



Department for
Digital, Culture,
Media & Sport



Department
for Transport

STREET WORKS TOOLKIT

Version 2.0

Fibre deployment in England & Wales



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Street Works

The upgrading of the UK's digital infrastructure to ultrafast, reliable fibre broadband will be one of the biggest projects in a generation. It will involve a considerable amount of street works - all in addition to routine street and road works operations. In view of this increased level of activity, and in the interests of minimising overall disruption to road users and the general public, it is important that this work is carried out efficiently.

This document provides examples of good practice and includes a toolkit offering advice for highway authorities (HA) and utilities wishing to collaborate in a cooperative working relationship. Given that the broadband roll out programme is the impetus behind this document, it inevitably focuses on the utilities specialising in fibre deployment. Its recommendations are nonetheless valid for all street works in general, and all utilities should work cooperatively with HAs.

Different interpretations of legislation and statutory guidance by industry and HAs, as well as the quality of the street works delivery, can have a significant impact on trust - hence the ability to deploy fibre infrastructure efficiently. Collaboration cannot be built without trust. HAs must be confident that a utility will not harm their highway assets. Suppliers need to feel confident that any fees or charges issued by an HA are justified. Consistency is key.

This toolkit aims to **improve consistency and trust, promote collaboration and complement current legislation**. It is tailored toward operational teams within HAs and utilities, in particular those responsible for planning and executing builds. Recommendations have been drawn from case studies and experiences from traffic and permitting managers, street works teams from utilities and contractors, the Joint Authorities Group (JAG) UK, HAUC UK, Streetworks UK, Broadband Delivery UK, the Department for Transport, and the Department for Digital, Culture, Media and Sport. DCMS recognises that the nature of deployment will be different across local areas, for example rural vs. urban. **We therefore look to highway authorities and industry to assess this toolkit and select the recommendations that are best suited to their local circumstances.** This document ultimately aims to improve the ability of HAs and industry to plan, deploy and deliver world class digital infrastructure at pace and 'right first-time' by spreading **existing best practice**.

***N.b.** A highway authority cannot grant special relaxations to certain utilities. Legislation does not allow highway authorities to make concessions selectively.*

The challenge

In 2017, the Broadband Stakeholder Group published a report by Analysys Mason assessing the barriers facing deployment of digital infrastructure in the UK¹. Issues identified in this report were around the patchwork of different permit and notice schemes across the UK, road/street classifications, the lack of early engagement and the process of deployment and reinstatement. What is key is the power of street works in enabling a connected Britain. 80% of the cost of deploying new full fibre networks lies in civils engineering alone², and whilst there are Government initiatives to help fund new networks, such as the Local Full Fibre Networks programme, most of the full fibre deployment in the UK will be commercial.

Utilities need to maximise the number of homes and businesses they reach. They are incentivised to expand reach as far as possible and more efficient works will allow them to connect more homes

¹http://www.analysismason.com/contentassets/2448861af5674dcfa77d9fea054e3893/analysys_mason_lowering_barriers_to_telecoms_infrastructure_deployment_may17.pdf

²Review of Civils Technology and Adoption - Report for Ofcom by Analysys Mason (2012).

and businesses with the available resources. A highway authority at the forefront of deployment will understand the potential pinch points and barriers as well as their region's challenges. They can ensure existing processes facilitate delivery and avoid delays. Highway authorities that develop fibre-friendly processes are likely to be prioritised for deployment by suppliers. Equally important will be suppliers who deliver incentive-based deployment schemes to ensure assets, congestion and public information meet the demands in all those areas.

Historically, the quality of reinstatements by the communications industry has been poor in many instances. However, performance is beginning to improve, and this needs to continue. Performance drives change, and good performance will drive more change. Problems that arise during fibre deployment are not inevitable. In builds where a **collaborative & flexible approach, consistent policies**, and **early & proactive engagement** are evident, we have seen rapid and successful deployment.

1. Early Engagement

HAs, utilities and associated contractors should engage at the earliest opportunity prior to any network build planning. Points of contact and escalation processes can then be exchanged and agreed. Successful end-to-end delivery of digital infrastructure requires a collaborative and proactive approach between stakeholders, with a focus on identifying solutions to barriers throughout the entire build. Early engagement should help identify a **performance-based incentive scheme** where utilities and HAs set out their expectations around standards that should drive better delivery for all.

Utilities should share their plans with HAs as early as possible. Whilst utilities may not know precisely which street they will be working in, or where cabinets will be located, early engagement of up to 6 months before civil works begin will allow highway authorities to greatly assist utilities in delivering new networks. This includes guidance on highways works, section 58s and pre-booked engineering works.

The telecoms market is highly competitive. However, earlier engagement will lead to cheaper, faster and more seamless build projects. Most importantly it demonstrates cooperation between utilities, contractors and HAs, which will lead to better working relationships during the build itself.

> Best practice example

Westminster City Council

Westminster's new approach to relationship-building and infrastructure deployment is an example of best practice in collaboration established early and carried out throughout the entirety of the build. [The Business, Planning and Transport Policy Committee released a report on Broadband Coverage outlining the Council's new approach to digital infrastructure deployment.](#)

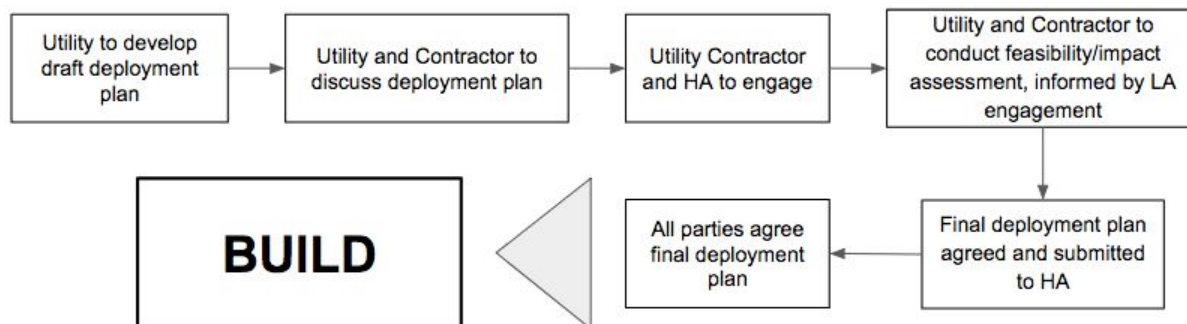
This was announced following Westminster's poor broadband coverage and speed performance³, and displays a pragmatic approach to the implementation of the legislation.⁴ Examples of a 'common sense' approach include:

- Westminster **employees are encouraged to agree early starts**, or to phase works.
- **New utilities in the borough are invited to meet the Council.** This builds relationships, establishes contacts and sets mutual understanding of expectations.
- The Council proactively identifies works where **contractors/utilities can work alongside each other.**
- **Parking bay costs are suspended** or reduced for utilities undertaking a programme of works.

³2014 Ofcom data showed that only 47% of premises in Westminster had access to superfast broadband, the worst coverage of any London borough other than the City of London.

⁴<http://www.legislation.gov.uk/ukpga/1991/22/contents>; <http://www.legislation.gov.uk/ukpga/2004/18/contents>;

How, What, When?



Utilities should engage their selected contractors to develop a high-level draft deployment plan in preparation for the build, focusing on - first and foremost - performance standards and delivery milestones.

This plan can then be presented and discussed, alongside other issues, in a HA-utility meeting. This would need to take place before each fibre network build.

Pre-build

1. LA-Utility Meeting

Participants:

Highway authority - Member of the Senior Leadership Team/Economics team, Senior Responsible Officer (SRO) from highways/street works, member of the legal team.

Councillor(s)/committee member(s) responsible for the economic/digital portfolio.

Utility - SRO from street works, project manager for build.

Contractor - Senior member/engineer and site supervisor.⁵⁶⁷

City of York Council

From the Chief Executive and the senior leadership team, to the highways and traffic managers, City of York Council understand the huge economic benefits that full fibre connectivity brings and have adapted accordingly. As a result all employees are fully aware of the power that street works has in enabling connectivity in communities:

- Permitting managers are empowered to manage innovative solutions, such as introducing forward planned noticing agreements with utilities able to anticipate their deployment.

⁵ It is highly recommended that a contractor representative is involved in all meetings between the utility and the highway authority.

⁶ It should be noted that the work promoter (utility) remains the accountable body even if it defers transactions to its contractor.

⁷ This recommendation supports the Early Contractor Involvement (ECI) models now recognised as best practice in the construction industry.

- The Chief Executive has adopted an approach of proactive support for all teams that enable fibre deployment - meaning a consistent 'how do we make this happen' attitude to all Council employees involved in street works.

Result - This has led to 33%⁸ of York with access to FTTP (compared with an average of 6% nationally⁹), whilst current rates of deployment will mean that by the end of 2019, 75% of the city will have FTTP. York is already seeing new companies and millions of pounds of investment arriving due to the availability of widespread digital infrastructure.¹⁰

2. HA-Utility information/issues to cover

A pre-build template agenda can be found in annex B.

HA could provide:	Notes
Usable public infrastructure/assets (incl. Asset condition data - National Street Gazetteer, Additional Street Data, pipe networks, available ducting, adopted/unadopted road network, LA land/property). <i>This should be available on the appropriate IT systems.</i>	Possibility of reduction in civil works, less demand on Highways team. Provides utilities with greater view of where deployment would make sense, reducing the likelihood of poor reinstatements, and allows for the creation of contingency plans for damage to poor condition surfaces. This includes information on footways/highways in poor condition.
Capital Works plans (including any programmes of resurfacing for the upcoming year)	Provides opportunity for co-working, improved timing of deployment.
Information on all required applications and processes. E.g. prediction of permit amounts and costs (incl. implications for parking bays, Temporary Traffic Regulations Orders (TTRO)). <i>This should be available on council websites.</i>	Enables utilities to put together a more detailed and accurate plan. Will also provide certainty of cost. Reduction of number of last-minute permits and permit/works cancellations.
Information on previous deployment techniques and reinstatement materials	Enables utilities to better plan the physical excavation and reinstatement part of the build. E.g. ensure that ducts are deployed deep enough.
Permit workload capability	Assessment of whether the highways team can manage the potential workload, and explore whether the utility can

⁸<https://www.thinkbroadband.com/news/8197-top-25-areas-of-the-uk-for-full-fibre-broadband>

⁹https://www.ofcom.org.uk/_data/assets/pdf_file/0019/122194/connected-nations-october-2018.pdf

¹⁰ Further information and figures currently confidential.

	deliver additional support should there be shortfalls in the authority's ability to manage the increased workload. This will minimise permit application deluges. In cases where the utility funds additional HA capacity, there should be full transparency and fairness around such arrangements.
Information on embargoes (e.g. special events) These should be communicated/available from the local HAUC body.	Enables utilities to put together a detailed, accurate and deliverable plan, and avoids delays in permissions due to peak demand at the start of works. Will also provide certainty of cost. Reduction of number of last-minute permits and permit/works cancellations (which will in turn reduce administrative costs on both sides). N.b. For the sake of clarity, HAs should avoid imposing blanket embargoes that are not specific on date/time and not loaded onto appropriate IT systems (e.g. National Street Gazetteer, Street Manager)
Restrictions (e.g. Section 58) These should be available on the appropriate IT system.	
Information about issues specific to the local area	Gives maximum opportunity for the utility and contractor to tailor specific digs to suit local circumstances. This could include knowledge of any special engineering difficulties, or areas marked for significant development/redevelopment.
Wider local plan/new development information	This will inform utilities of the HA's strategic development plan for the area, which will aid in planning builds.

Utility/contractor could provide:	Notes
Deployment Plan	Gives visibility to HAs so that they can advise and prepare as necessary. This will lead to better end-to-end collaboration. This should also include proof that the utility has explored the possibility of using existing networks.
Commitment to premises connected and new coverage (incl. Information pack on the resulting benefits)	Utilities should make clear to HAs which premises will be connected, the number of premises to be connected, and the newly available fibre coverage. Utilities should also supply the council and present councillors with a short pack outlining at high level the deployment plan, relevant information, and tangible benefits for the community (for example, economic benefits, number of new premises connected, what the new speeds mean for residents and businesses, etc)
Programme of works (agreed with contractor)	Gives visibility to HAs so that they can advise and prepare as necessary for better end-to-end collaboration. It will also help to prevent unnecessary delays to works.
Evidence of past performance in Street Works	Will help reassure HAs over reinstatement quality, and can feed into any Quality Plan agreement with that utility.
New deployment techniques (with guarantee period)	Present new or previously used methods (and highlighting HA endorsement when possible) of physical deployment. Gives the

	HA choice of new techniques and materials. ¹¹
Funding a resource (if required)	Enable provision of required resources to be used for that utility's deployment. Easing the workload of highways team at reduced cost to the HA.

Good practice	Notes
Agreement of shared objectives	Understanding that the fibre business case is very challenging for utilities, and that HAs are duty-bound to maintain the road network and manage congestion. Acceptance of the fact that fibre is vital to a region's economy, and that it needs to be delivered.
Agreement of quality plan	Discussion over standards of reinstatement, practicality vs technicality and how innovation can maximise this. Effective supervision and the 4th ed. Specification for the Reinstatement of Openings in Highways (SROH) are the keys to success. Contractors to consider in progress coring to ensure reinstatements are to specification and that any issues can be rectified quickly.
Fee exemptions¹² - e.g. Category 3-4 roads¹³, permits, parking bays, non-traffic sensitive roads	Will lead to smaller workload for highways teams and utilities.
Innovation Test sites Where LA can examine utility/contractor deployment and reinstatement techniques	Innovative techniques and materials have the potential to significantly improve operational efficiency. Innovative techniques not specifically covered by the 3rd ed. SROH can be used by agreement with the HA. Innovative materials can be used by agreement subject to the requirements in the 3rd ed. SROH for "Alternative Reinstatement Materials".
Mobile works	Discussion over mobile works (with specific techniques and supporting risk assessment). This will reduce traffic disruption, minimise road closures, and speed up deployment - especially on low vehicle volume roads.
Major Works Classification	Classification should be in line with Statutory Guidance and HAUC advice notes.
Works inspections/supervision	Agree regular site visits by both HA and utility inspectors, as well as a collaborative escalation method (yellow/red card scheme). Possible HA/utility supervision of the first x-kms of build to help raise the standard of works and reduce the

¹¹ This may involve provision of a method statement and quality assurance system.

¹² Within a framework of cost balance.

¹³ Traffic sensitive roads exempted at the discretion of HA.

	number of defects. Joint attendance between the HA and contractor is a good way of ensuring adherence to quality/defect plans and pointing out potential issues.
Discussion of contractors	Beneficial for both HAs and utilities to have a discussion over which contractors have been selected, previous performance in the region, and the contractor's ability to meet required standards.
Pre-site survey	Pre-site surveys provide all parties with a better understanding of the route, challenges of deployment, and likelihood of reactive works. Issues with asset standard and potential congestion will need early attention. In cases where a full pre-site survey is not possible, only the most technically challenging routes should be visited. ¹⁴
Communications strategy Marketing/PR campaign/local adverts, parish council meets, etc.	Engaging with the residents/councils and informing them that, following a few days of inconvenience, they will have gigabit broadband. This can involve banners on safety barriers, branded vehicles, engagement plans shared with residents and councillors. This should help reduce complaints from local businesses and residents, and may increase uptake of service.
Exchanges of Points of Contact (PoC)	HAs could provide a single PoC with authorisation to make decisions across all relevant teams (planning, highways, traffic management, local broadband programmes). Utilities could provide a PoC authorised to make decisions for street works, supervision and the contractor. This would help to resolve minor disputes and prevent issues escalating unnecessarily. These may be an HA Head of Highways/superfast broadband programme manager, and a utility project manager.
Sites of Special Scientific Interest (SSSI), Area of Outstanding Natural Beauty (AoNB), protection zones, conservation areas and ancient monuments	Discussion over how best to manage applications and works that take place in these areas. For example, use of GIS systems and MAGIC website/Historic Environment Scotland.
Works co-ordination/joint occupation & working <i>The introduction of Street Manager will significantly help the planning/coordination aspect of this practice</i>	Where there are planned HA works to maintain/improve the road network, the HA should consider inviting utilities to work in the road at the same time, as part of their duty under section 59 of the 1991 NRSWA. In a similar spirit, utilities planning to excavate a road should offer the HA an opportunity to share the works site. This will reduce congestion and save time and money for all parties. Similarly, where HAs identify two or more utilities working in

¹⁴ Final decision lies with the HA.

	the same location around the same time, it should highlight this to all parties. ¹⁵
Handling of reactive works	HA and utility to agree guidelines on what to do when fibre installation works hit a collapsed duct, etc and reactive work is required. This may include several solutions such as a utility submitting 'with excavation' rather than 'without excavation' notices/permits in areas where collapsed/damaged ducts are likely.
Special reinstatement materials	<p>HAs and utilities could benefit from agreeing on what is required when a special surface, e.g. cobblestones, is encountered. HAs may have stocks of special reinstatement materials for such circumstances that would be difficult to obtain otherwise. Utilities should cooperate by returning surplus materials to the HA.</p> <p>Any specialist reinstatements must be discussed in detail with the contractor. Similarly, works must not disturb a specialist surface until a strategy has been agreed between the utility, HA and contractor.</p>

Next steps

Utility to complete an internal feasibility assessment based on the delivery model agreed. This should involve further discussion with the selected contractor(s), drawing from agreements from the initial HA-utility meeting to give the contractor a minimum of 3 weeks to draw up a programme of works/delivery.

If accepted, a final deployment plan is drawn up, and agreed to/signed by all participants. For example - **the utility will deliver the fibre network, to a defined standard, on time. HAs will work proactively to assist the utility with permits and other traffic management measures. The agreed deployment plan might include flexibility on deployment techniques, a statement on reinstatement processes, and reinstatement materials (together with agreed performance levels).** This will provide certainty and clarity, especially over timescale and cost, to all stakeholders and will lead to higher performance (including 'right first-time' reinstatement quality) from both utilities and contractors.

Flexibility on fines, traffic management and defects is based on acceptable levels of compliance and performance. This agreement underpins much of the advice suggested in this toolkit. A utility not should expect to receive proactive collaboration if its performance is unacceptable.

¹⁵ This should be done as part of the regular meeting between utility, HA and contractor.

Case studies

HA and utility collaboration

Openreach and Leeds City Council

Openreach and Leeds organised two meetings before and at the commencement of a full fibre rollout in the city. One involved directors and senior stakeholders, the other operational stakeholders. Openreach and Leeds then arranged weekly plan & build calls to share progress and forecasts for the week ahead. This built relationships and established a culture of collaboration and coordination:

- For non-notice/non-permit works, the ability to retrospectively register reinstatements when circumstances changed on site was agreed - for example when cabling up a property and a blockage is encountered, Openreach are able to dig, clear and reinstate immediately whilst build teams are already on-site.

HAs offering usable public assets to a utility

Southend-on-Sea Borough Council & CityFibre

Southend invited CityFibre to use the Council's existing duct network in order to assist infrastructure deployment in the borough. This involved deploying fibre to 170 council assets. This was negotiated using a standard pricing model and resulted in minimal disruption to the traffic network, lighter workload for Southend's traffic team and more widespread fibre availability. The price per metre agreed was the prevailing market rate and thus avoided any state aid issues.

Utility providing additional resource to HA permitting teams

Gigaclear & KierWSP (Northamptonshire's outsourced HA)

To better facilitate their fibre deployment in Northamptonshire, Gigaclear offered to fund an additional fixed-term inspector position on the Highways Authority team. In return KierWSP used this to front end utility costs and address peak demand.

Result

Since the agreement, both parties have witnessed vastly improved flexibility:

- Working to standard notices as opposed to major.
- Early starts being granted where appropriate.
- Reduced fixed penalty notices.
- Fewer section 74s.
- Output is forecasted to increase by 70% without additional strain on KierWSP resources.
- Gigaclear are now able to invest an additional £3000/month into their network.

Agreement of shared objectives

Bristol City Council Code of Conduct for street works

Created in partnership with the HA and 5 utilities (including Virgin Media), the code outlines guidance to working in Bristol, and the ways in which both the HA and undertakers can best work together. Whilst non-legally binding, the document serves as a 'how-to guide' on issues ranging from traffic management and forward planning, to significant local events and reinstatement performance. It is recognised by all parties that street works is key in delivering world class infrastructure and connectivity.

HA and utility working together to promote innovation

Gigaclear & Fastershire (Gloucestershire and Herefordshire)

As part of their BDUK Fastershire tender, Gigaclear offered Fastershire the option of 2 deployment plans. One using narrow-trenching as the deployment technique, the other using conventional methods. The figures showed narrow-trenching would both significantly reduce cost and increase coverage. After discussion and provision of engineering evidence, Fastershire accepted the narrow-trenching deployment plan.

Result - With Complete Utilities serving as the contractor, average work duration across the authority was reduced, and the deployment saw a 200% increase in productivity compared to conventional delivery.

Pre-site survey/HA and utility jointly assessing road conditions prior to build

Cambridgeshire County Council & Virgin Media

To maintain build progress and reach an agreement suitable to both parties, Virgin Media (VM) and Cambridgeshire Highways formulated a plan to carry out weekly pre-build site walks and assign a Red, Amber or Green (RAG) status to each footway. Status was dependent on the present state of the pavement, and any previous works carried out by other undertakers. Footways were subsequently assigned a status, and a course of reinstatement action was agreed for each status:

- **Green** - Footway in good condition and reinstatement carried out by VM in accordance with the SROH. Defects outside of the line of trench and attributable to VM's method of work would be passed to VM.
- **Amber** - Specific options agreed on-site, such as no guarantee periods, slurry seal reinstatements and full width reinstatements.
- **Red** - Footway acknowledged as in poor condition and VM to reinstate according to SROH. System updated to confirm condition of footway. Defects arising outside of the line of trench to be assessed taking the pre-existing condition into account.

Alternatively for red-designated footways, the HA could make a contribution to the utility's reinstatement costs, or vice versa should the HA carry out reinstatements on red footways.

Local PR and communications strategy

Bewdley Town Centre works

A non-telecoms example: Major works had to be undertaken in Bewdley Town Centre in order to replace water and gas infrastructure. A prosperous town with a strong tourism industry, it was imperative that disruption caused by the 6-month works was minimised so that the tourist economy of the town would not be impacted. Key to this was positive engagement with residents, businesses and visitors. Alongside early engagement and joint working, Severn Trent Water and National Grid Gas undertook:

- Suspending works and maintaining street access during major public holidays and unplanned events (such as a military march).
- A local press & radio campaign before, during and after the works.
- 4,000 leaflets explaining the works and emphasising minimal disruption.
- Road signs with progress updates and advertising for Bewdley businesses.
- Site representatives that visited businesses and residents to deal with day-to-day enquiries and concerns.
- Regular dialogue between the Mayor, utilities and Street authority.

Works co-ordination/joint occupation

Dudley Town Centre Joint Working Scheme

A non-telecoms example; South Staffs Water, National Grid Gas and Western Power Distribution partnered to engage with Dudley Council to carry out an 18 month programme of works. This involved:

- Comprehensive, coordinated data exchange between the utilities and the LA.
- Weekly progress meetings between all parties.
- LA granting a single all-encompassing TTRO for the 18 month period.
- Joint working methods to promote duct installation and pipe use without unnecessary additional excavation. This also involved splitting costs.

Result

Minimised traffic, business and resident disruption (extremely low number of complaints), significant time and resource savings, lasting working relationships.

Permit-sharing

Openreach

Openreach have developed their internal street works system to present works originators with opportunities to 'permit-share'. When the originator is plotting the location of Openreach works, the system searches within a set radius and shows what existing permits are already agreed. This forces a decision from Openreach whether to share the permit. Should sharing be appropriate this reduced workload and cost for both the utilities and the HA.

Continued engagement

Following the pre-build meeting, regular meetings (minimum monthly) should be agreed between the utility and the HA to discuss progress, challenges and delivery, and any other business. Again, contractor involvement is highly encouraged. DCMS advises that these should have 2 general themes: strategic - looking at the big picture of delivery and timetables; and operational - more technical discussion of specific issues and practicalities on the road. A template for these meetings can be found in [annex C](#). Council/committee members should also be updated regularly regarding progress and issues.

'Dig Once'

One of the most effective ways to manage fibre infrastructure deployment is using a 'Dig Once' approach where, when a road is being excavated for whatever reason, ducts for fibre optic cables are also installed. This would allow for increased fibre capacity to be quickly and easily provided in future with limited disruption to traffic. This can be especially useful at strategic road crossings, pinch points, etc. The benefits are:

- Minimal traffic disruption (no foreseeable street works).
- Lighter traffic management/permitting/planning team workload (saved resources).
- Increased attractiveness of HA for fibre deployment (ducts are already in the ground, saving considerable time and money, mitigating unforeseen situations from deployment programmes)

Dig once/future-proofing

Transport for London (TfL) and Lane Rental investment

TfL have worked with the street works industry to use the lane rental fund in order to lay additional ducting during construction of cycle highways and other modernisation programmes. This has been done during concurrent street works and complements another lane rental funded project to capture and display redundant mains. This gives industry an opportunity to use existing infrastructure when planning street works activities. This will save the industry millions of pounds, significantly reduce disruption at strategic locations and provides opportunity for key infrastructure programmes to be delivered at speed.

Result (links)

[Future-proofing using Lane Rental funds - TfL I](#)

[Future-proofing using Lane Rental funds - TfL II](#)

[Future-proofing using Lane Rental funds - TfL III](#)

[Future-proofing using Lane Rental funds - TfL IV](#)

[Future-proofing using Lane Rental funds - TfL V](#)

Cambridgeshire County Council

Cambridgeshire County Council is reviewing its position on the automatic inclusion of fibre

ducting in all major infrastructure projects (roads, footpaths, cycleways, etc) that are commissioned by the authority. Connecting Cambridgeshire, the digital connectivity programme for Cambridgeshire and Peterborough, has drafted a policy that is currently going through the County Council's approval process. This proposes that all major infrastructure projects will have to include the provision of fibre ducting in its design and build and be included in scheme budget development. Officers working with partner agencies are also being encouraged to consider how fibre ducting can be incorporated in wider schemes.

Utility planning

Utilities and contractors can vastly improve the success and speed of builds by planning appropriately. Better planning helps ensure a more seamless management of resources and places less strain on highway authorities, thereby maximising opportunities for greater collaboration and flexibility:

- Desktop planning - over-reliance on desktop planning results in excavating areas that are wholly unsuitable, for example unstable verges, under hedgerows, and on unadopted highways with no wayleave. Physical site surveys will provide the utility and HA with a definitive view of the potential scale of work at any given location.
- Cancellations - whilst sometimes unavoidable, a high number of/frequent cancellations is evidence of poor planning.
- Errors on notices/permit/road closure applications - basic errors and late applications do nothing to improve trust and collaboration in street works.
- When things do not go to plan - honesty is the best policy and enables plans to be put in place to prevent recurring problems.
- Site supervision - application of the SROH and Safety at Street Works Code of Practice is a minimum requirement on all sites.

Going the extra mile

For HAs that wish to attract and promote digital infrastructure deployment, consideration could be given as to how their permit schemes might be structured to incentivise a major nationally important infrastructure project such as fibre deployment. This would need to be set against the need for the permit scheme to balance in cost terms.

2. Permitting, noticing and traffic management

Given the nature of this national infrastructure project, utilities may not initially know precisely which street they are working in until deep into the planning process. Communication is therefore essential. The long lead in for planning works should be seen as an advantage and HAs should not look to consider this as falling foul of 3-month notice periods and other traffic management lead times. Remedial and emergency work, the availability of crews, delays elsewhere and other factors affect a utility's ability to be precise with start dates and finish times. Whilst HAs will still need to rely on correct information being communicated, flexibility and understanding on these matters will quicken the pace of deployment (given HA expertise in understanding the network).

Most authorities operate permit schemes to manage their network. Each scheme has nuances in its processes that utilities have to adapt to. This lack of consistency impacts upon a utility's ability to deliver plans and deploy infrastructure. One of the challenges faced by utilities when planning a new network deployment is this variation between schemes operated by HAs. All schemes must comply with regulations and statutory guidance, and most highway authorities adhere to the [HAUC \(England\) Operational Guidance for Permit Schemes](#).

Highway authorities can manage their permit schemes as they see fit, but a collaborative and flexible approach will mean that utilities complete work faster and to a higher standard. Compliance with the TMA¹⁶ is critical and must be the baseline, but with appreciation that flexibility is sometimes needed to ensure delivery at the earliest opportunity (whilst balancing disruption to the travelling public). Permit schemes, by requiring a fee, enable the HA to offer a greater service to utilities when applying to work on their network. This includes assisting utilities to undertake works within the requirements of the 1991 NRSWA, the rules for TTROs, and those of the '[Red Book](#)'.

HAs are encouraged to work together with neighbouring authorities to agree a set of standard rules and criteria for permit and traffic management processes, and to use the [HAUC permit guidance](#). Greater consistency will allow utilities to better plan deployments across regions. This will result in faster and widespread deployment, which results in greater socio-economic benefits for each LA.

At the same time, utilities should comply with the HAUC permit guidance and should avoid submitting notices as soon as works are planned, and repeatedly asking for early starts. This can be addressed by following the suggestions in section 1.

Existing guidance and advice notes

Guidance and advice notes from DfT and the Highway Authorities and Utilities Committee (HAUC) must be considered, including:

- [Fibre cabinet installations](#)
 - Single cabinet installations should be classed as standard works¹⁷.

¹⁶ Traffic Management Act, 2004: <https://www.legislation.gov.uk/ukpga/2004/18/contents>

¹⁷ Cabinet installations must have consideration to the cabinet siting code of practice: <https://www.gov.uk/government/publications/cabinet-siting-and-pole-siting-code-of-practice-issue-2-2016>

- [Applying Section 74 regulations](#)
 - Each individual situation for an overstay charge should be considered on its merits.
 - HAs should not unduly deny work extensions for unforeseen circumstances where clear and practical evidence has been provided by the undertaker.
 - HAs should issue clear S74 warnings before issuing fines. Utilities are also expected to manage their own workload and milestones.
 - Where an undertaker has completed works and moved their signing, lighting and guarding equipment to another part of the highway for later collection, the HA should consider issuing a less-than-maximum fine. Where it does not impact vehicular or pedestrian traffic. Utmost care must be taken in areas where disabled pedestrians may be affected.
 - If the above equipment has been moved off the public highway, HAs cannot issue fines.
- [HAUC\(UK\) mediation process](#)
- [Traffic Management Considerations](#)
 - Avoid planning works from the desk, where existing conditions on site are not fully known and information may be out of date.
 - Avoid disconnects between works planners, civils contractor and traffic management contractors and maintain communication between all parties.
 - Avoid traffic management proposals being submitted by contractors who are remote from the site and have difficulty travelling easily to it to look at the current situation.
 - Avoid submitting traffic management proposals at short notice.
 - Do not submit poor quality proposals, such as illegible hand drawn sketches.
 - Ensure that traffic management proposals are submitted by individuals with adequate knowledge of the requirements of Safety at Street Works and Road Works and Chapter 8 of the Traffic Signs Manual.
 - Ensure that the experience of HA and works promoter colleagues is used when drafting traffic management proposals.

Yorkshire & Humber Common Permit Scheme (YHCPS)

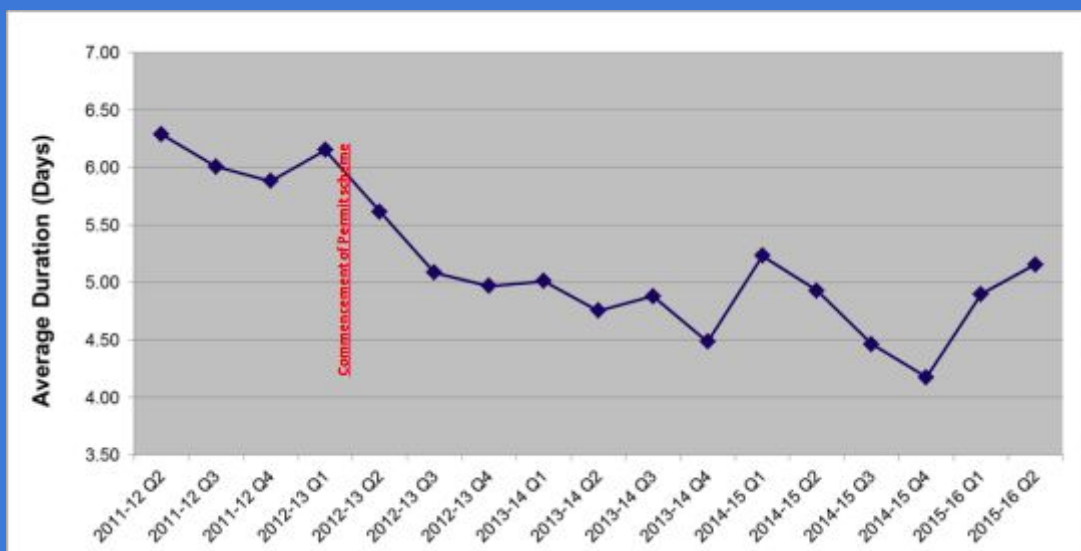
The YHCPS is an agreement between 12 highway authorities in Yorkshire and Humberside to align permit rules across the region. The key objective was to 'minimise delay and reduce disruption to road users from street works'.

All 12 HAs agreed to ensure certainty of work dates, provide regular updates of work plans, and improve operational aspects such as execution and monitoring. This change also involved a focus on driving proactivity, coordination and collaboration (such as emphasising that permits should only apply to road categories 0-2, and reducing permit fees when 2 or more undertakers share the same working space/submit joint working strategies).

Result¹⁸

July 2011 - June 2012 (prior to YHCPS)	Avg. works duration (awd): 6.1 days
July 2014 - June 2015 (post-implementation)	Awd: 4.6 days

- Increase in works gone ahead without cancellation.
- Works commencing on planned start date rose from an average of 82% in the 4Qs prior to the YHCPS in 2013, to 95% since implementation.
- 3 of the top 8 best local authority regions in the UK for FTTP availability are part of the YHCPS.



Whilst early engagement (as outlined in section 1) will help to avoid many of the problems that may arise during permitting, noticing and traffic management, it is best practice for all stakeholders to approach issues flexibly, collaboratively, and with common sense.

¹⁸ <https://www.leeds.gov.uk/docs/Third%20Year%20Review%20YHCPS.pdf>

Essex Highways

The best permitting schemes are those that have clear and unambiguous policies. Essex manage a strict, but proactive and productive permit scheme:

- Clear set of criteria for granting/refusing permits and traffic management permissions.
- Well-trained staff and empowered administrators.
- Stripped away and modified certain elements of the early starts system, making the application process smoother and quicker.
- Acceptance of micro-trenching as a deployment method following trials (despite unclear guidance in the SROH).

Most importantly however, the Essex Highways team operates a culture that looks for solutions, proactively supports well-planned deployments and applications, and understands the benefits that fibre networks bring.

Virgin Media and Wrexham County Borough Council

Whilst early and collaborative engagement will solve the majority of problems that arise during deployment, sometimes early starts are needed due to unforeseen circumstances. Virgin Media and Wrexham recognise the challenges of laying fibre and have accommodated, where appropriate, requests for early access to ensure continuity of the works programme. Wrexham have and continue to work proactively to find solutions to help maximise the speed and delivery of the build programme, ensuring disruption to residents and the travelling public is minimised.

This is part of the highway authority's wider work with Virgin Media, which itself provides an example of excellent collaboration between the Highways, Planning, Digital Strategy and Economic Development teams.

Issues that arise in the permitting, noticing and traffic management processes:

Issue	Suggested solution
Variation of permit schemes across the country	In the first instance HAs should use the HAUC (England) Operational Guidance for Permit Schemes. LAs are also encouraged to agree uniform rules with nearby authorities. Best practice here includes the Yorkshire & Humber Common Permit Scheme.
Fees adding up	Permit fees are set within a framework of cost balance. Authorities should look to incentivise the process. Where performance meets the agreed targets, consideration can be given to look at fees ¹⁹ and permit notification periods.
General traffic management applications	HA and utility to use 2700 notification on EToN - however the introduction of Street Manager will add consistency in this area. This promotes a common standard as well as quicker and more

¹⁹ For example road closure fees.

	effective working practice.
TTROs, parking bay discounts	Collaboration in planning deployment (section 1). Open exchange between PoCs of both utility and HA. Only requiring a TTRO when absolutely necessary and considering discounts where utility performance has exceeded expectations. HAs may advise rolling multiple TTROs into a single application.
Other planning issues (e.g. parked vehicles)	Collaboration in planning deployment (section 1). Open exchange between PoCs of both utility and HA. This will also prevent delays caused by parked vehicles, duct blockages, collapsed ducts. Ultimately the purpose here is to provide undertakers with greater flexibility when they experience unforeseen circumstances, for example illegally parked vehicles in work-sites blocking access.
Works on category 3-4 roads	HAs may want to consider the level of scrutiny (compared to cat 0-2 roads) they apply to cat 3-4 roads/traffic sensitive roads. The utility and contractor should act respectfully in residential areas.
Road closures	Blanket road closures in certain circumstances (see Gloucestershire County Council example).
LAs overwhelmed by number of permit applications	Discussion to take place around the utility funding an additional HA inspector/coordinator to manage extra workload (section 1).
Forward planning notices and early starts	These should always be considered should a utility and contractor agree a program of works with the HA.

Parking bay discounts

Westminster City Council

[Westminster parking bay discount programme](#)

In a 3-month period (June-Sept '17) concessions granted by the Council saved utilities £200,000. Westminster have recognised that the long-term economic benefits of full-fibre connectivity far out-weight short-term gains. DCMS recognises however that not all HAs will have the financial flexibility to adopt this approach.

Blanket road closures

Gloucestershire County Council

In certain circumstances, Gloucestershire offer blanket road closures. When a legal order to close a road is arranged, a number of jobs are listed on that order. This allows for rapid transition between deployment sites and quicker roll-out. The Network and Traffic Management team have developed and now champion this process.

Rejected permits - Outright Refusal vs. Permit Modification Requests

Whilst it is anticipated that permit rejections would be kept to a minimum due to early engagement (Section 1), there will be cases where changes need to be made and errors corrected. Permit Modification Requests (PMR) should be used in all but the most serious cases. **N.b.** The aim for all utilities must be for permit applications to be right first-time.

PMRs:

- Provide HAs with a steady stream of permit applications. PMRs do not shut down the permit application/restart the entire process. While HAs can refuse a permit application, they should say why the permit was refused to reduce the number of times a utility must begin the application process again. This will reduce the need to submit numbers of applications at the last minute in order to keep on track with project delivery timelines, so reducing any strain on HA resources, cause further delays and damage relations.
- Allow the utility to make changes to the application so that plans can remain on the schedule agreed with the HA and contractors in section 1. This will mean that utilities will be able to stick to agreed programmes with contractors, which ultimately will result in quicker works and higher quality reinstatements.
- All rejection reasons should be provided in the first instance (and as early as practicable) so that approval can be made on the second submission to avoid unnecessary work for both sides. The permit authority should make it clear in the PMR what needs to be changed.
- Should the HA revoke the permit for unforeseen circumstances, they should consider not recharging the utility for another permit application.

To ensure the greatest realisation of benefits all PMRs should be timely. There are many examples of Modification Requests being received a matter of hours before works are due to commence, and the effect of this on a programme can be almost as severe as an outright refusal. Experience suggests that a process for dealing with the interaction between the traffic management plan and permit conditions should be agreed pre-application. Clear agreed guidance and standards over which comes first is recommended. (**e.g.** avoiding cases where a permit is rejected because the traffic management plan has not agreed, and vice versa).

Incentivisation

A culture of incentivisation can help with faster and more cost-effective deployment of digital infrastructure. There are plenty of opportunities for incentivising rapid, high quality fibre deployment through the better use of permit and traffic management schemes. Some of these have been included in section 1, for example mobile works & TTROs, and forward planned permits/notices able to cover the expected works.

Night working

Although not practicable in all situations, working at a night can reduce the overall impact of street works on road users. HAs may therefore wish to consider how they might actively incentivise utilities to work at night. The point-of-contact within the HA would need to be aware of issues with the Environment Authorities as there are no clear processes for engaging with utility nightworks teams. Benefits include:

- Access to sites that would not be granted during the day, **e.g.** business, industrial and some residential areas where there is heavy traffic or parking issues.
- Jobs can be completed quicker as there is less traffic to navigate – less traffic means safer working environments and less complex traffic management requirements.
- Quicker repairs to faults affecting service. This includes pole smashes, cabinet smashes, construction damage and cut fibre. For example, when an excavator cut through multiple Openreach fibre cables near Heathrow, the damage was fixed in 2.5 days instead of 5 as the repair teams worked 24 hours until it was fixed. Pole and cabinet smashes through road traffic accidents can disrupt the service to many hundreds of customers or multiple communications providers. Having the ability to react quickly restores service with minimum delay, even if it is only a temporary overnight fix until a permanent repair can be scheduled.

N.b. To reduce night-time noise in residential areas, network providers and their subcontractors should consider use of battery powered inverters to power flood lights, sump pumps and fibre blowers (rather than petrol generators)

3. Physical deployment and reinstatements

A **flexible, proactive, and consistent** approach is needed for the civil engineering aspect of the build, as well as at the planning and permitting stages. Delivering the fibre networks the UK needs is a commercial venture. Owing to the nature of fibre deployment, utilities are consistently under pressure to maintain the economic viability of their plans.

Highway authorities differ in their approach to dealing with non-compliance in street works. Many are reasonable but some adopt a more aggressive approach. For this reason, contractors planning to carry out street works in certain highway authority areas build additional sums into their tenders to compensate for the cost of working there. While general utilities have no choice but to work in all authority areas, telecom utilities are less constricted on where they work because they are installing new apparatus, not servicing existing apparatus. As **telecom utilities are likely to favour working in areas where highway authorities have a collaborative attitude to the enforcement of street works, these same areas will tend to reap the economic benefits of good connectivity** sooner rather than later.

Common issues in deployments and reinstatements, and possible courses of action:

Topic	Suggested course of action
Condition of the road surface prior to works	HA, utility and contractor to conduct a pre-site visit ²⁰ of the proposed route, assessing the condition of the road and agree subsequent actions on deployment/build and reinstatements. All parties to advise each other of potentially challenging surface/reinstatement conditions.
Potential use of new material/technique	Utility/contractor to offer longer guarantee periods. For example, utility/contractor extending the guarantee period should the LA allow use of HAPAS-approved products (Highways Authority Product Approval Scheme) ²¹ . Utility/contractor to organise events showcasing new material/technique in action. Utility/contractor to present data on material/technique, where it has been used before and with HA/highway body endorsement.
Defect management	Adherence to agreed standards in section 1. Warning prior to fines (for first-time offences) Upload photos of defects onto Street Manager to enable instant investigation, avoiding unnecessary delays and site visits.
Fines	Assessment of performance vs. technicality. 10% of defect fines are levied on reinstatements that are performing to agreed

²⁰ At the discretion of the HA

²¹ And those covered by the Product Acceptance Scheme

	<p>standards, but don't meet precise technical specifications. Utilities could offer an extended guarantee on such reinstatements that are performing well - in return HAs could consider whether it is necessary to apply defects to reinstatements that are performing practically.</p> <p>The existing condition of the road should be taken into account when assessing works and defects. This should be part of the data exchange and agreements made in section 1. <u>Legally, it is not the utility's duty to reinstate the road to a better condition than it was.</u>²² Works on roads in poor condition are invariably harder to reinstate, and common sense should be applied when inspecting them. This should be discussed with the HA prior to any works commencing.</p>
Interpretations of the SROH	<p>Adherence to agreed standards in section 1.</p> <p>Agreed standards with nearby HAs and HAUC regional bodies.</p> <p>Proactive, flexible approach that brings solutions not problems.</p>
Parking bay suspensions	<p>Utilities and HAs should discuss suitable solutions if cars are illegally parked in planned work areas.</p>
Parking difficulties	<p>Temporary parking permits for vehicles used in delivering broadband to ensure work vehicles can be near the worksite. This will reduce traffic management applications and disruption</p>
Defects	<p>HAs should define from the outset what they consider a defect to be, preferably including photographs of previous examples.</p>
Deployment of poles	<p>Deploying fibre overground will occasionally require installation of telegraph poles due to damaged or full ducts. Installing a pole minimises civils activity (and chance of reinstatement defects). Poles can make deployment quicker, simplify the reinstatement process, and causes less works disruption to residents.²³</p>

Case studies

Pre-existing road condition
<p style="font-size: 1.2em; margin: 0;">Cambridgeshire County Council & Virgin Media</p> <p style="font-style: italic; margin: 5px 0 0 0;">This is explained in section 1</p>

²²SROH, S12.1.2: 'When determining whether a reinstatement requires any remedial action, the quality of the reinstatement shall be assessed relative to the condition of the adjacent surfaces

²³ Consideration must be given to the Pole siting code of practice:

<https://www.gov.uk/government/publications/cabinet-siting-and-pole-siting-code-of-practice-issue-2-2016>

HA and utility working together to trial new materials/techniques

Talktalk & City of York Council

Having successfully trialled new materials for narrow- and micro-trench reinstatements, Talktalk reached an agreement with the Council to use the material for their build in York, and in return extended their liability standards to provide reassurance.

Result

This has led to 22% of York with access to FTTP (compared with an average of 6% nationally), whilst current rates of deployment will mean that by the end of 2019, 75% of the city will have FTTP. The Council is already seeing new companies and investment arriving as a direct result.

Flexible/common-sense interpretations of the SROH

Essex Highways and micro-trenching

Following a series of successful trials and utility-run deployment technique roadshows, Essex have allowed for the use of micro-trenching in their jurisdiction. Whilst many HAs forbid this technique because it was not explicitly covered in the SROH²⁴, Essex have recognised that:

1. It is the fastest street works deployment technique available, meaning less road disruption.
2. Reinstatement materials which carry a HAPAS or equivalent approval lead to faster deployment and less road disruption, and thus should be allowed.

Gigaclear & Fastershire

As outlined earlier in this document, Fastershire's acceptance of the use of narrow-trenching as the main technique for the Fastershire build resulted in at 200% deployment productivity increase.

Shetland Islands Council and narrow-trenching

Despite considerable geographic and economic challenges, Shetland Islands made themselves attractive for infrastructure deployment by allowing fibre to be deployed via micro-trenching.

Shetland Islands Council Infrastructure Services Department developed the method of cutting a micro-trench to install a micro-duct and fibre into the carriageway bound layer, which is backfilled with crack infill material. Using the crack fill material allowed for a quicker deployment due to the considerably shorter curing time compared to other materials.

The network has now been in place for several years and there have been no defects related to

²⁴ Under the 3rd edition

the method used.

A balanced approach to fines

Fines for street works offences are completely avoidable, but there are inconsistencies between HAs in the frequency they are levied. A forward-thinking HA might wish to consider a more practical and pragmatic approach when encountering situations that require action. For example, the following offences might only warrant a warning as opposed to a fine:

- Double yellow lines not redrawn on a thin strip of reinstatements (warning).
- Permit boards missing a dot, or a single number is not clear enough (warning).
- Pedestrian facilities at a width of 99cm, not 100cm (warning).
- Working minutes outside of working hours.
- Unimportant administrative errors (typos).

Serving unnecessary fines and disproportionate section 74 charges should be avoided. HAs should use their powers to penalise utilities in a consistent and clear manner - common sense should be applied, and fines for minor offences should be carefully considered before being imposed. Incentives are a good way of managing these issues.

However, if minor offences are repeatedly committed despite warnings and improvement plans, then the only way to motivate change may be through fines.

The SROH

The SROH sets out the minimum acceptable standard of reinstatement of the highway in order to protect its integrity.

In 2019, the 4th edition of the SROH will be released. The document will be more open to innovation, and will allow new techniques and materials to be used. It will also include a specification for micro-trenches. The 4th edition should help lead to greater performance on the highway.

4. Contractors

Contractor relationships with utilities and HAs are as important, if not more so, than those between utilities and HAs. All parties need to ensure that programmes of work proposed by contractors and agreed to by utilities are adhered to.

Performance

DCMS is working with utilities and contractors to improve street works performance. Historically in the telecoms industry, performance has been poor but there have been improvements over recent months. **Regardless of permit fees, traffic management application rejections and interpretations of the SROH, utilities can make savings²⁵ should they follow a 'right first-time' approach to reinstatements.** Charges and penalties resulting from issues such as defects or poorly supervised works **will outweigh any benefits arising from over-zealous cost-saving proposals.** There is a strong appetite among utilities for improving their performance on the road (and DCMS advises discussing street works performance in the initial HA-utility engagement) To achieve sustainable lower costs, the DCMS proposes that:

1. **Utilities adhere to the contractor's timetable** of delivery as laid out in the initial programme of works.
2. **HAs and utilities discuss the contractor selection process** as early as possible. LAs will have considerable knowledge on previous contractor performance in their area, and will be best positioned to advise the utility (especially on sub-contractors).
3. **Contractors contribute and adhere to a performance standard** agreed to by all parties in the initial programme of works.
4. **Utilities propose an effective and suitable supervising plan** to ensure 'sign-off' on completed street works.
5. **The HA, utility and contractor arrange a pre-site survey** to assess the proposed route, and to design a bespoke RAG process for managing pre-existing road conditions.
6. **Utilities and contractors run roadshows** showcasing new, innovative techniques and reinstatement materials that might enable faster infrastructure deployment.

Challenges

Telecom utilities face unique challenges in street works compared with gas, electricity and water. The nature of physical communications infrastructure deployment, and the lack of widespread existing fibre/duct infrastructure in the UK, mean that their works are **high volume, short duration** and **predominantly footway-based**. In practice this has several major effects:

- **Vastly higher amounts of works** than the other utilities, meaning greater potential for charges/fines, penalties if not executed correctly. The volume of work also provides major challenges in logistics (for example transporting materials/gangs between plants and sites).

²⁵ For example by avoiding section 74 charges.

- The general contracting industry views gas, electricity and water utility work as more profitable (although these works also require high levels of training due to the danger they can pose). This essentially means that **telecoms work can be neglected**, not prioritised or more likely to be exposed to cost pressures by contractors.
- The application of certain permit schemes means that in the event of a physical barrier on-site, (such as an illegally parked vehicle, blocked or collapsed ducts, major traffic issues affecting materials transport), the job cannot proceed as planned. This has major knock-on effects on the remainder of a single fibre build.

Contractor concerns, effects on deployment and suggested solutions:

Issue	Effects	Solution
<p>Overwhelming utility focus on total homes passed (THP) rather than providing towns with a comprehensive network</p>	<p>Programmes are readily swapped as reactive civil works are discovered. These delays then impact:</p> <ul style="list-style-type: none"> • Communities - works cause delays whilst broadband they are expecting is not delivered. • HAs - utility deviate from agreed plans, thus impacting other works, permitting workloads, etc. • Contractors - moving teams across sites delays works and lowers quality. 	<p>All parties sign up to a programme of works, as outlined in section 1.</p> <p><i>In HA-led deployments, parties working jointly through the change control process to deliver comprehensive networks.</i></p>
<p>Lack of understanding over reactive works and their effects on deployment</p>	<p>Utilities/contractors often put fibre down old ducts, so whilst they are deploying, contractors are also having to 'prove' the integrity of the route. If they encounter an issue they will need to fix it or change their schedule, resulting in short-notice permit applications and delays.</p>	<p>Building an upfront plan about negotiating blockages on all duct routes. (Discussion and data exchange in section 1).</p>
<p>Utilities making contractors start early on agreed programmes</p>	<p>Contractors have to change/shelve previously agreed plans that have would have had accurate forecasting for budget and delivery.</p>	<p>All parties adhere to a programme of works (section 1).</p> <p>HAs as a signatory on the programme of works would hold delivery to account when it comes to permitting, traffic management, etc.</p>
<p>Utilities not giving contractors enough time to put together deliverable plans</p>	<p>Contractors cannot bring together correct resources on the right schedule, leading to increased permit fees, gangs being moved around, and poorer reinstatements.</p>	<p>Agreed programme of works (section 1)</p>

Utilities demanding too much from contractors	Contractors having to move gangs from site-to-site, leaving works hastily finished (or not finished at all). This is exacerbated by inflexible permit, reactive works beyond the control of utilities.	Agreed programme of works (section 1) Forward planned permits (section 2) Innovative materials and techniques (section 3)
Resistance to innovation	Slow pace of build due to inefficient techniques. This also leads to more expensive rollouts and less coverage.	Greater collaboration (section 1) and openness to innovation (section 3)

Glossary of Terms

AoNB - Area of Natural Beauty.

BDUK - Broadband Delivery UK, superfast broadband and local full fibre networks delivery team within the Department for Digital, Culture, Media and Sport.

DCMS - Department for Digital, Culture, Media and Sport.

DfT - Department for Transport.

EToN - Electronic Transfer of Notices: The national electronic system for managing and planning street works. EToN is governed by the Department for Transport. This is currently in the process of being phased out and will be replaced by Street Manager, a central repository for all road and street works data

FTTP - Fibre-to-the-premise

GIS - Geographic Information System

HA - Highway Authority

HAPAS - Highways Authority Product Approval Scheme

HAUC - Highway Authorities and Utilities Committee

HA - Highway Authority

Lane Rental - A scheme run by the Department for Transport that manages the busiest roads in a given authority. Currently only in use by Kent County Council and TfL.

Micro-trenching - Similar to narrow-trenching, however the width of the trench is smaller, usually less than 100mm

Narrow-trenching - A method of deployment by which a 'narrow trench', usually 300mm surface width or less, is cut along the side of the road/pavement.

NRSWA - New Roads and Street Works Act, 1991

Utility - Utility companies in the UK that deploy fibre include Openreach, Virgin Media, Gigaclear, CityFibre, Talktalk and Hyperoptic.

PMR - Permit Modification Request

PoC - Point-of-contact

Slurry Seal - A reinstatement material

SRO - Senior Responsible Owner

SROH - The Specification of the Reinstatement of Openings in the Highway

SSSI - Site of Specific Scientific Interest

TfL - Transport for London

TMA - Traffic Management Act 2004

TTRO - Temporary Traffic Regulation Order

VM - Virgin Media, a telecommunications Operator

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Annex A - useful documents/links

Useful documents/links

[DfT Good Practice Guide to Street works](#)

[HAUC \(UK\) advice notes and best practice case studies](#)

[Streetworks UK case studies](#)

[Analysys Mason 'Barriers to Telecoms Infrastructure deployment' report](#)

[HAUC \(England\) Operation of Permit Schemes Guidance](#)

Annex B

PRE-BUILD MEETING AGENDA TEMPLATE

1. Introductions and objectives <i>Local development strategy and high-level connectivity target/vision</i>	
2. Utility's deployment plan <i>Proposed route, contractor selection and programme of works, deployment and reinstatement strategy, examples/stats of previous deployments in similar environments</i>	
3. Data exchange <i>To include discussion over shared working space - ie. HA officer sitting with the utility team, and vice versa</i>	
HA to provide/discuss... usable public infrastructure /assets, road/existing duct condition data, capital works plan (incl. resurfacing programme), concurrent utility/council works (joint-working opportunities), info on previous build techniques and materials, local development plan	Utility to provide/discuss... deployment plan (as covered in 2), commitment to coverage, programme of works agreed with contractor, evidence of past street works performance
4. Permits/noticing, traffic management and works classification	
Estimate of required permits/notices, local scheme nuances, TTROs/parking bays requirements, permitting workload capability, road closures (incl. blanket closures), mobile works, stance on forward planning notices, fee discounts/waivers (e.g. cat 3-4 road), classification of works (incl. cabinet placing)	Funding additional resources
5. Local issues	
Sites of special scientific interest, scheduled monuments, areas of outstanding natural beauty, local nuances (e.g. traffic, pinch points, conditions), info on traffic/road restrictions (e.g. Section 58s, summer embargoes)	
6. Deployment and reinstatement <i>Pre-site survey, pre-deployment route walk (incl. RAG condition status)</i>	
Info on previous deployments/reinstatements, handling of reactive works, inspection plan, stance on HAPAS-approved products	Deployment techniques (including poles) and reinstatement materials to be used, evidence of past deployment and reinstatement performance, discussion over selected contractors, supervision plan, defect correction plan New materials/techniques - invitation to trial site for HA, extension of guarantee period for new materials/techniques

7. Community engagement <i>Agreement of engagement plan with local councillors and the public</i>	
Joint-engagement with local councillors/committee	Marketing and PR plan (e.g. adverts on vehicles, banners on safety barriers, leaflet drops, build representatives speaking with residents, joint-engagement with local councillors)
10. Exchange of Points-of-Contacts	
11. Agreement of shared objectives. Agreement of build and quality plan. <i>Utility will deliver the fibre network, to a defined standard, on time. HA will work proactively to assist the utility with permits and other traffic management measures, whilst providing agreed approach on deployment techniques and reinstatement materials.</i>	
12. AoB	

Annex C

MEETINGS DURING BUILD AGENDA TEMPLATE

STRATEGIC	
1. Build progress update (referencing the agreed build and quality plan - both utility and contractor programme of works)	
2. Local issues	Update on progress in SSSIs, AoNBs, and other local challenges
3. Community engagement	Update on marketing and PR initiatives, providing update to councillors/parish councils, complaint management
OPERATIONAL	
4. Permit/noticing and traffic management update	Performance, problems encountered/identified, likelihood of additional permits/traffic management, update on supervision and inspections, update on reactive works, compliance
5. Reinstatements performance	Update on reinstatements. To include performance of current deployment techniques and reinstatement materials. Adherence to agreed performance standards. Defect management
6. Violations and fines (if applicable)	Discussion over section 74 infractions, warnings, and other below-standard behaviour
7. AoB (incl. any Points-of-Contact changes)	