



NIPA Insights III, JUNE 2023

Project Hindsight - Post Decision Implementation



The
University
Of
Sheffield.

Summary and key findings

Major infrastructure is widely seen as a vital means of driving the United Kingdom's (UK) economic growth, increasing long-term energy security and delivering net zero. Accelerating the delivery of critical infrastructure is a key message in recent policy initiatives and government reform agendas. These reforms are wide-ranging and designed to improve the system brought in by the Planning Act 2008 (PA 2008) for the consenting of Nationally Significant Infrastructure Projects (NSIP) in the fields of energy, transport, water, waste and wastewater and projects of national significance (PNS) directed in these fields and for a business or commercial project. One significant element of focus in the reform agenda is the effectiveness and speed of the decision-making *up to the point of grant* of a Development Consent Order (DCO). It is critical, however, that timeliness (and effectiveness) are seen as a combination of the pre-application, consenting and delivery phases. In seeking to speed-up decision making, it is therefore essential that the earliest project development, and **consent as granted supports effective delivery**.

For NSIPs and PNS, project delivery is understandably complex and often spans several years. This post consent journey includes, although is not limited to, the considerable work associated with discharge of requirements, secondary consents and licenses, post consent design work, change-management, stakeholder engagement, compliance and mitigation, project-management and construction. This detailed and complex process, however, remains the subject of little in-depth research. Consequently, furthering understanding of NSIP and PNS delivery overall and, critically, the extent to which DCOs support effective delivery, is essential in the context of current reforms.

This is the focus of this research report, commissioned by the National Infrastructure Planning Association (NIPA) and produced by the University of the West of England and the University of Sheffield. With upward of 40 NSIPs and PNS now operational, and over 50 under construction, this research builds on the important foundations provided by NIPA Insights I (2017) and Insights II (2019), by drawing on the wider body of promoter, client, contractor and stakeholder experience in delivering DCOs that now exists. With over 100 participants, this research explores:

- How the DCO as granted impacts implementation;
- What issues are experienced in the journey from consent through to delivery and operation; and
- How the process could be improved to support good outcomes and delivery.

The findings presented are based upon detailed documentary review; extensive survey findings on experiences of the process post consent; six in-depth case studies; and interviews with local authority officers and statutory bodies.

Key findings

The surveys reveal a complex and mixed picture which is perhaps not surprising given the nature of projects, their variability and their different stage in delivery. There was, however, **no sense that a major overhaul of the consenting regime is needed**. Overall, the majority of respondents were either positive or neutral about their experience of moving from the DCO consent to construction, backed-up by evidence of **significant positive experience of project implementation**, with promoters working pragmatically to deliver within the parameters of their consent. Promoters are learning how to ensure that delivery and implementation are appropriately accounted for in DCOs. Nevertheless, the survey exposed some key areas where elements of the examination process and drafting of DCOs could be better aligned with the challenges of delivery and implementation, with nearly **50% of participants**

highlighting potentially beneficial post consent changes which were not pursued because of the time, complexity, expense and delay in seeking those post consent changes. **Post consent changes are largely still only requested where they are deemed *necessary* rather than *desirable*.**

Six case studies provide an in-depth view of project delivery. These are:

- Lake Lothing Highway Crossing, Lowestoft;
- Thames Tideway Tunnel Waste Water Scheme, London;
- Tilbury2 Port Scheme, London;
- A19 / Testo's Junction Improvement, South Tyneside;
- North Shropshire Reinforcement Electricity Scheme, Shropshire; and
- Hornsea 2 Off-shore Wind Farm, Yorkshire Coast.

Overall, there was a strong sense of the DCO process being preferential to other consenting regimes, with **the ease of delivery of the DCO as granted reported as being generally positive**. All case studies reported having "*largely*" achieved the right balance between flexibility and certainty. Nevertheless, there was experience in several of the case studies where **either greater flexibility, or the ability to pursue post consent changes with greater speed or ease, would have aided the construction and delivery process**. Impressive across all of the case studies was the attention to effective project management and knowledge transfer, and the desire to draw on prior learning to support effective delivery.

Extremely effective post consent relationships with local authorities comprised a stand-out feature in five of the six case studies. Nevertheless, engagement with local authorities and statutory bodies in this research illustrates that the resourcing of organisations with important post consent roles, remains an issue at delivery, causing construction delays. Moreover, further learning is needed on how these organisations can best support post consent change within the parameters of the system.

Conclusions and recommendations

There is significant evidence of promoters working effectively to ensure that post consent delivery issues are anticipated and addressed at both pre-examination and examination stages. As increasing numbers of schemes move from examination to construction and operation, it is evident that significant organisational and institutional learning is taking place regarding how to work within the parameters and flexibilities of the PA 2008 regime. The research highlights the hard work undertaken by the PA 2008 community to make the system work. The major difficulties faced by projects are largely where a scheme raises new challenges or has particular complexity in terms of the nature of the project, the stage at which contractors are involved, the degree of uncertainty in projects or the complexity of the biophysical / ecological context. As such, these are often specific to a given project rather than flaws with the PA 2008 system itself.

Overall, the **research does not suggest the need for significant change to the PA 2008 process**, and concludes with seven recommendations focussed on the need:

1. to work effectively to maintain and extend the opportunities for disseminating, sharing and reflecting on the experience of project delivery and implementation;
2. to ensure that reforms to the DCO process that focus on speed of decision making do not pass on problems to the delivery and implementation stage;

3. for a review of the further consents and licences required post DCO consent;
4. for a more supportive approach to post consent change management;
5. for significant ongoing support for local authority and statutory body engagement in delivery and operation as well as examination;
6. for greater consistency at examination, and in DCOs, in the treatment of flexibility mechanisms; and
7. for capacity building to bring professions together to support delivery.

As an addendum to the research, the UK Government's NSIP Action Plan (2023) is reviewed in light of the research findings presented.

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1. Introduction

1.1 The Planning Act 2008 (PA 2008) was specifically designed to speed up infrastructure delivery by introducing a new system for the consenting of NSIPs in the fields of energy, transport, water, waste and wastewater. Over a decade since the first Development Consent Order (DCO) was granted, significant attention is now being given to whether the system remains fit for purpose, facilitating the timely and efficient delivery of infrastructure. This research report for the National Infrastructure Planning Association (NIPA) focusses on the DCO delivery phase by exploring promoters, clients, contractors' and stakeholders' experiences of the journey from pre-application, consent and through to construction and on-going operation. It builds on the work done by NIPA in their Insights I and Insights II research projects with the benefit of having been able to draw on a significantly increased volume of projects at the delivery or completion stage.

1.2 The findings set out here are inter-disciplinary, with widespread relevance to both policy and practice. Importantly, they are intended to inform the ongoing programme of work being led by central government focused on reforming the infrastructure planning process, including (although not limited to) proposed amendments to the Levelling-up and Regeneration Bill¹, the Nationally Significant Infrastructure Planning Action Plan for England and Wales (NSIP Action Plan) and associated consultations², new and updated National Policy Statements (NPSs) under consultation, the National Infrastructure Commission's (NIC) report 'Delivering Net Zero, Climate Resilience and Growth: Improving Nationally Significant Infrastructure Planning'³, and proposals for a new approach to environmental assessment in the form of Environmental Outcomes Reports⁴.

1.3 This research was carried out by the Centre for Sustainable Planning and Environments at the University of the West of England (UWE), Bristol, together with the Department of Urban Studies and Planning, at the University of Sheffield (UoS)⁵. The team comprised:

- Hannah Hickman (project lead), Associate Professor in Planning Practice (UWE)
- Dr Aidan While, Senior Lecturer in Urban Studies (UoS)
- Nick Croft, Senior Lecturer in Planning (UWE)
- Dr Katie McClymont, Associate Professor in Urban Planning (UWE)
- Dr Stephen Hall, Associate Professor (UWE)
- Cat Loveday, Senior Lecturer in Planning and Development (UWE)
- Dr Rebecca Windemer, Senior Lecturer in Environmental Planning (UWE)⁶.

¹ <https://bills.parliament.uk/bills/3155>

² <https://www.gov.uk/government/publications/nationally-significant-infrastructure-projects-nsip-reforms-action-plan/nationally-significant-infrastructure-action-plan-for-reforms-to-the-planning-process>

³ <https://nic.org.uk/studies-reports/infrastructure-planning-system/delivering-net-zero-climate-resilience-growth/>

⁴ <https://www.gov.uk/government/consultations/environmental-outcomes-reports-a-new-approach-to-environmental-assessment>

⁵ Ethical approval for this project was secured via the University of West of England's research ethics committee (reference - FET-2122-67).

⁶ At the time of publication, Dr Rebecca Windemer had left UWE and taken on a new role at Regen (<https://www.regen.co.uk/>).

- 1.4 The team is grateful for the advice and support of the NIPA steering group: Jan Bessell (NIPA Board Chair and Director, and Pinsent Masons); Robbie Owen (NIPA Board Secretary and Director, and Pinsent Masons); Matt Sharpe (NIPA Board Member, and Quod); and Phil Emison (NIPA Council and Working Group lead Member, and Costain). The research team would also like to thank the 100 plus practitioners who participated in this research, who for reasons of anonymity are not named in this report, but whose experiences underpin the findings presented here.
- 1.5 The report is structured into six sections, and details of the research method and approach are set out in in section 2 below. It begins with a brief review of the key findings of NIPA Insights I and II, together with key subsequent developments, which provide the foundations for this research.

2. DCO delivery: issues, debates and previous research

NIPA Insights I and II

- 2.1 There is a wide body of literature and views on the principles of the DCO process and how the consenting process might be enhanced in the interests of different organisations and outcomes. That includes discussion of the relationship between examination and subsequent project delivery (for review see NIPA Insights I). However, there has been limited systematic exploration of the ‘post consent’ delivery phase. The most detailed systematic evidence so far produced on the various issues raised by the post consent experience are two previous NIPA Insights studies: NIPA Insights I (Balancing Detail & Flexibility – Through Planning to Delivery, 2016-2017)⁷ and NIPA Insights II (2019)⁸, which was intended to take forward NIPA Insights I recommendations in relation to techniques for effective delivery from projects completed or under construction.
- 2.2 NIPA Insights I focused primarily on the ways in which the examination and consenting process might enable or constrain subsequent post consent delivery. The research highlighted the importance of using mechanisms to create flexibility in the DCO – such as envelope assessments, limits of deviation, and the use of requirements and codes - and emphasised that achieving flexibility in support of more effective delivery might require more detail and consultation during the consenting phase. NIPA Insights I also highlighted the benefits of early contractor involvement in bridging potential divides between the consent and delivery phases, and the benefits of enhanced early engagement of local authorities, statutory bodies and communities.
- 2.3 The Insights I research was undertaken in 2016-17 when 60 DCOs had been granted, seven schemes had been fully constructed (mainly highways and rail) and 13 were under construction. Part of the rationale for commissioning the first Insights research was a concern that examination was being seen as an end in itself and ‘some DCOs were consented in a way leading to a lack of flexibility in construction that was causing more expensive and less advantageous methods to be used.’ The report also sought to address emerging concerns that the process was suffering from too much detail during planning, limiting flexibility during delivery, and that this was having an impact on a promoter’s ability to deliver infrastructure in the most efficient way by hindering design development and innovation.
- 2.4 NIPA Insights I presents evidence of good practice in the use of flexibility mechanisms, but also the range of concerns about confidence in the use and acceptance of levels of flexibility, inconsistent approaches by Examining Authorities (ExAs) and insufficient cross-industry learning. The research team found a widespread reluctance to apply for non-material changes after consent because of the complications involved and the lack of statutory timescales for decisions. The research suggested that high levels of detail were being required (or provided) in the examination process and that was increasingly the case. However, it was recognised that flexibility often required a higher level of detail during examination in exchange for benefits during delivery and construction.

⁷ <https://www.nipa-uk.org/news/NIPA-Insights-Research-REPORTS-LAUNCHED>

⁸ <https://www.nipa-uk.org/news/nipa-insights-ii>

- 2.5 Recommendations and experiences raised by NIPA Insights I included:
- the nature and legal form of the DCO is not flexible so it is important to make effective use of flexibility mechanisms where relevant. There is scope for flexibility mechanisms to be used and supported more extensively to enable better delivery and innovation, including a hybrid approach to DCOs and the use of standardised and industry recognised codes to achieve better delivery and support innovation;
 - some form of Early Contractor Involvement (ECI) is recommended in order to bring design and delivery more centrally into the examination process;
 - there is scope for promoters to adopt a more explicit project management framework from the outset to maintain a focus on deliverability and construction throughout the process;
 - the ExA should give more consideration to issues of deliverability and construction in the examination process and drafting of the DCO;
 - there are benefits from more extensive community consultation and early engagement with local authorities and statutory bodies (and the need to resource the extra workloads for those organisations, including the use of mechanisms such as Planning Performance Agreements (PPAs));
 - environmental assessment might be too detailed because of ‘belt and braces’ risk aversion; and
 - there is potential for more shared learning amongst the various organisations involved in DCO proposals.
- 2.6 Overall, NIPA Insights I report called for a better balance between detail and flexibility in the preparation of DCO applications, but recognised that although a degree of flexibility can be beneficial, the balance between detail and flexibility would be scheme and context dependent. By the time of **Insights II (2019)**, the number of projects either under construction or fully completed had increased to around 42 out of a total of 105 DCO applications and the research involved two new research projects (Project A: Consultation and Engagement in the DCO Process; and, Project B: Mechanisms to Support Flexibility in the DCO Process).
- 2.7 Project A (Consultation and Engagement in the DCO Process) found that ‘a great deal of work ... goes into consulting communities and stakeholders as part of the process of consenting, particularly in the pre-application stages’ and ‘many promoters are keen to maintain good relations with local communities and other stakeholders through construction to the operation of their project.’ However, the report identified scope to improve practice, particularly in ensuring that trust is built and maintained. For example, the report found that codes and plans governed by ‘requirements’ and separate Section 106 agreements, were increasingly being used to provide some flexibility in delivery, but that their role and rationale was not usually explained. Moreover, ‘rarely is an explicit link made between flexibility and ongoing consultation’.
- 2.8 Project B (Mechanisms to Support Flexibility in the DCO Process) echoes the finding from NIPA Insights I that although the range of mechanisms for supporting flexibility in DCOs were in use, they were still being used selectively because of uncertainties within the examination process. Project B found continued widespread concern about the time, cost and uncertainty associated with both the non-material and material amendment process for changes to be made to

consented DCOs. The research also echoed the NIPA Insights I finding that where there are difficulties, promoters and their advisers preferred to ask local authorities for assistance rather than request non-material amendments to achieve change in DCOs. The assistance provided by local authorities included: the use of additional planning applications; the use of Section 106 agreements; and the interpretation of standards and requirements in the DCO. NIPA Insights II highlighted that there is both an opportunity for greater consistency in approaches to flexibility, and also scope to co-ordinate and articulate the case for flexibility more effectively. To this end, the research proposed the creation of a Flexibility Toolkit to support the adoption and dissemination of good practice. The emphasis in the two NIPA Insight studies on process and change management spanning consent and post consent is also emphasised in the NSIP Action Plan and the Mace 2020 report on A blueprint for modern infrastructure delivery⁹.

The changing context

- 2.9 Since NIPA Insights II was published in 2019 there have been some important changes in the context for DCO delivery and operation.
- 2.10 **Firstly**, more projects have progressed to construction delivery and operation. When this research started in 2022, 40 DCO projects were operational, with over 50 under construction. At the time of writing (June 2023), 123 decisions have now been made. Previous research was therefore not able to draw on the volume and diversity of experience that now exists in terms of the range of projects that have progressed to construction, delivery and operation.
- 2.11 **Secondly**, there has been more reflection on the post consent stage in other areas of planning that illustrates the value of understanding planning beyond the point of consent, and the importance of understanding how permissions can facilitate and shape delivery, that might impact on, and have relevance to, the DCO delivery debate¹⁰.
- 2.12 **Thirdly**, despite the consistently reported successes of the PA 2008¹¹, some elements of the effectiveness of the process have been questioned, in particular: the extent to which statutory timescales for the speed of decision making are still being met; the increase in the volume of material generated by the process and propensity for changes at the examination stage; and the rise in the number of legal challenges to consented schemes. This latter element is, at least in part, a reflection of the propensity to challenge on the grounds of perceived conflict with carbon goals and national and global climate change commitments and out of date national policy statements.
- 2.13 **Finally**, in light of some of these challenges, is the ongoing programme of work by UK central government focused on reforming the planning process as detailed in the introduction to this report. This has included the request to the NIC to review the current approach to national policy

⁹ <https://www.macegroup.com/perspectives/201112-insights-blueprint-for-modern-infrastructure>

¹⁰ Hickman, H., Croft, N., Foroughmand Araabi, H., McClymont, K., & Sheppard, A. (2021). The whittling away of wonderful ideas: and the diminution of design quality. West of England Combined Authority. Available from: <https://uwe-repository.worktribe.com/output/7318606>

¹¹ <https://www.womblebondnickinson.com/sites/default/files/2020-07/Executive%20Summary.pdf>

statements and to identify how the national infrastructure planning system could create greater certainty for infrastructure investors, developers and communities. This review - Delivering Net Zero, Climate Resilience and Growth: Improving Nationally Significant Infrastructure Planning - published in April 2023, gives limited consideration of the link between examination / DCOs and post consent delivery and implementation. Similarly, despite welcome acknowledgement of:

“... the full end-to-end nature of infrastructure planning and delivery, and the importance of constructive and collaborative working to build trust in both the consenting process and between all parties” (2023, 1.6).

The UK Government’s NSIP Action Plan, published just prior to the NIC’s report, also appears focussed on the effectiveness and speed of the decision-making *up to the point of grant* of a DCO. **As NIPA Insights I and II suggest, it is important to see timeliness (and effectiveness) as a combination of the pre-application development and engagement, consent and delivery.**

Research approach and methodology

2.14 The primary purpose of this research was to draw on the now extensive body of experience in the implementation of DCOs. **Specifically, the team was asked by NIPA to explore:**

- How the DCO as granted impacts implementation;
- What issues are experienced in the journey from consent through to delivery and operation; and
- How the process could be improved to support delivery.

2.15 This research combined a mixed-methods approach and was structured into a number of phases summarised in table 1. The methods were specifically designed to ensure that the team engaged a wide number and mix of practitioners, covered a range of different types of projects (and project complexity), and drew on a variety of data sources in order to verify and validate the findings. Importantly, the in-depth case study phase, whilst having a project-specific focus, also allowed exploration of questions about the delivery process more broadly, especially where promoters, their delivery team, and stakeholders had been involved in multiple projects. **In total, this research has drawn on the experience of 115 individuals involved in DCO project engagement and delivery, comprising:**

- 51 survey respondents;
- 30 case study interviewees;
- 25 local authority officers; and
- 9 statutory body representatives.

2.16 The research was designed to cover a wide variety of delivery topics, including, but not limited to: contractor engagement; change management processes; community engagement; levels of flexibility; knowledge transfer from pre to post consent / continuity of staffing; mitigation measures in environmental statements; post consent design work; project management approaches; and roles of statutory bodies.

Table 1 - Research design

Stage	Purpose	Coverage in this report
<p>1A – Scoping Review of literature on reported DCO implementation issues in NIPA Insights I and II and more widely. Review of headline data on the 100+ schemes and categorisation of schemes into their current delivery stage.</p>	<p>To identify the range of possible implementation issues to shape the research and identify a long list of potential case studies.</p>	<p>Chapter 2</p>
<p>2 – Promoter and project survey An online survey targeted at all DCO’s under construction / completed to draw out experience across the widest range of projects in terms of their sector, scale, and delivery stage.</p>	<p>To provide a mix of quantitative and qualitative evidence across a wide range of DCOs and to aid case study selection.</p>	<p>Chapter 3</p>
<p>3 – Case studies Six in-depth case studies of projects either completed or a significant way through their construction delivery phase, comprising in-depth interviews with project promoters and their agents, their delivery team and contractors, and relevant local authority and other statutory bodies.</p>	<p>To provide in-depth project specific insight into scheme implementation issues and advice on DCO process improvement.</p>	<p>Chapter 4</p>
<p>4 – Local authority and statutory body engagement On-line roundtable facilitated by the Planning Advisory Service (PAS) NSIP Network to discuss local authority experiences of project delivery. In-depth discussion with two local authorities with substantial experience of DCO delivery. Interviews with representatives from statutory bodies.</p>	<p>To ensure the experience of key statutory bodies and players in delivery is reflected in the findings.</p>	<p>Chapter 5</p>
<p>5 – Review of findings</p>	<p>To draw together key recommendations and conclusions arising out of the research.</p>	<p>Chapter 6</p>
<p>Addendum</p>	<p>Headline review of NSIP Action Plan, in light of research findings.</p>	<p>Appendix 1</p>

3. Survey Findings

Highlights

- **51 surveys were returned providing insight across consented projects and from practitioners in a wide range of roles.**
- The surveys revealed a **wide range of experience and perceptions of delivering projects** post consent.
- Overall, the majority of respondents felt that their **experience had not been negative**, with ease of implementation of DCOs as granted weighted towards the **‘neither easy nor difficult’**, but with those of experience across multiple projects more likely to report implementation as **‘difficult’**.
- Very **few patterns emerged** in relation to types of project, or types of respondent, reflecting the importance of case-specific contexts in shaping approaches and outcomes of national infrastructure projects.
- There is significant **evidence of promoters working pragmatically** to deliver their DCO within the prescribed parameters.
- Nevertheless, nearly 50% of respondents reported **post consent changes** that would have benefited delivery and outcomes, but which were not pursued because of the difficulties, uncertainties and delays associated with post consent change.
- Suggested priorities for improving the DCO process **to better support outcomes and delivery** focused on points of detail – particularly around greater certainty in environmental assessment approaches to flexibility and the ease of post consent change – rather than a need for radical overhaul of the system.
- **Positive experiences of implementation** included:
 - Strong project management, with a collaborative team approach and continuity of personnel from pre to post consent;
 - Commitment to achieving outcomes which bring wider benefits (value being not just about cost);
 - Effective use of routes to flexibility (with limits of deviation and parameter-based assessments commended in particular);
 - Effective contractor engagement, particularly where early engagement enables DCO constructability and delivery to be factored into the consenting process; and
 - Strong partnership working with third parties, particularly local authorities.
- **Challenging experiences of implementation were reported** in relation to:
 - The deliverability of elements of DCOs, particularly the alignment between the consented scheme and the detailed design for construction;
 - Lack of contractor experience of DCOs, and moving too quickly to construction without full engagement with the details of the DCO;
 - Handling the need for post consent changes not achievable within the framework and limits of the DCO;
 - The decision not to pursue post consent changes because of timescales and costs (particularly when this would have necessitated additional environmental assessment); and
 - The resourcing of statutory bodies and important and relevant interested parties.

Methodology

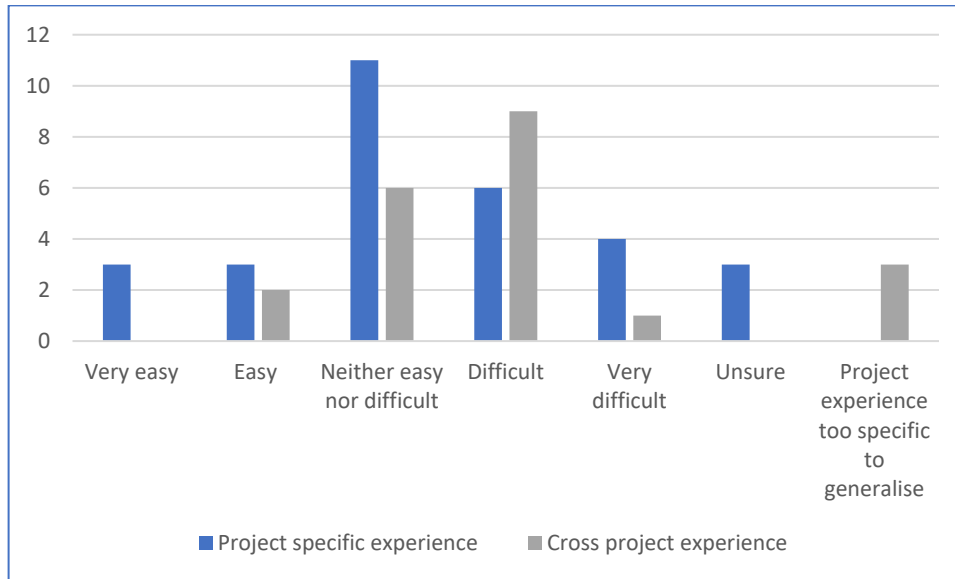
- 3.1 Two surveys were used to provide an overview of post consent delivery from across a wide range of DCOs and from the perspective of project promoters and their teams. These surveys allowed participants to share their experience either on an individual DCO (referred to below as “the project specific survey” or “PSS”), or their experience drawn from their involvement across a range of DCOs (referred to below as “the cross-project survey” or “CPS”). Questions covered all post consent stages. A mixture of both open and closed questions were used to provide a quantitative overview and to give respondents the opportunity to share more detailed experiences and to qualify and contextualise their answers¹². Not all respondents chose to share further details.
- 3.2 **A total of 51 surveys were completed: 30 of these were completed on the basis of experience of individual projects, and 21 were completed by participants sharing their experience across multiple projects.** Of those surveys completed for individual projects, a good representative range of schemes were covered, in terms of geography, scale, and type of scheme. 30% of those projects were completed and fully operational, 47% were under construction, with the rest either consented or with pre-commencement work underway. Those sharing their experience across multiple projects had worked on a wide range of DCOs (an average of five projects), with one respondent having worked on 25.
- 3.3 Those completing the individual project survey response had a range of job roles: contractors; consents managers; planning strategy managers; project delivery directors; project managers; environmental managers; consultants; and commercial leads. Of these, the **greatest number of respondents were either consents managers or project delivery directors or project managers.** Only five of these respondents had joined the project post consent, with the rest having started at inception, during initial concept and options design, or at the pre-application or application stage.
- 3.4 Those completing the cross-project survey had played a wider mix of roles in the DCO process. Some reported having undertaken a range of positions, but with the majority stating a focused role such as: technical specialist (landscape environment), environmental management / assessment, client-side development and contracting, project director, planning lead, or project manager.
- 3.5 The survey data was analysed by types of organisation (client, promoter etc), types of project and stage in delivery / operation, but this analysis is not reported here because there were no meaningful patterns when the data were analysed in this way.

¹² The surveys were piloted by two DCO practitioners, to test for comprehension and usability. Completion took place via the online survey platform – Qualtrics – with links shared widely via NIPA, professional networks and direct one to one contact. For reasons of anonymity, no individual project or practitioner is identified directly in the reporting of findings below.

Overarching views on ease of DCO implementation

3.6 Respondents were first asked for their views on the ease of implementing the DCO as granted. Figure 1 shows the findings for the ease of implementing the DCO in relation to construction of the project and Figure 2 for the ease of implementation in relation to operation.

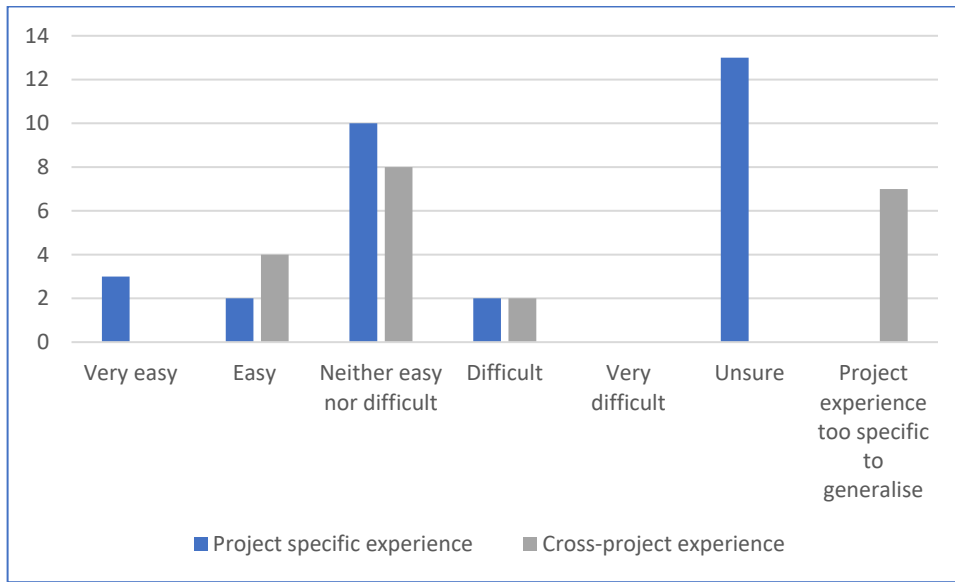
Figure 1: Views on the ease of implementation in relation to construction



3.7 For those responding on the basis of a particular project, the majority felt that the ease of implementing the DCO was either easy or neither easy nor difficult, though 10 out of the 30 single project respondents felt that the experience had been difficult or very difficult. Those responding on the basis of more than one project tended to have found the implementation of the DCO during construction to have been slightly more difficult. This might be seen as a generally positive response to DCO implementation given the challenges of construction and delivery. Indeed, those who reported the experience as being difficult or very difficult tended to be answering on the basis of projects still currently in construction, suggesting that respondents tended to be more positive about the post consent experience on looking back after the construction phase. There were no significant differences between types of project or types of respondents. Relatively few experiences were registered as 'very difficult'.

3.8 It was more difficult for respondents to comment on the relationship between the DCO and operation because many projects were not at the operational phase. Perhaps unsurprisingly, the experience was generally more positive for operation than for construction, with no respondents reporting major difficulties, perhaps because whilst the construction process might be hard, it is during this (and the prior consenting) stage that major issues leading up to operation should be resolved. Of the nine respondents who did answer on the transition from construction to operation, six of these were positive, and two were neutral.

Figure 2: Views on the ease of implementation in relation to operation



3.9 **Those with a positive perspective on implementation ease** focused largely on the project management approach and project team, and the clarity of the DCO itself. There was a strong sense that a team that endures from the start to completion leads to smoother delivery – enabling the anticipation of delivery issues to be made more explicit from the outset:

“The fact that a fully collaborative team was formed prior to submission meant there was full buy-in to the limits of deviation, constraints, ecological mitigation and proposed construction methodology defined within the DCO application and subsequent consent. This was a truly successful collaboration.” (Technical Co-ordinator / DCO Manager, PSS)

“Full integration of the promoter’s team and continuity of project team with external stakeholders, including the host local authorities. Implementation of the construction phase progressed in line with pre-application planning. Thorough handover from pre-construction team to colleagues responsible for the delivery of the construction phase. Pre-construction consent lead available and regularly based on site.” (DCO Lead, PSS)

3.10 A small number of respondents referred to a project mindset that permeates the whole team approach, including a working culture that is about supporting good outcomes beyond monetary value:

“We are taking a progressive attitude. We want this to be a model project. We are delivering things in the Construction Code of Practice with relative ease and wanting to go beyond them because it’s the right thing to do. It’s about value not just about cost.” (Project Delivery Director, PSS)

3.11 Those considering ease of **DCO implementation to be neither easy nor difficult tended to** highlight areas where post consent issues were not always easy to manage in relation to delays caused by the need for further post consent approvals or licenses, the volume of requirements to discharge, and concerns about the relative ease of the constructability of aspects of the DCO:

“Some more time could have been spent on getting to grips with key engineering solutions prior to consent - what's granted is all achievable but not with the ease that they might have been.”
(Project Delivery Director, PSS)

“We had difficulty in joining together all the parts. Much of the engineering solution hadn't been done prior to consent.” (Town Planning Lead, PSS)

“Some difficulty in aligning construction planning and detailed design to consented scheme. Good existing relationships with a proactive local authority have enabled some flexibility to be realised.”
(DCO Lead, PSS)

3.12 **Where those reporting difficult experiences of implementation** chose to provide further details, the major recurring issues reported are summarised below. Whilst there was a strong sense that issues were highly specific to the circumstances of a particular project, they point to some broader systems issues:

- errors within the DCO and the need for correction orders;
- the deliverability - *“depending on interpretation”* (Promoter, PSS) - and complexity of compensation requirements under Habitats Regulations (benthic compensation highlighted in particular);
- the need for further approvals and licenses and more detailed provision of further information prior to construction, *“the DCO was far from being comprehensive”* (Client, PSS);
- lack of *“flexibility for contractor innovation”* within the DCO, *“promoters constantly need to retain flexibility such that procurement and supply chain transparency can be achieved and the best outcome delivered at the time that the project has achieved the final investment decision (principally after securing the DCO)”* (Promoter, PSS); and
- frustration that changes *“which will not result in new or materially different environmental effects”* (Planning Manager, PSS), had to be progressed as non-material or material changes.

Experience of implementing specific elements of DCOs

3.13 Participants were asked to reflect upon their level of positivity about key components of the DCO with respect to delivery and implementation. The findings are represented in Figures 3 and 4 below (Figure 3 for project specific experience and Figure 4 for cross-project experience).

Figure 3: Perceptions of key delivery components of the DCO (project specific responses)

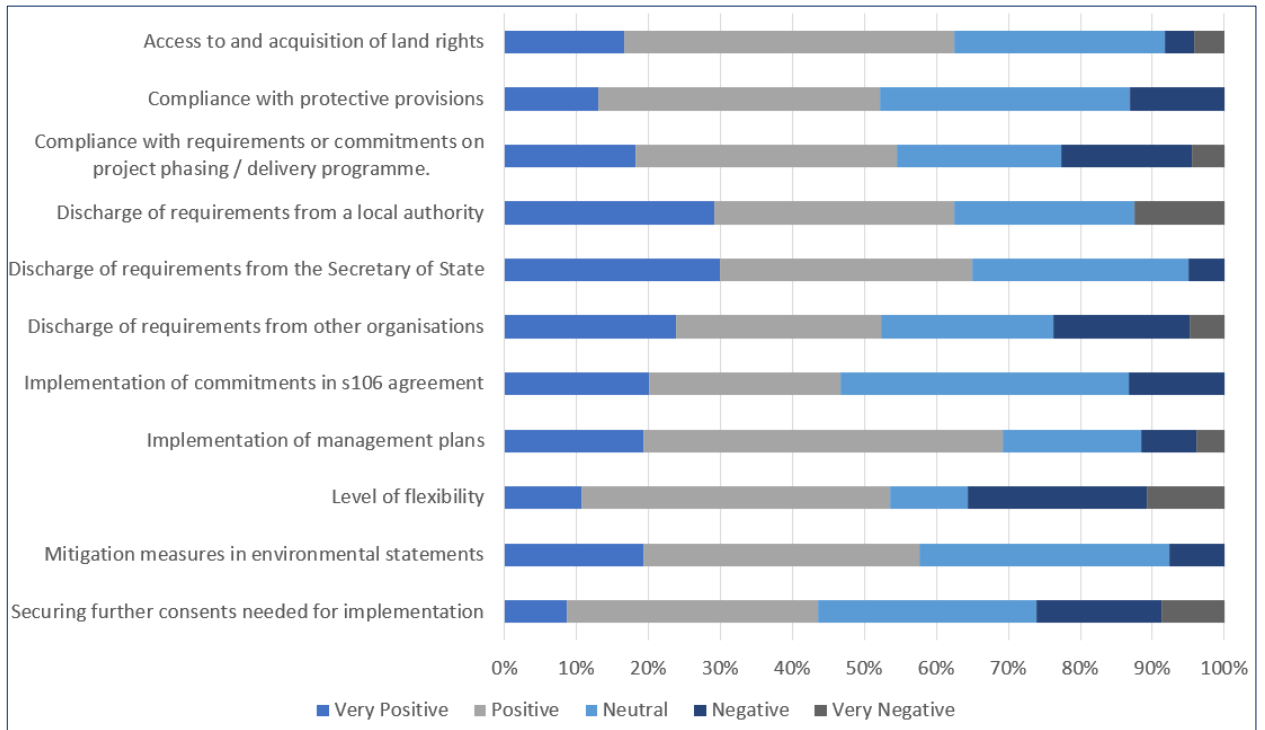
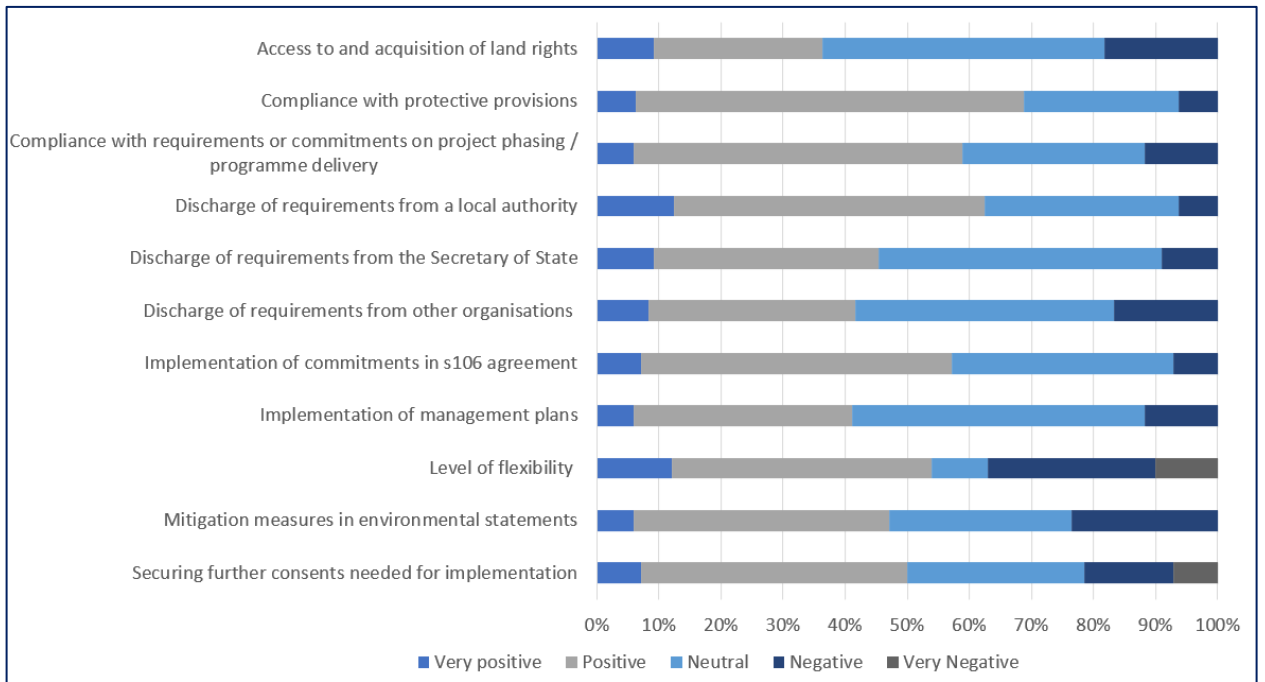


Figure 4: Perceptions of key delivery components of the DCO (cross-project experience)

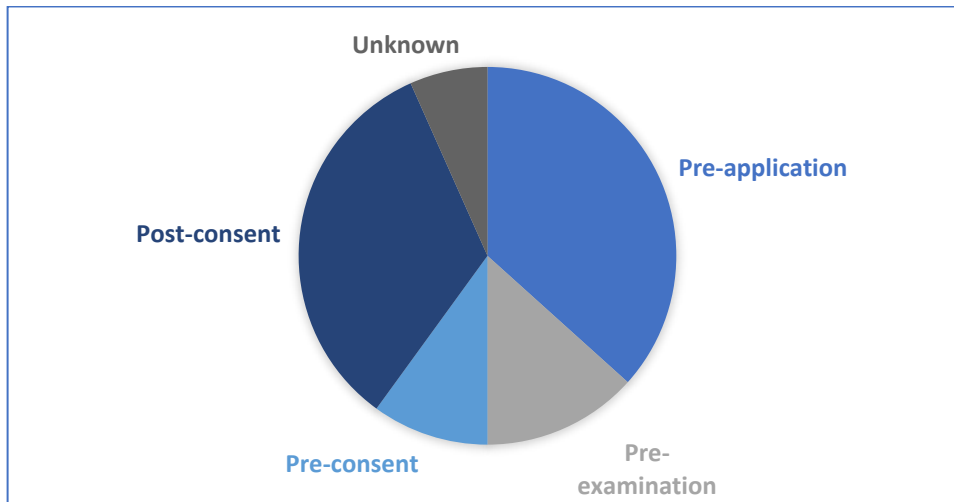


- 3.14 Figure 3 shows that the **majority of respondents were either neutral or positive** about all of the elements they were asked to comment on. Standing out as the areas with the greatest overall positivity (an aggregation of very positive or positive responses) were implementation of management plans, discharge of requirements from the Secretary of State, discharge of requirements from a local authority and access to and acquisition of land rights. Most negative (an aggregation of very negative and negative) were level of flexibility and securing further consents needed for implementation. In this, there were no significant variations in relation to type of project, construction stage or location.
- 3.15 Figure 4 affirms that the majority of cross-project respondents **were also either neutral or positive** about all of the elements they were asked to comment on. They were most positive (an aggregation of very positive or positive responses) about compliance with protective provisions and discharge of requirements from a local authority. They were most negative (an aggregation of very negative and negative) about level of flexibility, mitigation measures in environmental statements, and securing further consents needed for implementation.
- 3.16 Overall, Figures 3 and 4 show strong commonalities in terms of respondents' overall experiences. Notable, was the consistency in two of the areas of most negativity: levels of flexibility and securing further consents needed for implementation. It was striking that those with experience across multiple projects were less likely to select 'very positive' and overall have positive to neutral impressions of DCO delivery whereas those commenting on their project specific experience were more likely to select 'very negative' or 'very positive'. This may indicate that greater experience of the DCO process leads to a more nuanced and less extreme view of it as either positive or negative.

Early contractor involvement, project management and knowledge transfer

- 3.17 Both NIPA Insights I and II highlighted the significant benefit to the delivery stage of early contractor involvement (in the anticipation of the need for flexibility at deliverability), and of a clear project management approach that ideally involved the continuity of key individuals pre to post consent and effective arrangements for knowledge transfer. These factors are seen as key in ensuring a smooth transition from consent to delivery. Those completing the project-specific survey were asked about each of these three factors.
- 3.18 Figure 5 shows the stage at which projects had engaged contractors. 33% of projects had not secured a contractor until post consent.

Figure 5: Timing of contractor engagement



- 3.19 Where ECI had happened, it was largely observed to have been relatively light touch, for example through providing “early advice and support” (Consents Manager / Planning Consultant, PSS). Where projects had secured early contractor engagement, with the same contractor enduring post consent, this was universally observed as being extremely beneficial for delivery:

“[The client] selected [named contractor] as a contractor prior to the DCO application. The contracting team then formed a collaborative team with our client, their consultant and their legal team. This collaborative team was a resounding success with the contractor reviewing and helping to input into the DCO application. This ensured the DCO application fully considered the contractors design (this was a Design and Build Contract) and our proposed methods. Conversely, it also ensured we as contractor had fully considered the requirements of the DCO and as such could fully discharge the conditions within.” (Technical Manager / DCO Co-ordinator, PSS)

“Very early contractor involvement very positive, as they bought into design and DCO, became knowledgeable about the process, so reducing risk of “blaming the consent” later on.” (Promoter, project management team, PSS)

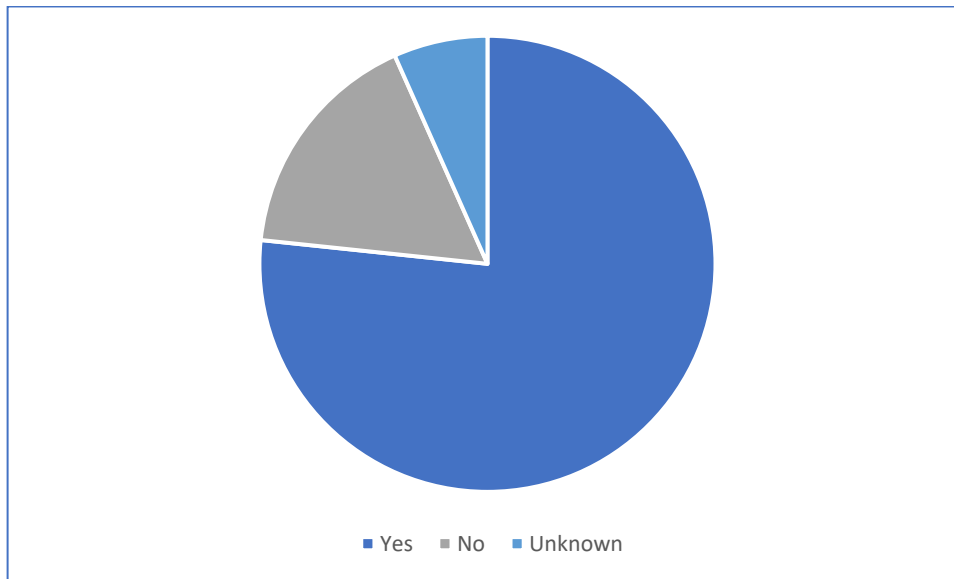
“We have found that the appointment of X as the lead construction partner ensured that a positive relationship was struck with the local authority partner, along with [client] as the scheme promoter.” (Promoter, PSS)

- 3.20 The challenges of changing contractor post consent, or the relatively late appointment of a contractor, were mentioned by a number of respondents:

“[There was] some early contractor involvement at pre-application stage but half-hearted as they knew they were not on the tender list. Due to procurement delays the actual delivery contractor was not appointed until most of the way through the examination. Far from ideal as they had to sign up to ways of working they had not developed.” (Project Manager, PSS)

“Initial contractor involvement for the scheme was undertaken by another company. The contractor changed from one contractor to another. A number of changes were identified particularly with the buildability...” (Contractor, PSS)

Figure 6: Project management from inception through to completion



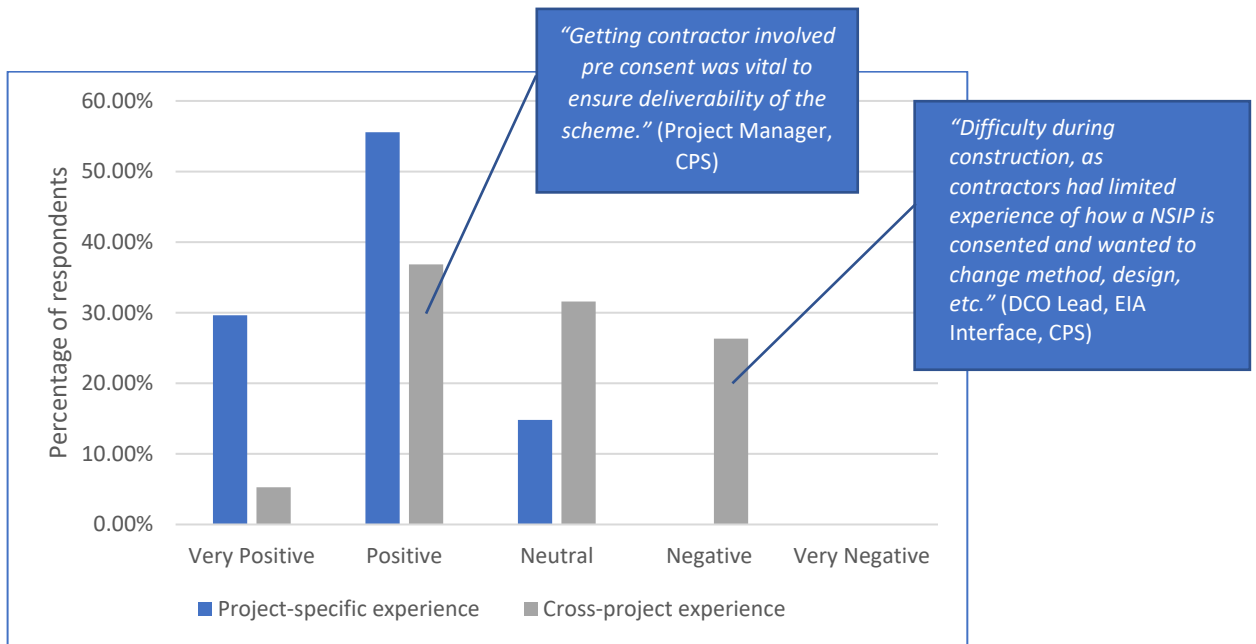
- 3.21 **Figure 6 shows that 77% of respondents reported having appointed a project manager** from inception through to completion and a very wide range of arrangements were reported for knowledge-transfer. Those without project managers prior to consent reported *“no dedicated handover, ad-hoc arrangements”* (Head of Consents, PSS) for knowledge transfer, whereas those with project managers prior to consent reporting, *“regular fortnightly project meetings and quarterly project board meetings from inception to completion”* (Consents Lead, PSS), and *“transitional arrangements for several team members to continue across into the delivery phase including the stakeholder engagement team”* (Planner, PSS). This points to the value of a project-management approach in support of knowledge transfer.
- 3.22 Overall, those with project specific experience were either very positive (17%) or positive (52%) about their experiences of knowledge transfer between team members, with only 10% (three projects) negative. In slight contrast, those reporting their cross-project experience whilst largely positive (55%) about knowledge transfer, more were either neutral (28%) or negative (17%), reflecting the more nuanced impressions that cross-project knowledge appears to generate as noted above.
- 3.23 Several participants suggested that the importance of knowledge transfer was very client led, some seeing this as an essential part of being *“a learning organisation”* (Promoter/Developer, PSS), resulting in *“at all stages of the development learning reports are produced and shared to ensure that learning from previous issues and situations is captured and distributed internally and to contract partners”* (Promoter / Developer, PSS).
- 3.24 Some respondents, clearly had frustrations about knowledge-transfer, observing, *“limited briefings and knowledge lost despite limited some staff continuity”* (Project manager, PSS) and *“whilst there were attempts to continuity this didn't always follow through”* (Consultant to

Applicant, PSS). Again, the picture was mixed across regions and sectors, reflecting specific experiences rather than any notable trends.

Engagement with key organisations and stakeholders

- 3.25 DCO delivery requires promoters to engage with a wide range of organisations. Key amongst these are: contractors (as the main delivery agents); local authorities (as main, but not always) dischargers of post consent requirements and plans, as key interfacing organisations for local communities and in monitoring); statutory environmental bodies (in relation to post consent requirements, licensing and monitoring); and the relevant Secretary of State (where plans and documents need further certification and as discharger of requirements and plans). Engaging effectively with these organisations is, therefore, of paramount importance in delivery. Key to this engagement, as detailed below, is the adequacy of resources within those organisations to be able to participate in an informed, efficient and timely manner.
- 3.26 Respondents of both surveys were asked to rank their experiences of contractor engagement (Figure 7), to comment on the adequacy of local authority (Figure 8) and statutory environmental body (Figure 9) resource and to reflect upon their experience of post consent engagement with the relevant Secretary of State, if and where required (Figure 10).
- 3.27 Overall, Figure 7 shows that project-specific participants were largely positive about their engagement with contractors, whereas those reporting their cross-project experience were more negative.

Figure 7: Experiences of contractor engagement



- 3.28 Within the cross-project survey, several respondents used the ‘any other comments’ option to spontaneously reference contractor engagement. Pre-consent contractors were seen as vital to

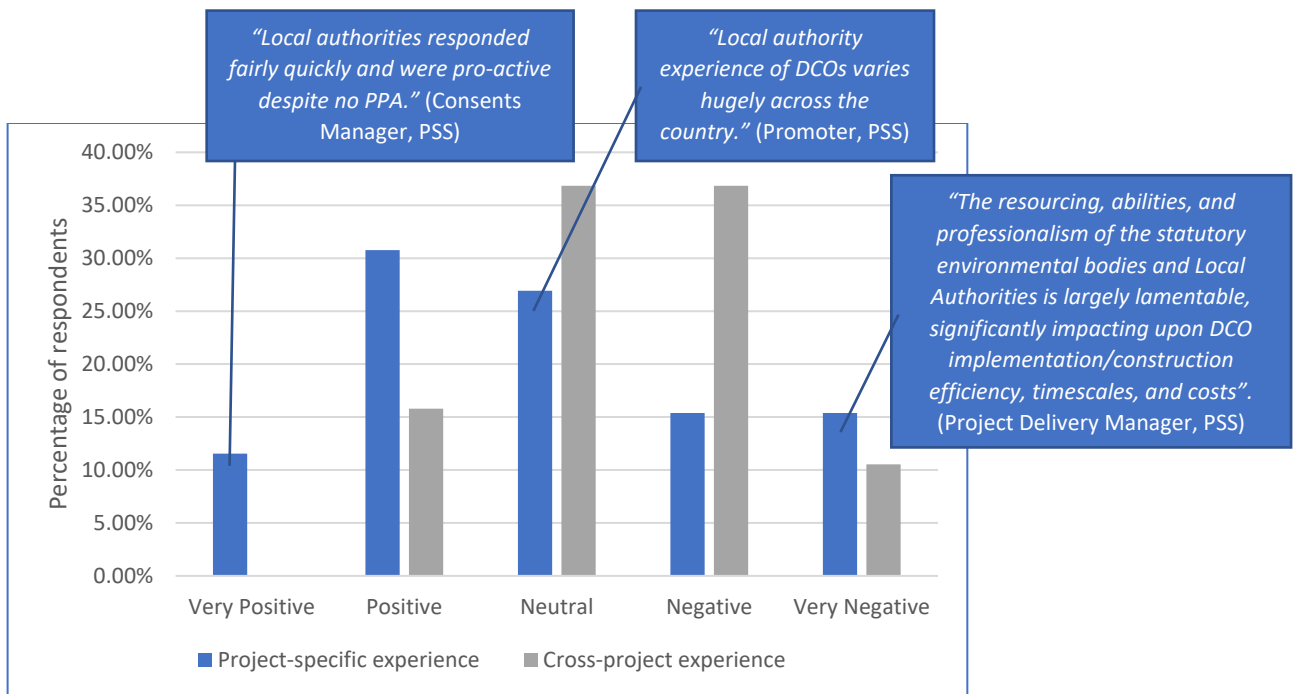
ensuring deliverability of consent, or alternatively problems arose as a result of lack of engagement pre-consent. The relatively limited experience of DCOs by contractors was highlighted as particularly problematic – resulting in contractors wanting to change construction methods and scheme design as is more commonly the case with consents secured via Town and Country Planning Act 1990 (TCPA) permissions. There was a strong emphasis on the need for greater consideration of the construction programme when drafting DCOs with the suggestion that too little consideration is given in the consenting process to construction works and programme management:

“In my opinion, and talking to others in the industry, it is not that the implementation stage is difficult - moreover, that client and contractors are unwilling to give it the respect that it needs - this means appropriately qualified individuals and time to do the work required, rather than rushing to site. I have seen many times people rushing to site - and then blaming consents for it - whereas in reality - they did not appropriately scope or programme this out - and then they didn't deliver and had to delay.” (Environmental Impact Assessment Advisor and DCO Manager, CPS)

“It's clear that little consideration is given to construction programme when drafting the DCO or what may happen post DCO in terms of the process. Little consideration is given to consents related to construction works and use of management plans creates its own industry rather than delivering benefits and mitigation.” (Town Planning Lead, CPS)

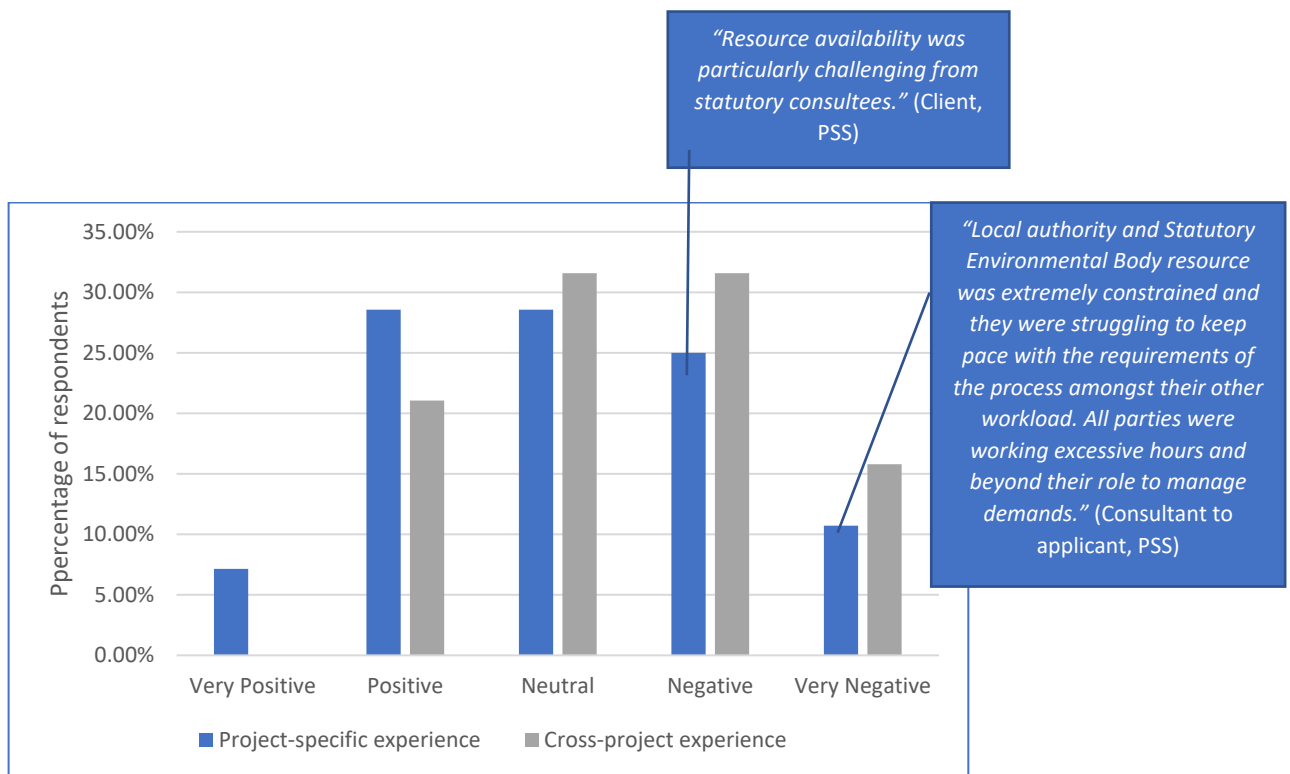
3.29 Figure 8 shows a range of views in response to the question about the adequacy of local authority resource to support DCO delivery. Again, those reporting their cross-project experience tended to be more negative on average.

Figure 8: Perceptions of the adequacy of local authority resource



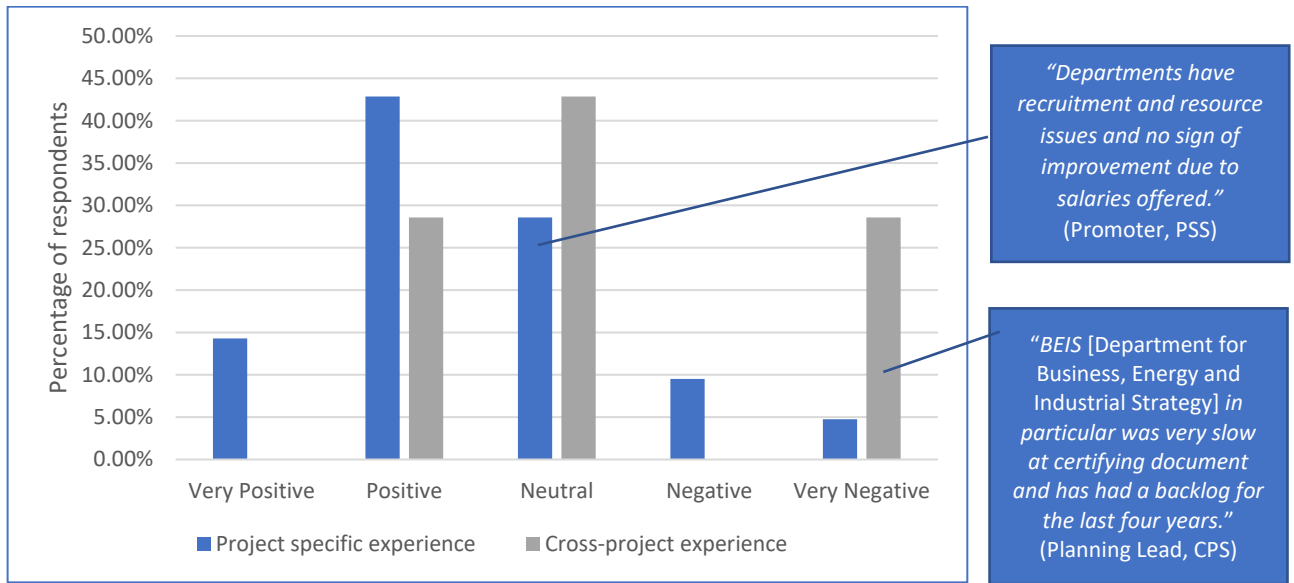
- 3.30 Where further observations were made here, negative comments were largely about resources, whereas positive observations about engagement with local authorities extended beyond the issue of resource and involved (1) working with local authorities with prior experience of working with a particular contractor, (2) good pre-existing relationships with a local authority enabling flexibility, (3) the benefits of working with a local authority with existing DCO experience, and (4) the benefit to a promoter of having someone in their own delivery team with prior local authority experience. Two participants emphatically observed: *“I cannot stress how well working with X authority, they managed the process so well and drove the behaviour of the whole team”* (Contracts manager / technical manager, PSS); and *“Local authorities and regulators were generally very responsive despite their resourcing challenges.”* (Client, PSS).
- 3.31 It was noted that on projects where there is prescribed resource (for example through a PPA, prescribed fees, or similar) and there is good familiarity with the project “the process is generally reasonable” (multiple roles, CPS).
- 3.32 Figure 9 also shows a range of views in respondents’ perceptions of the adequacy of resource in statutory bodies to support post consent delivery. Here, there is less variation between project specific and cross-project respondents. This may reflect the fact that statutory bodies are national organisations and there is therefore less evident opportunity for variation by project / local authority area (accepting of course that these organisations often have regional offices / officers).

Figure 9: Perceptions of the adequacy of statutory body resource



3.33 Figure 10 illustrates respondents' views on ease of securing certification of plans and documents from the Secretary of State. Here again, there was a tendency for those sharing their cross-project experience to be more negative. Very few additional comments were provided here, but some brief observations were made about the resources of particular departments and their relative 'slowness' to respond.

Figure 10: Experiences of getting certification of plans and documents from the Secretary of State



Routes to flexibility

3.34 As detailed in chapter 2, early research on DCO delivery has previously majored on the level of flexibility within DCOs to support delivery. The quote below illustrates that, for some respondents at least, matters of flexibility within consents remain pertinent to the debate about their effectiveness for delivery.

"Due to the rapid advancement of technology ... and challenging supply chain and economic environment we operate within, securing flexibility within the consent enables better financial, environmental and project outcomes as the project moves through pre-construction phase into construction." (Environmental Manager, CPS)

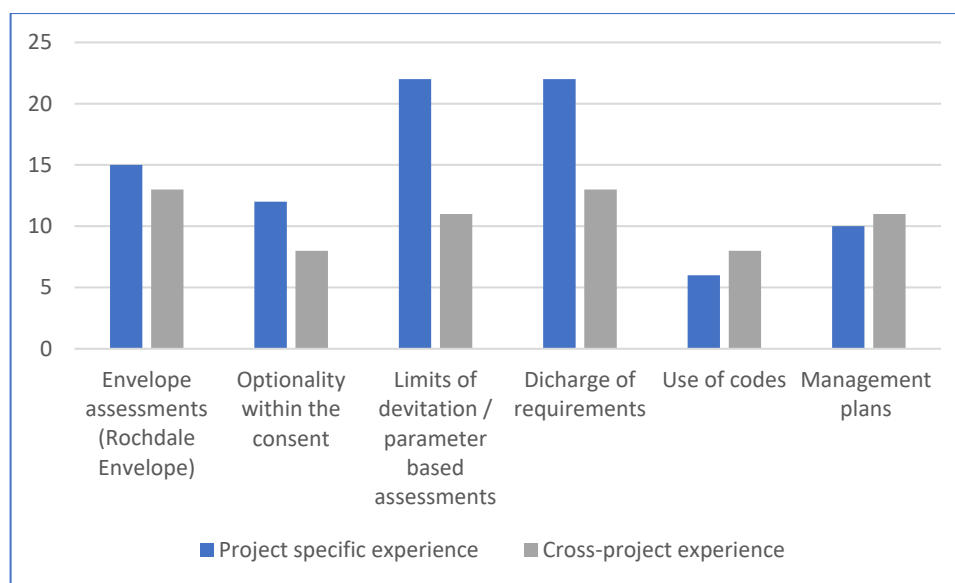
3.35 Participants were asked about their use of mechanisms within the DCO to enable post consent flexibility (including detailed design work) on their projects. The results are shown in Figure 11 and show a similar distribution of response across the two surveys.

3.36 One participant acknowledged their positive experience of several different routes to flexibility, but also that these vary in different cases:

"[effective use of routes to flexibility] depends entirely upon the developer you are working with, rather than the mechanisms themselves. I have had good experiences of implementing these mechanisms with both X and X ... I don't feel that the mechanisms would in any way be at fault,

but I could easily see how developers could take advantage of the mechanisms for their own ends.” (Town Planning Lead, CPS)

Figure 11: Use of mechanisms within the DCO to enable post consent flexibility



3.37 Nevertheless, as shown in Figure 11, the most common approaches were limits of deviation / parameter-based assessments and discharge of requirements. Within the project specific survey, participants focused their comments on the importance attached to limits of deviation, discharge of requirements and envelope assessments, although one praised their final design for being a hybrid of the two options included within the DCO:

“Envelopes and options were absolutely key to an efficient consenting and construction process. The long duration of the consenting process and developing technological environment makes these absolutely essential.” (Client, PSS)

“The envelope assessment and subsequent limits of deviation were a success on this project as they were defined as a result of several collaborative workshops.” (Contracts Manager / Technical manager, PSS)

“Wider limits of deviation, where landowners are engaged appropriately and agreements reached to mitigate impacts where possible (this is not consistent across projects), allow for a lower risk, lower cost, lower hassle (to promoter and landowners) delivery.” (Case Manager Land, PSS)

3.38 Detailed points were made about the benefits of limits of deviation, and envelope assessments in terms of: being able to construct and operate in different forms; allowing landscaping schemes to be designed in response to stakeholder engagement; optimising construction traffic management; responding to supply chain nuances; and ‘micro-siting’ once ground conditions surveys had been carried out.

3.39 Within the cross-project survey, participants referred to management plans as a “wide and effective use for flexibility” (Technical Specialist / Strategic Management, CPS) but with the emphasis on the importance of a consents manager within the contractor team, to ensure these

are used appropriately. One respondent suggested the need for greater learning on how management plans can be used for best effect.

3.40 However, one participant commented emphatically, “*we had them [routes to flexibility] all - but still not enough flexibility*” (Planning Strategy Manager, PSS), and “*in a number of cases the parameters secured were not sufficient to accommodate the changes necessary for the successful delivery of the project*” (Promoter / developer, PSS). Another noted that the EA had not been supportive of flexibility, with “*every bit hard fought*” (Project manager, PSS), and as a result observed that “*the biggest issue post consent were the changes and scope cuts required to bring the scheme costs back down*”.

Achieving change

3.41 One participant observed emphatically, “*here, almost ten years on [from the DCO being granted] and the project still will not be completed for another six years (estimate). Things are bound to change in that time.*” (Anonymous, CPS). Thus, participants in the project specific survey were asked to identify mechanisms they had used to achieve change to a DCO consent. These are detailed in Figure 12 below and show the use of non-material changes and the discharge of requirements as the marginally predominant mechanism for change.

Figure 12: Mechanisms used to achieve change to a DCO consent

Change route	Percentage of responses (project specific)
Non-material change	20.51%
Material change	3.85%
Discharge of requirements	20.51%
Application to the Local Planning Authority	16.67%
Implementation of management plans	15.38%
Update to plans and management plans that have to be finalised, submitted and approved	12.82%
No changes	10.26%

3.42 Participants in the project specific survey were asked to identify mechanisms they had used to achieve change to a DCO consent. These are detailed in Figure 12 below and show the use of non-material changes and the discharge of requirements as the marginally predominant mechanism for change.

3.43 The purpose of change was described by one participant succinctly as: “*to drive savings in cost, programme and improve quality*” (Contracts manager, technical manager, PSS). It is worth observing that these driving forces during the construction phase, appear somewhat a contrast to the consent phase with its focus on policy compliance, environmental assessment, consultation and land assembly. Changes sought covered a wide range of elements including:

- revisions to installation methods;
- changes to limits of deviation;

- alterations to capacity caps;
- access to land outside the DCO;
- updates to detailed designs;
- amendments to traffic management and construction phasing;
- additional haul roads;
- alterations to the layout of a footway and shared use footway/cycleway; and
- new access arrangements and the change of construction compound to site location to outside the order limits.

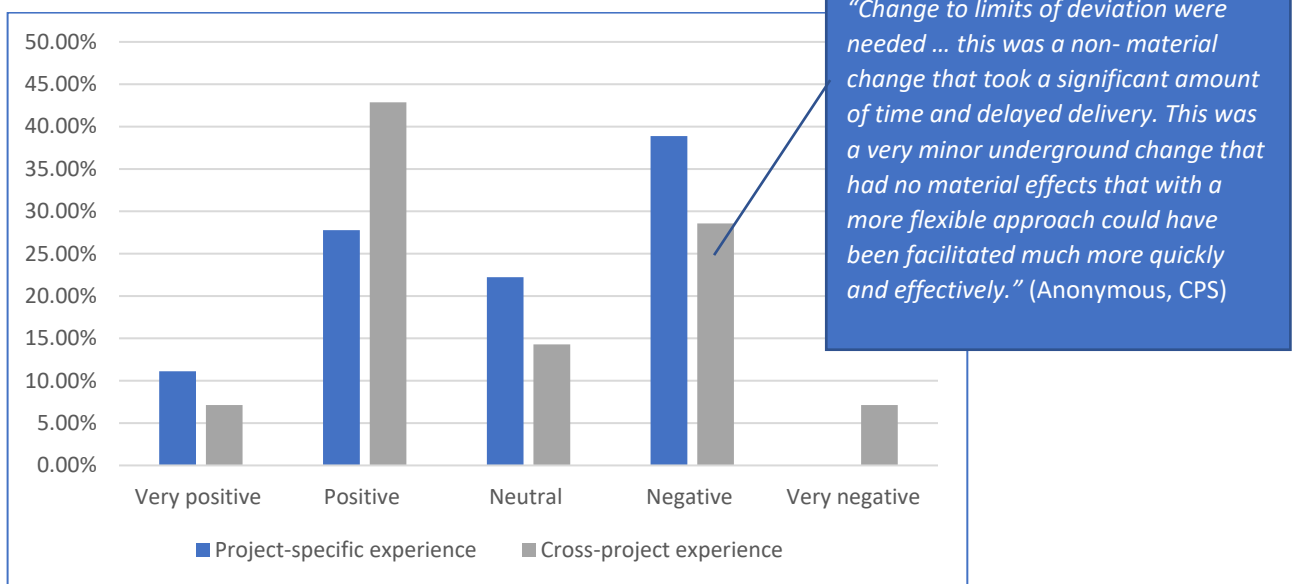
3.44 Cross-project respondents were also asked for examples of changes pursued, and how these were achieved. Highlighted were:

- discharge of requirements (where the respondent highlighted *“the importance of consultation with the relevant local authority on the need and benefits of change”*, DCO Manager);
- additional town and country planning applications (three mentions for minor changes, for an additional haul road, and transportation of spoil);
- a non-material change to limits of deviation to enable implementation of detailed design;
- a non-material change to extend the time limit on implementation; and
- a non-material change to change the scope of the project in terms of quantum and scale (but deemed to fall within the consented envelope).

3.45 One participant, submitting a significant amount of detail on a pragmatic but protracted approach to change management in a complex project (that for reasons of project anonymity is not detailed here), concluded their remarks with the observation, *“there has to be a better way than this!”* (Anonymous, PSS).

3.46 Participants of both surveys were asked to record their views on the non-material change process, in particular as shown in Figure 13.

Figure 13: Views on the non-material change process



- 3.47 Surprisingly few additional observations were provided to supplement participants' responses here, but it is interesting to note that negative experiences were largely about the delay caused to delivery by the requirement to pursue a non-material change, with one respondent commenting on *"too much unnecessary attention"* (Client, PSS) being applied to non-material changes and another *"they take a long time to prepare and get determined"* (Planning Strategy Manager, PSS). Some highlighted the lack of set timescales for decision making – *"timescales vary wildly from less than two weeks to over 18 months"* (Promoter/Developer, PSS) - in contrast to the tight timescales for examination. In one case, this was reported as resulting in the consent *"almost running out before the change was granted"* (Planning Lead, CPS).
- 3.48 Respondents were also asked about the use of **tailpiece requirements** as a route to post consent flexibility (tailpiece requirements being a mechanism inserted into a requirement providing for variation, for example through use of the wording 'unless otherwise approved in writing'). The majority of respondents either reported that they had no experience in the use of tailpieces, or did not know what they are. Whilst two commented emphatically that tailpieces had *"proved utterly critical to project delivery"* (Consents Manager / Project Delivery, PSS), and *"a cornerstone of flexibility and that has significantly reduced programme delays"* (Project Delivery Director, PSS) others commented with some circumspection highlighting the extensive evidence needed to gain approval and the cost and time required to demonstrate no new or materially different effects. It is worth noting that the Planning Inspectorate (PINS) Advice Note 15 (version 2 published in 2018)¹³ now advises that tailpiece requirements are *not* acceptable because they may allow for a change in the scope of the authorised development.
- 3.49 Importantly, **nearly 50% of participants in both surveys reported that they had identified beneficial economic, social, environmental or technological changes that were not environmentally worse than the DCO consent**, but which were not pursued because of the time, resources, uncertainty and potential delay associated with seeking post consent changes:
- "value engineering opportunities were identified towards the end of the detailed design process that could have resulted in substantial cost savings but ... [there was] insufficient time to progress non-material applications post consent."* (DCO lead, PSS)
- 3.50 In terms of impact of not pursuing these changes, observations were largely framed in financial terms, suggesting that *"some efficiencies including in cost and time could not be implemented"* (Consents Manager, PSS) and that *"the impact of changing DCO/new consents/TCPAs etc. was too risky / costly so even minor benefits in some areas could not be achieved"* (Consents Manager, PSS).
- 3.51 Some of the specific changes that were not pursued included:
- amendments to compensation requirements;
 - order limits boundary changes;
 - additional land (mentioned three times);
 - new access arrangements not captured in the order limits (mentioned twice);

¹³ <https://infrastructure.planninginspectorate.gov.uk/legislation-and-advice/advice-notes/advice-note-15/>

- changes to the position of small buildings;
- change to a bridge;
- retention of a cofferdam;
- removal of an acoustic fish deterrent; and
- access to working areas outside the DCO limits.

3.52 It is clear, that a number of these changes were not pursued partly because their potential impacts had not been previously assessed and therefore any change would require further environmental information and assessment. There remains an open question about the extent to which these changes could have been achieved if there had been greater anticipation of necessary flexibility at the point of consent, or whether these desired changes could not have been foreseen until delivery. **Nine projects reported having undeliverable commitments within their DCO.** For reasons of project anonymity these are not listed, but two respondents reported in general terms, *“there are various”* (Town Planning Lead, PSS), *“not yet but there will be some!”* (Project Delivery Director, PSS). One respondent provided a list covering a wide range of aspects of the DCO which included design and environmental issues:

“Environmental statement compliance processes; certain design principles; compliance with the limits of deviation; full compliance with the Code of Construction Practice; compliance with the Flood Risk Assessment; compliance with a number of the protective provisions.” (Consents Manager, PSS).

Community engagement

3.53 It is often during the construction of projects that communities experience the greatest impact. Whilst previous research has focussed considerable effort in understanding community engagement in pre-application and examination¹⁴, less attention has been focussed on community engagement post consent.

3.54 The reporting of community engagement was, perhaps unsurprisingly, in general terms largely positive across both surveys:

“Engagement with communities generally improves post consent as the project has then become a neighbour and has a bigger resource pool to support the activities. In my experience, this is generally nothing to do with the consent, rather ‘good practice’.” (Environmental Compliance / DCO Manager, CPS)

“My experience is that communities are generally well engaged post consent, but usually in terms of how construction is proceeding rather than relevance to the consented DCO.” (Project Management and DCO Manager, CPS)

3.55 However, there was a strong sense within the cross-project survey that the level and nature of engagement was very client, contractor and context dependent:

¹⁴ See for example, Natarajan, L., Lock, S.J., Rydin, Y. and Lee, M., 2019. Participatory planning and major infrastructure: experiences in REI NSIP regulation. *Town Planning Review*, 90(2), pp.117-138.

“Mixed. Community forums with independent chairs are a good vehicle for the largest projects. Contractors are very varied in practice and approach. The best keep engaged and involved.” (Anonymous, CPS)

“This is a very mixed picture - promoters that have been exemplary in other respects can be reluctant or refuse to set up adequate liaison during construction.” (Technical specialist and strategic management, CPS)

- 3.56 A very wide range of community engagement activities were described as taking place post consent. Some respondents provided full and detailed descriptions of activities, including:

“Newsletter, community events, mail drops, community fund, helpline, liaison officers from contractors and clients, skills workshops, charitable donations, local supply chain fairs, sponsorships, school visits, teaching packs, local school STEM funding.” (Client, PSS)

The level of detail recorded here was closely correlated with the scale of the project, with one of the largest projects reporting a level of detail including *“text message alerts to communities when large loads are anticipated”* (Promoter/developer, PSS). Several projects noted having community liaison managers or stakeholder communications managers, and nearly all projects reported some form of information sharing through newsletters, website updates and social media. Some listed detailed programmes of liaison group meetings, whilst others mentioned attendance at parish council meetings and other local groups. One mentioned the use of external communications specialists to support community engagement.

- 3.57 Asked in the project-specific survey whether these activities were prescribed in the DCO, eight respondents simply said ‘no’, with the rest saying either ‘yes’ or ‘yes-partial’. One respondent reported that:

“There was nothing formal through the DCO. But the project team and contractor did engage well, for example a “welly walk” across the route once under construction.” (Promoter, project management team, PSS)

- 3.58 The following elements of DCOs were specifically highlighted as the place where community engagement was detailed showing a high level of variability in practice:

- Management plans (three generic mentions);
- S106 agreements (one mention);
- Construction Management Plans (four mentions);
- Register of environmental actions and commitments (one mention);
- Community engagement plan discharged under requirements (one mention);
- Community engagement / liaison plans (two mentions);
- Pre-commencement requirement to agree an information dissemination scheme (one mention).

Desired changes to the DCO consenting process

- 3.59 Respondents to the project-specific survey were asked to suggest any change(s) to the DCO consenting process that would have better supported the implementation of their DCO, and if on reflection there was anything they would have drafted differently in the DCO. In terms of process

improvements there was generalised support expressed for reductions in the amount of paperwork and a desire for increased digitalisation. A number of respondents referred to the need to 'reality-check' commitments made at examination to interested parties, with those with delivery experience to understand their implications for delivery and ensure compatibility with the wider constraints and obligations of the DCO. Similarly, some questions were raised about the weight given to some stakeholder comments in the design process. Noteworthy is that one participant mentioned the potential benefit of "*a guide to DCO implementation for contractors and communities*" (Anonymous, CPS)

3.60 Most participants focused, however, on aspects where drafting may have aided further flexibility during construction:

- Articles allowing for more flexibility, for example in relation to access;
- More flexibility for changes to DCO limits where a better solution or route for construction is outside limits;
- Less land requirement specificity (more in line with Transport and Works Orders, noting corollary need for landowner engagement over the long term);
- Working hours exceptions for a specific activity;
- Less emphasis on provisions, secondary consents and having to agree aspects with interested parties;
- Relaxation of restrictions on unavoidable nightworks;
- Less prescription in site-specific plans;
- Less prescription in vegetation retention and removal;
- More flexibility in the approach to parameters for smaller, less significant buildings to allow for adaptation/amendment.

3.61 The cross-project survey asked respondents what changes they would like to see to the DCO policy, consenting and delivery process in order to better support project implementation. Responses here were relatively limited, and are summarised below, in decreasing order of frequency of mention:

- Increase in stakeholder resource to manage volume of DCO applications and implementation (increasing ability to respond within timescales) / greater support for local authorities;
- A more defined approach to post consent change (either material or non-material) including suggestions of a quicker process and of set timescales and requirements;
- Greater breadth of scope for change / more flexibility;
- Updated NPSs to allow consideration of the latest government policy in DCO applications;
- Better understanding of the whole project life span, from DCO application through delivery to operation;
- Shorter examination periods for less complex schemes;
- Better engagement with utility providers to allow protective provisions to be agreed at an earlier stage;
- An outline scheme of post consent discharging and community engagement;
- A shorter length for DCO documentation;

- Consideration to the interface / overlap of multiple DCOs and how they are managed to ensure no one project impedes another;
- Attention to addressing the high workload involved in DCO consent and implementation.

Survey conclusions

- 3.62 The survey revealed a complex, mixed picture which is perhaps not surprising given the nature of projects, their variability and their different stage in delivery. Indeed, respondents tended to be more positive looking back on a project than when they were still in the process of construction. The headline overall finding is that the majority of respondents were either neutral or positive about their experience of moving from the DCO to construction. This is backed-up by evidence of significant positive experience of project implementation, with promoters tending to acknowledge the parameters of the PA 2008 consenting regime and their ability to work within them. There was no sense that a major overhaul of the consenting regime is needed. Instead, promoters and clients are learning how to ensure that delivery and implementation are appropriately accounted for in DCOs. Negative experiences tended to reflect particular issues around projects that were not easily anticipated or where the project management team might have taken a different approach (for example, moving too quickly to construction, or failure or inability to engage sufficiently with contractors earlier enough in the process). Respondents were generally positive about the value and use of flexibility mechanisms such as limits of deviation and parameter-based assessments.
- 3.63 However, the survey demonstrated that there are some key areas where elements of the examination process and drafting of DCOs could be better aligned with the challenges of delivery and implementation. Indeed, participants highlighted several areas where the DCO might have been more flexible or more responsive to the challenges of delivery and implementation. For example, nearly 50% of participants reported detailed examples of where potentially beneficial post consent changes were not pursued because of the time, complexity, expense and delay in seeking those changes. It is clear that post consent changes are largely still only requested where they are deemed *necessary* rather than *desirable*.
- 3.64 Furthermore, whilst it was clear that promoters and their teams have positive experiences to report of their post consent engagement with key stakeholders, particularly local authorities, the resourcing of key organisations with important post consent roles, remains an issue for delivery. The need for further consents and licenses post consent is causing construction delays.
- 3.65 This then forms the backdrop for detailed exploration through six in-depth DCO project case studies below.

4. Case studies

Background and purpose

4.1. Six case studies were carried out to provide **in-depth and project specific insight** into scheme implementation issues and key learning to support effective delivery of subsequent infrastructure projects. The case studies chosen are detailed in the table below and shown on Map 1. All case studies were either delivered and operational, or at least partially under construction, and were chosen from a long list of shortlisted schemes to collectively ensure coverage of the following criteria:

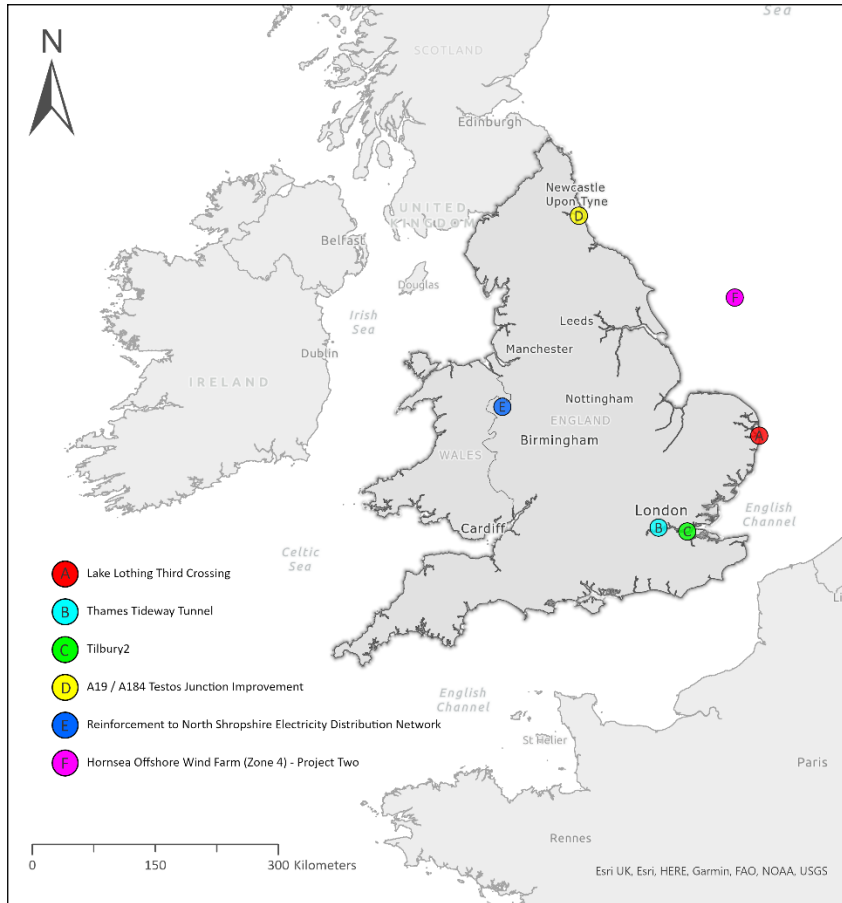
- Schemes with post consent changes (including non-material changes)
- A range of scheme types
- A range of geographies
- A range of types of promoters

Table 3 - Case study details

Project Name	Case Study A	Case Study B	Case Study C	Case Study D	Case Study E	Case Study F
	Lake Lothing (Lowestoft) Third Crossing (Gull Wing)	Thames Water Utilities Limited (Thames Tideway Tunnel)	Port of Tilbury (Expansion) – Tilbury2	A19/A184 Testo’s Junction Improvement	Reinforcement to the North Shropshire Electricity Distribution Network	Hornsea Two Offshore Wind Farm
Infrastructure Type	Highway river crossing	Waste water	Port facility	Replacement/upgrading of a road junction	Over-head power lines	Off-shore wind farm
Location	Lowestoft, Suffolk	London	London	South Tyneside	Shropshire	55 miles off the East Yorkshire Coast
Promoter	Suffolk County Council	Thames Water	Port of Tilbury	National Highways (formerly Highways England)	Scottish Power	Orsted
Construction Stage	Under construction	Under Construction	Completed and operational	Completed and operational	Completed and operational	Completed and operational

4.2. Each case study comprised documentary review and interviews with between three and ten professionals engaged in the delivery process, depending on the complexity of the project, and interviewee availability. Across the six case studies 30 interviews were carried out in total. The interviewee list for each case study was discussed with the promoter team, and across the case studies as a whole and included: project promoters / project managers / programme directors; consents managers / planning managers; external advisors / designers; contractors or their representatives; local planning authority leads dealing with discharge of requirements and plans / community engagement; and community forum chairs.

Map 1 - Case study locations



- 4.3. The write-up represents the interpretation of the research team. Nevertheless, a draft of each case study was written-up and discussed with the promoter team for confirmation that the case study provides a fair reflection of their delivery experience, albeit that participants acknowledged the possibility of further contrasting perspectives. For reasons of anonymity, individual interviewees are not directly identified. Each case study appears in full as a supplementary report available from the NIPA website, under its INSIGHTS section¹⁵, and collectively they evidence the huge variety of issues emerging at delivery and their resolution. Importantly, there are some significant contrasts across the case studies in terms of the hurdles faced, the duration of the delivery phase, the composition of the promoter team and the differences between linear and single site projects. Consequently, the individual narrative of each case study is distinct.
- 4.4. Here, we provide some over-arching themes and key learning from across these case studies. Under each of the key findings, individual case studies are signposted for follow up on an element of detailed exposition either in the pen-portrait of each case study that follows, or the more detailed reporting in the supplementary report.

¹⁵ <https://www.nipa-uk.org/>

Case study key findings

Key finding 1	Case study signpost
<p>There is a strong sense of the DCO process being preferred to other consenting regimes. Here, the certainty of decision making and clarity of the DCO were particularly highlighted.</p> <p>Overall ease of delivery of the DCO as granted was reported as positive, but with some contrasting views of individuals within case studies, especially Case Study B.</p>	<p>Case Study B for diverging views between promoter and contractor on ease of delivery.</p> <p>Case Study C for praise of DCO clarity and ease of overall deliverability ‘getting they DCO they wanted’.</p> <p>Case Study E for questions about the ‘one-size’ fits all approach to DCOs, and the challenges for linear schemes.</p>
Key finding 2	Case study signpost
<p>All case studies reported having achieved a broadly acceptable balance between flexibility and certainty within their DCO. Case Study B was an exception, where divergent views between the promoter and contractor team on levels of flexibility were reported. Whilst there were examples across most case studies where greater flexibility would have been an aid to delivery, additional flexibility within DCOs was also associated with incurring greater uncertainty, delay and additional costs.</p> <p>A variety of tools were included within the case study DCOs to afford a limited degree of flexibility at delivery stage within the DCO as granted.</p>	<p>Case Study B on the use of <i>tailpiece</i> clauses which permit variations of approach within the provisions of the DCO and <i>parameter plans</i> which outline indicative development sites.</p> <p>Case Studies B, C and F on the use of the <i>Rochdale Envelope</i> which provides for adaptability of design options in the absence of final details.</p> <p>Case Studies B and E on the importance of <i>limits of deviation</i> for framing the route of linear projects.</p> <p>Case Studies D and F for the benefits of anticipating where flexibility might be needed in construction, and the inclusion of options. In case study D, this avoided the need for significant post consent change.</p>

Key finding 3	Case study signpost
<p>All case studies reported strong partnership working with colleagues in their local planning authorities. This was perceived as delivering a range of benefits.</p> <p>The importance of the resourcing key interested parties – particularly those involved in compliance – was seen as essential in order for promoters to hold contractors to account for key requirements.</p>	<p>Case Study A for a pragmatic approach to the discharge of requirements, including partial discharge to allow construction commencement.</p> <p>Case Study B for the challenge of engagement with multiple local authorities on a linear project.</p> <p>Case Studies D and E for the value of close alignment between the strategic aims of the project and those of the host local authority.</p> <p>Case Study B for the practice of the promoter providing funding to embed regulatory body officers within the project management team and dedicated local planning authority contact.</p> <p>Case Study F for challenges associated with the requirement for post consent licenses from statutory agencies.</p>

Key finding 4	Case study signpost
<p>The stage at which the main delivery contractor was engaged varied considerably across the case studies. In general, the benefits of contractors being engaged pre-consent were acknowledged – particularly in relation to key finding 9 – but there was some reticence about the cost of this, both in terms of making this engagement meaningful, and the possibility of being ‘held to ransom’ for the future delivery of key features designed into the DCO.</p>	<p>Case Study A for the challenges of changing contractor post consent and the acknowledged benefits of early engagement between promoter, designer and contractor to help achieve the optimal balance within DCOs between certainty and flexibility, particularly on land-take.</p> <p>Case Study D for the benefits of a contractor-led DCO application.</p> <p>Case Study E for the challenges of ensuring continuity of design at application and post consent stages.</p>

<p>Key finding 5</p>	<p>Case study signpost</p>
<p>The benefits of a robust approach to project management and staff continuity pre and post consent was evident in all case studies and was universally seen as a fundamental pre-requisite of successful and speedy delivery. This was achieved in different ways across the case studies.</p>	<p>Case Study C for the strong team approach, including offer of training support to others.</p> <p>Case Study B for an embedded in-house staff team pre- and post consent.</p> <p>Case Study D for prior learning shaping approach to DCO to support constructability.</p> <p>Case Study E for porting of entire pre-consent promoter team to post consent.</p>
<p>Key finding 6</p>	<p>Case study signpost</p>
<p>All case studies highlighted the value of prior DCO experience in expediting effective delivery. Where promoters could draw on this experience, this was highlighted as impacting their approach, particularly in terms of anticipating likely delivery challenges and building these into the DCO.</p> <p>However, perhaps equally significant was <i>impact of lack of knowledge of the DCO process</i> amongst stakeholders and contractors, which caused substantial delays in two case studies.</p>	<p>Case Study A for construction delays caused by lack of DCO experience in the contractor team.</p> <p>Case Study D for the benefits of a contractor led DCO.</p> <p>Case Study E for challenges resulting from lack of knowledge of DCOs in the wider community, including key professionals.</p>
<p>Key finding 7</p>	<p>Case study signpost</p>
<p>Large infrastructure projects are typically characterised by a very long lead time, often many years, that precedes the formal DCO application. The nature and scope of inter-organisation relationships and developmental work pre-consent was, in many cases, a crucial determinant of successful delivery post consent.</p>	<p>Case Study C for the implications of the non-engagement of statutory consultees prior to DCO application.</p> <p>Case Study D on the advantages of long-term engagement in developmental work in large infrastructure projects.</p>

	Case Study E on the importance of stakeholder engagement and community involvement
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Key finding 8	Case study signpost
<p>Consent for temporary land uses during construction was a theme in a number of case studies – either because the need for temporary uses (e.g. plant storage) land had been clearly anticipated (Case Study D), or because lack of temporary access to land caused delivery challenges.</p> <p>Here, some participants reflected on the need to provide for more land in the DCO than is likely to be needed. Others acknowledged the challenge of achieving a balance between taking too much land and paying more compensation to landowners and taking too little and constraining contractors. The judgement in any one case was seen as dependent on the level of clarity a designer has pre-consent on the access and temporary works required for the construction of their design.</p>	<p>Case Study A for the decision not to seek a change to the order limits of the DCO because of the requirements for further environmental information and assessment and consequential delays in programme and cost.</p> <p>Case Study D for clear anticipation of the need for temporary land.</p> <p>Case Study E for resolution of land issues via a TCPA application.</p>

Key finding 9	Case study signpost
<p>Some case studies experienced significant “constructability issues”; that is, unanticipated technical challenges prevented certain consented works from being delivered as envisaged and environmentally tested at examination. For reasons of commercial sensitivity, some examples are excluded from case study write-up. Building in greater understanding of the technical feasibility of the DCO into the consenting process including early engagement with contractors was a strong theme in certain case studies.</p>	<p>Case Study A for the value of incorporating risk and uncertainty related to construction methodology, logistics and temporary works into the DCO.</p> <p>Case Study B for a non-material post consent change in relation to construction technology for marine piling.</p> <p>Case Study F for two non-material changes post consent.</p>

Key finding 10	Case study signpost
<p>A wide variety of learning applicable to other future major infrastructure projects, whatever the sector or location, was shared across the case studies. The five lessons that were expressed most frequently were:</p>	<p>Each case study has a key learning section as its conclusion. These provide important points of detail, and additional key lessons not summarised under this key finding.</p>

- The value of contractor engagement at the DCO stage in anticipating construction issues;
- The value of thinking pro-actively about risk, in order to make best use of options for flexibility within DCOs;
- The value of strong culture of team working. Rolling forward the same, or very similar team to oversee delivery helps with knowledge transfer and continuity of understanding about DCOs;
- The benefit of working with well-resourced and experienced host local authorities and the value of proactively supporting a local authority where either experience or resource is lacking; and
- The value of strong alignment between the need case for the DCO with the wider strategic objectives of the host local authority (and support within the wider community).

Case Study A – Lake Lothing Third Crossing, Lowestoft (Gull Wing)

“Once you've got your DCO issued and you're in contract where contractor time is money, you haven't really got the time as a client to go back, even if technically you could do it.” (Project Promoter)

The project and its delivery narrative

The Gull Wing, Lowestoft, is an iconic rolling bascule lifting bridge to provide a third crossing over Lake Lothing and improve connections between the north and south of Lowestoft. Consented in April 2020, the bridge is due to be completed in 2024. It is promoted and project managed by Suffolk County Council. The project has experienced some challenges in moving from consent to delivery because of its unique design, the lack of comparator projects to learn from, the change in contractor team and unforeseen tasks, such as the possibility of nesting gulls in buildings to be demolished soon in the construction phase. The new contractor brought in had limited prior experience of delivering DCO projects and there was an initial period of learning and adjustment. Nevertheless, project delivery has been relatively smooth and the case study explores how this has been successfully achieved despite the challenges faced by the project.

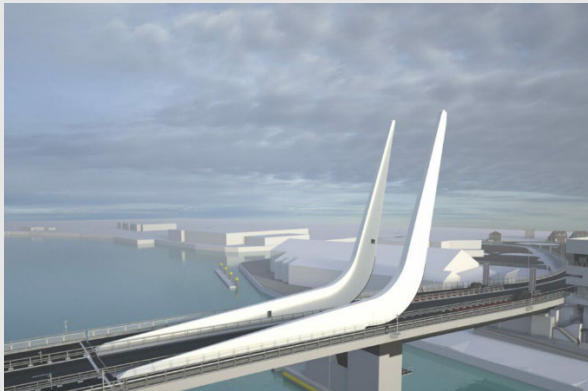


Image 1 – 3D design impression (Courtesy of Suffolk County Council)

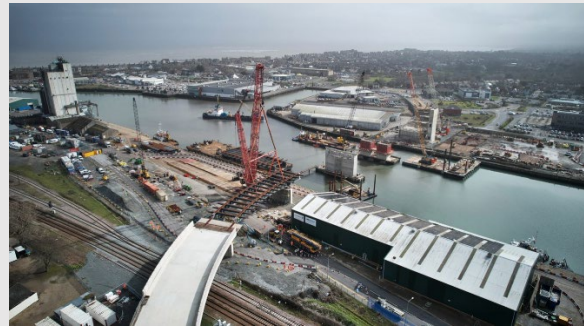


Image 2 – construction image (Courtesy of Suffolk County Council)

The relationship between the examination, DCO and delivery

The DCO as granted was seen as comprehensive with the examination process viewed positively in relation to working through important details. In particular, clearly defined horizontal and vertical limits of deviation within the DCO were praised for allowing sufficient flexibility for the development of the final design, aided by the use of a Design Guidance Manual, the final version of which was signed off as a requirement. Issues have only arisen with the DCO itself in relation to space for temporary works.

Managing change

The DCO's limits were designed to accommodate space not only for the permanent works but also for temporary works, contractor's access and storage, and general working areas. This required a detailed understanding of how the works would be carried out and generally this has worked out well. Where the DCO's limits have been deemed tight, these issues largely arose because of the change of

contractor and their preferences. Changes to the DCO were not pursued because of the requirement for further environmental assessment within a complex marine environment, the timescales involved and the programme implications. Whilst the delivery team would have preferentially extended the Order limits boundary, the contractor and promoter team have nevertheless been able to find solutions within the constraints of the DCO without major programme delays.

Separate TCPA applications were used to permit some associated development not consented for within the DCO, for a temporary car park and some promotion hoardings.

Delivery success factors

What underpins the effective delivery of this project is clear leadership and project management to overcome some of the challenges, including DCO compliance sessions by the promoter to support the contractor in understanding the terms of the DCO. Continuity of key staff members from the pre-consent team to the post-consent team was clearly important, particularly with a project director appointed post-consent. There were particularly good working relationships between the promoter team and planning colleagues with the County Council and with East Suffolk District Council, enabling the effective and pragmatic discharge of requirements. This included reaching agreements with landowners during the DCO process to ensure their support during construction. There was a particular need to work closely with the Harbour Authority (also the Port Authority and Operator) to ensure the long-term future of the port's operations, and thus ensure that a bridge intended to support economic development did not weaken the economic infrastructure of the town. There was a clear communication and community engagement strategy, with an appointed communications manager. This was essential to constructing in a complex urban and marine environment, with residential properties and businesses adjacent to the works site, and the resulting requirement for the careful monitoring and reporting of construction noise, vibration and dust.

Key learning

Building knowledge of the construction process early in the DCO process is essential to enable the right balance to be achieved in the level of detail needed to assess impact and an appropriate level of flexibility to enable responsiveness during construction. In part, this is about the value of incorporating risk and uncertainty related to construction methodology, logistics and temporary works into the DCO process, as the programme cost of revisiting and amending is high once construction is underway. In addition, contractors would benefit from greater awareness of the DCO process, and industry wide support is needed to support that learning.

Case Study B - Thames Tideway Tunnel Waste Water Scheme, London

“Our DCO has given us the flexibility we need and we’re delivering it. We’re getting close to the end of the job now and there’s been nothing in the consent that’s really prevented us from delivering the works.” (Project Promoter)

The project and its delivery narrative

The Thames Tideway Tunnel Waste Water Scheme (TTT) is an extremely complex scheme involving construction of a 25km ‘super-sewer’ for London, beneath the River Thames and spanning 14 London boroughs, some of which were initially opposed to the project. The scheme was consented on 12th September 2014, construction commenced in 2015, with completion anticipated in 2025. To date (June 2023), there have been five non-material amendments.

Bazalgette Tunnel Limited (BTL) (trading as Tideway) and Thames Water Utilities Limited (TWUL) are the infrastructure providers. The route is divided into three zones: west; central; and east, each having its own team of delivery contractors with responsibility for discharging requirements and obtaining secondary consents.

The scheme has been very complex to deliver due to the environments within which it is being constructed and the broad range of stakeholders with a statutory decision-making interest, particularly in respect of discharging requirements and secondary consents under protective provisions. The scheme therefore required careful project management, and extensive engagement with a wide range of stakeholders, employing a proactive approach to using the DCO’s flexibility mechanisms to enable design changes during delivery.



Image 3 - Thames Tideway Tunnel: Secondary lining the main Super Sewer tunnel beneath Blackfriars Bridge (Courtesy of Tideway)



Image 4 - Blackfriars Bridge Foreshore showing surrounding cofferdam (Courtesy of Tideway)

The relationship between the examination, DCO and delivery

Implementing the DCO has proved to be exceedingly complicated and resource intensive in terms of time, expertise and cost. Only around a third of the scheme was designed by the time of the DCO examination. The remainder was left for the contractors, once appointed, to decide once ground conditions / construction techniques were established at each location, and to then obtain the necessary consents and discharge the requirements. Some on-the-ground factors came to light once

construction commenced, resulting in changes being required to the DCO via non-material amendments. Despite the significant challenges in design and construction, the DCO provided an effective framework for delivery because of flexibility mechanisms such as ‘approximate’ dimensions, parameter plans/limits of deviation and ‘unless otherwise agreed’ tailpieces.

There were contrasting opinions expressed on the appropriateness and efficacy of the DCO wording. Some considered that, *“our DCO has given us the flexibility we need and we’re delivering it”* (Interview 1), *“the toolkits that everybody uses are all in Thames Tideway Tunnel DCO”* (Interview 9), and *“the project was flexible enough to allow for delivery”* (Interview 5). This sits in stark contrast to those who felt the consent *“has been proven to be quite a poor DCO in the round”* (Interview 8) due to it needing so many secondary consents, *“which has ended up hindering delivery”* (Interview 7).

Managing change

A range of changes were made using the non-material amendment (NMA) process for specific sites: revisions to shafts; substitution of a revised site works parameter plan; realignment of a short connection tunnel; the correction of an anomaly on an approved parameter plan; and allowing a historic vessel to remain in its current location. None of the amendments were considered to introduce any new significant environmental effects or materially different environmental effects beyond those already assessed within the original Environmental Statement (ES). The amendment applications were largely uncontroversial and overall, the NMA process *“worked pretty well for the types of changes we were doing, which were sort of tweaks, because you had certainty about decision time”* (Interview 1).

In contrast, discharging the requirements and secondary consents presented challenges for contractors, reflecting the complexity of working with multiple regulatory bodies requiring differing amounts of supporting information. The time taken for responses was also an issue. The formal process for reaching ‘agreement’ on secondary consents from protective provisions bodies allowed for conditions to be used which sometimes required agreement from private non-statutory third parties. This had the potential to create a ‘ransom hold’ over the project should third parties withhold their permission.

A *“unique”* (Interview 9) two-stage approach to discharging requirements was set out (in Schedule 17 of the DCO) to give local planning authorities (LPAs) foresight of draft material prior to its formal submission for discharge:

1. In stage one, a draft application is submitted to the LPA for comment;
2. In stage two, a formal application is submitted and the LPA has eight weeks to determine it.

Not all parties considered this to be successful. Despite this standardised process, contractors reported that LPAs *“seem to be operating slightly different approaches”* (Interview 4) *“depending on their political leanings or their objection to the scheme”* (Interview 3). Whilst an appeal process is built-in to the discharge process, in practice this mechanism was never used because of the uncertainty and risk associated with it.

There were a broad range of experiences of working with contractors, statutory bodies and other parties. Some LPAs were considered easier to engage with than others in terms of timely responses and the amount of information requested.

Delivery success factors

The TTT is an extremely complex project and its effective delivery reflected a proactive approach to using flexibility mechanisms in the DCO to enable design changes in delivery. The project also required careful and engaged project management and extensive engagement with a wide range of local authorities, stakeholders and statutory bodies.

Tideway's in-house consents team (initially created for the DCO for examination) was rolled forward to oversee delivery, with a layered process of programme managers (to oversee the whole project) and project managers (for each of the three zones). A regular, quarterly, stakeholder forum led by an independent Chair, was important in facilitating open discussion between the relevant London authorities, Tideway staff and other key stakeholders.

Communication between parties and building good working relations over a long period of time, was "*hugely important*" (Interview 9) in resolving issues that arose in discharging requirements and other consents. Maintaining channels of communication with all stakeholders throughout the project, pre and post consent has been important.

Key learning

When delivering a linear infrastructure project such as the TTT, ensuring sufficient flexibility whilst providing certainty in terms of environmental impacts is essential. Providing detailed design at the DCO stage should be avoided unless it is checked for constructability by those with practical on-the-ground expertise. It is important not to underestimate the number of submissions that will be needed under the DCO or the level of detail that will be required to discharge the requirements and other approvals. DCOs should be subject to as few plans and consents/requirements needing subsequent approval as possible and practicable.

Case Study C – Port of Tilbury (Expansion), Tilbury2

“There hasn't been anything that we have had to change in order to deliver what we wanted to deliver in the first instance.” (Promoter team).

The project and its delivery narrative

Tilbury2 Port Scheme, London is a new port terminal developed by the Port of Tilbury London and built on the site of the disused Tilbury power station in Essex, South-East England. It comprises a ‘roll-on/roll-off’ terminal for container import and export, a construction materials and aggregates (CMAT) terminal for handling bulk construction materials and additional storage capacity for goods and vehicles. Tilbury2 is located in Thurrock district, facing Gravesham on the other side of the river Thames. The project progressed smoothly from the point of consent to construction, and was operational in under three years from the granting of the DCO. The project benefited from a strong promoter team which endured pre and post consent, and because of the long history of port operations in the area. The pre-consent phase was deemed more problematic because of a lack of timely and constructive engagement from statutory bodies.



Image 5 – Tilbury2 in construction (Courtesy of Tilbury Port)

The relationship between the examination, DCO and delivery

The DCO process and the DCO as granted were seen as the right tools to take forward the development and having the right balance between certainty and flexibility to ensure swift delivery, but the examination process was seen as unnecessarily drawn out because of the behaviour of statutory bodies. They were viewed by the project promoter and their consultant team as not meaningfully engaging at the right stage of the project and making unsubstantiated claims which the promoter then had to repudiate. This was during the consultation stage and at examination. Statutory bodies were considered to have not engaged in a timely manner and having insufficient evidence to support their perspectives when they disagreed with assessments made by the

developer. Interviewees felt that the ExA should be given more power/duties to enforce more timely and cooperative behaviour from statutory consultees.

However, such problems pre-consent and during examination did not lead to any on-going difficulties. Following consent, delivery was subsequently smooth and swift with the Port open three years after the granting of the DCO despite construction challenges relating to the pandemic.

Managing change

The main tool of flexibility in this was the 'Rochdale Envelope' (alongside some of the Permitted Development Rights that ports have). It set the limits of maximum heights and the applicant team were very thorough in making sure that these limits covered a 'worst case scenario', both for heights, but also as a general principal in all their modelling assumptions (i.e. for noise, dust and environmental damage). This level of flexibility was useful for both the developer and the local authorities. By drawing on the most conservative estimates, the applicant was able to demonstrate that even in the worst-case scenario, the development would not go beyond what had been established as the legitimate scope of disturbance. Monitoring was not only set up within these envelope limits, but with clauses to allow both Thurrock and Gravesham councils to be involved in this monitoring, to address concerns raised by the latter at examination.

Delivery success factors

Staff continuity in the promoter team and ongoing good working relationships with the host local authority underpinned the success of this case, both in maintaining momentum and focus pre-consent and delivering rapidly. Most interviewees (who represented key members of the promoter team) had been involved long before the DCO process started, with discussion commencing with consultants in 2015; including discussion of whether the application would need a DCO rather than an alternative planning permission. Key players in the Port of Tilbury, London were involved even earlier and are still involved today. This allowed knowledge to be shared and for the team to give consistent answers about their approach.

This consistent, locally grounded team approach also impacted on the working relationship with the main discharging authority (Thurrock Council). The developer team provided Thurrock Council with bespoke training on the DCO process as this was the first one in their jurisdiction. This not only built the skills of the local authority team, but also built relationships between the two parties and key individuals as it was the planning consultants for Tilbury2 project team who delivered the training. This both built trust and aided the smooth resolution of any issues.

Key learning

Connections between people and place are important for smooth delivery. The Tilbury 2 team had a long-shared working history with each other, and the Port of Tilbury as an organisation has been an employer in the local area for more than 100 years. These people and place-based connections established a level of coherence and legitimacy for the development which allowed the project to persevere through pre-consent difficulties. With this as a backdrop (which clearly cannot be applicable for all types of NSIPs) the DCO provided a useful tool for delivery which streamlined permissions and gave more resource (through a PPA) for pre-commencement sign-offs.

Case Study D – A19 / Testo’s Junction Improvement, South Tyneside

“With Testo’s we were still establishing the DCO role. We’ve certainly learned lessons from Testo’s in many ways. The way they [Costain and the examiner] dealt with the flexibility and options was a precedent for future schemes.” (Interview 2)

The project and its delivery narrative

The Testo’s Junction Alteration scheme is a relatively small National Highways (formerly Highways England and Highways Agency) project to improve the congested A19 / A184 roundabout junction in the North East of England via an enlarged roundabout, new flyover and slip roads for the A19. The scheme is adjacent to (and links with) the NSIP scheme to improve the A19 junction at Downhill Lane, 1 km south of the Testo’s roundabout. The DCO was granted in 2018 and the project was completed in 2021. Construction was not without challenges, but National Highways working with Costain (as designer and contractor) was assiduous in anticipating potential issues. This included the inclusion of two design options in the DCO to allow for the uncertain costs of diverting gas and water mains.



Image 6 – Junction construction works (Courtesy of National Highways)

The relationship between examination, DCO and delivery

The examination process was seen by interviewees as being positive and the examination process was supportive. The DCO also provided a robust framework for implementation and delivery. This reflected the considerable effort that National Highways and Costain put into anticipating potential issues and ensuring sufficient flexibility within the DCO. The project design was also relatively mature

at the pre-application stage because of the contractors' early engagement in the project. A key issue for Costain during the consent process was to ensure sufficient flexibility for the phasing and sequencing of construction and uncertainties about the site. The DCO process included consent for two potential options for the elevated crossing of the A19 over the existing Testo's Roundabout and that was subsequently important in securing a more favourable design solution without the need for approvals or changes. The Testo's DCO also included provision for coordination with the neighbouring Downhill Lane NSIP scheme, for example in relation to site offices and linking footpaths.

Managing change

Post-consent approval was only required for a relatively minor design amendment, secured through the discharge of requirements process to reroute a proposed footway connection that created engineering problems when it was found to run closer to a water main than records and surveys had indicated. The project also benefited from good working links with key stakeholders including the local authority, statutory bodies and landowners established early in the planning stage.

Delivery success factors

With early contractor involvement, project managers were able to anticipate a range of issues in drafting the application that might have led to difficulties without the flexibilities built into the DCO. Project managers were also able to build early and sustained relationships with landowners and stakeholders during the development phase that were beneficial for delivery of the project. Testo's could be seen as a relatively self-contained and 'easy' scheme, but that perspective overlooks the commitment to collaboration, hard work and innovation that went into the DCO and its subsequent delivery.

Key learning

The Testo's case study is very much about the value of proactive organisational thinking in anticipating challenges and opportunities. The case study demonstrates the value of a strong contractor perspective at the pre-application stage in anticipating and managing delivery issues and exploring innovative solutions.

Case Study E - The North Shropshire Reinforcement Electricity Scheme

“We tried to argue that it was not suitable for a wood pole type line. We are in the same timeline as nuclear power stations with all its nuts and bolts. So, you can’t help thinking that there ought to be a slicker process out there for the lower threshold projects with a greater presumption in favour rather than having to justify each matter in evidence.” (Project manager).

The project and its delivery narrative

The North Shropshire Reinforcement Electricity Scheme, promoted and managed by Scottish Power Energy Networks (SPEN), enhances local electricity connectivity through a 22.5km 132,000-volt overhead power line supported by approximately 178 wooden poles from Oswestry to Wem. The DCO was approved in March 2020, and construction completed in December 2022.

Participants compared the DCO system favourably to previous infrastructure planning regimes; permitting the promoter to expedite planning consent, construct the asset, and to get it into service, more promptly. However, the “one size fits all” approach of the PA 2008 can make it difficult for linear projects, such as this, because it affects a broader set of stakeholder interests and landowners and requires more extensive consultation. Moreover, the legal language of the DCO rendered it inaccessible to a non-specialist audience. Many local stakeholders (including professionals) had limited knowledge and/or experience of the regime, resulting in delays locally.



Image 7 – Operational scheme (Courtesy of SP Energy Networks)

The relationship between the examination, DCO and delivery

The DCO was felt to have achieved a satisfactory balance between certainty and flexibility, affording the promoter a certain scope to adapt to changing circumstances, but within clearly prescribed limits in respect of (for example) position of individual poles; compliance to UK Felling Standards; restricted

construction hours; remediating contaminated land / ground water; and preparation of construction environment management and traffic management plans. The DCO represented a reduction in the overall number of consents required compared to other planning regimes.

Managing change post consent

The promoter team interpreted the DCO process as requiring the finalisation of project design prior to approval. This did not align with their typical project management practices in which the contractor (often responsible for detailed design) is appointed at implementation stage. Despite the DCO being submitted in 2018, and approved in 2020, the contractor was not appointed until 2022. The contractor team brought their own experiences of implementation, with certain ideas about how to resolve practicable problems of delivery, and a preference for greater flexibility within the DCO which was perceived as too rigid around locations, and number of poles, for example. Resolution of some of these challenges was achieved by close working between the contractor team, and the original design team who took the application to consent. The promoter was, however, keen to suggest the need for an improved process for dealing with post DCO changes: *“like some type of delegated authority or permitted development where, provided a change meets a prescribed criterion, it can be considered approved”* (Project manager).

The project encountered issues with access and issues in acquisition of rights. However, these were not as problematic as anticipated as, in its capacity as a Distribution Network Operator, the promoter had prescribed access rights. Participants suggested that this was, probably, atypical of such projects. In practice, the main aspect of negotiating with landowners, due to the overhead line solution, was in respect of tree cutting. There were some delivery delays incurred due to Covid but, otherwise, the period between consent and full construction was considered unremarkable.

Delivery success factors

The success of the DCO process depended to a large extent on the outcome of years of preparatory work, and informal consultation undertaken before the statutory process began which informed the process of devising options and detailed implementation. The progress of the project was also greatly facilitated by a (largely fortuitous) alignment with the corporate priorities of the Local Planning Authority expressed in the Local Plan and Infrastructure Delivery Plan. Participants also reflected that their experience of previous DCO projects, and the advantage of institutional learning, had played a key role in expediting the North Shropshire project promptly. Participants, again, suggested that this was atypical of such projects.

Key learning

The North Shropshire case study offers interesting lessons from the perspective of the promoter. The DCO process is a multi-organisational decision-making environment and a proliferation of stakeholders is therefore potentially involved. The promoter considered it important to position itself in the leading role, driving the inputs and decisions of the miscellany of interests. In this context, it is crucial for promoters to communicate a strong and unequivocal message about the *need* for the project, and to front-load the process of consultation and engagement, to ensure buy-in and to minimise opposition prior to application stage when the provisions of statutory consultation apply.

Case Study F – Hornsea 2 Off-shore Wind Farm, Yorkshire Coast

“We definitely had some points where things could have gone better but I think that was more to do with the entire process from end to end in terms of what you can provide when you submit an application and then what you get when you actually start digging a hole, which are two different things.” (Project promoter)

The project and its delivery narrative

Hornsea 2 is the world’s largest offshore windfarm generating over 1.3GW of power, located off the Yorkshire Coast adjacent to the river Humber. Consented in August 2016, the windfarm was completed in 2022 and is now operational. It was developed and managed by Ørsted.

The project was challenging because of the change of developer post DCO consent and the complexity involved in discharging requirements. The project also required a non-material change to the DCO to build one large offshore substation. Greater flexibility in some aspects of the DCO would have helped facilitate construction, but fixed parameters in the DCO were required to fully examine the environmental impacts of the project at consent stage. The project was delivered to budget and on time because of the strong and proactive approach to project planning and management throughout the process.



Image 8 – Hornsea Two from the air (Courtesy of Ørsted)

The relationship between the examination, DCO and delivery

The examination process was led by The SMart Wind consortium before the project was sold to Ørsted post consent. There were generally positive views of the DCO and the flexibility it offered overall, albeit the DCO included an extensive list of requirements in line with the complex nature of the project, which included onshore and offshore construction. The offshore requirements required prolonged negotiation with the Marine Management Organisation (MMO), Natural England and the Environment Agency and a non-material change to the DCO was required for the offshore substation. The flexibility built into standard clauses within the DCO and the parameters permitted through the Rochdale Envelope minimised the changes required post consent.

Managing change post consent

A non-material change to the DCO was pursued because of design changes to the offshore substation. Additional licenses were required for unexploded ordinance (UXO) on the seabed, which could only be identified during construction. However, these changes were relatively unproblematic because of consultation with key stakeholders and statutory bodies at an early stage in the planning process. Over 50 further consents, mainly for drainage and cabling, were required for the project and as such good working relationships with the local planning authorities were critical to delivery.

Delivery success factors

Hornsea 2 was a technically and organisationally difficult project to deliver. It was delivered to budget and on time because of the strong project management approach implemented by the developer. Positive working relationships with key stakeholders were formed and maintained in project delivery and continued post consent. A range of flexibility mechanisms were used to good effect. In particular, the Rochdale Envelope reduced the need to revisit the DCO, especially in relation to cable routes and offshore works. Development options in the DCO around foundations and cabling also allowed offshore construction to be delivered effectively. Flexibility within the drafting of the DCO standard clauses and early agreement to options in relation to methodologies and management plans with the MMO were important for working within the boundaries of the DCO.

Key learning

Positive and proactive stakeholder relationships enabled effective delivery of a complex project. Overall, the case study demonstrates the benefit of early engagement with statutory bodies, local authorities and stakeholders to addressing issues of delivery during pre-examination and examination, as addressing complex issues upfront in the DCO process reduced the need to make post consent changes and enhanced efficient delivery. Defined timeframes for formal post consent changes, where unforeseen issues arise, would have aided effective project planning, costing and delivery. Statutory bodies and local authorities highlighted the resource implications of their detailed input.

5. Stakeholder perspectives

5.1 The survey results and the six case studies revealed a range of experiences in the engagement of local authority and other statutory bodies post consent. Importantly, these organisations are widely seen as extremely significant for the effective operation of the PA 2008 regime, with their pre consent 'interested party' role often changing to a regulator and determiner of outcomes post consent. Strong collaborative relationships between promoters and key interested parties clearly enhance project delivery, and negative experiences can impact on delivery, for example by causing construction delays. The following section / chapter draws out the key themes arising out of direct discussion with both local authority officers and a range of statutory bodies, designed to directly elicit their experiences of post consent project implementation.

The post consent experiences of local authorities

5.2 Discussion of post consent experiences amongst local authorities took place as follows:

- Two online focus groups with the PAS NSIP Network comprising officers working on DCO's across England;
- One-to-one interviews with five officers at two separate county councils, with significant experience of DCO delivery;
- Feedback on these themes arising from the above two exercises presented at the NSIP Centre for Excellence Conference (in March 2023); and
- Local authority officers who participated as part of the case study research.

Excluding the conference, a total of 25 planning officers were engaged in discussion.

5.3 There were two predominant discussion points with local authorities. The first was the **volume of work that is required** of a local authority post consent:

"If you were to look at the work that's involved post consent, it can be similar to pre consent. You know it's a lot of work. If the costs end up as £1,000,000 from a local authority side of things, it could easily be £500,000 each side of the examination ... that's not an outrageous figure for a large NSIP. It's just the way it is. They suck-up a lot of time."

5.4 The second main recurring issue was that of change management, specifically trying to work out how to best achieve change within the parameters of the DCO, without needing non-material or material changes. Overall local authorities presented a pro-infrastructure delivery attitude tempered with working pragmatically within the limits of the DCO.

"... they take a huge amount of time to go through the construction phase and we're mindful of the fact that things change and we need to be able to assist and facilitate those changes, but do it in a way that is still compatible and in accordance with any safeguards provided for in the DCO."

"You wouldn't want to stand in the way of something that's now got consented with all the huge investment that comes with it... therefore you do whatever you can to help it without doing anything you shouldn't. It's what you are here to do... trying to facilitate it, without stepping outside of what's right."

5.5 In the two tables below, we draw together the additional elements that local authorities highlighted both positively and negatively in terms of their own experiences and for delivery more broadly.

Table 4 - Positive post consent experiences reported by local authorities

Positive experience for local authorities	Observations
Well-organised developers, keeping the local authority apprised of programme delivery.	<p><i>“There’s a programme ahead months in advance, telling us exactly what is coming in, making sure that there’s a pre-application on every submission.”</i></p> <p><i>“It is much appreciated where you’ve got a developer or somebody they’ve appointed as a consultant to manage it from their side. Makes a heck of a difference.”</i></p> <p><i>“You build relationships with the developer and we speak to them I’d say daily... It’s that the sort of safe feeling of thinking you can have a conversation with somebody over the phone... and just try and think we’re going to try and find a solution to this. We’re going to be solution focused.”</i></p>
Benefit of early sight of requirements submissions from promoters. Support for partial discharge to allow developers to commence on site.	<p><i>“By the time it does come to the submission of that application for discharge, we’ve seen it. We know what it’s all about, and it should be a very routine process.”</i></p> <p><i>“Contractually they want to get on, they don’t want to be delayed... for whatever reason, and they might not have all the information, partial discharge means you can say OK well, those sections are OK, which means you can probably do certain works.”</i></p>
Benefit of developing and sharing learning.	<p><i>“We worked with [County] and [District] colleagues... It was a shared project, we wanted to be consistent with what we were doing and making sure everybody was happy in terms of the enforceability of what we were issuing.”</i></p> <p><i>“Working with like-minded people across the district and the county made a huge difference.”</i></p>
PPAs as instrumental in ensuring appropriate local authority resource to support DCO delivery.	<p><i>“Our experience generally has been that post consent developers are more willing actually to be more generous with PPA funding because they want to push their projects through in a timely manner. That’s a positive starting point.”</i></p> <p><i>“There’s a very clear contrast in our experience between one DCO where we are funded very well through the PPA and one where we are not... we were able to discuss and agree with the developer a five week process for the discharge of minor related requirements and eight weeks for the major requirements.”</i></p> <p><i>“If you want to be able to meet DCO deadlines, it’s got to be funded.”</i></p>
The value in being able to retain staff involved prior to consent through to the delivery stage	<p><i>“It’s really helpful for local authorities to have that consistency... what we are finding is that quite often we have the consistency, whereas the developer doesn’t... I suppose you could say it gives us superiority.”</i></p>

including having sufficient funding.	<i>"We have got dedicated lead officers, so I think that's incredibly helpful. When there is an issue of a requirement, the developer knows exactly who the key council representative is, and likewise we know the district, so we know exactly who to go to and we get fast response on that."</i>
Acceptance that change can be positive for local authorities, communities and promoters - effort is needed to work out how to achieve change within the parameters of the DCO e.g. through Construction Management Plans and overarching Travel Plans, without requiring Secretary of State approval.	<i>"Change is not necessarily a bad thing and it should be built into the DCO – it has benefits for both parties I think."</i> <i>"X has been arguing very much for we want maximum flexibility and we have some sympathy because it's in nobody's interest that it goes back to the Secretary of State to make changes... but having said that, we don't want to, well, we need to ensure that what is being agreed at in the DCO has enough detail that actually it can't suddenly turn into something quite radically different."</i>

Table 5 - Negative post consent experiences reported by local authorities

Experience	Evidence
Challenge of dealing with complexity.	<i>"In terms of changes that have been made through requirements and resubmissions of requirements and changes for your requirements, and then through the Transport Review Group and then also through planning permissions, it can get really complicated, and it's just making sure you got systems in place which adequately keep up to date exactly where the latest controls are."</i>
Impact of lack of NSIP experience and no set processes established for how to engage post consent.	<i>"We didn't have a set process for it and we couldn't find a consistent example anywhere else for a set process or even an approval document... we had to come up with our own solution."</i> <i>"We haven't got a bespoke system [for dealing with the discharge of requirements]. We are piggybacking off what my colleagues in development management are doing."</i> <i>"There's a lack of experience that exists between each of the authorities... we're doing our best in circumstances of a very difficult developer... and we know there's a complex picture ahead of us."</i> <i>"You can't get experienced staff even if you wanted them."</i>
Concerns about what it means to operate within the DCO process, and in particular how to manage change legally within the confines of the DCO.	<i>"We're dealing with the statutory instrument (SI) as opposed to the TCPA... We have to go through the lawyers, making sure everything we're doing is actually legal and above board."</i> <i>"There's lots of just very technical stuff, and it's quite daunting."</i> <i>"We made sure that our legal advisers gave us a detailed explanation of both the DCO and the Deed of Obligation so that it's quite clear for anybody picking it up in the future that they understand the background ... anybody picking it up wouldn't understand that background."</i>

	<p><i>"They might push it a bit, but you know it's hundreds of millions of pounds and therefore those companies have got no interest in litigation and stuff like that."</i></p>
<p>Concerns about lack of trust between key organisations and therefore transparency in the sharing of information.</p>	<p><i>"We don't trust what has happened between the promoter and the local authorities in terms of the provision of information ... a lot of this is stemming from the fact we still don't, despite 12 months, have a PPA for any of the authorities involved."</i></p>
<p>Lack of funding.</p>	<p><i>"There's no funding and you can't give the heads-up to people within the technical teams to get them lined-up, ready to be able to review anything. And it's just well, with the best will in the world, we obviously want to accommodate. If it isn't an NSIP project priority for our Council at the same time..."</i></p> <p><i>"It can be more tricky if we have underestimated doing the negotiation on funding."</i></p> <p><i>"X is currently refusing to enter into discussions about how that might be funded, so we're having to make decisions about how we discharge based on no information about funding... we are obviously pushing back on things that we wouldn't necessarily need to push back on."</i></p>
<p>Change management challenges, especially in relation to assessing for cumulative impact and what's within the scope of existing environmental assessments.</p>	<p><i>"The debate becomes one of having a review and assessment of whether that change is able to be accommodated within the scope of what's already been assessed and is that legal and is that OK? Are there any additional impacts?"</i></p> <p><i>"Town and Country Planning stuff is far more flexible from our point of view. But actually, depending on the wording of the consent in the requirements and what the scope of the change is, then it is just a different mechanism, isn't it? It needn't be as complicated, but it's having regard to how that sits within the scope of everything."</i></p> <p><i>"I'm managing those expectations with the developers because whilst we do want to be able to facilitate projects, we also have on the other a duty to protect the environment and the local communities are hosting those projects, so I think it's that balance can sometimes feel really difficult, so I think that's probably one of the key challenges of dealing with change and public perceptions of how we deal with that change."</i></p> <p><i>"As they evolve, some bits aren't included in the DCO and some bits they want to deliver early, so as a result they actually submit quite a number of TCPA applications in parallel."</i></p>
<p>Perception that community engagement can fall to the local authority post consent.</p>	<p><i>"Communities want to have a place where they can frankly, vent their frustration... and even if individual developers have community liaison during construction, that is a different type of dialogue to a dialogue with local authorities, and I think that's a challenge, that's a new challenge, because we don't normally build this much infrastructure this quickly in X. The political consequences of that are going to be quite tricky to manage, and I don't really think we've thought about how that works yet."</i></p>

The post consent experiences of statutory bodies

- 5.6 A range of statutory bodies were approached for a discussion of their post consent experiences of engaging with promoters and other organisations post consent and four organisations accepted the invitation to participate. Discussions comprised a combination of one-to-one interviews and focus group discussions involving a range of participants, all of whom were, or had been, directly involved in post consent compliance. In total, we spoke to nine statutory body representatives.
- 5.7 Overall, statutory bodies emphasised that although they wanted to support the delivery of DCO projects, their primary role was to protect and safeguard the natural or built environment and fulfil their statutory duties, and to discharge requirements with appropriate care and attention. There was a feeling that more could be done to factor the role of statutory bodies into the consent process and delivery frameworks. The table below draws out the key themes raised by statutory body participants.

Table 6 – Themes raised by statutory body participants

Theme raised	Observations
Role of the ExA / examination	<p>ExAs seen as “<i>impressive</i>”, but “<i>not very accessible</i>”. General desire amongst statutory bodies for closer working with the ExA.</p> <p>Some inconsistency in the wording of requirements across consents noted, with subtle differences highlighted as having significant impacts on delivery and compliance: “<i>Post consent our regulatory and consents role steps up ... if the wording is not written completely right, this can have big implications for what actually happens on the ground... sign-off can be tricky and we are deemed as holding off a project we didn’t authorise</i>”.</p> <p>Request for “<i>far greater due diligence</i>” at examination, for example if impacts are found to be greater than expected during construction and operation then specified remediation strategies in DCOs need to have been properly scrutinised / tested for suitability.</p> <p>Concern about the “<i>rush to consent</i>”, with a fear that “<i>revisions up to the last minute can cause problems</i>” if not carefully considered. A push for quicker decisions was seen as potentially exacerbating this.</p>
Importance of front loading, to resolve key issues ahead of examination.	<p>“<i>The premise of the DCO and of the reforms, it’s about again recognising the importance of front loading. I guess the thing for me is the amount of stuff that can go past DCO with conditions or PPAs or other things that almost buys-out the value of doing the DCO. So, for me, it’s about getting that expectation of what can go through the DCO, so we don’t kick all these things down the road. Those delivery agreements, the principles, the premise, should be far more fixed at the DCO point. And I know that promoters hate that because they don’t like anything being fixed early, but there is so much value in getting it clear and right early in terms of the cost and time programme-wise post consent.</i>”</p>
Request for recognition of the challenges of sign-off timings applied to statutory bodies.	<p>“<i>We cannot meet some of the timescales sneaked into DCOs.</i>”</p> <p>“<i>Determining licenses for ancillary works often with big impacts requires a lot of work that simply cannot be handled in six weeks.</i>”</p>

<p>Request for developers to talk to statutory bodies about permits earlier than many currently do, enabling the planning and permitting processes to be paralleled.</p> <p>Some contractor teams (particularly those not familiar or experienced in UK regulation) assume that permits are just a quick sign-off – more education on this is needed.</p> <p>Request for an update on the guidance on permitting and planning.</p>	<p>Seen as an important way of (1) enabling some elements to be wrapped into the DCO (for example on waste management) so that separate permits are not required, and (2) de-risking projects and reducing delay at delivery.</p> <p><i>“For planning, consenting for something like a chimney might be about visual appearance and siting, whereas for permitting it might be about dispersal of emissions. If we aren’t engaged early enough, we might fail to permit due to fume dispersal because a chimney is not tall enough”.</i></p> <p><i>“Developers are pushing to put the spade in, but if they had engaged earlier, we would have told them that considerable evidence was going to be needed in order to grant a permit.”</i></p> <p><i>“We go to great pains to be clear that we can’t just sign-off. Everything we do is evidenced based.”</i></p> <p><i>“We could have saved the promoters a fortune if they had engaged on permitting six months earlier, as engaging with permitting can inform the design process, and really save headaches and de-risk the process later on... it’s really disappointing when permitting discussions start late, as it often then becomes very adversarial.”</i></p>
<p>Recent re-structuring within nearly all of the statutory bodies highlighted as intended to better support the DCO process overall, including arrangements for knowledge transfer to assist post consent delivery more broadly.</p> <p>The need for the improved integration of development teams and delivery focused teams within statutory bodies and promoter teams was persistently highlighted.</p>	<p><i>“Getting a DCO approved is hard and the last few months are all-encompassing... part of the challenge is the timing of that transition... laying all the foundations and having that up and running, to hand it to a major projects person, so that it’s not a clean stop and look the other way, here’s the brief, and here’s the keys, we’re off... the biggest challenge was just continuity of information, being able to communicate that back or know where the notes are, where the skeletons are in the cupboard.”</i></p> <p><i>“Front loading is basically delivering the requirements of the person at the end of the process. You achieve it through front loading, which is why it is such an odd thing that people are reluctant to get involved earlier... we’re literally saying to the person who has it at the end, ‘What do you want? And we’ll work out how we deliver it for you’.”</i></p>
<p>Request for clarity of information from promoters about their delivery programme, a single point of contact within the delivery team, and up-to-date information on the work for statutory bodies coming forward.</p>	<p><i>“The biggest change to support the system would be clear programmes of work from developers and more expertise to fulfil our functions.”</i></p> <p><i>“We really need a forward programme of when requirements are going to be brought forward without which it is really difficult to business plan. They often involve a huge number of specialists, and we can’t generate time from nowhere. If we have a clear programme we can attempt to set up a team.”</i></p>
<p>Resourcing challenges within statutory bodies, and an inability to recruit experienced staff.</p>	<p><i>“We are failing to recruit. We have seen 30% cut in pay in real terms over the last decade in our organisation.”</i></p> <p><i>“We had one post advertised three times with no experienced applicants – some teachers looking to change profession.”</i></p>

	<i>"We cannot fulfil the functions required of us."</i>
<p>Need for greater recognition of long-term resource input required by statutory bodies into the post consent life of projects, including monitoring of outputs, operational impacts and decommissioning.</p> <p>Need for shared learning across organisations as greater experience is accrued of this phase.</p>	<p><i>"Some requirements come with a huge amount of work to do, with lots of detail to come forward potentially over the next ten years and others for the lifetime of the development."</i></p> <p><i>"Post consent and operational issues are still a very new area to navigate",</i></p>
<p>Further advice needed on handling post consent changes through licencing, to ensure against inadvertent variations to a DCO via licencing.</p>	<i>"We take a precautionary approach, but further clarity here would be helpful."</i>
<p>Need for greater promoter / contractor awareness of the impact of small changes in the approach to construction.</p>	<i>"Small changes during construction can have huge impacts such as shifting on-shore construction from sand to rock. Applicants don't always understand the scale and complexity of impacts and the need for further assessment."</i>
<p>Desire for post consent change to focus on a clearer consideration of project outcomes.</p> <p>Future environmental outcomes reports are highlighted as a potentially positive direction in relation to post consent change management.</p>	<p><i>"Can't we express better what we want to achieve and allow flexibility within that... different ways of meeting the same aim? What we do is we lock-down the process rather the outcome. If you re-design and meet the same outcome, then either you shouldn't have a problem or you've not articulated your outcome properly".</i></p> <p><i>"We need an intelligent and necessary approach to change that's in everyone's interest, without going back through the process".</i></p>

6. Conclusions and recommendations

- 6.1 As more projects move through delivery and completion, this research has shown that promoters are working increasingly effectively to ensure that post consent delivery and implementation issues are anticipated and addressed at pre-application, pre-examination and examination stages. Significant organisational and institutional learning is taking place about how to work within the parameters and flexibilities of the DCO process. The major difficulties faced by projects in the post consent phase are largely where a scheme involves new technical challenges in design or construction, the stage at which contractors are involved (and changes in contractors), and the complexity and uncertainty of the site. Challenges are often specific to a given project rather than major systemic flaws with the DCO process itself. Organisations will continue to build their skills, knowledge and expertise in working with the regime, especially if that is facilitated by organisations such as NIPA.
- 6.3 Many of the process-based recommendations from NIPA Insight studies I and II are therefore being taken forward and are becoming embedded in practice, including:
- Recognition of the benefits of early and continued engagement with local authorities, statutory environmental bodies, stakeholders and landowners to build working relationships and trust, and anticipate potential barriers to effective implementation;
 - Action by promoters to ensure that design and delivery considerations are anticipated during the application process, the pre-examination and consenting process where that is possible; and
 - Promoters utilising the mechanisms that exist for flexibility in the drafting of DCOs where that is relevant and helpful.
- 6.4 Seven recommendations arise specifically from this research.
- 6.5 Firstly, this research has shown **the value of learning from doing and the sharing and dissemination of experience** in relation to DCO delivery. This happens in various ways, led by different organisations. It is, however, important for key organisations to maintain and where possible extend those processes of organisational learning. For example, a key task ahead is how to respond to the challenges of calculating carbon emissions within the context of Net Zero Policy.

Recommendation 1

The UK Government, The Planning Inspectorate and the DCO community (NIPA, promoters, legal representatives, professional teams, local authorities, statutory bodies) will need to work effectively to maintain and extend the opportunities for disseminating, sharing and reflecting on the experience of project delivery and implementation.

- 6.6 Secondly, this research has shown that there is a **careful balance to be struck between the quest for speed of consent and its potential consequences**. There is evidence from both promoters and statutory bodies that time both during the consenting process and at delivery is necessary to support innovation. There was a feeling that a faster and simpler examination must not inadvertently cause delays at delivery stage by leaving key elements for later resolution, or

problems in relation to the constructability of key elements of the DCO, resulting in delay or requirements for change.

Recommendation 2

Reforms to the DCO process need to ensure timeliness, and certainty in decision-making, but this needs to be combined with support so that the benefits of timeliness in decision-making do not pass on problems to the delivery and implementation stage.

- 6.7 Thirdly, the delivery perspective has shown that **after the DCO has been granted, a significant number of additional further consents and licences are often needed** (including approvals required under protective provisions). This is perceived as counter to the principle of the unified consent regime of the PA2008. This is complex and time consuming for all organisations involved, and can be a significant cause of delay at delivery.

Recommendation 3

Greater awareness and consideration are needed of the amount of consenting that is still required post grant of a DCO, and how that can be addressed to expedite infrastructure delivery. It would be timely for the UK Government to undertake a review of the potential to further streamline the consent regime and minimise delays and costs arising from the number of permissions, consents and licences required post-consent. [This is in line with the aspirations for a single consent process].

- 6.8 Fourthly, there are **still significant disincentives in applying for DCO changes** because of the delay, resources, time and uncertainty involved. This is particularly an issue for changes that are not fundamentally necessary for project completion, but would achieve additional social, economic, and environmental benefits or allow for innovation. Promoters were concerned about the lack of a prescribed timescale for decisions on post consent changes (whether material or non-material) and wanted scope for a more pragmatic approach to change where changes can demonstrate compliance with agreed outcomes. The UK Government's proposal for a new approach to environmental assessment¹⁶ has real potential to support a more strategic approach to post consent change evaluation in line with agreed environmental outcomes.

Recommendation 4

The DCO process would benefit from a more supportive approach to achieving positive post-consent changes to deliver better outcomes. This should include certainty of timescales for decisions on material and non-material changes where they are needed. The UK Government's proposed new approach to environmental assessment has the potential to enable a more pragmatic approach to post consent change evaluation where changes align with agreed environmental outcomes.

- 6.9 Fifthly, **effective delivery and implementation requires well informed and timely support from local authorities and statutory bodies and that needs to be supported**. The research found evidence of increasingly strong support from local authorities and statutory bodies, but this can

¹⁶ <https://www.gov.uk/government/consultations/environmental-outcomes-reports-a-new-approach-to-environmental-assessment>

be constrained by limited resources when the workload for DCO projects can be very significant. Many promoters also still need to work more effectively with these bodies at all stages of the process to ensure effective community engagement and timely delivery. The research found that PPAs and cost recovery mechanisms are increasingly being used to support local authority and statutory body input with agreed outcomes, and that needs to be extended. However, the research exposed the need to consider how additional resources and frameworks might support the important roles of local authorities and statutory bodies.

Recommendation 5

Effective local authority and statutory body engagement is paramount. There is a need for more proactive engagement of these bodies at an early stage to ensure focus in examination and proportionate and manageable controls and outcomes at implementation. This includes further consideration of how best to support and resource local authorities and statutory bodies to meet agreed delivery timescales.

- 6.10 Sixthly, this research provides evidence of increased experience and willingness in using available mechanisms for achieving flexibility within DCOs, and these tools being used with good effect. There is also increased acknowledgement that flexibility can be achieved in DCOs. The challenge for promoters is in the anticipation of where flexibility might be needed and the value of anticipating risk and uncertainty related to construction methodology, logistics and temporary works into the DCO process. However, it was also felt that a balance needs to be struck between the benefits of using flexibility mechanisms and the complexity that this might cause for some projects both at examination and in delivery. As found in NIPA Insights I and II **there is still concern about the consistency of approach and level of support for the use of flexibility mechanisms in DCOs.** There was also felt to be scope for greater clarity and a more coordinated approach and training of Examining Inspectors in relation to flexibility mechanisms.

Recommendation 6

The Planning Inspectorate, UK government and the DCO community would benefit from greater consistency and openness to innovation in DCOs at the pre consent planning and design stage, in terms of the treatment of flexibility mechanisms in support of effective delivery and increased certainty for promoters.

- 6.11 Finally, the research shows that **key to holistic strategies of effective delivery were the people involved, their knowledge and understanding of the DCO process and delivery challenges and cultures of working.** It has also reinforced the value of early contractor engagement in ensuring that delivery and constructability are embedded pre consent, but has further exposed some of the challenges of achieving this in practice for different types of projects. There also remains some reticence about the cost and the possibility of being ‘held to ransom’ for the future delivery of key features hard baked into the DCO that might arise out of ECI.

Recommendation 7

Action to build capacity and understanding must extend beyond up-skilling the planning profession and focus on bringing professions together, particularly drawing together construction, engineering, project management, lawyers, planners, designers, environmental disciplines and programme managers.

- 6.12 Importantly, the findings from this research resonate with, and are relevant to, the wider programme of activity to improve the delivery of critical infrastructure. Many align with the recommendations in the NIC's report 'Delivering Net Zero, Climate Resilience and Growth: Improving Nationally Significant Infrastructure Planning' (albeit that a sharper focus on delivery and implementation by the NIC would be a welcome next step). Some of these findings are supportive of the UK Government's NSIP Action Plan, but Appendix 1 maps the findings onto the Action Plan in more detail to highlight areas where additional focus or nuance of understanding is needed to ensure that the DCO process best supports effective implementation and delivery.

APPENDIX 1 – RESEARCH PERSPECTIVES ON DLUHC’S NSIP ACTION PLAN

In March 2023 (towards the end of this empirical research), the DLUHC published the NSIP Action Plan for England and Wales. In the two tables below, we provide brief observations on the overarching headlines and proposed key actions from the perspective of the research findings that are presented within this report.

Table 7 – NSIP action plan (key issues to be addressed by reforms)

ISSUES TO BE ADDRESSED BY REFORMS	RESEARCH PERSPECTIVES
<p>THE NSIP REGIME NEEDS TO BE:</p>	
<p>1. Better at delivering as robust as possible decisions within the statutory timescales, giving both developers and communities certainty in the process.</p>	<p>Deliverability / constructability needs to be built into the consenting process, so that a faster decision does not inadvertently result in delays at delivery. End to end processes and effects need to be understood in full.</p>
<p>2. Faster at handling all applications, through streamlined and strengthened processes, a proportionate approach, and a new fast-track timeframe for suitable applications.</p>	<p>Fast track may be suitable for some applications, dependent on scale, location and nature.</p> <p>However, our case study research has evidenced the complexity within individual projects. In considering the fast-track route, attention needs to be given not just to quality, but the scale and the nature of schemes, particularly the differences between linear and individual site-focused schemes.</p> <p>Proportionality is key, particularly in relation to post consent change (and requirements for further environmental assessment).</p>
<p>3. Greener, by delivering positive outcomes for the environment and following the mitigation hierarchy with proactive plans for environmental protection and enhancement.</p>	<p>Process improvements do not – in and of themselves - make projects greener. This research points to the important place of NPSs in setting the benchmark for national infrastructure projects.</p>
<p>4. Fairer to communities. by emphasising benefits to local people that come with major infrastructure investment.</p>	<p>Communities are often most impacted by projects during the construction phase. It is important, therefore, that proportionate community engagement post consent is seen as an integral part of the process, and not just a pre consent requirement. Lack of oversight on post consent engagement – or large gaps between consent and construction commencement – can create confusion and heighten project conflict and tensions.</p>

	Emphasising the wider national benefits of the scheme is important to contextualise localised concerns, but local concerns do need to be understood and addressed proportionately as far as practicable.
5. More resilient in its resourcing to enable all stakeholders to engage meaningfully and proactively in the process with the appropriate skills at the right time.	<p>Support for and capacity building within statutory bodies and local authorities is essential – this is just as, if not more, important post consent in order to expedite effective delivery as noted above re construction impacts. It is hoped that emphasis on ‘<i>the right time</i>’ includes consideration of the skills requirements post consent amongst all stakeholders.</p> <p>Late engagement in the examination can result in rushed and unsatisfactory outcomes in the focus to meet timescales and secure a consent. Greater emphasis should be placed on early engagement and collaboration based on delivering essential infrastructure and good outcomes.</p>

Table 8 – NSIP action plan (reform area and actions)

REFORM AREA & ACTIONS	RESEARCH PERSPECTIVES
<p>Reform Area 1: Strategic direction</p> <p>1 - Review the existing NPSs, where appropriate, to provide a clear and up-to-date need case for infrastructure and to take into account the emerging Environmental Outcomes process.</p> <p>2 - Update planning guidance to make the process for determining when and how to carry out NPS reviews clearer and simpler.</p>	<p>NPSs are only briefly mentioned within this research. Policy being clear and up-to-date is generally supported and the value of NPSs in setting strategic direction in relation to climate change is broadly acknowledged.</p> <p>The value of close alignment between the strategic aims of DCO projects and the wider aims of a host local authority were acknowledged. Some improvements to the alignment between the TCPA and DCO system could be of value, aided by further clarity within the National Planning Policy Framework (NPPF) on the intended inter-relationship between the two systems.</p>
<p>Reform Area 2: Operational reforms to support a faster consenting process</p> <p>3 - Bring forward legislative changes to streamline and strengthen the application process.</p>	<p>Application and examination were not a specific focus of this research, but findings point to desire for further streamlining. However, this research points to the caveat that a faster and simpler examination should not inadvertently cause delays in terms of delivery, by leaving key elements for later resolution. Nor create problems in relation to the constructability of key elements of the DCO. The quest for faster consenting</p>

<p>4 - Establish a new ‘fast-track’ consenting timeframe option for projects that meet quality standards.</p> <p>5 - Introduce a new application service portal.</p> <p>6 - Bring forward digital transformation of NSIP services and rationalise information requirements.</p> <p>Supporting text also mentions support for:</p> <p>Speeding up implementation by reviewing the process of material and non-material change applications</p>	<p>speed has to be understood in terms of full end-to-end delivery.</p> <p>Further information on what quality standards mean is needed. Case study E pointed to the potential for an alternative approach for schemes of a certain scale and complexity. Within the proposed <i>pilots and early adopter programme</i>, it will be important to employ a constructability lens for viewing the process, as indicated in the key lessons from the case studies.</p> <p>Simplification of documentation and support for digitilisation were raised in case studies and survey responses, but not in significant detail. Request from local authorities for standardisation of approach with regard to documentation in relation to discharge of requirements.</p> <p>Strongly supported by this research. It is clear that changes – that might be agreed as pragmatic and necessary by all parties - are not always pursued because of programme delays and costs.</p>
<p>Reform Area 3: Realising better outcomes for the environment</p> <p>7 - Establish a new Environmental Outcomes Reports process that will replace SEA / EIA.</p> <p>8 - Review protected sites and species policy framework (including Habitats Regulations Assessment) for terrestrial and marine environments.</p> <p>9 - Incorporate Biodiversity Net Gain requirements for all (terrestrial) NSIP projects from November 2025 and develop an approach for Marine Net Gain.</p> <p>10 - Implement a new Offshore Wind Environmental Improvement Package.</p>	<p>It is notable that environmental assessment was not a predominant theme of the research findings, with the exception of evidence of post consent changes not being pursued; in part, because of the cost and delay resulting from any requirement to re-open environmental assessments. Any reforms that provided the basis for a more pragmatic approach to environmental assessment in terms of post consent change would be welcome by this research.</p> <p>Environmental mitigation and monitoring generally seen as an important part of DCO implementation, and important in ongoing community engagement and good communication to ensure certainty.</p>

<p>11 - Implement the Marine Spatial Prioritisation Programme and ongoing marine planning reform projects.</p>	
<p>Reform Area 4: Recognising the role of local communities and strengthening engagement / Reform Area 5: System capability - building a more diverse and resilient resourcing model</p> <p>12 - Continue to support local authority engagement through the Local Authority Innovation and Capacity fund.</p> <p>13 - Build upon our newly established Local Authority Support Network.</p> <p>14 - Develop guidance on community engagement expectations.</p> <p>15 - Consult on measures to ensure communities are benefiting appropriately from hosting electricity transmission network infrastructure.</p>	<p>Strong desire from local authorities for more shared learning and support generally [see above on standardisation], but need to ensure this does not stifle innovation and continuing improvement and development of process and best practice delivery.</p> <p>Strong support for this.</p> <p>Our research illustrated a wide variety of practice in the way in which communities are engaged post consent and demonstrates the importance of community engagement at all stage of the process and the value of early community engagement (and trust building) for project delivery. Any guidance on community engagement should, however, ensure that expectations about pre consent engagement are matched post consent as it is during the construction and delivery phase that communities are often impacted most directly. However, this should be proportionate to the nature and scale of the project.</p> <p>General desire for better guidance and processes for understanding economic and social value and embedding them within the post consent process.</p>
<p>16 – Develop workforce strategies targeted at addressing NSIP skills and capabilities gaps in government agencies.</p> <p>17 - New mechanisms for cost-recovery for key statutory consultees.</p>	<p>This must include thinking about post consent. The NSIP Action Plan states, “<i>lack of capacity and capability in the system as one of the major barriers to faster and better consenting</i>”. It is clear that capacity and capability can also be barriers to delivery.</p> <p>Not a specific focus of this research, but mentioned in engagement with LPAs (Chapter 5) and would be widely supported if proportionate and providing certainty on delivery.</p>

18 - Support capacity and capability, including in local authorities, through the Innovation and Capacity Fund, shared learning through a network of authorities, and wider work to build skills and capacity in the planning profession.

This [and some of the other actions under reform areas 4 and 5] point to some of the behavioural and cultural actions required to support change. There is a lack of detail here, but it is worth noting that some of the key lessons coming out of the case study research surrounded knowledge, learning and teamwork. This research is, therefore, very much aligned with the intent of Action 18, albeit that more clarity is needed here.

As detailed in Chapter 6, there is need to connect the disciplines – construction project management, and planning. A dialogue between professional bodies, universities, and the industry is urgently needed here, as this is an area where constructive progress could commence in education.