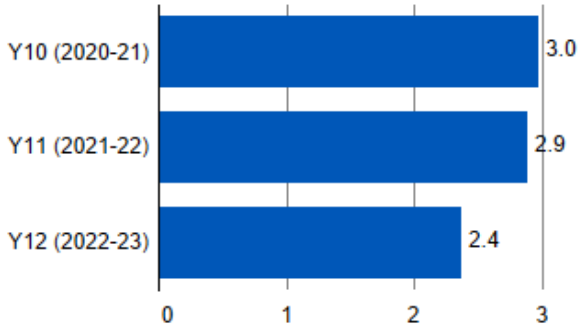
TPI2 Works Phases Completed (Base Data)



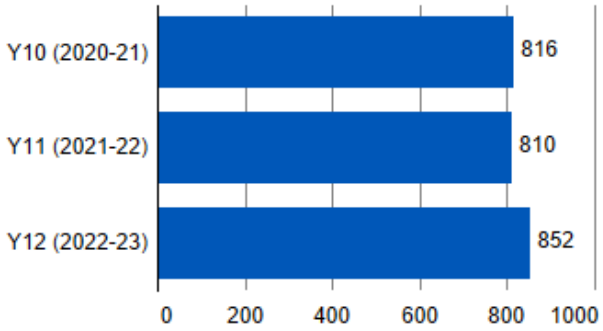
TPI3 Days of Occupancy Phases Completed



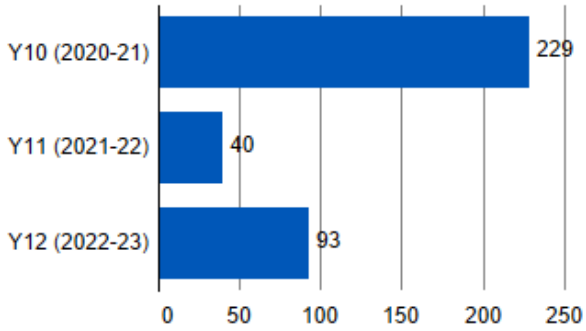
TPI4 Average Duration of Works



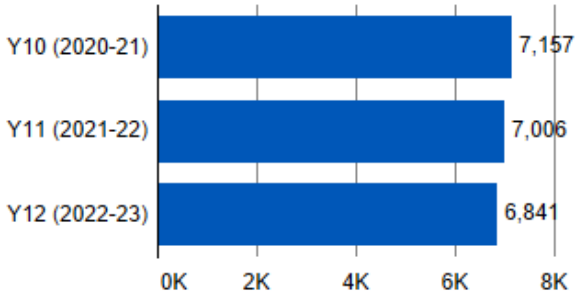
TPI5 Phases Completed involving Overrun



TPI6 Number of deemed permit applications



TPI7 Number of Phase One Permanent Registrations



Annex C: Glossary and common terms

Council	London Borough of Lambeth Council including their capacity as a Local Highways Authority.
DfT	Department for Transport
Duration	A work duration is calculated in calendar days based on the actual or proposed works start date and the actual or estimated works end date, inclusive of both days. Therefore, a works with an actual start date of 1st April and an actual end date of 5th April would equate to 5 days.
EToN	The Electronic Transfer of Notifications, the nationally agreed format for the transmission of information related to works between the Council and those undertaking works.
HAUC	The Highway Authorities and Utilities Committee.
NRSWA	New Roads and Street Works Act 1991.
PAA	Provisional Advanced Authorisation, which is a notice sent only in relation for Major works 3 months in advanced of the proposed start with a higher-level of detail for the intended works.
Permit	Permission sought by a Promoter to undertake works on the highway, in accordance with the Permit Scheme.
Permit condition	The capability for the Council to apply conditions to a permit, and therefore the work, is one of the primary methods to control and coordinate works through a permit scheme. The conditions that can be applied are set out within Statutory Guidance, *each with a reference code comprising NCT with a unique number*, within the following categories: date and time constraints; storage of materials and plant; road occupation and traffic space dimensions; use of traffic management provisions; work methodology; consultation and publicity of works; and environmental considerations for noise.
Permit Scheme	The Leicestershire County Council Permit Scheme
Permit Scheme Regulations	The Traffic Management Permit Scheme (England) Regulations 2007, Statutory Instrument 2007 No. 3372 made on 28 November 2007 and the Traffic Management Permit Scheme (England) (Amendment) Regulations, Statutory Instrument 2015 No. 958 made on 26th March 2015.
Permit Variation	The process to change an agreed permit to reflect current or proposed changes in the works.

Promoter	A person or organisation responsible for commissioning activities [works] in streets covered by the Permit Scheme - either an Undertaker or a participating Council as a highway or traffic authority.
Statutory Guidance	The Traffic Management Act (2004) Statutory Guidance for Permits.
TMA	Traffic Management Act 2004
Undertaker	Statutory Undertaker as defined within Section 48(4) of NRSWA
Work	Also referred to as an activity. Work that should be registered to the Council carried out by a statutory undertaker, as a street work, or for the Council, as a road work.
Works category	Every work is assigned a category, based on the following: Major works are works that are 11 days or more in duration or require a temporary traffic regulation order, *such as a road closure*. Standard works are non-Major works between 4-10 days. Minor works are non-Major works with a duration of 3 days or less. Immediate works are either emergency or urgent works that require an immediate start.