

East of England Uncertainty Mechanism Claim

May 2018

Contents

1. Executive Summary	4
2. Output Commitments.....	6
3. Background to Street Works	8
3.1 Licence Requirements and Scope	8
3.2 What has changed since the start of RIIO-GD1?.....	8
3.3 Impact on Costs	9
3.3.1 Permit Fee	9
3.3.2 Administration Costs.....	9
4 Contractor Strategy for RIIO-GD1	11
4.1 Cost Drivers associated with Productivity Cost Impacts	11
4.2 Confidence in underlying costs	12
5 East of England UM - £27.35m.....	13
5.1 Permit Fees - £6.46m (Nominal).....	15
5.1.1 Permit Schemes.....	15
5.1.2 Permit Types/Categories	16
5.1.5 Workload (Permit Applications).....	17
5.1.6 Permit Fee Exclusions.....	18
5.2.1 Training Costs.....	20
5.2.2 Non-Field Based Costs.....	21
(i) IT Running Costs	21
(ii) Field based administration.....	22
(iii) Traffic Management Scheme	22
(iv) Traffic Management Plans.....	22
(v) Pre Site Surveys and Site meetings	23
Cost per Metre Calculations	24
5.3.1 Conditions.....	24
(i) Timing & Duration.....	25
(iii) Traffic Management Provisions	25
6 Other considerations	27
6.1 Customer Bill impact.....	27
6.2 Data Assurance – Irregular Submission	27
6.3 Stakeholder Engagement and Industry Collaboration.....	27
6.3.1 Street Works UK (SWUK)	28
6.3.2 Highways and Utilities Committee (HAUC)	28
6.4 Innovation	30

6.5 Future Legislation and the risks to delivering our outputs	32
(i) Section 74A NRSWA – Lane Rental	32
(ii) Section 73 NRSWA – Contributions towards maintaining the highway	32
(iii) Section 78 NRSWA – Half width reinstatement	32
7 Appendices/Supporting Information.....	33

1. Executive Summary

Permit schemes were introduced in 2010 predominantly in the North London network and have since evolved across all the other Cadent gas networks. Permit schemes, the administration, fees and impact on productivity are an **unavoidable on cost** that has to be managed as efficiently as possible.

Cadent has completed the analysis of its specified street works costs relating to Permit Schemes for the East of England from their introduction in 2010, and assessed the impact on delivery of customer output commitments, and determined the actual costs and forecast costs for the current RIIO period.

Cadent (National Grid Gas Distribution) previously submitted a claim for the East of England network during the previous uncertainty mechanism window but it was rejected by Ofgem as there was insufficient evidence to fully validate the claim, including insufficient data (1 year of actual costs) and an uncertainty on the impact of future permit schemes. There is a case for submission with fully validated evidence for a 4 year period and an accurate forecast for the remainder of RIIO based on future workloads and permitting authorities.

The key factors driving costs into the business include the number of highway authorities operating schemes, the volume of works and the number of restrictions placed upon those works.

The value of the claim is as stated below

Table 1 – EofE Claim¹

Gas Distribution Network	Materiality threshold (09/10)	Total Costs in 09/10 prices	Nominal Costs (Claim)
East of England (EofE)	£5.03m	£ 21.26m	£ 27.35m

Permit schemes are individually unique to each highway authority as the legislation has been designed to allow Highway Authorities to better manage their road network by imposing restrictions (conditions) on works undertaken on the highway for a different number of reasons.

The effective meterage impacted by permit scheme introduction has risen from 43.7km in Year 1 to 291.7km in year 4 with an expectation that year's 5-8 will be in the region of 320km per annum.²

¹ App 1 – Master Cost submission table

² App 1 – Master Cost submission table

Cadent are now able to demonstrate, for example, the additional costs incurred to operate permit schemes relating to the actual fees incurred, the administration of the schemes and the impact on productivity where schemes exist.

Cadent are also aware that changes in future legislation will inevitable add further costs to Street Works, in particular the recent decision by the Department for Transport to further expand the deployment of Lane Rental³ and its potential to impact across our networks and again due to uncertainty over timescales, adoption and costs we have not included this in the claim, but will need to consider as part of RIIO1 close out and RIIO2 development.

Innovation continues to be a key for Cadent where street works are concerned with projects relating Blown Air Extrusion (BAE), Resin Based Pipe Replacement (PRISM), Internal Pipe Repairs (CISBOT) and others that will when fully developed have the impact of reducing the disruption caused by our Street Works.

Cadent have innovated in our systems and processes associated with street works to minimise the cost impacts we have seen and are projected. [Examples include the development of the lane rental “app” which has enabled work designers to avoid routes which would attract a charge.] We have also driven continuous improvement into our administrative and training costs as well as refining our processes to reduce the productivity impacts. All of this is reflected in our claim

Technological innovation continues to be a key for Cadent where street works are concerned and we are working on with projects such as relating Blown Air Extrusion (BAE), Resin Based Pipe Replacement (PRISM), Internal Pipe Repairs (CISBOT) and others. These are all viable technologies but currently less favourable economics are preventing them from widespread use. Hence at this stage, they are largely being considered for deployment in niche situations, Hence this deployment does not impact significantly on our projected street works costs included in this claim for the rest of the RIIO-1 period

³ Appendix 12 – DfT decision on Lane Rental

2. Output Commitments

The RIIO framework is in place to ensure delivery on a number of output commitments that we have made to customers. The key outputs that Cadent has committed to delivering for its customers, which are impacted by Street Works legislation and the associated costs that have not been possible to mitigate, are as follows:

Table 2 – Key outputs RIIO1

Emergency repair service to safeguard life and property			
Output	Description	Target	Potential impact on Street works
Gas escape repair risk	Safety: Outstanding repairs cumulate a risk score. This must be kept to a minimum by repairing escapes based on risk level	Set Levels	High risk escapes where there is risk to life or property must be repaired as a priority, therefore access to the highway may be required in order to carry out works at the time the escape has been identified. The location of the escapes cannot be predetermined and thus avoiding the permit fees is not always possible.
Mains replacement programme to upgrade old metal gas mains with safer plastic ones			
Gas mains risk removed	Safety: removing risk from the distribution system by replacing metal pipes with polyethylene pipes	Set level of risk removal per network	This is the work that is planned in advance. Planning is completed in the most cost effective way that causes the least amount of disruption with customers. Sometimes due to the risk level of the pipe the impact is unavoidable but it is mitigated where at all possible. Diversions are not included as they are funded by customers.
Provision of new gas supplies to prospective customers as requested			
Connections completion dates	Connections: ensuring connections are completed within the stated timescales	90% completed within agreed timescales	Providing new connections to customers and this is done at a time and date agreed with the customer. This involves working in the highway, but steps are taken to minimise disruption for road users. Again the location of the connections is not predetermined as to inside or outside a designated permit area.
Safeguarding future generations			

Virgin aggregate	Environment: reducing the amount of virgin aggregate used when reinstating	Less than 30% of non-recycled materials used in backfill	By innovating and reducing the amount of excavations required, not only is disruption reduced but there is also a reduction on the amount of spoil sent to landfill and minimises the use of aggregates. Restrictions applied to Street Works activities can drive the wrong behaviours increasing both the use of virgin aggregate and spoil to landfill by demanding all spoil to be continually removed from site.
Spoil to landfill	Environment: reducing the amount of spoil sent to landfill	Less than 10% of all spoil sent to landfill	

3. Background to Street Works

Street Works Legislation has changed over recent years, specifically with the amendment of the New Roads and Street Works Act 1991 (NRSWA) by the Traffic Management Act 2004 (TMA) with all works promoters needing to obtain permission in preference to notifying work on the highway when maintaining, replacing or installing assets within a permitting authority area. The aim of this legislation is to minimise disruption and congestion to road users caused through road works on the highway by the introduction of working conditions, to enable greater coordination, collaboration and co-operation of works on the highway.

3.1 Licence Requirements and Scope

The costs identified relate to the activities and legislative changes as defined under Special Condition 3F of the Gas Transporter Licence and cover 3F.3 (d) Specified Street Works Costs incurred when working on assets within the highway within specific permit authorities boundaries and the fees paid when these works are unavoidable.

3.2 What has changed since the start of RIIO-GD1?

Since RIIO-GD1 Final Proposals, an additional 60 Highway Authorities operate permit schemes in addition to the 20 allowed for as part of GDPCR1. Therefore as a result of this progression comes an increase in permit fees, administration costs and productivity issues. The numbers in relation to the increase in permit schemes can be seen in the table 3 below and the fig.1 shows the East of England geographic impact.

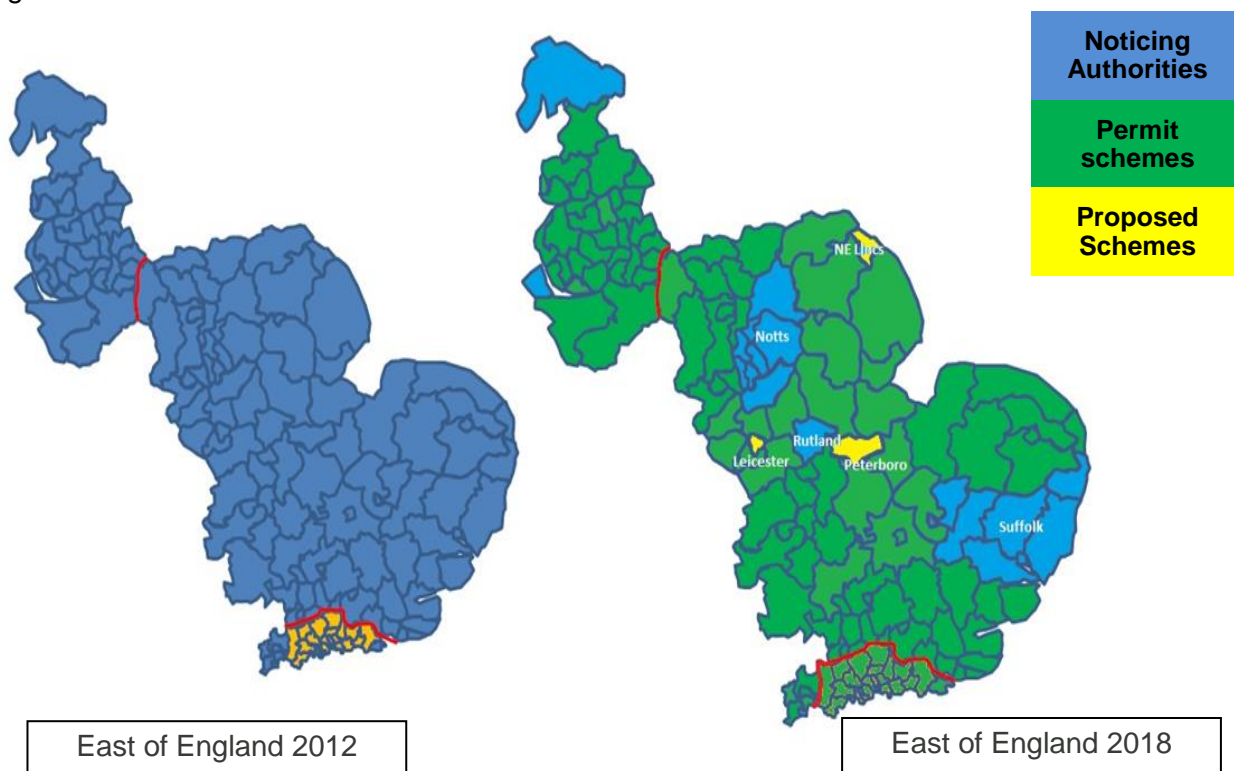
Table 3 – Cadent Permit Summary⁴

Network	Total Number of HA's	Live Permit Authorities 2012	Live Permit Authorities 2018	Overall
East of England	32	3	24	75%
North London	31	23	31	100%
North west	25	0	20	80%
West Midlands	14	0	5	36%
Highways England	1	0	0	0%
Totals	103	26	80	78%

⁴ App 1 – Master Cost submission table

The map below shows the pictorial change within the east of England network since the onset of RIIO1

Fig 1



3.3 Impact on Costs

The key impact since the introduction of RIIO1 is the continued increase in costs to undertake works on the highway through the implementation of permit schemes. Costs are incurred in three key areas;

- Permit Fee(s)
- Administration Costs
- Productivity Costs

3.3.1 Permit Fee

A fee can be imposed on any works promoter working within the highway of a permitting authority. The fee is derived by the highway authority assessing the costs incurred in administering the scheme and assessing the content of a permit and the impact it will have on the Authorities road network.

The fees are further refined dependent on works type and location of the works on the road network.

3.3.2 Administration Costs

These are the costs incurred through the back office and supportive staff involvement in managing the additional processes of managing permit schemes. These costs are over and above those requirements of noticing and include such elements as administration of

conditions, invoices (all permits carry a fee that requires administration) and additional site visits.

3.3.3 Productivity Cost

The advent of permits also introduced the element of conditions; conditions are applied to permits by a highway authority to aid the traffic management on the road network. Although there may be a positive impact on traffic and disruption the conditions do impact the cost of the works and can reduce productivity as identified further on within this submission. The principle established for productivity has been based on the 4 years of actual costs incurred within the network and working within the constraints of the individual permitting authorities and their permit schemes within the network.

4 Contractor Strategy for RIIO-GD1

To deliver the primary outputs related to mains risk removed and connections, Gas Distribution Strategic Partnership (GDSP) contracts have been put in place by Cadent, which were tendered through a procurement event in 2012 and commenced 1st April 2013. The procurement event allowed costs to be baselined for replacement activities, which included only live permit schemes at the time of the tender. The permit scheme costs included in all contractor rates reflected those that we had received funding for as part of RIIO-GD1 final proposals.

As costs associated with new street works legislation were uncertain, a mechanism for the contractor to recover additional evidenced costs, through a compensation event, similar to the cost recovery mechanism under RIIO-GD1 has been put in place.

The new contract arrangements and mechanism, has allowed for the identification of specific costs driven by Street Works against the very latest competitive rates for our replacement activities, the Gas Distribution Strategic Partner undertake this activity in managing their own supply chain.

4.1 Cost Drivers associated with Productivity Cost Impacts

As part of the GDPCR1 Income Adjusting Event in 2011 and through our RIIO-GD1 business plan discussions with Ofgem, we put forward arguments that the productivity cost impacts of permit schemes varied by Highway Authority. Our main arguments centred round population density and road type mix, which in the main would lead to greater road traffic and therefore an additional level of permit condition restrictions or different working practices being required by Highway Authorities to minimise the disruption to road users driven by our works.

To explain further, we experience that higher trafficked and more densely populated areas have more stringent permit requirements in order to keep the traffic flowing. This is where Highway Authorities are using the powers to put in place relevant restrictions to reduce the level of delay that may be caused by our works and to ensure their road users and constituents, who are already sensitive to heavy road use have the disruption kept to a minimum. Where there is less of an impact and in more rural areas, Highway Authorities tend to apply lower levels of restrictions.

Building on these factors we have looked at the types of conditions that are being applied to the permits. The main conditions that have been identified as having an impact on productivity are;

- Timing and Duration conditions – These conditions can restrict the time we are allowed to work within the highway and the overall duration of the works
- Road Space Conditions – This can significantly limit the space we have access to carry out our works efficiently, such as reducing occupation lengths from 100 metres down to 50 metres

- Traffic Management Conditions – This can impose specific traffic management requirements and plans to ensure traffic movement, which can add additional cost to the works in terms of planning costs and operational costs
- Methodology – This can increase costs by having to store plant and equipment off site to reduce the occupation of the highway that would normally have remained on site.

4.2 Confidence in underlying costs

By tendering our contracts to align with the RIIO-GD1 period and including design and planning activities within the contracting scope, we have been able to obtain the best market rates at the time to deliver our agreed iron mains replacement programme and provide longer term contracts that allow our contracting partners to invest in improving systems and processes to reduce the cost base.

Our Contract Management and Control function has reviewed and challenged the costs as part of their assurance process to confirm that they are reflective of actual cost impacts above and beyond the existing costs to undertake our mains replacement.

By using our controls process, we are confident that our proposed Street works adjustments that we have agreed with our Contract Partners only reflect those productivity impacts driven by the need to comply with the permit scheme legislation.

For our forecast productivity costs, we have derived these from our 16/17 actuals and workload mix. There is a risk that costs would increase when we start to deliver our larger mains replacement programmes. However, we have not included an allowance for this. In addition, we have not included any Real Price Effects as we consider this would be offset by efficiencies we may be able to deliver. We have adjusted our costs to reflect delivery of our mains replacement length output as this is a specific requirement over the RIIO-GD1 period.

4.3 Network Detail

We have provided our actual and forecast costs for the East of England network and described this in more detail. We have taken the time to explain how the network is built up. Points that are consistent with all networks are as follows:

- Due to the timing of the Uncertainty Mechanism all costs are based on nominal costs and these are used to project future years cost allowances.
- The forecast workloads are as specified in our 16/17 RRP
- Permit schemes that have been introduced up to and including March 2018 have been included in actual costs
- Highway authorities that have demonstrated an intent to implement a permit scheme within the remaining four years of RIIO have been included in the forecasting methodology
- Permitting authorities that have evidenced a policy revision from strategic street to all street costing methodology have been included

5 East of England UM - £27.35m

Cadent proposes an increase in allowances of £27.35m for Specified Street Works Costs for East of England network. This sum includes the permit fees, the additional administrative activity and the productivity costs incurred to operate permit schemes within 24⁵ (of the 32) Highway Authorities.

The costs (table 4) incurred have been broken down into three specific sections (permit fees, administration and productivity) and each is covered separately within the document.

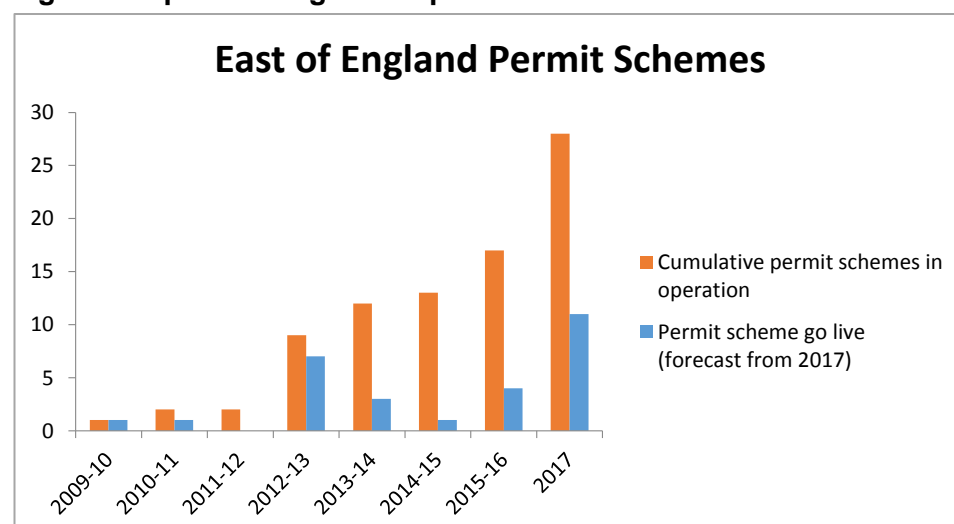
- Permit Fees £6.46m
- Administration £9.38m
- Productivity £11.5m

Table 4 – Cost forecast Summary

Costs	Unit	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	Totals
Permit Fees	£m Nominal	0.30	0.35	0.62	0.94	0.99	1.08	1.09	1.09	6.46
Administration Costs	£m Nominal	0.16	0.75	1.20	1.08	1.29	1.45	1.61	1.85	9.38
Productivity cost impacts	£m Nominal	0.23	1.03	2.33	1.25	1.41	1.57	1.73	1.97	11.50

Fig 2 below identifies the increase in the introduction of permit schemes by Highway Authorities in the East of England from 2012 onwards and forecasts that 88% of all Highway Authorities will have permit schemes in place by 2018/19.

Fig 2 – Graph showing rise in permit schemes within EofE⁶



The East of England has a number of varied schemes within its boundary including the East of England Permit Schemes (EOPs) that operates and applies fees on all roads and streets

⁵ Excludes TfL, Barnet, Haringey & Enfield

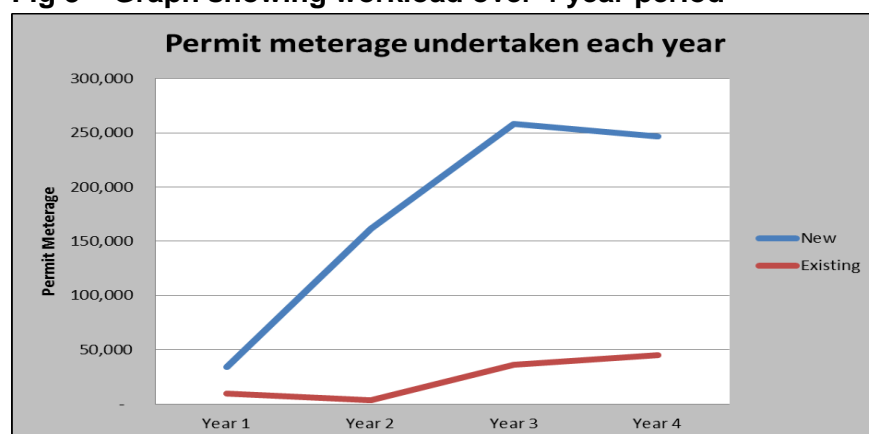
⁶ App 1 – Master Cost submission table

in comparison to the Yorkshire Permit Scheme (YCPS) that operates on class 0, 1, 2 and Traffic Sensitive Streets only.

It should be noted that highway authorities within specific schemes are moving from selected street criteria to all street permit schemes implementation that will further increase costs moving forward.

Work volumes have also had an impact on the East of England cost impact with the increase in length replaced undertaken within the 'new' permit schemes have risen over 600% between year 1 and year 4, rising from the equivalent of 43km of work under permits in year 1 to 291km in year 4 (see fig 3). The forecast is that this will rise further to 329km per annum for the remainder of RIIO1.

Fig 3 – Graph showing workload over 4 year period⁷



The financial impact has reflected both the increase in workload undertaken in alignment with the increase of highway authorities adopting permit schemes, additional meterage of replacement and a significant rise in the number of conditions applied to our works.

Productivity costs are driven by the length replaced within the permitting area which drives the number of conditions (restrictions) that are applied and it can be seen from table 5 that there was a significant increase (66%) in conditions applied in Year 3. In comparison the replaced length increased in year 3 increased by 78%.

The reduction of conditions applied in Year 4 may be due to the introduction of Statutory⁸ and non-statutory⁹ legislation that helped to reduce the number of conditions applicable down from 45 to 13 standard national conditions¹⁰.

Table 5 – Correlation between length and condition¹¹

		13/14	14/15	15/16	16/17
Mains Replacement (impacted by Permit Scheme)	km	43.728	165.353	294.334	291.792
Conditions applied by highway Authorities	no.	213	5527	9224	5335

⁷ App 1 – Master Cost submission table

⁸ App 13 – Statutory Guidance for Highway Authority Permit Schemes

⁹ App 14 – Non statutory guidance for the operation of permit schemes

¹⁰ App 15 – Standard National Conditions (Permit Schemes)

¹¹ App 1 – Master Cost submission table

5.1 Permit Fees - £6.46m (Nominal)

The permit fee costs are those actual costs incurred by the Highway Authority to assess and enable network management to be coordinated on the road network as defined within the respective legislation and demonstrated by the invoices paid during the relevant financial year.

These fees do not necessarily align with the costs recorded or projected within table 3.13 for Street Works within the respective RRP submissions as the costs within the RRP submission are inclusive of all permit fees for all works and all fees are not reclaimable under the proposed methodology. The RRP table 3.13 was designed to capture all costs relating to permit fees, whilst that is appropriate in assessing the costs on an annual basis, there are specific items that need to be excluded from the claim where these costs are avoidable¹².

The methodology used to forecast the number of permits was based on the average existing noticing workloads¹³ within each Highway Authority for years 1-4 with a forecast for years 5-8 based on average actual workloads, any increase in workload forecast and any additional highway authorities adopting a permit schemes on a year by year basis.

The average¹⁴ permit fee cost for the EofE network equates to £55.46.

5.1.1 Permit Schemes

The legislation allows highway authorities to run individually designed schemes within their own network without reference to any similar schemes. There are two types of permit schemes operated within the East of England Network, those that apply fees to 'all streets' within the authority boundary, and those that apply fees only to the busiest streets within their network, typically 0, 1, and 2 category roads plus any nominated traffic sensitive routes.

Of the 28 authorities operating or proposing to operate schemes 19 of those authorities operate a scheme that involves permitting on all streets. Northamptonshire permit scheme has already moved and there are proposals from both Barnsley and Doncaster to move from selected street criteria to full street permit scheme implementation. This will further increase the cost of the scheme(s) and the claim and have been included within this submission.

There are four highway authorities, Leicester City, Leicestershire¹⁵, Peterborough and North East Lincolnshire where costs have been estimated and forecast where communication¹⁶ has been received from these authorities of their intention to operate a permit scheme during 2018.

Barnet, TfL, Haringey and Enfield costs and data have been excluded from this submission as they were included within the income adjusting event (IAE) submitted in 2012 and therefore those costs incurred would have been included in the rendered for RIIO1.

¹² See 5.1.6

¹³ App 1 – Master Cost submission table

¹⁴ Average Permit Fee – is an average of permit fees, application fees and variation fees

¹⁵ Leicester City & Leicestershire permit schemes commenced in 2018

¹⁶ App 6 –Notices of Intent

5.1.2 Permit Types/Categories

All permits attract a fee dependent on the works type and the proposed location of the works, permits are then subsequently split into a further three categories these being granted, major provisional advanced applications and variations.

5.1.3 Charging Methodology

The following work types¹⁷ attract permit fees, Major Works, Standard Works, Minor Works and Immediate Works (Emergency and Immediate)

These work types are then further split by the location on the highway to which the permit is to be applied which then derives further cost division specifically; Category 0,1,2 & Traffic Sensitive Streets and Category 3 & 4 non Traffic Sensitive Streets

The fees applied are then dependent on the work undertaken by the permitting authority to assess and respond to the permit request. There are a number of actions that can be taken;

- **Granted** – Those permits submitted to the Permitting Authority that are authorised so work may progress and a fee applied
- **Major PAA** – Those Provisional Advanced Authorisations (PAA) that are submitted ahead of the progression of the permit to commence the works, these attract a fee in addition to the fee for the granting of the permit as identified above. This fee category only applies to ‘Major’ works
- **Variations** – Those permit variations submitted to the Permitting Authority when details regarding the works on site have changed or there is a requirement by the permitting authority to request changes to the permit. Initial permit submissions will dictate most site conditions and should alleviate the need for variations
- **Deemed** Permits – those permits that were not assessed within the respective timescales and therefore become deemed and do not attract a charge

The tables below detail the maximum allowed permit charges within the regulations¹⁸ as set by the DfT

Table 6 – Max fees for Cat 0, 1, 2 & TS

Category 0,1,2 & TS							
Major PAA	Major 10+ days	Major 4-10 days	Major 1-3 days	Standard	Minor	Immediate	Permit Variation
£105.00	£240.00	£130.00	£65.00	£130.00	£65.00	£60.00	£45.00

Table 7 – Max fees for Cat 3, 4 & non TS

Category 3 & 4 non TS							
Major PAA	Major 10+ days	Major 4-10 days	Major 1-3 days	Standard	Minor	Immediate	Permit Variation
£75.00	£150.00	£75.00	£45.00	£75.00	£45.00	£40.00	£35.00

¹⁷ App 16 - NRSWA1991 as amended by TMA2004

¹⁸ App 13 - Statutory Guidance for Highway Authority Permit Schemes 2015

5.1.4 Fee Application

Of the 24 schemes currently running within the EofE network the average fee costs are within 7% of the maximum allowed in the 'higher category' (table 6) and in the lower category (table 7) they are within 10% of the maximum allowance.

Variations fees within both categories are within 1% of the maximum applicable fee.¹⁹

The fees for the four authorities that propose to go live post 2018 are not yet known the forecasting methodology has therefore utilised the average cost of all permit fees applied to existing schemes.

5.1.5 Workload (Permit Applications)

The workload figures have been determined from actual permits and notices submitted by EofE network for the first 4 years of RIIO1 and a forecast for the remaining 4 years based on the actuals in combination of the forecasted workload which includes any proposed additional permit schemes.

The introduction of permits doubles the administrative workload for managing works on the highway as the application of both noticing and permitting legislation applies to all works. The table below details the workload based on the number of notices sent within the 4 year period.

Table 8 – Noticing workload – EofE Network²⁰

Workload	Year				
Notice Type	2013/14	2014/15	2015/16	2016/17	Grand Total
IMMEDIATE (EMERGENCY)	6052	6329	5633	7128	25142
IMMEDIATE (URGENT)	1806	1950	1971	1711	7438
MAJOR	2635	3019	3752	4004	13410
MINOR	3132	4783	3342	5040	16297
STANDARD	6648	5206	6856	5022	23732
Grand Total	20273	21287	21554	22905	86019

It can be seen that the number of notices has increased over the 4 year period by approximately 10%. It should be noted that the advent of permits does not detract from the management of the number of notices that has to be sent.

In comparison the following table identifies the number of permits administered within the same period has risen year on year due to the increase of Highway Authorities adopting schemes and the increase in workload. This increase is quite substantial seeing a 200% rise in the number of permits over the 4 years.

It can be seen that there is a direct correlation between the workload (number of permits) and the number of variations issued/permitted, Cadent have worked on improving the

¹⁹ App 1 – Master Cost submission table

²⁰ App 1 – Master Cost submission table

planning processes that has seen a decrease in the ratio of variation to less than 25%, thus a variation is only required on 1 in every 4 permits.

Variations were introduced to permits to ensure any changes in on site traffic management, locations or any other data that would aid the management of the road network by the permitting authority. Variations could also be imposed by the permitting authority.

Variations are primarily used for:

- Date changes – any planned date changes to the works from the original proposed, this could be at the request of the customer, request of the permitting authority or to facilitate co-ordination of resources
- Traffic Management – any changes in traffic management, there are 10 different types of traffic management that should be recorded and updated and these are detailed within the Electronic Transfer of Notices (Eton) Technical Specification

All endeavours are taken to reduce variations and they become unavoidable in the management of the works with the alternative options being Fixed Penalty Notices (FPN's) for non-compliance or cancel and raise new permits (at a greater cost).

Table 9 – Permitting workload – EofE Network²¹

Workload	Financial Year				
Permit type	2013/2014	2014/2015	2015/2016	2016/2017	Grand Total
Grant Permit	4150	5273	8131	11911	29465
Major PAA	92	113	711	1184	2100
Variation	956	1302	2193	3406	7857
Grand Total	5198	6688	11035	16501	39422

5.1.6 Permit Fee Exclusions

(i) Highway authorities

Those Highway Authorities within the EofE network that were included within the initial allowances under GDPCR1 for North London have been excluded from the calculation although the costs incurred have been captured. The highways excluded from this costing mechanism are Haringey, Barnet, Enfield and TfL

(ii) Work Types

There are some categories of permits or works types that have been excluded or removed from the costs in this paper, these include those fees included for Remedial Works and those permits that were 'Deemed' as they do not attract a charge although variation charges may still apply to the works.

- **Remedial works**

Where works have been undertaken to remediate or correct poor compliance with the specification, Section 71 of NRSWA identifies the need for the works promoter to carry out these works.

²¹ App 1 – Master Cost submission table

Where permit applications have been made to undertake remedial or rectification works the permit fees have been removed from the costing element and total 2,688 fees consisting of 2,342 permit applications and 346 variations have been removed. The value of which is identified in the table below.²²

Table 10 – Remedial Permit fee charges incurred – EofE network

Value	Fin Yea				
Permit type	2013/14	2014/15	2015/16	2016/17	Grand Total
Grant Permit	£29,653	£31,875	£25,917	£26,114	£113,559
Variation	£5,446	£5,007	£2,852	£1,482	£14,787
Grand Total	£35,099	£36,882	£28,769	£27,596	£128,346

These costs can be seen in the table²³ are detailed by highway authority.

- **Deemed Permits**

Where permit applications have been submitted and a permitting authority has failed to assess the permit within the prescribed timescales a permit will then become 'deemed' and no permit fee costs will be incurred for that permit.

5.2 Permit Administration Costs - £9.38m (nominal)

Table 11 Admin Costs²⁴

Costs	Unit	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	Totals
Admin Costs	£m	0.16	0.75	1.20	1.08	1.29	1.45	1.61	1.85	9.38

The introduction of permit schemes has seen the increase in administration for works promoters on the highway. In reality the works promoter has to request to work on a highway where previously it was a case of notification of our intention to work on the highway.

Although the regulations quite clearly set out the differentiation between the noticing and permitting regimes the information technology (EToN) has not significantly changed, or has actually become more complex to manage both the notice and permitting regime in one system.

This additional complexity has led to more administration in addition to the requirement of some of the permitting authorities becoming more onerous, demanding more and more detail to enable them to undertake their Traffic Management duties in driving the co-ordination and collaboration of works on their highway.

The administrative costs have increased year on year in line with the proportional increase in the number of authorities adopting permit schemes and forecast costs projected as defined in table 11 are in line with an 88% adoption of permits by authorities within the EofE footprint.

²² App 1 – Master Cost submission table

²³ App 1 – Master Cost submission table

²⁴ App 1 – Master Cost submission table

The administration costs have been further broken down into sections as determined by the Street Works RRP table 3.13 Section D and these include the following;

- Training Costs
- Non-field based costs – Management and Staff
- Field Based administration – Traffic Management Plans and Pre-site visits

5.2.1 Training Costs

The advent of NRSWA 1991 as amended by TMA 2004 gave the authorities more power to implement their Traffic Management duties and thus impose more control and restriction on works promoters. Under the notice regime the works promoter 'informed' the authority of the works, under a permit regime the works promoter requests permission to undertake the works.

Specific training costs are included in this section as more permit schemes are introduced with more and more staff needing to be competent in the management of permits. Permit schemes, even within the same gas network, do differ so training is inevitably tailored based on each scheme and even in some instances each authority within a similar scheme.

The training and development costs include for office based employees, direct or subcontract workforce and supervisors to understand and enable compliance to permit schemes.

As additional highway authorities adopt permits there is a requirement to expand the administrative knowledge and understanding of the requirements of those schemes. In particular the introduction of the new 'Model Conditions' has seen a requirement to brief and amend local procedures to recognise this change in process. This training has not been via external courses but the expertise already within the team being drawn upon and lessons learnt being shared with the team.

Training costs include the training of all operatives and staff on any new prospective scheme in addition to any development of 'applications' to improve the efficiency and compliance for permit schemes.

Total cost of training is valued at approx. £33k per year for 28 back office staff and in excess of over 200 operational/supervisory staff.²⁵ The costs also include the development of an application to make the process more efficient.

The suite of apps that were developed in line with the TMA reopener had the intention of;

- Being able to see permit information (dates / conditions etc.) from a mobile device out of the office, as opposed to carrying paper copies
- Allow the user to see live amendments to the permit, including permit condition changes, date changes and comments from the Local Authority
- Give an operative on site the ability to send permit requests (Actual Starts, Works Stops, Amendments) rather than needing administrative support

²⁵ App 2-5 - Yearly submission

The benefit of using the application drives efficiency by allowing teams to send / receive / amend permits without the need to travel to an office location. It also means that our back office staff can be more efficient, by removing the requirement for them to assist in the operation of sending permit updates for the teams on site.

5.2.2 Non-Field Based Costs

The non-field based costs are those costs incurred to administer permits that include any additional staffing resources, any upgrades in IT running costs and any additional managerial costs.

5.2.3 Back Office Administration

The staffing resources deployed are the office based costs associated with the creation, management and closure of the permit which includes the interaction and communication with the relevant permit administration teams within the permit authorities in resolving any comments and challenges that may be raised specifically regarding restrictions and conditions imposed (these are the primary driver for the additional administrative cost of permits).

Within the East of England network there are two teams of staff utilised for the management of the workload for the various work types that include replacement, connections and repair activities.

The introduction of permits has seen an increase in workload (see 5.1.5 table 8 & 9) with an additional 40,000 transactions²⁶ being undertaken by the back office staff to ensure compliance with permit regulations.

Over the 4 year period a number of initiatives have been undertaken to improve the efficiency and reduce the costs of the back office administration team including both more refined training and development of an application. This has seen the costs reduce from £456k in year 2 to £263k²⁷ in years 3 and 4. These efficiencies have been included in our forecast through the utilisation of year 4 costs when projecting forward in our model, costs will still rise as the increase in both workload and additional permitting authorities needed to be taken into consideration.

(i) IT Running Costs

IT costs in the back office related to the additional back office head count that is required over and above what would have been required if works were undertaken under a noticing regime. An annual cost of £2,210²⁸ per person is charged for the supply of hardware and networks. This is then multiplied by the number of additional back office staff that is required to undertake the existing workload and the additional permit activities. Average IT costs for the first 4 years equated to £5k²⁹ per annum.

²⁶ App 1 – Master Cost submission table

²⁷ App 2-5 - Yearly submission

²⁸ App 2-5 - Yearly submission

²⁹ App 2-5 - Yearly submission

(ii) Field based administration

Field based administration costs are those incurred through the advent of permits that were not identified or required under the noticing regime for NRSWA. These items were specifically defined as:

- Traffic management schemes including traffic control apparatus (special signage)
- Traffic management plans
- Pre-site surveys to meet the planning requirements
- Site meetings to ensure the requirements of the Traffic Managers are met

It should be noted that only those costs incurred specifically detailed within the permit scheme or the permit itself over and above those requirements specified under the noticing legislation are included in the assessment.

(iii) Traffic Management Scheme

Traffic Management Scheme (TMS) costs are those costs incurred in agreement with the permitting authority where a works promoter will provide special signage or purchase of materials for individual works or projects. Application of Matrix signs are a prime example. Traffic Management Systems (TMS) were deployed in excess of 800 occasions up to year 4 with a cost in excess of £600k.³⁰

The costs incurred were all verified and can be accounted through the production of individual invoices³¹.

(iv) Traffic Management Plans

The introduction of permits and the introduction of traffic management plans have become a significant factor for the increase of costs in administration. A traffic management plan³² is requested on all works involving carriageway encroachment by permitting authorities to detail the lay out, site occupation and details of the traffic management for the site.

Included within these costs are any associated site meetings. These Site meetings can also be requested with permit authority inspectors to discuss and agree the Permit conditions that will finally be published.

The costs of TMP has increased from £64k in year 1 to £281k in year 4 an increase of over 300% with over 1600 plans produced in year 4.³³

³⁰ App 2-5 - Yearly submission

³¹ App 7 - Examples of Invoices received

³² App 8 - CAD drawing example

³³ App 2-5 - Yearly submission

(v) Pre Site Surveys and Site meetings

Pre site survey costs are incurred by inspectors in the field where there is a greater requirement (under TMA2004) to visit sites to assess the viability or impact of any permit conditions that could be applied to the works. These visits have now become an integral part of the planning process to ensure the smooth administration of the permit and prevent any delay in starting the works through permit rejection by the highway authority.

In addition to the pre-site survey there are also additional meetings undertaken with highway inspectors to ensure the permit conditions can be met, this has had a significant impact and is one of the biggest changes introduced through permit regulation.

In years 3 and 4 over 3000 additional visits were undertaken to facilitate site meetings with authorities incurring costs of £222k³⁴ per annum for these years.

5.3 Productivity Costs - £11.5m (Nominal)

The East of England network claim seeks to capture all additional costs incurred as a result of working under the permit conditions resulting in an additional £5.51 per metre³⁵ over the 8 year period. This cost applies to circa 54% of the total length due to the East of England having varying schemes varying from 'all roads' to 'strategic roads' and a number of authorities still operating noticing.

A Compensation Event (CE)³⁶ submission for each year has been provided by our contracting partner that impacts over the first 4 years of RIIO1 and will be projected forward for the remaining years.

Since the Compensation Event submission, our Contract Management and Control function have been able to review and challenge the claim to validate that the costs are driven specifically by the new permit scheme and permit scheme conditions from other geographic or legislative constraints. This has resulted in the claim being accepted for East of England.

The key drivers to the increase in productivity costs are workload and conditions applied to that workload. The increase in productivity costs were primarily driven through the imposition of restrictive conditions that were placed upon our works by the permitting authorities. Conditions can be further broken down into more defined categories including;

- Timing & Duration
- Road Space
- Traffic Management Provision
- Methodology
- Consultation and Publicity
- Environmental and
- Local conditions

³⁴ App 2-5 - Yearly submission

³⁵ App 1 – Master Cost submission table

³⁶ App 10 – CE Event (Sample)

Conditions drive cost by restricting the utility activities on a street or placing additional requirements on utilities so they can work in a street that were not applicable under the noticing regime. Each of these conditions has its own impact on the works and a number of these conditions could be applied to any works simultaneously.

Initially there were up to 45³⁷ different interpretations of conditions that could be applied within all the different schemes operating within the East of England. For the purpose of this submission the conditions have been broken down into specific categories as detailed in table 3.13 of the RRP submission.

Cost per Metre Calculations

- Replacement activities - the starting point for our meterage calculations is based on our tendered amount of 25m per man per week on a replacement job. Based on a 3 man team this equates to 75m per week which is 15m per day.
- Connection activities – we endeavour to complete 2 connection jobs per team per day. Therefore we have attributed 7.5m against a connection job.
- Repair Activities on average we complete 3 reinstatement jobs per team per day and so have attributed 5m against a reinstatement job.

5.3.1 Conditions

The method utilised to calculate the cost impact and breakdown of each condition is detailed within the data³⁸ and details year on year all the recorded works within the authority boundaries that are running permit schemes and records against each of those works the permit conditions applied.

Of the 7 condition categories identified in section 5.3 only 4 of these condition categories had an impact of cost which can be seen in table 12.

Table 12 – Productivity cost incurred through condition application³⁹

	Year 1	Year 2	Year 3	Year 4
Timing and Duration Conditions	£ 178,185	£ 600,813	£ 645,485	£ 217,760
Road Space Conditions	£ -	£ 142,109	£ 409,104	£ 263,473
Traffic Management Provisions	£ 25,109	£ 279,707	£ 672,210	£ 525,896
Methodology Conditions	£ 24,277	£ 547	£ 65,837	£ 104,024
	£ 227,571	£ 1,023,221	£ 1,792,636	£ 1,111,154

³⁷ App 2-5 – Yearly submissions

³⁸ App 2-5 – Yearly submissions

³⁹ App 2-5 – Yearly submissions

(i) Timing & Duration

This condition can be applied to restrict works to certain days and specific times within those days permitted. This condition, although reducing the impact of the works on disruption and congestion during the busy times does have the impact of extending the overall duration of the works and leading to a perception that Cadent are occupying the highway longer than necessary.

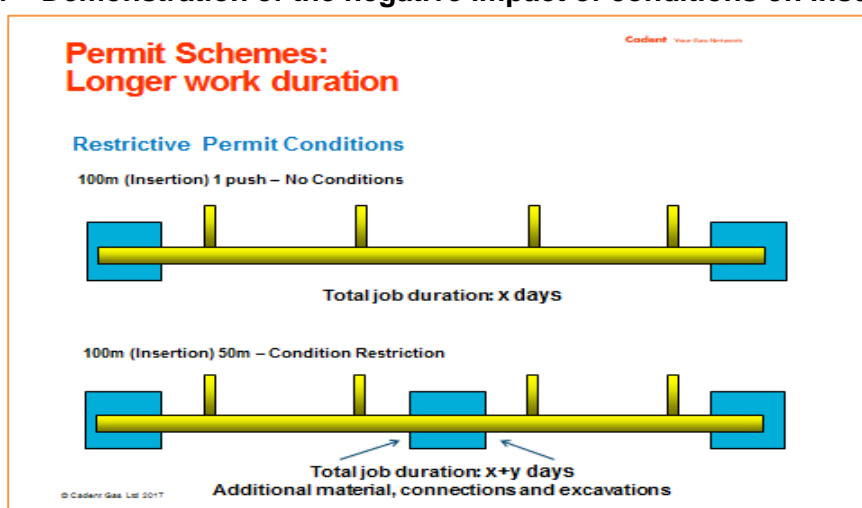
As an example a work that requires 10 days to complete (10 hours/day) would, if this condition applied at both the peak am/pm traffic sensitive times reduce the working day to 0930-1530hrs (6 hours/day) and would therefore require an extra 7 working days of occupation to complete the same work.

In addition, working outside the restricted hours brings additional cost in setting up and closing down the sites for the restricted period which is in itself unproductive, additional issues then arise regarding environmental issues (light, noise etc.) in addition to paying premium rates.

(ii) Road Space

This condition can be applied to restrict the amount of space or occupation of the highway at any one time and is utilised to prevent works being too elongated or occupying both sides of the same street simultaneously and thus disrupting both pedestrian and traffic flows. The impact of this condition and increased costs is seen by the reduction in pipe that can be replaced in a phase and additional excavations, connections and reinstatement that may be incurred through this application. Fig 4 below demonstrates how this can add to unproductive costs.

Fig 4 – Demonstration of the negative impact of conditions on insertion



In addition other requirements can be the removal of spoil from the worksite on a daily basis.

(iii) Traffic Management Provisions

The conditions applied within this section are those relating to how the traffic should be managed during the period of works and can include the imposition of road closures, the manual management of portable traffic signals, the application

of specific traffic management measures set out in the traffic management plans, closure of a lane or part of a dual carriageway, the application of 2 way (multi-way) portable light signals or Stop/Go Boards are in operation⁴⁰

Methodology

This specific condition relates to the restriction or imposition of 'how' the works are undertaken. This includes items such as a direction to the storage of plant and or materials within the site area and specifically requesting that such items are stored 'off' site until required thus incurring additional cost to store away from the location of the works.

(iv) Consultation and Publicity Environmental and Local conditions

There have been additional conditions applied under this category but the number has been considered too insignificant to impact or assess the costs for this type of restriction.

⁴⁰ App 9 – Condition Application example

6 Other considerations

6.1 Customer Bill impact

The 2018 Uncertainty Mechanism submission for street works would impact customers in the East of England only. Taking into account the fast / slow money apportionments of the street works UM per the RIIO GD-1 Price Control Financial Model, and the expected timing of revenue adjustments through Ofgem's annual iteration process, we anticipate that additional allowances will add roughly £3⁴¹ to customer bills in RIIO GD-1 on average. There will be a small enduring and reducing impact into future price controls of less than 20p⁴² per annum as the costs are depreciated through Regulatory Asset Values (RAV).

The anticipated increase to customer bills across RIIO GD-1 and RIIO GD-2 (assuming a 5 year price control) is shown below⁴³

Table 13 – Customer Bill impact

		UOM	2020	2021	2022	2023	2024	2025	2026
ESTIMATED ANNUAL BILL IMPACT 2017/18 PRICES	DOMESTIC	£ / ANNUM	£2.11	£0.34	£0.16	£0.14	£0.14	£0.13	£0.13
	NON DOMESTIC	£ / ANNUM	£46.48	£7.43	£3.48	£3.11	£2.99	£2.89	£2.80
	AVERAGE	£ / ANNUM	£2.61	£0.42	£0.20	£0.17	£0.17	£0.16	£0.16

6.2 Data Assurance – Irregular Submission

In line with Data Assurance Guidance requirements, we have produced an irregular submission assurance report and this is attached⁴⁴.

6.3 Stakeholder Engagement and Industry Collaboration

At Cadent we are active in working with key organisations to ensure that we can input, co-ordinate and collaborate with other organisations in improving performance, benchmarking and moving Street works forward to the benefit of all our customers and stakeholders. Ultimately we as Cadent want to keep our customers and the public safe whilst delivering against our outputs and keeping disruption on the highway to a minimum.

Cadent are currently at the forefront of Stakeholder engagement including leading the other Gas Networks in key areas of legislation. Cadent hold positions within Highways and Utilities Committee (HAUC) England being a contributing member, chairmanship of the ENA Street Works working group, hold a directorship and full membership of Street Works UK (formerly NJUG), have fully engaged membership of HAUC England working groups, again leading the gas industry in the review of legislation and regulation in key areas including the

⁴¹ App 20 – Customer Cost Calculation

⁴² App 20 – Customer Cost Calculation

⁴³ App 20 – Customer Cost Calculation

⁴⁴ App 11 – DAG irregular submission

Co-ordination Codes of Practice, Inspections Codes of Practice, Specification for the Reinstatement of highways (SROH), leading the Street Manager group with the DfT on behalf of all utilities.

Cadent has received accolades⁴⁵ for the work undertaken in the Street Works Regulation with regards to both Permits and Street Manager projects that will see us continually engaged with all the key stakeholders through to 2020. In addition, Cadent are currently awaiting engagement from the DfT to help develop the future regulations and operational guidance for the deployment of Lane Rental.

Examples of Cadent's key Street works stakeholders:

- Local Government Association
- Highways Authorities
- Ofgem
- Department for Transport (DfT)
- Street Works UK
- Highway Authorities and Utilities Committee (HAUC)
- Energy Networks Association
- Gas Network Companies (Wales & the West Utilities)
- Gas Suppliers (British Gas)

Some examples of how Cadent has collaborated across the industry can be seen below

6.3.1 Street Works UK (SWUK)

Cadent holds a Directorship on the SWUK Board in addition to holding the 'director of Operations role and works with 57 other Utility members to promote best practice and improve street works performance. Significant benefits are brought to the industry by reviewing and establishing new or amended legislation that is fit for purpose for utility promoters undertaking street works. Cadent also instigated a review into how SWUK operates including implementing Expert Practitioner Groups that specialise in different areas of street works legislation to aid understanding across the industry.

6.3.2 Highways and Utilities Committee (HAUC)

Cadent is an active member of HAUC England, acting as joint Chair of the Co-ordination working group that helps produce advice notes on legislation. The aim of this group is to resolve disputes through engagement and discussion without the need to revert to legal action and also to drive and share best practice across the Utility industry and Highway Authorities to reduce disruption in the highway.

6.3.3 Department for Transport (DfT)

Cadent has been supporting the DfT in drafting and reviewing amended legislation and advising on new regulations such as Statutory Guidance for permit schemes. By

⁴⁵ App 18 – Letter from DfT – JAG Award

collaborating with Government departments Cadent aims to protect the interests of its customers and also shape the future of legislation.

Cadent has been one of the foremost utilities working with the Street Manager project proposed to go live by the DfT in 2020/21 and is working to ensure and drive consistency in future interpretation and application of new systems that should improve co-ordination and collaboration with the ultimate aim to reduce congestion and disruption on the roads.

Key examples of where Cadent has collaborated with and influenced the industry are as follows:

- **Permit Regulations** – working with the DfT and HAUC, Cadent have succeeded and been engaged in getting an amendment to the Regulations with the introduction of the Statutory Guidance for Highway Authority Permit Schemes⁴⁶ and introduced a HAUC England guidance for the operation of permit schemes⁴⁷ that will drive uniformity in both the application and deployment of permit schemes including a defined set of National Conditions that will enable all works promoters to adopt consistency when working on different highway authority assets. A full permit evaluation report into the effectiveness of permit was due to be released by the DfT in the 1st week of May to enable all works promoters and permitting authorities to understand any strengths or weaknesses of the scheme. This report is still awaiting publication as of 22nd May 2018.
- **Specification for Reinstatements of Openings in the Highway (SROH)** - Cadent is currently working with the DfT and HAUC community to redraft the regulations appertaining to reinstatement that will remove the ambiguity and challenge regarding reinstatement. Inclusion of redefined performance criteria and a more efficient process for the inclusion of innovative techniques (e.g. vacuum excavation) to be incorporated into legislation.
- **Inspections Codes of Practice** – Cadent are currently reviewing this legislation to improve the performance of current processes in respect of inspections including defining a set fee for all inspection, a new way of calculating inspections based on occupation and a unified approach for escalation for non-compliance. Again savings are expected in the administration of this legislation.
- **Lane Rental Review** – Cadent has been asked to take part in a review and impact assessment of Lane Rental by the DfT to define the benefits the scheme has produced for the Highway Authority and the impact of costs for the utility.
- **Street Manager Project** – The Street Manager project is being run by the Department for Transport (DfT) its purpose is to transform the planning, management and communication of street and road works through the use of open data and intelligent services. This project will enable all works promoters, utilities and authorities to better co-ordinate their works much more effectively, minimising congestion, reducing disruption and improving journeys for road users.

⁴⁶ App 13 – Statutory Guidance for Highway Authority Permit Schemes

⁴⁷ App 14 – HAUC England Guidance for the Operation of Permit Schemes

Our Strategic Street Works Manager, Paul Gerrard has played a vital leading role in the Alpha phase of the project representing all utilities. The nomination, sponsorship and appointment of Paul reflect the importance, experience and expertise that we were able to bring to this critical project and demonstrated the trust we have gained with our key stakeholders.

The key role undertaken during the Alpha stage was to communicate, engage interact with other key utility representatives including the chairmanship a bi-weekly virtual group composed of stakeholders from Kier, Balfour Beatty, Street Works UK, Virgin Media, Western Power Distribution, Openreach, Anglian Water, Southern Gas Networks, and UKPN. The meetings were held to update and gain feedback on progress and to ensure that fellow utility companies had their views recognised and they were updated on progress and were able to positively influence the outcomes.

The Alpha phase commitment to this project was a minimum of three days a week over a three month period starting in November 2017 and was completed in February 2018.

The Alpha phase successfully met its objective in defining a MVP (minimum viable product) that could successfully be taken through to the Beta stage. In April 2018 the MVP also met the standard of the GDS (Government Digital Service) requirements enabling progression through to the Beta stage. The Beta phase is due to commence in May 2018 and Cadent will be looking to support this initiative that will drive Street Works administration, collaboration and co-ordination into the digital age.

6.4 Innovation

Cadent have innovated in our systems and processes associated with street works to minimise the cost impacts we have seen and are projected. [Examples include the development of the lane rental “app” which has enabled work designers to avoid routes which would attract a charge.] We have also driven continuous improvement into our administrative and training costs as well as refining our processes to reduce the productivity impacts. All of this is reflected in our claim.

In addition, Cadent continue to work with all the other Gas Distribution Networks in developing technological ideas⁴⁸ of improving the efficiency of the networks in parallel to reducing costs including street work elements. The following technology innovation ideas are currently going through the Research and Development (R&D) stages. Whilst all these technologies are viable and could have an impact on street works, at the current time, none of those detailed below have become part of widespread deployment in the day to day activities due to the current unfavourable economics of application at scale. Hence they are currently only being considered for niche application and therefore we do not anticipate them having a material impact on the projected street works costs for the rest of the RIIO1 period. A summary of the main technologies is shown below practicalities of scale and have not been included as an efficient cost saving within the RIIO1 period.

⁴⁸ App 19 – Innovation

Table 14 - 'Inflight' Innovations

Technical Name	Description
Blown Air Extrusion	The development of Blown Air Extrusion of a new pipe inside the existing service pipe using a polymeric material The expected benefits would be a reduction in customer disruption due to fewer excavations on private and potentially public land
Cast Iron Fitness for purpose	The development of a methodology to assess the fitness for purpose (FFP) of cast iron mains for continued use with remediation, for use as a host pipe for remediation by techniques such as cured in place (CIP) or thin walled plastic liners
CISBOT/WECO	Further developing robots to undertake repairs to joints such as WECO seal work to identify the best opportunities for remote internal repairs on large diameter mains Identified benefits should lead to less disruption and excavation thus reducing cost impact on street work activities
PRISM (Pipe Replacement in situ Manufacturing)	This innovative project to replace existing pipes in situ will undertake long-term tests on the lifetime characteristics of the PRISM pipe. The objective is to provide evidence that the expected lifetime of a PRISM pipe exceed the threshold set by the Cadent policy team, currently 50 years. Identified benefits should lead to less disruption and excavation thus reducing cost impact on street work activities
Tier One Replacement System (TORs)	The overall objective of the TORS project is to make it possible to replace both tier one mains and associated services by effecting the connection using a robotic platform operating within a conventionally laid PE main. It is estimated that around £80m of service replacement activity remains on Tier 1 mains in the plan to be delivered from 2016/17 through to 2020/21
SENSIT Acoustic Pipe Locator	The development of a technological device for the identification of gas pipes (plastic or metal) in the highway. Benefits include reduced excavation on site, in addition a reduction in the requirement for reinstatement and backfill materials in addition to the associated costs of working in the highway under the existing regulations.
KOBUS Gas Pipe Puller	The aim of the project is to create a method of extracting and renewing ¾ inch gas supply pipe avoiding the need to excavate to replace the gas supply Success for this project will mean approval of the KOBUS gas pipe puller as an effective operating technique for the replacement of ¾ service pipes without the need to undertake unnecessary excavation and the associated street works costs.

6.5 Future Legislation and the risks to delivering our outputs

Cadent is fully aware of potential future legislation that may be enacted, and is working with its stakeholders to improve its performance and to deliver against the promised output commitments to ensure more regulation is not required.

The future impact of legislative change has not been included within this claim although costs could be incurred (Lane Rental) prior to the end of the current RIIO period and will be incurred moving into RIIO2.

(i) Section 74A NRSWA – Lane Rental

The recent announcement by the DfT to roll out Lane Rental (a payment made to rent our sections of specified highways) throughout England could have a high financial impact on the cost of working in the street. Cadent already operate within 1 Lane Rental network, that in Transport for London, with costs nearing £1m per annum. It has been estimated (based on the information available) that a full roll out within the existing criteria of the TfL scheme could see an on cost of circa £12m per annum over the four networks operated by Cadent. We will be working with the DfT and key Stakeholders over the next year to reduce the impact of Lane Rental costs on the consumers whilst assisting the DfT to meet its key priorities in reducing disruption and congestion to the travelling public.

(ii) Section 73 NRSWA – Contributions towards maintaining the highway

The advent of winter has once again raised the issue of 'Pot Holes' in the press and the lack of funding to local highway authorities to maintain their roads. Cadent, working with Street Works UK are adopting a stance to stipulate that pot holes are NOT caused by utility works and that the existing legislation ensures that any works undertaken in the highway are guaranteed for a minimum of 2 years. A proposal by some highway authorities to enact S73 would mean all works promoters would pay a 'contribution' to maintaining any excavation undertaken in the highway. A cost of £50/sq. would result in an on cost for Cadent in excess of £20m per annum based on the number of excavations undertaken in 2016/17.

(iii) Section 78 NRSWA – Half width reinstatement

There is a proposal to enact S78 of NRSWA that would allow Highway Authorities to depict how much reinstatement of their assets should be undertaken when a works promoter wishes to undertake works in the highway. This issue has been raised in Scotland and although is less likely (as it drives more occupation and thus disruption/congestion) it should not be ignored in future Uncertainty Mechanism considerations.

7 Appendices/Supporting Information

Number	Details	Type
1	UM Master submission	Excel Spreadsheet
2	Year 1 data capture	Excel Spreadsheet
3	Year 2 data capture	Excel Spreadsheet
4	Year 3 data capture	Excel Spreadsheet
5	Year 4 data capture	Excel Spreadsheet
6	Notifications of intent	Memo
7	Example Invoice	PDF
8	Traffic Management Drawing	PDF
9	Condition Application Example	PDF
10	Compensation Event	Excel Spreadsheet
11	DAG irregular submission form	PDF
12	Lane Rental Decision - DfT	PDF
13	Statutory Guidance for Highway Authority Permit Schemes	PDF
14	HAUC England Guidance for the Operation of Permit Schemes	PDF
15	National Conditions for Permit Schemes	PDF
16	NRSWA as amended by TMA	PDF
17	C&P Review Process Example	Various
18	Cadent accolades	Word
19	Innovations	Excel Spreadsheet
20	Customer Cost Validation	Excel Spreadsheet

Access to all the appendices can be found at the following link.

<https://teams.nationalgrid.com/sites/RRP/RRP%20201718/Forms/AllItems.aspx?RootFolder=%2Fsites%2FRRP%2FRRP%20201718%2F04%20Process%5FProcedures%2FStreetworks%2FUM%5FEast%20of%20England%2FAppendices&InitialTabId=Ribbon%2EDocument&VisibilityContext=WSSTabPersistence>