



Cross-sector Infrastructure Interactions

Consultation Response Summary
Non-confidential version

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About this document

This document provides a summary of the responses received to the consultation on Cross-sector Infrastructure Interactions, which sought views on a package of remedies aimed at making the process of crossing or otherwise ‘interacting’ with incumbent utility networks easier, quicker and cheaper. The consultation also asked several questions about the quality of, and access to, network asset information, the balance of risks faced by network operators and measure to raise the importance of interactions for network operators.

This summary accompanies the conclusions of UKRN’s project on cross-sector infrastructure, which proposes a package of remedies to support an industry-led self-regulatory response to clients’ concerns.

This project forms one part of our work on infrastructure investment¹. The other workstreams include:

- an Investor Guide² to support the investment community in its understanding of how the UK regulated utility sectors work;
- a summary report on enabling innovation³ that focuses on current practices across the regulated sectors and the way that each regulator supports or promotes innovation.

Other related UKRN work includes:

- our report on network resilience and the role and duties of economic regulators in supporting cross-sector resilience⁴; and
- our project looking at the factors affecting affordability of utility services for households, considering how affordability issues are approached in different regulated sectors, outcomes for households and the role of regulators in addressing affordability.⁵

About UKRN

UKRN is a network formed by the UK’s economic regulators:

- The Civil Aviation Authority (CAA)
- The Financial Conduct Authority (FCA)⁶
- Office of Communications (Ofcom)
- Office of Gas and Electricity Markets (Ofgem)

¹ Further details of this project is available on the UKRN website: http://www.ukrn.org.uk/?page_id=182

² The UKRN investor guide is available on the UKRN website here: <http://www.ukrn.org.uk/wp-content/uploads/2014/07/UKRN-Investor-Guide.pdf>

³ The enabling innovation report is available on the UKRN website here: <http://www.ukrn.org.uk/wp-content/uploads/2014/07/Cross-sector-infrastructure-investment-enabling-innovation.pdf>

⁴ Our phase one report on cross sector resilience is available here: <http://www.ukrn.org.uk/wp-content/uploads/2015/04/Cross-sector-resilience-phase-1-final.pdf>

⁵ Our phase I report on understanding affordability issues is available here: <http://www.ukrn.org.uk/wp-content/uploads/2015/01/UKRN-Affordability-Report.pdf>

⁶ Although it has competition and consumer protection functions, the FCA is not classed by HM Government as an economic regulator

- Water Services Regulation Authority (Ofwat)
- Office of Rail Regulation (ORR)
- Northern Ireland Authority for Utility Regulation (Utility Regulator)
- The Payment Systems Regulator (PSR)

Monitor, the sector regulator for health, participates in the network and its projects as appropriate. The Water Industry Commission for Scotland (WICS) and Legal Services Board (LSB) are contributing members which generally participate in projects as observers.

Contributors to this document

This document has been produced by

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- Ofwat, and
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I. Summary

- I.1. In June 2015 we consulted on a package of measures proposed in the consultation aims to improve the processes, and associated costs, for both installing new infrastructure which crosses in-situ assets belonging to regulated network operators and obtaining permission or supervision from network operators to undertake work in close proximity to existing assets.⁷ These included:
- **statement of good practice principles**, to be adopted by network operators and ideally other infrastructure operators to guide or influence their practices and behaviours towards clients crossing their assets;
 - **An annual report by network operators**, affecting networks above a minimum scale and proportionate to the effect on clients, with the first report expected within 12 months of our final proposals (expected to be published in the summer), outlining how operators have adopted the principles and improved the experience of clients; and
 - **A follow-up review of outcomes by UKRN for the 2016-17 business year**, to judge the success of these measures and any others that industry may have adopted.
 - **The inclusion of interactions in impact assessments to be undertaken by sector regulators**
- I.2. The consultation also raised several question about the quality of, and access to, asset data and on issues affecting indemnity levels required by incumbent networks.
- I.3. We received 17 non-confidential responses to the consultation. These responses came from stakeholders working in the rail, energy, water, telecom sectors along with responses from engineering contractors, forestry and Ordnance Survey. We also received some additional responses to aspects of the consultation provided on a confidential basis. These confidential responses have informed our analysis and are summarised within this document, where it is possible to do so without compromising their confidentiality.
- I.4. The proposed good practice principles are broadly supported by respondents, with some suggestions to ensure safety and security are included. Our stated intention for UKRN to review outcomes and progress in the 2016/17 business year was also broadly supported. Annual reporting on a uniform basis is not universally supported. Some respondents are concerned with the costs, specifically additional data collection on top of existing regulatory reporting obligations. In addition, some considered that greater comparability of reports within sectors was necessary, which would need more detailed consultation to reach agreement. Other respondents queried whether existing legislative standards (e.g. from street works) may supersede or conflicts with the proposed reporting. On balance, a more bespoke report is preferred, which more closely reflects the Principles and the individual circumstances of network operators.
- I.5. On data issues, the majority of respondents considered that incentives were already in place to improve data quality, such as safety duties, and data access, and this was best led at an industry-level. Some clients considered networks should take greater responsibility for the quality of data, offering a warranty, and in meeting costs of surveys. It was noted that a number of schemes provide access to network data, but that these may not always provide complete coverage of all relevant utility services or roads. Many respondents recognised that provision of information to a central hub could, in theory, offer 'one stop shop' advantages. However, past efforts to establish common data portals faced

⁷ ['Cross-sector infrastructure, consultation on remedies'](#), 4 June 2015, UKRN.

significant challenges, including responsibility for data accuracy, costs of meeting common terminology and IT standards, ensuring full inclusivity of relevant infrastructure operators and, in some cases, national security concerns.

- I.6. Our consultation queried the extent that the level or scope of indemnity cover required by incumbents from clients materially affected interactions, and what remedies may be available. Nearly all respondents that commented recognised that indemnity requirements can cause problems for clients, albeit that their purpose is, ultimately, to protect the supply of services to consumers. In summary, problems include i) poor information on risks or assets, which made commercial assessment of projects versus risks difficult; ii) the duration that indemnity clauses remain in force; iii) the scope of indemnities, in particular inclusion of consequential losses or damage caused by third parties to a clients' assets that affects the incumbent's network; and iv) cases where indemnity levels did not appear to reflect risk, with unlimited liabilities often required of clients. The overall impact was to raise costs and risks for infrastructure development.
- I.7. The remainder of this document examines in detail the responses received to the consultation on the proposed remedies and the further questions raised.

2. Response to the proposed remedies

Introduction

- 2.1. The following sections sets out views on the four proposed remedies: a statement of good practice principles, underpinning the behaviours we expect of network operators; an annual report by operators on their experience of interactions with clients; a progress review by UKRN to assess the effectiveness of remedies; and, where relevant, inclusion of the effect on interactions in regulators' impact assessments.

A statement of good practice principles

- 2.2. In the consultation we proposed five good practice principles which we expect network operators, as stewards of our national infrastructure, to adopt to guide to their approach to interactions. We also suggested that other large infrastructure operators should consider adopting these principles and where possible engage with their implementation.
- 2.3. The good practice principles were supported by all respondents, however two respondents noted the requirements for the principles should balance the benefits brought against the cost of achieving them. A further two respondents suggested that a threshold for value or complexity of the works to be undertaken should be set before the principles apply, as this may influence assessments of how the principles will be applied.
- 2.4. There was general agreement amongst respondents that these principles should be adopted across all infrastructure operators, of both regulated networks and other infrastructure. However two respondents noted that network operators would need some time to adopt new processes and to develop comparability across different sectors.
- 2.5. A self-regulatory approach was favoured by respondents over a more prescriptive regulatory approach; however the Infrastructure Client Group (ICG) disagreed and suggested several more formalised regulatory approaches. The National Joint Utilities Group (NJUG) noted that although a standardised approach may have several benefits it is likely that different sectors may need to take different approaches to adopt the principles. Two respondents noted that it may be difficult to ensure the principles are fully implemented and performance maintained overtime if there are no perceived incentives or penalties for adhering or not to the principles, although they noted that the proposed annual report may provide a reputational incentive.
- 2.6. On the specific good practice principles, respondents' comments are summarised below:
- **Principle 1: The role of infrastructure owners**
 - Three respondents from the energy sector noted that this principle echoes an existing requirement under their licences. They also welcomed the focus on consumer benefits.
 - One respondent suggested that it may be useful for the principle to distinguish more clearly the stewardship role of network operators for existing assets and the role in the effective delivery of new infrastructure. They consider this would ensure that regulated network operator recognise the key role other infrastructure owners will play in assisting the development of new and major infrastructure projects.

- **Principle 2: Efficiency and economy**

- Four respondents from the energy sector noted that this principle is consistent with existing obligations on network companies and that this should effectively address concerns of onerous costs. One respondent suggested that individual regulators should be included in the list of parties. However, one respondent felt that this principle is currently insufficient to catalyse change and should be expanded to introduce more formal metrics or key performance indicators (KPIs) regarding diversion requests. They stated that network operators often consider diversion requests as a burden and do not give these requests equal priority with new utility connections, for which a regulated regime exists. This can cause clients with multiple diversion requests considerable delays.
 - National Grid suggested that a requirement regarding the safe development and operation of the network be incorporated within this principle or added as an additional principle. They noted that non-regulated clients often have unrealistic expectations of both network operators and their own capabilities, which can lead to process inefficiencies.
 - Two respondents suggested this principle would encourage collaboration between network operators to reduce costs and establish service levels and standards of information to be made available to clients; however BT expressed concern about network security and the cost of making information available, they noted the need to find the right balance between risk and benefit.
- **Principle 3: Transparent processes and practice**
 - Energy sector respondents considered that they currently engage with stakeholders on a continuous basis and that their existing processes already achieve the objectives of this principle. They also noted their existing obligation to report on their performance to Ofgem and they suggested that the UKRN review these reports to identify if additional reporting would be necessary to achieve this principle. Two energy sector respondents also expressed concern that this principle appears to move beyond principle into prescription which they considered should be avoided.
 - National Grid noted that differing nature of interactions works, depending on the scale and the type of assets involved, and the relevant legislation, standards and codes of practice governing these works will require network operators to be adaptable in their approach to interactions. Therefore they suggest that a threshold of scale and complexity be applied to which the principles would apply, to make the principles easier to interpret and comply with.
 - Ordnance Survey stated the importance of accurate location information to interactions work and cited their experience of working with utility companies. They suggested that wording be adapted to refer to “clear, accurate and maintained asset information” to ensure the information provided is maintained and updated to reflect the most recent real word changes.
 - Two respondents suggested that a greater level of detail should be included within the principal or through supporting industry guidance. ICG suggested that a process of continuous learning and best practice should be implemented to standardise processes. While BT Openreach expressed concern that resource availability would prove a significant constraint and possibly cause delays if multiple requests were to be made simultaneously.
 - Three respondents from the energy sector highlighted that existing regulation requires them to report extensively on their performance and expressed concern about the potential cost and resource demands if further reports of additional information were required. However, Western Power Distribution considered that much of the information specified within this principle is already reported to Ofgem could be made more widely available using the same format.

- ICG expressed concern that there is currently no authority or arbiter who network operators and clients can turn to if they are in dispute and that this is currently beyond the terms of reference of economic regulators. They consider this to be a concern and potential cause of delays and inefficiencies for major infrastructure projects.

- **Principle 4: Clear, transparent and appropriate pricing**

- Three respondents in the energy sector expressed support for this principle so long as commercial sensitivities and their ability to negotiate for the best deal in their regulated activities are not compromised. Western Power Distribution suggested that it may already be possible to provide indicative costs in a format similar to that required for new connections. Similarly National Grid stated that it is already required by Ofgem to publish its connection charging methodologies and charging statements and that it may be possible to extend this depending on the level of information required by clients and the associated costs for doing so.
- BT considered that this principle has already been implemented by the New Roads and Street Works Act and its associated regulations and codes.
- Infrastructure Client Group considered that the principle does not go far enough and suggested this be expanded to include a duty on the network operator to mitigate costs to clients of interactions.

- **Principle 5: Continuous learning and best practice** – this principle was supported by all respondents; however ICG suggested a more prescribed approach to reviewing performance.

- 2.7. Four respondents suggested that an additional principle should be included regarding the prioritisation of the safety, security and the integrity of network assets in managing infrastructure interactions. It was noted that this forms a statutory duty for many of the regulated network operators and should be reflected in the principles to aid clients understanding and expectations of the processes.
- 2.8. In addition to network and infrastructure operators, four respondents felt that the relevant operators for roads, highways and other non-regulated infrastructure operators, such as oil pipeline companies, the Country Landowners Association and Drainage Boards should adopt the good practice principles too. It was also suggested that local, regional and national government and other public bodies should consider adopting these principles. Frontier Power, expressed concern that Offshore Transmission Owners (OFTOs) were not explicitly referred to as network operators in the consultation document.
- 2.9. Respondents suggested a number of organisations that would be well placed to support the implementation of the good practice principles; six respondents suggested that existing forums such as the Highways Authority & Utilities Committee (HAUC), or trade bodies such as the NJUG, the Energy Networks Association (ENA) and Water UK, two respondents suggested a collaboration between utilities, infrastructure operators and other agencies, one respondent considered that UKRN should take a monitoring role of the actions taken by network operators to embed the principles and six respondents noted sector regulators will have a key supporting role.
- 2.10. Respondents suggested that network operators could embed the good practice principles by:
 - obtaining management or CEO level endorsement for the remedies;
 - publicising their commitment;
 - actively engage with stakeholders and potential clients;
 - completing the initial impact assessments within an agreed timeline; and

- annual reporting.

2.11. It was recommended that economic regulators support these actions by:

- looking for evidence of implementation of the principles within the assessment of any stakeholder incentive schemes in place;
- considering the eligibility of projects to develop new approaches consistent with the principles for allocated funding, such as the Network Innovation Allowance;
- providing support in undertaking the impact assessment with respect to price controls and existing reporting requirements;
- supporting joint working between network operators to minimise costs; and
- providing a monitoring role of network operators adherence to the principles.

2.12. However, ICG favoured a much more prescriptive approach to the principles and suggested that the principles be formally codified and KPIs be developed; they then envisaged a much more formal regulatory approach.

2.13. There was a general agreement that the good practice principles complement existing obligations and would not cause conflict. Network Rail noted the need to conduct a more detailed review of how the principles align with existing standard asset protection agreements to identify any discrepancies or gaps. Two respondents from the energy sector noted that projects will need to consider stakeholder needs in the context of other relevant legislation (depending on the type of infrastructure interaction), which may place additional constraints on the specific interaction. One of these respondents considered it would be helpful if sector regulators could support this process by developing a detailed implementation plan which could identify potential impacts. It was also noted that there may be instances where a network operator must object to interactions proposals to ensure due consideration is given to the impact on their assets, one respondent suggested that conflicts can be effectively resolved by ensuring consistent policies for protecting assets which would mean the same standards would be required for every client.

Annual Reporting

2.14. Annual reporting is not universally supported, with some respondents from the same sector expressing opposing views. Five respondents supported the proposals as presented in the consultation; this included two energy sector respondents. Six respondents expressed more qualified support for the proposal if some key concerns could be adequately addressed including: the development of an appropriate format for the report, the level of data required, and the ease and cost of gathering data. They expressed concern that reporting should not create an additional resource burden, with the report requirements reviewed against existing reporting obligations to avoid a duplication of effort. Several respondents noted that although reporting would promote accountability and transparency amongst network operators it may be of limited use to clients.

2.15. Four respondents in the energy sector did not agree with the proposals because, they consider there to be considerable existing regulatory reporting requirements. They also expressed concern that a report within 12 months would not allow sufficient time for the proposals to be implemented and a standard for reporting to be agreed, particularly if the same reporting standard is to apply across sectors. Northern Power Grid suggested that while a full annual report may be too great a burden,

they could support the sharing of best practice and increased cooperation with other infrastructure operators to minimise costs, particularly if these activities could be acknowledged as part of their annual stakeholder engagement requirements.

Who should produce the report?

- 2.16. Seven respondents considered that all licensed network operators (and particularly those listed in the consultation document) should produce a report. Ten respondents considered that it would also be appropriate for organisations, such as the Highways Authorities, gas and oil pipelines, telecommunications and rail operators, who operate assets which are crossed frequently by other network operators to also submit reports. They also suggested that this could be extended to include local and regional authorities and similar bodies. NJUG supported the exclusion of street works from the cross-sector infrastructure investment project, proposed in the consultation, as they agreed that street works are already subject to an extensive statutory and regulatory framework.
- 2.17. Four respondents considered that a threshold should be met before an organisation is required to submit a report; two respondents suggested that network operators may be expected to submit a report if they have a material number of interactions with stakeholder or if they operate critical infrastructure, Frontier Power suggested that OFTOs should not be required to submit a report unless they are involved with interactions they consider of relevance to other network operators, alternatively two respondents suggested that the threshold should be linked to asset value, for example those with a Regulated Asset Value (RAV) of £50m or more. One respondent suggested that the level of detail required in a report should be proportional to the significance of a project and the scale of interactions required.

How often and by whom should the report be produced?

- 2.18. Nine respondents agreed that reports should be produced on an annual basis. Network Rail stated that there may be some benefit to reporting some information on a more frequent basis, but consider that the benefit of doing so would depend on how this information would be collated and reported. Two respondents stated that until the scope of the report and its likely impact is better understood, it would be very challenging to produce a report, particularly within 12 months. Eight respondents considered that reports should be published by network operators and made either publically available or should be summarised in a collated report produce by the sector regulator. Although one of these respondents considered that UKRN should take on the role of producing a consolidated report. One respondent suggested that an independent body publish the reports.

What should be included within the report?

- 2.19. Views were split fairly evenly between whether a bespoke or prescribed approach to developing the report would be preferable and several respondents were able to recognise some benefits in the alternative approach to the one they favoured.
- 2.20. Four respondents favoured a bespoke approach as this would allow data already collected to be used for additional purposes, reducing the reporting burden which is particularly important for smaller companies; it would also allow the differences between different industry sectors and network operators to be reflected. Respondents recognised that if a bespoke approach was adopted there would need to be some agreed minimum content included within the report.

- 2.21. Four respondents favoured a prescribed approach as this would drive consistent methodologies which would assist clients in reviewing information and help to encourage collaboration across operators. They stated that consistency would also allow comparison between different sectors and different operators within sectors. If a prescribed approach were adopted respondents considered that existing industry lead forums such as NJUG, HAUC and ENA, and collaborative approaches between network operators and sector regulators, are well placed to develop guidance materials. Respondents also suggested that engaging with stakeholders who are likely to become clients and funders, as well as organisations like the Local Government Association (LGA), would also be of benefit. Two respondents also considered that it would be beneficial for the UKRN to provide further guidance, potentially through establishing a working group on the topic.
- 2.22. Network Rail stated that they would prefer to engage further with other network operators to consider the requirements of the report and the relative benefits of both approaches.
- 2.23. Two respondents agreed that the information reported should tie back to stakeholder’s key concerns and reflect the good practice principles. As well as the information proposed in the consultation respondents considered that at a minimum the report should contain the following information:
- Number of enquires, split by the work type (e.g. information requests, requests to cross or work in the vicinity, diversions etc.);
 - The industry sector which the request comes from;
 - Average length of time to respond for each type of work enquiry (with reference to the operators published commitment if available);
 - The number of each type of work undertaken;
 - The number of each type of work that did not take place;
 - The average length of time for work to be completed;
 - Average fee per interaction and per client; and
 - Review of delivery timeline and costs of interaction with respect to the forecast.
- 2.24. Western Power Distribution suggested that the report should mirror that produced for connection requests to allow comparability. Respondents also considered that the report could include:
- Information on the company’s procedure and polices for interacting with other network operators;
 - Information on client feedback received, whether this has been received through formal regulatory measures, surveys, meetings or other means; and
 - An opportunity for clients to submit feedback.
- 2.25. Respondents felt that network operators could best convey their own experiences when acting as a client through the appropriate feedback channels with the operator they have interacted with, rather than through inclusion of these experiences in their own report. It was considered that any such inclusion in the report may be viewed as “naming and shaming” particular operators and this would not be conducive to good engagement and collaboration between network operators. Respondents recommend setting up opportunities for network operators to engage regularly on an informal basis to share best practice and identify the sorts of issues that occur.

A follow up review by UKRN

- 2.26. Twelve respondents agreed that these remedies should be reviewed once implemented and that the UKRN remains the correct organisation to conduct this. Respondents were reassured by the continued involvement of the UKRN, anticipating that further refinement of the proposed remedies may be necessary once implemented. It was suggested that it may be helpful to undertake a baseline assessment of interactions work in order to facilitate a meaningful comparison at the review.
- 2.27. All but one respondent considered the proposed timeframe for the review to be appropriate; however ICG questioned whether this may be too soon to identify the effects of implementing the proposed remedies. They suggested that subsequent reviews in the years after the 2016-17 review will be required to ensure the proposals continue to be effective, a third party independent review or audit at that stage may also be of benefit. National Grid noted that they consider further work is required by UKRN to define more clearly the infrastructure works that would be included within the proposed remedies and the activities to be undertaken by network operators.

Impact assessments by regulators

- 2.28. There was agreement amongst respondents with the proposal that regulators should consider if the impact on cross-sector interactions is appropriate in future impact assessments. Three respondents from the energy sector noted that there may be some practical issues to resolve including consistency with licence and relevant legislative obligations.

3. Other issues

- 3.1. The consultation also posed several questions about the quality of, and access to, network asset information, the balance of risks faced by network operators and measures to raise the importance of interactions with network operators. The responses to these questions are summarised below.

The quality of and access to asset information

- 3.2. Respondents noted that utilities have obligations under Section 79 and 80 of New Roads and Street Works Act (NRSWA) 1991, which places duties on utilities regarding the provision and maintenance of asset information. In order to satisfy this and other obligations (such as the Water Industry Act for water undertakers, HSE obligations or other regulatory obligations) there are a number of measures and voluntary initiatives in place across the different industry sectors. For these reasons eight respondents stated that they did not consider further regulatory intervention necessary at this time. Two respondents, Network Rail and Openreach, provided details of initiatives they are currently developing, with the ORR and NJUG respectively; both identified the potential for sharing information with other network operators in the future, but noted the needs for common data standards and to balance the benefits of doing so with resourcing demands.
- 3.3. Ordnance Survey recommended that regulators take steps to encourage effective sharing of information about network operated assets. They provided a detailed response based on their experience and recommend that regulators work together to agree a set of clear data standards in respect of asset information to enable effective sharing. Anglian Water suggested regulators consider measures to improve quality and access of asset information which focus on:
- data currency - to reduce the risk of out of date data and the potential for incorrect decisions to be made;
 - the loss of control of the data – or what it was intended to be used for; and
 - the security and protection of operationally sensitive information.
- 3.4. The Scottish Forestry Commission also recommended that regulators take steps to encourage all network operators to sign up to pan-government access to shared GIS data, which can facilitate a two-way exchange of data between the network operator and client. They have found this to be beneficial when working with some network operators.
- 3.5. United Utilities noted that initiatives to promote central provision of information have had limited success as the advantages of reduced search effort, coordination of works and on-site display of records have been felt to be compromised by difficulties in coordinating access permissions, maintaining security and commercial interests and managing differing data standards. They recommend regulators undertake initiatives to better understand these barriers. Frontier Power also provided details of experience using existing web based asset search companies, which can often use selective data sources and do not make exclusions clear. They stated that they would welcome a regulated independent operator, such as National Underground Asset Group (NUAG) managing coordinated asset information across all network operators to reduce risk in cross-sector interactions.
- 3.6. ICG recommended that a requirement is placed on network operators to take a greater level of responsibility for the asset information held and provided to clients, they suggested that network operators should provide a warranty that the information provided is up-to-date and accurate. They

also noted that they consider network operator should be responsible for meeting the costs of survey work undertaken to provide updated data on network assets, not the clients, as is currently the case.

- 3.7. The Scottish Road Works Commission (SRWC) stated that the coordination and cooperation between parties involved with road works in Scotland has been supported by the introduction of training and a formal qualification for road authorities and those acting on their behalf, this has also helped to raise the profile of interactions work.
- 3.8. In general respondents were supportive of a degree of mandatory provision of network asset information to one or more centralised hubs, just one respondent opposed the proposal. However, all respondents identified areas of concern about how such reporting and provision of data would be implemented. The key advantages and disadvantages identified are summarised in the table I below.

Table 1. Advantages and disadvantages to the provision of network data to a centralised hub

Advantages	Disadvantages
Accessibility may be improved if all the information is held centrally	Ownership of data may not be clear
Regulatory reporting may be simplified if regulators are provided with access to raw data via the hub	Developing standardised data format for reporting across sectors may be challenging
Reducing the number of data sources used by clients should reduce the risk of errors and potential accidents	Providing data in a standardised form may restrict operator’s ability to develop their own tools to meet client’s specific needs.
If managed well, centralised hubs can “present a single version of the truth”	It is not clear who is the responsible party for maintaining and updating data records, and who is liable for errors
Potential to improve cost control for interactions.	There is a public safety risk associated with the locations of potentially dangerous infrastructure (e.g. gas and electricity plant, etc.) being easily accessible
Improved resilience, through easy access to network operators information	As some network assets are classified by Government as Critical National Infrastructure, providing asset data could create a risk to national security risk to raise
Opportunities for increased coordination between parties	Additional costs associated with providing network asset information
Potential to provide clients with a “one-stop shop” for access to utility networks data (potential that non-regulated networks e.g. roads could be included)	Potential for discrepancies between two or more sources of data, if central hubs are not updated regularly to reflect recent changes to network assets
Significant benefits to major infrastructure clients particularly in the early design stages, reducing the costs and improving efficiency of the early design process.	Compatibility with different technology platforms, software requirements and changing record keeping requirements (metadata)
	Coordination of access permissions
	If historic asset data is not readily available, the benefits may be limited.

3.9. SRWC noted that when consulting on the proposal for the VAULT facility, provided by the Scottish Road Works Register (SRWR), mandatory reporting was considered but ultimately rejected and data is provided on a voluntary basis. They also noted that in addition to this resource, there is the Dial a Dig service operating in Scotland which enables effective interaction with parties outside the street works community. NJUG suggested that an industry led approach may be more appropriate than a regulatory lead one, as industry participants would be best placed to identify the needs and assess, with other stakeholders, the requirements, benefits and costs of a proposed initiative before making a decision to proceed.

The balance of risk faced by network operators

3.10. All respondents who commented on this issue identified that the levels of indemnities required of clients by network operators can form a barrier to interactions works and would merit further investigation. National Grid noted that they consider indemnities provide incentives for clients, working on or in proximity to network assets, to adhere to safe working practices and are important to provide protection for energy consumers if anything were to happen to affect their energy supplies. National Grid also supplements indemnities with requirements that adequate constructors insurance

be in place for works in close proximity to National Grid assets. They suggested that the UKRN seek to facilitate reciprocal indemnity terms for interactions between regulated networks.

- 3.11. Scottish Water stated that they do not consider the indemnities required of clients to be a material issue in most situations, given the large number of interactions that take place annually. The requirements they place on clients focus on measures to mitigate the risk to services, and in some exceptional cases they will require additional insurance cover for developers' activities, if for example they are working within Drinking Water Protected Areas. Scottish Water stated that third party contractors working on their behalf are required contractually to carry the construction risk for the associated work and to have insurance for this.
- 3.12. Anglian Water noted that the issue of indemnities can often be a key area that can delay the approval process for interactions and the timing of works. Network Rail noted that they are aware of the potentially discouraging impact indemnities can have on smaller clients and they have experienced some developers withdrawing requests or looking for alternative solutions. In some cases they are able to alleviate this by a range of measures including: offering top-up insurance for clients to reduce the costs; or undertaking aspects of the work on client's behalf.
- 3.13. ICG considered that the indemnities required by the utilities can be very one sided and exceed normal market terms in both breadth of scope and cost that would be usual in commercial arrangements. They consider that the monopoly position of the utilities means that they are not inclined to adopt a commercial approach to risk apportionment, despite having the protection of relevant insurance cover. This can lead to protracted negotiations and major infrastructure projects may be forced to take on unreasonable risks; where the level of indemnification required is wide in scope, unclear as to its extent, unlimited in terms of liability cover or much longer in duration than would be expected commercially,
- 3.14. Several respondents noted the need for more detailed work and analysis into how cost and risks could be allocated between the parties, including consideration of the role of insurance, to improve the pricing or balance of risks by network operators. This includes concerns with the pricing and risks borne by clients when asked to meet unlimited liabilities, where insurance cover is not always available.
- 3.15. Respondents suggested that regulators work with UKRN to facilitate a review of how these interactions risks are managed in the legislative framework across other industry sectors; this would need to look not just at the cost of indemnities, but the use of indemnities vs the use of liabilities, possible licence mechanisms and the legal framework and how the legislation relates to each utility sector. Respondents also suggested that such a review may consider more generally how risks are managed and if there should be any shared risk and reward between customers and licensees. One respondent also suggested reviewing the standard terms of contracts and consider developing a standardised set of terms, particularly with respect to the Standardisation of PF2 Contract Terms published by HMT.

Other measures to raise the profile and importance of interactions

- 3.16. There was broad agreement amongst respondents that network operators should support the UKRN's proposals at board (if appropriate) and senior management level, so raising the profile of interactions within the organisations. It was also recognised by all respondents that a focused programme of stakeholder engagement, focusing particularly on the client's experience would help to strengthen good practice. Scottish Forestry Commission identified the single most important action

was to make the key contact for interactions within a network operator clearly visible and able to coordinate requests across the operator (that may compose several business units such as distribution, transmission and generation).

- 3.17. It was noted by six respondents that trade bodies, such as the ENA and Energy Utilities Alliance, and industry representatives such as Water UK and the European Federation of Water Utilities (EUREAU) could have a key role in raising awareness and promoting good practice to interactions work, including drawing on experience and research from outside the UK.
- 3.18. ICG suggested that formal approaches across industry may be effective. Drawing from the experience of Crossrail it was suggested that major infrastructure projects could benefit from establishing a formal memorandum of understanding (MoU) between the project and the highest priority utility stakeholders. This was successful because it established key principles and working practices and ensured visibility of the importance of these work at the most senior levels of all organisations. A second respondent felt that it would be beneficial if specifications for laying network operators equipment could be standardised, to reduce the complexity of interactions.
- 3.19. Respondents suggested that economic regulators and the UKRN could facilitate intra and cross sector collaboration and consistency on approaches across the different utilities, ensure that focus is maintained on interactions and by ensuring a proportionate regulatory framework is in place. One respondent noted that it may be appropriate that the remedies to improve interactions work are supported more firmly by government. Two respondents suggested that economic regulators should take a more formal role as is currently the case for new connections.

4. Views on overall evidence and conclusions

- 4.1. Most respondents agreed that the approach taken by UKRN effectively characterised the issues faced during interactions and accurately reflected their relative importance. However three respondents from the energy sector again noted that they consider the timescales suggested to define the scope and process changes needed to support meaningful reporting to be unrealistic. These three respondents also stated that although a standardised approach would help to support interactions with third parties, flexibility would be required within any standardisation to respond to the variety of client needs.
- 4.2. Some respondents noted that clients often have a poor understanding of the regulatory and HSE constraints placed on the infrastructure owners, this can be frustrating for the client who may propose a particular interaction or connection requests on the basis of cost, but these may not comply with the design standards necessary to maintain network integrity. They noted that many risks to the network are not always obvious to developers and a large amount of engagement and influencing can be necessary to bring about a common understanding. They considered that more focus should be given to explaining the reasons why these constraints are necessary and consider the inclusion of this issue in any education and engagement activities carried out essential.
- 4.3. When considering whether there are any other impacts or issues related to interactions that should be addressed, two respondents from the energy sector noted that there is a strong public safety dimension to cross sector interactions which should be considered. They noted that employees in different industries will not have undertaken the training relevant to all the utilities they will work with in interactions and it is therefore critical that advice is sought before beginning work. Both these two respondents and another from the energy sector also noted that further consideration should be given to how national security can be maintained in relation to critical infrastructure involved in interactions and how the proposed remedies will align with existing legislation, licence obligations and standards. These respondents also requested that further work be done to define the scope of the transactions which should be expected to meet the good practice principles, in terms of scale and complexity
- 4.4. One respondent suggested engagement with the highways agencies would be useful to understand particularly how financial agendas drive their approach to interactions. They also identified an issue with obtaining specific consents where the timescales for decisions are not defined in legislation. United Utilities suggested that the approach recently adopted with respect to water company developer services activities could provide a useful model for improving interactions.
- 4.5. Two respondents highlighted issues when working with or near Network Rail assets, they mentioned specifically the timing of responses, the standardised approach used by Network Rail and their concern about significant annual costs agreed in perpetuity for redundant lines. One respondent highlighted the uncertainty clients face about which interactions works would be contestable or non-contestable works and the reluctance they experience from network operators to undertake work on their assets. They suggested that there may be a need for standardisation and the introduction of an independent arbitration process to resolve disputes. Another respondent suggested that there may be merit in requiring network operators to use data supplied by clients and other network operators to identify synergies between maintenance and interactions work programmes.
- 4.6. Five respondents in the energy sector considered that there are useful actions that economic regulators could take now to address issues affecting interactions. One respondent reiterated their

earlier suggestion that Ofgem consider whether adherence with the good practice principles could fall within the stakeholder engagement incentive scheme for gas distributors. The four other respondents suggested that regulators undertake a review of the impact of the proposals on effectiveness of existing legislative, licence and price control actions, for example if changes to the approach taken towards indemnities were implemented what effect might this have on network operators ability to comply with licence obligation or how the balance of risk might be assessed under a price control.

- 4.7. Seven respondents noted that there are likely to be direct impacts on interactions from price controls and other regulations affecting network operators. Three respondents from the energy sector noted that there are likely to be both direct and secondary impacts as a result of the introduction of the proposals contained within the consultation, however they stated it would not be possible to quantify what these might be unless greater clarity is provided by UKRN about the scope of works to be included and any specific changes to indemnities or the requirements of reporting to a central hub become clear. One respondent suggested that any impacts could be best mitigated by the early engagement of both parties, to allow a solution to be developed in a timely way.
- 4.8. Three respondents noted that regulatory requirements and price controls drive many behaviours of network operators when dealing with interaction requests, particularly if there is a possibility the network operator may be penalised for an interruption to its customers. Clients often find this frustrating and it can cause them to bear increased costs. One of these respondents suggested better cross sector education about the constraints placed on network operators would be beneficial to improve interactions and that this should form part of the performance reporting.