MAJOR INFRASTRUCTURE PLANNING AND DELIVERY

EXPLORING NATIONALLY
SIGNIFICANT INFRASTRUCTURE
PROJECTS (NSIPs) IN ENGLAND
AND WALES

UCLPRESS

Major Infrastructure Planning and Delivery

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Exploring nationally significant infrastructure projects (NSIPs) in England and Wales

Ben Clifford and Janice Morphet



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Glossary

AONB

EEC

EIA

EIB

ES EU

GLA HS2

IPC

BEIS Department for Business, Energy and Industrial Strategy (UK government) CABE Commission for Architecture and the Built Environment **CBA** Community Benefit Agreement Construction Environmental Management Plan **CEMP** CLG Community Liaison Group **CLWG** Community Liaison Working Group CoCP Code of Construction Practice CPO Compulsory Purchase Order **DCLG** Department of Communities and Local Government (former UK government department) DCO Development Consent Order DETR Department of the Environment, Transport and the Regions (former UK government department) DfT Department for Transport (UK government) DLUHC Department for Levelling up, Housing and Communities (UK government) DTLR Department for Transport, Local Government and the Regions (former UK government department) EΑ **Environment Agency** F.C. **European Commission** European Court of Justice F.C.J **EDF** Électricité de France

Environmental Effects Compliance

Environmental Impact Assessment

Infrastructure Planning Commission

European Investment Bank Environmental Statement

Greater London Authority

European Union

High Speed 2

Area of Outstanding Natural Beauty

JR Judicial Review

LEMP Local Environment Management Plan

LIR Local Impact Report
LPA Local planning authority

MHCLG Ministry of Housing, Communities and Local Government

(predecessor to DLUHC)

MHLG Ministry of Housing and Local Government (former UK

government department)

MMO Marine Management Organisation

NAO National Audit Office

NEWT Not environmentally worse than NGOs Non-governmental organisations NIA National Infrastructure Assessment

NIC National Infrastructure Commission (UK government)
NIMBYs Objectors to development apparently taking an attitude of

'Not in my Back Yard'

NIPA National Infrastructure Planning Association

NPS National Policy Statement

NSIP Nationally Significant Infrastructure Project

OECD Organisation for Economic Co-operation and Development

PIL Parties with interests in land

PINS Planning Inspectorate (UK government agency)

PLA Port of London Authority

PPA Planning performance agreement

PPP Public-Private Partnership

RSPB Royal Society for the Protection of Birds

S106 Section 106 agreement

SCDC South Cambridgeshire District Council

SDG Sustainable Development Goal (United Nations)

SPA Special Protection Area

SSSI Site of Special Scientific Interest

TCA Trade and Cooperation Agreement (related to Brexit)

TCPA Town and Country Planning Act

TEN Trans-European Network

TEN-E Trans-European Network (Energy)
TEN-T Trans-European Network (Transport)

TfL Transport for London
TMP Traffic Management Plan
TWA Transport and Works Act

UK United Kingdom
UN United Nations

Preface

This book is the result of our joint engagement with research into the operation of the planning system for nationally significant infrastructure in England over the last five years. This partnership came about through an opportunity to undertake some research funded by the National Infrastructure Planning Association, which in turn led to two more pieces of research for the same organisation. The book flows from that research and hence heavily features issues that had been the focus of that funded research: the relationship between consent and delivery and the scope for flexibility in consents, and the relationship between promoters of schemes and stakeholders, particularly local authorities and local communities. We have, however, attempted to broaden our scope to consider how the Nationally Significant Infrastructure Planning regime operates more broadly.

Some of this may seem somewhat opaque and related to very particular governance arrangements. Yet how we plan major infrastructure is vitally important for our economy, society and environment. Who gets a say in this consenting process, and how we balance, understand and mediate (or don't) national need and local impact is hugely significant in and of itself. How well the regime operates, how it's being reformed (and who has power in this) and how the system is being impacted by issues such as Brexit also tells much about how we are governed in the contemporary UK.

Writing the book in 2021 and 2022 has been somewhat challenging. We've had the personal impacts of the Covid virus on all of our lives, personal and professional. We've then had considerable flux in the UK government, so much so that we spent longer on the revisions to our manuscript following reviewer feedback than the Truss government lasted. This political drama then relates to changes in policy areas including ongoing planning reform, which is highly relevant for this book. In the end, we've had to draw a line somewhere so that the book can actually be published, and so doubtless there will be further developments

in relation to NSIPs that may come fairly quickly after publication. Nevertheless, as a document reflecting on the first decade of the operation of the NSIPs regime, hopefully our findings here remain useful for some time to come.

We'd like to acknowledge here those who have helped this book and the research that underpins it. We are grateful to NIPA for funding the empirical research that informs the book (particularly the case studies). The conclusions we drew in our reports for NIPA and the distillation of that research are entirely our own responsibility, of course. We would like to thank all those who took time to participate in our focus groups and interviews during our research, often taking lots of time out of busy schedules to share invaluable insights with us. We are grateful to those giving permission for us to reproduce images as figures included in the book, although again the responsibility for the text is our own and has not been endorsed by those giving permission for the images to be included. The anonymous reviewer of this monograph manuscript made some helpful suggestions on improvements we could make, while being reassuringly supportive of the merits of the book as a whole, and we are thankful for that. And lastly, we are very grateful to Chris Penfold at UCL Press for his forbearance during the drawn out process of getting this book finished.

> Ben Clifford and Janice Morphet London, November 2022

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Introduction

Infrastructure matters!

Large infrastructure projects are interesting for multiple reasons, raising important issues around economic and environmental impact, spatial distribution of investment and community engagement. They are usually projects requiring significant budgets, with complex construction issues and debate around the relationship between costs and benefits including their role in supporting national objectives. They also raise questions about the scalar and temporal distribution of costs and benefits and, as such, represent national policy for places and the economy.

In the contemporary United Kingdom, infrastructure has been linked to concerns about regional inequalities, economic productivity, the housing crisis, Brexit and climate change. Delivering high-quality infrastructure in an era of major political and economic change has come to be seen as vitally important (Davies et al, 2018). This is not unique to the UK. Across the world, states are taking infrastructure issues seriously and transport, energy and telecommunications infrastructures have become a priority for the European Union (Marshall, 2014). Building resilient infrastructure is part of goal nine of the UN's 17 'Sustainable Development Goals', and infrastructure concerns are relevant to a number of these goals. Major infrastructure is firmly in the camp of 'high politics', with 'infrastructuralism' linked increasingly since 1990 to national competitiveness and the working of the contemporary capitalist economy (Marshall, 2013).

At the same time, we are in an era of major political, environmental, technological and economic change. As Marshall (2011a: 903) notes, 'The whole infrastructure field is caught in a powerful and tense pull of forces, making it a deeply problematic area for public action.' Considering finance, we now have a context of highly liberalised infrastructure

markets in many developed economies, particularly around the energy sector in the UK. The introduction of privatisation and liberalisation (Morphet, 2021a) subsequently lead to pressure for regulatory reform giving rise to social relations of inequalities and a contested politics of infrastructure production and management (McFarlane and Rutherford, 2008; Cotton, 2018). Technologically, we are seeing changes such as the rapid development in turbine technology used in the offshore wind industry (Broadbent and Nixon, 2019). Technological innovation, including large-scale supply side infrastructure, is expected to play a significant role in the move to a low carbon world, in the face of the implausibility of sufficiently timely and far-reaching social, economic or behavioural change, helping energy security as well as tackling climate change (Cotton and Devine-Wright, 2011; Lee et al., 2012).

These economic and technological forces of change, in particular, seem to drive political priorities to reform the way infrastructure is governed. Neoliberalisation and the 'modernisation' of the state drives change in how infrastructure is planned and developed and calls to reform the spatial planning governance of major infrastructure (Marshall, 2014). Yet the issue of reforming the planning of major infrastructure deserves further attention, given the long temporalities of infrastructure, the resultant path dependencies, questions about the balance between communities, experts and politics, questions of scale between national needs and local impacts, controversies around the environmental, social and economic contexts and impacts of significant infrastructure development as well as questions about procedural justice, the distribution of costs and benefits, territorial futures, and a link to deeply held spatial imaginaries and values.

In this book we examine the extent to which the system of planning and consenting what are termed 'Nationally Significant Infrastructure Projects' (NSIPs) introduced through the Planning Act 2008 has been a national mechanism of change within English public policy, how its operation has evolved over time and consider the role that it can play in the future. The book draws upon a review of theory, research and evidence that has been undertaken both to understand the mechanisms available to implement major infrastructure projects and to examine the role of the 2008 Act including the regime it introduced for consenting NSIPs within this context. Overall, we seek to explain the origins of the regime for consenting nationally significant infrastructure projects in England (and, to some extent, Wales) and consider how effectively it has been operating in practice over the last decade. This will involve issues of infrastructure policy and delivery and planning practice and reform that have broader interest and reflect issues being seen in many contexts internationally.

The planning and delivery of infrastructure remains a live and topical issue: in 2021, the UK Government instituted the National Infrastructure Planning Reform Programme (DLUHC, 2021a; 2021b) which it had indicated in the Planning White Paper, Planning for the Future (MHCLG, 2020). This review included both the processes through which schemes are examined and also the National Policy Statements that are used to provide the principle for the development of infrastructure falling within the categories set out in the Planning Act 2008 and through subsequent revisions. It has also published a review of UK connectivity (Hendy, 2021). These policy interventions can be understood as a response to changes required following Britain's exit from the European Union (Brexit) in 2020. We discuss this in more detail in Chapter 2. In this first chapter we examine the place of major infrastructure projects as part of a national system of government, their role in wider public policy including the economy, regional policy, levelling up and social and economic cohesion. In all of these roles, infrastructure has both national and local spatial dimensions that are frequently used together as part of a business case or HM Treasury Green Book (HM Treasury, 2021a) assessment before a project is approved for public funding support. In the private sector, similar business cases are made in order to secure project investment from within the company or the market.

Infrastructure is a broad topic, capable of consideration at multiple scales and in multiple dimensions. Our concern in this book is not, for example, with infrastructure funding or financing – vitally important as this is – but rather to understand the evolution and operation of the current regime of infrastructure planning in place in England (which has also been functioning in Wales for much of its period of operation). For the remainder of this introductory chapter we briefly consider a range of broader contexts that help to understand the situation of this infrastructure planning regime. These various issues are necessarily only briefly explored here, but we consider, in turn, infrastructure *governance* in international and UK context, how infrastructure has been linked to a variety of policy *goals*, and the operation of infrastructure *planning* in an international and in a devolved UK context.

Governance: infrastructure investment and international commitments

The UK has a number of longstanding international agreements with bodies including the World Trade Organization, the United Nations and the EU, even following Brexit. The length of time taken in the negotiation of these agreements before their finalisation and subsequent implementation – sometimes up to 10–15 years – provides governments and the civil service with long lead-in times to prepare a policy pathway and anticipate some of the expected changes – political and legislative – that may be required. In some cases, the role of pre-emptive action or early delivery by states can be used to establish a first-mover advantage in negotiations that can be beneficial to the state both in reducing subsequent adjustment costs and providing consultancy and advisory services to other states subject to the same agreements. Thus, while there may be consistency of underlying regulatory requirements, they may be presented to a domestic audience in ways that fit within wider public policy change programmes (Kingdon, 1995). In the United States, the implementation of the WTO Government Procurement Agreement (GPA) for services in 1994 was set within a 'steering not rowing' context of public policy leadership by the Clinton administration (Osborne and Gaebler, 1992), and in the UK this approach was also used by the Labour government (1997–2010) (Morphet, 2007), while the predecessor Major government (1990-7) used narratives of the citizen's charter to establish the market for public service provision (Morphet, 2021a).

World Trade Organization

In the UK, before 1979, national infrastructure investment was undertaken primarily by the state, either directly or through public agencies and funded from general taxation. The introduction of the principle of opening public projects to the private sector was as a result of the GATT Government Procurement Agreement (GPA) adopted in the UK in 1980. The GPA included new principles and regulations and was initially agreed by the Labour Government in 1976. It meant that the expenditure on construction and procurement of goods in a range of public bodies were then opened to the private sector (Morphet, 2021a) and that private sector ownership and responsibility for facilities could be agreed. In 1994, through the WTO Uruguay Round agreement, the GPA was extended to public services. In the UK, the then prime minister, John Major, extended schemes such as the Private Finance Initiative (PFI) to allow the private sector to fund and manage public facilities for a contracted period after which they would be passed to public sector ownership. The bodies using these facilities paid rent and service charges for the facilities for the contracted period and have included projects for schools, hospitals and transport (Pollitt, 2005). At this point the UK entered a mixed economy for the provision of public infrastructure and services.

The adoption of the GPA in 1980 also encouraged a review of procurement and markets in the EU. The member states of the EU were individual members of the WTO, and they would be required to open their public projects and subsequently services to competition, including from other member states. The EU set up a review to develop the principles of a single market across its members to support compliance with the GPA, while it was already agreed that the EU would be responsible for compliance to the WTO. It also enabled the EU to progress the removal of trade barriers that existed between member states, including for the free movement of people, capital, goods and services. The work to establish the Single European Market (SEM) was undertaken by the British Commissioner to the EU, Lord Cockfield, and the SEM came into effect in 1992. In parallel with these discussions to establish the SEM, the potential accession of Eastern European member states became an increasing possibility. While the new Europeans could provide additional skilled employees into the labour force, it was understood that they would not initially be able to cope with the level of competition within the GPA and SEM, not least because their infrastructure was not connected with existing EU member states. If the SEM was to be effective in the longer term, then these issues needed to be addressed and the Trans-European Networks programme for transport and later energy, supported by an EU regulation, was established in the 1992 Maastricht Treaty (Spiekermann and Wegener, 1996) and launched in 1996 (Richardson, 1997).

While the GATT/WTO international agreements provided a driver for policy change in the EU and the UK, this was not outwardly acknowledged in UK domestic policy narratives. The move to privatisation and outsourcing of infrastructure, goods and services was regarded as a political agenda rather than as a result of an international agreement, although the policy tools used to implement the GPA were applied to achieve political outcomes, as later illustrated in comparison with the mechanism used to implement the GPA in other countries (Morphet, 2021a). While an international agreement, it was understood that each member of the GATT/WTO would need time and political space to implement the changes required to open their public sector markets (Goetz and Mayer-Sahling, 2009). Also, the starting point or base line for each member state would vary depending on their existing practices. Hence, in the UK there was a national health service while in France primary health services were provided by a range of private consultants within a national system. There were also choices for different approaches within signatory states. An example of this is the deregulation of the bus services in the UK (Rye et al, 2021). In London, the opening of competition

for buses was set within a framework of a single system and livery, integrated fare structure and ticketing and branding. Outside London, competition was undertaken between bus service operators providing similar routes, with competition being provided at the bus stop to the traveller. This differentiation of bus systems still operates although some change is now being implemented, as in Manchester.

In the UK, the application of the GPA for major infrastructure has occurred in a range of ways. A new section of the M6 was provided by a private contractor and required a toll. The Severn Bridge was provided by a mixture of public and private funds and was also put within a toll regime. For energy, national security of supply became an issue of increasing concern and joined the national risk register. Here there were concerns about the need to meet climate targets set in Paris in 2015, the depletion of North Sea Oil and gas supplies and the restriction of supplies coming from Russia and its satellites into parts of Europe such as Germany. The EU established a Trans-European Network (TEN) for energy that focused on removing reliance on single suppliers such as Russia and providing investment for services of cross-EU pipelines. The UK is serviced by a pipeline from Norway and other proposals exist for supply from France. One of the actions taken by the EU on the finalisation of Brexit was to establish a new energy supply pipeline for Ireland from France, not via the UK.

The WTO also made a trade and environment agreement in Marrakesh in 1994 and this has become increasingly important in its work. The environment features in a range of trade disputes (Shaw and Schwartz, 2002) and since 2020, a group of 71 WTO member states (82 per cent of WTO members) has been engaged in Trade and Environment Structured Discussions (TESSD) to consider ways in which work on trade and sustainability can be advanced, including through the adoption of common standards for its members (Birkbeck, 2021).

European Union

The UK's membership of the EU 1973–2020 had a significant effect on the way in which the UK undertook a number of its domestic policies. Within the EU, the UK agreed to pool the sovereignty on a range of issues including energy, transport, water, the environment, regional policy and the way in which these matters were undertaken and delivered within the UK using agreed principles and legislation through the Single European Market and Cohesion policies for sub-state territories. As a dynamic organisation, the EU also progresses its policies and legislation within

wider international agreements such as with the UN and WTO and aligns them with its own policy objectives through seven-year programme cycles. The EU also discusses and confirms these policy priorities for the future through long programmes of discussion, agreements and subsequently specific treaties that become bound into the foundational treaties after agreement e.g. Maastricht (1992), Amsterdam (1997) and Lisbon (2007). Within these programmes, member states are supported in their delivery funding programmes that are negotiated as part of the legislative process and member states may have considerable freedom in the order in which these policies or projects are delivered within an overarching timeframe for compliance. Within the cohesion programme, for example, states are able to identify and prioritise specific projects within these overall frameworks (Dellmuth, 2021).

The legislative framework for delivery is through EU directives and regulations. EU regulations require implementation as set out within them and do not need to be agreed by domestic parliaments, as their legislative power is drawn from the overarching EU treaties. The range and influence of this legislation on UK domestic policy for transport and energy is set out in the Review of the Balance of Competences between the UK and the EU (UK Government, 2012; 2014a; 2014b; 2014c). In some cases, these programmes may be in place for a number of EU programme cycles in order to achieve their objectives such as those for the Trans-European Networks (TEN) for transport and energy, which was adopted as part of the Maastricht Treaty negotiations in 1992, implemented in a regulation in 1996 (EC, 1996) and, for transport, subsequently reviewed and refocused in a revised regulation (EC, 2013a). The key projects for the UK had already been identified before 1996 (EC, 1995). TEN-T networks identify corridors across the EU's territory within which transport improvements should be made for missing links or bottlenecks that are identified by the member states. Any improvements made within these regulations are required to deliver three transport modes. In 1996 these corridors were primarily east-west in their orientation, and in the UK the route between Crete and Donegal supported improvements in the A14, including the Cambridgeshire Guided Busway and the West Coast Main Line (EC, 2012). In the 2013 regulation the corridors shifted to a north-south orientation with the North Sea Mediterranean route passing through the UK with 14 identified projects including the improvement of the Glasgow-Edinburgh rail link, the Northern Rail Hub, HS2 electricity supply improvement, smart motorway implementation, Crossrail and improvements in the Felixstowe to Nuneaton rail line (EC, 2014). In addition to these corridors, other improvements

were included such as public transport access to airports. As part of the delivery of the TEN-E regulation, the EU also provided some direct funding for project development through the Connecting Europe Facility and then the funds for delivery were also provided to agreed percentages of projects with the balance frequently being supported through loans from the European Investment Bank (EIB). Overall, energy, water/sewerage and transport projects formed the largest percentage of UK loans from the EIB (EIB, 2022).

United Nations

As a member of the UN, the UK signed the Paris Climate Accord treaty 2015 and the Sustainable Development Goals (SDG) (2015), which include infrastructure commitments in SDG 9. These include a commitment to develop sustainable, resilient and inclusive infrastructure and links with other SDGs including the New Urban Agenda (SDG 11), with a target of developing 'quality, reliable, sustainable and resilient infrastructure, including regional and trans-border infrastructure, to support economic development and human well-being, with a focus on affordable and fair access for all' (target 9.1) (UN, 2022).

Governance: infrastructure delivery within the UK

Strategic infrastructure delivery within the UK is undertaken through a range of legal and funding methods. In England, strategic and nationally significant infrastructure delivery has been promoted in a range of ways. It can be directly by government and delivered by a specially created institution such as HS2 and Hinkley Point, it can be through the government agency such as that for highways, or projects can be promoted by the private sector such as those for energy. The UK Infrastructure Bank was created in the Spending Review 2020 by HM Treasury and opened in Leeds in 2021. Its purpose is to drive regional and local economic growth and it will work particularly with local government and the private sector. It will focus on specific projects. In its policy design for the Bank (HM Treasury, 2021b), the focus of its activity is on infrastructure investment to support economic growth. In some respects its functions appear to overlap with those of another government agency, Homes England, which also provides funding for infrastructure to support housing development. In Scotland and Wales the devolved administrations have prepared their own national infrastructure plans

(Scottish Government, 2021; Welsh Government, 2021) and it is uncertain how these will interrelate with the UK state approaches that are emerging.

The National Infrastructure Commission

The National Infrastructure Commission (NIC) was established in 2015 and became an executive agency of the Treasury in 2017 to provide expert advice to the government on the infrastructure challenges it faces. The NIC has a charter and works within a fiscal and economic remit that is set within the principles laid out in the Eddington Report (2006). Its responsibilities include advising on 'the UK's future needs for nationally significant infrastructure, help to maintain UK's competitiveness amongst the G20 nations and provide greater certainty for investors by taking a long-term approach to the major investment decisions facing the country'. Its remit is to independently define the nation's long-term infrastructure needs, prioritising and planning, and testing value for money to ensure that investment is properly targeted to deliver maximum benefit. The framework for its operation was updated in 2021 to extend its role to advise on how the UK can reach net zero. Its role is to support sustainable economic growth across all regions of the UK, improve competitiveness and improve quality of life. It is required to prepare a national infrastructure assessment for each parliament, make recommendations to government and monitor its progress. It also undertakes specific studies and prepares an annual report. Apart from this requirement, the NIC has the freedom to report on relevant matters as it chooses (HMT/NIC, 2021) and the government is required to lay the NIC's reports before parliament. The NIC also has an Oversight Board to which it has to respond.

Central to this NIC remit is the National Infrastructure Assessment (NIA) – an in-depth review of the UK's major infrastructure needs on a 30-year time horizon – that is to be undertaken once in every Parliament. The first National Infrastructure Assessment (NIA) by the NIC was published in July 2018 and reviewed the UK's future economic infrastructure needs up to 2050. It made recommendations for the delivery of new transport, low carbon energy and digital networks, how to recycle more and waste less, and how future infrastructure should be funded. It aimed to ensure the UK is prepared for the technological advances that will change how the country operates. In its NIA (2018) the NIC considered the delivery of National Significant Infrastructure using the 2008 Act. In its assessment it recommended that design of projects should be improved and included within procurement processes for NSIPs

INTRODUCTION

as they are in HS2 and Crossrail. The NIC has published a range of reports on infrastructure issues including Smart Power (2016), High Speed North (2016), freight (2019) and resilience in infrastructure systems (2020).

As part of its preparation for the second NIA, the NIC has indicated that there are strategic gaps in the provision of infrastructure (NIC, 2021). As part of this process the NIC published a baseline report that has surveyed the current state of the digital, energy, flood resilience, water and waste water, waste and transport sectors. In the next NIA, the NIC has agreed that it will focus on three strategic themes: reaching net zero, reducing environmental impacts/building resilience to climate change, and helping level up communities across the UK.

Goals: infrastructure policy as a mechanism for change

As we will discuss in this book, the role of public policy to achieve both international commitments and domestic political priorities is usually bound within narratives that can be communicated to the public, the media, academic community and those sectors affected by the policy proposed (Shanahan et al, 2011). These policy narratives may take some time to introduce and may be associated with a change in the political ideology of any new government after an election. In the UK, an incoming government will have had the support of a civil service team for a period before the election, during which time an opposition party will be able to discuss its proposed manifesto and policy changes. During this process, they can be informed of longer-term and international commitments that may have some priority or frame the opposition's policy proposals. Part of this period before a general election will be used to bring together these pre-existing requirements into policy narratives that can be put before the public and Parliament if the opposition party is successful in gaining power. For the party of government, these discussions can occur during the life of the government although the priorities of any prime minster and ministerial team may make the insertion of these international commitments more challenging. A change in prime minster or cabinet reshuffle can support these narrative changes in practice and may be an example of punctuated equilibrium (True et al, 2019).

The communication of a policy narrative has a beginning, middle and end (Roe, 1994) and the narrative will describe the final objective and how the policy pathway will achieve these ends. Interest groups can engage with this narrative both on its objectives and its methods (Shanahan et al, 2018) and commentators and researchers can project

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explanatory theories onto the policy process. The framing of these narratives to implement international agreements can be to achieve physical projects as much as social or environmental outcomes although Esposito *et al* (2020) argue that this kind of policy narrative analysis has not been undertaken frequently in relation to mega-infrastructure projects such as NSIPs. These major infrastructure projects may also be implemented as part of a wider international context, through commitments, as when the UK was part of the European Union (EU), or adopted as part of international best practice based on evidence such as from the World Bank, International Monetary Fund (IMF) and the Organisation for Economic Co-operation and Development (OECD, 2013) on the role of infrastructure investment as a means to support economic growth. This broader context matters in terms of understanding the origins, operation and potential futures of the NSIP regime in England.

The government's role in the provision of national and local infrastructure is understood as one of its key mechanisms for supporting a range of objectives including the growth of the economy, the encouragement of foreign direct investment (FDI) (Othman et al, 2019) and as a means of social and economic redistribution. These policies may have domestic objectives but their delivery is set within a context of international agreements for the means of their provision particularly concerning their procurement and operation. This book considers the role and effectiveness of the insertion of a new policy approach as a mechanism of change, the Planning Act 2008, locating this in the literature on why policy changes and the processes that are associated with this (Dudley and Richardson, 2004; Dudley et al, 2000). Major infrastructure investment requires government support in terms of legislation, funding and political will. Given the time taken to develop large scale infrastructure projects, these also need political support and policy persistence through different parliamentary terms and potentially across changes in government that are longer than one political cycle of four to five years. This is particularly the case where infrastructure projects are supported and delivered through private sector investment such as those using the Private Finance Initiative (PFI) (Morphet, 2021a).

The institutional and legal context for these projects may also use temporal mechanisms for promoting policies (Goetz and Meyer-Sahling, 2009). Dudley (2013) argues, after Kingdon (1995) that windows for policy rollout are set within longer-term government narratives created to support their specific delivery. While such time or policy windows may appear to be opportunistic, there is also a planned role for this approach when wider international agreements such as those made between the UK and the World Trade Organization (WTO) and the EU have to be

implemented. These major agreements frequently provide a sevenyear timeframe for their delivery in order to manage potentially major switches in domestic policy to suit the agreements through a change in government, as in the UK in 1979 with the General Agreement on Tariffs and Trade (GATT) (Morphet, 2021a) or to reset policy within a government during the change of political leader such as between Major and Blair in 1997. The longer timescales offered for delivery, set within international agreements, recognise the political issues associated with changes in policy direction (Putnam, 1988). Kingdon (1995) argues that policy windows present the best opportunities when there is a change of administration after a general election or, within government cycles, a change in leadership such as a new prime minster. Cabinet reshuffles also present the opportunity to insert new policies with less explanation than within a stable political environment. Another approach used by the UK Government has been through regular Comprehensive Spending Reviews, which have provided the opportunity to reset or redirect policy without a wider public debate. These have been adopted across OECD member states in order to change priorities and the funding reallocation that goes with them (Tryggvadottir, 2022).

A further issue to consider in relation to these international obligations is that although there may be public discussion about their preparation and then adoption, their subsequent role in shaping policies and legislation can be sunk within domestic policy narratives. This is a particular but not peculiar issue within the UK. Often the longer effects of such international agreements can be seen in US policy and trade literature (Krikorian, 2012) where it is discussed in more open ways including the effects domestic and external trade groupings such as the EU have on US policy. Within the state, there can be policy advantages to be gained by using the requirements of these international agreements to support change that might override purely domestically generated, ideologically driven policies. While, in the UK, these will be understood at the heart of government, including in the Cabinet Office, Foreign and International Affairs Office and the Treasury, they are less likely to surface within the narrative that supports their domestic rollout within the operational departments of the state or in public discourse. Hence the literature on policy delivery, in searching for underlying explanatory drivers, may overlook these longer-standing commitments that will be used at the heart of government. The Institute for Government (IfG) discussed the role of successful policy making in the UK (Hallsworth et al, 2011) and did not recognise that the 10 policies that were identified as the most successful in their delivery were all derived from UK commitments to action within the EU (Jackson 1992; Morphet 2013). This international, longer-term and overarching requirement for delivery, albeit within an approach that allows a domestic narrative, is critical to understanding the policy and legal context of the delivery of the Planning Act 2008 and NSIPs.

Goals: infrastructure provision to support economic growth and international investment

Investment in infrastructure is regarded as a key contributor to national economic growth (Esfahani and Ramírez, 2003), particularly as part of a public investment programme (Fournier, 2016). Transport infrastructure investment is also identified as a key contributor to national productivity (Crafts, 2009). When considering locations for international investment, companies will be evaluating a range of factors including access to markets, labour supply, skills and a government's programme for further infrastructure investment and maintenance. This investment is measured as a percentage of GDP (OECD, 2021). The OECD's definition of infrastructure investment is:

Infrastructure investment covers spending on new transport construction and the improvement of the existing network. Infrastructure investment is a key determinant of performance in the transport sector. Inland infrastructure includes road, rail, inland waterways, maritime ports and airports and takes account of all sources of financing. Efficient transport infrastructure provides economic and social benefits to both advanced and emerging economies by improving market accessibility and productivity, ensuring balanced regional economic development, creating employment, promoting labour mobility and connecting communities. This indicator is measured as a share of GDP for total inland investment and in Euros for the road, rail, air, inland waterways and sea components (OECD, 2021).

Investment in transport infrastructure is regarded as a particularly important factor in the level of national productivity (ECMT, 2007). The OECD has shown that infrastructure investment in the UK is lower than in other OECD member states but that all countries would see a return on infrastructure investment.

Goals: infrastructure investment as a mechanism to support national security

The role of national infrastructure investment in supporting national security is common across a range of countries including the UK (Brem, 2015). This investment includes the maintenance of existing infrastructure, replacement and updating together with new provision to meet obligations and promote change. When new technologies are introduced, such as the internet, then countries need to enable its provision by direct intervention or enable a range of providers to meet national needs. In the US, this is termed Critical Infrastructure Protection (CIP) (Hemme, 2015), which has been actively addressed since 1998. In 2006 a National Infrastructure Protection Plan was produced to support the resilience of the existing infrastructure and national security (Department of Homeland Security, 2006). This incorporated issues such as cyber-crime and terrorism as well as supply. In the US, this security approach has also sought to examine the potential issues concerning the need for an interconnected approach to different types of infrastructure and the risks of a silo-based approach to provision. In 2007 a specific review was undertaken on the provision of transport as part of this national security programme (Sammon and Caverty, 2007). This covered a range of issues including operating systems and technology.

In the UK, a national infrastructure plan was produced in 2011 and subsequently updated (HM Treasury, 2020). The main concerns about threats to national infrastructure are related to cyber-attacks rather than physical danger or interruption of capacity in supply for energy and water. When first instituted, the threats to security were regarded to be in the provision of energy, which resulted in a policy shift towards nuclear. The crisis in gas supply in 2021-2 resulting in increased prices and reliance on uncertain providers such as Russia may lead to a reconsideration of the balance of threats in the UK. Another challenge in considering the security of infrastructure is in the effects of fragmentation that have resulted from outsourcing over a 40-year period. Recently, the UK government has moved to consider national infrastructure through a single approach to overcome these issues (Langley, 2018). There have been assessments of cyber-security for national infrastructure (Stoddart, 2015), which have extended to health (Ghafur et al, 2019) and education (Crick et al., 2019). A UK National Risk Assessment was first published in 2008 and then subsequently updated, with the latest version being issued in 2020, although this was subsequently withdrawn in February 2021 and not replaced.

Goals: infrastructure investment as a mechanism for regional redistribution and levelling up

The role of infrastructure investment and provision is a mechanism for regional development and redistribution (Rietveld, 1989). However, despite regional policies being in place in the UK since the Barlow report of 1940 (MacKinnon et al, 2020), much of government investment has been spatially blind or concerned to reinforce the areas where the economy has been growing and becoming more congested. This has extended into consideration of support to promote sub-regional economic development both by states and groups of municipal authorities (Erie, 2004; McCann, 2021). The assessment of the effects of the role of infrastructure investment in supporting subnational economies has been undertaken although there may be issues of understanding this investment within a wider economic analysis. Infrastructure investment may be more attractive in regions or locations that are already economically buoyant such as in and around Greater London (Linneker and Spence, 1996). There is also a role for investment in growth corridors – what has been part of the UK approach to regional redistribution - including the Leicester-Birmingham corridor (Wannop and Cherry, 1994), the M4 Sunbelt region (to the west of London along the Thames Valley) (Bassett, 1990), and more recently the Oxford-Cambridge Arc (Valler et al, 2021).

The UK Government's commitment to the principle and associated policies of 'levelling up' was introduced after the general election 2019 and set out in a speech by Boris Johnson when prime minister in 2021. In this, infrastructure included the provision of housing and broadband in addition to transport and energy and is a major element on the levelling up programme. In part it was associated with the implementation of Brexit and the replacement of EU structural and cohesion funds for lagging regions in the UK, but it was also proposed as a more widespread policy approach to include consideration of national infrastructure in transport and energy (Shearer et al., 2021). A levelling up fund of £4.8bn was created to implement 'shovel ready projects' with decisions on the projects announced in the 2021 autumn budget. However, as with some of the other funding schemes like the Towns Fund, which also included infrastructure projects, the initiatives appear to be disconnected from other policies and focused on government-supporting constituencies. As part of their broad levelling up policy, the government also established an infrastructure bank with £12bn capital and £10bn guarantees.

In the West Midlands Combined Authority (WMCA), an assessment has been made for the contribution of green infrastructure towards

levelling up (Chapman and Phagoora, 2020). In this the WMCA considered the relationship between green infrastructure and inequality as a key platform for levelling up in the city region with recommendations for improving the provision of open space and access to it by different social groups. The precise meaning of 'levelling up' is difficult to set out (Shearer et al, 2021), not least as there has been no clear statement by government. The Bennett Institute, in its research programme for levelling up, has been focusing on the role of infrastructure (Bennett Institute, 2020). The lack of clarity in the meaning of levelling up is also regarded as being unhelpful when a range of government departments are expected to be participating. UK government departments have a long history of silo working and there is perceived to be a danger that these contributions will not work together particularly when they are concerned with infrastructure delivery. The Levelling Up the UK White Paper (DLUHC, 2022b) and subsequent Levelling Up and Regeneration Bill (DLUHC, 2022c) have included missions and 'capitals' that are designed to provide an integrated approach across government to decision making including for infrastructure, but no mechanisms are set out for their combined operation in decision making and project selection.

Planning: regimes for infrastructure in other countries

In considering government approaches to defining and funding national infrastructure projects, there is international evidence to draw upon. The OECD has produced a compendium of policy good practices for infrastructure investment (OECD, 2020) which included an agreed principle of good governance across different levels of the state (OECD, 2014). The OECD (Pisu et al, 2015) has identified the relative proportional spend on infrastructure in the UK as being average in comparison with other OECD members, but lower than other G7 countries. While recognising the role of improved planning processes at national and local level as contributing to the delivery of the UK's infrastructure delivery performance, the OECD also stated that a consistent National Infrastructure Strategy also provides some certainty for investors. However, despite this, the OECD recommended that the investment process needs to be improved in several ways to secure better UK performance in comparison with other leading economies. These include:

- improved public–private investment processes
- more integration between modes

- more consistent approaches to regulation
- including all key infrastructure types within regulatory regimes, e.g. ports
- increasing transparency in regulatory regimes
- stronger policy framework to overcome policy uncertainty
- insufficiency of long-term planning
- recognition that the National Infrastructure Plan was a good first step but needs further development into a long-term reliable strategy, e.g. as in the Netherlands
- government should move away from one- and five-year budget cycles for its own infrastructure investment
- national infrastructure plans should also include using existing networks in ways that enhance their capacity
- infrastructure investment needs to be considered as part of the country's economic strategy
- horizontal and vertical integration improvements are required within and between infrastructure sectors
- more infrastructure investment needs to be anticipatory such as that for flooding
- there should be better linking between national and local infrastructure planning and programmes and this should be included within local plans
- the UK should support and engage in the Investment Plan for Europe
- the government should develop more 'ready to go' infrastructure projects to attract external investment. (Pisu *et al*, 2015)

When considering infrastructure policy and delivery in other countries, there are two groups that are useful to consider for understanding the current UK context. The first comprises member states of the EU, where the TEN-T regulations are operational and the specific corridor projects within the regulation cross national borders. The second group of countries are those that are part of the Commonwealth (particularly Australia and Canada), but which, like the United States, have a federal government model where there may be more focus on national co-ordination in the context of devolved state powers.

In considering the approaches to strategic and national infrastructure in EU member states, these vary according to the legal codes and the existing system of land use planning (Nadin and Stead, 2008). As Marshall (2014) identifies, it is not only the regulatory processes that are important

in infrastructure planning but also funding and government direct involvement in delivery. There are also different political contexts with expectations of community engagement in decision-making processes and the extent to which there is a tradition and expectation of the state's investment and involvement in projects of this scale. There may also be different levels of reception of such projects in terms of their contribution to the national economy. In France (Marshall, 2014) and Ireland (Williams and Nedović-Budić, 2020) for example, infrastructure has been identified and accepted as a major contributor to economic growth. Similarly, in Germany, improving East–West communications has been a major factor in the unification programmes (Zumkeller et al, 2004; Santamaria, 2020). In the Netherlands, there is more focus on water-based strategic infrastructure – canals, ports and flooding measures – and the role of international airports, whereas roads take on a more local dimension (Marshall, 2014).

In considering implementing TEN-T programmes in different member states, in France, despite a strong planning culture and legacy, different infrastructure types and modes are in separate rather than integrated programmes (Marshall, 2014). However, the national programme for 2011, shown in Marshall (2014) does reflect the second phase of TEN-T routes adopted in the revised EU Regulations (EC, 2013a). There is also a deliberative approach to decision making with the community (Marshall, 2016). In Spain, there has been more willingness to recognise the role of the EU in supporting infrastructure delivery. Before EU enlargement started in 1992, Spain was a main beneficiary of the EU structural funds programmes for lagging economies and frequently the EU commissioner for Spain took the responsibility for transport. Enlargement meant that Spain would no longer be a major beneficiary of infrastructure funding with a greater focus on east-west connections across the EU's territories, but the deal brokered as part of the Maastricht Treaty negotiations gave Spain a final programme period of higher levels of funding. In Spain, like France, plans and programmes for major infrastructure are made by sectors (Marshall, 2014). This is in contrast to the Netherlands and Ireland, which have national infrastructure and spatial plans that have been regularly updated (Marshall, 2014; Lennon et al, 2018). In the Netherlands in 2008, the national planning system changed to become more focused on integrated strategic infrastructure planning, which included the merger of different government departments (Marshall, 2014).

While the system of planning regulation in Ireland has been similar to that in the UK, through the creation of a National Spatial Strategy in 2002 and the updated National Planning Framework (NPF) 2018, the

approach is now more similar to that in Scotland (Lloyd and Purves, 2008) and Wales (Harris and Thomas, 2008) than to that in England. The shift in 2002 also represented a move towards a more European model of planning to embrace wider co-ordination and use of policy and programmes (Nadin and Stead, 2008). In addition to nationally significant infrastructure, the National Spatial Strategy (TSO, 2002) also included the designation of strategic settlements. The NPF covers the period to 2040 and includes a National Development Plan for infrastructure with delivery supported through a designated budget that lasts until 2030 and has already been reviewed (Government of Ireland, 2021). It also has the associated legal powers to achieve implementation of the projects and is co-ordinated across sectors (Lennon et al, 2018).

Outside the EU, a focus on infrastructure in the planning system emerged in Australia as part of a shift towards spatial planning (Dodson, 2009) with the Australia Infrastructure Plan (2016) prepared within an integrated approach, and is accompanied by an Infrastructure Priority List (2015). As part of the national governance principles, the government will set out the mechanisms and funding for the delivery of these projects. There is a commitment to public engagement in the decision-making process while this is coupled with an objective to align infrastructure investment with productivity and economic growth. Overall, there is a commitment to identifying projects that will be required until 2050 and safeguarding these so that they can be delivered. In Canada, a national approach to strategic infrastructure planning has not been developed although it has been proposed based on the quality and funding of the existing provision (Mirza and Ali, 2017). In the US, there has been a focus on infrastructure security and President Biden has made it a key focus of his presidency. In 2021, he signed the Bipartisan Infrastructure Law and allocated \$2 trillion for its implementation.

Planning: infrastructure in a devolved UK

Town and country planning is devolved in the UK, with responsibility for this falling to the Northern Irish, Scottish and Welsh administrations, so that the UK government is only responsible for planning in England (Morphet and Clifford, 2014). There are, however, a group of overlapping governance spheres here that are evolving, such as environmental regulation post-Brexit. Funding for infrastructure in Scotland, Wales and Northern Ireland has primarily been through national (UK) taxation and tied to allocations for England agreed in the Barnett Formula introduced

in 1979 (Christie and Swales, 2010; King and Eiser, 2016). The Barnett Formula is used by the UK Treasury to calculate the annual block grants for the Scottish government, Welsh government and Northern Ireland Executive. It therefore determines the overall funding available for public services such as healthcare and education in the devolved nations (IfG, 2020). It is also used to issue proportional funds when additional government expenditure is made in England. When introduced, the Barnett Formula was considered to be a temporary arrangement, initially establishing the level of public expenditure on services such as health and education, but since devolution in 1999 it has been used to set the budget allocation. However, the Barnett Formula does not include investment that is considered as a reserved matter within the devolution arrangements (projects that are UK in their scope and where there is a retained lead by the UK government).

The role of the Barnett Formula has become central to discussions and negotiations on devolution within the UK (Kay, 1998). It has particularly emerged when there have been considerations of additional subsidiarity and new phases of EU cohesion programmes that have set policy for much of the substate governance relationships within the UK, such as in 2014 (King and Eiser, 2016). Paun (2015) argued that the distribution of devolved funding should be reassessed to represent real expenditure more nearly, although he did acknowledge that the Barnett Formula, while having no legal basis, was a mechanism for funding distribution without constant re-negotiation (Heald, 2020). However, this issue has become more urgent as the implementation of Brexit has proceeded (Birrell and Heenan, 2020).

After Brexit, the UK government commissioned a review of Union Connectivity (Hendy, 2021) to replace the strategic infrastructure policies and regulations provided by the EU. Up to this point, the strategic policy and programme for infrastructure corridors and energy had been undertaken by the EU with specific delivery policies followed by the UK government for England and the Scottish and Welsh Parliaments and the Northern Ireland Assembly for the devolved nations. The Connectivity Review is targeted at creating a strategic transport network for the UK to replace TEN-T, which it has termed UKNET. It uses the same method of defining multi-modal transport corridors that align transport investment with economic growth, social cohesion and levelling up as TEN-T. It has also proposed specific area improvements studies with the Scottish and Welsh Governments and to develop improvements with Northern Ireland.

Brexit has seen the UK government take back the EU policy and delivery powers that had been devolved to these administrations and has

centralised them through the EU (Withdrawal) Act 2018. There is as yet no indication when they will be returned to a devolved basis although there was a promise made in parliament that they would be eventually returned. The Scottish government has objected to the Hendy review arguing that this is not a Westminster matter but has been urged by the Westminster government to work on the implementation of its proposals (Brown, 2021). The LUWP also indicated that the missions and 'capitals' are UK-wide. On the other hand, the Energy White Paper (BEIS, 2020) makes a number of references to the relationship with the EU but not how it is intended to replace the TEN-E Regulations (EC, 2013a). The White Paper acknowledges devolution and indicates that all the proposals within it that have a UK component will be negotiated with the devolved administrations in the way that prevailed before Brexit. In other words, this recentralisation of the state (Morphet, 2021b) is still in process and its outcomes are unclear.

Scotland

In Scotland, the government has had responsibility for local infrastructure delivery prior to devolution, with funding being allocated by the UK central government. The Scottish Government (2015) commissioned papers on the relationship between infrastructure investment and economic growth to create an economic rationale to underpin their National Infrastructure Mission, which is to increase annual investment in infrastructure by one per cent of current GDP, or £1.56 billion, by the end of the current Parliament in 2025–6. In Scotland, the main channels through which infrastructure enables inclusive and sustainable growth are through its role in:

- supporting the foundations of economic activity
- stimulating demand in the economy in the short to medium term
- improving the supply side of the economy in the longer term (through enhancing productivity and productive capacity)
- improving the efficiency of markets (through facilitating the development of key sectors and technologies, unlocking private sector capital, improving private sector competitiveness)
- improving social and environmental outcomes (through reducing regional disparities, reducing emissions, improving environmental quality and health and well-being) (Scottish Government, 2018).

The Scottish Government established an independent advisory Infrastructure Commission that comments on infrastructure priorities.

The Infrastructure Investment Plan for Scotland (Scottish Government, 2021) includes major projects for energy and is associated with a £33bn budget. In this Investment Plan there is a commitment to increase infrastructure expenditure by one per cent of Scottish GDP (2017) by the end of the Parliament in 2025. The policies and proposals within the investment plan are more integrated than those in England and are also associated with the Fourth National Planning Framework for Scotland. It excludes projects that are proposed by the private sector or undertaken by the UK Government.

The Planning Act 2008 procedures for obtaining Development Consent Orders (DCOs) have not applied in Scotland. Instead, the necessary statutory consents for any major infrastructure project are usually obtained separately. As in England, a Transport and Works order or the Private/Hybrid Bill process in the Scottish Parliament could be used. Examples of this have been the process used for the Edinburgh Tram Project, heavy railways and the Forth Crossing. In Scotland, some infrastructure projects have been defined as nationally significant in the National Planning Framework for Scotland (Cave et al, 2013). The Crown Estate also has its own energy auction for offshore wind for Scotland (Kollowe, 2022).

Wales

In Wales the development consent process for NSIPs only applied to types of development where responsibility had previously been reserved by the UK Government. Following the Planning Act (Wales) 2015, the Welsh Government took over responsibilities for this process in 2019 through the definition of Developments of National Significance (DNS). Although initially the DNS were managed by the Planning Inspectorate (PINS), in October 2021 these responsibilities were transferred to the Welsh Government Planning and Environment Decisions Wales (PEDW) service. Since 2019, a range of guidance to support the implementation and application of the DNS has been issued (PINS, 2019; Welsh Government, 2021) and some of the projects and thresholds that are subject to the DNS system have changed. The precise details of the criteria related to various projects can be found in the Developments of National Significance (Specified Criteria and Prescribed Secondary Consents) (Wales) Regulations 2016 (as amended). As of 1 April 2019, the DNS thresholds related to generating stations have been extended; as a result, all energy generation projects of between 10MW and 350MW are now captured by the DNS system, as are overhead electric lines of up to 132kV that are

associated with a devolved generation station. DNS projects that involve more than one specified criteria (for example, a scheme involving a railway and solar panels) can be covered by a single application and associated application fee, provided they form part of the same project. DNS projects that include overhead electric lines are included in this principle. Energy storage projects are no longer captured by the DNS system. Effectively, all energy storage projects, up to 350MW can now be decided by local authorities through the planning process. However, this does not include pumped hydroelectric storage schemes of between 10MW and 350MW which are still captured by the DNS system. While being described by the Welsh Government and the Planning Inspectorate as being similar to the NSIP system in England, the associated consents or development for DNS will be dealt with by local authorities in Wales (Cave et al, 2013).

Northern Ireland

In Northern Ireland, strategic infrastructure is connected to the Regional Development Strategy (RDS) and is managed through a range of specific programmes through the Department for Infrastructure. The RDS-related programme operates until 2025 and is connected to the Regional Transport Strategy (RTS) with its associated programmes. The projects included within these strategies are funded and delivered through the Investment Strategy for Northern Ireland (ISNI). In 2021, the planning minister within the Northern Ireland government announced a review of strategic planning policy for oil and gas (Mallon, 2021).

Delivery of infrastructure through the English planning process

The Town and Country Planning Act 1947 established a legal framework for the use of land and buildings in England and Wales (Cullingworth and Nadin, 2006). The purpose of the act was to ensure that land and buildings, regarded as a national resource, were used in the public interest. As part of this new process, the rights of property and landowners to use their assets as they wished was removed and replaced by a planning consent regime. Any proposal for the use of land had to be supported by the principle of development that set out need and purpose. The post-war planning approach was to ensure that housing, social and community facilities could be developed in accessible and planned locations. Following the Planning Advisory Group's report (MHLG, 1965), the planning system was reformed to move away from specific land use

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zonings to a more strategic approach. This was through development plans as set out in the 1968 Planning Act (Delafons, 1988). This was later reviewed, with a focus on speeding up planning processes (Prior 2005), with subsequent reforms introduced through legislation in 1991 and 2004 that addressed local and regional planning. The planning system was further reformed through the Localism Act 2011, the introduction of the National Planning Policy Framework (NPPF) and deregulation of developments where planning consent is required (Clifford *et al*, 2019). While there have been various changes in the development plan system, development planning applications are still largely determined within the Town and Country Planning Act 1990. Prior to the Planning Act 2008, planning consent for infrastructure at all scales utilised this planning process.

As part of the overall structure of planning legislation that operates in England, the Planning Act 2008 differs from the other legislation in a number of ways. Firstly, it seeks to incorporate a set timescale for scheme examination and reports, which has been met in the majority of NSIP applications although it has been undermined by ministerial decision making since 2016. Secondly, after a long and detailed process to accept an application for a DCO into the examination system, the outcome was originally widely taken to be assured with consent, but again there have now been a number of scheme refusals by ministers. Thirdly, like other acts for specific infrastructure such as the Electricity Act 1989, there has been no possibility to challenge the reason for the proposed infrastructure by virtue of testing local need unlike other planning legislation or that for compulsory purchase orders (CPOs). Instead, this is dealt with separately through the National Policy Statement (NPS) process and cannot be contested during the consenting phase. Further, there is no meaningful opportunity to test community consultation or the cost/benefit, economic and social dimensions of such projects. It is also worth highlighting here, though, that there is no national spatial plan in England – no equivalent of Scotland's National Planning Framework or the National Development Framework for Wales, so major infrastructure decision making tends towards the fragmented and aspatial. This is all explored in much greater detail in subsequent chapters.

Considering more than a decade of Nationally Significant Infrastructure Projects

This chapter has provided a context for understanding the engagement of central government in the provision of nationally significant infrastructure

in the UK. Important debates surround the financing, cost/benefit, technical, environmental, economic and social dimensions of significant infrastructure projects. The very categorisation of some projects as 'nationally significant' is itself a political choice with a range of spatial and scalar implications. There are a number of important contexts to consider in relation to significant infrastructure in the UK including in relation to Brexit, devolution and regional equality. Following concern around infrastructure development and delivery, in England and Wales the Planning Act 2008 introduced a new regime for assessing and consenting Nationally Significant Infrastructure Projects, with a process that incorporated establishing the principle of development through parliamentary approval of National Policy Statements, acceptance and time-limited processes including examinations of and decision upon projects.

As we explore in this book, this regime has been largely accepted as a positive one by most stakeholders (such as planning consultants, inspectors and lawyers) involved in it, who value the certainty of decision making. However, some significant concerns persist, in particular about community engagement and incorporation of local knowledges, as well as questions about the engagement of stakeholders and role of local government in a 'national' system. There is also the relationship between (planning) consent and (project) delivery, which can relate especially to issues of flexibility. Consideration of these themes runs throughout our book.

Having provided context in this chapter for understanding the 2008 reforms and the evolution of the NSIPs regime, which has now been operating for more than a decade (with the first application made in 2010 and first Development Consent granted in 2012), in Chapter 2 we explore the origins of the 2008 Act and the arguments mobilised in support of introducing a new separate system of planning for 'Nationally Significant' infrastructure. Chapter 3 briefly outlines how the regime works and the process for gaining a Development Consent Order. Chapter 4 then reviews existing scholarly work and literature on the NSIPs regime as well as relevant work on policy development, reform and communities. Chapter 5 considers the relationship between consent and delivery. Chapter 6 outlines how the system has operated in practice and the type of projects that have applied for consent through it. Chapters 7, 8 and 9 then provide case studies of a range of NSIPs, drawing upon our own empirical research. Finally, in Chapter 10 we conclude the book by considering contrasting views as to how well the regime works, and for whom, how the example of NSIPs helps us understand processes for policy change in the UK government and speculate on the future for major infrastructure planning and delivery.

2

Origins of the NSIPs regime

Introduction

In this chapter we explore the antecedents of the Planning Act 2008 and the decision to establish a separate planning system for Nationally Significant Infrastructure Projects (NSIPs). We will contextualise this discussion within both domestic and EU policy frameworks. In the UK, we briefly overview the various consent regimes, for example under the Electricity, Highways and Transport and Works Acts, as well as Town and Country Planning Acts, which existed before the NSIP regime was introduced in the 2008 reforms. We discuss this in relation to the Eddington (2006) and Barker (2006) reviews, which are often seen as key proponents of these reforms, but also highlight how there were a number of previous government proposals and discussions from 1998 onwards to establish a planning system for NSIPs. The majority of these focused on the apparent need to provide certainty in the process for scheme promoters, in the expectation that delay and uncertainty would jeopardise investment in infrastructure. There was also an unspoken assumption running through these proposals that the Planning Inquiry procedures used within the framework of the Town and Country Planning Acts were giving too much weight to the community and landowners, together with other stakeholder interests, and that this was what was causing delay in the process (Johnstone, 2014). We explain the arguments mobilised in favour of the reform and the reaction to the proposals when they were mooted. We also note that a number of the issues identified by the Eddington Report as being problematic in the planning system for major infrastructure projects have not been resolved through the Planning Act 2008.

What are the key consenting regimes for the provision of infrastructure in the UK?

There were a number of different regimes for gaining consent for national infrastructure projects in effect before the Planning Act 2008 was introduced. As part of the process of introducing the reforms in the 2008 Act, an argument was made that this was a complexity that could lead to inefficient and delayed decision-making procedures (Bishop and Jenkins, 2011). However, since the 2008 Act, these different planning and development consent regimes still exist for projects smaller than the thresholds set for NSIPs and in the case of hybrid bills, for projects that could potentially be NSIPs. We now consider these in turn.

The Transport and Works Act 1992

The Transport and Works Act (TWA) and its associated regulations provides a means for fixed transport schemes such as rail, trams and inland waterways to be procured and implemented in England and Wales and the works to be included within this act can be determined by the Secretary of State (Durkin et al, 1992). The TWA includes provisions for environmental assessment and compulsory purchase orders and mechanisms for working with other consenting regimes such as town and country planning and hazardous substances. In the application of the TWA, the project is provided with a Transport and Works Act Order (TWAO) that is agreed by Parliament. The TWA was introduced to replace the previous system available to promote such schemes using private members' bills in parliament and was used widely to support the provision of fixed infrastructure including ports and harbours. TWA bills are supported in their passage through Parliament by parliamentary agents who advise on procedures. The TWA was also designed to be a simplified process for schemes that were being funded by the Private Finance Initiative (PFI) (Vickerman, 2000) to allow the Secretary of State's approval, although schemes with significant concerns can be referred by the Secretary of State to a public inquiry.

The TWA process was initially seen as one for private schemes, without much local authority support or engagement (Lesley, 1995). Initially the TWA applied to England, Scotland and Wales, but this has now changed with schemes in Wales applying to the Welsh Parliament and schemes for Scotland needing to be considered within the procedures set out in the Transport and Works (Scotland) Act 2007. A TWAO normally authorises the scheme, compulsory purchase of land for

the scheme and also for works and mitigation, and closure of roads and other traffic orders necessary for the implementation of the scheme. The provisions of a TWAO can be very wide and, as with a Development Consent Order (DCO) under the Planning Act 2008, it is important to consider the content of the order when it is drafted. The issues to consider in this process mean a wide range of expertise is needed including project management and experience of those who will be operating the completed project (Winckworth Sherwood, 2018). The requirements for planning consent are incorporated into the TWAO process as set out in the Town and Country (Planning General Permitted Development) Order 2015. This may require that either outline or full planning consent be obtained.

The government reports annually on the number of applications for schemes made under the TWA and the decisions made during this annual period. In the period 2020 and 2021, there were nine decisions in each year relating primarily to railway projects. As we will note, in other regimes such as the Planning Act 2008, projects that have consent under one legal route may also use others for consents for specific aspects of their schemes. A project for HS2 is included in the 2021 list of TWAOs for example, although it received parliamentary consent for its implementation through a hybrid bill procedure. Constituent projects that use other legal means to secure their consents may include new stations, footbridge or tunnel improvements. The TWA may also apply to some types of infrastructure such as tramways (which are not considered nationally significant) but there may be choices when heavy rail projects are considered, although specific thresholds for rail projects were introduced with the Planning Act 2008.

There have been criticisms of the operation and use of the TWA. These include a failure to agree matters between parties before the TWA procedures are started, with the case of Thameslink 2000 cited as an example of delay for failure to agree the key elements of design before the process commenced (Bolden and Harmon, 2003). A second issue is the extent to which these projects are related to the planning system and wider development implementation. Also, there are concerns that the projects promoted under the TWA are not related to other strategic planning proposals such as the provision of new locations for housing as found in similar infrastructure investment processes in France (Bolden and Harmon, 2003). Further, as Hickman and Hall (2008) have shown, using the TWAO procedure does not necessarily lead to smooth decision making, as in the case of Crossrail.

Hybrid bill procedure in Parliament

Hybrid bills mix both public and private procedures to support the delivery of major infrastructure projects. The Public Bill Office in Parliament decides whether a bill can follow this procedure and Parliament only generally has one hybrid bill per year (Kelly, 2018). A hybrid bill is introduced by a member of parliament for the government (Patrick and Sandford, 2012) and these have been where there is infrastructure that is nationally significant but has a local impact and particularly large geographical footprints, such as rail lines across numerous local authority boundaries. The procedures are set out in Erskine May (2011) with current procedures introduced between 1985 and 2016. Examples of hybrid bills include a number for the implementation of HS2, the Channel Tunnel Rail Link 1996 (High Speed One) and Crossrail 2008. Objections to hybrid bills can be heard by the select committee appointed by Parliament to consider the bill. The select committee considering the hybrid bill is not allowed to consider the principle of development and the promoters are not required to argue the expediency of the procedure although committees can make changes within the scope of the bill. Examples of these changes include Liverpool Street and Woolwich stations in the Crossrail bill and changes in nonstatutory property protection in the HS2 Phase 1 Bill.

Hybrid bills for railway works are promoted by the government, which authorises the construction and operation of the railway. The process provides planning consent and compulsory purchase powers. Compensation is provided within the terms of the Land Compensation Act 1963. The planning consent is considered to be similar to an outline consent, with detailed approvals being given by local authorities on aspects of the scheme's implementation. The bill procedure also disapplies heritage requirements and replaces them with a non-statutory regime.

The use of a hybrid bill procedure can be long and complex. It may also be extended by changes in the project proposals during the consideration of the bill as in Crossrail (McCaffrey, 2016). In Northern Ireland there was no provision for a hybrid bill procedure in the standing orders of the Northern Ireland Assembly (McCaffrey, 2016). In Scotland, one hybrid bill had been introduced by 2016 (McCaffrey, 2016) and there is guidance and procedure set out (Scottish Parliament, 2021). The hybrid bill procedure is only used in Scotland for a bill promoted by the Scottish government. The procedure has been used to secure consent for the Queensferry Crossing, the second Forth Crossing road bridge, which was authorised and commenced construction in 2011. The procedure

for introducing a hybrid bill in Scotland requires that it is accompanied by statements beyond what is required in England:

- a statement on legislative competence by the presiding officer
- a statement on legislative competence by the member introducing the bill
- a policy memorandum
- a financial memorandum, which must contain additional information if the bill is a 'works bill', namely bills that either seek to authorise the construction or alteration of certain classes of works, or seek to authorise the compulsory acquisition or use of any land or buildings
- a Scottish Ministers' Statement (which must contain additional information if the bill affects heritable property)
- in certain circumstances, an Auditor General's report may also be required.

Town and Country Planning Acts 1947, 1990

While the TWA and the hybrid bill procedure can be used for some infrastructure, other types of infrastructure have used Town and Country Planning legislation to obtain their consents for development. These include airports and their terminals, such as Heathrow Terminal 5, energy such as Sizewell B nuclear power station in Suffolk, for which the promoter on behalf of the Government, the CEGB, sought a direction under section 40 of the 1971 Town and Country Planning Act (Layfield, 1988) although the public inquiry was held under section 2 of the Electric Lighting Act 1909. The development of Sizewell B created community concerns for safety and also for how risk was to be assessed. As O'Riordan et al (1988) indicate, the risks were seen to be capable of assessment within a framework of cross examination at the public inquiry. An inquiry held under the Electric Lighting Act 1909 could not consider the issues in relation to overall supply and need for the facility but rather only the merits of the specific location (O'Riordan et al, 1985). Yet the chairman of this inquiry, Sir Frank Layfield, did try to ensure that the views of the community were put, requesting financial support for their representation, although the government refused this request.

The case of the planning inquiry of Heathrow's Terminal 5 was significant in the way it was used to illustrate the issues involved in using the Town and Country Planning system to obtain consent for national infrastructure and used as a reason to implement the Planning Act 2008.

The proposal for Terminal 5 was contained in the Airports White Paper (1985) and it was opened to passengers in 2008. While the delays were popularly attributed to the planning system, Pellman (2008) argues that there were other reasons including the lukewarm support for Terminal 5 in the Airports White Paper and the failure of the government to make any national statement on airport policy capacity generally or at Heathrow in particular. The government also failed to make any appropriate policies on air quality and noise that would have made some contribution to the debates being undertaken at the planning inquiry. There were also delays in the appointment of the planning inspector and establishing the inquiry, which was a year after the planning application was submitted, itself nearly 10 years in preparation. The planning inquiry ultimately dealt with 37 planning applications and draft orders. The narrative of delay around the consent of this project played a significant role in the justification for the NSIPs regime, yet is a more complex picture than has sometimes been presented.

Highways Act 1980

All roads in England and Wales are included within the jurisdiction of the Highways Act 1980 and the act consolidated much previous legislation. Part 3 includes the powers to create highways and section 278 provides powers for agreements that allow private developers to either fund or complete works to public highways outside or beyond the development site itself, such as traffic calming and capacity improvements. The document is signed by the local highway authority and the developer to ensure that works are completed to the highway authority's satisfaction and local authorities can require contributions to fund their work on these projects. The Highways Act 1980 also includes provision for a public inquiry. There appears to be no specific criticism of the use of this legislation for the provision of major or nationally significant highways, although specified limits mean that the Planning Act 2008 is now used for the largest schemes in England.

The Harbours Act 1964

The Harbours Act 1964 is the legislation used for any port or harbour development including marinas apart from those developments that meet the size thresholds set out in section 24 of the Planning Act 2008 for NSIPs policies, which are included in the Ports NPS (Department for Transport, 2012). The Marine and Coastal Access Act 2010 delegated the powers of the Secretary of State for Transport to the newly established

Marine Management Organisation, which now determines applications for harbour development (Winckworth Sherwood, 2019).

Electricity Act 1957, 1989

The Electricity Act 1989 includes all aspects of electricity supply and provision. The UK has implemented a multi-agency approach to electricity generation (Bagnall and Smith, 2005). The Planning Act 2008 includes the provision of electricity networks and the co-ordination of generation and transmission undertaken by the National Grid Company. It also includes power stations with generating capacity over 50MW in England. In Wales power stations over 10MW are dealt with by the Welsh government. In Scotland, all power stations continue to be given planning consent under the Electricity Act.

What was different about the approach to Nationally Significant Infrastructure Projects?

The Planning Act 2008 set the regime for Nationally Significant Infrastructure Projects (NSIPs). Its introduction was primarily viewed as a response to the Eddington (2006) and Barker (2006) reports. However, there were a number of previous government proposals and discussions from 1998 onwards about the potential to establish a planning system specifically for nationally significant infrastructure projects. One of the first was the consultation on *Modernising Planning: Streamlining the processing of major projects through the planning system* (DETR, 1999) that announced a new approach for planning major infrastructure projects and focused on ensuring that people affected should have a right to have their views known while projects essential for the country's economic future should be prioritised. The new approach envisaged that there would be:

- clear statements of government policy setting out our priorities for investment
- a stronger regional framework for identifying investment needs and strategies
- robust arrangements for prior public consultation
- new parliamentary procedures for approving projects in principle before detailed aspects are considered at a public inquiry
- improved public inquiry procedures
- improved arrangements for compulsory purchase and compensation.

The idea of national policy statements for infrastructure seems to have first been mooted in this document. No immediate reforms followed until a new minster Stephen Byers made a statement in Parliament in July 2001 in which a list of 14 types of 'major infrastructure projects' was proposed to be included in a parliamentary approval process (Marshall, 2011b). These proposals for reforming the planning system for major infrastructure projects were contained in the planning green paper 'Planning Delivering Fundamental Change' (DTLR 2001a; 2001b). These proposals were based on concerns about the opportunities for groups to engage and participate in major planning projects (Owens, 2002) and it identified the need for:

- clear policy framework to support investment of national significance
- national policy framework for major infrastructure
- CPO powers for land assembly for national infrastructure
- approval in principle for major infrastructure projects should be given by Parliament
- reducing adversarial planning procedures that were 'inefficient'.

These approaches were accompanied by new parliamentary procedures for processing major infrastructure projects (2001) that stated that inquiries would be debarred from opening up issues of principle of major infrastructure projects where Parliament had agreed them and that consent would only be refused in exceptional circumstances where issues could be rectified by planning conditions. Following this, in 2002, the Secretary of State for DTLR announced a package for streamlining processing of major infrastructure projects through the planning system and comprised commitments from the government to:

- make up-to-date statements of government policy before major infrastructure planning projects are considered within the planning system in order to reduce inquiry time in debating policy
- have improved regional frameworks through Regional Planning Guidance
- improve inquiry procedures to consider concurrent sessions in major infrastructure projects
- improve arrangements for Compulsory Purchase Orders (CPOs) and compensation.

In 2004, the Planning and Compulsory Purchase Act included a new process for determining major infrastructure planning applications and this was followed by Circular 07/2005 on *Planning Inquiries into Major Infrastructure Projects: Procedures* for England to implement the 2002 Secretary of State package through a new section 77A of the Planning Act 1990, which was inserted following section 44 of the Planning and Compulsory Purchase Act 2004. These changes meant that:

- there could be concurrent sessions
- publicity to be given to inspectors' pre-inquiry meetings and recommendations
- term 'major participant' introduced
- Secretary of State to notify the local authority that inquiry is being held
- new rules on appointing a technical advisor and mediation to allow evidence gathering prior to or between pre-inquiry meetings.

Following this, HM Treasury Reviews, primarily those of Barker (2006) into land use planning and Eddington (2006) into transport both identified the need for reform to deliver a more efficient and effective planning system, reduce delays and to improve the speed and responsiveness of planning decision making. This was accompanied by the Energy White Paper (2007) that also emphasised the cost, uncertainty and delays for major energy projects associated with the planning system. In 2007, the Government also published a White Paper on Planning for a Sustainable Future (HM Government, 2007) that included inter alia, the commitment to ensuring the effective handling of Nationally Significant Infrastructure Projects, establishing clearer national planning policy and speeding up and simplifying the system as a whole. Also in 2007, the Treasury's Review of Sub-regional Economic Development and Regeneration (HM Treasury, 2007) identified the need for major infrastructure projects to be led at regional level, for infrastructure investment to be set within a framework of economic indicators, for the establishment of regional investment funds and the provision of mechanisms for local authorities to promote infrastructure delivery through asset backed vehicles.

Summary of concerns before 2008: the Eddington Review 2006

This brief review of the period 1998–2007, prior to the introduction of the Planning Act 2008, demonstrates a continuing and consistent concern

to reform the planning system for major infrastructure projects. These statements about the need for change were not supported by a more substantial case until the Eddington Review (2006) was published that set out the need for reform in more detail. The Eddington Review also put together the components of reform that had been proposed in the period since 1998 and included them in a single approach that resulted in the system established for major infrastructure projects contained within the Planning Act 2008. The background issues identified by Eddington were as follows.

Lack of public policy integration

One of the key issues before 2008 was the lack of integration between government departmental policy at national level and the various regional strategies for spatial planning, transport and the economy, Hull (2005) indicates that a lack of public policy integration is one of the key reasons for poor performance in delivery and implementation deficits. Although, as Eddington later stated (2006), the mechanism available for integration within government was through a cabinet committee, no such mechanism existed at the regional scale. The reforms to regional planning, including the creation of Regional Spatial Strategies (RSS) to replace regional planning guidance in the Planning and Compulsory Purchase Act 2004, which followed the Planning Green Paper (2001a), had not resulted in the intended single focused and integrated approach for each region. Rather, each government department published a regional strategy for their responsibilities that remained in silos and were regarded as being in competition with each other. The failure of the 2004 North East referendum to establish democratic regional government (Tickell et al., 2005) was followed by a government switch in emphasis to sub-regions through the Sub National Review (SNR) (HM Treasury, 2007) where groups of local authorities entered Multi Area Agreements (MAAs) (Haughton and Allmendinger, 2008) within Functional Economic Areas (FEAs) (DCLG, 2010). The RSS and other regional strategies were abolished in the Local Democracy, Economic Regeneration and Construction Act 2009. Following the 2010 general election, the strategic approaches at regional level were abolished and Local Enterprise Partnerships for sub-regions were established without any legal basis, to operate government and EU programmes (Morphet, 2017b; Sandford, 2022). The issues of fragmentation and competition for the provision of infrastructure were not addressed. Further, no mechanisms for strategic investment decision making were established.

Contribution to national economy

Eddington underlined the role of transport infrastructure in supporting the economy through enhancing productivity. In his report, Eddington identified the role of transport in driving the economy by:

- increasing business efficiency
- increasing business investment and innovation
- supporting clusters and agglomerations
- improving the efficient function of labour markets
- increasing competition
- increasing domestic and international trade
- attracting global mobile activity. (Eddington, 2006: 15)

Eddington argued that there were infrastructure challenges across the whole country as well as in urban areas, and emphasised the role of planning in supporting delivery. He had no initial intention to consider planning matters, rather leaving that to the parallel review of planning led by Barker (2006). However, Eddington included proposals to reform the planning process for major infrastructure projects by introducing a new 'independent Infrastructure Planning Commission to take decisions on projects of strategic importance' (2006: 7). He also recommended that transport in larger urban areas should be managed in a more integrated way. While Eddington's report is remembered for its proposals to change the planning system for major infrastructure investment in the UK, this was a recommendation that was intended to meet the wider concerns and challenges. These included climate change, lack of strategic planning and a need to designate networks and hubs using existing as well as new infrastructure to support cities and businesses across England. Eddington stated that one of the key transport infrastructure challenges for England was the operation of international gateways including ports and airports, and that these were mostly in private hands. Eddington identified national government as having an important role in the investment, access and interoperability of these gateways as transport nodes or hubs.

Cost, uncertainty and delay in the planning system

After lengthy discussion, Eddington concluded in his report that the planning system:

has evolved over several decades to the point at which it can impose unacceptable cost, uncertainty and delay on all participants and the UK more broadly. The current situation affects the UK's

competitiveness by deterring investments and limiting the responsiveness of the transport sector; it hinders the ability of Local Government and other interested parties to engage properly in the process and can sometimes preclude them from doing so; and in extending planning blight and uncertainty, it can severely affect the lives of individuals directly affected by proposals (2006: 56).

Eddington stated that the causes of these problems are 'complex, interlinked and vary from application to application. There is no easy solution ... a distinction should be made between necessary time spent considering serious matters and unnecessary delays' (2006: 56). Eddington also recognised that it was not always the planning system that was at fault and some of the deficiencies were the responsibility of the scheme promoter.

Eddington summarised the causes of 'unnecessary cost and delay' that had developed over many decades and included:

- 1. lack of clarity about national policy so that public inquiries are needed to establish the policy for and basic case for development
- 2. the adversarial nature of the process
- 3. a second stage of decision making the ministerial stage
- 4. overlapping statutory and formal processes with different legislation and operational modes and different ministerial accountability

Eddington identified the scope for legal challenge from beginning to end and the consequences for planning as:

- 1. lack of clarity of government policy
- cumbersome and complex process makes it difficult for promoters to know what is required; delay may be tool for objectors; no incentives for inspectors to manage process more effectively; allocation of costs may be inefficient
- 3. lengthy inquiry period
- 4. two separate phases in decision making
- 5. multiple final decision makers
- 6. risk of legal challenge. (2006: 322)

As an outcome of his review, Eddington recommended that direction from ministers should be at the heart of the process, that government should produce clear guidance on the strategic objectives for transport and that there should be public consultation on these national strategies. He further recommended that an independent planning commission

should be established to determine planning consent for major infrastructure projects and that the process created should include statutory rights of legal challenge at key stages of the process. He also found that the community faced costs of uncertainty and blight as a result of lengthy decision making and concluded that in comparative European markets, competitors could move faster. Planning uncertainty was an issue for both public and private sectors in securing funding for projects, meaning that the 'current planning system can be very costly and inefficient, especially for major projects' (Eddington, 2006: 311).

In considering the role and effectiveness of the planning system as reformed and reconceptualised as spatial planning in the Planning and Compulsory Purchase Act 2004, and implemented through national policy and Regional Spatial Strategies, Eddington found that the objectives had been included to ensure that:

- UK infrastructure projects to support sustainable development are identified and brought forward
- environmental, social and economic objectives are balanced; the process has to be fair, effective and transparent
 - o fair interested and affected parties can bring forward their views and these are properly considered
 - o effective final decision makers have to thoroughly consider the relevant facts and strike a balance in a timely and cost effective manner
 - o transparent public and participants understand how the process is working and to what timetable.

However, Eddington also identified that the key issues and challenges for transport infrastructure created through the planning process were that it:

- can take too long
- includes too much uncertainty
- costs too much for participants and the UK economy.

This was illustrated graphically in the report. Projects that took a long time to be determined within these processes included the M6 Toll Road, Manchester Airport, the Tyne Tunnels and Dibden Bay port.

Eddington concluded that one of key consequences, when transport infrastructure projects have an uncertain time for their regulatory determination, is that their costs can escalate throughout the process.

Costs are also uncertain given the time of the application process being open. In addition, inspectors can add conditions to projects that are not considered at the outset and these also add unexpected costs. Finally, there are costs where land stands derelict or idle as a result of delay and non-determination and he cites the Thameslink 2000 project as an illustration of this effect. The combined effects of these risks of uncertainty, cost and delay may mean that investors and developers will not support applications for schemes. Scheme delay has costs for society and also enables competitors to move in to fill a gap (Eddington, 2006).

The FU context

Eddington also identified that the UK planning systems needed to be compatible with EU law (Eddington, 2006).

What the Planning Act 2008 was expected to resolve

Given the range of issues and concerns that had been amassed in the Eddington Review (2006) and from international comparisons (Helm, 2009), any new system needed to address a range of concerns if it was to be a means of more robust approaches to infrastructure delivery. These issues were as follows

To be a delivery system for national infrastructure

Eddington (2006) focused a whole volume of his report (Volume 4) on delivery and how it could be improved. One of Eddington's recommendations was that Government 'reforms the planning process for major infrastructure projects to provide greater clarity and certainty without compromising fairness and thoroughness, in particular by providing greater clarity about government policy through Strategic Statements of transport objectives and introducing an Independent Planning Commission to take the final decision on specific applications' (Eddington, 2006: 52). As Marshall has demonstrated, the IPC had been waiting in the wings since 1999 and the proposed independent nature of decision making was expected to be similar to the office of the Monetary Policy Committee (Marshall, 2011b: 456).

To make the planning system faster and fairer

In order to balance the needs of the national economy, sustainable development and public engagement, Kelly (2008: 2) stated that 'the main challenges were to make decisions faster and fairer, more efficient

and more accountable, to ensure more timely delivery and to improve the ability of communities and individuals to participate in the system.'

To be more cost effective

As Kelly (2008) points out, the three national reviews that informed the development of the Planning Act 2008 – Eddington (2006), Barker (2006) and the Energy White Paper (2007) – all demonstrated that there were significant costs associated with planning delays for major projects. At the time that the Planning Act was being considered as a bill, major infrastructure projects were taking approximately two years to be determined and it was expected that the new Planning Act would reduce this to one year.

To meet the needs of sustainable development

This was seen to be an important feature of any new planning system for major infrastructures (Kelly, 2008; Marshall, 2013).

To increase certainty and predictability

This was particularly seen to be an important component of the new system (Kelly, 2008) and as a means of ensuring that major infrastructure projects could find it easier to obtain investment funding.

To remove ministers from decision-making process

Eddington argued that ministers should be removed from the decision-making process although Kelly (2008) emphasised that it was important for ministers to be responsible for the policy objectives. Eddington (2006) also stressed the need for Parliament to be involved in decision making by approving departmental policy statements.

Where schemes meet EU requirements there would be a presumption in favour of development

This point was made by Eddington (2006) without specifying which these were.

To maintain the right to be heard

Kelly (2008) emphasised this provision as part of the new regime, and this was a key issue as the Planning Bill passed through Parliament.

To maintain the balance between national and local democracy

The concerns about local democracy and national decision making were widely voiced and the approach taken offered a range of ways through the issue. Firstly, major schemes would be few in number and more of the smaller local schemes would in consequence be considered by local authorities (Kelly, 2008). Secondly, the range of methods for achieving planning consent remained and some schemes would still go through traditional routes. Although there was an intention for local authorities to be consulted in spatially specific national policy statements, in practice the NPS have primarily been aspatial. However, on every DCO application, a local impact report from the local authority has to be considered.

Eddington Report proposals for reform and the white paper

As a result of his work, Eddington made proposals to establish a new planning system for transport infrastructure projects that addressed these issues and was as follows:

- 1. put ministerial direction at the outset with strategic objectives in national strategies that might include:
 - demand and capacity projections
 - strategic spatial and environmental impacts potentially including SEA
 - wider consequences of development
 - statements about other issues including significant local consideration
- 2. have full consultation at the outset of these strategic statements
- 3. provide increased certainty for all parties
- 4. encourage consultation by scheme proposers with the community
- 5. establish Independent Planning Commission (IPC) for strategic transport schemes and have the commission make the decisions that would engage with promoters from an early stage; ensure key issues are appropriately tested and take the final decisions
- 6. for IPC schemes, ministers have no role in determination and where compliant there would be a presumption in favour of development subject to EU compatibility

- 7. provide more discursive and inquisitorial inquiries rather than adversarial; IPC power to determine mitigation measures; assume written reps
- 8. impose challenging and achievable time limits for key stages of the inquiry to provide greater certainty
- 9. simplify process through creation of a statutory consent regime with one set of procedural rules
- 10. establish clear rights of legal challenge.

There were seen to be risks associated with these approaches including spending too much time preparing the statements and making them too detailed, and finally statements may not be taken into the process or be too risk averse. For this reason, having a time-limited approach to the determination of consent was seen to be preferable to the open-ended planning system that prevailed at the time.

Following the Eddington Review, the government published the white paper *Planning for a Sustainable Future*. The sections on national infrastructure argued that it was problematic that multiple consents were required for major infrastructure, that the consenting process was slow and complex, and that the adversarial nature of the inquiry system favoured the well-resourced making it more difficult for local government, NGOs and the public to effectively participate (HM Government, 2007). It was argued in the white paper that 'most major infrastructure decisions ... are already taken at the national level by ministers' (HM Government, 2007: 22) with the Transport and Works Act 1992 and Highways Act 1980 involving applications directly to ministers, not to local authorities (with airports being unusual in just being consented solely through the town and country planning system). 'Local impacts were acknowledged but it was argued that local authorities would have a strong part to play in representing their communities and helping shape national infrastructure in their area' (HM Government, 2007: 17), ensuring local views were reflected within the proposed new legal system.

The Planning Act 2008

Following the white paper, a bill was introduced in Parliament. The Planning Bill attracted 32,000 responses, the majority of which were from organised campaigns. The bill attracted a large measure of political consensus in Parliament, which included agreement that reform of the

existing system in an incremental approach would not be adequate to address the problems that had been identified (Kelly, 2008). The Planning Act received royal assent on 26 November 2008. The government press release about the act highlighted that there was apparently enough renewable energy caught up in the system to power 1.5 million homes, and that people would be given three chances to be heard instead of just one under the old system, so the process was actually more accountable and transparent (Grekos, 2010).

Once passed, the Planning Act 2008 created the independent Infrastructure Planning Commission (IPC) as a non-departmental public body that was empowered to examine and take decisions on NSIPs under its chair Sir Mike Pitt. It appointed independent commissioners to examine NSIPs submitted within the 2008 Act regime. Relevant government departments started a process of preparing National Policy Statements (NPS) that were approved by Parliament following a period of consultation. The government proposed to switch on the new system in a phased manner, starting with energy and transport sectors in 2010 and concluding with water supply in 2012 (Owen, 2009).

Changes since 2008

Since 2008, there have been changes to the system. Operational changes have been applied through the abolition of the independent Infrastructure Planning Commission (IPC) in the 2011 Localism Act, three years after it had been established. The independent decision making on NSIPs was removed from the IPC and transferred to government ministers who had set the relevant NPS and in whose departments the schemes lay. The functions of the IPC were absorbed into the Planning Inspectorate (PINS) together with the staff and commissioners who had been appointed specifically for this task. Some commissioners decided that they would prefer not to work within the PINS system and although some remained with PINS as members of examining authorities for NSIP applications, the majority of those appointed by the IPC have now left. The case officers and staff managing the NSIP regime recruited specifically into the IPC were transferred with their roles into PINS and are still managing the system. These case officers were experienced as consultants or local authority planning officers prior to joining the IPC. They were not recruited through normal civil service administrative staff procedures and have professional qualifications.

A second series of changes have come though legislative adjustments and amendments. These have included the following changes in primary legislation:

- 2009 Marine and Coastal Planning Act: The primary legislation that, among other matters, amends certain provisions of the Planning Act 2008 including sections 42 and 104, repeals sections 148 and 149 and inserts a new section 149A;
- Localism Act 2011: The act abolishes the Infrastructure Planning Commission and transfers the decision-making powers of the commission to the Secretary of State. The act also makes a number of amendments to the Planning Act 2008 that have the effect of altering some aspects of the procedure for seeking development consent for nationally significant infrastructure projects;
- Growth and Infrastructure Act 2013: This act includes provision for facilitating or controlling the provision or use of infrastructure, the carrying out of development, and the compulsory acquisition of land;
- The Infrastructure Act 2015: This act includes provision to change the timing of the appointment of the examining authority, provide for two-person panels, and amend the process for changes to, and revocation of, development consent orders;
- The Housing and Planning Act 2016: This act, through section 160, amends section 115 of the Planning Act 2008 to allow an element of housing to be included as part of the development for which development consent may be granted;
- European Union (Withdrawal) Act 2018: This commenced the process of removing the UK from the EU. While it started to remove the legal effect of EU Regulations and Directives, it permitted the completion of existing committed projects such as those in TEN-T.

There have also been changes in secondary legislation. Significantly, there has been the establishment of a separate system for Wales that is included in the Planning (Wales) Act 2015 and has been implemented as an increasingly separate system since 2019, which was fully established in October 2021.

Reflecting on the Planning Act 2008

At the time of the 2008 Act, and since, there has been some debate surrounding this approach to planning and consenting major infrastructure.

Proponents have argued that the Eddington Review concluded major infrastructure projects in the UK were being significantly delayed by the planning system and that, together with the Barker Review, they suggested the need for a system that reduced complexity and uncertainty, separated national policy and decision making on individual projects and provided a unified consent regime for national infrastructure projects (Owen, 2009). Similarly, White argues that a new system to make the process faster, fairer and easier for public involvement was needed given that:

It was almost universally acknowledged before 2008 that the town and country planning system was not fit for purpose for major infrastructure projects. Heathrow Terminal 5 represents the genesis of the 2008 Act. Planning permission for T5 was granted in November 2001, eight years after the planning application was lodged and following an inquiry that sat for nearly four years. The project involved 37 different applications across 7 separate pieces of legislation. The total cost of the process was £84 milion ... Similarly, the Sizewell B planning inquiry sat for 340 days and heard evidence from 195 witnesses, yet as few as 30 sitting days were spent examining evidence of the local impacts of the project. Two years of the inquiry were spent debating the contrasting merits and risks of nuclear power (White, 2013: 100).

Marshall (2018), however, argues that Sizewell B and Heathrow Terminal 5 were unusual cases used as excuses to force through a new approach for all sectors. Ellis, meanwhile, argues that the Barker and Eddington Reviews had remits from HM Treasury to address competitiveness rather than to consider planning holistically:

A number of myths about the nature of delay have built up and driven reform measures which seek to replace accountability and citizen rights with a model of public 'involvement' that is vague and not subject to clear lines of redress. Overall, the government agenda has been to elevate competitiveness above public legitimacy (Ellis, 2008: 75).

Whatever the debate, the new regime was introduced and has now been fully operating for more than a decade. Marshall (2011b) suggests that a very particular set of circumstances came together to lead to the new way of planning infrastructure. Part of this can be seen as related to the changing political economy of infrastructure itself. Since 1990, the

developer of much nationally significant infrastructure (except road and rail) has become the private sector as opposed to the state, which then requires infrastructure being made an area from which profit can be made (Marshall, 2013). This can be seen as part of the wider shift towards a regulatory as opposed to dirigiste state in which regulation rather than public ownership becomes the key context in which large-scale infrastructures are governed (Cotton, 2018). As infrastructure is heavily contested (for example having a large land take can have large externalities) and has large upfront costs combined with long payback periods, there was pressure to remove planning risk and increase certainty beyond that which the existing planning arrangements had been providing prior to 2008 (Marshall, 2014).

Continuing pressure from the Confederation of British Industry (CBI) and business interests to reform the planning arrangements for major infrastructure for economic reasons coincided with the increased influence of Chancellor Gordon Brown and HM Treasury on the domestic political agenda in the UK. The Comprehensive Spending Review, instigated in December 2006, identified infrastructure as a key feature of national competitiveness. The findings of the Barker Review of land use planning, the Eddington Review of transport, the white paper on electricity generation and even some comment in the Stern Review about energy infrastructure's centrality to climate change, demonstrated an apparent coalition in favour of reform within government that opposition from the environmental lobby did little to counter (Marshall, 2011b; Marshall, 2013).

What is important to consider is that a number of the issues identified by Eddington as being problematic in the planning system for major infrastructure have not been resolved through the Planning Act 2008 and its subsequent amendments in legislation and delivery. These include:

- integration between transport modes
- designated networks
- climate change issues
- targeted and strategic investment programme
- need for a spatial approach.

There is still no vertical or horizontal integration between NPS and scales of governance in decision making. There has been no integration between planning for different transport modes. While there is a national infrastructure investment programme of strategic projects, these comprise a list of projects that have no relationship with each other or

other spatial approaches that have been adopted though government policies for combined authorities and city deals. The government's international ranking on infrastructure provision, as defined by the World Economic Forum, has not improved since 2008. In 2015/16 it stood in twenty-fourth position, and the UK's weakness in infrastructure delivery has continued to be viewed as requiring improvement by the OECD and the EU (Pisu *et al.*, 2015).

Finally, has the Planning Act 2008 provided a faster system? In their research Marshall and Cowell (2016) found that despite the core process being very tightly constrained within a time frame, the other elements of achieving consent were not contained in this way and were outside the control of the project's promoter and their advisers. These elements include the pre-acceptance process to the point where its submission for a DCO Examination is approved and any changes in the DCO after the order is made. They considered how much time has been taken to process applications for major infrastructure projects before the adoption of the Planning Act 2008 and compared these with the times taken using the act. When the 'exceptional' projects, such as Heathrow Terminal 5 in effect misrepresent the average time taken for consent to be achieved, they found that the average time for consent for the majority of infrastructure projects has stayed the same, although the distribution of time between elements of the process have changed. They conclude that decision times have not been shortened by the Planning Act 2008 in general although specific projects like that for Hinkley C power station may have benefited. Since this research, a further issue has emerged that has affected the time taken for the consenting process for specific projects and that is the increased delay by government ministers in issuing a decision, that now extends beyond the time limits set out in the act. Further, the acceptance process for an NSIP scheme into the process was expected to give some kind of certainty about a positive outcome. However, ministers have started to refuse consent for projects when they reach this final point or to permit them when the planning inspector has recommended refusal, as for the Norfolk Boreas Wind Farm in December 2021. In other words, there are a number of potential issues surrounding the NSIPs regime. Having understood, in this chapter, the emergence of the reform, and the objectives for it, we turn in the next chapter to outline how the system should operate as a consenting process for infrastructure. After that, we consider existing scholarly work on the regime before considering how it has been working in practice.

The Planning Act 2008 processes

Introduction

Since the implementation of the Planning Act 2008, there has been a bespoke route for the planning and consent of major infrastructure projects in England and, until 2019, in Wales. In this chapter we explain how this 'nationally significant infrastructure project' regime works including the role and coverage of National Policy Statements (NPSs), questions over what constitutes an NSIP (which has changed slightly over the last decade), the process of pre-submission consultation, the process through acceptance and examination to decision and post-consent procedures. This includes brief discussion of some recent issues related to climate change commitments and understanding the Development Consent Order (DCO) instrument itself: with a consent that is centred on a text proposed by the promoters, and given that can cover multiple consents including rights of compulsory acquisition of land, it is potentially a very powerful instrument. We then specifically consider routes to flexibility in the consent, the role of local authorities in the regime, and compare it with the more general town and country planning procedure in England. The Planning Inspectorate (PINS) explains the NSIPs process themselves by saying that there are six stages of the development consent regime for NSIPs: pre-submission, acceptance pre-examination, examination, recommendation, decision and post-decision (PINS, 2022a). An overview of all six stages is included within this chapter.

Supporters of the NSIPs regime when it was implemented claimed that it provided greater certainty in many respects than the various former planning and consenting regimes for major infrastructure in England that preceded it. White (2013) categorises these into 10 'certainties' that he argues the regime seeks to achieve:

 certainty of regime (what constitutes an NSIP being set out by legislation, although as we will see in some cases this has changed

- since the Planning Act 2008, making things slightly less fixed and clear than perhaps originally intended)
- certainty of compliance (the regime, including actors within it, are governed by strict statutory requirements)
- certainty of integrity (advice and correspondence with all parties is published on the PINS website, giving greater transparency)
- certainty of participation (with heavy frontloading and an important role for the consultation report, although as discussed in the previous chapter, this is widely critiqued in the scholarly literature in particular)
- certainty of project (once an application has been submitted, there
 is only limited scope to change the project for which development
 consent is being sought)
- certainty of process (with considerable support for a more consensus-seeking examination process compared to the former adversarial inquiries)
- certainty of outcome (given the NPS establishing the principle of development and a resultant presumption in favour of development, White (2013) argued that if these were kept up to date and promoters complied with them then they should be certain of gaining consent, although we will show in Chapter 6 that this certainty also seems to have eroded over time)
- certainty of timing (given the set timescales for the key stages from acceptance to decision, explained further below, although again there have been some delays with decision making on a number of cases, as we explain further in Chapter 6)
- certainty of decision (once a decision is made, there are only limited
 options to appeal via judicial review, meaning that work can usually
 commence quickly in terms of the planning consent side of things,
 as we explain further below and in Chapter 6)
- certainty of compensation (the DCO can include compulsory acquisition powers and agreed compensation, meaning these issues should then be more fixed once consent is granted, assisting project management).

As can be seen from our comments in brackets on the above list, several of the 'certainties' now seem decidedly less certain than they appeared in 2013. We return to some of these issues and themes through the following chapters of the book, including in the case studies and conclusion. Nevertheless, it is these certainties that have been key features of the regime and seen as advantageous by many parties. This was reflected in our

2017 and 2019 research reports (Clifford and Morphet, 2017; Morphet and Clifford, 2017; Clifford and Morphet, 2019a, 2019b; Morphet and Clifford, 2019). In our research, although there were suggestions for improvement of the system, many of those involved from government (including statutory consultees) and promoters (and their advisors) were generally supportive of the regime and saw strengths in it that often linked back to these certainties. Perspectives from other groups – particularly academics – have, as we discuss further in the next chapter, varied.

Although we try to provide an overview of how the system was expected to work in this chapter, it is necessarily brief. There is further guidance and a series of advice notes provided on the PINS website. The guidance includes documents relating to the procedural requirements and fees associated with the regime, housing and NSIPs, making changes to DCOs, examinations, associated developments, compulsory acquisition and Trans-European Energy Networks (PINS, 2022b). Alongside this are 18 non-statutory advice notes that intend to inform all stakeholders in the regime about a range of process matters related to the Planning Act 2008. These include advice on local impact reports, the role of local authorities, EIA (Environmental Impact Assessment), rights around notification of interest in land and entry to land (for example to undertake surveys), preparation of documents, an overview of the system for the public, the 'Rochdale Envelope' (discussed further below), Habitats Regulations, working with public bodies, transboundary issues, preparing a draft DCO, the consultation report, material changes to DCOs, cumulative effects assessment and the water framework directive (PINS, 2022b). This list gives some indication as to the scope of the system and issues that have been felt to be important over the last decade of its operation. We consider some of these further below.

Legislation and extent

The NSIPs regime is governed through UK primary and secondary legislation implementing EU regulations. This legislative context establishes how the system operates and its extent, including type of scheme and location. As was explained to us during a research interview at the Planning Inspectorate, the regime was designed as a system with considerations like the Human Rights Act, Environmental Impact Assessment and Habitats Regulations there from the start, as an embedded part of the system design rather than as things that had to be bolted on to existing systems like the older consenting routes for major infrastructure operating in the UK.

It is also important to note the diverging systems for identifying and approving nationally significant infrastructure in England, Wales and Scotland as discussed in Chapter 1.

In terms of legislation, the most important primary legislation for England is the Planning Act 2008, which includes 178 sections and various schedules establishing the operation of the regime including NPSs and DCOs. The 2008 Act established the legal framework for NSIPs including their definition and consent. It has since been amended by the Marine and Coastal Access Act 2009, the Localism Act 2011, the Growth and Infrastructure Act 2013, the Infrastructure Act 2015, the Housing and Planning Act 2016, and the Wales Act 2017 (PINS, 2022a). For the operation of the regime within England, the most significant of these was perhaps the Localism Act 2011. Introduced by the coalition government soon after taking power from the Labour government, which was responsible for the 2008 Act, the Localism Act 2011 abolished the Infrastructure Planning Commission, with the Planning Inspectorate taking over responsibility for the consideration of DCOs (including running the examination) and the decision making powers then transferred to the relevant Secretary of State instead of the IPC's professionally appointed commissioners. Onshore windfarms were also removed from the scope of the regime. These changes came very early in the operation of the regime, and subsequent amendments within England have been more minor. Although at the time of writing government is considering reforms, there has been a period of relative stability in the day-to-day operation of the NSIPs regime for the last decade (much more so than the town and country planning system for other development).

The primary legislation is then complemented by secondary legislation governing the regime such as rules and regulations issues in 2009 about forms and procedures, in 2010 about examination rules, in 2015 about interested parties in examinations and in 2017 about EIA (PINS, 2022c). The EU's TEN-E regulation (EC, 2013b) has also been important for the regime with the provisions around timely development and interoperability of a trans-European energy network albeit, as already mentioned, now impacted by Brexit. The role of TEN-T is explicitly shown in the NSIP for the A14 for example.

The sectoral extent of the regime has changed slightly over time. NSIPs are infrastructure projects in energy, transport, water, waste water and waste that exceed thresholds defined in legislation. The Growth and Infrastructure Act 2013 allowed the Secretary of State to direct that certain business and commercial schemes can be consented through the regime. Onshore windfarms have been taken out of the regime, and there

have been proposals to include shale gas production ('fracking') infrastructure within it, although this was not implemented (BEIS, 2019). This, perhaps, relates to an earlier view that the certainties of the regime and removal from local decision making might help deliver these controversial schemes. Perceived frustration with the traditional town and country planning system has also seen proposals, again not realised, for major housing developments to be added into the regime as well (Hickman and While, 2015).

Geographically, the regime now primarily just gives consent to major infrastructure projects in England. The story of devolution in the UK is complex and evolving, however, as discussed in Chapter 1, planning is a devolved matter with the Northern Irish, Scottish and Welsh governments responsible for planning in their territories. Transport policy is also devolved, although energy is only partially devolved with the UK government retaining some responsibilities. The result has been that many energy projects in Wales have been considered through the NSIPs regime over the last decade. The 2013 Silk Commission recommended various further powers for Wales, including over energy NSIPs (Cowell, 2017). The Planning (Wales) Act 2015 established a Welsh-specific major infrastructure project consent regime. The Wales Act 2017 devolved powers to the Welsh government including the consenting for new energy projects, fracking, marine licensing and harbours with the UK government just retaining responsibility for energy projects (except onshore wind-powered generating stations) that exceed a capacity of 350MW. This would include nuclear power station proposals.

National Policy Statements

A key element of the regime as designed is the National Policy Statements (NPSs). These are sectoral documents, approved by Parliament, which set out the government's policy in relation to major infrastructure in that sector including the objectives for the development of NSIPs. This will include consideration of how the development of these will contribute to sustainable development, have objectives that are integrated with other government policies, consider actual and projected capacity and demand, consider relevant safety and technology issues, set out circumstances where it will be important to address potential adverse impacts of development and, where appropriate, set out specific locations envisaged for NSIP developments so as to provide a framework for investment and decision making. The statements should also include other policies or

circumstances that ministers should consider in decisions on NSIP development consent, so that there is a clear and transparent framework for such decision making.

The NPSs set out the principal issues to be considered during the examination as well as setting out the need for such infrastructure from a national interest perspective, so establishing the strong presumption in favour of development (Rydin *et al*, 2018). NPSs undergo a process of public consultation and Parliamentary scrutiny and approval before being published. There are 12 designated National Policy Statements and a further one whereby a draft was consulted on, but a final version does not appear to have been adopted, as set out in Table 3.1. A draft NPS can still be considered by the examining authority where relevant.

As the dates shown in Table 3.1 demonstrate, many of the NPSs themselves are now quite outdated. There have been rapid technological advances particularly in relation to renewable energy infrastructure. The UK has left the EU. In February 2020, the Court of Appeal made a judgement that, in effect, cancelled the NPS for airports on the grounds of the UK's international commitments on climate change (Walker, 2020a). As with other legislation that the UK has agreed with other countries, such as EU Regulations, the government's argument that they should have effect only once they had been placed into domestic law was found to be wrong. In ratifying the Paris Climate Accord treaty 2015, the UK law was changed, the court found. This decision was overturned by the Supreme Court in December 2020 and the NPS reinstated. However, this points to wider issues around climate change and compatibility with net zero requirements, another area of rapid evolution since many of the NPSs were first published. Out-of-date NPSs undermine a key design feature of the regime, giving less certainty on decision making.

Alongside the issue of timeliness of review, NPSs have also been criticised for being fragmented between sectors, missing potential connections between different schemes and types of development. They are mainly aspatial documents, except the nuclear power one, not taking a spatialised approach to infrastructure (Marshall, 2014). Although there is public consultation during their preparation, there is no formal right to be heard during their preparation even though they might make site-specific recommendations that can directly impact groups such as landowners (Ellis, 2008). As documents designed to aid decision making, it is perhaps concerning that they do not make serious consideration of alternatives to the proposed NSIPs, and Marshall (2018) argues that they do not fully account for geographical, social and economic impacts of schemes.

 Table 3.1
 National Policy Statements (NPSs)

NPS	Sponsoring Department	Adoption date	5-year review date
Overarching energy (EN-1)	Dept for Energy and Climate Change (DECC)	19 July 2011	19 July 2016
Renewable energy (EN-3)	Dept for Energy and Climate Change (DECC)	19 July 2011	19 July 2016
Fossil Fuels (EN-2)	Dept for Energy and Climate Change (DECC)	19 July 2011	19 July 2016
Oil and Gas Supply and Storage (EN-4)	Dept for Energy and Climate Change (DECC)	19 July 2011	19 July 2016
Electricity Networks (EN-5)	Dept for Energy and Climate Change (DECC)	19 July 2011	19 July 2016
Nuclear Power (EN-6)	Dept for Energy and Climate Change (DECC)	19 July 2011	19 July 2016
Ports	Dept for Transport	26 January 2012	26 January 2017
Airports	Dept for Transport	5 June 2018	5 June 2023
National networks	Dept for Transport	14 January 2015	14 January 2020
Hazardous Waste	DEFRA	6 June 2013	6 June 2018
Waste Water Treatment	DEFRA	9 June 2012	9 June 2017
Geological Disposal Infrastructure	DEFRA	17 October 2019	17 October 2024
Water supply	DEFRA	Under preparation. Consultation was 29 November 2018 to 31 January 2019	

Establishing the principle of development

In the UK, the 1947 Town and Country Planning Act removed the rights of land and property owners to determine the use of their holdings without reference to the land use plans and policies set out through approved process and subsequent legal precedent within these. This meant that any change of use, expansion of premises, compulsory planning order or other use of land for infrastructure needed to have specific planning consideration and, if necessary, a planning permission. The key determinant in these processes is that the proposed or any change of landowner, infrastructure provider or developer needs to establish the principle of development, that is, a specific need for the proposal. This could be established by demonstrating how a development met policy requirements or specific needs. It remains the basis of planning applications and appeals under the Town and Country Planning Act system across the UK, as, for example, when considering the provision of sites for new housing development.

The Planning Act 2008 removed this need to establish a principle of development, or demonstrated need for an infrastructure proposal of a size or type contained within the act, and replaced this with definition of a need by a National Policy Statement put forward by the Secretary of State within the relevant department and approved by Parliament. The process was used to supplement the primary legislation passed by the EU through its TEN-T regulations and once agreed, required to be put into law without further discussion. The NPS created a policy narrative and bridge that meant that the 2008 Act could implement the EU TEN-T regulations without acknowledging their role in decision making. The NPS also meant that the new system for the developer of new infrastructure would not have to consider whether there is demand for this at a planning inquiry as in the case of the planning inquiries on Terminal 5 at Heathrow or at Sizewell B, for example.

This position has been changed by the UK's decision to leave the EU and has stimulated government reviews of the NSIP system in 2021. The departure of the UK from the EU following the Brexit referendum has considerable implications for the operation of the Planning Act 2008. As the EU TEN-T regulations (1996; 2013) no longer apply in the UK, there are questions around the establishment of the principle of development on which the processes in the 2008 Act are based. This means further reform will be needed to revise the system following Brexit. Further, while the 2008 Act applied to England and Wales, in 2021, the Welsh system has separated from that in England. The Scottish and Northern Irish systems were already separate. That means that there are now

four different planning systems and legal regimes to consider when determining how the EU regulations should be replaced.

Pre-submission

In keeping with the broader direction of planning reform and governance under the New Labour government, the design of the NSIPs regime placed heavy emphasis on the 'frontloading' of participation and attempts to build consensus before formal political opposition. The pre-submission stage of an NSIP is therefore extensive and, in the absence of set timelines (unlike later stages) but with a number of pre-requisites to be achieved before a project can be accepted for consideration of development, consent can be lengthy. The promoter of the NSIP will need to scope and refine the project before formal submission to the Planning Inspectorate. This will include formal consultation with statutory bodies, local authorities, local communities and any parties likely to be affected by the project (particularly any landowners) as a statutory duty.

The length of time taken over this pre-submission consultation will vary according to the scale and complexity of the project (PINS, 2022a) but there should be a multi-stage, iterative and expensive pre-submission consultation with local communities and statutory consultees which is then reported on in the formal consultation report that must be submitted as part of the process of the acceptance of an NSIP for development consent (White, 2013). The consultation is the responsibility of the promoter. Most use a public relations contractor who may utilise a range of means of consultation. Communities are often understandably keen to understand what the final project will look like, how they will be engaged through the development of the project and construction management issues.

There was widespread debate surrounding participatory rights in planning as the Planning Act 2008 was being introduced. One of the provisions of the regime is that those with private interests, such as landowners, are unable to utilise the common law of nuisance in relation to NSIPs, and hence they must rely on the participatory rights provided by the regime to assert their interests (Bishop and Jenkins, 2011). The core decision-making framework for infrastructure development is found in planning law, supplemented by environmental assessment. There is a long history of public participation in planning law, with domestic law reinforced over time by the EU and international legal context giving the public specific rights around their engagement in the NSIPs regime (Lee *et al*, 2012).

Environmental assessment

The design of the project must be sufficiently developed pre-submission for an Environmental Impact Assessment (EIA) to be undertaken alongside meaningful public engagement. The quality and appropriateness of the EIA will be considered by PINS as an essential element of the pre-submission process. There will have been public participation on the drafting of the NPS, during the pre-submission phase and during the examination of a specific NPS. Further, 'the procedural rights granted to the public through EIA are enforceable, and a reasonably familiar ground for judicial review of planning decisions. The courts have emphasised both the "right to a fully informed decision on the substantive issue", as well as the importance of an "inclusive and democratic procedure" (Lee *et al*, 2012: 51).

The development of the NSIP scheme may involve the use of a planning approach conceived by case law known as the 'Rochdale Envelope' approach, which was transplanted into the planning processes for offshore windfarm NSIPs under which the project is described using general parameters. These parameters cater for uncertainties at the time of submission and allow considerable flexibility in project implementation (for example specifying a range of the number of wind turbines and their broad location rather than fixing this exactly at the time of application) (Caine, 2018). This flexibility allows for technological innovation and adaptability between consent and construction, which can be a considerable period given the scale of NSIPs. Where there is this type of flexibility proposed in a DCO, then the environmental assessment has to use a 'not environmentally worse than' (NEWT) approach where different scenarios within the parameters of flexibility are produced and modelled to consider environmental impacts. This approach can make it harder for the public and other stakeholders to engage in meaningful consultation as it can be harder to visualise the final development. Further, there is now an emerging issue for offshore windfarms whereby neighbouring schemes have all been assessed to the maximum extent of possible environmental harm and there can then be cumulative effects whereby modelling for any further schemes shows that the environment does not hold 'capacity' in the area for them (Caine, 2018).

The role of local authorities

Local authorities, where the NSIP or part of the NSIP is within their boundaries, will be consulted on the promoter's EIA Scoping Report prepared pre-submission. They will also be consulted by the promoter about their Statement of Community Consultation, which sets out how they propose to consult the community, so that the authority can, if they so decide, influence how the consultation is being conducted. In the White Paper proposing the regime, HM Government explained that it intended to:

require promoters of national significant infrastructure projects to consult affected local authorities from early in the project development process. As elected local bodies, local authorities have a key role to play representing, and helping promoters to understand, local community views. And, as place-shapers, they have a key role to play in developing a vision for their local area in partnership with their local community, and in delivering on that vision to create a vibrant, healthy, sustainable community. Promoters should therefore always consult with local authorities likely to be affected by their proposals from early in project development and work closely with them throughout the process (2007: 63).

When the NSIP is then formally submitted to PINS, they will ask the local authority to provide a statement on the adequacy of the promoter's consultation (PINS, 2022a). While local authorities are not the decisionmakers for NSIPs, they do have a clear and potentially significant role in agreeing the promoter's strategy for pre-submission consultation (Natarajan et al. 2018), making representations on the adequacy of that consultation and submitting their Local Impact Report (Owen, 2009). Bishop and Jenkins (2011) suggest that local authorities are well placed to consider how best to balance the interests of individuals and the wider community and hence have an important role to play in working with promoters on the pre-submission consultation and then commenting on its adequacy as part of the acceptance of the proposed NSIP for consideration for development consent. However, in practice, pre-submission consultation has increasingly been undertaken by consultants and represented in a compressed form. The responses of local authorities to this process have also been uneven and there have been issues in terms of the levels of understanding of the NSIPs regime in some local authorities.

Local authorities are also required to submit a Local Impact Report to the Examining Authority, which should be a document objectively assessing the potential impacts of the NSIP locally and providing evidence about the area's character. However, authorities receive no specific fees or funding for their work in the process (White, 2013). This can present challenges given the impacts of austerity on local authorities over the last decade in England.

Application passage points, examination and the DCO

After the pre-submission stage, a promoter wishing to develop an NSIP would then submit the scheme documentation to PINS and the proposal would pass through a series of passage points that are defined in legislation, with mandated time limits for stages intended to assist with project management (Figure 3.1). There have been a number of delays with ministerial decision-making over recent NSIPs despite these mandated time limits, reducing another 'certainty' of the regime, although PINS have largely stuck to the prescribed timeframes for the parts of the process they are directly responding for.

As noted in Chapter 2, the work of the promoter to get to the point of submission of the draft DCO to PINs for acceptance into the system can take a number of years. The acceptance stage begins when the promoter formally makes a submission for development consent to PINS, who then have 28 days to decide whether or not it meets the standards to be accepted for examination. As the table in Appendix 1 shows, some proposals have not been accepted and have required further work at this stage. Promoters themselves also have the ability to raise a legal challenge (by lodging a judicial review within six weeks) to PINS refusing to accept a submission. With formal acceptance, project documentation will be published on the PINS website and become publicly available.



Figure 3.1 Passage points with defined time limits for the development consent process for NSIPs. (Source: authors.)

One of the perceived strengths of the regime is that the promoter drafts their own DCO (albeit these are usually at least partially modified through the examination process), which then becomes a Statutory Instrument approved by Parliament. The DCO gives strong powers to NSIP promoters, whether they are public bodies or private sector organisations, and covers multiple consents. These consents include planning (development) consent and (where relevant) listed building consent, conservation consent, Harbour Revision orders, Harbour Empowerment orders, Transport and Works Act orders, orders made under section 4 of the Gas Act 1965 as well as various marine matters such as section 34 of the Coast Protection Act 1949 and Deemed Marine Licenses (Owen, 2009) replacing consents that would previously have been required under the Gas Act 1965, Electricity Act 1989, Pipeline Act 1962, Transport and Works Act 1962 and the Town and Country Planning Act 1990 (White, 2013). The DCO will also give compulsory purchase rights over land (referred to as 'compulsory acquisition' in the regime) and can also give powers to stop or divert highways, create harbour authorities and various environmental permits. Associated development can also be given consent (DCLG, 2013).

As part of the examination process, the Examining Authority (a single planning inspector or panel of up to five inspectors) will consider the proposed draft DCO and as part of their post-examination report, if they recommend consent be granted, they may also recommend any changes to the DCO they consider necessary. The relevant Secretary of State will then consider these proposed amendments as part of their decision making on the scheme and may themselves require further amendments to the DCO text when granting consent. The DCO will contain detailed matters on design of the scheme, construction approaches and environmental management. There will be 'requirements', which can be considered similar to 'conditions' under the Town and Country Planning Act – detailed matters to be agreed post-consent and subject to subsequent further approvals – and there may also be 'protected provisions', which are to ensure the interests of statutory undertakers (such as organisations providing national infrastructure networks) are considered.

The pre-examination phase does not have a defined time limit but usually takes around three months after acceptance. The promoter must publicise that the submission has been accepted and how people can register as interested parties to be included in the examination. Interested parties will include local authorities and statutory consultees (usually government agencies with specific interests for example over nature conservation, flooding, heritage or the road and rail networks), local

landowners and may include local community members and groups. Interested parties submit to the Examining Authority a 'Relevant Representation', which is a written document setting out their views on the application. A preliminary meeting will be held to discuss procedural issues and a timetable for the examination, and the close of this preliminary meeting then marks the start of the six-month examination phase.

The examination is different from public inquiries held into major infrastructure proposals before the Planning Act 2008, such as the inquiries held into new nuclear power stations (Rough, 2011). Under the 2008 Act, examinations are inquisitorial rather than adversarial. The examination makes greater reliance on written evidence being submitted and responded to rather than oral hearings (Owen, 2009). This means much of the business is conducted by the Examining Authority inviting interested parties to submit written representations and respond to their questions and comment on other submissions in writing although there are some oral hearings and site visits. It also means that the Examining Authority will themselves direct inquiries to investigate a range of issues they consider to be important in the application and where they think they need an increased understanding or where a more developed solution may need to be required. In hearings, each interested party would be entitled to make oral representations in turn. Unlike a planning inquiry, undertaken within the adversarial model, there is a general presumption against cross-examination, although the Examining Authority may permit questioning of a party giving representations if they consider it necessary (Rydin et al, 2018).

During the examination stage, the Examining Authority will be considering all relevant information supplied in the various representations and evidence submitted by the interested parties and responses to their questions set out in writing or provided at hearings. At the same time, interested parties (including local authorities and statutory bodies) will be encouraged to work with the promoter to produce 'Statements of Common Ground' to set out areas of agreement between them (PINS, 2022d). Amendments to the draft DCO may be proposed, and associated legal agreements made (particularly S106s) as means of mitigating the impacts of the project. The negotiations around all of these agreements as well as the process of preparing for and participating in the examination can make it a very intense period for all parties.

As well as S106s, referring to Section 106 of the Town and Country Planning Act 1990, which may include provisions for community benefit, there can also be specific 'community benefit agreements' (CBAs) agreed

for an NSIP: 'the term refers to those agreements between the various stakeholders involved in a project, in particular between the developer and the host community, which can provide a range of benefits, including financial incentives, infrastructure, and community empowerment measures' (Glasson, 2017: 12). A CBA is separate to an S106 and is not 'material' to the planning process (things secured in a Section 106 can be considered as a form of mitigation for planning decision making). An examination of the first 38 consented NSIPs found only limited use of CBAs but they can be a positive tool to secure compensation for impacts on local amenity and inconvenience caused by construction process and allow NSIP promoters to demonstrate their 'good neighbour' credentials sharing rewards and engaging with the host community with benefits including financial incentives, (financial sums, reduced utility fees, profit sharing), social benefits in kind (such as transport improvements, apprenticeships, affordable housing, village and sports facilities) and community empowerment measures (such as ongoing monitoring, local capacity building, local participation in decision making) (Glasson, 2017).

Decision making

After the examination phase concludes, the Examining Authority then has three months to write their recommendation to the relevant Secretary of State on whether to grant development consent or not. This is in the form of a detailed report summarising all relevant aspects of the proposal, representations and mitigations. The relevant NPS should guide this report (Grekos, 2010). This will be accompanied by a final draft DCO. The relevant Secretary of State is the minister with responsibility for the area of government business that an application relates to, for example, the Secretary of State for Transport takes the decisions on applications for highway NSIPs. Within the legislation, the Secretary of State is then expected to issue their decision within three months, and this is done via a letter to the promoter that is also publicly available via the PINS website. The DCO is then formalised by Parliament as a Statutory Instrument, which has a similar force as a piece of individual legislation.

Under the UK planning approach, the courts have a reduced role since planning procedures are designed to be the forum for considering the planning merits of proposed development and decision making on this, weighing up the pros and cons as part of the 'planning balance'. For NSIPs, the potential role of the courts was further reduced as a common law action around 'nuisance' is specifically excluded under the Planning Act 2008, reducing opportunity for the courts to be involved in deciding

cases in which development consent might abrogate private interests (Bishop and Jenkins, 2011). The right to judicial review, as with all actions of public bodies in common law jurisdictions does, however, remain. There is a six-week window for the promoter or any of the interested parties (including local authorities) or anyone else who can demonstrate 'sufficient interest in the matter' to legally challenge the Secretary of State's decision in the High Court. This has happened a number of times, both to NSIPs granted development consent and those refused it (see Appendix 1 and Walker, 2021a).

Post-consent

Once made, the DCO, as a Statutory Instrument, itself can only be amended through a material or non-material amendment process (the difference depending on the scale and impact of the amendments). Amendments might be sought for positive reasons because contractors want to use innovative or cost-effective construction methods, minimise disruption or take advantage of technological advances. Amendments are approved through the relevant Secretary of State. There is no fixed timescale for non-material amendments, which has caused some concern among promoters given the costs associated with delays. The material amendments route may involve a new examination and take 18 months in total (DCLG, 2015). The first application for a material amendment was made in 2021, more than 10 years into the operation of the 2008 Act.

Although planning permission under the traditional Town and Country Planning Act process cannot be used to amend the DCO for the main NSIP itself, planning permissions can be utilised for associated development and there are examples where this has been used to provide some flexibility for delivery as planning permissions can be quicker and cheaper to obtain. Multiple consents can cause complexities but demonstrate how local authorities can and do positively help deliver NSIPs.

The requirements section of the DCO contains an outline of matters that will be dealt with post-consent, for example that a construction management plan will be agreed and implemented. They are discharged (approved on application) by specified external bodies. The most common discharging authority is the relevant local authority, but it might also include the relevant Secretary of State, various statutory consultees and occasionally other bodies. In discharging requirements, there is a process specified for statutory consultees to check detailed matters and confirm

their acceptability. This means that these detailed matters do not need to be fully determined pre-submission, discussed in great detail at examination, or even specified in the main body of the DCO. Used effectively, the requirements section of a DCO is key to flexibility in the process.

We found in our 2017 research (Morphet and Clifford, 2017; Clifford and Morphet, 2017) that the post-consent stages of the NSIP regime had often been overlooked with the focus on obtaining the DCO. The result was that sometimes very small changes of wording could make a significant impact on deliverability. The sequencing of discharge had not always been adequately considered or community engagement provisions were insufficient to secure public confidence for subsequent detailed design. As it is the local authority overseeing the discharge of most requirements and any associated S106, their viewpoint is important and has previously influenced the consent where they have raised concerns about requirements-related issues (Rydin et al, 2018). In some cases, promoters including Highways England choose to discharge the requirements through their Secretary of State rather than the relevant local authorities.

The discharge of requirements involves considerable work. Many local authorities record them on their planning databases the same way as a planning condition would be discharged. There is nothing in the 2008 Act about fees for requirement discharge work, time limits for these or appeals for refusal or non-determination, so procedures for these are usually written into each DCO (White, 2013). Enforcement of requirements is also usually a local authority responsibility. Given there is no specific funding for local authorities for their work in the NSIP regime, promoters can make planning performance agreements (PPAs) with local authorities to better enable them to engage throughout the regime (Glasson, 2017).

Conclusions

The NSIP regime involves development consent for projects being given under a process that is governed by the Planning Act 2008 as amended by various subsequent acts of parliament and supported by secondary legislation, guidance and advice notes from central government and the Planning Inspectorate. The process involves a clearly defined middle section from acceptance, through examination, to decision, but with less clearly time-limited pre-submission and post-consent phases, which also involve important work to the planning and implementation of schemes.

As nationally significant projects, decision making on development consent falls to central government ministers acting on the advice of technical experts (the planning inspectors forming the Examining Authority and civil servants within the relevant government department) but there are potentially important roles for local authorities in helping to mediate community engagement and manage project implementation through the discharge of requirements governing things like detailed design, construction and environmental management.

The NSIPs regime establishes a range of development that is then consented through a separate planning system from that dealing with the majority of development in England, the town and country planning system. The boundary between the two regimes has, however, at times changed (for example whether onshore windfarms are consented through DCOs or traditional planning permissions), been proposed to change, or become blurred. The blurring includes categories of development that can go through either route (such as business and commercial projects, or associated development) and is indicative of the complexity and debate around the designation of some types of development as 'nationally significant infrastructure' as well as perceptions as to advantages and disadvantages of the different regimes and political calculation as to whose interests are best served by them.

The NSIPs regime was initially lauded for a number of 'certainties' it provided for those seeking to promote major infrastructure projects. There have, however, been some developments that have worked to undermine some of these certainties. With the National Policy Statements becoming increasingly outdated and questions over compatibility with climate change and the post-Brexit regulatory environment, the presumption in favour of development has been undermined. There have been an increasing number of projects refused consent (albeit still very much a minority) and ministerial decision making has not always been to schedule. The regime has now consented more than 100 projects, including large scale infrastructure such as a nuclear power station, a super-sewer, offshore windfarms and large new highways schemes (see list in Appendix 1). It has successfully facilitated significant schemes, many of which have been built out or are currently under construction. There have, however, been a number of challenges on the relationship between consent and delivery that are discussed in Chapter 5. There has also been a range of scholarly perspectives on the regime, to which we turn next.

4

Understanding the NSIPs regime

Introduction

This chapter aims to help us understand the NSIP regime in terms of existing broader scholarly debate. Firstly, we argue for the importance of taking a policy perspective on the regime, which considers reflection on the ways in which central government introduces major policy changes within the context of earlier work on policy processes. Second, this will include consideration of the extent to which we have seen the creation of a new policy community, the National Infrastructure Planning Association (NIPA) to support the introduction of this new regime and the ways in which it has fostered practices and dialogue with government. We then turn to explore the existing literature around NSIPs and DCOs. This is primarily focused around the lost opportunity from public inquiries in governance, the effectiveness of the regime in engaging communities and incorporating local knowledges, and how timely decisions made through it actually are.

How does government introduce new policy such as the Planning Act 2008?

The introduction of the NSIPs regime can be considered both in terms of its impacts and effectiveness as a tool of planning major infrastructure, but it also represents an example of the implementation of new policy by the central state. While there is much research on the ways in which policies are implemented and their effectiveness, there is a growing literature about the ways in which major policy change is stimulated and inserted into an operational system such as that of government. As Dudley *et al* (2000) points out, there is more than one theory that can be applied

in seeking to analyse policy changes on this scale including punctuated equilibrium (Baumgartner and Jones, 1993), policy diffusion (Marsh and Sharman, 2009; Baybeck *et al*, 2011) and institutional rational choice (Ostrom, 1991). Other theories include Kingdon's (1995) policy agenda setting and multiple streams approach and, finally, catastrophe theory (Zeeman, 1999). The context of these theories also relates to other theories on governance, structure and agency and their means of delivery including principal agent theory (Guston, 1996), temporalist (Goetz and Meyer Sahling, 2009) and path-dependency (Duit, 2007). Some of these approaches have more relevance to major theory changes in comparison with others. Dudley is specifically interested in the theories of major change or of policy discontinuities – what stimulates these changes and why are some more successful than others (Dudley and Richardson, 2004)?

Policy change is most publicly understood when it is regarded as the result of an advocacy coalition seeking change over time (Jenkins-Smith and Sabatier, 1994) and success in achieving change may depend on the venue for engagement in this process (Dudley and Richardson, 1996). This may also be dependent on the extent to which a policy window can be used (Kingdon, 1995), as advocacy coalition opportunities to change any agenda may be restricted. While these approaches to policy change are related to external pressure from interests that can change the political weather, it does not deal with factors that may create pressure for governmental change from international sources. Here Kingdon (1995) proposes the role of agenda setting and multiple streams where required policy changes may not be in line with the prevailing political ideologies or narratives of governments but nevertheless have to be implemented within an agreed time period. The resulting pressure on government is to find ways of presenting these longer-term commitments to change as the outcome of pressure from specific advocacy coalitions that are in support of their political ideology. This involves the means of narrative and a range of strategies to use them (Witting and Dudley, 2019).

Agenda setting uses the narrative of change through pressure by advocacy coalitions in order to deliver longer-standing commitments, which may continue across government terms, even where there are changes in political majorities, by mobilising these interests when policy windows emerge. In achieving this, Kingdon defined a multiple streams approach where the problem, the policy and the political streams are operating in separate channels until a policy window emerges, that may be accidental or engineered, for them to be brought together (Béland and Howlett, 2016). In particular, Kingdon (1995) suggests that a policy

window may be created through a focusing event that could be a crisis, an accident or through a specific event such as a report. In the period 2000–7, HM Treasury used a range of these reporting mechanisms through the use of 'policy tsars' to generate windows for action (Levitt and Solesbury, 2012). These reviews were undertaken by those who were experienced in the particular field under review but seen to have some degree of independence. The terms of reference, the support for the review and the reports were all under the control of the Treasury in these instances and the reports could provide a case for action outside more regular policy cycles. HM Treasury has also used spending reviews as a means of change (Deakin and Parry, 2000) but as these occur only every four years, the use of policy tsars could be more immediate and issue-focused.

Other approaches to introducing major change in government policies are seen in times when there are changes in governments at the time of ministerial reshuffles. Here the machinery of government can be used to introduce major change through the creation of a new government department or change the portfolio of a minister. As change is expected, a new policy insertion may attract less comment and attention than trying to do this within a period of relative policy consistency, although machinery of government changes can be very blunt instruments (White and Dunleavey, 2010). Here also the management of policy change through points of time may also be a consideration (Goetz and Meyer-Sahling, 2013) – both for the length of time available and the opportunities for the insertion of these pivot points (Krehbiel, 2006) into a government's period in office. Other ways of inserting change in government may be in response to a national event or crisis such as a fire, flood or an issue highly salient with the public (Kay, 2011). Even here though, despite a potential public outcry for some immediate change, a short-term response or palliative initiative is more likely than a major change that might emerge after public inquiries. These too have some narrative that the public can understand and the change that is implemented becomes a resolution to a longstanding concern or issue.

Policy diffusion theory also includes an international dimension where governments are influenced by the experience of others in choosing approaches to policy delivery (Baybeck *et al*, 2011). These theories may work when a number of governments have to apply the same policies as a result of international agreements as seen in outsourcing and opening the public sector to competition (Morphet, 2021a) or within the EU (Ette and Kreienbrink, 2007; Karkatsoulis *et al*, 2016). This can also occur where there are less formal agreements to be implemented but an international consensus for action (Baldwin *et al*, 2019). There can also

be similarities of approach when there are constitutional linkages such as in policy adoption between the UK and Commonwealth countries including Canada and Australia (Obinger and Wagschal, 2001). Thirdly, governments may adopt policies from others because they take the view that such policies have been advantageous elsewhere and there may be a danger of being left behind without their adoption. However, all approaches to policy diffusion will depend on the fit between the policy and the structure of government, its past policies and how any approaches used elsewhere can be accommodated within prevailing government narratives. In the case of the implementation of policy approaches to the provision of national infrastructure, the UK constitution and level of discourse on the mechanisms for the implementation of EU legislation agreed by the UK (Morphet, 2013) was not well aligned to using policy approaches adopted in other EU member states (Fabbro and Mesolella, 2010; Van Weenen *et al*, 2016).

Some changes, however, occur without these narratives or back histories. The theory of punctuated equilibrium attempts to understand why these major changes occur and what stimulates them. This theory deals with change in policies that have been regarded as being in stasis and changing incrementally rather than radically. This appears to be more prevalent where there is a threat that extends beyond one country and there needs to be cross- or multi-national responses, as in climate change (Lundgren et al., 2017). If this is the case, what then stimulates major change and punctuates this stasis (Baumgartner and Jones, 1993) or creates what Jones (1994) describes as a 'serial shift'? In their work, Baumgartner and Jones relate these changes to switches in the Government's budget priorities (John and Margetts, 2003), but there appears to be no reason why this is the only way in which these major changes can or should be considered. Such changes in the public policy system appear to be dramatic and occur suddenly (Givel, 2010), as a consequence of some external shock, although, behind the scenes, the necessity of such change may have been understood for some time. The development of punctuated equilibrium theory also accompanied a major change in public policy through the earlier introduction of the Government Procurement Agreement by the World Trade Organization to introduce private sector competition into public sector services. This needed a narrative as set out in Osborne and Gaebler (1992) and in the public service reforms in the UK as led by John Major (1990–7) and the Labour government subsequently (Morphet, 2007). As Princen (2013) indicates, punctuated equilibrium can be used to examine the ways in which EU policies are implemented and is a theory well suited to this arena.

In achieving successful institutional change, short-term measures do not appear to be as successful as more major shifts in the system (Romanelli and Tushman, 1994) and it is useful here to consider the processes that the UK Government sought to use to implement change in the infrastructure planning system following the introduction of the TEN-T regulations in 1998 (EC, 1996). In practice two methods were used to implement these major changes in the UK. As shown in Chapter 2, the gradualist approach to change, using submerged legislative shifts over the period 1998–2004 did not meet the type of change required and none was implemented in practice. This may have been because they all operated within the 1947 Town and Country Planning Act system and would allow the consideration of the question of need for the proposed development through a planning inquiry. Implementing a more radical approach, by removing this opportunity to question need, could be achieved by creating a narrative as in the Eddington Review (2006) and a major change in legislation. An interesting point to note is that although called the Planning Act 2008, it was not based on the 1947 town and country planning legislation as all the previous attempts to achieve change for consenting major infrastructure projects had been.

The use of narrative devices for such major change when used in conjunction with the implementation of international agreements needs more discussion and understanding in the UK (Bache, 1999). The multilevel government context, as it interacts with political decision making, is also a central feature to be considered for punctuated equilibrium (True et al, 2007). In the UK, analysis of punctuated equilibrium has focused more on attempting to observe it either through changes in expenditure (John and Margetts, 2003) or through major policy agenda announcements such as the Queen's speech (John and Jennings, 2010; John and Bevan, 2012) but no analysis of the relationship between major shifts of policy that are related to external or international agreements. Governments prefer to demonstrate that they have their own power locus and are acting in their national interest. The application of an international agreement, which has been negotiated behind the scenes (Hermansen, 2015) without much public discourse, but which can have a major impact on policy practice, has to be managed in some way that makes it appear to be in alignment with government priorities. Hence the long discussions and negotiations within the WTO to implement the GPA, which in effect had been going on since the early 1960s, have eventually to be delivered in ways that appeared to be beneficial to public policy and delivery (Morphet, 2021a). Generally, these disruptions can be implemented through the changes in government as indicated above but given that for EU legislation there were always time limits agreed at the point of the adoption of the regulations, sometimes governments run out of road in attempting to implement them. This was the case with the TEN-T Regulations in the UK so there needed to be a major change or policy punctuation to agree their implementation.

One final important consideration in relation to policy is how it actually gets implemented. Despite a wealth of research highlighting the messiness of public policy implementation (Hill and Hupe, 2002) this can often be overlooked in general. This has certainly been the case in planning, where there has been a tendency to focus on understanding reform from a top-down, centralised perspective overlooking issues of outright implementation failure (Barrett, 2004) or the routines and devices of what Lipsky (1980) termed 'Street Level Bureaucrats'. Clifford and Tewdwr-Jones (2013) explored the at times difficult implementation of a range of reforms to the town and country planning system implemented under the New Labour government in England, and Clifford (2022) develops this by highlighting the importance of everyday practices within and of the state given that centrally imposed policy reform is often messy, incoherent and incomplete and reliant on the mundane actions of situated agents to implement. In other words, the state is a peopled construct and without the everyday actions of people like planning inspectors and local authority planning officers, no reforms would actually take place. For the Planning Act 2008, this perspective reminds us of the importance of a focus on implementation and actually existing practices. What has happened since the legislation was passed and to what degree is the system working in the manner it was originally intended? What are the practices of state and non-state actors that actually constitute the regime day-to-day? Our case studies in later chapters provide some insight into this.

The establishment of NIPA – a new policy community

In order to understand the implementation of the 2008 Act and evolution of policy around major infrastructure planning in England, it is important to also consider the role of an organisation called the National Infrastructure Planning Association (NIPA). For transparency, we would highlight again here that the core empirical research underpinning this book was funded by NIPA, although the translation and interpretation of that into this book is entirely the responsibility of the authors. NIPA was established in 2010 with the aim of 'bringing together individuals and

organisations involved in the planning and authorisation of major infrastructure projects. Our principal focus is the planning and authorisation regime for nationally significant infrastructure projects introduced by the Planning Act 2008' (NIPA, 2022a). We argue that it is an example of a policy community and one that has been able to exert influence over the ongoing operation and reform of the NSIP regime.

What are policy communities?

Policy communities and networks exist in the 'interstices between and among government agencies, interest groups, corporations, industry associations, elected officials, and other institutions and individuals' (Miller and Demir 2017: 137). These groupings are stable (Rhodes, 1986; Jordan, 1990), may be instrumental to those participating in them and these purposes may relate to organisational or professional advantage. The involvement of policy communities in seeking to shape or implement government policy may act in ways that are similar to lobbying or, at the other end of the spectrum, may be concerned to share information and practice about emerging legal or policy systems that have significant effects on their business or responsibilities. Unlike other organisational structures, the membership of a policy community may not reflect a hierarchical position of power within an organisation and may rather reflect some specialist know-how, experience or access within an organisation that can be shared to wider advantage or used to seek confirmation of acceptable or common practices in emerging policy spheres. As such, policy communities can be constituent parts of the wider governance context (Atkinson and Coleman, 1992), in that they are important for decision making but do not hold any formal powers to effect legal or regulatory change.

Policy communities can function in formal and informal ways. They can establish their means of communicating within professional and interest societies that can exchange information (Rhodes and Marsh, 1992) and become locations of information and experience that can be used by governments when consulting on policy. Their experience of engaging with specific policy delivery will make such organisations of value to government either in the ways in which it can contribute experience of delivery, or to be influenced at a time of change to prevent their opposition. For informal networks, these may be between colleagues and may increasingly be based on the use of social media including the establishment of WhatsApp or Facebook groups, exchanging information via Twitter or through the use of professional webinars established by

sector practitioners. These act both as a means of promoting their business or organisation and for obtaining information or access to others in the same sector who might act as clients in the future. Other mechanisms have also grown in influence as a response to the pandemic from 2020 onwards including blogs and podcasts.

While policy communities can comprise those seeking to influence government or regulators, more formal approaches to establishing standing groups to act as a policy community can also attract those who are responsible for making regulations. These representatives of government and its agencies can be observing members of any standing groups or use their membership to engage in informal opinion seeking to test or obtain views of the policy community. These networks between operators and government can also be used to facilitate higher level conversations with members of the government and create pathways of information and potential influence not open to others outside the policy community. In this case they can act as gatekeepers to the debates, discussions and decisions. The establishment of a formal policy community organisation can provide advantages both for those better connected and those on the fringes seeking better information and briefing. For those who have better access to decision makers, their representation of a wider sector group provides more credibility in any transaction relationship with government, and they can act on behalf of others, providing information flows and seeking to bring the sector group to support the changes in policy that are being discussed. For those more on the fringes or new to the sector, membership of a formal policy community provides speedier access to information than would be available if they had to spend their time expanding their networks. Membership of a formal group can also help to expand individual networking. Individuals can exercise influence and power in both these informal and formal policy community settings. While sharing information to formal groupings, individuals may be taken into the confidence of government officials and provide informal advice in return for information that is not shared in wider groupings.

Another means of creating policy communities to influence decision makers in the UK is through the creation of an All Party Parliamentary Group (APPG) that can be established to promote policy change on a specific issue. These groups have no official status within parliament and are run by and for members of parliament and the House of Lords. The UK Parliament keeps a register of all groups that it publishes on a regular basis. In December 2021, there were APPGs on infrastructure in general and for some specific types – for example electric vehicles or the West

Coast Main Line railway. In other cases, infrastructure is part of a wider interest in places such as the APPG on Building Communities or the West Coast Islands. The number of APPGs as a means of lobbying on specific issues has been increasing (Thomas, 2015) and there are some concerns about their role in relation to specific issues such as pharmaceuticals (Rickard and Ozieranski, 2021).

What distinguishes the differences between a policy community and a lobby group or think tank that is also concerned to influence policy making in specific directions? While think tanks may be characterised as groups producing new policy ideas based on research, in practice they are funded by sponsors that may be using the think tank to promote a particular position at one step removed. Pautz (2014) argues that understanding the role and function of think tanks is essential to understanding policy development and delivery in the UK. It is also important to consider the purpose of establishing a think tank, which is to use research and data analysis to influence decision making in particular directions. Otherwise, such research could be undertaken within a university or other organisation, although think tanks will commission research from these wider sources. Within Government, think tanks act as mechanisms through which policies can be reviewed or changed either through specific think tanks working with parties in power (Hartwich and Macualay, 2021) or for civil servants attempting to open a wider range of approaches to ministers through their use. Think tanks also appear to be more benign in their narratives for promoting change than lobby groups, which are established explicitly to manage change in government. However, as with meetings with the press or think tanks, there is not always transparency in the way in which meetings with lobby groups or their representatives are recorded and made available within the public domain. Contributions for individuals and organisations to political parties and individuals in parliament have to be recorded for public record but again these do not always provide much information of the subjects of discussion. McKay and Wozniak (2020) found that only four per cent of all such meetings were recorded in the lobby register and 29 per cent of lobby groups made public their clients.

The National Infrastructure Planning Association (NIPA)

NIPA has set out the need for the association in relation to the new system established through the Planning Act 2008 that created a unified consent regime for projects across different sectors. The role of NIPA is stated as to disseminate learning and best practice for promoters, their advisers

and those affected by the proposed NSIPs. This is undertaken through events, an annual conference and working groups. NIPA has commissioned research through 'NIPA Insights' in 2016, 2019 and 2022 and distilled this into advice for its members. The research has also been used to inform central government and our part of it is the basis of this book. NIPA has also been engaged in discussion with central government both through consultations on specific changes in legislation or regulation relating to the regime more generally. NIPA's governance is through a board and an advisory council. It has a former minister who chairs the council.

Since its formation, NIPA has been engaged in a range of consultations with government about the operation and reform of the system after taking views from its members and commissioning research, which has helped inform and justify positions taken in this lobbying of central government. NIPA was actively engaged in the 2014 and 2021 reviews, both through the preparation of formal consultation submissions and informal meetings.

NIPA acts as policy community where its members share in common processes and was seen as an important way of sharing information and practice about the Planning Act 2008 regime when it was first implemented. It has continued in this role subsequently. For its constituent members, who represent all those interests who operate within the process – project promoters, lawyers, consultants including for environmental assessment and works management, statutory consultees such as government agencies, local authorities and community consultees – the evolving practices of the 2008 Act have given them more interest in working together. The Planning Act 2008 does not reflect the more adversarial culture of planning inquiries but one where agreement is sought at the outset - through statements of common ground agreed before the submission of the project into the presubmission processes and with micro-negotiations being undertaken throughout the examination process requested and required by the appointed examiner. This is another way in which the Planning Act 2008 differs from the Town and Country Planning Acts in that it is inquisitorial rather than adversarial; before the Planning Act 2008, the inquiry process was adversarial (Bunn and Vlahos, 1992) and this was also a factor in the narrative of reform that led to the implementation of the NSIP system (Owens, 2002). It also separated it from the increasing levels of conflict about planning applications for housing (Allmendinger and Haughton, 2010; Inch et al, 2020).

While membership is open to all, it is worth noting that membership of NIPA has tended to be dominated by promoters of infrastructure development and those who advise them: of the current board members, six are legal professionals working on infrastructure planning, two work

for planning and engineering consultancies and two work for scheme promoters directly (NIPA, 2022b). This is not to say that the organisation has not been open to a range of views or genuinely interested in issues like public engagement in the regime but it is suggestive of a policy community that in our view tilts towards those seeking to see major infrastructure projects developed and delivered. It is beyond the scope of our research to critically examine the influence of NIPA or any other groups on government policy around NSIPs and the operation of the regime, but it is always useful to be mindful of the extent of power and influence policy communities are able to exert and whether any particular interests are excluded or marginalised from those communities.

Debates in existing literature on the NSIPs regime

For the remainder of this chapter, we now turn to existing scholarly literature and debate on the regime. Considering the scale and impact of NSIPs, the specific planning regime governing them in England has not generally received that much academic interest compared to the voluminous material on the more general town and country planning system. That said, there is some published scholarly literature, in particular considering the move to the new system and its relationships with local knowledges and publics, and in this section we consider the existing work on the regime. It is worth noting that the scholarly literature on the 2008 Act regime has tended to focus on the front end of the process of gaining consent for NSIP projects, as opposed to the research that is at the heart of this book, which focused on the period between consent and project operation.

The move to a new system

The introduction of the Planning Act 2008 is generally understood partly as a response to the longstanding claims of planning delay jeopardising 'essential' infrastructure development (Owens, 2002), and the privatisation of much infrastructure from the 1980s (Morphet, 2021a). Marshall (2011b) also highlights a rise of 'infrastructuralism' just as planning influence was declining in wider society and government. The Act can be understood as an institutional fix in two ways. The first is in a change of relationships between state, market and citizens and response to technological change (Newman, 2009). In this neoliberal and depoliticised context, planning and public engagement are seen as interference and bureaucratic delay that must be

streamlined, contained and de-risked so that the civic world cannot unduly undermine market logics (Cowell and Devine-Wright, 2018). The second way that it can be seen as a 'fix' is as a policy window to implement an international agreement (Kingdon, 1995).

The introduction of the NSIPs regime can be understood as a reordering of priorities by the state when discourses of 'competitiveness' and 'infrastructure delivery' and accelerated decision-making drown out questions around the public value of wider deliberative processes (Marshall and Cowell, 2016). This links to longer-standing debates about the tensions between speed and participation in the English planning system, the role of planning in mediating the public interest and the value of argument around issues such as development and sustainability (Newman, 2009). Marshall suggests the 2008 Act made full and fair public deliberation harder and is, as we have shown in Chapter 2, an example of manipulating 'regimes of decision making' (2018: 446).

Views about the new system in general differ, although there is a tendency in the scholarly literature to fall on the side of criticism of the regime. There is some commentary that streamlining decisions, avoiding long public inquiries and giving certainty, is welcome (Grekos, 2010) although White is unusual in the scholarship on the regime in claiming that 'the system is fundamentally sound and represents a major improvement to what preceded it' (2013: 146). There might be more agreement, however, that 'the 2008 Act stands out as a genuine revolution in the way that planning applications for major energy and infrastructure projects are prepared, assessed, determined and implemented' (White, 2013: 147).

Given the nature and scale of these major infrastructure projects, where there are dimensions of acceptance to consider from the market, socio-political actors and the community (Horbaty et al, 2012), any reform to the governance of planning and consent for such projects is likely to attract some level of controversy. The IPC was established by the 2008 Act then abolished within three years, and infrastructure projects remain profoundly politicised. Even with privatisation, the public tend to hold political leaders responsible for adequacy of infrastructure and local impacts of projects (Morphet, 2021a). Further, the key design of the regime raises the suggestion that 'giving strategic direction to markets through NPSs demands a governing capacity not previously seen' (Newman, 2009: 162). Writing six years after the regime was implemented, Slade and Davies argue that 'the UK makes poor decisions about infrastructure compared with some other wealthy countries' (2017: 1), a point also found earlier by the OECD (Pisu et al, 2015). Beyond comment on the system in

general, there are a number of particular themes in the existing literature on the NSIPs regime that we now consider in turn.

Not-joined-up spatial planning

Major infrastructure development takes place across the national territory, both on and offshore, and is an inherently spatial process. Yet a particular theme of criticism in existing literature around the NSIPs regime is that it is not joined up sectorally and is far removed from strategic planning considering the spatial implications of public policy coherently. The NPS are divided by sector and so 'systematically hide important connections, making policy for low carbon futures, for example, much harder to move towards' (Marshall, 2014: 31). Preparation of NPSs by different departments in the UK government misses the principle of sectoral co-ordination (Marshall, 2013). The divided situation in England is increasingly in contrast to the devolved administrations of Scotland, Northern Ireland and Wales with their national spatial plans (or 'planning frameworks') with the principle of development for major infrastructure in Scotland approved through their National Planning Framework.

The post-2008 system in England has engaged with some of the major questions related to infrastructure at the national level and demonstrates an attempt to re-engage the state with long-term steering (Marshall, 2011a), but the regime has functioned over its period of operation in a political-economic context of anti-planning rhetoric at the local level, with an ongoing dominance of market ideology and a continual push for economic-led planning reform seeking to support more entrepreneurial and private sector activity. Such a context is unlikely to be supportive of national strategic spatial planning. This is despite some attempts to set out what the issues might be if this strategic planning is undertaken. Wong (2002) explores the ways in which a national spatial development plan for the UK could be developed for its benefit. Using four options, she first considers keeping the status quo, while the second is to strengthen the existing arrangements. The third suggests a more interventionist approach from central government to create policy guidance for the national plans developed by the devolved administrations. The final option is for central government to take a stronger directive approach to creating a UK spatial planning framework that includes strategic matters such as infrastructure. Wong favours option three. A second approach to developing strategic planning was made by the UK2070 Commission (UK2070 Commission, 2020). The approach used here was to consider the role of a national framework to resolve issues of regional and local inequalities. Here the recommendation was for an English spatial framework to work alongside those for the devolved administrations, which defines core infrastructure and investment priorities.

With recent (and the current) UK governments seemingly unsupportive of more joined-up strategic spatial planning in England, the resultant disjointed process causes some concern. Cotton and Devine-Wright (2011) outline the need for a more joined-up approach to the zero-carbon transition and energy infrastructure, including power supply lines that may be needed for renewable energy generation:

As Flynn et al (2008) have shown, engaging with the public around one specific technology without also addressing broader aspects of a highly interconnected system of generation, transmission, supply, and use runs into difficulties when participants seek to open up discussions about future scenarios. Therefore, while the value of upstream engagement on transmission-network siting is, in principle, supported by these findings, they also raise significant challenges concerning practical implementation ... whilst it is tentatively suggested that the involvement of local community representatives in network governance must move upstream to enable citizens to have greater involvement in strategic planning, there is also a need for greater clarity in national policy making around the configuration of future energy systems required to address climate change and energy security ... so as to avoid the necessity of having to continually explore both wider systematic as well as locally specific issues in each context where new infrastructure is provided (Cotton and Devine-Wright, 2011: 958).

As well as concern for the consequence of the NSIP regime not being joined up is concern about it being largely aspatial. Without government focus and intervention, the complex assemblage of non-integrated statemarket actors around UK infrastructure naturally tends to prioritise southern England. As Marshall argues: 'The issue of the material and imaginary historical geography of England ... England's geography is difficult territory for any major change ... There is little clear image of a future England, in fact not even competing clear imaginaries' (2011a: 901). There remains, however, a material geographical base to big infrastructure, with a physical geography to things like water resources and a political geography of where certain things such as nuclear waste are to be acceptable (Marshall, 2020).

The role of the National Infrastructure Commission and their National Infrastructure Assessment might yet open up further reform around the degree to which there is an integrated, spatial approach to major infrastructure in England in future. Some sub-national attempts such as the Transport for the North strategic transport plan point to the transformative potential of infrastructure and the increasing emphasis on 'growth' and political desire to keep some sectors and electorates happy through certain big projects means further developments around major infrastructure are likely in future. Nevertheless, spatial planning remains under attack as a state policy instrument (Marshall, 2020) and some attempts to have infrastructure-led spatial planning such as the Oxford–Cambridge Arc appear to have stalled. The concern in existing literature that the NSIPs regime is often disjointed and aspatial therefore remains significant.

Questions of scale

The very naming of the post-2008 regime as the system for *Nationally* Significant Infrastructure Projects evokes questions of scale. Firstly, what is the nation? Initially the 2008 Act applied to England and Wales and now only England, excluding Scotland and Northern Ireland. It is not a UK infrastructure planning system: no such thing exists. As the previous section demonstrated, there are criticisms of a lack of a strategic and UK-wide infrastructure plan and programme that is increasingly present in EU member states such as Ireland. Nevertheless, in so far as we consider the difference between central, sub-national or regional and local governance in England, the system has been described as 'fundamentally centralised' in literature (Natarajan, 2019) with discussion of a politically driven national framing of infrastructure development (Natarajan et al, 2018) and centralisation in the name of sustainability (Rydin et al, 2018). The system is described as 'central-government-led and dominated' (Marshall, 2020: 64) with the (then proposed) 2008 Act reforms described as 'a further rescaling of planning policy in the service of streamlining' (Cowell and Owens, 2006: 414) or more simply as the process of rescaling enacted through the Planning Act 2008 (Johnstone, 2014).

Although the 2008 reforms certainly did involve some rescaling, and the NSIPs regime can be considered as central government dominated, the degree to which these reforms to planning governance 'rescaled decision on infrastructure projects to the nation state scale, rather than the regional, local or community scale' (Cotton, 2018: 250) is actually open to debate. The use of recovered appeals and call-ins for

schemes being consented through the traditional town and country planning system and the operation of consenting regimes like those under the Electricity or Transport and Works Acts has meant that central government ministerial control has long been part of project consent for significant national infrastructure projects (Cowell and Devine-Wright, 2018). As we will demonstrate in our case studies in later chapters, there also remains an important role for local government in the system, for example in relation to the post-consent stages such as the discharge of requirements. In other words, while there are important questions of scale at play here, for example local impacts versus national needs, the degree to which the Planning Act 2008 represented a rescaling of control of these major projects in England is much more debatable.

There are questions over the scalar appropriateness of different governance tasks around major infrastructure with reworking of decisionmaking levels around onshore wind over recent years (Natarajan, 2019) and certainly some shifting territorialisation of governance around these projects has been occurring (Cowell, 2017). There are important questions around the spatially and socially differentiated contexts for major infrastructure projects and questions about, for example, how qualities of landscape might be assessed and understood at different scales (Cowell, 2010). Considering energy provision and carbon transition, Cowell (2017) comments on the socio-technical regimes of energy provision systems not aways being coterminous with state structures while Cotton (2018) highlights the scalar aspects of environmental justice where there can be conflict between locally affected communities and national decision-making authorities with a need to consider 'scalar parity' in a partnership-based balancing of competing interests.

Thus, whatever the degree to which, and questions about the extent to which, the 2008 Act represented an act of rescaling around the governance of major infrastructure planning and consent, the regime does present important scalar questions. As Cotton argues, there is a geographical nature of environmental justice that is 'fundamentally defined by scale' (2018: 242) and this is often seen in community protest surrounding things that are managed through the NSIPs regime such as power transition lines or radioactive waste disposal. Given that developers do not need to demonstrate a need for their project under the 2008 Act regime (when this is done through the NPSs), 'the social construction of a locally situated infrastructure project as *nationally significant* circumvents local environmental justice with a utilitarian principle of the

'greater good' by framing it at the nation scale ... [which can lead to] distributive, procedural and recognition injustices' (Cotton, 2018: 250). Nuclear waste management is given as an example of where rebalancing of local and national scales of interest through a partnership model has been more successful (Cotton, 2018).

Yet local communities are often conceived of as NIMBYs and breaking this cycle 'requires new ways of thinking and practicing public engagement that better connect national policy making with local places directly affected by specific projects' (Devine-Wright, 2010: 19) rather than just viewing the contexts of large-scale projects 'either as "sites" to be developed or "backyards" to be avoided (Devine-Wright, 2010: 23). At present there is a tendency for national support for renewable energy but frequent local opposition to the development of the infrastructure associated with it, with a co-existence of sometimes apparently contradictory attitudes, beliefs and practices between the relationally intertwined local and national spatialities (Batel and Devine-Wright, 2015). The idea that political dissensus can be 'solved' through rescaling policy reform, acting as a form of depoliticisation (Fawcett and Marsh, 2014), seems misguided (Johnstone, 2014) and with the emergence of devolution deals and cityregions in England, some of whom seem to be forming growth coalitions with central government as 'infrastructure alliances' (Marshall, 2020) there appears likely to be further scalar flux and scalecraft in future around major infrastructure in the UK.

Indeed, the extent to which the NSIPs regime has involved rescaling of governance and responsibilities, and with future potential flux around this (for example what is designated 'nationally significant' infrastructure), the concept of 'scalecraft' is useful. As Pemberton explains, different national governments may seek to reform governance structures to deliver policies and demonstrate competence; a 'statecraft through scalecraft' that can be uncertain:

If scale is viewed as a social product then deploying a new scalar discourse for local government or crafting or establishing new scales of working requires certain aptitudes, skills and/or experiences, and can entail failure, experimentation and learning ... as a political act, crafting new scales of working may be 'tricky, messy, and awkward ... things are rarely easily produced' (Fraser, 2010: 333–4). Indeed a 'scalar fix' may rely on its embeddedness within dense webs of relations to other scales and spaces (Brenner, 2001: 606): unexpected, uneven and intersecting geographies can impinge on practices of scalecraft' (Pemberton, 2016: 1309).

Local knowledges and understanding

Questions of scale around the NSIPs regime then link into themes about the degree to which these projects engage local knowledge and incorporate rich local understanding. This links to questions about the focus for attention in the system and the power dynamics of regulation (Rydin, 2020). Large projects are often controversial because of the wideranging implications for host localities (Glasson, 2017), for example new power transmission lines by their nature may alter landscape character, impact local amenity and effect property values (Cotton and Devine-Wright, 2011). The scale of a project, its location (including not just landscape but also social deprivation issues in host communities) can all be important and public acceptance of major projects can involve a balance between the socio-political, market and community dimensions (Roddis et al, 2018).

NSIP arrangements do allow for local people to both be present in pre-submission consultation but also form part of the inquisitorial examinations (Natarajan *et al*, 2019) where such presence may then bring up questions about lay versus professional knowledge claims, as seen in relation to landscape and seascape in the Navitus Bay offshore windfarm project (Lee, 2017). Yet despite allowing for some presence of local people in the process, these arrangements are called into question in some existing literature. There is often little discussion of socioeconomic impacts in Examining Authority reports under the NSIP regime with limited understanding of local economy and challenges for local businesses as opposed to the government view of investment in large infrastructure as beneficial for the national economy (Rydin *et al*, 2018). A better understanding of the distribution of costs and benefits across scales around national infrastructure seems important (Horbaty *et al*, 2012).

There may also be a need for more reflexive deliberation around issues like the technical potential of new infrastructure technologies such as those around renewable energy and the contextual conditions in which they might be deployed, for example in relation to the contextually-embedded qualities of landscape (Cowell, 2010). As Owens has suggested, however, 'controversies about major projects do not simply reflect a tension between some uncontentious national good on the one hand and particular local interests on the other; often they expose deeply held and divergent beliefs about the nature of the national good itself' (2002: 952).

Community and stakeholder views

Consideration of the extent local knowledges feature in the NSIPs regime links strongly to the extent to which community (in particular) and wider stakeholder views are incorporated into the planning and consent of major infrastructure. This has been a preeminent theme in existing literature on the Planning Act 2008 system. It is widely viewed that the 2008 Act introduced 'significant changes to the opportunities for public participation in decision-making' (Natarajan et al, 2018: 201), offering 'a particular arrangement of the representation and contributions of local people' (Natarajan et al, 2019: 118). This is important given that planning processes have long played a 'performative role in constructing "local voices"' and are a 'particularly important space within which the views of local stakeholders are framed, given expression and represented' (Rydin et al, 2018: 566) and that notions of trust and place attachment are closely intertwined with views on the fairness of decision making.

Similar to the much wider literature about community engagement and public participation in planning more generally, it is widely argued that positive engagement during the consenting process and a deeper understanding of local views can boost confidence and legitimacy and reduce opposition to development, potentially alleviating controversy about planning proposals that may create localised environmental burdens (Natarajan et al, 2018; Cotton, 2011). There are, of course, different rationales for public participation with notions of procedural justice, representativeness and fairness linked to the space and opportunity for deliberation and dialogue (Knudsen et al, 2015). Deliberative methods, with direct citizen involvement, are often considered to increase legitimacy but can be time consuming and expensive when government reform agendas are often focused on speeding up planning for major infrastructure (Cotton and Devine-Wright, 2011).

Considering the regime in general as well as specific examples of renewable energy projects and electricity power transmission lines, existing scholarly work argues that there is weak incorporation of evidence from the public compared to professional actors in the NSIPs regime (Natarajan, 2019) and that even when a rhetoric of deliberative engagement might be adopted by promoters, there is often a lack of 'clear rationale and effective means to incorporate citizen perspectives' (Cotton and Devine-Wright, 2012). Limited opportunities for dialogue and an instrumental view of public participation (Cowell and Devine-Wright, 2018) can lead some communities to conclude that consultation has been

poor, particularly as locals would often like to discuss the principle of development (Natarajan et al, 2018). Community engagement issues can be compounded by uneven distribution of resources and capacity, with the NSIP regime making onerous demands of all stakeholders but some better able to meet these than others (Abbott, 2020). Not only are there resource demand issues but also technical and bureaucratic hurdles meaning those with relevant skills, knowledge, time and ability to pay for legal representation can engage more readily in NSIP consultations, so that there is uneven engagement in practice linked to issues of inequality (Davis and Wright, 2017).

It is not universally accepted that the community engagement in the NSIP regime is problematic. Broadbent and Nixon (2019) suggest many stakeholders find that the Planning Act 2008 process allows for stronger participation on energy developments than the Electricity Act process it replaced. The white paper proposing the Planning Act 2008 reforms argued that the DCO processes would allow 'local authorities and local communities to more effectively express their views about projects and influence a promoter's proposal' and that it would support 'early and inclusive consultation' that 'benefits everyone' (HM Government, 2007: 60–1). Many planning professionals apparently feel that a more upstream front-loaded public engagement is a good feature of the NSIP regime (Davis and Wright, 2017). Cotton and Devine-Wright (2011) found that the Planning Act 2008 meant national grid engaged public actors at an earlier stage of the planning process than it did previously, but there was still a tendency to dismiss all objectors as 'NIMBYs'.

Means of improving community engagement in the regime are a frequent feature of existing scholarship. Natarajan *et al* (2018) call for greater engagement by local authorities in pre-submission discussions between communities and promoters and post-consent in monitoring and ensuring compliance with the DCO. For Abbott (2020) it is about considering direct financial support to community groups so that they can better engage in the NSIP process that might then improve access to legal expertise so that rights to collective participation in planning can be exercised meaningfully. Slightly more radically, Slade and Davies (2017) seek a 'Commission for Public Engagement', an independent actor to improve the quality of engagement for major national projects, facilitating public debates when NPSs are developed and providing advice to promoters pre-submission and during the DCO process. They argue that:

The UK lacks forums for productive and structured public debates on infrastructure policy options. The UK is poor at engaging the public and local communities on major infrastructure projects. This has serious consequences: when local communities feel disempowered or that a decision has been made in an unfair way, they often oppose development entirely. This local opposition can result in unnecessary delays and additional cost' (Slade and Davies, 2017: 4)

A slightly different perspective is offered by Davis and Wright (2017) who suggest that prescriptions for 'more and better' engagement to remedy democratic deficit within infrastructure planning can assume a latent demand for participation and overlook some barriers to engagement. They argue that instead there is a need to look at how the distribution of outcomes and benefits from major infrastructure, including consideration of profit making, might enhance its democratic value.

The idea that improvements to public participation will help educate a 'misinformed' and 'irrational' public so that there is less opposition to controversial infrastructure projects is questioned by Cotton (2011) while Cowell and Devine-Wright (2018) highlight the complex assemblage of public engagement approaches now in play and the need to work through this to chart the balances being struck on the public's behalf in various ways. Writing at the time of the passing of the Planning Act, Ellis questioned the ability of the then IPC to determine the public interest and argued that 'it is important to establish a consensus about the democratic nature of planning and decision making. Democracy is not an optional extra' (2008: 85).

Room for contestation

Linked closely to these concerns about the opportunity for community engagement in the regime in general are specific criticism in the literature on NSIPs about the room for contestation that exists within the regime. The 2008 Act changed opportunity structures for political engagement on major infrastructure projects in England, promoted by a coalition of interests who have long viewed planning as a burden to growth (Cowell and Owens, 2010). The Act is viewed by many scholars as a deliberate attempt to streamline the planning processes for NSIPs so that there is less opportunity for public participation apparently due to economic development trumping environmental and community concerns (Cotton, 2011), although the EU context for the Act is not mentioned here and often overlooked as a factor in its difference from other town and country planning act procedures. Lee *et al* highlight the partial and highly

contentious view of the planning system in the overarching National Policy Statement for Energy (EN-1) published in 2011, arguing that 'planning, and the role for people in planning, are sometimes quite explicitly represented as a barrier to progress' (Lee *et al*, 2012: 41) against government priorities for construction of infrastructure.

As well as opportunity spaces for participation, though, there is also how much influence participation can have in the process: questions not just about the amount of public participation but the power it has in the regime. Once NPSs have been ratified by Parliament, questions such as need and, in some cases, other issues like siting and safety are decided and fixed, so that opportunities for challenging the basis of policy are undermined by the sequential nature of decision making under the regime (Johnstone, 2014). This leads Rydin *et al* to question the potential legitimacy concerns 'associated with providing opportunities for public participation when that participation can have very limited impact on decisions' (2015: 149).

Existing academic literature generally views it as negative that the there is no longer the opportunity to question the principle of development for an NSIP during the examination, unlike the former public inquiries, and that there have been 'various forms of closure of what is permitted for public discussion' with reduced procedural fairness as a result (Cowell and Devine-Wright, 2018: 509). There is concern that compression of time for examination reduces the ability for different interests to be heard (Rydin et al, 2018) even if individual Examining Authorities may be supportive at hearings (Natarajan et al, 2019). Ellis (2008) argues that painting opposition at examination in a negative light is naïve given there can be legitimate divergence in views about how land is used. A consenting regime should seek to provide a fair arena to resolve divergent views and protect the public interest and the interest of those affected by decisions. Rough (2011) discusses the long history of public inquiries in relation to infrastructure in the UK and the spaces they have provided for policy debate and learning and public scrutiny, with environmental campaigners using the planning inquiries of the 1970s and 1980s to question core assumptions of more road building, and expresses a positive view of how a concerted opposition was able to open up decision-making at the Sizewell B nuclear power station inquiry. Similarly, Johnstone highlights how activist publics have made use of 'planning spaces such as public inquiries for their "unofficial" role of intervening in government policy around the kinds of issues that have not been democratically addressed through traditional settings such as the ballot box' (2014: 698) with a mixing of local and nonlocal publics within the same arena and the opportunity to engage with the basis of policy. That said, Johnstone also notes that public inquiries could be problematic and in their own way technocratic, authoritarian and exclusionary.

Cowell and Owens (2006) have argued that we should look beyond a narrowly instrumental account of the role of planning and consider wider opportunity structures it has provided to the greening of the state and promotion of environmental sustainability. They argue opposition at public inquiries helped change what was acceptable in the context of motorway and trunk road construction and that similar subversive use of the planning system in relation to power station inquiries in the 1970s and 1980s shifted energy policy on questions of need, economics, safety and supply-side bias. Elsewhere Cowell and Owens suggest that 'as well as examining the formal, overt functions of the system in delivering sustainable development, analysts should consider the "subversive" effects of planning, for challenging, deliberating, and – in some instances – displacing the dominance of unsustainable forms of development' (Cowell and Owens, 2010: 955).

Post-2008, 'under this regime, extensive public hearings are now unlikely to occur for certain categories of infrastructure. This is partly because of the emphasis on written representations, but also because the regulation of time is linked to a containment of the scope for deliberating key policy issues: the introduction of the NPSs may thus have gutted the system of most of its more fundamental contestation' (Marshall and Cowell, 2016: 1859). There are diminished 'political opportunities' for nongovernmental actors to intervene in the policy process around major infrastructure under the 2008 Act regime (Johnstone, 2014).

Lee *et al* argue that the whole NSIPs system involves a framework around strategic policy decisions having already been taken in the NPSs, 'leaving decision makers on individual projects with relatively limited scope for manoeuvre. There is actually likely to be little that participating publics can contribute to the final decision', which may then cause frustration to all parties, although of course there are arguments against genuinely devolved decision making on major infrastructure (2012: 33). The policy framework may thus prevent certain interests and representations from carrying weight within the DCO decision-making process (Rydin *et al*, 2018). The danger is then that participation becomes more a bureaucratic hurdle than a meaningful opportunity to influence decisions.

As has been highlighted, a key aim of the NSIP system was to streamline and speed-up decisions, which by implication considers public opposition as a cause of delay. This corresponds to a tendency to want to 'contain' democratic activity within narrow participatory processes even though 'insurgent' forms of opposition can draw attention towards important issues including broader questions of how the distribution of outcomes and benefits of major infrastructure projects might further enhance the public more generally rather than only the market in the increasingly privatised space of these projects (Wright and Davis, 2017). Some scholars suggest that allowing greater opposition during the planning process can help seek consensus around sustainability and promote greater democracy and justice (Devine-Wright, 2010; Cowell and Devine-Wright, 2018).

The general conclusion is that while the NSIPs regime might offer ample opportunities overall for public involvement, there is not that much ability for local community actors to influence decision making outcomes (Cotton, 2011). There has arguably been a closing down of institutional spaces for challenge, with political arenas for decision making usually spatially distanced from localities directly affected by major infrastructure projects (Devine-Wright, 2010) and, while there may be benefits from discussion at a national level around NPSs, 'by concurrently restricting what can be said at a local level, and at a more advanced stage in the policy process, the approach laid out in the Planning Act 2008 ultimately fails to accommodate the ways in which policy making is constitutive of politics' (Rough, 2011: 42). This is contrasted to the more deliberative approach in France by Marshall (2016), who elsewhere questions how well the infrastructure consent process in England and Wales deals with democracy, deliberation and dissent (Marshall, 2014). That said, it will be interesting to see the ongoing evolution of the regime as the changes brought by the post-Brexit legal context may see a return of more open contestation that was present before 2008.

A pro-development system

Somewhat linked to the question of the room for contestation in the system is a sense in existing literature that the NSIPs regime is a prodevelopment system. Rydin *et al* (2018: 568) suggest that 'the whole NSIPs regime was established to facilitate infrastructure development' with a strong policy steer from central government in favour of consent, and this was apparent in the Barker (2006) and Eddington (2006) reviews that preceded the Act. It is suggested that as a result local views may not be considered under a 'how-not-whether' decision making framework (Natarajan *et al*, 2018) that has instituted 'a new central government/ business duet, with previously more important local government and

other interest groups relegated to less significant roles ... an effective instrument has been crafted to close down public deliberation' (Marshall, 2018: 451). It is suggested that deliberative local community involvement is undermined by technical criteria and top-down decision-making paying lip service to public involvement (Cotton, 2011) with the strong prodevelopment stance of NPSs limiting scope for incorporating dissenting decision making and Examining Authorities focusing on mitigation as the best route to dealing with public concerns (Rydin *et al*, 2015). Indeed, Devine-Wright (2010) argues that the main focus for public participation in major infrastructure seems to be securing public acceptance of development-led projects.

This pro-development criticism of NSIPs has to be set within the context of criticisms of a failure of UK strategic planning (UK2070 Commission 2020; Wong 2002) and associated infrastructure investment programmes that are longer than five-year terms of Parliament. There could be arguments for more public investment rather than reliance on the private sector for the delivery of these projects, but as we can see from the schemes promoted by Highways England, considered later in this book, this may still not provide transparency in the discussions on approaches and involvement in delivery as indicated here.

As we explore in Chapter 6, a number of projects have been refused development consent and this has become more common in recent years, however, there is still some conception of the regime as prodevelopment, particularly if there is a supportive NPS establishing the principle of development. For this reason, there has been what Marshall (2018) suggests to be 'manipulation' of the regime including adjusting content of NPSs, timing of making NPSs and defining what is nationally significant infrastructure. This has included the proposal to bring fracking into the regime so that 'we can expect to see the phrase "national significance" ... become ever more elastic as the years of a continually neo-liberalising planning system pass by (Marshall, 2018: 450). This is suggested to be part of the neoliberalisation of the planning system more generally, with airport expansion similarly fitting this narrative given the strangeness of having an NPS for one project only (the Heathrow third runway) so that 'the way the planning of airports has been managed in the last 15 years or more has fitted the bigger picture of broadly neo-liberalising politics, including as it does the elements of gradual but insistent marketisation, depoliticisation and thus de-democratisation' (Marshall, 2018: 455). That said, taking a more statist approach may not address any of these issues in delivery.

Questions of speed

A final issue with the NSIPs system discussed in existing scholarly literature relates to issues of speed. Considering the temporalities of major infrastructure as a contested area of public policy, Marshall and Cowell highlight the way that 'narratives of "delay" to "nationally significant infrastructure" have been used to rationalise a whole suite of institutional changes: towards procedural streamlining, fixed time schedules and the curtailment or staging of opportunities for public engagement' (2016: 1843). Yet despite the dominant discourse of the need for swift and streamlined procedures to facilitate investment and delivery of major infrastructure, the evidence of delay in planning procedures used to justify reform has apparently often been limited, ambiguous and selective with a lack of clarity as to what constitutes 'delay'. Marshall (2013) suggests that only rarely did contestation through the town and country planning system in operation before the 2008 Act lead to major, problematic delays. Elsewhere, Marshall (2011b) suggests that despite being repeatedly referenced as sources of extreme delay and thus in support of the need for the new system, the Sizewell nuclear power station and Heathrow Airport Terminal 5 inquiries were actually unusual. Ellis (2008) argues that some of the delays with Terminal 5 were due to changes being made by the applicant through the consenting process, for example 18 further planning applications were submitted after the inquiry started.

The narrative of delay in making decisions on major infrastructure projects being used to justify planning reform has been seen internationally yet such reform does not often seem to speed up delivery. In a detailed examination of transport and electricity generation projects in the UK, Marshall and Cowell (2016) demonstrate that looking endto-end from pre-consent to final approval, the reforms introduced since 2008 have done relatively little to alter overall decision times, although the allocation of time between decision making stages has changed. In other words, the 2008 Act process is, on average, not faster at delivering consents for major infrastructure than the preceding arrangements. There are, then, as we explore in later chapters, further sources of delay between consent and delivery to consider also. Perhaps the intractability of some issues such as those relating to project finance and complexity are why the focus for political attention has so often been on that small (albeit vitally important) part of overall infrastructure delivery that is planning and consent.

Conclusions

In this chapter we have considered the way that public policy is made, and how this helps us to understand the 2008 Act as representing a particular coalition of interests at a particular moment of opportunity, yet the actual operation of the NSIPs regime since then is subject to classic issues of policy implementation and the everyday practices of the state, which have not previously been fully explored in this context. One aspect of this is the extent to which there is a policy community around the NSIPs regime that influences ongoing policy reforms around the system.

We have also conducted a review of the scholarly literature on the structure and operation of the 2008 Planning Act. This primarily raises concerns that the regime sees public participation in a rather instrumental way and it is argued by some scholars that the 2008 Act saw a rescaling of responsibility that made decision making more remote from communities impacted by major infrastructure and reduced room for contestation. The ability for dialogue over wider questions of sustainability and the public interest, and the distribution of costs and benefits is at the heart of much of this debate. Together, these provide the context for our own research into the operation of the system, which includes consideration of the relationship between consent and delivery of projects and the engagement of stakeholders and communities. We examine this through case studies of the system in practice introduced later in this book. We turn next, however, to considering the issue of the relationship between consent and delivery of nationally significant infrastructure projects, an issue not given much attention in previous literature on the regime.

5

The relationship between consent and delivery

Introduction

In this chapter we examine the operation of the NSIP system as it moves between project consent and project delivery, drawing on findings from our own original research. This included an analysis of the first 50 NSIPs that had received development consent, between October 2011 and May 2016. Looking at these we found that seven schemes had, by that point, been built (14 per cent – mainly transport schemes), 13 were under construction (26 per cent), 11 had announced planned construction commencement dates (22 per cent) and 19 had not started construction and there was no publicly announced date or intention to do so (38 per cent – mainly energy schemes) and indeed two of these schemes had definitely been cancelled.

Our analysis in this chapter and those that follows draws heavily on data from three pieces of academic work commissioned by NIPA. The first, published in 2017, was particularly concerned with the relationship between consent and delivery in the regime (Morphet and Clifford, 2017; Clifford and Morphet, 2017). The second two considered the operation of regulatory aspects of the regime post-consent (for example DCO requirements and codes) and post-consent community and stakeholder engagement practices (Morphet and Clifford, 2019; Clifford and Morphet, 2019a; 2019b). Across these research projects, we conducted 45 semi-structured interviews, observed one community information evening, held four focus groups and conducted detailed desk-based research looking at the first 50 (2017 report) and the first 66 (2019 report) NSIPs that had received development consent. These interviews and focus groups included a full range of promoters, various consultants working for them, local authorities, statutory consultees and local communities.

As regards delivery, the nature and scale of many projects within this regime means there can be long timescales between consent and implementation and it is only in recent years that many approved NSIPs have entered the construction phase. As more schemes have started construction, there have been concerns raised about the amount of detail required in the consenting phase of the regime, the flexibility possible in approved DCOs and the role and possibility of early contractor engagement as a means of dealing with these subsequent problems. There is also a discussion of those schemes that do not move into delivery and the role that the NSIP regime plays in their funding. We discuss how detail contained within DCOs can be driven by a wide range of factors and stakeholders in the system including environmental assessment, compulsory acquisition of land, public consultation, Examining Authorities, promoters and their advisers (lawyers and consultants), local planning authorities and statutory consultees, the National Policy Statements (and the tests contained within them), and location of the project. Some of this detail is viewed as important and necessary to understand what is being consented together with its impacts in order to give public confidence. However, there can also be detail within the DCO that can then make construction more difficult and, in some cases, restrict technological and construction innovation that would lessen the impacts of a project.

We explore the options for modifying DCOs post-consent and the possible routes to flexibility within them, such as the Rochdale Envelope. We also discuss how some projects have been promoted to obtain a DCO by parties who never intended to build them but rather to sell on the consent, which can have important consequences for delivery. Finally, we reflect on the consequences of prioritising process over outcome and highlight that too much focus has tended to be placed by various players in the regime on obtaining a DCO as an end in itself, rather than project delivery.

Issues in delivery

In order to consider the implementation of DCOs, we examine the issues that have emerged through the research we have undertaken. This examined how far the 'streamlined' and 'flexible' consent system for national infrastructure delivery established by the 2008 Act has appeared to be undermined by the increasing requirements for more detail in the consenting process while little consideration was given to the requirements for project implementation.

Certainty

The operation of the Planning Act 2008 together with its subsequent amendments was designed to improve the certainty of the consent system for major infrastructure projects in response to the criticisms made in the Eddington Review (2006). The changes introduced in the 2008 Act set specific timescales for each stage of the process with the overall outcome, a decision, to be reached within one calendar year. This certainty was largely achieved until 2015. However, subsequently the process has been less secure, with delays in the decision-making process and some applications for NSIPs being refused. This has accelerated since 2020. The pressure on maintaining the legal timescale also meant a greater focus on the time spent at the pre-submission stage. One issue to be considered is whether there have been issues and challenges within the operation of the Planning Act 2008 regime from the outset or if these have gradually emerged as unintended consequences of its operation and could be resolved within the regime.

While intended to be a time managed, one-stop process, a number of issues have emerged from the Planning Act 2008 system. Some of those engaged in the delivery of NSIPs have questioned whether the shift between the initial independent commission approach to decision making, which was changed after the Localism Act 2011, has led to the examination of schemes becoming more like a planning inquiry in their approach. After the changes in the 2011 Act, more general inspectors rather than dedicated examiners were used, breaking the principle of the separation from the Town and Country planning application regime that was always a fundamental objective of the 2008 Act. However, the inquisitorial rather than adversarial approach, as in a traditional planning inquiry, has remained.

A second set of concerns were related to those applications entering the NSIP regime when it was first introduced. These were considered to be more mature and therefore ready to move through the process, creating some expectations of how the new system would operate overall. For those projects that were developed and submitted after this first wave, then, there may have been different levels of preparation for DCO submissions as expectations were set as to what was required. In assuming a more streamlined process was available, less preparation may have been undertaken at the earlier stages. The delays encountered by schemes entering the system later may also have related to the type of application or the sectors, where some types of schemes are always submitted by the public sector while others such as those for energy are primarily submitted

by the private sector. Applications made by private sector promoters were more likely to be concerned about costs at the outset whereas in those made by the public sector there were more concerns about meeting overall delivery deadlines.

Another set of issues was related to the type of area in which a scheme was located, drawing upon experience of differences for schemes involving networks such as pipelines through open countryside and those relating to fixed facilities in more built-up areas, open coastal or rural locations used for onshore connectors for offshore energy projects. Further, there can be more issues about control of working practices during the construction of the scheme than the scheme in its finished form. In some cases, the finished scheme did not seem to be a major issue for communities but elsewhere the certainty of the design of the scheme was considered to be a major point for the community and considered in pre-submission consultation. We discuss these issues further in Chapters 7, 8 and 9. These concerns could drive requirements for greater detail at the pre-submission and examination stages. It may also be an important issue for consideration in the drafting of the DCO, also illustrated through the later case studies.

A final set of issues related to certainty in the process emerged though a comparison between the NSIP system and those routes available to promoters under other regimes including the Town and Country Planning Acts, the Transport and Works Act 1992, the Hybrid Bill procedure (McCaffrey, 2016) and specialist legislation such as the Harbours Act 1964. The view was expressed that under some systems such as the Transport and Works Act 1992, civil servants are more empowered to have discussions with applicants in the process. This makes the system more flexible, although less certain in the accompanying timescales, in ways not possible through the DCO examination process.

Levels of detail

Another concern expressed in the operation of the Planning Act 2008 has been the increasing levels of detail in all stages of the application process and the effects that this might have on subsequent delivery. Perceptions of requirements for increased provision of detail at all stages in the process have increased during the operation of the NSIP system. The principal areas where an increase in detail was perceived to be occurring included at the pre-submission stage for environmental and other assessments; through the examination process where requirements for more detail in evidence and matters of detailed design were emerging;

specific site identification; the management of construction; and in the context of the wording of the final DCO. One specific unexpected extension of the examination process was the perception of increased use of detail to quickly resolve outstanding issues and disagreements in order to meet the overall timeframe set in legislation. This set up a chain of further unintended consequences when these detailed agreements were made separately and not considered as part of the final delivery requirements. Hence, detailed agreements entered into in the short-term could be contradictory or unhelpful to other parts of the delivery process. However, in some sectors, there was a view that detail had aways been required to be established as part of the process not least in respect of managing the project's impact and its mitigation.

The increasing levels of detail in the pre-submission stage were concerned particularly with environmental assessments. While there is the possibility of using the Rochdale Envelope to define the wider location on and or at sea (Wright, 2014; Caine 2018) in which the future development will be sited, there has been a tendency to define these envelopes as widely as possible to offer maximum flexibility for later implementation of the project for the scheme promoter. This has been regarded as the main mechanism for ensuring flexibility during delivery. This flexibility is required as the DCO is relatively difficult to change once approved. This has led to consideration of why the envelope should be of this size and scope and led to more detail being required to support these arguments. There has also been a tendency to treat the environmental statements in a cumulative way so that evidence that has been considered in other NSIP examinations is included to provide more detail. This is undertaken as a risk avoidance measure and may have implications for the cumulative impact of development.

Other pressures for the provision of detail have come from community interests (Johnstone, 2014; Norton *et al*, 2017) and greater concerns for environmental justice (Cotton, 2011). Communities may have views about the appearance or process of design for the outcome of the scheme and immediate neighbours are also concerned about hours of working and the uses associated with construction that they may be required to live with for several years. Some of these issues may also be raised by statutory consultees that are required to consider the implications of the proposals on a range of environmental and heritage assets. The need for detail may mean that statutory consultees do not get involved until later in the process when details of the design or routes are clearer so that they can consider any specific issues related to siting. Some statutory consultees consider that earlier engagement was better because,

although the specific locations may not be known, they would have more power to influence them as the scheme developed.

More detail on the proposed project may arise from parties with an interest in land (PIL) concerned with the use of their land and the specific location of development within the designated site. There may also be concerns about the impact on neighbouring activities, consequent matters related to land drainage and location of soil movement, and borrow pits and dumps that can affect adjoining land. In addition, there may be concerns about access to parts of their land that may be cut off during the period of working, including difficulties that may arise when construction compounds are started. Access may also be changed as a result of the final scheme. Overall, a lack of detail of scheme staging and delivery may mean that it is not possible to identify when land is required or acquired, with associated payment, by the promoter whether for a Compulsory Acquisition or temporary use. Landowners also work through their own land agents. Typically, these are not groups that work in concert with each other and information may not be shared between them.

When the NSIP is being examined, examiners may also ask for details of schemes and construction if they consider that the issues have not been appropriately raised by other parties during the examination. Examiners may also seek more detail if they take the view that those appearing in the examination are not sufficiently aware of the likely issues that will emerge during the development and they therefore spend time examining these issues to ensure that they have been fully discussed. There will also be matters that examiners will request to be resolved between interested parties to the project, often overnight, and these might include matters of detail such as the layout of carparks or parking, access for vehicles into the site, methods of working and other matters that might be more appropriately left to the delivery phases of the NSIP and addressed through a Code of Construction. Where these more detailed matters can be agreed much earlier, it will reduce the risk of failing to achieve a DCO but could cause later inflexibilities in implementation.

In our research we found a widely held view among promoters and their advisers that the level of detail in the process is problematic. It can create extra costs if additional requests for information or new studies have to be undertaken and can stifle innovation in construction and hinder the opportunity to take advantage of technical developments that may occur over the long timescale of implementing an NSIP. However, other NSIPs have overcome this issue through the inclusion of mechanisms for the management of detailed delivery through the drafting of the DCO.

A higher level of detail can provide confidence to all parties engaged in the process including the Examining Authority, statutory consultees, local authorities and landowners. The community, landowners and statutory consultees all need detail in order to evaluate the proposal. The Examining Authority may seek detail to ensure the issues from these interests in the process are fully investigated. Statutory consultees are also learning from the processes and each other, with some coming to the view that their early engagement and specification of detail can bring a better outcome. They would prefer to do this rather than take the opportunity to raise issues at a later stage. Finally, the requirements of Compulsory Acquisition of land processes must be examined fully, although many promoters seek to achieve agreements with landowners outside these Compulsory Acquisition processes. Despite this increase in the pressure for the provision of more detail from the project promoters, there does not appear to be much evidence that more detail is being required at the pre-submission stage, although this might have a wide range of benefits for the scheme. The community might be given some information about the general nature of development, but their request for more detail may come through the examination when they are raising issues directly or are having their interest investigated by the Examining Authority. Local authorities are required to prepare local impact studies at the pre-submission stage, but these seem to be reflecting on the details that are already provided rather than seeking more. We have also noted an increased involvement of local authorities as interested parties in the examination process, which did not occur in the early years of operation of the 2008 Act. This may relate to the relatively small role that these impact statements appear to be serving in the process after submission and the increasing recognition of the role of local authorities' public heath responsibilities and for discharging requirements. Conversely, initially there appeared to be few demands for detail coming from promoters or their constructors to ensure that specific aspects of the scheme are safeguarded or that codes are incorporated into the requirements to provide support for constructability later. However, this has also changed, with the increasing use of Codes of Construction Practice (COCP) and Construction Environmental Management Plans (CEMPs). In those projects with a project management capability, these issues are more likely to be incorporated in a systematic way but there is no evidence that they are driving early requests for detail.

The Examining Authority may require more detail from the project promoters to ensure that issues have been properly considered, and see more detail in terms of design, siting or construction requirements as key

to achieving this. There may also be specific issues emerging during the examination that require further environmental impact assessments. In some cases examiners thought that the community had not been sufficiently aware of the potential impacts of the scheme and sought to investigate these issues on their behalf. Those with interests in land that are subject to Compulsory Acquisition also need detail at this stage and the Examining Authority will want reassurance that their interests have been considered and the necessary human rights tests met. Where promoters and their advisers have taken more than one project through an NSIP process, they have greater understanding of where more detail is likely to be required and factor this into subsequent applications. There is an increasing view that more detail at the front end of the project in terms of design and construction methods may reduce the need to undertake these individual agreements within the pressure of the examination phase. Further, an increasing use of COCP and CEMP to support the delivery of the project – for design, construction and sustainability – including their contents, how they will be used and who will discharge them, is another means of reducing the need to undertake these specific side agreements during the examination.

Issues around flexibility

While the NSIP regime set out in the Planning Act 2008 was designed to be more streamlined, with all consents and agreements being established before the project began, it quickly became clear that this approach, while shortening the consenting process, led to issues when later flexibility might be required in delivering the scheme. Where the DCO and consent process needs further rounds of consideration for minor changes, these do not have the same time limits linked within legislation as the primary process and this leaves considerable uncertainty in the way the scheme might be able to be progressed. At the same time, the procedure for a major amendment to the NSIP process has never been established and this system was tested for the first time in 2021-2 (Latif-Aramesh, 2022f). In our research we found that this lack of flexibility in the consent process after the DCO has been granted had led to the use of best rather than optimal solutions that might subsequently have become available to scheme promoters including those at lower environmental cost. As experience with the regime has developed, scheme promoters and their advisers have been able to develop other strategies for managing flexibility at later stages including the use of COCP and CEMP so that the methods of delivery could be agreed once the scheme was underway.

When considering the need for more flexibility in the NSIP approval and implementation process, there were several reasons identified by scheme promoters. The first was that of a commercial necessity for projects like Rail Freight Interchanges where the end users of associated development such as warehouses are not known at the time of consent. In other sectors, rapid technological change in relation to what is being built (particularly in the energy sector) must be considered when coming to construct projects later (given the long timescales for many NSIPs). There may also be changes in construction industry technology as the project is being built that need to be considered (and can sometimes reduce impacts). There are also potential changes in delivering projects more cost efficiently or cost effectively. Finally, there may need to be flexibility to enable the delivery of the project in ways that are better for affected communities. As constructors develop their working methods for projects they may find ways of operating that are more beneficial and less disruptive for the affected communities, which cannot be applied without either flexibility or amendments to the DCO.

In the focus on the time limits within the Planning Act 2008, flexibility in project delivery may be hampered. One of the key points at which flexibility can be enhanced or denied is through the drafting of the Development Consent Order (DCO). Flexibility can be incorporated into a DCO using mechanisms such as setting the limits of deviation, allowing detailed design to be agreed post-consent under governance put in place through the requirements or through provisions allowing for the temporary use of land. Projects can also be hampered if these are not set in ways that allow for change or if the lines of deviation are drafted in such a way as to be problematic, for example if they are too narrow. In addition, the DCO can set out the use of alternative options over the routing of a cable for example. Once the DCO has been approved, it is fixed, although it is possible to request material and non-material amendments to the consent. This open-ended part of the process is at odds with the culture and performance of the rest of the NSIP regime, where each phase of the process is set within specific timeframes and this creates uncertainties within an overall project management approach within the legislation. In the light of this, promoters frequently prefer not to request any changes or to use the Town and Country Planning Act 1990 instead, using planning applications, where this is appropriate and possible (for associated development to the NSIP but not the main NSIP itself).

The DCO also sets out the process for the discharge of requirements. This has emerged as an increasing role and responsibility for local

authorities, although Highways England (formerly the Highways Agency) has used its Secretary of State instead on some schemes such as the A14 road (Chapter 7). There may also be other issues related to statutory consultees who may have a role in discharging requirements. The discharging process can be managed through a PPA with the local authority or other regulator, defined within the DCO. Some promoters take the view that using a local authority may be risky, particularly where they have been opposed to the project. Further, not all local authorities or regulators use PPAs, and may therefore lack resources to undertake these tasks, hence risking further delay in the process.

One particularly difficult area in creating flexibility is in the use of environmental or Rochdale Envelopes for environmental assessment. This defines the wider frame within which the development will be situated, with the final location being determined through subsequent stages in the process. This approach is also taken in 'not environmentally worse than' (NEWT) assessments. The environmental envelope can be a very useful tool of flexibility but there are also associated issues with its use. Promoters may wish to draw a wide envelope to create maximum flexibility, but this may make other parts of the assessment difficult and it may need to be reduced. Where there are adjacent sites that are likely to be developed for similar projects, there may be an unintended consequence of a cumulative impact that may reduce the potential for further development, while the envelope may be an issue where there are Compulsory Acquisition powers as part of the DCO. This may mean that the flexibility is too wide for the necessary ECHR tests to be met. It may also affect temporary use of land for working sites during the construction process. This is an increasing issue as more NSIPs are progressed through the 2008 Act system.

While the DCO is a first and important staging post in the implementation of the NSIP, if there is no appropriate consideration for the management of delivery and change that may be required subsequently, it can become a means of reducing the benefits of the DCO process. If the mechanisms for change following the granting of a DCO were time-limited, giving certainty in their use, then flexibility may be easier to achieve. However, under the current system, scheme promoters and their advisers are responsible for the drafting of the DCO and for consideration of their need for flexibility for delivery from the outset. The issues relating to lack of flexibility reflect a lack of focus on this delivery at the front end of the process including pre-submission and examination and the drafting of the DCO. As a Statutory Instrument, the

form of the DCO is fixed, which means that a failure to consider constructability and deliverability as core components leaves the flexibility requirement to be bolted on at a later stage through material or non-material changes or the use of other planning consents (where possible). For those NSIP projects where this has been less of a problem, there has been a greater detail in the design of the scheme and/or the use of codes of design, construction and sustainability.

Another means of maintaining a focus on the flexibility needed for deliverability is through the use of project management. Some promoters have adopted a consistent approach to the project throughout the whole of its development and implementation using a project management capacity from the outset. The project management function is recommended as best practice by the National Audit Office (2016b) and the Major Projects Association (2018) and the role of the project managers will be to ensure that the focus is on the entire process including delivery throughout. They will be considering the implications of any requirements or agreements reached during examination of the project, design and construction procurement, meeting any mitigation required and community issues.

One issue that has stimulated considerable debate among those promoting NSIPs is the best stage to include contractors. These opinions vary according to the sector. For energy projects, where the DCO is a requirement of the government auction, there is less focus on the deliverability and a priority to minimise the costs of the project that is undertaken at risk to the promoter. For other more complex schemes, advice from a contractor in the design and means of delivery may save costs and delays later in the construction phase. If the construction team is part of the project from the outset, then this makes the design and detailed operational issues easier to include in the project processes. We found that for some promoters of multiple schemes, this is becoming a more usual way of working. There are some issues about potential conflict of interest for constructors in public sector projects, but these can be managed appropriately. One means of achieving an integrated approach between promoter and constructor is through the creation of a Special Purpose Vehicle (SPV). This approach has been used before in major infrastructure projects such as the public-private partnership for the Second Severn Crossing.

While delivery of the project has not been the primary objective of the examination process, there is a case that it should play a more prominent role. The Examining Authority has powers to address this issue if it wishes. There may be an expectation that the promoter will focus on deliverability issues as part of managing their own interests, but the advisors relied upon

in the pre-submission and examination processes may not have the range of skills required to address these issues and be more focused on consent, which will be related to their fees and bonuses. In our research we found no examinations where project delivery has been an issue for consideration although there have been a number where the details of construction working have been discussed at length and detailed requirements included in the DCO. While these issues are important, particularly for communities living close to the project and associated development sites, this is not the same as considering the whole issue of construction and project delivery. While there is no provision to require any Examining Authority to review these issues as part of their hearings, the difficulties created for delivery and construction by lack of flexibility in the system could helpfully be brought more to the foreground of discussions. This could also influence the agreements that are made during the margins of the examination and create a balance in the desire to agree a scheme that will obtain a DCO and a scheme that can be built readily once the DCO is in place.

The drafting of the DCO is a central issue when considering the delivery of an NSIP project. Some projects have had far fewer problems than others with flexibility. While there is advice from PINS on how to draft a DCO, deliverability and constructability are not to the fore as primary objectives. Instead, there is more focus on other issues including the environmental mitigation or the operational hours of the construction phase. In some cases, details of construction methods have been included within the DCO without these having been finalised with the appointed contractor or the relevant costing of specific methods, and there may be later problems and cost implications when the project moves into the construction phase.

If there are uncertainties related to the subsequent construction of the project, then it is possible for DCOs to be hybrid, where the scheme is set out with some detail, but a variety of methods are used to allow later flexibility in construction including standardised and industry recognised codes. Some promoters and advisers may be anxious about this approach and assume that it would be problematic and not acceptable to PINS or the examiners. However, in one case, the promoter provided the examiners with two versions of the DCO where there was incomplete determination of issues at the end of the examination period.

Improving deliverability: potential changes in approach

When we were conducting our research, there appeared to have been little shared learning between promoters about the period after the DCO

is obtained and the transition into delivery and construction, although this is something NIPA has more recently been concerned about. A lack of sharing between promoters has meant that the DCOs and their drafting remain variable in their ability to support deliverability. If statutory time limits for non-material changes to DCOs could be introduced this would reduce uncertainty around utilising this route and in turn allow more change. The lack of detail and early contractor engagement means that constructability may only be considered after the DCO has been agreed. This may mean that constructors wish to change the DCO to improve working methods, costs or innovation. If the DCO has been drafted to include the tolerance of some flexibility using COCP and CEMP, then these will be more helpful to this delivery phase. However, adhering to an inflexible DCO can be more expensive and reduce opportunities for innovation and improvements in delivery for the environment and communities.

Community engagement

Community engagement should be meaningful in the NSIP process. The system is centrally concerned with managing local impacts associated with nationally needed infrastructure. This means that there needs to be engagement at appropriate times and feedback has a chance to influence projects. Practices are variable between promoters. Some of the engagement appears to take an engineering/technical approach of 'we will work out the best solution' which reflects a traditional approach, where much engagement is through public meetings rather than through true engagement. Deliberative fora, facilitated by independent chairs, could be held. In France, the national infrastructure system engages a preliminary deliberative approach and then a public auditor is appointed to ensure that issues raised in consultation are addressed through the consenting and delivery process (Marshall, 2016). Local authorities have a role in quality assuring the consultation that is undertaken in the presubmission process and they may need to take a more active role in assessing this, specifically addressing whether the points raised in consultation have been addressed in the project proposal.

The need for initial detail of the project can be offset by the use of more consultation in the construction phase. Where requirements are being used to manage the detailed design and the management of construction, there is a good argument that these should be subject to local consultation. There may be other more detailed issues on hours of working and siting of working compounds that require local consultation. Approaches that are agreed early in the development of the NSIP and

included within the DCO may reduce the need for more scheme detail at the outset as there will be greater public confidence in their later engagement and in the transparency of these processes.

The role of planning performance agreements

Requirements associated with the delivery of the project will be set out in the DCO as will their method of being discharged. This is frequently carried out by the local authority, which would normally have a planning performance agreement (PPA) with the promoter (Bristow, 2008). Through this, in return for payment from the promoter, the local authority will agree to discharge the conditions within guaranteed timescales. Some local authorities do not have a PPA in practice, but these could be instituted outside the DCO to assist the promoter and local authority.

The role of local authorities

A greater involvement of the local authority at the pre-submission phase could improve the working relationships and engage local politicians in a more formal way in the project. The local authority's statement on the proposed development could also be foregrounded more in the process rather than being regarded as a formality and not considered after the pre-submission stage. In addition, local authorities have a role in the presubmission processes by certifying that the public consultation on the proposed scheme undertaken by the promotor is adequate and meaningful and submitting a local impact report on the proposed development. This is an opportunity for local authorities to become more engaged although they may not feel much encouragement to do so as their impact reports seldom appear to be mentioned in the examination. Giving more recognition to these through referencing them in the process may give local authorities more stake in the development and help wider engagement in the process.

Initially, the role of local authorities was peripheral and uncertain in the process of obtaining a DCO but practices have evolved to provide engagement in the examination process, not least given their environmental health responsibilities. Further, increasingly the role of local authorities in discharging requirements and holding community chest funds for local amelioration projects has changed their role in the examination processes (see more on this increasing role for local authorities in Chapters 7-9). While some larger local authorities, with

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experience of several NSIPs, have been able to establish a team and provide advice to other authorities, some have little experience and may only be concerned with a small section of a major scheme for a pipeline, tunnel or road. When multiple local authorities are involved in one scheme, this can cause concern for the promoter, but it is also difficult for the individual authority that will probably have to spend a disproportionate time understanding the whole project in comparison with the impact within their own area. Altogether, the resourcing of public sector bodies involved in the system is critical to their engagement in the NSIP process. Local authorities, statutory consultees, central government departments and PINS are at reduced levels of resource due to austerity cuts in all parts of the public service. PINS resourcing has been made more complicated by the way the service is reliant on examination fees which can vary greatly from year to year. This financial picture and its consequences for staffing could impact the ability to understand and deal with project delivery. A scheme that incorporates more flexibility can require more work to understand the environmental assessment and how the scheme meets the required tests during examination and for discharging the requirements post-consent.

Focus on the delivery stage by project promoters

Overall, when undertaking our research, we found that there was less understanding and experience by promoters of an NSIP during its delivery phase as a result of the front loading of the process in obtaining a DCO. There seems some evidence that the focus on the front part of the process can be crowding out the issues related to the delivery of the project. There has been an unintended shift in the balance within the process that reflects the number of schemes to have achieved a DCO but not the growing number of schemes now in their implementation phase. While the DCO may have some indication of its deliverability such as through consents for compulsory acquisition and hours of working, the purpose of the DCO process is to achieve a completed scheme not a Parliamentary Order. At the same time, there is a low level of cross-industry understanding of the impact discharge of requirements on construction. Even minor changes in how requirements are framed can have large implications for construction (for example 'no work can start' as opposed to 'no work at this site can start') as well as the process, time and resource implications of how they are discharged.

Issues of deliverability: through the stages of the project

We found that there could be issues with delivery throughout the stages of an NSIP, with a need for delivery to be a 'golden thread' running throughout the project stages rather than seeing the achievement of the DCO as an end in itself.

From scheme inception to acceptance

The first part of the process of delivering an NSIP – from inception to application acceptance – represents the most uncertain phase for scheme promoters and their advisers. These include a concern for cost from all promoters and local authorities. One promoter indicated that their costs for the scheme development and associated processes for submission from inception to acceptance were £5 million per application and, despite having submitted a further application, using experience gained, the costs were the same. These costs were attributed to advisers, with promoters stating that advisers were risk averse in their advice and this had increased over the period of the operation of the NSIP regime. Promoters also commented that advice appeared to be derived from cumulative experience from previous examinations in attempts to gold plate the application. There remain issues and questions about whether these costs are proportionate where promoters have no other choice of application process. Promoters also want to mitigate their risk by linking a successful outcome for a DCO with the fee scales agreed with consultants and advisers. This incentivises the consultants and advisers to do all they can to achieve a successful DCO. This may be reducing the potential for thinking about applications in different ways and focusing on project delivery. For regulators, there were concerns that more general schemes do not allow them to make their assessments, and this meant that they left their engagement in the application process to a later stage when the design was more firmly identified. There was also an issue in the focus on detail in examining limits of deviation in any scheme including both compulsory acquisition of land and for working sites during the construction phase.

The extent to which the construction and delivery of the scheme was considered throughout the application process was also a major consideration. From constructors, there was reluctance to engage in schemes based on the assumption that early design engagement would remove their eligibility to tender for work later, particularly in schemes with public sector promoters or using public funds. The benefits of

appointing a project manager for the delivered scheme at the outset may also be a conflictual issue. The wider use of evidence plans and the potential opportunity for applicants to withdraw their proposals and resubmit them might also improve the flexibility and deliverability of the NSIP. At the pre-submission stage, stakeholder consultation could be considered in new ways rather than the formulaic approaches that are frequently used. The consultation responses could also be recorded in ways that are trackable throughout the project. In a number of NSIP presubmission documents, the consultation reports were not related to individual issues, grouped thematically without attribution and in some cases in non-searchable PDFs.

The quality and content of the NPS, their non-spatial nature and the extent to which they are currently fit for purpose remain a challenge for users of the NSIP system. While there was a government commitment to review the NPS five years after their publication, this did not occur until 2021, with both the NSIP system and each NPS being reviewed, starting with the energy sector. There was also a general view that, despite the amount of PINS guidance available to all parties on the NSIP system, there was a need for further advice and guidance and a review of how it is being used in practice. There were also some concerns about Government Departmental advice to PINS and whether this was having restrictive effects on the process.

The role of the statutory consultees in this first stage and their experience has been expressed as an issue of concern by some NSIP promoters. Some statutory consultees have established specific units or teams to deal with NSIPs, although others appear to wait until late stages in the process, engaging through single interventions than in an ongoing way. Statutory consultees could be given a duty to engage and be obliged to do so at this first stage, rather than leaving it too late to enable them to achieve what they want from the process, as earlier engagement leads to more positive outcomes for statutory consultees. There are issues about the formulaic approaches to consultation that are not regarded as meaningful types of engagement by PINS, including in the environmental assessment. One obstacle to engagement appears to be the generality of schemes at this first stage as the lack of detail means that communities may not take them seriously. Also, there are requirements for stakeholders to register with PINS at the pre-submission stage if they wish to engage in the process later and frequently this interest only arises later in the scheme's development. There can be confusion between the examination for a DCO and the planning inquiry process and many stakeholders and consultees assume that there will be an adversarial process they can use later. However, despite a wish of some parts of the Environmental Bar to see an adversarial style, the system has remained inquisitorial, and many people cannot engage if they are too late to register their interests.

Consultation overall, and particularly in this first stage, is regarded by advisers as being procedural and there was more focus on ensuring consultation-specific requirements were met rather than considering engaging with communities and stakeholders about the final scheme. While PINS provides free advice to promoters, it does not seem to offer the same advice to stakeholders and communities, with this available from local authorities. Local authorities also have to prepare a local impact report and need to represent the wider implications of a project that may extend beyond those communities immediately impacted by the proposed development.

From acceptance to DCO

At this stage, there is almost always an increasing level of detail required by the Examining Authorities. This may be because they have some specific interest or concerns on some aspects of the application that they consider need to be explored, or to ensure issues that are relevant to the community and stakeholders are being fully aired in the examination. This might result in more details of the proposed scheme being provided. Another area where detail is being required at this stage is on matters relating to the environmental envelope and extent of deviation from the expected sites for final operation and for use during delivery. As more detail of the scheme becomes available, possibly in response to the examiners' questions, this may lead to consequential requests for further environmental information to test specific issues that subsequently arise.

The extent to which applications are fixed when they were approved for submission by PINS is a growing consideration. Some Examining Authorities found that the applications were changing throughout the six-month examination period prior and this degree of change is problematic in relation to pre-submission stages such as consultation with the community and statutory consultees as well as on environmental assessments. Overall, there is some variation in practice between Examining Authorities and there is an issue of concern about the consistency of the process. These variations may depend on the interest and experience of members of the Examining Authority or the differences between schemes and the level of detail submitted. The inclusion of other consenting matters, particularly in relation to

compulsory acquisition of land, also has a strong influence on the conduct of the examination.

The roles of community and stakeholder interests are particularly important in this examination phase. Some who act as Examining Authorities considered that it was their responsibility to ensure relevant issues were identified and considered even if they were not directly raised by the community and stakeholders in the process. Examining Authorities also attempt to ensure that stakeholders and communities are heard although some problems were expressed about those who engaged with the process too late. Statements of common ground between all parties could be developed further and reduce the need for issues to be examined specifically through open processes.

A main consideration in this middle phase of the process rests on the pivotal role of the drafting of the DCO. For promoters and constructors, the quality and type of flexibility included within the DCO is critical to the later constructability of the project. Project managers with experience of the delivery understood the significance of this drafting and its influence on the final efficiency and effectiveness of its construction. The DCO draft also influences the potential role of innovation that could be brought to the scheme in its implementation. If these issues can be considered from the outset as being central to whole process, then there is a better opportunity to achieve flexibility. In some DCOs, promoters and their advisers set limits or working procedures that may bring difficulties in the future. How far can these be overcome within DCO drafting and subsequent consent processes? One of the key issues is the setting of maximum parameters in the environmental envelope relating to the scheme. Developing a greater level of detail earlier or setting out construction intentions as part of the submission phase could contribute to the solution. One approach may also be to consider the role of the local authority in achieving flexibility and deliverability. The use of model wordings and timeframes for completing stages of the project could be used in planning agreements to greater effect. This might also overcome concerns about the role of local authorities by promoters. There was also some discussion about moving towards using model wording for DCOs together with their bespoke elements and suggestions that further research and/or more guidance on wording could be an effective measure to consider. Government departments may also influence the wording of DCOs.

The interest and engagement of communities in the proposed scheme may be more immediately focused on the problems caused by the construction of the project rather than the project once it is completed. Projects may take many years to complete and result in additional traffic on local roads, traffic re-routing, heavy and dirty vehicles passing through communities and access for construction workers. There will also be concerns about hours of working.

From consent to implementation

In the post-DCO phase there are two main sets of issues and challenges to be considered. The first is about process and the second about implementation of the consented scheme, and in some cases these are linked through any requests for material and non-material changes of the DCO as implementation teams take over from those concerned with obtaining consents. Once the DCO has been approved, detailed matters may need to be agreed by local authorities. As a consequence of government austerity policies since 2010 (National Audit Office, 2016a), the capability and resources available within local authorities to undertake these processes have been diminished. There may be variations in the practices of local authorities and the speed with which they are able to deal with these processes even where planning agreements have been secured for determination within set periods.

The time taken to approve material and non-material amendments to the DCO and the process involved appears to be mystifying to most of the non-regulatory participants promoting NSIPs who also regarded it as a major inhibitor of innovation and efficiency in scheme design for implementation.

The issues concerning the DCO, its potential for change or amendment and its relationship to construction methods emerged as a greater issue and challenge as more schemes moved from consent to construction phase. Generally, post-DCO, a new set of project managers and advisers are appointed, and this may be when the promoter takes the scheme to market to find contractors to implement the project. Several issues appear to be emerging at this stage. Firstly, those involved in construction of the project are finding the DCOs are reducing their options for delivery and in some cases incorporating delivery approaches that require higher levels of expenditure than might be achieved through different methods. Secondly, the DCO process for material and non-material changes is long and risky, so many promoters would rather choose a more expensive but guaranteed construction method than have an open-ended start date for a project. For some projects, the

DCO as drafted does not allow for innovation through different construction or delivery methods. There may also be restrictions agreed in the DCO concerning transport of materials and hours of working that the promoter may wish to change to the benefit of the scheme and the local community.

In addition to these issues and challenges raised in relation to different parts of the NSIP consenting and implementation process there were some further issues raised in relation to different sets of participants in any NSIP scheme. The role of promoters and projects within the NSIP system varies between the public and private sector and some government departments are reluctant to engage with local authorities for post-DCO consent processes. There have been few applications for industrial and commercial schemes following the new powers made available in the Growth Act 2014 and this might be because there is no associated NPS for this sector, leaving the process and outcome less certain than for other types of application. For the regulators, including PINS and holders of other consent regimes, there could be more explicit transfer of practice between consent regimes to the benefit of the NSIP system. DCO examiners in PINS could be trained more in the operation of the other regulatory processes. In our research, some said there is a PINS 'mindset' and culture that is in some way detrimental to the NSIP regime. Lastly, the role of central government departments and Parliament in respect of the NSIP regime remains uncertain and changeable.

Conclusions

As we have noted previously (Morphet and Clifford, 2017), obtaining a DCO has been seen by a range of parties as an end rather than as part of a wider process of delivering nationally significant infrastructure. This has particularly been the case when the promoter of the DCO has not been intending to implement the scheme, but rather to sell it on. Given national infrastructure needs, an increased focus on deliverability is important. In planning terms, there have been particular concerns about the levels of detail in the consenting process and the relationship between detail and scope for flexibility, given technological change and detailed design work often needing to be done post-consent. These levels of detail can be driven by a wide range of factors and stakeholders in the system including environmental assessment, compulsory acquisition of land,

public consultation, examining authorities, promoters and their advisers (lawyers and consultants), local planning authorities and statutory consultees, the National Policy Statements (and the tests contained within them), and location of the project.

Some of this detail is viewed as important and necessary to understanding what is being consented and its impacts. However, there can also be problematic and conflicting details agreed as part of the examination process, which can then make construction more difficult and, in some cases, restrict technological and construction innovation that can lessen the impacts of a project. At the same time, there are a range of routes to flexibility to support delivery that are possible in the regime including the use of envelope assessments (sometimes termed the Rochdale Envelope), NEWT assessments, limits of deviation, temporary use of land, options within a DCO, and the use of requirements and a range of codes within them to govern flexibility/ detailed design and construction. There have been a range of concerns expressed about the use and acceptance of levels of flexibility by Examination Authorities and inconsistent approaches in evidence, for example in the use of codes/framing of requirements. This has not been helped by out-of-date National Policy Statements. The failure to review the NPS after five years is now being addressed but this has not involved taking the opportunity of making them more integrated and uniform as this is being undertaken individually and sequentially. The reviews could indicate where flexibility for delivery might be brought into the drafting of DCOs and reflect differences in requirements within each NPS.

There are also important questions as to how much focus on construction there has been through the consenting phase of some DCOs: in our 2017 research, early contractor engagement had been found to be rare. This seems to have changed a little and there has been some improvement in project delivery. While more early contractor involvement might reduce the concerns about the delivery flexibility in DCOs, the scale of NSIPs mean that some post-consent changes to the scheme are inevitable. In 2021, the DCO for the Able Marine Energy Park was proposed for a material amendment and this is assessed by an examining body rather than an Examining Authority as for the initial application (Walker, 2021b).

The relationship between consent and delivery is clearly important, and given our focus on planning in this book, worthy of some attention. However, issues with scheme implementation are not just about the nature of individual consents or indeed the consenting regime more

generally. There are also important broader issues around project finance in particular, and the broader political economy of infrastructure development, which we mentioned in the introductory chapter of this book. The largest number of unimplemented schemes is in the energy sector, where private financing is most prominent. Having explained the origins of the system, key issues in relation to the system and existing scholarly reflection on the NSIP regime, we now turn to considering the system in practice, drawing further on our research to explore a decade of consented nationally significant infrastructure in England and Wales.

The system in practice

Introduction

The first NSIP to be granted consent under the 2008 Act regime was the Rookery South Energy from Waste scheme, with the Infrastructure Planning Commission (IPC) granting consent on 13 October 2011. However, a special parliamentary procedure was then used to contest compulsory acquisition of land and the DCO was not made (it did not come into force) until 28 February 2013. The second scheme to gain consent was the Ipswich Chord rail NSIP, on 5 September 2012, and this DCO came into force on 26 September 2012. Whichever scheme we count as the 'first' DCO, we are now a decade into the operation of the Planning Act 2008 regime as a way of consenting major infrastructure and, by the beginning of April 2022, 99 schemes had been granted development consent through this system.

In this chapter we explore the type of schemes and perceptions of the regime in practice. We outline the type of projects represented in the NSIPs that have been consented so far, their status in relation to delivery and information as to their promoters, location and financing. We also discuss the DCO applications that have been refused, and the reasons for these. Having considered the types of projects submitted and their status, we then consider the perceptions of a range of stakeholders on the regime including the way consultation reports are structured and community consultation commitments secured, drawing on our own empirical research across the regime as a whole. Finally, we consider the most recent trends in the operation of the scheme, including central government failing to meet the guaranteed timescales for decision making, ministerial refusals of DCOs, and legal challenges – through the Judicial Review system – of out-of-date National Policy Statements. There are also likely implications of planning reforms for environmental

assessment post-Brexit that the government has signalled to be considered

The types of projects that have been through the NSIP system

The Planning Inspectorate's (PINS) website contains pages dedicated to national infrastructure planning and part of this lists all NSIP applications that PINS is aware are planned to be submitted, those that are under examination and those that have been decided. By early April 2022 this comprised 209 projects, of which 106 had been determined (PINS, 2022e). Table 6.1, below, illustrates schemes at each stage of the consenting phase by type according to the PINS data. Of these 209 proposed or consented projects, 126 have been for energy projects, 72 for transport, six for waste, two for waste water, one for water and two for business and commercial projects (Figure 6.1 below).

The individual submissions made within the 2008 Act regime can be viewed on the PINS website and can be further subdivided into each stage that the project has reached. The website also provides details of the schemes and their promoters. In January 2022, there were 73 applications at pre-submission stage. Of these, the highest proportion was for energy projects, including offshore wind, which comprised nearly 50 per cent of applications at this stage. The next-highest group was for grid connections or pipelines and highway schemes, both at 12 per cent. In addition, there were five for rail schemes and four applications for airport developments. Other applications were for water, waste, oil refinery and industrial and commercial parks. NSIPs are located across England and Wales, as illustrated by the maps in Figures 6.2 and 6.3 below.

For those applications within the system, there are increasing delays between the recommendations of the Examining Authority to the ministers responsible for decision making and the time taken to make these decisions (Walker, 2021c). In a number of cases in early 2022 the minster was seeking further time to make a decision that ranged across different types of infrastructure including for rail (Metrowest), road (M54 to M6) and energy connectors (Aquind – this was subsequently refused development consent).

As well as the PINS data, there is useful information available on NSIPs going through the consenting process kept by Angus Walker, Infrastructure Planning Partner at law firm BDB Pitmans and author of a useful blog on the Planning Act 2008 and DCO schemes (Walker, 2022a).

NSIPs of which PINS were aware in April 2022 by scheme type and stage in the consenting process

Table 6.1

Acceptance/

	Pre-	pre-		Recommendation/			
	submission	examination	Examination	decision	Decided	Withdrawn	Total
Business and Commercial	1	0	0	0	0	1	2
Energy	47	4	2	2	69	2	126
Transport	22	0	5	11	34	0	72
Waste	3	0	1	0	2	0	9
Waste water and Water	2	0	0	0	1	0	3
Total	75	4	8	13	106	3	209

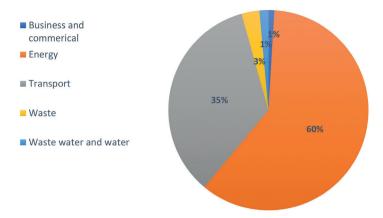


Figure 6.1 Categorisation of all 209 NSIPs of which PINS were aware in April 2022 by type of scheme. (Source: authors.)



Figure 6.2 Location of all NSIPs of which PINS were aware by April 2022. (Source: PINS, 2022e. Map data © 2022 Google).



Figure 6.3 Location of all decided DCOs by April 2022. (Source: PINS, 2022e. Map data © 2022 Google).

The list of projects and their dates kept by Walker is reproduced as Appendix 1 of this book, giving a complete list of all NSIPs that have formally entered the consenting process to date. The scheme names give a sense of the now quite wide range of projects that have sought consent through the 2008 Act regime. Figure 6.4, below, illustrates the date that 141 schemes that have applied to PINS (or the IPC) for acceptance between 2010 and 2021 (some projects have applied more than once, and are counted here separately unlike in the PINS data). The distribution of projects by year shows an interesting decline in 2016 and 2017. This does not seem to be directly linked to macro-economic cycles, but may be related to confidence in the regime (we were commissioned by NIPA in 2016 to look at the relationship between consent and delivery as a number of early NSIPs had hit problems as they entered the construction phase, and this may have dented confidence) or, perhaps more significantly, uncertainty related to Brexit and political, regulatory and financing challenges associated with this.

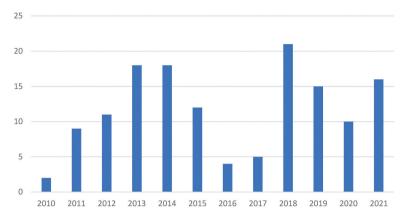


Figure 6.4 Number of DCO applications per year received by IPC/PINS 2010–21. (Source: authors.)

Projects that have been redetermined through legal challenges

Development Consent Orders are subject, like any decision making by a public authority in a common law jurisdiction, to legal challenge through judicial review. Walker summarised 15 attempts at legal challenge to DCOs that had occurred from the introduction of the 2008 Act regime to November 2021 (Walker, 2021a). Most of these had been unsuccessful. However, the first successful legal challenge involved the Preesall Gas Storage NSIP. The application had been refused development consent on 9 April 2013. The promoter, Halite Energy Group, then launched a judicial review on the basis that the Examining Authority had taken an approach not debated during the examination that was then adopted by the Secretary of State in their decision making, breaching the principle of fairness. The challenge was successful, the decision quashed and, on second consideration, the DCO was granted.

From then on there were no successful legal challenges until 2021, when there were four. On 16 February, the Manston Airport DCO, which had been granted on 9 July 2020, was quashed by the High Court following a challenge by a local resident claiming that insufficient reasons had been given by the Secretary of State for departing from the Examining Authority's recommendation of refusal. In April 2022, the project was under consideration again.

On 18 February 2021, the High Court quashed the Norfolk Vanguard wind farm DCO, again following a legal challenge launched by a local

resident. The DCO had been granted on 1 July 2021. The main ground was the lack of consideration of the cumulative impact of a substation being built for that and another wind farm, Norfolk Boreas. This scheme has now been reconsidered and a DCO granted a second time on 11 February 2022.

Then on 8 July 2021 the High Court quashed the A38 Derby Junctions DCO, which the Secretary of State had approved on 8 January 2021. This followed a local resident bringing a challenge on the grounds that a reasoned conclusion on environmental impact assessment had not been provided, relating in particular to climate change impacts. The scheme is currently in the process of being redetermined.

Just a few weeks later, on 30 July 2021, the High Court quashed the A303 Stonehenge DCO, which had been granted by the Secretary of State on 12 November 2020. This controversial 13km road improvement scheme included a 3.3km tunnel in the Stonehenge and Avebury UNESCO World Heritage Site and had caused concern with archaeologists, environmental groups and druids. A crowdfunded legal campaign group, Save Stonehenge World Heritage Site, had instituted the judicial review. The review succeeded on the grounds of a failure to consider impacts on all heritage assets properly and a failure to consider an obviously material alternative routing (a longer tunnel with portals outside the World Heritage Site). The scheme is also currently in the process of being redetermined. Judicial review has long been a feature of the planning system in the UK but it is interesting to see an apparent increase in successful challenges in the NSIPs regime since 2021.

Projects that have been withdrawn or rejected

Up to April 2022, there are 11 projects where the DCO application has been withdrawn part-way through the process. Three of these have been resubmitted and are under reconsideration. The most recent says they will resubmit, one scheme is 'paused', another has attempted to use the town and country planning consent route for a smaller scheme and the other five schemes appear to have been abandoned altogether.

The first of these withdrawals, in 2011, was the Brig y Cwm energy-from-waste power-generating station. The promoters, Covanta, said this was because of the fragmented approach of the local authorities in Wales to waste disposal although there had also been a significant level of public opposition to the scheme (Pinsent Masons, 2011). Then, in 2012, the Roosecote Biomass power station proposal in Cumbria was withdrawn having previously been accepted into the DCO process.

Promoters Centrica withdrew this following government clarification of a preference for co-firing and coal conversion to biomass rather than construction of new biomass power stations (Centrica, 2012). Then in 2013, the Atlantic Array offshore wind farm, proposed to be one of the world's largest with a 1.2 gigawatt capacity, was withdrawn by promoters RWE Innogy who claimed that the technological challenges and market conditions made it not the right time to proceed; however, other sources claimed that problems financing the scheme were the issue (BBC, 2013).

The Fieldes Lock rail-linked power station was also withdrawn in 2013. This energy-from-waste scheme in Hertfordshire was dropped by promoters Veolia after they had withdrawn from the bidding process for a contract to dispose of waste from the North London Waste Authority and concluded that the commercial prospects for the scheme were limited (Donnelly, 2013). Further attempts to construct a smaller power station at the site have continued via the town and country planning application process since.

In 2019, National Grid then withdrew their DCO application for the North Wales Connection electrical power lines since this was linked to the new nuclear power station scheme at Wylfa, the promoters of which had terminated the contract for a new powerline connector. This reflected difficulties in the main project of building a new nuclear power station at Wylfa. The Wylfa Newydd Nuclear Power Station DCO application was then finally withdrawn in January 2021. Promoters Horizon Nuclear Power blamed government funding options for this, following Japanese backers Hitachi removing support for the scheme in September 2020 (BBC, 2021).

The Rail Central Strategic Rail Freight Interchange from Northamptonshire was withdrawn in 2019, with promoters Ashfield Land and Gazeley announcing that they felt there was potential to improve their proposed package of highways enhancements that required such significant changes to their submitted DCO that it needed to be withdrawn and revised. In 2021 they then announced they had 'paused' the entire project (Rail Central, 2021).

The Lower Thames Crossing DCO application was withdrawn in 2020 following PINS apparently seeking more information about managing construction traffic, the navigational impact of use of a jetty on the River Thames near Tilbury Docks, the site waste management plan, Habitats Regulation assessment, landscape and ecology management and a need to respond to concerns raised by Thurrock and Gravesham councils on consultation approaches (Horgan, 2020). A new submission was apparently being prepared to submit in summer 2022 (Horgan, 2022).

The Boston Alternative Energy NSIP involves an energy-from-waste facility with an associated aggregates facility, wharf, waste reception and storage facility and grid connection. The DCO application for the scheme was withdrawn in December 2020 with a revised submission, with additional information, then accepted in April 2021 and currently under consideration. Similarly, the Net Zero Teeside project involves a carbon capture network and a combined cycle gas turbine electricity power station. The first DCO application for the scheme was withdrawn in June 2021, but a revised scheme was then accepted by PINS in August 2021 and is currently under consideration.

Most recently, the first submitted business and commercial DCO application, the London Resort, was withdrawn in March 2022. The scheme involves a leisure and entertainment resort including a theme park and associated infrastructure works. Local media reported that the BBC and ITV had withdrawn their involvement over environmental concerns (Delaney, 2022). The promoters have reported that the classification of Tilbury as a freeport, which has meant revisions are required in moving the ferry terminal from Tilbury to Grays, while Natural England have designated an SSSI on the site, also requires changes to the scheme but that a revised DCO will be submitted in 2022 (London Resort, 2022).

There have also been two schemes rejected, that is, not accepted into the DCO system. The first of these was the very first application to the former IPC, the Maesgwyn Power Line scheme, which was submitted for acceptance two days before the Rookery South energy-from-waste scheme in August 2010 but then rejected in September 2011. The scheme, for a power line connecting to a planned new wind farm in Wales, since seems to have been abandoned and withdrawn from the regime. The second rejection was the King's Cliffe hazardous waste extension, otherwise known as the East Northants Resource Management Facility Western Extension, which was rejected in 2021 but then a revised application was accepted and is currently under consideration.

Projects that have been refused

In addition to the Preesall Gas Storage scheme already mentioned, at the time of writing six other projects have had development consent refused and these decisions have not been overturned through judicial reviews. The Preesall scheme involved a project to inject gas into, store it in, and then extract it from underground caverns with a proposed storage capacity of up to 900 million cubic metres at a site near the Wyre estuary in Lancashire. The Examining Authority had initially recommended

development consent be granted but the Secretary of State disagreed, issuing a refusal in April 2013. The Secretary of State had noted the national need for gas storage and the economic benefits of the scheme but felt there was insufficient geological data to support the suitability of the underground caverns for gas storage and this uncertainty was contributing to local fears and opposition to the project (Scott, 2013a). Following the High Court quashing this refusal, further representations from interested parties were invited and an independent geological evaluation was conducted. The Secretary of State then granted consent in July 2015 (Scott, 2015a).

The next refusal came in September 2015, for the Navitus Bay offshore wind farm scheme. This was for a development offshore, 14km from the coast of Dorset and 17km from the Isle of Wight, with a planned capacity of 970 MW generated by up to 194 turbines. The Examining Authority recommended refusal and the Secretary of State agreed, refusing consent. This was despite acknowledging the need for the development as established in the NPS. The key issues were visual impact on an Area of Outstanding Natural Beauty and the Dorset and East Devon coast UNESCO World Heritage site as well as some other minor associated issues, like design quality and the detrimental impact on tourism (Scott, 2015b).

At the time this refusal seemed to cause some concern among the community of promoters and consultants involved in NSIPs as it had apparently been unexpected and was being widely discussed by promoters and their consultants at the time of our first research project. It was quickly followed by another refusal, this time for an onshore wind farm: the Mynydd y Gwynt wind farm, which was proposed to have up to 27 turbines located in Powys generating up to 89 MW, and associated development. In this case, the Examining Authority recommended consent be granted, but the Secretary of State disagreed and refused. Natural Resources Wales, a government statutory agency, had expressed concern about impact on red kite birds and a European Special Protection Area with a view that there could be significant avian mortality following collisions with turbines, and there was thus potential significant impact on the integrity of a European site protected under the Habitats Regulations (Scott, 2015c).

The White Rose Carbon Capture and Storage project was refused development consent in April 2016. The scheme would have involved a coal- or coal-and-biomass-fired electricity-generating station with a proposed installed capacity of up to 448 MW with carbon capture and

storage facilities. The Examining Authority had recommended approval, but the Secretary of State disagreed and refused development consent on the grounds that the scheme relied on government funding that was no longer available (this having changed between examination and decision) and, further, that compulsory acquisition of the necessary land could therefore not be justified (Scott, 2016a). The Yorkshire and Humber Carbon Capture and Storage Cross-country pipeline was a proposed 75km pipeline from the White Rose power station to the North Sea for carbon capture and storage. Again, the Examining Authority had recommended approval but, in January 2017, the Secretary of State refused this with the justification that the intervening cancelling of government funding for carbon capture and storage meant the White Rose scheme was not proceeding and that the pipeline applicant could not therefore demonstrate a need for the project, a reasonable likelihood of CO₂ emitters connecting to it and again consequently that compulsory acquisition powers were also difficult to justify (Scott, 2017).

The Thanet Extension Offshore Wind farm scheme sought to extend the existing Thanet Offshore wind farm, adjacent to the entrance to the Thames Estuary, for up to an additional 340 MW of generating capacity. The Examining Authority recommended refusal and the Secretary of State agreed, refusing consent in June 2020. Concerns were raised about shipping, maritime navigation risk and consequent impact on proposed ports in the Thames Estuary by not allowing sufficient sea room for vessels entering the estuary (Leigh, 2020a).

In January 2022 the Aguind Interconnector scheme was refused. This would have involved a bi-directional subsea 2,000 MW electrical power transmission link between the UK and France. At the acceptance stage of the 2008 Act process, the scheme was a 'project of common interest' under the EU's TEN-E regulation, but this status was lost after Brexit. The Examining Authority recommended development consent be granted but the Secretary of State disagreed, citing a range of potential harms to a scheduled monument, listed building, tourism, sports pitches, potential delay to the North Portsea Island coastal defence scheme and inadequate consideration of alternatives for substation development (Leigh, 2022). A number of delays occurred in issuing the decision on this scheme. There had been further requests for information after the examination and while the Examination Authority reported in June 2021, a decision was not issued until January 2022. Delays in ministerial decision making are one of many potential sources of delay in the regime. We now turn to progress on approved projects.

Progress in delivery of the approved NSIP projects

Attempting to assess the progress, funding and delivery of NSIP projects is more difficult to determine once they have left the consenting system. The project delivery timetable and the source of funds are not matters that can be considered as relevant in the examination unless they have an effect on aspects of the proposal, including length of time for it to be implemented, as this might affect different locations and communities. Further, PINS do not collect information on the progress of the project once a DCO is granted and the projects will not necessarily have their own websites. This is regrettable as it would allow feedback into the consenting process and more refinement in the Examination process and the drafting of the DCO.

In reviewing the 34 transport projects that have been approved since the NSIP system started, of the 21 initiatives that received their DCO in 2018 or before, the majority of these are completed with larger, later approved projects such as the Silvertown Tunnel under construction. There did not appear to be any projects in this category with approvals in 2018 or before that have not commenced. Ten projects received their DCO in 2020 or 2021. The majority of these transport projects are promoted by public bodies and the scale of work undertaken before the pre-submission stage is likely to be high with schemes already taken through a range of assessment processes.

When considering the variety of energy projects that have been submitted to the NSIP process, these demonstrate a different range of outcomes. Up to January 2022, there have been 63 energy projects that have been considered and have a decision. The promoters represent a range of organisations with some from the public sector but the majority from the private sector. It is also clear that there is a longer gap between the decision on the DCO and the commencement of the project in comparison with transport NSIPs, where there appears to be an average of two years between consent and completion. Energy projects appear to take much longer to start, and that for the Swansea tidal lagoon was deemed out of time when it proposed to start work. For those energy projects that have commenced, there is a gap between the DCO and a start on site of four to five years and once commenced they appear to take a longer period for construction or be undertaken in phases. For some projects it is difficult to determine their current status in delivery. There are 47 energy NSIPs that have been given DCOs between 2011 and 2018 and, of these, 16 appear to be completed while eight have been cancelled or not progressed. This is perhaps a lower number than might

be expected given the cited role of the DCO in promoter participation in the government's energy auctions. Of those that have been cancelled or not progressed, there appear to be wider reasons given for their lack of progress, although the energy auctions may provide an underlying reason. Of the energy projects, there are some DCOs where the promoters are seeking minor or major changes in the DCO and these may be due to a change in technology. Of the other NSIPs given DCOs between 2011 and 2018, some are still at the planning for construction stage or under construction. For some it is difficult to determine the current position on delivery.

Having considered the types and progress of projects coming through the regime, for the remainder of this chapter we consider the perceptions of stakeholders of the regime, practices in the regime such as pre-consent engagement as captured in consultation reports and post-consent engagement, and some challenges for the system in practice. In this, and in three case study chapters that follow, we draw heavily on our own empirical research, introduced in Chapter 5. We turn now to perceptions of key stakeholders of the 2008 Act regime in practice.

Perceptions of the stakeholders of the NSIP regime

The system for obtaining consents for major infrastructure projects introduced through the Planning Act 2008 has largely been welcomed by those stakeholders engaged in the process interviewed as part of our research, although it has not necessarily been quicker than the previous system (Marshall and Cowell, 2016). For promoters and those engaged in delivery, there has been strong support for the timetabled approach and consequent certainty about decision making this brings, although the recent steep increase in DCO refusals and extended ministerial decision period beyond that originally anticipated also need to be considered for the regime's future. Statutory consultees have generally welcomed the opportunity to discuss the project through a pre-submission process and the examination as opposed to an inquiry, although, given government austerity programmes, they have increasingly sought fees from scheme promoters for making their involvement in a timely way. The various governments in power since 2008 also seem to have generally welcomed the regime, hence its survival. A possible proposed expansion was included in the 2020 Planning White Paper (MHCLG, 2020) and after this, a wider review of the system, including the NPS, was introduced (DLUHC, 2021b).

For local authorities and local communities, however, there have been mixed responses, which appear in part to be dependent on promoter practices. Some communities have been positively engaged with local NSIPs and this may be where there is longer experience of similar types of development in the area, as in Suffolk. The community groups that have been less supportive of the system are often those where the NSIP promoter may be working to tight deadlines or where there is little information about the final visual effects on the development. Some groups have reported engagement from promoters in the process until the DCO has been granted but then no meaningful engagement after this stage, when detailed design, construction and associated development will be considered. There is also some uncertainty about enforcement of compliance with the requirements including codes of construction or environmental management plans within the agreed DCO, which will have significance for the local community, statutory consultees and those with an interest in land.

In reviewing all the NSIP projects that had an adopted DCO by 2019, it was possible to see changes in practices of engagement with stakeholders since 2008. When the process for obtaining a DCO for an NSIP was first introduced, the focus of securing engagement to meet community and other interests' concerns was initially through the Environmental Statement (ES) and its associated commitments register. This provided a level of guarantee for the delivery of the agreed outcomes set out in the ES and, as such, was also considered to provide a method of reassuring delivery of commitments to third parties. However, it is also apparent, as the experience of the NSIP process has developed, promoters and their advisers have migrated to the use of Codes of Construction Practice (CoCP) and Construction Environmental Management Plans (CEMP) as methods of incorporating these commitments in ways that are more flexible. The use of CoCP and CEMP means that much of the detailed decision making about delivery of the project, including the practical methods of achieving the ES and other agreements/requirements that may emerge with statutory consultees and undertakers in the examination process can be agreed later. These codes establish the rules, while their detailed application within each project can then be agreed between the promoter, their constructors and, usually, the local authority before and during delivery. This arrangement provides more flexibility in the construction of the project while not removing the local authority's statutory responsibility for transport and environmental regulatory compliance. These processes may also include consultation with stakeholders.

Neither CoCPs and CEMPs have specific definitions or frameworks for what might be included or otherwise and there is no indication of why one approach may be preferred over another in any specific project. Some include Construction Traffic Management Plans (CTMPs) while other promoters hold these plans separately, alongside the CEMPs and CoCPs. Local authorities are also increasingly seeking to specify what is included within the CoCP and CEMPS as experience develops. Local authorities are also frequently responsible for discharging the agreed actions and requirements contained within these codes.

While the CoCP and CEMPs together with other codes and specific requirements made by statutory undertakers are increasingly used to create the opportunity to deal with issues when the project emerges into the construction phase, they are not adequate to meet all the constructors' needs for flexibility and promoters use other means to deal with unexpected situations or changes during the delivery of their projects. In some cases, these changes may be to site definition or unexpected ground conditions. Here scheme promoters may use the Town and Country Planning Acts route to work round the issue, if they are for what can be classified as 'associated development' to the main part of the scheme. Other mechanisms include making a non-material amendment to the DCO. However, these non-material amendments are not time-limited for their determination by government Secretaries of State unlike the main DCO process and some promoters have sought to avoid using them if possible. In some cases, this has meant that promoters have used the provisions of the DCO even where there are better known methods of delivery. Alternative methods of achieving flexibility and deferral of specific scheme details have also been introduced by project promoters in the use of S106s to secure requirements and obligations following the amendment in the Planning and Compensation Act 1991 to be used with the Planning Act 2008. These are also discharged by the local authority.

Statutory consultees

In the period of operation of the 2008 Act, statutory consultees have increasingly required more detail of the proposed project and a contribution to resourcing towards the costs of their engagement. Some statutory consultees work together to undertake their assessments and some issue their own advice to promoters such as Historic England. The flexibility required to achieve NSIP delivery needs to be considered by all parties, including statutory consultees, from the outset.

Additional negotiations with statutory consultees are likely to take place during the examination period and statutory consultees may require control over discharging the conditions or protected provisions they set. The Examining Authority, when considering the DCO draft, needs to be sure that the needs of the SC have been considered in the process. Promoters respond to statutory consultee comments through flexible approaches like envelopes and specific engagement is required from some consultees, particularly in relation to siting where earlier involvement in the project is most helpful. Statutory consultees are also learning from the processes and each other and are coming to the view that their early engagement and specification of detail at this point can bring a better outcome. Statutory consultees would often prefer to do this rather than take the opportunity to raise issues at a later stage. This is not the case with all statutory consultees, but it has emerged as a growing practice. If there is more detail on the NSIP at the outset, it can give statutory consultees more confidence in the process. The drafting of the DCO is also critical for statutory consultees, as is their role in discharging requirements that can be part of a specific type of PPA.

Landowners and those with an interest in land

The role of landowners and those with an interest in land in the NSIP process is central not least as the DCO will include compulsory acquisition powers and hence there are issues about appropriate protection for those likely to be affected. Those promoting NSIPs could give more certainty to landowners. The promoter's consultation processes need to be reviewed from the outset by local authorities to determine whether they are appropriate and meaningful for those with an interest in land, although the local authority may not have much resource to achieve this. The role of SC and how they engage in NSIP process will also have some influence on land. However, some with an interest in land find it difficult to engage in the examination process and to understand how this differs from a planning inquiry. Those with an interest in land may consider that their interests are best served by delaying agreement on sites. Land agents who represent landowners may work independently and not appreciate the range of common issues. Scheme promoters prefer to come to an agreement with a landowner outside a statutory acquisitions process. Landowners may be engaged in side agreements during the examination process, which will not be subject to the same public consultation and may eventually act in ways that are detrimental to the delivery of the scheme. Landowner agreements may be required by the Examining

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Authority if there is likely to be a requirement for compulsory acquisitions. Those with an interest in land want more detail of any project particularly as it affects issues of land drainage and detailed design is needed for this engagement. Landowners can be approached by promoters to purchase additional land by agreement after the DCO. Improving the relationships with landowners by providing more detail at the outset of the scheme can lead to more flexibility in the delivery of the project.

As the projects that have obtained their DCOs have moved forward to implementation and operation, changes in the practices of those involved have occurred. Increasingly, promoters are seeking flexibility in their pre-acceptance consultation reports. This has primarily been focused on routes and site locations in relation to expected subsequent negotiations with those with an interest in land. While promoters of NSIPs can seek compulsory acquisition powers, they prefer to come to a negotiated agreement with landowners without resorting to these powers. The flexibility in routing provides an opportunity to open negotiations with a wider range of landowners and those with an interest in land than might be the case if a specific route or site is identified at the outset. Issues that are raised by parties with an interest in land (PIL), statutory consultees, statutory undertakers, the community and local authorities can be accommodated in the delivery of the project without finalising issues at this early stage through establishing decision-making processes. These can include access to land and homes during construction as well as the practical issues of lighting, construction vehicle routing, air quality, waste management, water catchment issues and recruitment of labour. In the early NSIP projects, the design was left until the later stages and not identified as a specific area for bounded flexibility, but this practice has been gradually changing.

Local authorities

When the Planning Act 2008 was being considered at Bill stage in Parliament, it was suggested that local authorities might have more engagement than was ultimately included in the act. Initially, the role of local authorities in the NSIP process was primarily front loaded at the pre-submission phase. It may assist local authorities to have more detail of the project as they undertake their two major roles at this stage – preparing an impact report of the consequences of the project in construction and operation and secondly assessing the quality of the consultation undertaken on the project by the promoters. The impact statements made by local authorities have a relatively low level of

influence on the NSIP process as a whole and are seldom, if ever, discussed by the Examining Authority.

When considering the delivery phase of the project, some promoters consider having a PPA with a local authority. Where there has been some opposition to the scheme, this can be regarded as a risk. Where local authorities do not have a PPA with an existing promoter and the scheme is being implemented, a PPA can be introduced after this initial stage. The local authority role in NSIPs initially emerged as peripheral. As local authority impact reports are seldom mentioned after the pre-submission stage, this may act as a discouragement to local authorities to engage with them as a process. Resourcing of local authorities is critical to their participation. Local authority engagement in pre-submission process can appear rushed, with some issues left until later, even though the local authority does not have any locus in the examination phase. Issues such as traffic modelling are also of concern. Local authorities require more detail of the completed proposed scheme but can apply design codes to safeguard this interest.

As local authorities have become more experienced in the NSIP processes, they are recognising the issues that will engage them and their communities later in project delivery and raising these at earlier stages. These particularly relate to the construction phase when traffic management and other on-site management requirements need to be determined, then compliance assessed and finally signed off as being met. To improve the ways in which construction matters are dealt with, local authorities are increasingly specifying what they would like to be included in a CoCP or CEMP so that this can be a matter of later agreement and included as such in the DCO. Some promoters are providing draft CoCP and CEMP as part of their DCO process while others are stating that these will be the responsibility of constructors later in the process. While there is uncertainty as to the content and stage of delivery of CoCP and CEMP, it is not surprising that local authorities are seeking a greater role at an earlier stage. It is also the case that some promoters are ignoring these requests from local authorities.

As NSIPs have moved to the construction phase, local authorities have become more involved with promoters as constructors fit the DCO to a practical outcome. Where there are significant changes such as the need for a different access or there is confusion about which part of the development can precede another, local authorities are frequently engaged in developing alternative approaches using the Town and Country Planning Acts (where this is possible). The local authority is also in dialogue with the community during the construction phase

and will need to ensure that access and other environmental health standards are being met even where they have no role in the discharge of requirements (as has been the case for some highways projects). In some cases, the local authority acts as the intermediary for any community funds that the promoter may have provided through an S106 and the local authority will be in liaison and negotiation with the communities benefiting from the funds on the ways that they should be spent.

Communities

The 2008 Act states that communities should be afforded protection and must be able to engage meaningfully in consultation. Hence, communities need to have resources provided for them to do so and greater access to understand the whole project. Communities need to have their roles reassured through the entire process of decision making on the NSIP to its delivery. However, communities may find it difficult to understand some projects without a level of detail. Promoters can offer more certainty to communities and achieve more flexibility for delivery in providing this. The NSIP system allows for more engagement and transparency with communities throughout the delivery of the project, but for the community the pre-submission phase of consultation can appear rushed. Local communities often want greater detail about issues such as air pollution, landscaping, monitoring (rather than just modelling) noise and its control. Where statutory consultees are engaged earlier, this can also provide more certainty for the community but the increasing scale and complexity of ES for each project can make engaging with communities more difficult.

Local authorities are required to examine the efficacy of consultation by promoters with the communities affected by the scheme at the pre-submission stage. However, there is some uncertainty in communities about which organisation should be signing off compliance with the codes. Communities can experience many years' disruption as NSIPs are implemented and may not have any immediate contacts if issues of noise, hours of working and the like are managed by the promoter. Communities require to be consulted through the life of the project not just at the pre-submission stage. Other changes in practice have emerged to improve the delivery of the projects including the NEWT approach to assessing and managing environmental impacts. There is a growing practice of sharing assessments with regulators for example.

Emerging practices for stakeholders that support delivery

As the number of NSIPs entering the construction phase has increased, a range of practices have emerged that support project delivery and, in some cases, these have become part of the DCO. These are changing the role of the DCO from a consenting mechanism to one that is also central to operational completion. These emerging practices include the following.

Establishing a golden thread to delivery throughout the NSIP process

A golden thread, which is a narrative of the project, its objectives and expected operational outcomes leading from the start to the completion of the project, acts as a mechanism for reference and can identify issues in the process. This thread helps to identify the points where flexibility for delivery will be required and how these can be managed in the delivery of the specific infrastructure type. Without this, decisions can be merely expedient, causing later problems.

Establish a single narrative in the Environmental Statement

The practice of developing the ES in chapters, prepared by different experts on the team, has been identified as problematic if there is no point at which the issues between components within the ES are examined and their influences on each other discussed and potentially mitigated. This can be achieved by having a consistent view of the delivery outcome in the ES and examining all the elements of the ES against this objective. Where the ES is structured around strong individual, specialist chapters, it was considered that this made it difficult for stakeholders to understand the wider implications of the NSIP and any changes to it. It was also seen to provide difficulties for constructors who later found inconsistencies and incongruities between these chapters that they had to apply as part of the delivery process. This was exacerbated where codes and standards were embedded as weblinks within the ES chapters and their specific implications for any development are not set out in detail, as is increasingly the case.

Drafting of the ES and other documents

The ES and other documents, such as the consultation report, should be clear and workable texts given their role. However, frequently the ES and

the consultation reports prepared for schemes are difficult to understand or are not user friendly. The utilisation of significance criteria, particularly where these are in relation to quantitative criteria such as noise, vibration or traffic, needs to be set out. Where there is potential uncertainty in the reference design and its construction methodology, it is important that a genuinely worst case scenario is reported. The ES should avoid being so fine-tuned that any small increases in magnitude of effect could trigger another significant effect. They need to be sense checked to avoid this. The ES should also avoid multiple levels of significantly adverse effects and should rather be expressed as binary, either significant or not significant. Where there are construction ES compliance assessments, these should be kept within the project and not subject to approval or provided for information to third parties. The scope of the ES should, where possible, include the remedial infrastructure works required by the project.

Establishing a full commitments register

Establishing a full commitments register from the beginning of the DCO process, including pre-acceptance stages, builds on the commitments register that is part of the ES process but goes further to include those commitments made in the consultation process, during examination and associated side discussions with parties with an interest in land, statutory consultees and undertakers and local authorities. A register also assists promoters and their advisers in ensuring that commitments are not contradictory, which has sometimes occurred in practice. Further, such a register would easily identify the parties to be consulted if there need to be any changes in the delivery process. This is also useful for constructors where there is frequently a need to make operational sense of nested agreements that are set out in 'geological' layers in the process. Contractors can find these difficult to access and interpret in relation to each other. It also helps promote community and stakeholder confidence through transparency and ease of access to information on commitments that can sometimes otherwise be contained in numerous different documents as part of the often voluminous paperwork associated with the DCO process.

Consultation and working with the community

The consultation report undertaken at the pre-submission stage is rarely viewed after acceptance of the NSIP into the DCO process. This can give rise to difficulties when working with the community subsequently

when earlier agreements and discussions may be overlooked in practice. Including the commitments made in the consultation report in an overarching register provides a means through which these can be openly met and the community informed that this is the case. This might improve community trust and confidence. Interest and engagement from the community can vary according to the type of project, perceived impacts or where projects are located mainly offshore or across boundaries. This may relate to the specific site chosen for aspects of the project's delivery or wider issues of design and operation. A consistent community liaison presence for all aspects of the process including consultation, examination, construction and operation provides a means of communicating with the community and conveying their concerns directly to the promoter and is now being more frequently adopted, for example in relation to the Heathrow Airport third runway NSIP.

Early engagement with contractors

For those projects that had entered the construction phase with little contractor engagement pre-consent, it has often turned out that earlier engagement with contractors could have made a significant difference to later pressures for delivery flexibility, including examining details of operational sites, the phasing of works and ensuring that these were matched by the DCO contents or included appropriately in the codes and requirements. When reviewing the delivery options as part of the DCO preparation, it would be useful to stress test options to examine their delivery in the round not just in terms of achieving a DCO.

CoCP/CEMP

Either a Code of Construction Practice or a Construction Environmental Management Plan (sometimes both) are frequently used on NSIPs. Where they are used, then there should be attempts to ensure that the mitigation measures reflect the certainty and uncertainty in the reference design. Where highways and other infrastructure operated by third parties is included within these codes, it is important to take care on access and use by other third parties at the same time as the implications for the NSIP under construction.

DCO wording

Paying attention to the wording of the requirements in the DCO to allow partial discharge of requirements (by geography or phase of the works) is

an increasing practice. Ensuring that the access to third party land for inspection for investigations, monitoring and remedial work to third party land and property are also important practices as are ensuring that third parties will accept mitigation in advance of works as well as postworks damage.

Side agreements made during the examination

Where there are side agreements with third parties, these need to be agreed after discussion with the constructors to ensure that they are not restricting delivery or are in conflict with existing agreements. Side agreements with those with protective provisions are regarded as unhelpful for construction and implementation. Where land is gifted to those with protective provisions, it is important to ensure that this does not provide these third parties with greater powers than legislation or disapplied legislation would allow.

Discharge of requirements/protective provisions

Bodies in receipt of requests for discharge processes to commence should be subject to the same validation processes as planning consents and can be agreed through PPAs with local authorities or other statutory consultees. Once requests for discharge of requirements are received by appropriate bodies, there should be specific time limits for their discharge including time limits for requests for further information. It is useful to clarify whether if there is a delay or refusal for the discharge of requirements there should be a process of appeal for the NSIP promoter and whether it is valid to attach conditions to the discharge of requirements approvals. It is also important to agree whether there should be deemed approval if not determined within a defined time frame and an allowance should be made that ultimate deadline can be extended by agreement unless there is an agreement for deemed approval. Conditions that would have the effect of requiring the agreement or approval of other statutory or non-statutory third parties before the project can meaningfully utilise all or part of the consent are not allowable, and need to be identified.

Incentivising project delivery rather than the Development Consent Order

The Planning Act 2008 is about delivering projects. DCOs are not the objective and it may be important to incentive those working on them to relate at least part of their rewards to successful operational delivery.

To consider how due diligence can be assessed for an NSIP scheme

How can due diligence be undertaken by a potential purchaser of a consented NSIP or a constructor tendering for the delivery of the project? Is it clear where the elements of the project and its associated ES, requirements and codes work together? Also, is it clear where the risks will fall in the process of construction and delivery?

Reference designs

Reference designs have two key roles in the NSIP process. The first is to offer a developed design that gives some certainty to all those involved in the project's delivery including the community, local authority and the Planning Inspectorate. Where this is the case the reference design needs to be developed and tested by the constructor and they need to be centrally involved in the EIA to test the deliverability of the project before the details are included within the DCO. The second approach is to provide a light or indicative reference design and then include a range of flexibility for delivery within the DCO. In this case, there is still a need for ECI so that there can be a review if the likely significant effects of the project can be incorporated within the DCO. In both cases, the constructor needs to be available to advise the promoter on any third party agreements made during the examination and the likely effects they will have on the constructability of the project and if necessary advise on the implications for the ES as a consequence.

Approved plans

It is emerging practice that two status categories are used for approved plans – one for approval and the other for information. This approach reduces the need to fix details of landscaping and other requirements in the DCO plans meaning that these can be agreed later.

Order limits

When considering order limits, these should always take into account the likely extent of remedial and replacement works for third party infrastructure that could be some way outside the project site boundary.

Designation of zones

Some projects have used the designation of zones within the order limits but this is a diminishing practice and where they are conceded it is suggested that these are tested to ensure the infrastructure will comfortably sit within them.

Disapplied legislation

Disapplied legislation can be a particular issue for some schemes and there may be reasons to agree to disapply all legislation prior to a specific date as it is logically superseded by the DCO. Scheme promoters are also using protective provisions or requirements to replace where statutory or non-statutory bodies have the meaningful ability to prevent the project being delivered following the DCO. One provision is to ensure that the requirement to gain abstraction licences under the Water Resources Act 1991 is disapplied.

Changing practices on consultation and engagement

A key issue in relation to the system's operation in practice is around the approach to consultation and engagement, both pre- and post-consent. A number of existing scholarly works consider pre-consent engagement more generally (see Chapter 4), but much less exists on post-consent, even though significant details can still be resolved at this stage. We consider now consultation reports (pre-consent) and post-consent engagement.

Consultation reports

Consultation reports have tended to vary widely in size, complexity and navigability. They speak to important issues as to how easy it is to engage with the regime, given voluminous documents and a tendency for commitments to be scattered across these. Many promoters make specific commitments to stakeholders to undertake some future dialogue with them to resolve specific issues. In total, these commitments to some sort of further engagement appeared in 20 of the 65 NSIP consultation reports published up to 2019. Where these commitments were made, most frequently they were set out in the promoters' response column as requiring or leading to no changes in the delivery of the project,

even where the commitment seemed to suggest that this was at least an open issue for future resolution. As NSIPs have developed, there has been an increasing tendency to state that many of these outstanding matters will be resolved through specific processes – particularly the CoCP or the CEMP. However, even where these were used, not all commitments made by the promoter to the stakeholders were included within them. Other codes and plans were also mentioned as a means of future resolution including traffic management plans (under a variety of names) and the management of mitigation during construction.

When considering the use of CoCP and CEMPs from the perspective of the consultation reports, there is also great variation in the way that these approaches are used within the whole of the NSIP process, including which of the two is used and for what, when they are prepared, who prepares them and whether they are available as part of the suite of documents available for consultation at the outset. Some promoters state clearly that the CoCP or CEMP is provided for information as part of the consultation report while others state these will be prepared later in the process by the appointed constructors. In some cases, issues are said in consultation reports to be resolved in a future \$106, but these commitments tend to float without any reference as to how they will be negotiated or what role they have overall. By 2019, a third of promoters have given commitments to ongoing relationships with the community into construction and operation.

Considering consultation reports published up to 2019, it is clear that the involvement of local authorities remains variable and is primarily made with individual services, for example highways, environmental health or heritage rather than as an authority-wide response. This approach does not seem to have affected the type of response provided by the promoter. While local authorities are engaged in the Statement of Community Consultation (SoCC) and in how consultation is to be undertaken at the pre-submission stage, it is clear that there have been some criticisms of the consultation undertaken within these approved approaches. In these cases, promoters have dealt with this criticism on a case-by-case basis. As practice has developed, some local authorities have combined to make their responses to the promoter as part of the consultation and, in others, promoters have answered in detail to one local authority and required all other local authorities making the same point to refer to the comment made. In many cases, the promoter has made the same replies to every local authority consultee making the same point, repeating the same wording multiple times throughout the consultation report. The local authority may be the scheme promoter and where this is the case, other local authority

departments and services make their consultation responses as if to a third party as required as part of the process. Some local authorities are landowners and again are treated in the same way as other landowners.

The role of the local authorities in signing off completion of agreed actions in CoCP, CEMP, through S106s or other methods has rarely if ever been mentioned in consultation reports. The use of S106s between the promoter and the local authority are very poorly explained in consultation reports and they are used as individual mechanisms for the resolution of specific issues. It is not clear who will negotiate the S106, to what document it will be attached and who will assess compliance to its commitments. As S106 appears to be used frequently, its role in resolving stakeholder comments could be better explained.

The use of CoCP, CEMP, S106 and other codes and plans governed through the DCO requirements appears to be presented in the consultation reports primarily to resolve and then close down issues raised in presubmission engagement. There is little evidence that they are used to generate the potential for ongoing relationships with stakeholders at a later stage. There is also evidence that the role of community views is being lost within wider issue grouping and it is hard to identify what these issues may be in practice. The issues raised by those with an interest in land are clearly the most salient at the consultation stage and there is evidence to suggest that the consultation process is regarded as a flexible means to resolve siting and routing issues. The consultation stage could be used by the promoter to identify which issues will need to be resolved at the delivery phase including design, technology, construction management issues and operational handover and processes suggested for stakeholder involvement as these come forward for determination. As this is not occurring now, many issues are being raised and then 'resolved' by reference to a future process. These commitments are not set out in the consultation report although this might provide a reasonable narrative conclusion as to what stakeholders can expect next.

The rise in the reliance on the use of codes and plans governed through the DCO requirements is now attracting more attention from local authorities and other consultees and there are increasing indications that the contents and operation of codes and plans are forming part of the assessment of the project as a whole and the adequacy of the consultation. In this, the stakeholders appear to have more focus on delivery of the proposed project than the promoters. Specific commitments to further community consultation or the establishment of community liaison groups post-consent have appeared in a number of projects, as already

noted. Examples of consultation reports specifically highlighting such commitments include A556 Knutsford, Daventry Rail International Freight interchange, Hornsea offshore Wind and Knottingley Power Station. For the North London Heat and Power project, a community forum was established under the CoCP as well as a dedicated phoneline and email for residents during construction, and for the Rampion Offshore wind project, a Fishing Liaison Officer was appointed, a commercial fishing working group established and sea users' group and project liaison groups with the community and businesses set-up. The River Humber Gas Pipeline appointed a community liaison officer through the CEMP and in the Triton Knoll project there was mention of a communication plan as part of CoCP. In many cases, however, these commitments were around ongoing community liaison, for example to ensure information flow around construction and/or operation rather than for full consultation to further shape the project.

Commitments to post-consent engagement in practice

In addition to the role of consultation reports, commitments to working with the community, landowners and statutory commitments can be contained in the schedules of requirements. These can include provisions for the engagement of stakeholders directly named as being consulted on or responsible for the discharge of requirements. These will very commonly include the local planning authority, highways authority and statutory consultees such as the Environment Agency and Natural England, but the list can be quite extensive (including, in the case of the Thorpe Marsh pipeline, a gliding club).

Named provision specifically to further consult communities, in the sense of seeking their views so as to further shape the project on matters such as detailed design and scheme implementation, is much less common in DCO requirements. In 2019, the A14 Improvement Project and the M20 Junction 10a Project were the only two containing these despite the detailed design work that often happens post-consent and the stakeholder confidence that can come from a clearly stated and secured commitment in the schedule of requirements. In the case of the A14 project, there are clear commitments to further consultation over the detailed design secured in the requirements. For the M20 Junction 10a project, details of the consultation must be submitted to the Secretary of State, who was named as being responsible for discharging requirements. There are similarly worded provisions for the A14 project. The Silvertown Tunnel project schedule of requirements also included

specified commitments to further consultation over the detailed design of the project, including the establishment of a design review panel.

Although requirements specifying consultation to explicitly shape the detailed design have been rare, it was more common to have requirements ensuring some sort of community liaison (usually to ensure the flow of information about project construction or operation or complaints). These commitments could be found as stand-alone requirements in the case of 10 DCOs out of 65. In the case of the Brecha Forest wind farm project, it is Requirement 37 about 'Community Liaison', and for the Hinkley Point Nuclear Power Station project, it is Requirement 2 about 'residential amenity: information dissemination and complaints handling'. Requirement 31 of the separate Hinkley Point Connection project is very similarly worded. Others have a commitment to establishing a community liaison committee such as Whitemoss landfill and the Ferrybridge multi-fuel project Requirement 47 relates specifically to a local liaison committee. Finally, in terms of local community liaison, for the East Northants Resource Facility, no obvious commitment to further community liaison was present initially. However, in the Examining Authority report, as a result of their recommendation, Requirement 4 of the DCO had been altered to ensure that the development was carried out in accordance with 'sections 4, 6 and 10 of the environmental document'. The Examining Authority report noted this was in relation to continuing engagement with the local community, with a comment that: 'Local confidence in the safe operation of the site can be enhanced if a requirement for continued engagement with the local community is incorporated into the DCO rather than being left as a volunteered commitment. Not only would that give it more substance in the eyes of local residents, it would also ensure that the commitment would continue if Augean ceased to be the owner of the site' (Green, 2013: 54).

In the schedules of requirements for consented DCOs, by 2019, 15 out of 65 projects had an explicit statement that the CoCP or the CEMP must include some sort of community liaison or communications. Examples here are the East Anglia One project, where the CoCP under Requirement 20 must include 'a project community and public relations procedure' and Progress Power, where the CEMP under Requirement 11 must include 'complaints procedures' and 'provision for setting up a Community Liaison Group'.

CoCP and CEMP documents are not always publicly available such as on the PINS website and although draft CoCPs and/or CEMPs are sometimes submitted, often these are drawn up post-consent. Sometimes these documents are available on a developer website but not often.

Indeed, this is sometimes commented upon specifically in the Examining Authority reports, for example for the Galloper Offshore wind farm, where it is noted that the CoCP 'allows for the setup of reporting and liaison lines of communication which seeks to address direct criticism arising from the locally reported experience of the GGOWF development construction' (Bessell *et al*, 2013: 132). Similarly, the Rampion offshore wind farm Examining Authority report notes that the CEMP, which is required, will include details of 'local community liaison responsibilities including communications plan' (Walker *et al*, 2014: 103).

It is worth noting that public information regarding the process of discharging of requirements was explicitly mentioned in three highways DCOs (from the set we examined), related perhaps to the role of the Secretary of State for Transport in discharging requirements instead of local planning authorities. This is secured through a 'public register of requirements', as specified in the A14 DCO. Similarly worded provisions are made for the M4 Junctions 3 to 12 Smart Motorway and M20 Junction 10a projects.

S106s can be used to secure further community engagement in the Examining Authority reports and these practices can be exemplified in three DCOs. For Keuper Gas Storage, the report notes an S106 includes provision for 'The setting up of a local liaison group the details of which are to be agreed with CWAC and EC [the local authorities]'. These provisions ensure that there is a channel for communication with the local community as the development progresses and ensure that the HGV traffic generated by the development keeps to the routes that have been the subject of assessment in the ES (Green, 2016: 78). For Preesall Gas Storage, an S106 includes provision for 'continuation of a community liaison panel during [construction and operation] between Halite, WBC, LCC [local authorities], parish councils and residents' (Hudson et al, 2013: 139). The Thames Tideway Examining Authority report notes, among several commitments to community liaison working groups, that an S106 between the promoter and the London Borough of Lewisham provides that 'whereby the Council would establish a steering group, involving local community groups, to develop a landscaping masterplan for Crossfield Amenity Green and the adjoining public realm. The Agreement would provide funding for the preparation and implementation of the masterplan' (Bessell et al, 2014: 93).

Finally, a significant number of DCOs incorporate a Deemed Marine Licence. These have their own schedules of conditions, which can themselves include further commitments to ongoing engagement. These are particularly around fisheries issues, for example the Dogger Bank Creyke Beck wind farm where the conditions for the marine licence

include condition 9(d) relating to the project environmental management and monitoring plan that must include details of a Fisheries Liaison Officer and a Fisheries Liaison Plan.

Explicit commitments in the requirements of DCOs to meaningful consultation to shape the detailed design of project post-consent are rare but do exist. In so clearly setting out further consultation over the detailed design of the project post-consent, the requirements of the A14 may be considered good practice. Slightly more common in the requirements are commitments to community liaison, particularly over construction impacts but sometimes over the operational phase of projects. Such commitments to further engagement can also occur separately in a range of documents associated with the DCO and its consent, some of which are not immediately accessible to the public. In making an explicit commitment to ensuring the CoCP and its related documents and strategies are publicly available post-consent, we believe the requirements of the recently made Silvertown Tunnel DCO are good practice. More generally, promoters need to consider the transparency of various commitments to ongoing consultation and engagement and how easy it is for the public and other stakeholders to keep track of these and their fulfilment. There is a great deal of work that goes into consulting communities and stakeholders as part of the process of consenting a Nationally Significant Infrastructure Project, particularly in the presubmission stages. Many promoters are keen to maintain good relations with local communities and other stakeholders through construction to the operation of their project.

Challenges to the NSIP system

Having considered how the system is working in practice, it is worth concluding this chapter by considering some of the ongoing and emerging challenges to the 2008 Act system in practice.

Failing to meet timescales

When the Planning Act 2008 was introduced it was intended to give security of timescale for determination of the DCO to the scheme promoter. A number of DCOs have not met the legal timeframe and the time extensions requested by ministers, which now means that the balance between certainty and cost in the system is now being undermined by uncertainty in outcome in time and decision. The use of

delay in ministerial decision making is now becoming commonplace with two decisions being delayed in January 2022 and two in December 2021 (Walker, 2022c). While the Planning Inspectorate has only once requested a delay in 114 examinations by January 2022, they were admonished by the Secretary of State for BEIS, despite this department delaying eight of their 16 decisions between 2020 and 2022 (Walker, 2022c).

Ministerial refusals of DCOs

The 2008 Act was also expected to provide some certainty of likely permission. Although it is possible to refuse a DCO application, it is also the case that the frontloading of the application submission process is expected to rule out any likely reason why the DCO should be refused. It is therefore interesting to note that six DCOs had been refused by January 2022 (Walker, 2022b), of which two have been challenged, one successfully (the Preesall Gas Storage project) and one unsuccessfully (the Mynydd y Gwynt onshore wind farm). This refusal was for an application for a wind farm at Mynydd y Gwynt in Wales. It was the second and was issued by the Secretary of State for Energy and Climate Change on 20 November 2015. The proposal was refused on environmental grounds. There are also DCO applications that are now approved by ministers against the advice of the inspectors who examine the schemes including the Boreas Wind Farm in Norfolk in December 2021, which has had an additional compensation schedule added.

Legal challenges through judicial review

Any challenge either to the grant or refusal of a DCO has to be to the High Court through a judicial review using S118 of the Planning Act 2008 and, like other JR processes, cannot be on the merits of the case but on the procedures that have been followed. In practice, any JR of a DCO is likely to turn on the correct interpretation of policy, the environmental assessment/effects of the project and procedural fairness of the examination (Whale, 2016). A JR was undertaken in respect of the DRAX RE DCO where the proposal was recommended for refusal by the Secretary of State by the examiner because the level of emissions was not controlled by the DCO but subsequently given consent by the Secretary of State. The JR against this approval was requested by ClientEarth but the arguments in their case were dismissed by the judge (Walker, 2020b). In 2021, a JR against the award of a DCO for the A303 Stonehenge road

tunnel was successful. While the Examining Authority recommended refusal, it did indicate the Secretary of State might take a different view and approve the DCO, which is what occurred. The JR challenge was on five grounds, two of which were successful: the failure of the Secretary of State to review the environmental assessment and secondly because no alternatives to the proposal were considered by the scheme proposer.

Environmental assessment reforms post-Brexit

The role of environmental assessment is critical at all stages in the process of the delivery of an NSIP, in acceptance of the project to be considered for a DCO, in examinations, in the decision and in its delivery and onward management. Environmental assessment issues have been responsible for delays in determining DCOs and in their refusal, as noted above. The UK's environmental regulations are international in their legal basis, including the Trade and Environment Agreement 1994 with the WTO, and with the United Nations (2015). In terms of the detailed legal basis and means of addressing compliance with these international agreements, the UK's legal basis, methods and reporting were within the EU while the UK was a member. Now that the UK has left the EU, it must determine how these environmental assessments are going to be undertaken in ways that continue to comply with international agreements and meet EU standards where there are now cross-border issues for trade or supply.

The UK government has introduced the Environment Act 2021 and is now also attending to the component elements that are also required to be determined. For NSIPs, the most significant element of the Environment Act 2021 is the requirement for biodiversity net gain (BNG). The government opened a consultation on BNG in 2022 (DEFRA, 2022). This is of particular interest to the operation of the Planning Act 2008 as those sectors included within the purview of the NSIP system that have matters of BNG included to be addressed in their NPS cannot have the DCO approved if the BNG, currently set at 10 per cent, is not met. Those NPS without a BNG requirement may be subject to freestanding additions to the NPS requiring it in NSIP applications (Latif-Aramesh, 2022a). The government consultation on BNG addresses issues for NSIPs specifically and is proposing that the BNG requirement does not become necessary until 2025, unlike planning applications under the Town and Country Planning Acts that will require BNG to be addressed in 2023. The consultation also proposes that those organisations such as government agencies, Network Rail and National Grid will be able to take an 'estate' approach and use their other land holdings to create BNG for their NSIP applications. There are also suggestions that where the scheme promoter cannot provide BNG within their site, they may be able to use compulsory acquisition powers to find this elsewhere, and this approach has already been used to achieve BNG on another NSIP for Cleeve Hill. In addition to this, a further consultation on guidance for BNG for NSIPs is indicated. Other elements of the 2021 Environment Act that may become important for NSIPs will be the provision for conservation covenants that commit to action or inaction and will allow organisations to become responsible bodies. Adapting to this changing regulatory framework is likely to present some challenges in the NSIP regime in the years ahead.

Conclusion

The NSIPs regime is now well established as a means to consent major infrastructure projects. Following more than a decade of decisions under the 2008 Act, at the time of writing more than 100 development consents have been agreed, although three of those are now under redetermination following judicial reviews. Twenty-three other proposed NSIPs have been formally accepted and are currently under consideration through the consenting process. The regime has seen an interesting range of proposed NSIPs from gas and nuclear power stations, wind farms, oil and gas pipelines, highway and railway schemes, rail freight interchanges to a super-sewer, a theme park resort and a tidal lagoon power station.

There are, however, some challenges to the system. As previously mentioned, White (2013) talked of the multiple certainties the regime was designed to bring but a number of these now seem rather less certain. As Walker (2021b) has highlighted, many ministerial decisions on DCOs have been delayed, reducing the certainty of timing that was supposed to be a key benefit of the regime and a means to assist effective project planning (often financially important). The certainty of decision, with only apparently limited means to appeal decisions, has perhaps also been reduced as there have now been five successful judicial reviews, four of which have been in 2021. White (2013) had also suggested a certainty of outcome with the strong presumption in favour of development from NPSs, however, we have now seen seven projects refused development consent (one of these then being overturned). An approval rate of 94 per cent compares favourably with the town and country planning application process in the UK, but nevertheless suggests slightly less certainty than was perhaps originally envisaged.

Interestingly, all the refusals so far relate to energy project schemes. Eight of the 11 projects that have been withdrawn after formal acceptance into the regime have also been energy projects. This links to the particular challenges around infrastructure in this sector, where financing more heavily private sector-led schemes seems a particular issue compared to the more public sector-driven transport schemes. It also links back to the point we made in the previous chapter that even a granted DCO does not equate to a delivered NSIP.

Despite these important sectoral differences within the NSIPs regime spectrum, there are also some common challenges for example around environmental assessment post-Brexit. We have also found, through our own research, a range of challenges around the resourcing of local planning authorities and statutory consultees, and public confidence in their engagement in the process. These are important as the involvement and confidence of these groups is essential to supporting the higher levels of flexibility that make projects of this scale and delivery of timeline feasible. We now turn to consider some case study NSIPS to illustrate the operation of the NSIPs consenting regime in practice. Across all of these, we particularly highlight the relationship between consent and delivery, the role of local authorities in making an apparently centralised system of national infrastructure actually work, and public engagement in the regime.

7

The A14 Improvement Project case study

Introduction

The A14 Cambridge to Huntingdon Improvement Scheme is an NSIP promoted by Highways England recently completed in Cambridgeshire. As we have shown in Chapter 6, by February 2022 the PINS website identified 72 of the 205 submitted Development Consent Order (DCO) applications as relating to transport projects and of these 34 are schemes submitted by the government's main road infrastructure development and management agency, Highways England (previously known as the Highways Agency). It was also a project defined as an EU TEN-T scheme.

The £1.5 billion scheme was the largest highway scheme in the UK for many years. The stretch of road that the scheme was designed to relieve contains both north–south traffic travelling between the M11 and A1 and east–west traffic on the A14. Highways England argued that the scheme was needed because of traffic delays on the A14 between Cambridge and Huntingdon, with almost 85,000 vehicles per day (above what the road was designed to handle), and because more than a quarter of this is heavy goods vehicles (well above the national average for this type of road), particularly traffic to and from the port of Felixstowe. It was suggested that this project was necessary to combat congestion, unlock economic growth, improve connectivity and safety, and provide enhanced facilities for pedestrians and equestrians (Highways England, 2017a).

The project is now completed. In this chapter, we consider the A14 scheme as an example NSIP. We outline the nature of the consent through the regime and the implementation of the DCO, then consider the role and perspectives of stakeholders and communities in the consent and project construction. We draw heavily in this chapter on our own original research, including from focus groups and interviews with a range of

actors involved with and impacted by the project as well as desk-based work, as explained in Chapter 5. Overall, we are interested to consider how the DCO process has worked in this case study, focusing in particular on the relationship between planning consent and project delivery, the role of local authorities in the process, and the engagement of communities and other stakeholders.

Context

A DCO application was made to the Planning Inspectorate on 31 December 2014, accepted for examination on 27 January 2015 and consent was granted by the Secretary of State for Transport on 11 May 2016. The scheme involved:

The improvement and upgrading of a 23-mile length of strategic highway between Cambridge and Huntingdon, the widening of a 2-mile stretch of the A1 between Alconbury and Brampton, and the modification and improvement of the associated local-road network within this corridor (PINS, 2017a).

The location map (Figure 7.1) gives an overview of the scheme.

The route has also long been identified as part of the Trans-European Transport Network (TEN-T) of priority routes, as the main road route for freight from the Benelux countries, through Great Britain to Ireland and as part of a longer corridor between Crete and Donegal (EC, 1995; 1996; 2005; 2013). The A14 was specifically designated as a Trans-European Network (TEN-T) by an EU Regulation in 1996 (decision 1692/96/EC) and confirmed by a further regulation in 2013 (1315/2013). While the UK was in the EU before Brexit in 2020, these TEN-T corridor routes traversed the EU's territory to improve east-west access in 1996 to support the accession states, and shifted to a north–south focus in 2013 to support connectivity for the lagging economies in the south of the EU. The A14 was included within these regulations as part of the improvement of the route between Crete and Donegal and was accompanied by other improvements in this corridor such as the Cambridge guided busway and the improvement of the Felixstowe to Nuneaton railway line (EC, 2005). The UK government argued that this scheme should be included in the TEN-T programme as it was congested. The project was included within the 2007 package of UK road schemes funded by TEN-T that also included improvements to the A1 and M6 (EC, 2007).

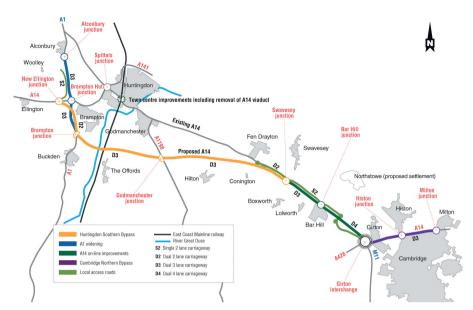


Figure 7.1 Outline map of the A14 improvement scheme route. (Source: Highways England, 2017b, reproduced with permission from National Highways.)

The 2014 National Infrastructure Plan (HM Treasury, 2014: 33) argued that 'the road network is vital to the economic sustainability of the UK. Well-connected road infrastructure enables people to travel for work and leisure and businesses to move goods. Over 65 per cent of freight movements and 90 per cent of passenger miles are made by road.' The vital role of the 'strategic road network' having been explained, the plan announced, under a package of measures to increase connectivity and support economic growth, a £1.5 billion investment in the A14 Cambridge to Huntingdon 'which improves freight access to Felixstowe, one of the country's major shipping ports, tackling the congestion in the east of England and unlocking a major housing development at Northstowe' (HM Treasury, 2014: 36). No mention of the European context was made although it was referenced in the DCO Examining Authority's report.

The project started in November 2016, with initial works including installing safety barriers on the existing A14, constructing a temporary bridge over the River Great Ouse, creating roads within the construction site to avoid using local roads, archaeological mitigation, diverting utilities within the scheme boundary, clearing vegetation and creating new habitats for water voles (Highways England, 2017a) before full construction works of the new roadway commenced. The new road was

expected to be completed and open to traffic by the end of 2020, but in practice the new road was completed and open and the upgraded road completed (with the 70mph speed limit restored) in May 2020, more than six months ahead of schedule and on budget, which Highways England attributed to 'what the UK construction industry can achieve with an integrated client team, common goals and targets, and a shared vision of success' (in Veale, 2020).

As a comparatively recently completed scheme, there is little academic literature on this NSIP. There was discussion about infrastructure deficit around Cambridge and need to upgrade the A14 to support further growth in the sub-region as long ago as 2004, as part of local state fixes and growth coalitions (While *et al*, 2004). More recently, there is one scholarly publication on the project, about bridge engineering, that notes that the scheme includes the design and construction of 22 integral bridges in varying forms typically found across the wider network. The design of these structures was undertaken by a joint venture of Atkins and CH2M (Sandberg *et al*, 2018).

Although the documentation on this project is extremely limited, there is a much broader relevant literature on road building. Interestingly, in a recent consideration of tensions in the UN Sustainable Development Goals, Wenz *et al* (2020) discuss the balance between additional road building and its economic benefits compared to the associated additional cumulative CO₂ emissions from construction work and additional traffic and the sustainability tensions inherent in this. The role of growing emissions from the transport sector, dominated by road-based emissions, has long been recognised and there have been calls for alternative modes and technologies to tackle this (Chapman, 2007). As well as climate change, the health-related impacts of air pollution, particularly that from road traffic, are well recognised and cause huge inequalities and indeed issues of environmental justice (Loopmans *et al*, 2022).

Project consent

For the research that was undertaken, the DCO project documentation was examined including the Examining Authority's Report (Fernandes *et al*, 2016), the Secretary of State Decision Letter (Woods, 2016a) and the final consented DCO (Woods, 2016b). The documentary evidence shows that a number of changes to the originally proposed DCO were considered during the examination period, including some last-minute changes to significantly reduce the impact of land take, supported by the

argument that there had been difficulties obtaining representations from interested parties on this before, late into the examination. In total, there were 71 changes made to the DCO accepted by the Examining Authority and one further change accepted by the Secretary of State, with six revised drafts of the DCO submitted.

As well as land acquisition, the other main factors considered as part of granting consent included traffic flows and modelling; designing and engineering standards; air quality and emissions; carbon emissions; noise and vibration; flood risk; landscape and visual impacts; water quality and resources; biodiversity and ecological conservation; economic and social effects; the historic environment; Environmental Impact Assessment and Habitats Regulation Assessment. The consent made use of limits of deviation from drawings within pre-set constraints, as well as temporary possession of land in order to support project implementation.

The DCO requirements cover the preparation of the detailed design, code of construction practice, pre-construction surveys of protected species, notifying contaminated ground water to the LPA and EA, landscaping, archaeology, traffic management plans, surface water drainage, borrow pits, noise mitigation, Brampton meadows SSSI mitigation, highway lighting, flood risk assessment, air quality monitoring and traffic monitoring and mitigation.

Although at 253 pages, the final DCO is a lengthy piece of secondary legislation, at 23 (including one on interpretation and four on procedures for discharging them), the number of requirements is comparatively small compared to other DCOs we looked at through our research. The Examining Authority's report contains an in-depth discussion of the requirements, noting that the original draft DCO submitted to them contained a 'general paucity of requirements ... particularly when compared to other consented highway-related DCOs' (Fernandes *et al*, 2016: 253). Over the course of the examination, 10 new requirements were introduced as well as a number of drafting changes to the 13 originally drafted requirements. Changes included:

- ensuring that the detailed design does not introduce materially worse environmental effects than assessed in the Environmental Statement
- making provision for the Design Council to review and provide advice in the finalisation of detailed scheme design (in relation to landscape and visual impact)
- ensuring the SoS and LPA must sign-off the detailed design of the visually intrusive new Great Ouse viaduct

- ensuring consultation on contaminated land and groundwater is not 'falling between two stools' of the LPA and the EA (Fernandes *et al*, 2016: 258)
- introduce more precision around air quality monitoring.

Further detail in the requirements themselves about borrow pit restoration and management, as originally proposed by Cambridgeshire County Council, was avoided by the fact that a Borrow Pit Restoration Strategy would become a 'certified document' linked to the DCO.

For the requirements, Interviewee 23 outlined how the number had almost doubled over the course of the examination, saying 'broadly, it starts off with the smallest Christmas tree you can get away with and then it gets decorated over the course of the six months.' Some of the requirements might have been avoided by delaying the project a further six months but this was not acceptable for the funding programme according to Interviewee 32: 'I think we could have removed some of the requirements by spending another six months on the design, but that would have held the scheme up six months and our instructions were pretty clear that we must deliver to the timescale.' He concluded that, overall, 'I've got a feeling, on our scheme, we got the balance about right to be honest, about the level of detail.'

No S106 was made with any of the local authorities along the route. Nor was the discharge of requirements, as is usual for DCOs, given to local authorities but was instead to be done centrally by the Secretary of State, apparently because of concern over technical capacity and resources within the authorities. This is now the approach usually used by Highways England on their NSIPs. Given this, however, the DCO contained further detail about the process for discharging the requirements including the necessity of undertaking further consultation and producing a public register of the requirements (Requirements 19 and 22). At examination, the key issue about who signed off the consents centred on the transparency of that:

The inspectorate were very interested in the public involvement in the discharge of consents and how individuals would be able to track this working, if it were taken away from the local authority and so the consents register, ... how can they follow this process and so what we came up with was a register that they can follow (Interviewee 23).

The DCO included a requirement for a Code of Construction Practice (CoCP) to be in place (Requirement 4) and the document for this included

a section on community engagement requirements, such as a commitment that there will be 'a programme of high quality, effective and sustained communications' during detailed design and construction (Highways England, 2015: 19), making use of online channels, a newsletter, parish/community/landowner/environment forums, and notification to local residents, businesses and parish councils. The CoCP then moves on to 'enquiries and complaints', noting that there would be the ability to contact the Highways England Customer Contact Centre by phone and email 24 hours a day.

In terms of public engagement and transparency, there was a requirement (Requirement 3) that the detailed design preparation must involve advice from the Design Council's Design Review Panel and consultation with local authorities, parish and community forums, landowners and environmental interests. As well as requirements, the DCO also incorporates protected provisions in Schedule 9, covering access to or changes to apparatus, expenses or costs, reasonable cooperation, submitting plans/notification of construction for utilities providers, the Environment Agency, Cambridgeshire County Council and railway interests.

As part of our research, an experienced highways engineer consultant provided us with written detail as to the level of design that is normally carried out at the preliminary design stage for highway schemes and which elements are not carried out until the detail design stage (while noting that there is not an absolute fixed line between preliminary and detailed design, with judgement to be made about what to include when). In essence, the preliminary design is at a 1:2500 scale to identify the required land take, the effect on rights of way, to enable an Environmental Impact Assessment (EIA) to be carried out, to enable the scheme budget to be developed and construction methodologies to be worked out and in order to enable meaningful consultation with stakeholders such as local authorities and government agencies, landowners and the public. This preliminary design is not sufficient, however, for the scheme to then be constructed, which normally relies on plans at 1:500 scale.

The reasons for doing less detailed design prior to consent included cost (the detailed design for this scheme apparently being about £25–30 million, which was apparently considered too much public money to spend 'at risk' before consent is in place), timing (the detailed design could have delayed the DCO application by 12 months if done preconsent), and risk (any changes made as a result of the examination process would then incur greater costs if the detailed design was already made). Other reasons included credibility of consultation (people can't

meaningfully influence something that is already fully designed), flexibility for construction contractors once appointed to determine economic methods and options and hopefully allow better value to be achieved, and allowing for the susceptibility of road schemes to ground conditions meaning some elements are best done when construction is underway and these elements may have other interdependencies. That said, it was also acknowledged that some more detailed design work can help preconsent in terms of clarifying/responding to concerns from statutory consultees wanting certainty over budgeting for high cost items such as railway possessions or utility diversions or because some detail can assist early contractor engagement and accelerate the overall scheme programme.

In our research interviews, the promoter acknowledged the large number of amendments made to the DCO during examination, and considered that, while unpopular, these had improved the scheme and responded to concerns raised by statutory consultees and landowners. They felt landowner engagement would continue to be challenging for future NSIPs, but as an organisation they could improve statutory consultee engagement in future:

We're certainly advocating even more forceful discussion with the statutory bodies beforehand. We're coming up with corporate level agreements with National Grid, with Environment Agency, among others, for service level that we would expect and that we would provide in return to try and stop that sort of thing from happening again' (Interviewee 23).

Better engagement of statutory consultees does, however, raise resourcing issues. Indeed, from the perspective of the other key public sector actors in the system, and as a result of his experience on this project, Interviewee 31 advised local authorities to 'not underestimate the amount of resources they need'.

The A14 was the largest highways scheme in England for about 20 years, and certainly the largest to have come through the DCO route, and had prompted Interviewee 31 to wonder if six months was sufficient for an examination into a project of this scale. He felt it meant it was difficult to 'get to grips' with the huge amount of detail and commented:

the process is much better than the old way of doing it, but I think a scheme of this size, maybe nine months would have been a bit more realistic timescale and I think, at the end of that process, we'd have

had probably complete agreement ... all these issues would have been bottomed out, or at least crystallised ... towards the end, you're very much in a sense on a train headed towards the buffers and throughout, we were trying not to pull the emergency cord on that train, don't get the train to stop, just make sure it takes the right path.

Project implementation

Our research was conducted while this NSIP was being constructed. This meant interviewees gave some reaction around issues related to the implementation of the project, including tensions between detail and flexibility and the relationship between consent and construction. There was an acknowledgement of apparent tension between some community members and groups wanting more detailed design during engagement and keeping things more flexible to allow room for construction innovation and efficient use of resources. In interview, some of the promoter's staff felt that the DCO process was better than that used for the old Highways Act in terms of the set timeframe and that an examination would not drift on for years in the same way as a public inquiry. There was some feeling, however, that at the examination more detailed designs than the outline designs that were being presented for the A14 would have been preferred. The approach used, in submitting less detailed designs, reflected the rush to get consent through the DCO as there were financial pressures to implement the project. After the consent was issued, there was apparently a ministerial push to get on and build the project, which then meant a rush to prepare the detailed design, get requirements discharged and then get on site. This government concern may have been related to Brexit and wanting to complete the scheme before the UK left the EU as the examination and decision were conducted in the period around the UK referendum on leaving membership of the EU.

In relation to the question of the amount of detail that had been in the DCO as opposed to being resolved post-consent, there had also been a desire from local authorities and statutory consultees for some more detail in relation to this scheme pre-consent. For example, local authorities had concerns over the widths of public rights of way and had wanted these defined in the DCO. Highways England indicated that this was not possible as detailed design had not been completed. Instead, Highways England argued that sufficient safeguards were ensured through associated orders. Local authorities had also been concerned about

'Borrow Pits' and drove some additional detail around these through the examination:

One example was where we showed borrow pits; so the sources of material to build roads out of comes out of these borrow pits and we included the application for the borrow pits in the DCO application and the way it panned out is there was quite a focus on wanting more levels of detail on the restoration plans for these borrow pits afterwards ... and more detail seemed to be demanded as the hearings went on. It was a big topic for some people as to what these borrow pits might be left looking like afterwards ... we ended up having far more detailed plans than they might have envisaged to satisfy various objectors. The alternative is, you don't do that detail, you leave these questions hanging and you let the planning inspectorate decide whether you've justified the case or not, but obviously, you try your best, in the time available, to answer the questions that people raise (Interviewee 32).

Additional detail had also been driven in this project by landowners, and Interviewee 25 felt more detailed design should have been done pre-submission:

We think that the developers that are putting in these applications, sometimes ... they haven't done enough work on the design process before they put in these applications and there's too much design detail left for like 'oh, well that will come after the examination process,' when actually, landowners need to know that the detail of how they are going to be affected, rather than just roughly where something is going to be ... Particularly with regards to the A14, we thought that Highways England ... shouldn't have put in their application for it to be accepted for at least another six months.

There were particular concerns about a lack of detail on field drainage and the drainage off the road according to Interviewee 25. This lack of detailed design pre-consent also caused some issues relating to consultation according to Interviewee 33:

The conflicting demands of some people not to spend too much money and other people wanting more detail, demanding some expectation of, I don't know, full 3D drive through visualisations that have got every last detail modelled in them, down to the road sign and the lighting column and safety fencing and some of those expectations are unrealistic at that stage.

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Highways England, as promoter, considered that detailed design should be done post-consent for cost management and flexibility. One detailed example relating to a better construction solution, more preferable to an affected landowner, was provided. Apparently, this was not possible due to the drawing of the DCO red line boundary (the land covered by the consent) and the difficulty getting this changed, leading Interviewee 33 to comment:

In effect, I suppose, I could summarise it in the sense that this particular scheme is on a very fast delivery programme, for the size of the scheme at least, and the balance between the amount of detail prior to the hearing stage and, in some ways, the rigid nature of the legal position of the DCO that's granted, in having to develop that design within those constraints, that's, potentially, led to the difficulties all round.

The limits of deviation on the scheme were quite restrictive (half a metre for the vertical limit) according to Interviewee 32, less than other major infrastructure schemes he had worked on before and 'that makes it very restrictive at detailed design stage, if you want to do anything else, if you want to explore better road layouts, more economic whatever, it sometimes ties your hand' but reflects the environmental assessments underpinning the Environmental Statement.

Some issues between consent and construction had indeed become apparent. For example, there was some discussion in interviews that the red line had been drawn 'somewhat too close' to accommodate the final design/construction in places. The linear nature of highways schemes made the red line boundary particularly challenging when moving from consent to construction:

With a highways scheme being such a different animal in terms of a linear scheme, there is far more opportunity, or risk of developing the design, which will perhaps impact on the development boundaries, the red line boundaries from the DCO, and to a degree, perhaps that's really where I've been coming from with my comments in terms of some of the difficulties that we've had to overcome within this phase, there is an understandable need to justify the land that has been identified and there is no wish to take more land than is required, but ... it does therefore constrain the boundaries for the design as it is developed in detail (Interviewee 33).

It was suggested by Interviewee 23 that there had been some discussion over construction compounds, but the layout was specified in the DCO:

The contactors asked if they could lay out the site compound differently and the answer was 'no' because it's secured in the DCO that it will be arranged in a particular way and that's what they'll have to deal with, even though the other way might well be cheaper for them and less environmentally damaging for surrounding areas.

Similarly, Interviewee 32 gave examples of what had been proposed post-consent to improve constructability but were not possible due to the DCO. These included work outside of the DCO red line boundary (such as utility work where additional land would be beneficial), variations outside of the Limits of Deviation (raising the alignment) and a footpath diversion. However, these were improvements on the consented project, but there was a view the project as consented was deliverable. Interviewee 23 explained that Highways England was keen to get on building the project, particularly given the project finances, and so were unlikely to consider post-consent amendments to the DCO: 'We're very keen to avoid it because of the timescales, so we are generally given very quick turnaround targets by government, to get something from their idea on to site as quick as possible and the post-consent regime, the post-consent changes would delay that.'

As a result, any potential improvements would not be pursued through formal amendment of the DCO due to concerns about the timescales of the change process but instead through alternative routes. Interviewee 23 continued:

We're not proposing to resubmit the DCO, but what we are proposing is finding ways and means of acquiring rights over additional land, say for a utility type diversion, or just temporary occupation, the contractor needs to use a bit of additional land, or moving the location of a pond, that sort of thing, the requirement rights over additional land; we seem to have agreed with the local authorities that a more traditional ... if you want to go and build a pond on an additional area, it would be like a planning application to a local authority.

There would also need to be a benefit to cost ratio of enabling any changes of 10:1: 'A 10 to 1 multiplier is a typical rule of thumb that people use, if there is £1 million to be saved, they might punt £100,000 at pursuing it'. In other words, 'It's much easier to go with the bird in the hand that you've

got, you've got a consented scheme, it's much easier to go and build the one you've got than to start looking at alternatives' (Interviewee 23).

Generally, however, it seems that in the A14 project, Highways England was able to retain desired levels of flexibility during the consent phase, as Interviewee 32 explained: 'Generally, we wanted contractors still to have a range of options available to them, we didn't want to go down the line of absolutely nailing, say, bridge types.' The CEMP and landscaping plans were used as a way of managing more detail post-consent. Overall, Interviewee 29 suggested that the DCO for this project was quite flexible: 'it's a flexible DCO because it authorises, in essence, a referenced design, a preliminary design and the detail was not there because Highways England hadn't produced a detailed design'. Furthermore, the use of temporary possession of land was something landowners did like: 'Temporary possession of land, yes, lots of farmers said "well actually, if they're just wanting that land for a compound site, or a site to put soil on, yeah, of course, we'd rather they took it on a temporary basis," so that's fine and they liked that' (Interviewee 25).

This project therefore seems to have allowed some flexibility to be retained through the use of limits of deviation and temporary use of land, although there were some drivers for further detail to be provided around certain issues. There was also use of requirements to manage detailed design issues being resolved post-consent. Although the number of requirements increased through the examination, they appear to have helped to avoid further detail going into the DCO. For example, there was apparently some disagreement between Highways England and the local authorities over the aftercare for the 'borrow pits' associated with the project but this was able to be dealt with through requirements rather than the main DCO with a 'borrow pit restoration plan' included in the associated documentation. Similarly, some disagreement between Highways England and the local authorities was apparently avoided by the use of the CoCP.

Interviewee 29 explained that care had been taken to try and avoid having a duplication of detail between individual requirements and the CoCP, Construction Environmental Management Plan (CEMP) and Local Environment Management Plan (LEMP) that were utilised here. This was important to make the discharge of them more manageable:

We were very tough in terms of saying 'well, if something is dealt with by, in effect, the Code of Construction Practice, we're not going to double up and have it as a requirement as well.' So that's why, if you look at the DCO, there aren't as many requirements as many other projects because we were keen to not double up and to try to

maintain some rigour and discipline because the more requirements you have, the more process you have to go through later on for discharge.

Interviewee 30, a statutory consultee, was involved in the discharge of requirements and felt this process was working effectively. They did, however, think the detailed wording of requirements was very important and this was something they had learned from other NSIPs they had been involved in. They had a standardised wording they would suggest. Interviewee 32 did feel the discharging of requirements was 'intense':

It's been quite hard work and quite intense because some of the requirements were written 'no work must proceed until this particular consent is in place,' which pretty much puts your entire site on hold until certain consents are found, so certain consents become very, very critical; others of the requirements were written 'no relevant part of the work may progress until the relevant requirements have been satisfied.' So that's limiting, geographically, to the local area around a particular issue ... The one I described about River Great Ouse Viaduct, I think, quite strangely, said that the scheme couldn't progress until a visual of the river viaduct had been discharged; it's quite strange that the whole scheme should be on hold.

Overall, Interviewee 29 felt that although there had been some minor issues apparent in the way the project had been consented now it was being constructed, these were very few in number for a project this size: 'They've got that power through the DCO to design the detail in a way that is appropriate, but with important safeguards for landowners, for communities, for statutory bodies, that I think is, so far, working out well.' Interestingly, even though it was working well overall, the importance of a firm link and institutional memory between consent and construction was apparent in the A14 NSIP: Interviewee 31 gave evidence of the need to explain to contractors why a particular local authority had wanted something at the examination stage. This relates to an emerging theme of the importance of project management for NSIPs throughout the life of the scheme, bridging the divide between consent and construction.

Stakeholder perspectives

During our research we engaged with statutory consultees (for example government environment and nature agencies), local authorities and the

representatives of local landowners for the project and considered their perspectives and relationships with the A14 scheme. These represent key stakeholders for the design, consent and implementation of the NSIP and in this section we consider their views on the scheme and its process from proposal to construction. Highways England had a strategic stakeholder manager who was there from pre-submission, present at much of the examination and was still involved post-consent, dealing with local authorities. There were also three stakeholder managers for landowners, local businesses and the public. Parish councils were shared between all four team members. It was considered important to have a recognised name and face that people can relate to rather than an anonymous organisation. It was also recognised that stakeholders like continuity and the ability to deal with the same person consistently who is able to know the local farmers and landowners. This was in addition to a member of staff responsible for communications such as a project website (now available at https://nationalhighways.co.uk/our-roads/a14-cambridgeto-huntingdon/), Facebook site and social media.

Statutory consultees

In general, the view from both those interviewed associated with Highways England and with statutory consultees was that the A14 NSIP had seen fairly effective engagement of statutory consultees through the DCO process. For example, Interviewee 30, from a statutory consultee, commented: 'Highways England and their contractors, their ecologists, throughout the project, I'd say we only had positive engagement with them. I can't think of any particular issues we had through the whole process.'

There were some concerns around two specific statutory consultees. There was concern expressed by Interviewee 23 about the Environment Agency and flood risk assessment. Interviewee 29 was also concerned that the Environment Agency's engagement with the project had been insufficient: 'the whole running the flood risk model was desperately delayed and I think the agency changed their flood risk model very late in the day'. Both interviewees considered this to be due to resourcing issues.

The engagement by National Grid was felt by Interviewee 23 to have been slightly problematic on this project, with the apparent case of not wanting to engage on a project too speculatively pre-submission because of the costs of detailed work. There were specific requirements for a gas pipeline diversion during examination. Similarly, Interviewee 29 felt some of the utilities providers had been harder to engage presubmission, resulting in changes to the scheme being needed later during

the examination: 'there was quite a lot of late input from some of the utilities, which meant that we had to bring forward quite a few changes to the scheme'. It should be highlighted here that although invited, we were unable to interview staff from either of these organisations for this research. Key issues may therefore be the understanding from some statutory undertakers and consultees of the NSIP regime, and the importance of pre-examination consultation and engagement, and the resource levels and capacity in austerity-hit public sector statutory consultees for such engagement.

Landowners and parties with an interest in land

The engagement of landowners affected by the A14 project seems to have been more mixed. Interviewee 23 felt it had been hard for the promoter to engage landowners in the pre-submission stage, and they had then tried to accommodate them through many changes (related to design issues) to the DCO during the examination:

We find that we will talk in advance to landowners and to statutory parties, but it's not really real for them until the examination is underway, and the chances are we won't be able to come up with an acceptable solution to them during the six months of the examination period, so while it might be acceptable in planning terms and it might well receive consent, we found that if we give it a few more months of negotiation, we might get something which is even better for the landowner and maybe even better for us. So things like access gates, private means of access, arrangements of hedgerows and so on, and you wouldn't want, especially, to be tied down to a particular plan, if you could improve it with a little bit more discussion and it's hard to get that discussion before the application. Notably, with the A14, you probably saw, there were quite a few changes made during the examination and they were, as a result of those negotiations happening, they managed to get them in before the close and I think it was put into three main sets, private means of access and so on, for landowners; gas diversions, where National Grid actually got properly involved ... further discussion with the Environment Agency when that finally got itself sorted out meant that we were able to reduce some of the flood compensation areas. It is the intention of the Act that that kind of thing is sorted before the application goes in, but it's very hard to get the buy in from the other parties, to give that level of attention, when they're not time pressured by the examination (Interviewee 23).

From the perspective of Interviewee 32, engagement with landowners drove many of the changes made to the DCO during the examination, which showed a certain willingness to respond to consultation: 'The vast majority of them were down to ongoing negotiations with landowners ... I suppose it's a shame that they came to light so late in the day, midway through the DCO process, but we tried to flush them out earlier and that was just not possible.' Interviewee 25, however, had a different perspective and felt that the engagement with landowners had been impacted by the lack of early detailed design work, which was perceived as due to cost saving but meant landowners could not understand exactly how they were going to be affected. There was also apparently a lack of meaningful engagement, which involved negotiating changes to the scheme:

What they're more or less doing at some of the meetings they're having, is what I would say is they're going through the process with landowners and they're pretty much saying 'this is the route, this is what's going to happen and this is the process of the DCO and then we'll get our compulsory powers and then it will be constructed,' ... they're not negotiating (Interviewee 25).

In summary, many landowners apparently complained that pre-consent they did not feel there had been enough meetings or real negotiation and from their perspective they were just being told what was going to happen, however, once issues were raised by them in examination, it was felt that there was a reasonable response from Highways England to issues raised. This suggests that despite the gearing of the system towards pre-consent engagement, some parties still skew their resources and focus towards engagement during the examination while the gaze of the examiners can perhaps also help drive promoters towards compromise with stakeholders raising concerns and issues. There was also some evidence that land agents representing landowners did not fully understand the differences between the NSIP examination and Town and Country planning inquiry systems. Further, there was apparently little appetite of land agents to work together in any way.

Local authorities

The NSIP passes through the territory of three district councils (Cambridge City, South Cambridgeshire and Huntingdonshire) and, due to two-tier local government, is also within Cambridgeshire County Council. In the pre-consent and examination, in the main the engagement

of local authorities appears to have gone well from the perspective of both the promoter and the authorities. Indeed, Interviewee 31 felt that the promoter had engaged local authorities better in the A14 project than they would have done under the previous regime, which placed less emphasis on the pre-submission stage. However, the local authorities concerned had been supporters of the project, which influenced their position. There were also concerns about drainage raised by the local authorities and the use of local and recycled materials in the construction of the scheme that they apparently felt were responded to appropriately.

For the A14, there was a partnership between all the local authorities concerned, with a joint impact report despite particular interests pursued by some (such as the City Council's interest in air quality measurement and monitoring). Interviewee 31 felt this joint working between authorities worked well although resources were constrained:

We had to rely on our own in-house resources, all of whom were committed to normal planning work and didn't always find the time, particularly within the restricted turnaround periods, to respond and that's probably where our approach to really see what actually is it that we need to say, what are our actual points to get across ... we targeted the specific points that we needed to put to the examining panel and we didn't get dragged into other things.

There was some speculation that the local authorities might have put more resources at a higher political level had they been objectors to, rather than supporters.

Local authorities did not always find Highways England and their advisors very responsive to working with them to resolve the issues they were raising, however: 'at times, it was like getting blood out of a stone, to be quite honest, in terms of getting effective dialogue and getting them not to be defensive about it ... obviously, we had local knowledge which we thought they would find useful' (Interviewee 31). Indeed, Interviewee 31 further commented that it would have been good to have been able to reach agreement before examination between the local authorities and Highways England about the issues they were raising, and he felt that the Examining Authority were 'exasperated' at the preliminary meeting that they had not. It was suggested by several local authority interviewees, as others had also commented, that Highways England had not allowed enough pre-submission time for a scheme of this size, with a feeling that the year between appointing a development partner to submitting the DCO application being a rush in terms of the amount of documentation

and investigation work required. This may have been linked to the tight funding window for the project.

The main issues for the County Council going into examination were apparently around the de-trunking of the old A14 road (that is, transfer of responsibility for it from Highways England to the county council) and the condition that 32km of the former road would be transferred to them, around securing public rights of way, around traffic modelling, flood modelling and the extent of archaeological work. The district councils were apparently more focused on noise and air quality, as well as traffic modelling and future monitoring. Interviewee 23 felt the local authorities had engaged effectively as a collective group through the pre-submission and examination phases and had had some success over issues such as traffic modelling, where there was apparently disagreement with Highways England.

During construction, it appears there were some issues caused for district councils, although fewer for the county council. The construction works led to a lot of road closures with the county council as the highways authority and operator of a traffic control room. There was apparently a feeling that there was a good working relationship between the county and Highway England's project team, with staff continuity helping with consistency of engagement. A regular monthly forum was considered helpful. The county council were engaged on traffic management about some detailed design issues, including traffic signals.

Local authority staff explained that an important concern during construction was about HGV drivers not following advertised diversionary routes (impacting villages but also city roads in Cambridge). The county council tried to work with Highways England to improve signage but other measures were hard to implement as the police did not have resources to enforce. During construction, any road closures could have led to long delays on the local road network as there were few diversionary routes available (given the geography of the Fens). In one early case, there was apparently traffic chaos at Bar Hill due to inadequate temporary traffic light sequencing but the contractors responsible did not seem interested or engaged in responding to the concerns raised.

There were some difficulties around certain pre-commencement requirements (particularly related to the removal of trees), night-time working and air quality monitoring. Mitigation measures such as installing triple glazing on nearby housing had difficulties associated with the noise assessments and complexities of applicability. These issues were felt to have led to a decline in trust locally in Highways England. Local authorities and some community groups had concerns

about the application of agreed air quality monitoring requirements. In interview, some of Highway England's staff explained that the requirements for air quality monitoring stations came from the examination, where local authorities pushed for their inclusion. They needed to be operational six weeks before construction started but were going to be put on third-party land, which required negotiations, and unexpected hurdles kept emerging around that.

At the district level, South Cambridgeshire District Council (SCDC) had a project officer working on the A14 improvement from 2002 to project completion. Other officers from Environmental Health and management become involved from 2015 with the approval of the LEMP, standards relating to noise, vibration and air quality during construction. SCDC received a large number of complaints from March 2018, when construction works commenced in earnest. The complaints related to those elements of the project near residents, rather than the construction in the open countryside. An A14 action group was a feature of the local elections in May 2018, when control of the council switched from Conservative to Liberal Democrat.

SCDC found dealing with the discharge of requirements quite challenging, as a forward programme of work from Highways England was not forthcoming, and hence they could not plan workloads. Requests apparently often landed on their desks without warning, for example for landscaping, and it was then hard to resource accordingly. There was a feeling there wasn't a 'sharing culture' between Highways England and the local authorities, even though they were supporters of the project.

There was no PPA in place between Highways England and SCDC, and apparently they refused to enter into one as 'they're a public body delivering highways projects in the public interest', yet the project was a real drain on council resources – something that was more than anticipated. Highways England did not predict how demanding it would be dealing with local community concerns and complaints. In addition to resources, a PPA gives governance with structured senior level contact, which the council considered would have been very helpful. SCDC had direct responsibilities to give consents for the construction works under Section 61 of the Control of Pollution Act 1974 (Environmental Health), but again this placed a major resource demand on the council (and neighbouring Huntingdonshire District Council). Issues such as statutory nuisance and noise monitoring (particularly out-of-hours noise monitoring) were significant for a project of this scale, and the district council had to use a consultant to assist them.

There was a view that engagement with the various forums (economic, landowner, parish) had been less full and structured post-consent compared with pre-consent. Apparently, Highways England did not send prior notification letters to warn neighbours of the commencement of construction works and got off on a bad footing with local communities. The district council felt it had to act as a mediator at times, even though most local people actually supported the scheme (just not how it was being delivered). The council hosted a monthly community engagement meeting, with Highways England in attendance. There were also working groups on noise, air quality and legacy landscaping but it sometimes apparently felt that the first two regularly descended into shouting matches, although there is a view that the legacy landscaping group made a real difference.

It was considered that Highways England were good at disseminating information, through road shows, but much less good at responding to issues and making changes to react to complaints. Noise from night-time construction works was a major complaint, alongside air quality and vibration. As environmental health issues, these fell within the district council's area of responsibility. It was recognised that as a linear project with machinery moving around a lot, it is harder to mitigate than a static work site (where you might have a limited number of sources and receptors and put a noise fence up). The timing of these night-time works could make a real difference to people's lives (for example, students during GCSE and A-level exams) yet were not clearly explained ahead of works commencing.

There was an impression among SCDC officers that Highways England struggled to deal with the level of complaints that had been received. Responding to these through website updates seemed at times to have been challenging and there were difficulties putting in place a process to try and ensure there was not duplication between Highways England and local authorities in responding to complaints (for example a log showing complaints received and what is being done in response, which was promised by Highway England but not implemented by the time of interview, halfway through construction, due to resource constraints). The district council set up its own web page to give local communities additional information and its role in relation to the project.

A major issue was apparently that the public expected they would be able to telephone someone in the middle of the night if construction works were taking place and have someone respond to their complaint immediately. Providing details of immediate contractor contact is normal practice on a large town and country planning consented development but was not provided for by Highways England in a way that the district council would expect on any other major development site. As a result, the district council facilitated this, with a night-time direct contact number provided (although this was listed on the district council website but not the Highways England one). The council also reported that Highways England would not use the 'considerate contractors' status for the project, which includes set engagement with communities and local authorities.

The detailed design was shown on a shared website and the council officers told to look at it rather than being more actively engaged. Those we interviewed from SCDC did not have much sense of what happened in response to their feedback. On documentation availability, SCDC officers found the numerous versions of documents on the PINS website could make it hard to find the current version in use. It was acknowledged the LEMP was on the Highways England website, but it often cross-referenced the CEMP yet this was not available publicly or to the council officers at the time of our interview. The contractors said it contained confidential information. The district council received numerous FOI requests in relation to the DCO requirements and their discharge.

Within SCDC, local councillors had been very engaged and at one point were having weekly meetings with officers for updates. There was a desire from the council for more transparency around the project during construction. The post-May 2018 administration was apparently much more concerned with air quality than the previous administration. The project was still supported by the council, but now within a policy context that is seeking zero carbon by 2050 and air quality improvements in the district. There was recognition that Highways England did good work on legacy and undertook additional landscaping to mitigate noise and air quality issues. The civil engineering information on detailed design, through models and virtual 'flyovers', was seen as good practice and the district council officers felt there has been good work on and around archaeology.

There was a general concern at SCDC that the Oxford–Cambridge Arc could bring lots more big infrastructure projects to their territory, and these would need to be managed effectively as they were implemented (although, in 2022, subsequent to our interviews, the Government decided not to pursue the arc as a major housing area). The council were therefore keen that lessons from this project were learned. From the implementation of this NSIP, these were:

• the need for consistency between what is promised pre-consent and what happens post-consent and accountability around this

- the need for promoters to be responsive to the local community
- promoters should work closely with local authorities, who have knowledge of local communities and expertise around community work on big development projects, and see the local authority as a partner
- a narrative is needed to bring the community with you, including a realistic timetable and sense of construction impacts
- a PPA with a local authority might help them resource the intensive work needed as an NSIP is implemented, but also contain useful senior oversight governance arrangements
- an effective complaints procedure needs to be specified in a CoCP and to involve proper engagement by contractors. Complaints actually need to be responded to so they do not spiral into more negative frustrations.

It is inevitable that there will be construction impacts from schemes of the scale of NSIPs, however, it is clear there is need to think carefully and resource properly the oversight of implementation, including resourcing local government for their role supporting this and being truly open and responsive to local community concerns. The local authority, as a guardian of a local place, will inevitably become closely involved if there are issues being raised by communities. We turn now to consider more directly the community perspective.

Community engagement and perspectives

We engaged communities via interviews and focus groups both in the time between consent being granted and construction started, and again when construction was underway. Looking at the documents submitted for examination, it is notable that in the pre-acceptance consultation process, the promoters made a commitment to the use of CoCP as a means of ameliorating community concerns about various types of disruption in the construction phase of the project. There were also numerous community concerns about lighting, access to property and cycling. Assurances in relation to mitigating some of these issues were made through the means of the Environmental Statement. In interview, staff from the promoter believed that community consultation had led to some changes to the scheme, for example noise fencing and very low noise surfacing, which were discussed during examination rather than just left for consideration post-consent through the CEMP.

Pre-consent engagement and examination

There were some concerns expressed to us during our research relating to the engagement of the community with the A14 project prior to the DCO being granted. Each project must be seen in context. Two participants in focus group 4 (which comprised civil society groups including members of parish councils, charities and campaigners locally) had been involved in earlier proposals for improving the A14 between Cambridge and Huntingdon and this longer planning history clearly provided context for their experience of the current scheme. The stop/start planning history of upgrading this stretch of the A14 was acknowledged by one focus group participant as part of the issue in local community perceptions: 'three shots at doing the A14 ... that's caused a lot of problems, people have had to fire themselves up and then it's all been taken from the table again.' Interviewee 31 did feel that the DCO process was more positive than previous regimes in terms of community engagement: 'one of the reasons why I felt it was a more positive process was because it did have that engagement, they had this right to be consulted and part of the process is for the examining panel to decide whether or not they had been effectively consulted, so it's good they had that dialogue.'

There was some suggestion that different parish councils apparently wanted contradictory solutions in relation to local roads, particularly towards the eastern end of the scheme. Towards the western end of the scheme there was apparent acknowledgement by local authorities of the issues being raised by the parish councils impacted by the new road alignment, but they still felt it was the best routing possible. In relation to parish councils, Interviewee 23 commented that 'Highways England probably hadn't been engaging with parishes as well as they could have been – maybe as well as they should have ... they can be effective during the examination.'

There was a feeling from one participant in a focus group that 'the consultation was very much "we'll tell you what we're going to do," rather than really listening to some quite sensible ideas from a whole variety of people'. Another, a parish councillor, commented 'I did get them to engage with me, but they just (strung) me along until the end of the inquiry and said "thank you very much, that's it." So I'm very, very critical of the Highways Agency and their so called consultation because I think it's a complete and utter sham.' Another commented 'For me, the issue was about attitude. This was epitomised in one of many well attended meetings in Brampton, where very carefully worded questions were asked of Highways England and by the end of the evening, not one of the

12 questions had been answered, not one.' One member of a charitable organisation reported that they felt at the pre-submission stage, after the initial outline work was done, they were able to get some adaptations from the promoter, but they became less engaging the further into the DCO process you got.

One participant in a focus group reported attending some of the examination hearings and feeling that the promoter was not responsive to civil society or parish council organisations, only the County Council, whose representative was apparently able to enter into meaningful dialogue and negotiation with the promoter in a way they felt they were not. Another participant in a focus group had not attended the examination because 'I couldn't really make the level of commitment required to deal with it properly' while another commented 'the feeling I got was that it was a fast-track process, just to force the issue through, there was never any issue that it was going to be consented, there was no real interest in engaging.' Although all documents were online, the time taken to find these and engage could be an issue for community engagement: 'each of their responses would require me to spend about half a day going on the internet, try to find references to various documents that they'd referenced all over the place – extremely difficult to do – but I kept going because I was determined not to let them just fob me off.'

There were a number of key areas for concern raised by the civil society groups and individuals, including air pollution, noise impact and the monitoring of these. One example was given in relation to the way the noise levels had been modelled. Other concerns mentioned by individual focus group members included traffic and the safety of the road layout in certain locations and non-motorised users. Severed footpaths, an apparent lack of imagination in what would happen with the old A14 left over and the consideration of non-motorised users and public transport were also key concerns:

I think for me the big disappointment was that it was just another road scheme, without the aspiration that was promised by the Department of Transport, that it would be undoing the damages of the '70s and it turned out, they've just done it again. So there was a real feeling that there's a massive opportunity wasted in terms of what they could have done. They've done a minimum level of NMU [non-motorised user] provision.

These may be issues involving County Council as well as Highways England responsibilities, but for local community groups there appeared a lack of joined-up thinking about a 'total route strategy' rather than a narrower 'road strategy'. One participant had apparently tried to engage with the County Council but found them not as helpful as he would have hoped: 'I was dealing with the county council, their team, and that was part of the disappointment I felt was they weren't engaging any more than Highways England was ... and I got the feeling, as I say, that's because they're so cash strapped.' Another issue was not considering alternative options at the Girton Interchange or 'rat-running' on other local roads as this was outside the project boundary.

Two focus group participants did report some positive early engagement with the promoter but felt dialogue had then ceased, one commenting: 'I thought that was quite positive, we got the feeling it did help to steer the inclusion of new stuff in the DCO plans, but that's when it stopped, they said "we've done it now, we've given you our best compromise" and that, I think, was the frustration, that there was no ongoing ... yes, the initial encounter was, I thought, quite positive'. Another added: 'I'm really dismayed by the total drop off the cliff of the communication at the end of the inquiry; that was it, there was no more discussion.'

A local resident and parish councillor (writing in a personal capacity) wrote to us while we were undertaking our research. The respondent's experience of the A14 project was that the pre-submission consultation was not genuinely collaborative, with the promoter apparently not making people feel listened to or that evidence and concerns raised were taken seriously: 'They physically were present, but conversations were most frustrating'. The main issues being raised were over air quality, route choice, rat-running on local roads, changes to elevations of local roads over the new alignment, noise concerns and environmental issues (wildlife and trees in particular). The respondent felt the NPS just locked in current ways of thinking and standards, without reflection on changing contexts such as climate change and increased concern with air pollution generally. They also felt there had been insufficient account of the changing local context, with new various proposed developments in the area including largescale new housing sites.

At examination, the respondent reported that the lead examiner did seem to listen and ask Highways England and their lawyers to review things, but it was 'always the same outcome – within current rules so it is an expensive farce'. She did not feel the issue of air quality was adequately dealt with at examination. Post-consent, there were local concerns about tree and hedgerow removal and construction traffic.

The result was that the apparent take-away lesson from the A14 DCO experience was:

Do not trust this process. It seems that the only way to make any significant change to the early plans must be outside of this system. It is a closed loop which simply costs tax-payers millions of pounds, frustrates those trying to work collaboratively for the best outcome – recognising the need for national infrastructure – and develops massive distrust with our government and its agents.

Another person who contacted us, who has been involved with the Campaign for Better Transport (but also writing in a personal capacity) raised concerns about bus stop provision along the route. A further note sent to us by a local campaign group, the Brampton A14 Campaign Group (BCG) felt that the system was skewed in favour of the promoter without adequately protecting affected communities. They felt concerns about design issues such as visual intrusion had not been adequately addressed in the consenting process, nor was there apparently high-level consideration of alternatives such as greater use of rail freight to reduce the need to accommodate so much lorry traffic on local roads. Concerns were also expressed about 'Highly complex, technically dense and long documents being prepared, which are costly and impenetrable by the lay person wishing to engage with the process' and the imbalance between resources and representation at examination between the promoters and local community groups. Again, concerns about air pollution and public health, sustainability and lack of full consideration for alternatives to highway building were expressed.

The overall experience was described by one focus group participant as 'like a juggernaut'; and given the County Council's support for the project, they were described as 'part of the juggernaut', another focus group participant adding 'That was a shame really because that's the only other powerful organisation'. Asked for their takeaway lesson from engaging with the A14 project through pre-consent to the approval of DCO, another focus group participant stated:

That it's a steamroller, basically. There isn't a genuine attempt at engaging. As I said right at the beginning, to me, there were two parties they had to engage, one was the county council, the other was the landowners on the compulsory purchase, so they did that, they had to negotiate with them. The other people, I got feeling the DCO process was designed to expedite and avoid a public inquiry and make the whole thing much quicker, a done deal.

Another recognised that having a time-limited examination was, in his view, better than a longer public inquiry (commenting 'it is a positive because you'll get things moving quickly') but then added 'but you might as well say you're not going to have the engagement, it's completely facile, please don't bother to ... don't waste your time because that, I think, is the feeling that a lot of people have, is this sense of putting a lot of effort in and not getting much out of it'. A third participant commented 'small players get sidelined' while a fourth suggested 'the time constraints they put on the money, which means that they throw a plan on the table and say "it's got to be that, otherwise we won't have the money" contributed to a lack of meaningful community engagement.

In slight contrast to this, Interviewee 33 felt there had been effective attempts at engagement: 'I think, yes, there was a good deal of involvement/participation' but that people wanted higher levels of design detail pre-submission than the promoter could supply: 'I think possibly, in terms of individuals, they would perhaps prefer and have a better understanding of concrete facts and designs, whereas obviously, we were looking, at that stage, at an outline feasibility; so perhaps the engagement of individual parties, landowners and others was not so great.' Interviewee 32 also made a link between level of detail and community consultation, suggesting that a lack of detail at the concept pre-submission stage could make meaningful engagement more difficult. Although consulting early did apparently allow some 'scope to take on board people's opinions' so there were advantages and disadvantages to the front-loading of engagement, but levels of detail were important.

Post-consent engagement

The promoter's staff told us in an interview in 2019, while construction was underway, that their perception was that from pre- to post-consent, local communities remained interested in what's happening. People noticed things and wanted to know what Highways England and their contractors were doing. The level of engagement remained steady from pre- to post-consent and it was felt to be important that engagement did not drop off once consent was achieved. The focus of that engagement, however, shifted. Early engagement was very much about the benefits of the scheme, why it was being done, and explaining the process. Later engagement was more about what's going to happen as the project was being implemented and how people would be impacted.

A range of engagement tools were used, including a mobile visitor centre van taken to community events, festivals, supermarkets, schools and colleges, which people could invite to their event. There was increasing use of social media as the project progressed. Ten thousand people followed the Facebook page and 3,500 followed the project's Twitter account. Social media was even used to engage football fans who might only use the road twice per year as they follow their (not locally based) teams. The project progress pictures and timelapse videos seem to have been particularly popular, so for example people could see why there'd been a full road closure and what's been achieved over that period. There had also apparently been some element of selfpolicing on social media as many locals strongly supported the project. Despite the success of the online and social media presence, there was, however, a recognition that some people (often older people) still preferred face-to-face meetings and there were newsletters as well as attendance at parish council meetings. There was a strategic stakeholder forum, although the frequency of meetings reduced post-consent (at the request of the strategic stakeholders).

We held another focus group in January 2019, when construction was well underway, as a way of gaining a sense of the community perspective. This involved parish council representatives from the whole of the route. This was well attended. In contrast to our 2017 community focus group, there was general support for the project, with some wishing it had been built 20 years before, and it was noted that the current A14 was at complete capacity so even a very minor accident led to chaos. Reflecting back on the consent after a couple of years, it was felt by several attendees that the DCO process felt like a rubber stamp, with the argument that the project was for the greater good overriding any concerns about local impacts. There had been legal action by the Offords A14 Action Group over the routing decision. There were some unresolved concerns regarding traffic modelling. However, there was also a suggestion that Brampton Parish Council had been able to influence the design of the A1/A14 intersection and some parish councils reported having had some useful engagement with the Highways England experts on air quality.

Post-consent, there were mixed views in relation to the detailed design process. In general, it was felt that once the project had consent, it became harder to have an influence than it had been pre-consent. The consultation events on detailed design were felt to have been more information-giving than proper engagement, and there was a sense that the detailed design was done behind closed doors rather than incorporating local knowledge and views. This was despite important elements, like the design of the Great Ouse Viaduct, being done post-consent. In the early days, there was felt to be a lack of detail on issues

local communities really cared about and a minimalist approach to mitigation was reported.

It was also reported some elements had changed, for example a promised footbridge not being built, without parish councils being told. Furthermore, the recent announcement that the scheme was going for motorway status was a big surprise to many attendees at the focus group and led to further questions about the detail of signage, lighting and whether there would be any impacts on layout from this change in road status.

In terms of the project's construction phase, a range of adverse impacts were reported by various attendees at the focus group. Things apparently started badly with the destruction of trees being far greater than many people were expecting. The impacts of construction were generally felt to be worse than had been expected, and there could have been more transparency on how disruptive things would be. Some specific concerns in relation to drainage issues and land prices were raised. There were particular concerns about traffic impacts, with HGV drivers diverting on unsuitable roads through villages such as Swavesey, Hemingford Grey and Fen Drayton, and a lack of ability for the police to assist (although improved signage seemed to have helped a bit). The very long official diversion routes were not popular, hence people were taking alternative routes. A reported increase in rat-running saw 6,500 vehicles daily through villages such as Boxworth compared to 800 before works started. On occasion A14 closures coincided with other closures in the area, which caused issues. There were also concerns around impacts from the construction project on country roads.

That said, it was felt that in general the CoCP was adhered to, and working hours specified were followed. New road surfaces were felt to have reduced traffic noise. Announcing and explaining night working to local communities had apparently improved through the construction phase. Mud was cleared off roads as promised. In general, there was some feeling that it was easy to forget long-term project benefits when suffering shorter-term construction impacts, and greater early transparency about this would have helped.

There was some concern about the accessibility of contractors on this project in relation to complaints, and the issue of who you could complain to immediately when something is happening during construction (for example a contractor removing trees when they perhaps shouldn't be). It was felt that people would rather have directed such complaints directly to Highways England and their contractors than having to go through the district council. The approach of Highways

England to engagement was felt to be one where information was given rather than a collaborative approach to problem solving. One attendee described it as a 'brickwall-like approach to communication'. The fact you could only talk to Highways England, and never to their contractors, was a cause of some concern.

The liaison officers from the project were, however, felt to be good and had made a real effort to communicate with the parish councils and keep them informed. Having a directly contactable, named and known liaison person was appreciated. These liaison officers came to events and parish council meetings, which was considered helpful. The closure information was initially felt to have been quite poor but again improved through the construction phase. The roadshows and mobile visitor centre had been popular. The dedicated website was felt to have become better as the project progressed, and the offer of coach trips to the construction sites was appreciated. People liked signage explaining what's going on (for example, this is an archaeological dig).

The scheme was reported to be having some positive legacy and cited, for example, the donation of speed enforcement monitors to one parish council and the legacy fund supporting some new paths and pavements. There had apparently been some tree planting, although it was suggested that there was some inconsistency in the distribution of legacy funds and how well their use was publicised. The promoter themselves told us how the project had donated excess materials, for example to help improve local footpaths, paved a church access road and assisted a school playground and animal shelter. They felt that as the project progressed, people were increasingly interested in how the scheme can help the community and over time that has become a greater focus of attention than the design.

More generally, there were concerns about unresolved questions such as over the local traffic movement around Brampton/Huntingdon once the old A14 viaduct was taken down. This was not a Highways England responsibility but is clearly an impact from this project and caused local concern. There was also concern about a lack of a joined-up approach between the A14 and other large development proposals, for example thousands of new houses in developments such as Northstowe. Will the legacy road be sufficient for the predominance of car-based commuters in this area? How much co-ordination is there between this NSIP and other significant development and infrastructure projects proposed in the area? Nevertheless, overall, it was felt that Highways England's liaison with parish councils post-consent had been reasonable in terms of making an effort to keep them informed and having dedicated

contact channels through project liaison officers even if there were some concerns about elements of the detailed design process and management of construction impacts.

Interestingly, Highway England's staff in interview did feel that on detailed design, local communities were not offered much choice on the whole scheme but there was some input on things like fences and private access, which was incorporated. In that sense, Requirement 3 on detailed design was more about Highways England giving information about the detailed design as it progressed than more meaningful community engagement to actually shape the scheme. As the biggest highways project for many years in England, the promoter's own staff reported to us that they felt the project has actually enhanced Highways England practice and expanded views about the range of communications channels that can and should be used. They felt in terms of post-consent engagement, they had learned lessons about staff continuity leading to better engagement, having local staff who knew the area. Building a rapport with local communities could help, and it was important to be open about mistakes and learn from them (the accidental removal of a bus stop at Cambridge Crematorium raised by a community member to us was apparently acknowledged and corrected).

Conclusions

The A14 Cambridge to Huntingdon Improvement Project is a very large NSIP now completed. The experience of the DCO project has clearly already been one from which a number of stakeholders, including the promoter, Highways England, have been able to learn lessons and gain useful experience to apply in future projects. It has generally been presented by Highways England as a successful project (for example, Highways England, 2020). There is some evidence, however, that there seems to have been a rush by the promoter to get to examination and some of the requests for detail might have been avoided had more time been spent pre-submission (there appear to have been funding issues at play here, perhaps related to a desire to secure funding before Brexit), however, changes made to the DCO and the use of requirements demonstrated a willingness to respond to concerns raised and apparently the DCO as consented was fairly readily implementable.

There were, however, a number of concerns raised in the development and delivery of this NSIP. Community engagement, even if a majority of local people apparently supported the scheme, has been of concern. The approach to 'consultation' appears largely to have been a 'decide and defend' model where information is given and comments allowed but then not much happens in response. A slightly rushed detailed design stage appears not to have had much scope to incorporate feedback from local communities, councils and other stakeholders, so not making for meaningful engagement. Further, apparently this engagement declined through the examination and into the post-consent period. This is important in relation to local communities having sufficient trust in promoters and their contractors to support detailed issues being resolved post-consent. The poorly established system of response to local residents and landowners then seemed to place additional burdens on the local authorities who were not perceived as part of the project's delivery by Highways England, which adopted a very top-down approach to the project.

This NSIP also raised issues about alternative transport strategies and whole network policies reducing the need for the new road; issues around climate change and in relation to air quality are much bigger issues that any part of the UK planning system would struggle to cope with (despite their vital importance to society as a whole). These wicked issues become difficult to answer through the DCO process. Nevertheless, they do point to some wider concerns at play in a system focused very much on individual projects in a case-by-case manner and a silo-driven approach to NPS and the 2008 Act regime as a whole.

Post-consent, the A14 project DCO requirements made commitments to consult on the detailed design stage, to publish the CoCP and LEMP, to consult on the discharge of requirements and have a public register of these. These requirements appear to have been complied with. There was subsequently proactive work to engage parish councils and other local stakeholders, and the project website contained useful information relating to the discharge of requirements. The work of the project's stakeholder liaison officers was generally appreciated; particularly the consistency there was in some staff from pre- to post-consent. A proactive approach to giving information about the project at events seemed to have helped, and social media was used effectively. The project's website developed and road closure information became better as construction progressed.

There were, however, particular concerns about the transparency of the impacts of construction processes, and the complaints procedures in relation to them. There were issues as to who could be contacted who knows what's happening on site there and then (particularly at weekends and evenings). There appears to have been a lack of joined-up working with local authorities, which is particularly important given their role in relation to environmental health, and there was little apparent consideration of the resource implications on local authorities from a project of this scale. Improvements in these areas could have helped smooth the implementation of a project that in theory is widely supported locally.

The project was completed early and on budget (even though a very high budget was allocated to the project). There were clearly elements that went well and lessons both positive and negative for other NSIPs. Transparency of engagement and decision making appears to be vital. If more detail is being decided post-consent, then it is vitally important to ensure there is sufficient opportunity for meaningful engagement on this: there cannot be an appearance of engagement 'dropping off' once the examination ends if there are still matters being determined after it. More broadly, it seems the DCO process is pushing things to be more transparent and involve more upfront engagement than the preceding consenting regime for new highways projects, as intended, but as a planning approach it remains siloed with regard to broader strategic development and environmental contexts.

Thames Tideway Tunnel case study

Introduction

The Thames Tideway NSIP is one of the largest and most complex projects that has been given consent under the Planning Act 2008. A 25km 'super sewer', it is a tunnel under London (primarily following the River Thames), that aims to enhance the existing (primarily Victorian) sewerage system and provide capture, storage and conveyance of almost all the combined raw sewage and rainwater discharges – tens of millions of tonnes of which currently overflow directly into, and pollute, the River Thames every year. These will instead be taken to the Beckton Sewage Treatment Works in east London. A linear project, it transverses 14 London boroughs and is being created within heavily built-up and in some cases historic areas. As noted in the preceding chapter, linear projects have their own specific challenges of multiple local authorities and numerous requirements for working locations – for access and for works.

The choice of the NSIP legal process to achieve the consent for this project was significant. In deciding how this tunnel could be consented, the government had a range of existing consenting regimes to consider. The use of the 2008 Act was not available initially and required changes in the legislation to allow this regime to be used. The reasons for this were never made explicit but the defined timeframe of the consenting process was considered to be a major factor by those involved. That created considerable pressures on the project teams and no time extension was sought. Like the considerations to consent the A14, the government was under some pressure to provide a response to its continuing failures to meet the EU Waste Water Treatment Directive (1991) and the European Court of Justice (ECJ) was close to imposing both one-off and continuing fines as it had done in Belgium.

There seem to have been some issues during examination about expectations of community engagement and a focus on community and local authority concerns led to provisions for generous compensation schemes for householders and institutions. As we will discuss, the involvement of local authorities and their expertise throughout the project has been quite different from the A14 scheme considered in Chapter 7. Overall, the Thames Tideway is a major and unique project that has generated many innovative ways of engaging the community and maintaining this contact throughout the life of the construction works. In this chapter, the details of how this has been established and operated are discussed. It concludes with a consideration of how these approaches to community engagement could be used in other NSIPs and major infrastructure projects.

Context

The application for Thames Tideway was accepted by the Planning Inspectorate (PINS) for examination on 27 March 2013 and development consent was granted by the Secretary of State for Communities and Local Government and the Secretary of State for Environment, Food and Rural Affairs on 12 September 2014. Construction started in 2016 with primary works, and tunnelling commenced in 2018. It is generally considered to be the largest project yet given permission through the DCO regime. A non-material amendment was made to the DCO in May 2017, to allow variation in the locations and depths of inlet and outlet shafts to be constructed at Beckton Sewage Treatment Works so as to facilitate their construction and reduce excavation waste.

The main tunnel has a diameter of 7.2m and passes through environmentally sensitive and densely populated areas under London and along the river. Figure 8.1 indicates the project location. It is the largest water and sewerage infrastructure project in the UK since the industry was privatised in 1989 (National Audit Office, 2017). At the time of writing, the project is under construction and is due for completion in 2024. It involves 24 construction sites from Acton in west London to Beckton in east London. The tunnel commences 30 metres underground, gradually descending through what pre-construction were uncertain ground conditions to meet a separate new tunnel by the River Lee at 66 metres depth (Zhivov, 2018). The original promoter was Thames Water. Bazalgette Tunnel Limited (trading as 'Tideway'), a consortium, is now the licensed infrastructure provider set up to finance, build, maintain

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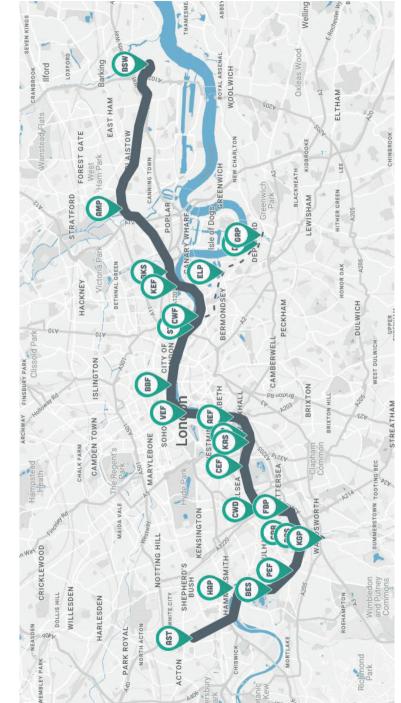


Figure 8.1 The location of the Tideway project within London (Source: Tideway, 2017, reproduced with permission; map data © 2017 Google)

and operate the tunnel, with this special purpose vehicle involving an overarching body and three different consortiums focusing on different geographical sections of the route.

The project's scale and London location means it has achieved a high profile and there are already a number of publications that relate to it. Some describe the background to the project demonstrating that, like many cities internationally, London has sewers that drain both waste water and surface water together to treatment facilities. In order to prevent sewer flooding during high rainfall events, at various points along the River Thames there are outflows – called 'Combined Sewer Overflows' (CSOs) – which discharge, when the flow is higher than small dams in the sewer, untreated raw sewage mixed with rainfall directly into the River Thames (Dolowitz *et al*, 2018; Loftus and March, 2019). There are 57 CSOs along the tidal Thames and they prevent the sewerage system backing up to the point of overflows from manholes and raw sewerage flooding roads and buildings in London (Zhivov, 2018).

As London's population has expanded and higher intensity storms have become more common under climate change, urban surfaces have become more impermeable due to paving and development ('soil sealing') and base flows of waste water have increased due to higher water consumption. CSO discharges have now become more common as the Victorian sewerage network designed by Joseph Bazalgette is overburdened. The CSOs were designed to be used about four times per year but in London they now occur around 50 to 60 times per year, causing an annual average overflow of 39 million tonnes of untreated waste water to flow into the Thames (Loftus and March, 2019). Indeed, DEFRA (2015) highlights that a system designed for a city of four million people is now operating at 80 per cent capacity even in dry weather, so even fairly light rainfall can trigger CSO use.

This discharge of untreated sewage into the river is not only an environmental and moral issue, but also led the European Commission to issue, in 2006, a reasoned opinion that the UK was not complying with the 1991 Urban Waste Water Treatment Directive. This was followed in 2010 by the European Commission launching enforcement action. In 2012 the Court of Justice of the European Union confirmed that the substantial use of CSOs along the Thames did not comply with the EU directive. Although no fines were immediately issued, continued use of CSOs placed the UK government at risk of a lump-sum penalty and daily fines (National Audit Office, 2017 in Zhivov, 2018). Indeed, in October 2013, the Court of Justice found Belgium in breach of its obligations under the directive, resulting in a one-off lump sum fine of €10 million

(£8.5 million) plus fines of up to €859,404 (£734,533) for each six-month period of further delay (National Audit Office, 2014).

In 2000, before these judicial actions were set in motion, Thames Water, along with government partners, had commissioned the Thames Tideway Strategic Study (TTSS) to set objectives and evaluate options for protecting the tidal Thames from the adverse effects of waste water discharges (Dolowitz et al, 2018; Grafe and Hilbrandt, 2019). The proposed solution was the new super sewer tunnel. The tunnel as now being constructed will connect with 34 CSOs and is expected to reduce spill events from about 39.5 million cubic metres per year to a maximum of 2.35 million cubic metres per year (Alder and Appleton, 2017; Zhivov, 2018).

There has been some controversy around the choice of the Thames Tideway Tunnel as the optimal solution by the TTSS. In London, the solution to CSOs has been 'grey' infrastructure – new tunnels – but in other cities internationally there has been greater use of 'green' infrastructure including green roofs, rain gardens, detention basins and other forms of Sustainable Urban Drainage system and source control measures. These were rejected for London because of the highly urbanised nature of the catchment, the impermeability of London's clay soils, the absence of natural receiving waters (due to the incorporation of many of London's original streams and rivers into the sewerage network) and claimed excessive costs (Dolowitz *et al*, 2018). The case for the scheme is summarised in DEFRA (2015).

An independent report opposing the Tideway Tunnel was published by the original chair of the TTSS steering group: Binnie (2014) claimed that many of the improvements needed to reach the original objectives of the TTSS had been achieved through the construction of the separate Lee tunnel and the associated improvements at sewage treatment works, and that implementation of SUDS could significantly reduce storm flows into the sewers (Dolowitz *et al*, 2018). Completed in 2016, the Lee tunnel is the largest-diameter and deepest tunnel ever built in London, 6.9km long and going to a depth of 80 metres, it has already cut CSO discharges by more than 40 per cent. The scheme was noted for a number of construction innovations (Costes *et al*, 2018).

Given the critique of the necessity of the Thames Tideway Tunnel, some scholars have described the £4.2 billion scheme as guided more by 'financialisation' than environmental need given the apparently increased opportunity for rent extraction compared to any alternatives: 'Financial and political interests come to be integrated into an elite fix that will generate returns for the pension funds, insurance companies and sovereign wealth funds now integral to the hydrosocial cycle of the city'

(Loftus and March, 2019: 2293). Similarly, Grafe and Hilbrandt comment on the scheme as 'a textbook example of today's financialized landscape of urban infrastructure provision' (2019: 607).

More broadly, Dolowitz *et al* highlight that 'as post-industrial cities follow different economic, social and political pathways, their infrastructural choices are also diverging ... An interceptor tunnel was more viable in London where the institutional, economic and regulatory structure of the water industry supported large capital investment' (2018: 90). There has also been concern about the scheme from the NAO, who comment that the uncertainty in the modelling was not fully explored before the full tunnel option was supported by government and that a smaller, lower cost tunnel could have been a viable alternative, while when construction started, it was still unclear how much Thames Water customers would have to pay per year towards the bill (National Audit Office, 2017).

The NSIP is divided into three design and build contracts: East, Central and West. Tunnelling is mostly in clay in the west section, mixed sands and gravels in the central section and chalk in the east section (Stride, 2016). The three joint venture consortia of principal contractors are complemented by a fourth contractor responsible for delivering the control system (Harvey *et al*, 2020). The tunnel includes 18 CSO drop shafts to divert storm effluent into the tunnel and construction has also involved three large diameter construction shafts to enable the launch of the tunnel boring machines to excavate the main tunnel drive (Newman, 2021).

The public–private partnership (PPP) financing model of the project is explored in detail by Zhivov (2018) who explains that the already highly geared finances of Thames Water meant they could not cover the project costs alone, given the scale of risks and uncertainties. Instead, a hybrid approach was adopted including a government support package, private financing and consumer charging, which should peak in this decade at up to £25 annually per household to pay towards the £4.2 billion project cost (2016 prices). The project involves a 'Special Purpose Vehicle', Bazalgette Tunnel Limited, which is a separate company but closely engaged with Thames Water who will both supply and receive sewerage from them once the tunnel is complete (Grafe and Hilbrandt, 2019).

The project has involved detailed pre-construction geological ground models, using data from borehole and river borne seismic reflection surveys that have extended geological investigations to a greater depth and higher density than any previous studies and have together delineated several significant geological structures along the route (Newman and Hadlow, 2021). Despite nearly 500 investigation boreholes

pre-construction, there have been geological complications during excavation that have resulted in adaptations to excavation techniques, as discussed by Newman (2021). Finally, in terms of existing literature, the innovative approach during construction for providing health and safety briefings to 14,000 staff is explored by Harvey *et al* (2020). We now turn to our own research findings in relation to the project.

Consenting the project

As the National Policy Statement (NPS) for Waste Water states, 'The Thames Tunnel does not fall within the original thresholds contained in the Planning Act to be considered an NSIP as it is not associated with a new or extended STW [Sewage Treatment Works] of 500,000 population equivalent or above. However, the Secretary of State for Environment, Food and Rural Affairs made an announcement on 6 September 2010 that development consent for the project should be dealt with under the Planning Act 2008' (DEFRA, 2012: 17). Following the Secretary of State's announcement, the NPS was produced and provides the policy framework for waste water schemes considered NSIPs. This includes explaining the need and establishing the principle of development for the Thames Tideway Tunnel. It is interesting that the DCO route to consent was clearly favoured over other options, such as a hybrid bill. It was not clear to most of our interviewees why the DCO route was chosen here.

Thames Tideway is the largest DCO made to date. The order is 339 pages (Thames Water, 2014a) compared to, for example, 162 pages for the Hinkley Point C Nuclear Power Station, by any counts another large project (Scott, 2013b). In interviews, it was suggested to us that it was the project that 'nearly broke' the NSIPs regime, and there have been no projects on a similar scale consented this way since (HS2, for example, was dealt with by way of a Parliamentary bill process and interviewees suggested to us that this seemed more appropriate for a complex, large linear scheme passing through a large number of local authority areas). There was also apparently a strong desire to keep to the six-month examination period rather than seek an extension and seeking an expedited consenting process may have been important here (perhaps given the threat of fines following the European Court ruling). Interviewee 18 did feel that a six-month examination period for a project of the scale of Thames Tideway was too short: 'So it was speeded up, but it just meant that the misery was concentrated in a shorter period of time, and really concentrated, and it didn't help ... that was just hellish.'

It was also described to us as a sort of 'one off' project without a similar scheme to use as a model, which meant the promoter themselves drove some of the detail considered in the examination and contained in the DCO: 'particularly on the big, infrastructure projects, like nuclear, or Thames Tideway, they're one off projects and you don't have that confidence of other developers doing a similar thing before' (Interviewee 7) as to where flexibility to sort out detailed design later could be acceptable.

As a linear project, stretching across 14 local authorities, the Thames Tideway NSIP undertook its pre-acceptance consultation on a site-by-site basis. We undertook a desk-based analysis of some of the key supporting documents that accompanied the application for development consent to see how they balanced detail for the actual DCO consent and flexibility for what might be further worked out post-consent, to assist with constructability. Firstly, in reporting the results of consultation in the report, issues were themed and grouped. The role of the Code of Construction Practice (CoCP) was identified as a means of responding to the points made in consultation and mentioned 125 times. It was also used as a mechanism of response through different stages of the consultation. The Consultation Report also mentioned the role and use of a Traffic Management Plan (TMP) in response to issues raised by consultees.

In the pre-acceptance consultation, the role and use of flexibility in the delivery of the project was mentioned in relation to specific aspects of the NSIP and included design solutions for project works sites and the design of tunnel alignment using limits of deviation. There was also some flexibility mentioned in the conveyance of waste material excavated from individual sites. In addition, the consultation process sought flexibility from the Port of London Authority (PLA) in the selection of modes in the transport strategy although there was a request for a firm degree of certainty from the PLA in responding to the promoter's request for derogations to enhance flexibility. Finally, the Environment Agency recognised the promoter's wish for flexibility for contractors while recognising the necessary responsibilities of contractors to the environmental objectives that must be met.

There were commitments to further consultation and action beyond the DCO stage in the NSIP delivery process. The project adopted the City of London's Code of Practice for Construction and Demolition and, where CoCPs have been produced by the local authorities directly affected by the project, these were taken into consideration. The CoCP includes specific tree protection measures. The promoters also committed to undertake specific mitigation measures in the CoCP for several individual

sites identified in the report. Commitments on avoidance of damage to buildings during construction including heritage assets were secured though the CoCP set out in the consultation report. A commitment for a TMP within the CoCP was made. There is a commitment to a construction communication plan in the CoCP. Other commitments for standards to be incorporated into the CoCP included emission standards for construction equipment, the role of river transport during construction, the requirements for contractors to produce a Sustainable Waste Management Plan for each site, the effects on fish during construction, construction hydrology, construction air quality and site layouts.

The CoCP for Thames Tideway was prepared in two parts – Part A for the whole scheme (which would then apply individually to each site) and Part B for issues specific to each site. The requirements section of the DCO states that the CoCP will be in two parts, but the requirements do not then specify the elements to be included. The CoCP includes a general provision about allowing some flexibility as long as the results do not lead to impacts that are materially worse than the original intentions; a NEWT approach. These 'unless otherwise agreed' provisions are apparently widely used, particularly in relation to detailed design and landscaping requirements and are essential to project delivery.

We also looked at the environmental statement (ES). This used a spatial parameters approach so that infrastructure could be located within the limits of deviation to allow some flexibility during detailed design. The ES also takes a design principles approach, that includes both project-wide and site-specific design principles, allowing flexibility for detailed design work to be conducted post-consent. In addition, there was a book of plans, which identified permanent above ground designs and included three levels of flexibility – for approval (fixed), indicative (largely fixed) and illustrative (provides one possible manner of construction/visual appearance). Frequently, design parameters use a maximum level to allow more variation and be smaller if required including minimising encroachment onto the foreshore, providing reassurance that designs would be as small as feasible within the maximum extent showing on the plans.

The examiners' report is 534 pages and supplemented by appendices (Bessell *et al*, 2014). It considers issues of air quality and emissions, biodiversity implications (both terrestrial and aquatic), coastal and river change, design, landscape and visual impact, flood risk and climate change, impact on the historic environment, issues of regeneration and impact on open space, issues of noise and disturbance, socio-economic

effects (including amenity, health and well-being), traffic, travel and transportation, water quality and resources, habitats regulations, pollution control, security considerations, common law and statutory nuisance, rationale for selection of work sites and drive strategies and compulsory acquisition and related matters.

A civil engineer specialising in water projects and who was Tideway's Strategic Projects Director has written a book providing his account of how the NSIP was planned, designed, approved, funded and is being constructed (Stride, 2019). This includes details about the consenting process, such as the fact that the DCO application was about 50,000 pages, which weighed about a tonne and, as two copies were required, two transit vans had to be hired to take the submission to PINS in Bristol. Figure 8.2, below, is a photograph of all the documentation at the DCO submission stage, giving a sense of the scale of the project and the task for giving it consent.

The requirements section of the DCO is divided into project-wide requirements (19) and site-specific requirements (353) and only one other consented DCO examined during our research (Hinkley Point C Nuclear Power Station) has this. Taking together the project-wide and site-specific requirements, there are 372 requirements for Tideway. The next largest found in our research was 232 for Hinkley Point C and then



Figure 8.2 The Thames Tideway Development Consent Order application (with all supporting documents). (Source: James Trimmer, PLA, reproduced with permission)

the next highest was North Killingholme Power Station scheme with 51. Comparison of the promoter's initial draft DCO and the one consented by the Secretary of State shows the draft DCO has a requirements section over 81 pages and the final one has requirements over 121 pages, with additions flowing from the examination process, for example project-wide Requirements 10 to 19.

The division of the requirements between project-wide and site-specific sections was seen as a key route to flexibility for construction. The intention here was that construction on any one site would not be held up by the discharge of requirements relating specifically to another site. It was apparently impossible to avoid some project-wide requirements, but these were agreed with an awareness of their criticality to implementation and a desire that the project-wide requirements would not unduly hold up one of the three main contractors awaiting another.

One interviewee did suggest that Thames Water was mainly focused on the consent rather than the construction of the project, which he felt explained the willingness to allow many requirements to be added to the DCO with consequences for those involved in their discharge:

to get the consent was obviously Thames's fundamental objective ... 'must get the consent' and if that means we'll give them a condition and have a condition placed on it, that was acceptable ... So what it meant was this keenness to put everything into conditions mean that I now have a team of 15 people involved in consenting Tideway [i.e. dealing with additional consents and the discharge of requirements after the main DCO has been granted]. We've got three project managers because obviously, there is three contracts and the amount of consenting work, either directly that we consent, or that we're a consultee to and there are formal drafts, submission drafts, it's Byzantine (Interviewee 18).

It is worth noting that in addition to the requirements in Schedule 3 of the DCO, there are also secondary approvals related to the Deemed Marine Licence in Schedule 15 and the protective provisions in Schedule 16. We were told that taken together from requirements, other schedules and side agreement (for example with landowners), more than 10,000 secondary approvals were required on the project.

Use was also made of S106s in the consent of this NSIP. There are apparently 14 S106s on the Tideway NSIP, and 36 asset protection agreements. These potentially support the deliverability of the consent by

avoiding additional articles in the DCO/requirements to manage the issues being dealt with through such agreements. Many of the community liaison provisions for the project are in the S106s with a template and set of terms to which all local planning authorities were asked to agree. This was to help promote deliverability to contractors and ensure fairness. The examination report notes, among several commitments to community liaison working groups, that an S106 between the promoter and the London Borough of Lewisham provides that 'whereby the Council would establish a steering group, involving local community groups, to develop a landscaping masterplan for Crossfield Amenity Green and the adjoining public realm, the agreement would provide funding for the preparation and implementation of the masterplan' (Bessell *et al*, 2014: 93).

Constructing the project

While Thames Tideway was promoted as an NSIP by Thames Water, it would not be responsible for construction as it had always been intended that this would be undertaken by a PPP. It was suggested to us during our research that this may have made the promoter more cautious but perhaps also meant that the promoter did not consider the issues likely to arise in the construction of possibly the most complex NSIP project to date. The contract for delivery has been divided into three parts each covering a geographical area of the whole route. One of the key issues for constructors has been the role and development of the reference design and the extent to which the project's promoters assessed its deliverability. We were told that the project was only 5 to 10 per cent designed at the time of applying for consent and detailed design work continued for several years after consent was granted. While there was some construction advice to the promoters before consent, the deliverability of the reference design was not stress tested nor were alternative design approaches considered. There were also specific issues for design and build projects and their procurement that needed to be considered in the reference design.

During our research we were told that at times the ability of the project to utilise more efficient and effective methods of delivery was hampered by a lack of flexibility in the DCO. Further, some of the dimensions used led to a non-material amendment to the DCO although there was a push for flexibility around land take. It was also suggested that flexibility could be improved if the ES was stress tested to ensure that

the elements of the ES worked together and whether it was genuinely assessing a realistic worst-case scenario. For example, the number of barges assessed in the ES and EIA to remove tunnelling spoil was less than the required number for industry-standard tunnelling rates. It was also suggested that when limits were defined in the ES these should have been examined to assess the implications on the delivery of the project. While changes in the delivery of the project might be able to be managed using Environmental Effects Compliance (EEC) there are numerous changes that exceed these limits. However, the use of EEC as an everyday tool of screening had proved to be an essential component of flexibility for delivery on individual sites.

Similarly, site boundaries and project limits included within the DCO were, in the perception of several of our interviewees, not properly tested for deliverability so that some contractors struggled to keep within the DCO limits. The wording of some requirements was also seen as too restrictive in practice. For example, requirement BLABF13 at Blackfriars states that works to the listed embankment wall shall not commence until details of works to restore the listed fabric are approved but apparently there was need to do some initial intrusive works to the listed structure to assess its structure and restoration needed.

The CoCP was agreed at examination before contractors were appointed, with many other required documents (like the Noise and Vibration and Air Quality Management plans) depending on it. The high level of detail in the CoCP was restrictive and contractors have had to rely on the tailpiece 'unless otherwise agreed' route to deviate from it. For example, at one site there is a specified number of road lanes that must be kept open outside the work site, but this puts the project at the hostage of other parties doing road works, while a provision not to reverse lorries out onto a road is difficult if the work site is not large enough for a lorry to turn around.

The relationship between the DCO and other legislation is complex as it disapplies some legislation but not all, and interpretation of this has at times placed considerable cost and delay. The discharge of the protective provisions was apparently complex, with issues around the legal remits of named organisations and with a lack of specified timeframes to resolve issues. On occasion, restrictive conditions were placed on discharge approvals, up to 50 at a time. The DCO set no statutory time limits for response from statutory consultees, local authorities and others in dealing with licenses and discharge of requirements. We were also told that legal agreements with landowners and parties with interests in land (PIL) that obviated the need for compulsory acquisition needed to be carefully considered for their potential effects on delivery.

There was evidence from our research that the consenting process did then cause some difficulties in implementing the project, including additional costs and delays. There have been occasions when the DCO had been amended in order to apparently improve its constructability, as shown by the four approved non-material amendments to the DCO. The first amendment was approved on 17 May 2017, which notes that following detailed design work and a 'constructability review' the promoter wanted to make changes to locations and depths of shafts to de-risk elements of construction and reduce evacuation waste (Watson and Fairbrother, 2017). A second non-material amendment to the DCO was approved on 30 November 2018. This was to replace the site works parameter, apparently correcting some mistakes on the originally approved drawing rather than actually changing any planned works (Watson and Jeavans, 2018). A third non-material amendment was approved on 11 March 2020, to amend limits of deviation, works schedules and plans and limits of deviation to allow a minor realignment of the main tunnel and a new connection tunnel (Watson and Jeavans, 2020). A fourth non-material amendment to the DCO was approved on 14 August 2020 to allow changes to the site works parameter plans, loss of listed river wall plans and demolition and site clearance plans (Jewell and Jeavens, 2020). Non-material amendments to DCOs are not now uncommon, and this is a large project so perhaps more likely to require them, however, this does lend some support to the interviewees and focus group attendees who told us that the original consent had felt a little rushed and without sufficient early contractor engagement.

An interim report published in September 2021 confirmed the project was on track for completion in 2025, with a one per cent increase in costs, although the overall project cost estimate of £4.2 billion and estimated £20–£25 annual cost range for Thames Water billpayers remains unchanged. Construction of the project was then about 70 per cent complete with site excavation complete on all sites and 23.5km of the new tunnel excavated. Construction is ongoing at the time of writing.

Post-consent engagement

As already noted, the Thames Tideway DCO has more than four times the number of requirements than any other project we looked at during our research except Hinkley Point C, reflecting its scale. These requirements require extensive engagement with local planning authorities, statutory and other consultees for their discharge. Interestingly, and in contrast to the A14 case study considered in Chapter 7, none of the requirements

makes explicit commitments to further community engagement or consultation directly. There is, however, a requirement for this in both the project-wide and site-specific CoCPs. The project-wide CoCP (Thames Water, 2014b) notes that construction contractors will make Construction Environmental Management Plans (CEMPs), which will need to comply with the CoCP. Copies of these CEMPs do not appear to be available publicly. The CoCP, however, makes high-level commitments that these CEMPs will consider community liaison, among other matters. The CoCP notes that 'When there are impacts from construction that cannot be mitigated at source, the Non statutory off-site mitigation and compensation policy is available to address the residual effects' (Thames Water, 2014b: 8). It makes a commitment to consult on further consents and approvals required under the discharge of requirements, noting that this might be through a number of channels, including working groups, community liaison, informal discussions, stakeholder engagement, or submission of documentation, and that any feedback received shall be taken into account. The CoCP places obligations on both the promoter and their contractors for community liaison, specifying that:

The employer and the contractor shall take reasonable steps to engage with nearby residents, especially those who may be detrimentally affected by construction impacts. They shall provide stakeholder relations personnel who will provide information on the construction process and shall be the first line of response to resolve issues of concern (Thames Water, 2014b: 11).

The CoCP also makes commitments to notify neighbours of works, and that contractor will make a community liaison plan approved by the relevant local authority and the promoter. This plan must apparently comply with the commitments made in the sustainability statement, include a communications plan to: ensure the relevant planning authority, community, stakeholders and affected parties are kept informed of construction works; establish a website to update people on tunnel boring progress; ensure that contractors liaise with local community projects, tenant and resident groups and employment and education initiatives, and have plans to provide a survey and small claims process for any damage caused to properties.

The CoCP then notes that 'Appropriate meetings will be held with residents (or their representatives), businesses and other local occupiers to keep them informed about the works and to provide a forum for them to express their views', with the relevant local authority having a key role in agreeing the frequency of meetings (Thames Water, 2014b: 12).

The CoCP commits the promoter to operate a 24-hour freephone number during the construction period to deal with enquiries and concerns from the public. A complaints register is then to be maintained by the promoter and shared monthly with local authorities. Finally, coordination and communication meetings will be held with key stakeholders including local authorities and statutory consultees.

There is then a site-specific CoCP for each work site. Some of these, such as the one for the Albert Embankment Foreshore, just say under communications and community/stakeholder liaison: 'As per the CoCP Part A' (the project-wide CoCP already discussed) (Thames Water, 2014c: 2). Others make additional commitments. For example, at Chambers Wharf, the CoCP states that the promoter 'shall convene a community liaison working group in accordance with Schedule 4 of the S106 deed with the London Borough of Southwark' (Thames Water, 2014d: 2). At Deptford Church Street, there are some commitments about liaison with St Paul's Church and a commitment that the 'contractor shall provide a full-time community liaison person dedicated to the Deptford Church Street site' (Thames Water, 2014e: 2).

We conducted desk research while the project was being constructed. At the point of our research, the project had a dedicated website (https://www.tideway.london/) which included much general information about the project and news updates on progress as well as the 24-hour helpdesk telephone number. News updates had been frequently added. There was a general documents search area, where the CoCP documents could be found. There was also a specific section for each work site, where there were updates including details on construction working hours, meeting dates/minutes and presentations from community liaison working groups, a high-level overview of commitments at that site, and details of how to get involved or find out more.

A forum for stakeholders was established and its purpose was described as to:

Promote understanding and communication across a wide range of stakeholders with an interest in the successful implementation of the project; encourage agreement around interpretation of the strategies, policies, and other commitments contained in the Development Consent Order; ensure stakeholders are well informed and involved in Tideway's progress and are able to influence the thinking and direction of the project at both practical and strategic levels; consider and seek resolution on issues affecting more than one London borough or organisation (Tideway, 2019).

An Independent Advisory Service and Independent Compensation Panel were established to deal with mitigation of construction impact and related compensation. Full details of this were provided on the Tideway website, along with details of an Independent Complaints Commissioner.

Looking at local authority planning databases shows that the construction management documents have been considered by them as set out in the discharge of requirements process, and these include a 'Community Liaison Plan' for each work site. These seem to follow a similar format for each work site, but with some information tailored as appropriate.

Tideway forum and community liaison groups

The Thames Tideway Tunnel Forum was established with an independent chair and we attended and observed a meeting. Membership included all local authorities along the route, statutory consultees, government departments, the Consumer Council for Water, the Thames Estuary Partnership and Transport for London (TfL). During construction there were meetings every three months. The most common format at these meetings reflected stakeholder requests for presentations and updates on specific items requested from Tideway. The local authorities had a premeeting chaired by a council officer and each meeting included an update on community engagement over the previous three months, and complaints received. The format seemed to work well. The forum started during the DCO process, and it was apparently Thames Water who wanted the independent chair model for the group, learning from the approach taken during Crossrail and before that the Channel Tunnel Rail Link.

One meeting was given over to an annual review of the project. Meetings were typically well attended, with 40–50 people present. Having the meetings every three months meant that rather than dealing with day-to-day matters (which tended to be handled with a bilateral approach between Tideway and the organisation concerned), the forum provided a valuable opportunity for networking. This was felt to be important to maintain effective relations between organisations and promote partnership approaches to smooth project implementation.

An examination of the Community Liaison Working Group (CLWG) presentations and minutes shared online (via the project website) from December–February 2019 was also conducted as part of our research. These showed how different the context of each work site is. For example, Earl Pumping Station (Rotherhithe) had a drop-in session in February 2019 where no residents attended at all, and this was similar at a number

of other sites as well. At the Acton Storm Tanks site, the February 2019 CLWG meeting was attended by 12 people plus the Tideway and contract staff. Since the last meeting, there had been six complaints (related to noise, lights left on after hours, vehicle movements). Concerns were expressed in the meeting about noise levels, whether Tideway were honouring their commitments about this and whether they alternated periods of very loud and quieter work in order to reduce the overall average noise level. Concerns were also raised about how widely the information sheets were being delivered, with some local residences apparently not having received one.

Presentations showed no complaints having been received at the Barn Elms and Putney Foreshore sites during the period being examined. For the Carnwath Road Riverside site (near Wandsworth Bridge), the presentation to the CLWG detailed that a total of 21 complaints had apparently been received since the last meeting: 15 related to noise and vibration, four related to lighting, one related to barge movements and one related to air quality. The Chambers Wharf (Southwark) February meeting notes show nine people attended along with Tideway and contract staff. There were some questions about noise and contractor staff walking routes to access the construction site. There was also positive feedback on the use of barges, reducing lorry movements.

At Greenwich Pumping Station and Deptford Church Street, the January 2019 CLWG meeting had 17 attendees plus Tideway and contractor staff. Noise and air quality were raised regularly, even though the Section 61 limits had not been exceeded (Section 61 of the Control of Pollution Act 1974, relating to noise and vibration), with one resident commenting the impacts of noise were subjective. There were also a number of issues around lorry movements and holding areas for the construction sites, and a clear desire to see more use of barge movements where possible. The Hammersmith Pumping Station CLWG January 2019 meeting had 13 attendees plus the Tideway and contractor staff. The presentation shows they had had one complaint about the 24-hour working. This compares to 22 complaints in the previous period, so there was a feeling noted in the minutes of improvements at this site. Different options regarding an element of construction were discussed and resident feedback noted, including concerns about the implications on mature trees.

At Kirtling Street and Heathwall Pumping Station (Nine Elms), the December 2018 CLWG meeting had eight attendees plus Tideway and contractor staff. Noise was discussed again, as well as lighting, working hours (particularly over Christmas), traffic diversions and the target end date for construction (which people seemed keen was adhered to).

Finally at King Edward Memorial Park Foreshore (Shadwell), the February 2019 CLWG had seven attendees at a drop-in session plus Tideway and contractor staff. A resident raised concerns about the frequency of CLWG meetings, and how well in advance they are publicised. The final detailed design of the foreshore was not yet complete, and a resident asked for a greater opportunity to be involved in this.

This desk-based analysis gives a sense of engagement and issues raised during construction of this NSIP. As well as our desk research, we also conducted interviews with staff from the promoter side and local authorities in order to understand their experience of the implementation of the project.

The promoter

On the client side, we were told there were communications leads for each of the three contracts with teams undertaking communications and stakeholder engagement and Tideway and contractor staff working together. Regular email updates and newsletters helped communicate the project to communities and stakeholders.

Interviewee 39 considered levels of trust to be better on Tideway than other major projects he had worked on, and that community relations are better than at other major projects such as Heathrow or HS2. For stakeholders in the central section, key concerns were around minimising disruption and not preventing big events such as the London Marathon and Ride London happening in the 'nation's living room'. For residents, particularly towards the east area (although other developments mean there's an increasing number of residents close to the Battersea works site), the key concerns were around noise and vibration as well as (often unfounded) fears over subsidence.

In terms of complaints, Tideway has a 24-hour freephone telephone number and an email address monitored round the clock as one point of contact. It was agreed that a response is required in 10 days, however, post-consent the project team felt this was too slow and committed to respond within five days but tried to do so within 24 hours, which works contractors/site managers became used to. It was felt that speedy responses encourage trust.

Some complaints apparently went via borough councils, and even more rarely through councillor and MP casework, but the most usual approach was for residents to contact Tideway directly (in apparent contrast to the A14 project). Complaints statistics were shared with local authorities and showed wide variation between work sites even though

many have similar works being undertaken at them. This shows the importance of local contexts. In total, Tideway was getting about 15–20 complaints per month, apparently much below the rate for some other big projects. It was felt that Tideway had often exceeded their required responsibilities, for example giving secondary glazing beyond the required affected areas. There was also a process to pay £30 to affected people to get out of their homes near construction sites and entertain themselves on very disruptive days.

We were told about how community liaison working groups were held quarterly, as required by the CoCP. The original idea of these was apparently that residents would have representatives attend, but there did not seem to be many people wanting to take on these roles. Initially the groups ran in closed sessions but there was a view that they were being dominated by some individuals so transitioned to run as an open town hall style meeting every three months plus drop-in meetings between, with one meeting held for each work site. It was acknowledged that in some cases these processes could not influence the decision making on the project particularly when there were construction constraints such as the need to pour concrete. Sometimes it was apparently more about just explaining the parameters and thus constraints of the consent, which ultimately was what was being implemented.

Local authorities usually attended these community liaison working groups as well as local residents and Tideway staff. In the case of Blackfriars, there were no residents so different formats were used including business breakfasts for facilities managers from local businesses and a Tideway staff member going into larger office buildings to engage their staff. Initially it was considered that, as a baseline, having such meetings once per quarter would work but as construction continued it was felt useful to vary these (for example, at one stage they were having monthly meetings at Chambers Wharf, where there was a high attendance, whereas at Victoria Embankment attendance was very low). It was felt for future reference that it might be better to specify a minimum frequency of event, but allow a choice of formats (working meeting, open town hall, drop-in session to adapt to local circumstances).

As already mentioned, there was a larger forum that included local authorities and allowed wider issues to be discussed. Most local authorities had a single point of contact for Tideway, usually a planner. Tideway funded a range of staff in different local authorities to support both consenting and, in some cases, post-consent engagement. The statutory consultees tended to be much more technical so were dealt with by the planning team not the community team at Tideway. Local

authorities were seen as key partners, particularly given that more than a hundred consents per site were needed related to Town and Country Planning and environmental health. The level of interest and engagement did, however, vary between boroughs along the route.

Interviewee 39 felt that, although it had on occasion been challenging, post-consent engagement had been very important. The project had to adapt all the time, for example a delay in one thing could mean a delay on something else that might depend on a Spring Tide. Adaptations and complexities meant ongoing post-consent engagement was vital. Contractors came to understand and support this. It was also felt that it was important to keep local authorities on side, and of course resident complaints mattered to local authorities.

It was also considered vital that the framework for post-consent engagement is actually set out clearly in the CoCP. Although this might look like making additional commitments that could then be burdensome, if it is not there clearly then the resources needed to do it may not be provided. The promoter considered that it was usually best if contractors do most of the response to construction-related complaints, but if this is not clearly specified in the CoCP then those contractors will seek to minimise what they do to reduce costs.

Although contractors were considered best to respond to the 'here and now' construction complaints, it was felt that there was still a need for the promoter to have staff involved in community and stakeholder liaison as contractors and engineers are not always experts on how to do this. Further, the promoter apparently considered that there is a need to ensure adequate client/contractor relationships about how to manage external relationships and complaints.

Local authorities

The extended level of local authority engagement after the acceptance of the NSIP into the consenting regime is unusual in the Tideway project, even compared with other linear NSIPs for roads and pipelines. It appears that in this project, a different approach to local authority engagement was undertaken from the outset and this may have been related to both the intensely developed nature of the working sites, the existing expectations of community involvement in the London boroughs concerned, and the need to ensure that councillors were kept fully appraised of the scheme and any changes required. The NSIP also required a large number of \$106s that had to be undertaken with each borough and the project required dedicated local authority staff, which it

funded, if the project was to maintain its progression to delivery. This level of engagement also offers useful experience for other NSIPs where local authorities have been less involved after the pre-acceptance stages.

In order to understand how this continuing local authority engagement was working, we interviewed officers from two London boroughs along the route. A number of the boroughs have staff who have worked for them on Tideway issues from pre- to post-consent. Wandsworth and Richmond Councils (the two boroughs having shared services), had a programme and consenting manager and team. They had seven work sites across the two boroughs. Interviewee 43 felt that the DCO process had worked fairly well. There was a logical process up to examination and the local authority felt that they had managed, through raising issues at preliminary hearings, to influence the selection of work sites. There was an open approach to communication and the Statements of Common Ground seemed to work well. There was a short hiatus between consent and implementation with some staff moves and the handover from Thames Water to the new infrastructure provider, but things apparently then settled down.

Post-consent there was a significant volume of work for local authorities in relation to the discharge of requirements. Many elements of the consented DCO were outline in nature, so there was a lot of detail to be considered through the requirements discharge process. In some cases, these even required pre-submission negotiations between the promoter and the local authority. There were also complexities from the interaction of the DCO with other legislation, but Interviewee 43 felt local authorities helped the promoter work through this. When interviewed, they had not actually refused to discharge any requirements, but there were difficulties at times and regular face-to-face meetings helped things to work effectively. Consistency of personnel on both sides was felt to help build good working relations, although there were some changes of staff between Bazalgette Tunnel Limited, Jacobs and other contractors.

Interviewee 43 felt they had close working relations with staff from the promoter and their contractors in the contract areas covering the two boroughs. There was also close involvement in the inter-borough forum. A Service Level Agreement (SLA) with Tideway funded three posts at Wandsworth and Richmond and there was also a pot available for ad hoc local needs, for example in relation to ecology and parks. The funding agreement was reviewed annually against the anticipated scope of works for that year. It was considered essential to allow the boroughs to manage

the considerable extra workload related to Tideway, which included some Town and Country Planning applications around Wandsworth, when the councils were under conditions of local government austerity. Each requirement being discharged involved the equivalent work as a major planning application. At the time of our interview, in 2019, there had been more than 130 consents in Wandsworth alone. This review process between the boroughs and the promoter is an unusual and helpful feature that could be used elsewhere.

Local councillors were apparently closely engaged. The leader of the council received a formal annual update, and the responsible cabinet member received these more regularly. There was direct correspondence between the leader of the council and the chief executive of Tideway when required. There were clear escalation processes to senior managers on the part of both the council and Tideway. The council also engaged other statutory consultees (for example the PLA, MMO, GLA, EA and TfL) and felt there was a close working relationship and understanding of each other's perspectives. This was helped by the regular forum meetings (already mentioned), which worked by all the stakeholders having a meeting to discuss issues with Tideway staff, then having a further session just between themselves.

The local authorities were also well aware of the Community Liaison Groups already mentioned. Interviewee 43 considered that having these Community Liaison Groups specified in the DCO had been vital in ensuring that they occurred and were given appropriate attention by contractors. From the council perspective, they felt most groups had seen active engagement with a high level of local knowledge from residents being contributed to the project. The proactive engagement by the promoter reduced complaints and the burden on the local authority. Construction impacts were apparently the greatest community concern and there were some traffic management issues (some of which have resulted in complaints to local councillors). Tideway were responsive in trying to deal with these. Environmental health issues did arise for neighbours to the work sites (in the case of Battersea, the number of neighbours was much higher during construction than when the DCO was consented given recent housing development in the area). The key concerns tended to be about noise and air quality. At the time of interview, the number of complaints around the main site had been low, but operations were just then increasing. At Putney, there had been no complaints despite very intrusive piling works.

Apparently residents usually addressed their complaints directly to Tideway, who provided direct contacts for site teams at night, with a named liaison person on site contactable directly. A monthly meeting would go through monitoring data, Section 61 applications and complaints, involving the borough's Tideway programme and consent manager, the Environmental Health team, and the Tideway site teams. If a resident complained directly to the council, there was an agreed joint process between the local authority and Tideway to respond.

Interviewee 43 explained that Tideway, as promoters, undertook high-level community engagement directly but most day-to-day relationship and complaint handling was done by the contractors themselves. They added that this was done very professionally. Apparently much information was made publicly available. All applications under the discharge of requirements resulted in site notices and their documentation put online, like any other planning application. The council did consult on requirement discharges, although there was no necessity specified for this. There was also consultation on the construction logistics and community liaison plans before these were approved by the council. On the whole, these got few comments from the public, but this could reflect the fact that people were well informed by the project.

The local community were also apparently keen to be involved in the long-term legacy elements of the project. Tideway were undertaking community and school visits and were proactive in getting their own staff to undertake local benefit volunteering. Their contractors were all very well known by the public and there was a real interest in their behaviour and ensuring a good reputation locally. Overall, there was a perception that Tideway took a 'bells and whistles' approach to post-consent engagement and had been very approachable.

In Southwark Council, as well as officers involved in consents, there was a Tideway funded 'consultation and involvement' officer to work with residents on issues related to the project that impacted them. According to Interviewee 44, this role was created in 2018 as residents were keen for the council to support them and were apparently distrustful of Tideway. These issues included environmental matters, complaints, understanding proposals, interpreting data and obtaining support for mitigation. The overall aim of the post was to improve dialogue, which had been felt to be particularly difficult around Chambers Wharf.

Interviewee 44 felt that the project started with tensions locally and poor relationships as local residents and Southwark Council had objected to the use of Chambers Wharf as one of the main sites. The council attempted a judicial review but was unsuccessful. Once construction was underway, the council's priorities shifted to ensure the best relationships between the council, Tideway and local residents, to ensure the best

possible outcomes. The building works on the foreshore affected some immediate neighbours quite severely, with long periods of noise, dust and vibration being experienced. An 'acoustic enclosure' (essentially a big metal shed) was then built, which mitigated much of the noise and dust, although having such a big structure on the river front, blocking some river views was not welcomed either. Local residents were apparently given the opportunity to see the proposed design of the acoustic shed before it was built.

Community Liaison Group sessions had been running on a monthly basis at Chambers Wharf, with a formal meeting every quarter and then drop-in sessions between. Attendance at the formal meetings was initially quite high but then dropped to about 12 people per session, probably related to the acoustic shed as that seemed to have mitigated a lot of the early construction impact/environmental health issues and related resident concerns. These meetings were seen as vital, but it was also felt to be important that there were clear escalation procedures and senior contact directly between the council and the promoters.

Interviewee 44 told us that complaints from the local community tended to be sent directly to Tideway, although sometimes they were sent to the council's housing and Environmental Health teams. There had apparently been some accusation that many complaints being raised by residents at Chambers Wharf were not related to Tideway. Council officers have monitored these complaints, and most were related to Tideway. There was a large elderly and vulnerable population living within 100m of the construction site. The council's consultation and involvement officer was apparently trying to assist in dealing with the non-Tidewayrelated complaints, as well as taking a holistic well-being approach to the local community. Construction impacts can impact the mental health of residents and this links to a broader public health agenda. For example, it was explained to us that getting residents out of their homes near the construction site to go on organised walks or attend cookery classes not only got them away from the construction impacts but hopefully benefited their well-being more generally.

Interviewee 44 felt there was also a need to sometimes manage the expectations of local residents. The construction works had consent and would last five years, regardless of whether people liked that or not. There were apparently various monitors around the site checked regularly by the council's Environmental Health team, and the project had usually been found to be staying within the agreed limits. In some cases, people might complain about noise from the construction site, but this was then checked by Environmental Health and found to be within acceptable

limits. They would then be referred to the council's consultation and involvement officer to see if anything else could be done to help that resident, for example activities to get them out of their house during construction hours.

There were a range of agreed mitigations, such as window cleaning, and the council officer worked to ensure a smooth process for residents (who can be elderly and vulnerable) to benefit from those. Different residents wanted and needed different mitigations, so some degree of adaptive response was found to be helpful. A proactive approach was taken to keep residents informed about what was coming up, and project milestones. Funding from Tideway, via an S106 with the council, also supported a community magazine as some residents did not have internet access to see the project website.

We were told that experience of sites along the Tideway project varied enormously. At the Albert Embankment in Lambeth there were no nearby residents, so the perception of construction impacts was less, and the post-consent engagement needs were perhaps less, whereas at Chambers Wharf there were numerous residents very near to the construction site and many of these are vulnerable with predominantly social housing in the area. Given this, having a dedicated officer for community relations and work was felt to be very important and having this role within the council seemed to be more trusted by local residents than if they worked for the promoter directly, although the post was funded by Tideway (for the duration of the construction period).

At the time of our interview, Southwark Council were producing a developer's charter for major projects being built across the borough and having an 'on the ground' liaison officer was seen as best practice for long-term construction projects following the experience of Tideway (Southwark Council, 2021). Interviewee 44 felt that giving residents a voice and say was important, helping to reduce complaints and smooth the implementation of projects while improving the well-being of local communities.

Conclusions

The level and role of community and local authority engagement in the Thames Tideway project has been much greater than other NSIPs we have considered. The project is also larger than either the A14 (itself not an insignificant NSIP) or the energy projects we consider in Chapter 9. The construction period lasts for eight years and affects numerous sites

across Greater London. These sites vary in proximity to residents and in terms of other sensitivities of location. In existing published literature, there is some debate about the necessity of the project at all, given the possibilities of 'green' as opposed to 'grey' infrastructure.

The choice of the NSIP route for Tideway by government is interesting given that amendments to the NSIP regime had to be made to accommodate it and given that there were already existing procedures that could have been used (such as a hybrid bill procedure). Perhaps this was linked to a desire for certainty over consenting timescales given the risk of further EU fines in relation to the breaches of the waste water directive. The examination and consenting were challenging for all parties, given the scale of the project and its documentation and the determination to stick to a six-month timeframe. There does appear to have been some issues from a lack of sufficient early contractor engagement to ensure that there was consideration of constructability of the reference design and to ensure the practicality of a CoCP being agreed at examination (and as a means often used to secure ES mitigation). At times, the precise wording of the requirements agreed during consent has had a great impact on project implementation post-consent. There were examples of how flexibility can be necessary in some requirements, as seen in the example of the listed structure at Blackfriars needing some works to come up with a restoration plan that then needs approval before main works can commence. There is evidence here for careful thought and clarity between promoters, contractors and local planning authorities as to the precise process and timescales for discharging requirements.

It was also noticeable that the Tideway promoters put considerable effort into developing good local authority and community relations from the outset, including very specific individual mitigation measures that have not been seen in other NSIPs (including those promoted by government agencies). While the success of the project was important to meet challenging EU legal infringements and potential ongoing fines, the approach used has been unusual. For most NSIP schemes prior to our research in 2019, most local authorities were not included in the examination and DCO drafting process although their role increased considerably once the projects started in their construction phase. Here local authorities have started to become much more useful to scheme promoters to overcome problems in DCO wording through the submission of new planning applications.

Although some local authorities objected to certain issues and sites pre-submission, it seemed that Tideway worked hard to establish a good relationship post-consent. While there was an awareness of all stakeholders and statutory consultees, it seems there was an appreciation of the important role of local authorities as links between place, community, local politics and the project. There were also many consents required from each borough, and Tideway were supportive of funding additional posts in relation to this, but also in some cases in relation to community engagement. There also appeared to be a good structure, through the Thames Tideway Tunnel Forum and direct engagement, for senior level relationships between the local authorities and the promoters.

Overall, it does seem Tideway have taken a 'bells and whistles' approach to post-consent engagement. This did not mean everything went entirely smoothly. There were apparently some difficulties, in particular at the Chambers Wharf site, but the level of commitment to mitigation/compensation in relation to construction impacts, engagement to keep people updated, and complaint handling on the Tideway project seems to have exceeded a number of other NSIPs we are aware of and to follow best practice in many ways. At the time of writing, construction has not yet been completed but it will be interesting to see the impact of the completed project on London and the tidal Thames over the long term.

Energy projects case studies: Galloper Offshore Wind Farm and Progress Power Station

Introduction

Energy projects account for the most common type of DCO application to date and can be large projects. However, apart from the nuclear power stations such as Hinkley Point C, most of these energy projects can be considered as smaller than other NSIPs, including the A14 or Thames Tideway projects already discussed. We therefore consider two case studies of different energy projects in this chapter: the Galloper Offshore Wind Farm and Progress Power, a proposed gas-fired power station. These are both connected to Suffolk, in the east of England. We consider both separately, in turn, before attempting to draw some cross-cutting conclusions.

Like the Thames Tideway and A14 NSIPs, until December 2020 energy projects were subject to the pooled legislative initiative and competence between the UK and the EU. Energy also formed part of the Trans-European Networks as TEN-E and was subject to EU Regulations (EC, 2013b). TEN-E comprised corridors, centralised networks and local nodes to contribute to the energy supply (Lindberg et al, 2019). There was both an economic and security underpinning to the TEN-E policies, which are in development and discussion many years before their anticipated adoption date. The access to energy varies across the EU's territory, with many member states purchasing energy in the form of gas or oil from third party states including Norway and Russia (Sziklai et al, 2020). A key policy thrust of TEN-E was to develop a range of pipelines to ensure access to supply could be provided at reasonable cost. This also had a security underpinning not least as much EU energy supply was from Russia through the Nord Stream 1 pipeline (Chyong et al, 2010; Heinrich, 2018) and Nord Stream 2 currently under development but

paused as part of the sanctions regime at the time of writing in 2022. Further, the island of Ireland has received energy via the UK in a unified gas and electricity system. However, post-Brexit, the EU announced the development of a direct energy link between France and Ireland. Renewable energy projects have come to be seen as important both for reasons of energy security and climate change adaptation.

While a key consideration for NSIP energy projects is their smaller scale and the associated relative higher cost that the regime creates, they are also subject to success in government auctions for their ability to be delivered. In order to bid in the auction, a project needs a DCO, but the lack of certainty about such success also meant that the NSIP would be less developed in detail as a mechanism to limit the costs to the promoter. In addition, the development of the wind energy often means that in addition to the energy producing facility, there also needs to be a connection to the National Grid with new substations and sometimes also transmission lines, which have on occasion proven quite controversial. Despite the specific contexts for energy projects, there are also some aspects of their consent and delivery in common to other types of NSIP, and in this chapter we again consider issues of the relationship between consent and implementation, the role of local authorities throughout the process and the engagement of communities and other stakeholders.

Galloper Offshore Wind Farm

Context

The Galloper Offshore Wind Farm is an NSIP originally promoted by SSE Renewables, which was implemented and is now operated by a joint partnership between Innogy SE, UK Green Investment Bank (GIB), Siemens Financial Services and Macquarie Capital. It comprises 56 turbines located 30km off the coast of Suffolk, which was officially opened in September 2018. It can generate sufficient electricity to power the equivalent of 380,000 homes with an installed capacity of 353MW (RWE, 2021).

A DCO application was made to PINS on 21 November 2011 and granted by the Secretary of State for Energy and Climate Change on 24 May 2013. The scheme was originally proposed to involve:

The installation, operation of Galloper Wind Farm, a proposed offshore generating station and its associated electrical connection. The Galloper Wind Farm generating station would involve the development of up to 140 wind turbine generators, with a maximum capacity of 504MW encompassing an area of 183km² within three areas. Export cables would be brought to shore and a proposed substation would be constructed to connect the project to the national grid network via existing adjacent transmission towers. Includes new electric downlines and sealing end compounds to connect the wind farm to the existing 400kV network (PINS, 2017b).

Due to issues relating to the project's financing, a 'project optimisation' exercise resulted in a reduction to 56 turbines and reduction in generating capacity to a planned 340MW after the DCO was granted. This led to a non-material amendment with the application made on 27 January 2015 and granted on 2 July 2015. As with a number of DCOs, there was also a planning application to support changes to the substation design.

The wind farm represents an expected investment potential of around £1.5 billion (Galloper Wind Farm, 2022). Figure 9.1 is an overview map of the project location. Initial onshore groundwork construction commenced in June 2014, however, there was then a pause due to the original promoters (SSE Renewables) withdrawing support for the project. Onshore construction works then resumed in October 2015 and offshore constructions works started in summer 2016 (Galloper Wind Farm, 2022). Construction was completed in March 2018 and the scheme now employs a team of 60 people based in the port of Harwich to operate and maintain the wind farm (Galloper Wind Farm, 2022).

The project was promoted as an extension to the existing Greater Gabbard offshore wind farm as part of a rapidly developing sector. The UK has, at the time of writing, one of the larger installed offshore wind capacities in the world. Local authorities in East Anglia have formed the Norfolk and Suffolk Energy Alliance (NSEA) together with the region's energy sector to collaboratively support and promote the 'East of England Energy Zone'. Offshore wind is seen as an area of diversification for these local authorities and James (2016) suggests that the joint efforts of local government in the region have enabled them to support economic growth and success on a larger stage than any of the authorities would be able to individually.

A range of academic literature mentions this project. Soares-Ramos *et al* (2020) examine current trends in the development of offshore wind farms across Europe. Noting financing and technological challenges, they find the costs are decreasing and wind farms are being developed further away from the coast and into deeper waters. In financing Galloper, Clutton-Brock *et al* (2016) highlight how the European Investment Bank

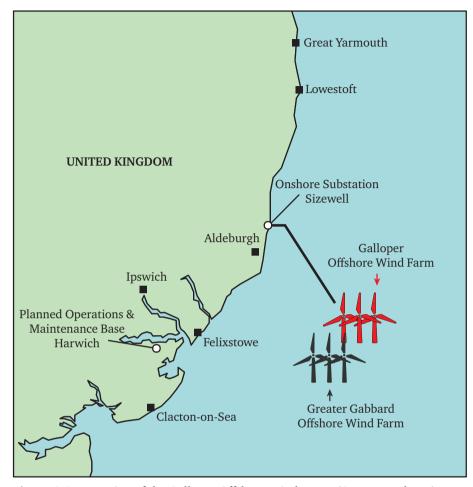


Figure 9.1 Location of the Galloper Offshore Wind Farm. (Source: authors.)

(EIB) had been providing large amounts of relative low-cost capital for UK low carbon energy infrastructure, including €317 million towards this project. This is also mentioned by Griffith Jones and Naqvi (2021), who explain that the financing was closed to the UK in 2016 after the Brexit referendum. The EFSI (European Fund for Strategic Investments) guarantee was used to support the EIB's financing of the Galloper Offshore Wind Farm and this was important to address the financing gap that has existed in the offshore wind industry. This gap had been caused by the pace of technological change (with lenders exposed to greater risk due to new technological developments with limited track records), multicontractor risk (working offshore on large projects with new construction

methods is inherently risky so contractors have usually only been comfortable signing up to do discrete tasks rather than all of the construction) and the large size of upfront investment required. To illustrate the pace of technological change in this sector, Griffith Jones and Naqvi (2021) highlight that the Galloper project selected the then cutting-edge technology of a Siemens 6.3MW turbine with a maximum blade length of 154m, which superseded their previous turbine of 4.0MW capacity with 63m blades, but within just a few years has already been replaced by turbines with a 9–12MW capacity each.

The issue of public knowledge and engagement in NSIPs is considered by Rydin *et al* (2015) and Lee *et al* (2018) whose research looked at a number of wind farm NSIPs including Galloper. They concluded that national policy seems to constrain the scope for public objections to be considered in this decision making compared to more hard-edged and technical 'evidence'. They argue that the inclusion of local people and adequate understanding of impacts, such as those on the local fishing industry, is important but requires funding so that communities and NGOs are not overwhelmed by the scale and work required to engage in the consent of NSIPs.

There has also been some discussion around cumulative effects assessment. Durning and Broderick (2015) note the inconsistency in the terminology and use of concepts by different stakeholders in the Galloper DCO documentation. Arguing that the marine renewable energy sector is vital to the UK economy, ensuring energy supplies and energy security, and helping to decarbonise, they suggest that practice at cumulative impact assessment for the sector had been poor. This is important where the licensing procedures for marine development can require assessing the cumulative consequences of multiple projects, but this may then create an effect greater than individual projects and this complex area of developing practice might in future constrain further projects. This is a continuing issue, as discussed in Chapter 10.

A key impact of offshore wind farms is on birds. Mentioning Galloper, Nehls *et al* (2018) consider potential displacement of redthroated divers in relation to their wintering home ranges while Griffin *et al* (2016) suggest birds wintering at sites some distance from wind farms may encounter them during their annual migration. They suggest that EIAs for offshore wind farms should consider the potential impacts and that cumulative impact assessments would be assisted by a standardised European database of wind farms.

Looking at the design of wind farms, Rodrigues *et al* (2016) offer a multi-objective optimisation framework for offshore wind farm layouts

and mention Galloper. The project is also mentioned in Tranberg *et al* (2019) on new approaches to machine learning for the jackup vessels used during offshore wind farm construction. Finally, Verfuss *et al* (2016) examine the scale of the risk to harbour porpoises in relation to using noise reduction technologies during piling to construct offshore wind farm turbines.

In this case study, we examine the documents relating to the consent of this NSIP, in particular the Examining Authority's Report (Bessell *et al*, 2013) and the Secretary of State Decision Letter (Scott, 2013c). We conducted interviews with those associated with the promoter, their legal advisor, statutory consultees and local government. Local community and civil society groups were invited to a focus, but none attended. A site visit to the location of the construction of the onshore substation was conducted in February 2017.

Consenting the project

Galloper was one of the first major DCOs to go through the Planning Act 2008 regime. There were some differences from other offshore wind farms. It was an extension of the existing Greater Gabbard project and the onshore substation could be built next to the existing Sizewell nuclear power station, reducing onshore issues. Interviewees commented that as a very early consent in the history of the regime, all parties had been learning as they went along.

The key issues for the offshore wind farm seem to have related to ornithology and the Secretary of State's decision letter notes significant debate around project mitigation between the Application, Natural England, the RSPB and the Examining Authority (Scott, 2013c). There was also concern as to cumulative impacts (the Galloper wind farm being directly next to the existing Gabbard one) with the decision letter noting the potential for cumulative impacts on a European site or a Ramsar site. In addition, there was some discussion of fishing interests offshore during the examination. Onshore the key issue was the location of the substation, which lay within the Suffolk Coast and Heaths Area of Outstanding Natural Beauty (AONB) and was a particular concern noted in the Local Impact Report (LIR) (Bessell *et al*, 2013).

Flexibility was used in this DCO, with an 'envelope' assessment (the 'Rochdale Envelope') and a NEWT approach to both the offshore wind turbines and onshore substation. This can be seen in the wording of Schedule 1 to the DCO, which outlines the authorised

development and includes frequent use of 'up to', for example 'an offshore wind turbine generating station with a gross electrical output capacity of up to 504MW comprising up to 140 wind turbine generators each fixed to the seabed by one of four foundation types' (Scott, 2013b). This was commented on in the Examining Authority's report, for example noting the landscape and visual effects of the substation, they comment 'A worst case scenario is assessed, defining the substation broadly because of the desire to preserve flexibility for future design' (Bessell *et al*, 2013: 126), while in relation to Habitats Regulation Assessments they comment 'in reporting and using the information provided by the parties to recommend how and what mitigation level we believe it is necessary to deliver to achieve a position of "no likely significant effects" we have had full regard to the: uncertainty and or flexibility of elements of the project and data' (Bessell *et al*, 2013: 191).

The requirements of the DCO are used to govern the flexibility provided. They provide a time limit for the development to be carried out, design parameters for the wind turbines (and a process for approving the design through the Secretary of State) with the upper size limit for height, maximum permitted blade length and so on specified as well as requirements in relation to offshore safety management, aids to navigation and offshore decommissioning. The requirements contain many provisions in relation to the governance of the onshore construction works associated with the substation and grid connectors, for example allowing for flexibility in detailed design subject to sign-off by the local planning authority, and the need for their approval (in consultation with the County Council and Natural England) in relation to landscaping. Provision is similarly made for approval of fencing, drainage, archaeological surveys, an ecological management plan, a CoCP, and control of construction hours to be agreed with relevant authorities after the DCO has been granted but before relevant construction starts. The DCO also incorporates a 'Deemed Marine Licence' and protected provisions for statutory undertakers.

Interviewee 26 highlighted two key issues for the DCO for Galloper, around habitats for the offshore wind farm and around land acquisition for the grid connector and substation:

The two, main pressure areas, looking back, were in relation to the habitats directive and the fact that we were effecting a population that was linked to an SPA near to the site – bird population – and the other issue was the interaction with EDF and the fact that we were seeking to compulsory acquire land for the substation extension and

it turned out ... well, they revealed that our grid connection was going through the route of a site they were reserving, in their own minds, for cooling water for Sizewell C, which is an application some way in the distance, so both of those required a job of work to be resolved ... The DCO process certainly puts you under pressure to resolve things and I think that's broadly a good thing.

The Energy National Policy Statement (NPS) was very important as it gave the presumption in favour of granting the consent and provided a 'useful framework for the decision maker that the applicants and other parties can take into account when they're preparing the applications; it provides a checklist' (Interviewee 26). It also apparently helped having the NPS backing for the principle of offshore wind farms given the promoter was unable to reach a statement of common ground with UK bodies for the fishing industry or their Dutch or French equivalents.

High levels of detail were apparently required around the Environmental Statement and the documentation required for a DCO application was voluminous, according to Interviewee 27:

I think, when we put the application, we had ... I can't even remember now, about 27 volumes of the ES, the Environmental Statement, plus every other document that had to go in – it was difficult to keep track of all documents ... ours was probably one of the shorter, certainly offshore wind DCOs, in terms of the amount of information we submitted; I've seen some since that are just absolutely huge and I don't know how everybody ... would even attempt to read them all.

Finally, as already noted, the DCO for this project has had a non-material amendment approved through the Secretary of State. This related to the wording of Requirement 8, which governed the size of the turbine foundations for the offshore construction, to increase the monopile diameter for each turbine from 7.0 to 7.5 metres. This proposed parameter change was compared to the worst-case scenarios applied in the original ES and found to be within the limits for all but one parameter – the increase in the maximum pile diameter meaning greater hammer energy applied during construction. This was a concern in relation to the potential for mortality or injury to marine mammal and fish species. The applicant updated their noise modelling and concluded that the impact would still be equal to or less than those presented in the original ES. The applicant argued that without it they could not design a foundation that

met the required harmonic frequency, stiffness and strength limits to satisfy the geotechnical and turbine design limits without exceeding the absolute limitations of mass and steel thickness imposed by the manufacturing and installation processes (Scott, 2015d). The Secretary of State's decision letter notes some dispute of this from Natural England, however, the modelling and case of the applicant was accepted, and the change granted (Scott, 2015d).

This non-material amendment was related to developments in turbine technology. The reduction in the planned size and generating capacity of the scheme already mentioned then resulted in a smaller onshore substation being needed, and it was decided to move the location slightly to within the grounds of an existing substation. As these changes to the associated development consented fell outside the red line boundary of the DCO, additional permission was required either through amending the DCO or through a Planning Permission under the Town and Country Planning Act. A Planning application for the substation was made to Suffolk Coastal District Council on 28 Feb 2014 and granted by them on 21 May 2014.

Implementing the project

There was a change of promoter during the life of the development and their need to optimise the business case led to a significant scaling back of the project. Apparently the DCO had 'the necessary flexibility to cope with that offshore very easily' (Interviewee 26). Onshore, however, the associated change in the substation was dealt with through a planning application under the Town and Country Planning Act instead of amending the DCO:

Onshore, it involved a major change to the substation arrangement, so we had to consider whether to use the [DCO] amendment regime, or whether there was an alternative ... so instead of going down the amendment route with all the risks and the timings attached to that, we were able to craft a TCPA application, which dovetailed with the DCO ... so it meant that part of the overall substation works were still going to be built under the DCO, but the remaining, reduced part was going to be built, but still substantial, was going to be built under the TCPA and then we had to work with the local authority to persuade them that we could make that work and that the conditions could all be aligned and so forth and we were successful in doing that (Interviewee 26).

Interviewee 27 felt that reducing the size of the substation improved the development with a smaller footprint and visual impact, but they had not allowed sufficient flexibility in the DCO to permit this. The changes in the transformer and substation design were apparently driven by National Grid, in response to the reduced generating capacity. The decision to use the Town and Country Planning Act rather than amend the DCO was due to concern about time, with a deadline by which to start generating energy in order to obtain government funding:

So we went back to the drawing board and we had a reasonable local authority in place, so it was all done in just about the timescales that we required, but if we had had an antagonistic local authority, who was dead set against the development – it happens, a lot – that would have had to have gone to appeal and various other things before we'd even have got near it and that could have put the grid connection in doubt, which, ultimately, could have killed the project because the project we have is on a deadline for renewable obligation certificates (Interviewee 27).

This use of a planning application to vary the associated development is not unusual in the NSIP regime and makes an interesting commentary on the ease of amending a DCO.

In general, we were told that, post-consent, it was common for there to be discussions as to what the DCO meant, whether certain things will be signed off and whether people are 'prepared to go through the time, cost and risk of seeking amendments' (Interviewee 26). A minor issue apparently arose because of the need for an additional temporary car park for contractors doing construction, which was not in the original DCO, but this was resolved with the local authority. Further, a change in promoter can involve gaps in understanding, although apparently not particularly in this case.

The most notable feature of the post-consent stage with the Galloper project was the non-material amendment approved by the Secretary of State, as Interviewee 26 explained:

Everybody thought that they had made enough allowance for the maximum possible width of diameter of the pile and the technology had moved on such that the project wanted to use the bigger pile and we had to take a view on how quickly we could get that through, whether it was controversial – we didn't think it was controversial – and we made the decision to apply, it took a while, but we got there.

The post-consent non-material amendment had been vital to ensuring the continued viability of the project, as Interviewee 27 explained:

The amendment order was to allow a larger monopile and that came about because the only way we can make the numbers work was to put a bigger turbine on it, the only way to put a bigger turbine on it was to put a bigger monopile on it. Without that then, there would be no project, which is an interesting concept and it shows that at least there was some flexibility within the system to allow that change to be made, but it did take quite a lot of time, effort and uncertainty within the project.

Engineering advice had apparently been sought at the time of the DCO submission that indicated that a six-metre diameter for the monopile foundations was more than sufficient. At that point a larger size had not been used and the consent allowed up to seven metres. In two years, the construction technology had changed so rapidly that a 7.5 metre monopile was needed. As Interviewee 27 recalled, 'We had lots of engineering advice through pre-submission and lots of different things, that actually, you find out in real life, isn't the way because things move on, things change all the time, people have different ideas, different engineers have different thoughts about how things should be done, so the flexibility is key.' Other amendments to the DCO had apparently been considered between consent and construction, driven by engineering developments and a need to reduce costs to make the project viable (leading to a sixmonth pause in construction). In the end, they were not necessary and engineering advances improved the viability of the project sufficiently for construction to proceed without further amendment.

The issues around detail and flexibility seen with Galloper are in some ways quite typical of offshore wind farms. Offshore wind farms are generally at the higher level of flexibility within the DCO regime, and this NSIP was typical of that:

Offshore wind is at the outer edge of the level of flexibility that you could reasonably expect because you are saying 'there's a large area of sea, I don't want to commit to the precise number of turbines, I want up to x' ... there are some offshore wind farms where the site is very tight and that really does largely dictate what it's going to look like, but then Galloper was a relatively generous site. The DCO that we have ended up with meant that ... there were quite a lot of layout variations that were credible within that and I think that was

very helpful to the project, it enables the design to be optimised in terms of ... the amount of electricity that you're generating and also to the business case in a sector that's being subsidised and needs to improve its business case wherever it possibly can (Interviewee 26).

The Rochdale Envelope approach was apparently 'at the heart' of the application, as well as use of limits of deviation both for turbines and for the cable route. Flexibility was built into the DCO with a menu of approaches to controlling ornithological impacts, with drafting essentially allowing an acceptable level of bird mortality to be agreed and then that applied to modelling to agree the turbine size and number of turbines.

Interviewee 27 explained that flexibility is an absolute necessity for offshore wind farms, and they had used the Rochdale Envelope approach to assessment to try and enable this:

We had to have those options in this, so that when we get contracts, or get offers in from the suppliers and the principal contractors, then we actually have a reasonable chance of actually getting something like this buildable for the money that it costs. Unfortunately, it's not the same as building an extension where you can actually go 'right, it's going to be this size.' You don't know with an offshore wind farm, just slightly changing the layout where the wind turbines are, having a slightly bigger one, having less with smaller foundation types, or different foundation types, changes so much ... There's so many different variables ... but until you've actually got the certainty of the consent, you can't really drive it that much further forward.

It is only once consent is given that a contractor is appointed to do the detailed implementation design work. This need for flexibility when working in a marine environment was apparent to statutory consultees: 'there needs to be an envelope approach because of this uncertainty that is caused by working in the marine environment, so when it comes to the flexibility of a licence, we are aware of that' (Interviewee 28).

Much more specifically to Galloper, the project was built at much less capacity than originally envisaged, but this was allowed for in the flexibility of the DCO that was then not updated. Interviewee 24 felt this had particular implications for cumulative impacts on future projects:

so in theory, at some point, we're going to reach a point where because of the cumulative impact – on birds, for example – we're not going to be able to allow any further development because we've reached that threshold of acceptable impact, but that cumulative

impact is the sum of all the worst case scenarios consented, rather than what's been built, so it's, potentially, a piece of work there to do, which would need to get done with BEIS and PINS and the relevant developers to bring the consents down to match what's actually being built, so that for subsequent cumulative assessments, you can take account of what's actually being built, rather than what's been consented and there's, potentially, unused headroom.

The heavy use of the Rochdale Envelope type approach meant more had to be determined post-consent through the requirements. The CoCP was used, along with other codes to help govern detailed design and construction issues:

There was the Landscape Management Plan, and other surveys that needed to be done, DCO design drawings that needed to be improved, lighting schemes ... pretty much, all the detail needed to be sorted out later ... and again, because we had a reasonable local authority, I think that was OK. Offshore, we've had a million and one things to do as well, as you can imagine, that's generally through the Deemed Marine Licence (Interviewee 27).

Part of the project was being consented on behalf of National Grid and the requirements were framed in a way that compartmentalised them around future work packages, in an attempt to have phasing that would work well.

The requirements were apparently worded quite 'generously' compared to a planning application's conditions with 'fairly broad latitude' around the detailed design and hours of working according to Interviewee 34, although he understood the reasons for this flexibility: 'Invariably, between planned and construction through a field, there always needs to be an opportunity to tweak designs and adjust, to take into account detailed circumstances and how you do build that into the process and it is an interesting balance.'

The requirements allowed for the unexpected to be found when undertaking construction work offshore:

where issues have been dealt with through requirements, it pretty much depends on what the developer finds when they go out there. For Galloper, they found ... it was the ship's bell and a couple of cannons and then potential World War 1 or World War 2 aircraft, so they've had quite a lot of archaeological things that they've been dealing with (Interviewee 28).

Overall, we were told (when conducting interviews while construction was ongoing) that the requirements were apparently working well with no major issues during their discharge according to several interviewees. Yet, on the other hand, an issue with the requirements was that many named bodies were, in practice, not that interested in them: 'Part of the awkwardness that I have found is some of the wording of the conditions, which required consultation with certain agencies, where we are looking at relatively minor matters, where they weren't terribly interested' (Interviewee 34). Another minor issue with the requirements was that they did not allow for the (unforeseen) pause in construction with the change of promoter and scaling back of the project to prevent it being cancelled: 'The originally approved Ecological Management Plan, obviously, I think didn't cater for what would happen if there was a period where development ceased and that is often the problem that we have on mitigation anyway' (Interviewee 34).

Engagement with communities and stakeholders

Statutory consultees

A range of statutory consultees were involved onshore and offshore, and a range of concerns were raised. The overall feeling from the statutory consultees expressed during our interviews suggested that the promoter had engaged well with them, and that various statutory consultees had co-operated where required between them on their response and engagement with the project. For example, Interviewee 35 (from an environmental statutory consultee) felt that the promoters were responsive to the issues they raised: 'We had contact with them at the pre-submission stage and then again during examination stage as well. I think, generally, they were very responsive, very engaging.' Equally, the promoter seemed to feel that engagement by statutory consultees had generally been very good, but it was notable some bodies clearly had separate teams working on the onshore and offshore elements, and this could sometimes cause delay and issues around co-ordination.

There were apparently some difficulties reaching agreement with Natural England over predicted impacts on bird life:

The key risk ... is to try to reach an agreement with the relevant statutory nature conservation body – in that case, Natural England – as to what the predicted impact – in that case, the relevant SPA species would be – and that proved to be extremely challenging ...

we then had to offer a menu of solutions ... the whole issue of predicted [avian] morality is complicated (Interviewee 26).

Agreement was, however, reached on a 'consentable' range for the scheme. The promoter had apparently taken a novel approach to mitigating bird mortality at Galloper, including not just changes to hub height and similar measures to reduce mortality at the generating site, but also contributing towards mitigation by supporting nesting colonies onshore: 'I haven't seen this dual approach been taken seriously, not for any other offshore wind farm anyway' (Interviewee 24). There were apparently also some concerns over surface water disposal at the substation, which is quite a large site, and this is an example of detail which was driven by the Environment Agency. Interviewee 35 considered the funding of statutory consultees was an important issue: 'we are becoming more alive to the issue that it is costing us time and money and we've got to try and recover that more and more.'

Local authorities and landowners

There seems to have been good engagement between the promoter and the local authorities on this project throughout. Interviewee 26 felt there had been a very positive working relationship with Suffolk County Council and Suffolk Coastal District Council [now East Suffolk Council] and those issues that did emerge both during and post-consent were resolved effectively. Interviewee 34 agreed that the promoter had been proactive in their engagement with the local authorities. No PPA was signed with the district council, however, although there was a 'not insignificant' workload for them.

Interviewee 34 explained the main considerations for the local authority in relation to the project:

Clearly, there is an economic, social ... a gamut of what you would normally consider under a development management process, it's there about saying about natural beauty, but at the same time, there's the social importance of it as a national infrastructure project, but within that, the logistics of how it will happen, what the significance of the appearance will be, what level of mitigation is required and is achievable, but this followed, pretty much, hot on the tails of Greater Gabbard as well and you were looking at cumulative impacts and at the same time, there were also, to some extent, cumulative impact issues to do with some of the work at Sizewell B.

There were no particular issues around the engagement with the local authorities, according to Interviewee 27. The big issue onshore was around landscaping, and the promoter agreed to have a large mound surrounding the substation so that it was well screened.

The major land ownership issues seen in some other NSIPs were not seen here, perhaps given the very small onshore component to the scheme. Nevertheless, there was apparently a particular issue around compulsory acquisition of land, and the competing needs of mitigating impact but justifying land take for this project with a nuclear power station owner being the landowner for the substation site (issues were apparently eventually resolved by a deal outside the DCO process, which did not require compulsory powers):

Because we were in an AONB, we had to think very carefully about how the landscaping and the tree planting and so on would work with the substation, but at the same time because we were doing compulsory acquisition, we also had to be mindful of the normal rule that says you must be able to demonstrate that you're only taking the land that you absolutely need. So there was a lot of tension between those two things and the solution that we came up with was to put in two versions of the scheme in the original application and we said 'this is the version, that if we already owned the land, we think it's the best for the environment ... but this is the alternative version that's more restricted in terms of a platform that we were having to build and the planting, the size of the platform and the slopes and what have you' ... but it does also meet the CPO test and those were very different designs; if you were to look them up, they were significantly different. So in the end, we didn't need to take that the whole way through because we were able to do a deal with EDF, and part of that deal was to use the better design, which involved the bigger land take (Interviewee 26).

Local communities

There seems to have been a comparatively low level of community engagement with this scheme. According to Interviewee 26, the community had no particular interests in the wind farm as it is so far offshore: 'on Galloper, our turbines are over the horizon, although the residents don't care about what they look like, but they did care about the substation

because that was relatively close to them'. The planning history of the area, with previous major developments like Sizewell, also meant there was local understanding of consultation.

A similar view that the local community did not apparently have many concerns about this NSIP at all was presented by Interviewee 34:

I think the community – quite a localised community at Sizewell – they do have regular stakeholder meetings with these people and open days and I think it's worked reasonably well ... because of what they have lived with over the years with Sizewell A and B and Gabbard, they are a community that has been used to living with these sort of large-scale projects and I have to admit, the way the project is managed, the greatest impact, I suppose, has been on where highway speed limits and things like that were introduced into the road and where they were perhaps moving plant into the site for a very limited duration ... but there's been very few direct complaints about anything.

The promoter did apparently try to respond to some issues that were raised, however:

In terms of the local community, we have reasonable engagement with them, we weren't that worried at the time, it wasn't a case of some other schemes, whether it's an overhead line, or whatever, that goes 200 miles through an AONB, it was a relatively short ... onshore cable and the substation itself, the onshore substation is in an AONB, which could have been a major issue for some local authorities and some local people; the fact that it was, in fact, within a few hundred metres of Sizewell A and B Nuclear Power Station kind of put things into context and also we tried to locate it next to an existing substation for the Greater Gabbard Offshore Wind Farm, so we tried to minimise it and we took their points of view into account, trying to keep all the infrastructure together basically ... there were some individuals that had some concerns that we tried to deal with, but there wasn't a huge amount of community interest (Interviewee 27).

A member of a local environmental organisation could not meet for an interview but provided written feedback to the UCL team giving a slightly different perspective. Their main concern was about environmental and wildlife damage. Concern was raised by the promoter's representative at the public exhibition apparently having no awareness:

that vegetated shingle is a biodiversity action plan priority habitat, even though this would be significantly disturbed where the cables come ashore at Sizewell. The shingle contains rare plants, such as Sea Pea. The beach is also a County Wildlife Site. In addition he had no idea that the sea off the Suffolk coast is part of the Outer Thames Special Protection Area (SPA), designated for the rare red-throated diver and important for harbour porpoise. Yet the route for the cables would be directly through this European protected site.

This was compounded by an apparent lack of response from the promoter to written questions asked of them at the pre-submission stage. There were also concerns about the timing of the works in relation to the red-throated diver visiting the area during winter. Overall, this local group felt that 'our views were not at all taken into consideration by the developer ... It seemed extraordinary that they should be totally unaware of the wildlife and environmental issues. We were left with the distinct impression that the company considered such issues to be unimportant, and that our concerns weren't worth the bother of responding to.'

This view did not seem to us, however, to reflect a particularly strong level of concern locally. Whether the lack of vociferous negative reaction from the community is related to action by the promoters or just the particular nature of this scheme is, of course, open to debate but it is clear that this NSIP is not characterised by strong local opposition in the way some others have been. We will now turn to consider the Progress Power Station scheme, before drawing conclusions from both projects at the end of this chapter.

Progress Power Station

Context

Progress Power is a proposed simple cycle gas turbine power station with a nominal generating capacity of up to 299MW, to be built on the former World War 2 airfield at Eye in Suffolk. The project includes a power peaking plant on the former airfield (which is now due to incorporate a single gas turbine generator with a single exhaust flue

stack), a new electrical connection cable to a new substation, and a new gas pipeline.

The scheme was promoted by Stag Energy, in parallel with a largely identical proposal for another gas-fired power plant with a nominal generating capacity of up to 299MW proposed to be built on the Hirwaun Industrial Estate, Aberdare, Wales, which received consent on the same date. Both Progress Power and the Hirwaun Power Station are designed as rapid response gas power stations that could respond to times when renewable electricity sources cannot meet national electricity demand. The application was accepted for examination on 25 April 2014 and consent was granted by the Secretary of State on 23 July 2015. The current owner of Progress Power is Drax Group, who purchased the consent from the original promoters (Stag Energy). Figure 9.2 illustrates the location of the project.

Local news announced project delays in November 2019: it was originally envisaged that the promoters would secure a contract to supply electricity and commence construction of the power plant in 2018 and then start commercial operation about two years later. However, a first

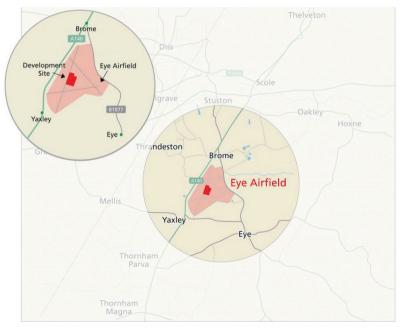


Figure 9.2 Location of Progress Power Station in Suffolk. The locally controversial substation is not shown on this map, but lies to the west of the A140 from the Eye Airfield. (Source: Drax, 2022, reproduced with permission.)

bid to the capacity auction had been unsuccessful and then in November 2019 the ECJ ruled that the UK must halt power capacity auctions pending further investigation by regulators (Parkin, 2019) into state aid issues (since resolved). At this point there was concern about whether the project would ever be constructed, given the five-year limit to commence construction in the DCO and local media highlighted the construction works would provide 150 jobs and up to 15 full-time jobs thereafter to operate the power station as well as the promised £300,000 community benefit fund that might be at risk.

Capacity auctions have since resumed: Progress Power Station was listed in the T-4 capacity market 2024–5 final auction results, qualifying it for government subsidies to guarantee electricity supply (Global Energy Monitor, 2022). Press coverage in March 2021 was that Drax has won subsidies 'worth £230 million' to support the building of three new gasfired power stations. Drax had scrapped plans for building Europe's largest gas-fired power station, a 3.6-gigawatt project at Selby, North Yorkshire, but retained plans to build up to four 299MW gas plants at other sites. Results of the capacity market auction in March 2021 were that subsidies had been won for three of these plants, with the intention to ensure electricity supply at times of high demand as the country moves to more reliance on renewables. Drax has, however, apparently also considered selling the three projects as the company seeks to be carbonneutral by 2030 (Godsen, 2021).

A press release from Drax in June 2021 announced that construction would commence on this site in July 2021, starting with erecting a new perimeter fence around the old airfield site (Drax, 2021). In November 2021, it was then announced that National Grid had awarded a company called Burnes and McDonnell a £14 million contract for the design, supply, installation and commissioning of a 400kV substation associated with the power station and, despite being linked to a gas power station, billed as assisting the UK's transition towards net zero (PBC Today, 2021).

There are no scholarly publications on this project at the time of writing, although the archaeological report is available online: as part of the DCO requirements, between September 2017 and March 2018, Oxford Archaeology East carried out two separate phases of excavation at the site, revealing remains spanning from the Bronze Age to the post-medieval period (Collie *et al*, 2018). At the time of conducting our own empirical research, the project had been consented, but construction had not yet commenced, and it was uncertain if it would ever be implemented. At the time of writing, construction does appear to be underway, and it is

now anticipated that the gas-fired open-cycle turbine power station will be operational in 2024 (Global Energy Monitor, 2022).

Consenting the project

The examining authority's report (Green, 2015) is shorter than some of our other case studies at 124 pages for the main report and with a single person instead of a panel for the examination, reflecting that in some ways this is a more straightforward and smaller scale project than some of the other NSIPs we have considered. On balance, the examining authority found that considering the mitigation measures that could be secured through the DCO and an S106 (this, interestingly being given considerable emphasis in the report), there were no significant concerns around emissions, biodiversity, traffic and transport or health. The S106 was noted to include agreed measures for socio-economic and educational improvements in the vicinity of the project, improving connectivity between the proposed development and the nearby town of Eye and measures to enhance landscape and visual amenity.

The examining authority considered there were potential positive outcomes from the scheme including meeting energy supply need and economic benefits of the development. There were, however, some potential negative impacts on landscape and visual impact and on historic and heritage assets identified including permanent damage to an historic field system. The examining authority commented that 'there is a fine balance between the benefits and adverse effects of the development' (Green, 2015: 120). The examining authority concluded that they recommended that the Secretary of State should grant consent for the development with a gas-insulated but not an air-insulated substation. The promoter had wanted the option of either, but the examining authority considered the harmful impacts of the development would be acceptable with the gas but not the air insultation option. This recommendation was then followed by the Secretary of State when granting consent (Scott, 2015e).

The consultation report made several commitments into the DCO, delivery and operational elements of the project. These included meeting concerns for landscape mitigation through an Outline Landscape Mitigation Strategy and Outline Landscaping Plans in the context of design principles that had to be agreed with the local authority before construction. There were also landowner concerns about access to the electrical connection compound but the promoter, while addressing these, did not include them within the DCO.

In recognising concerns for landowners during construction, the promoters indicated that they would be adopting a CEMP and a Construction Management Traffic Plan that would be included within the DCO. There was also a commitment to engage with stakeholders, local authorities and local communities as the project progressed, including over access to the electrical connection compound and a landscape strategy to screen its components. In addition, there was commitment by the promoters to continued engagement with the local community and key stakeholders following submission of the DCO, as well as throughout the construction, operational and decommissioning phases should the DCO be granted. There were commitments to achieving good design in the consultation report. There was concern discussed in the consultation report about whether sufficient detail was provided in the pre-acceptance consultation, particularly around the potential to vary the number of stacks (between one and five) in the completed project under the NEWT assessment principles. The community was focused on the potential of the project for bringing jobs to the area both in construction and during the operational phases. The promoter pointed out that the project would also bring a considerable addition to business rates and expected benefits to local business.

Following the granting of the DCO, a non-material amendment to the consent was sought and granted on 11 November 2016 related to the number of Gas Turbine Generators to be constructed (with the option for between one and five in the order). A single gas turbine generator power station had by then emerged as the preferred approach and further design work on this had suggested that there would need to be amendments to some of the parameters and locations of various structures including allowing for a taller stack than had originally been envisaged (Scott, 2016b). A second non-material amendment was granted on 27 July 2020 to extend the five-year time limit for the commencement of the authorised development to 13 August 2021 (Leigh, 2020b). This relates to the capacity auction and project funding issues already discussed.

Towards construction of the project

The project had clear intentions to allow flexibility over the number of gas turbines and associated stacks, between one and five, and this is mentioned in both the project's consultation report and ES. The flexibility for variance in turbine technology reflects the original promoter not intending to build and/or operate the power station but rather to obtain

consent and sell this on. A degree of flexibility over project construction and scope for differing technological solutions at the time of construction were sought. Given this upfront desire for a large degree of project flexibility, PINS advised that the ES should be clear in showing which works plans related to which option in the DCO. In order to support this flexibility, the promoters were required to ensure that the EIA assessed the worst case when design flexibility was proposed. In particular whether more, narrower stacks or fewer, wider stacks would represent a worst-case scenario for visual amenity.

This flexibility was assessed through a golden thread of all possible scenarios in the ES, but this made the ES complex and difficult to explain to stakeholders as each chapter/topic required a different worst-case scenario (for example, for some things, having five turbines instead of two is more impactful, but not others; fewer turbines meant fewer, taller flue stacks). It was also considered that flexibility and the trust of stakeholders and local planning authorities was key, and for promoters to explain the limits to flexibility.

We were told during our research that an approach based on parameters adopted in the DCO allowed flexibility and was now working as intended into project delivery. In addition, as is usual for most NSIPs, the requirements section of the Progress Power DCO further supports flexibility to assist project implementation, including landscaping plans, details of fencing, a surface and foul water drainage plan, a written scheme to detail the contamination of any land, a written ecological management plan, and a written scheme of investigation being dealt with post-consent through the framework provided by the requirements section. Notably, Requirement 3 on 'Detailed Design' allows considerable flexibility.

Interestingly, although the same draft DCO was used for both Progress Power and Hirwaun, differences emerged between the two in their requirements section so that Progress Power has 23 requirements to Hirwaun's 21 and with some differences in wording within some requirements. This reflects the different sites, local communities, local authorities and statutory consultees between the two projects. The Progress Power site was slightly more sensitive than the Hirwaun site, with heritage issues around the substation. A number of elements are specified to be included in the CEMP under Requirement 11. Notably, the Progress Power CEMP includes a specific provision for setting up a Community Liaison Group when the Hirwaun Power one does not. We were told this was to deal with issues raised during the examination phase and as part of the response to and management of the concerns of the community.

A significant issue for the implementation for the project occurred when it became clear that a major element of the operational equipment (fan coolers) had been omitted from the DCO. The promoter had to return for a non-material amendment to the DCO, which was obtained. This delayed the project by five months. There were further issues on the provision of access to the project when it was found that the access point included within the DCO could not be used as there were protected tree roots impacting the construction of access roads (the original consent had taken into account the extent of the above ground trees, but not their roots). An alternative access point was secured using an application with the Town and Country Planning Act but as this was outside the DCO, this did not have accompanying compulsory acquisition powers giving rise to potential issues with landowners. Greater pre-submission contractor engagement might have assisted in fully assessing the options and needs for construction compound access.

There were also apparently issues around contradictory requirements, for example on Hirwaun stating that no part of work could commence before bat mitigation was in place but that bat mitigation itself actually required some works to be undertaken. Similarly on Progress, some preparatory work required hedgerow approval, but this was apparently not possible within the DCO requirements as it would count as works itself, and this had to be resolved with an application through consent under the TCPA.

Engagement with communities and stakeholders

The project has a dedicated website (http://www.progresspower.co.uk/) that includes general information about the project, commitments to a Community Benefit Fund, and a commitment that a proactive approach will be taken to supporting local businesses during the 30-month construction phase (which will apparently need about 150 staff). There is documentation on the project website showing that a design workshop relating to the substation was held with the local community in January 2018. There were also community information/update events held in July 2017, October 2017 and January 2019. Details of the discharge of requirements did not appear on the project website but could be found on the Mid-Suffolk District Council's planning database, as can details of some TCPA planning Applications for associated development to support implementation of this NSIP.

As in other NSIPs, the discharge of many requirements included direct engagement with the local authority and some other statutory

consultees, like Natural England. Unlike the A14, there are no explicit requirements around consultation on discharging requirements or for a public register in relation to this. There is, however, within Requirement 11 for the CEMP, a need to establish a community liaison group (CLG). The final version of the CEMP was written by Peter Brett Associates in August 2018, approved by Mid-Suffolk District Council and is available by searching their planning application database. The CEMP deals with the CLG and notes that 'the Owner will pay particular attention to managing the relationship with local residents that may be affected by noise or other amenity aspects caused by the construction works' (PBA, 2018: 15). The CLG is specified to include local community membership, with several listed organisations (including parish councils) as well as the district and county councils. Complaint procedures are noted and close liaison with local authority Environmental Health Officers is also required.

Interviews were conducted with the promoter, local authorities and a community liaison event was attended by researchers during the period between the project gaining a DCO and construction starting. Interviewee 36 (who worked for the promoter) explained the scheme was one of several being developed on the former airfield, and although the project does not seem to have caused great concern with the local authority, statutory consultees or the Examining Authority, the combination of several industrial schemes and proposed new housing together have caused some concern in the community. In relation to this particular NSIP, there was apparently more difficulty with the substation in open countryside than with the main power station, and the landscape impact of this. There were also concerns relating to ecology and hedgerow removal and the relationship between the temporary access road and field boundaries.

While the promoter has almost identical NSIPs for gas turbine power stations at two locations, they considered that there had been more difficulties in Suffolk than Wales (which is entirely on a brownfield site, in an industrial location). This demonstrates the importance of the particular local geography and context to schemes. There was some recognition that the consultation process in Suffolk could have been improved in the pre-submission stages when levels of trust were low.

Following the change of promoters, Interviewee 36 said that there had been a concerted effort to improve relations with local communities and stakeholders. Improved relationships were considered a priority given the length of time required to deliver the project, and because the current promoter would be the operator of any completed power station. This included running information events and trying to engage the five

different parish councils, landowners and those who would be involved/affected by the archaeological works. It was noted that different local groups and individuals are often interconnected and share information. There was a feeling that relations with landowners and parish councils had improved over the last year before our interviews.

Although there is nothing specific in the requirements for a design review process, there was concern expressed at examination, and noted in the Examining Authority report, over the adequacy of the submitted Design and Access Statement. As a result, a new design principles statement was submitted and accepted by the local authorities using a statement of common ground. This document made commitments for formal design review including community involvement and consultation (Progress Power, 2017). The detailed design requirement was discharged with community workshops held. In doing these, there was awareness of expert/lay differences in judging design and that there were certain constraints that the substation design needed to work within. Nevertheless, there was a view that the workshops had gone well and added transparency to the detailed design process. Although the detailed design requirement was discharged, the programme of informational events continued until the formal establishment of the CLG six weeks before construction started.

Interviewee 36 considered that post-consent engagement was important, including where there was an opportunity for community input (for example the design workshops). Other events were held to provide general updates. The promoter had exceeded the post-consent engagement requirements to address community fears, build better relations and to try to achieve what was best for the project. However, it was considered that there must be some honesty, realism and care taken to avoid over-committing in a way that the promoter might not be able to fulfil. A proper communications strategy for the discharge of requirements was considered essential as people want information and transparency; an absence of this can apparently lead to unhelpful speculation.

Local authorities

The county and district councils attended the design review workshops and community information events. A community benefit fund has been managed through the district council and there was an S106 with Mid-Suffolk District Council making various commitments as to how the promoter will work with them, but no PPA. The local authorities have also been supportive where Requirement 22 was utilised to make some minor

amendments, for example changing engineering diagrams to fit national grid codes.

Interviewee 37 explained that Suffolk County Council had been involved in several NSIP schemes and able to build up some experience and expertise. Officers welcomed the opportunity to engage early with schemes through the NSIP regime's pre-submission requirements, and in this case were apparently able to agree much before examination such as draft CEMPs. However, several issues were left unresolved in the presubmission discussions, particularly around the substation.

Although quite a small NSIP, Interviewee 37 stated that the project had been locally controversial. There were key concerns around amenity-related issues such as construction transport management and access, noise and dust, historic field boundaries and landscape issues with the substation. Although it was understandable from the perspective of the County Council that promoters and their contractors would need some commercial space to implement schemes post-consent, going for the worst case scenarios and utilisation of the Rochdale Envelope can apparently make it harder for communities to understand the true impact of the final scheme. It was stated that this makes it important to give assurances about engagement post-consent and transparency about the way the promoter will seek to minimise and mitigate issues post-consent so the worst case will not happen.

Interviewee 37 felt that the initial engagement of communities and stakeholders by the previous promoter was poor. They may have been more focused on getting the DCO and then selling on the consent rather than having a long-term interest in the scheme's delivery and a longer-term relationship with the community. For other schemes in the County Council's experience, such as an offshore energy scheme, there is an expectation of a long-term relationship between scheme and local people. The result was that the parish councils, in particular, became well organised. Some issues became difficult at the examination, and the local authorities pushed requirements to engage the community on detailed design and to have a CLG during construction. Securing these clearly in the requirements was felt to be essential to give confidence.

Interviewee 37 also felt that regardless of the change of promoter, the move from application to delivery teams can often present challenges in NSIPs, with the risk of gaps in knowledge emerging. This can make it harder to make the requirements work, as the reason for certain commitments is not always fully understood by the delivery team. The team obtaining a DCO focus on this and not what will come afterwards.

The change in promoter to Drax apparently required hard work to re-engage the local community. Certainty of substation design was an important issue. There had been three workshops with parish councils, the Design Council (CABE), promoter (Drax) and local authorities on the detailed design. These were considered effective and rebuilt some confidence with local communities. Although the CABE panel were slightly constrained by the DCO, some real choice was given, for example between different substation building designs and colours. This process was considered to pave the way for easier implementation.

Interviewee 37 stated that a local authority is at the centre of a community in the way that other statutory consultees are not. People will contact the Council with their concerns and queries. There is a growing awareness of this by the promoters, with local councillors and parish councils given early sight of the proposed TCPA planning applications being submitted for this project. Further, increasing consideration was being given to information presentation and the concerns of local democracy. There had apparently been community concerns with a lack of information given about pre-commencement works (like hedgerow removal) and promoters appreciated that it was important to ensure people are informed and aware.

More 'in principle' commitments about engagement through the discharge of requirements (especially on detailed design issues) can help manage the uncertainty generated by the Rochdale Envelope. Overall, there was a desire to see an improved process to move from the consenting element of the NSIP into the delivery phase. There is another handover point to consider between the construction and operation of the project. The local authority is there throughout the whole process as a consistent presence. Interviewee 37 argued that the council can provide some continuity for the project and the community and act as a liaison point with parish councils. The community is also a consistent presence and it is important to engage them fully early in the process and maintain this communication.

The district council has had an area manager in the planning department who was effectively the single point of contact for the promoter. Although it is a small project in terms of NSIPs, Interviewee 38 explained that for the district it was a big project and of high concern to the community and councillors. These concerns were apparently wide ranging including road junction design and signage. The district council was also aware that Eye Airfield would be the location for a new chicken processing plant and business park development and were keen to ensure that all these developments (including Progress Power) work well together.

Interviewee 38 considered that the requirements section of the DCO was clearly set out. However, there were some issues in its operation. It was not clear whether the water pipeline was covered in the DCO (needed to supply firefighting water in case of incident at the gas-fired power station) and so a TCPA planning application was prepared. The precise wording of elements of the DCO and requirements could be a challenge. A TCPA planning application was prepared to cover the hedgerow removal as, although this was possible via the DCO, the processes of discharging the requirements meant that this would not be possible before bird nesting season (when it couldn't be done, and a long delay would then accrue). Similarly, timing between the requirements relating to ecology and landscaping led to some issues around fencing.

Interviewee 38 explained that the district council had been working closely with the promoter on TCPA planning applications for a different temporary access road route (for construction) for the water pipeline, and to reroute the cable connecting the power station to the substation (as new contractor advice on drilling techniques means it will be possible to put the cable under the old runway – a heritage asset – without disturbing it, rather than having to go the longer way around). Local councillors were interested in these applications. With most of the requirements discharged by the time of our interview, there was a view that Drax, as a promoter, had been very engaging with the district council (and perhaps better than some housing developers can be on their planning conditions). The local authority had also been involved in the non-material DCO amendments and some variations under Requirement 22, which has been worked through between district council, promoter and other statutory consultees through joint meetings.

Interviewee 38 was aware of the community's concerns on the landscape impacts of the substation in open countryside near Yaxley (more so than the main power station on the Eye Airfield site, which is an enclosed industrial site). A key concern had been the views from Yaxley of the design and colour of the substation. Local councillors had also been concerned with the design, hedgerow removal and fencing. The parish councils had been concerned with the access road and its interaction with the former airfield's heritage elements (where local knowledge comes into play). Interviewee 38 commented that the hedgerow removal caused a surprising number of local issues, with the community questioning why it was necessary, and some potential misunderstanding about the extent of works (which was more cutting back than full removal). They felt that Drax were helpful in giving further details to explain what was happening, reducing concerns.

Overall, Interviewee 38 considered that engagement post-consent has been good, with the promoter helpfully providing information and working to keep in contact with the district and country council officers. They felt that much was left to be decided post-consent so the local authority had been kept quite busy in relation to the project. There was an \$106 that helped resource this work. Some issues seemed to have lots of scope to change post-consent but other requirements were more tightly drawn. The council has had to work to understand why some things are set out as they are in the DCO.

Interviewee 38's impression was that the design workshop worked well. There was thought given to the appearance of the substation in both summer and winter, and efforts to reach a consensus view among the 30 people who attended. Members of the public, statutory consultees and planners were split into smaller groups and this helped rebuild trust with the local community following the tensions over the hedgerow removal. A TCPA planning application was used to implement the chosen design of buildings and green and brown colour scheme. The appearance of the substation had been a major community concern since the pre-submission so providing different options and some local control really helped. Continuous engagement was considered essential, so that local people's knowledge and awareness is developed bit by bit rather than having any big shocks.

Local communities

We attended the community information event held in Eye in January 2019. It was well attended. It was stated by the promoters that the pre-commencement works were completed, and the project was working through the requirements. There was an explanation of the restrictive timetable within the landscape and ecology plans for certain works. An explanation of the new horizontal drilling technique that deviates from the DCO work areas for gas and cable lines was given, hence the TCPA planning application. Similarly, the existing water supply was insufficient for firefighting needs hence the new water pipe needed via another planning application. Reassurances were given that farmers had been engaged in discussions about these route realignments.

The planning application for a new temporary works access to construct the substation was explained, with justification of less impact on the A140 road, reduced need to clear trees and hedges and better alignment to existing field boundaries. There was some discussion about the interaction of this with the World War 2 aircraft dispersal zone

hardstanding, and its national significance. There was also discussion about the access road only being temporary and what would happen for ongoing maintenance, which had apparently been raised during examination (which meeting attendees recalled – sometimes it seemed local community members had better institutional memory than the promoter's staff, who had changed since then). It was highlighted, however, that construction required much bigger vehicles to access the site than ongoing maintenance, as confirmed by National Grid, and hence the revised proposals.

There was an explanation given at the meeting about the capacity market auction having been suspended due to a European legal ruling, and the potential delays for the project. A 'material start' needed to have been made by August 2020 or the DCO expired. Again, members of the audience recalled discussions from the examination, where apparently it was suggested even without success at the capacity market auction, the project could be implemented, and the electricity generated just sold. The meeting also discussed the CLG and the district council's recent approval of its membership.

There was a comment from an audience member that it was hard to keep track of commitments made years ago (pre-submission or during examination), especially for under-resourced parish councils, and it was sometimes difficult to now understand why certain commitments were made three or four years ago. This is a major consideration for all NSIPs. Further, the PINS website had so many documents that looking through all to see the commitments made was difficult and some sort of summary would help.

There was also a question over whether DCOs appear in solicitor searches (in the same way as TCPA planning applications) and potential implications for house buying. The meeting was generally informative and respectfully conducted between all parties. It concluded with a note that there were no further information meetings scheduled as yet but that the Progress Power team were open to communications directly in the meanwhile.

Conclusions

While there are a number of specific factors relevant to each of these schemes, and indeed differences between an offshore wind farm and a gas-fired power station on an old airfield, they demonstrate the breadth of 'energy' projects seen through the regime. There are also some

commonalities from both case studies, in particular in relation to the funding challenges of energy NSIPs and the real push for flexibility in these DCOs. The Galloper scheme was one of the earliest DCOs, and it is clear it has provided learning for many subsequent projects that have already been extracted and benefited the NSIP regime. However, there are clear correlations with key themes here with some much more recent DCOs that highlight persistent themes and potential issues that exist for NSIPs. These may be related to the way in which the regime is established and operated and the scale of these projects.

The energy sector has been marketised (Parker, 2013; Morphet 2021a) and companies or consortia are required to bid for licences. Before bidding, the possession of an extant DCO is critical for their success in the auction. Both projects here had pauses between DCO and construction while funding issues were resolved, and both projects were adapted due to funding issues and constraints once they changed promoters.

Flexibility can become all the more important for these entirely private sector projects. For Galloper, in common with other offshore wind farms, considerable flexibility was built in to the DCO. Nevertheless, a non-material amendment was required in order to enable construction to proceed in a viably cost-effective manner, taking account of the latest wind turbine technologies. This demonstrates the pace at which construction technology in this sector has changed, and the need for a secure route to make amendments to DCOs. Concerns about the ease and timeliness with which a DCO can be amended are further demonstrated in this particular project by the fact a TCPA planning application was used to amend the substation (as associated development) rather than amending the DCO itself. Progress Power had a high degree of flexibility for an onshore scheme in terms of the number of turbines and stacks, which proved essential in implementation although it still required two non-material amendments to the DCO and TCPA planning consents.

For both projects, there appears to have been good engagement between the promoter and statutory consultees, with local authorities particularly supportive of the schemes. Although attention was paid to framing requirements, their discharge for both projects has presented some difficulties. It is notable that at two local authorities and at least one statutory consultee involved in the discharge of requirements it was reported they had underestimated the amount of time and work this would involve, and resource constraints in such public bodies are clearly an issue if more is to be dealt with post-consent in flexible DCOs. This is a useful experience for other NSIPs to consider.

Progress Power made commitments for post-consent engagement on detailed design, with community involvement and a design review process, with a CLG during construction. The CLG is specified as a DCO requirement, but the design review process was less obviously secured: it came about as a result of a commitment made in a Statement of Common Ground with the local authority during the examination. This was incorporated in the design principles statement agreed under the DCO requirements as a certified document. This highlights the range of points in the process that commitments can be made, and the difficulty keeping track of them was raised at the community information event we attended. The issue of consistency pre- and post-consent in terms of engagement and understanding of commitments was also raised. There was some perception that community relations had initially been handled badly, but with a change of promoter and more proactive work post-DCO, relations had improved. Allowing the community the chance to influence the substation design contributed to improving relations and addressing key concerns. Regular community information events (which were beyond the requirements and commitments for post-consent engagement) also seem to have worked well during the long gap between consent and implementation.

Across both projects, the important role of the local authorities in mediating between promoters, parish councils, local community members and other stakeholders, and in helping to implement projects through granting planning permissions and discharging requirements was apparent. With place knowledge, understanding of the interaction of different current and planned developments and awareness of local politics, there is a key role for local authorities in NSIPs that is being increasingly recognised. Given the austerity that had impacted many local authority planning departments over the last decade, the resourcing of their work post-consent remains an important consideration.

10

Conclusions

Chapter outline

In this concluding chapter we reflect on the key issues raised through our consideration of the NSIPs regime in practice. We note how the system itself has evolved over the last decade. We highlight the issues of effects of the institutional framing of the front end of the consenting process over delivery where the consent is the goal as opposed to the construction and operational delivery of nationally significant infrastructure, the relationship between consent and delivery and between detail and flexibility, and the implications for community engagement in a regime that prioritises by design 'the national interest'. We also consider the evolving role of local authorities and how their everyday work has been helping to actually deliver projects through their regulatory powers and role discharging requirements. We reflect back on our understanding of the regime in relation to existing literature and the wider issues of how we understand processes for policy change. We then conclude by speculating on the future of the regime, given the context of the UK's exit from the EU, the current government review, and the ongoing controversies around issues such as airport expansion (particularly in light of climate change), nuclear power projects (particularly in light of funding issues), fracking and the way large new settlements might be consented.

How has the NSIP regime evolved, 2008–20?

The changing role of central government in decision making

The introduction of the Planning Act 2008 to provide consents for Nationally Significant Infrastructure Projects, seemingly defined by government but in fact representing the EU strategic infrastructure corridor network and associated projects, has been interesting from the outset. The corridors and projects have been determined by the EU as a whole with the UK fully involved in the selection and prioritisation of specific improvement projects. The UK was receiving the largest amount of infrastructure funding from the European Investment Bank at the time of the Brexit referendum, although new loans were halted subsequently. After the adoption of the first TEN-T Regulations in 1996, it took at least 12 years, if not longer, when the EU pre-legislative preparation is included, for the UK state to find a legal means that could be used to translate these into domestic practice. The particular issue was the shift from the use of land for infrastructure, based on the principles of development as set out in the Town and Country Planning Act 1947, to one where the principle of development was established through treaties and their implementing regulations as alternative means. The switch to an inquisitorial rather than an adversarial inquiry model set within National Policy Statements approved by Parliament provided some shield for these changes.

The initial establishment of an independent Infrastructure Planning Commission that would hear and determine these applications for the Development Consent Orders necessary as part of the NSIP delivery system set up in the Planning Act 2008 created a closed system where the issues for consideration could be controlled by setting an administrative procedure. The focus on improving timing of decision making after the artificially extended Heathrow Airport Terminal 5 planning Inquiry also helped to support the narrative of the need for change. Interestingly the act itself was not subject to significant change through Parliament or in response to the white paper – there was significant environmental lobby opposition but this did not become more widespread (Marshall, 2013).

Once the IPC started to operate the 2008 Act, examining and deciding on each DCO application, central government decided that they wished to depart from the independent system and return their direct control over this decision making. In the case of some projects, the government departments did not wish public expenditure to be determined outside their control. In the Localism Act 2011, the IPC was abolished and replaced by Examining Authorities provided by the Planning Inspectorate. Other aspects of the NSIP system remained the same: the process for pre-submission acceptance, the assumption by many that any project accepted in to the NSIP system would be approved and an adherence to the time scales adopted from the outset that would enable decisions to be reached within a year of the date of project acceptance into the system.

In the period 2008–20, there were legal tweaks and changes in the system that allowed the use of S106s for future commitments, as in the TCPA procedure for planning applications. There were also extensions to the types of projects that could be included within the regime including some with ancillary housing, the major Thames Tideway project and other business and commercial schemes. There were also other informal changes in promoter practice that occurred during this period, particularly relating to the role of the examination, including the attempted management of risk through accumulating environmental assessment practices and short-term agreements between parties promoted by the examining authorities to meet timescales, although these were not assessed for the overall effects on project delivery (Morphet and Clifford, 2017).

The National infrastructure Planning Association was established in 2010 to create a collaborative community of those involved in progressing NSIPs, although this primarily focused on the DCO element of the projects. NIPA holds annual conferences and has commissioned research on the system, such as the research on speed and flexibility in the system on which this book is based. The National Infrastructure Commission was established for England in 2015 on an interim basis and on a legal footing in 2017, with some expectation that it would advise on delivery and determine areas of investment within the framework established by the EU TEN-T programme for strategic infrastructure. This also matched the EU review of sub-strategic infrastructure and definition of a new set of links between corridors from 2014 onwards. While publishing a series of reports and recommendations and having a legally defined role in providing an infrastructure assessment for each new parliament, the NIC's influence has been less than anticipated. Nor was there any research commissioned to assess whether the Planning Act 2008 was providing a speedier and more efficient approach to the delivery of these projects before 2022, when NIPA commissioned research on this issue. Overall, until recently, the national policy context for NSIPs has remained static with little consideration of the way in which the NPSs have grown increasingly distant from other UK international policy commitments as agreed in the 2015 Paris Climate Accord and the UN Sustainable Development Goals (SDGs) also agreed in 2015. NPS reviews promised after five years in their introduction in Parliament were not fulfilled, although, as discussed below, this process has now commenced.

In the period 2010–20, the NSIP regime has functioned in ways that have stretched beyond what was envisaged at the outset. The focus on the mechanism of delivery in the examination, including the

detachment of the community and local authority from the process in the early years of its operation, overshadowed and distracted from other concerns about need for the facility and the locations being chosen. There was an acceptance that the examination process was focused on the *how* of the NSIP delivery and not the *why*. As Marshall and Cowell (2016) demonstrated, the NSIP regime was no quicker than the one that preceded it and after 2020, a distinct rupture in the practices in the system was demonstrated through more DCO refusals by Secretaries of State and delays in decision making much beyond the 12-month period adopted at the outset. There was also an increase in judicial reviews as the NPSs were out of date, not reflecting the government's international agreements, even where these had not been formally considered by Parliament and transposed into UK legislation. Again, the wider than UK dimension was shaping NSIP practice and this was compounded by the Brexit referendum in 2016 and the UK's departure from the EU in 2020.

What changed in 2020?

Given the relationship between the Planning Act 2008 and the need to apply the EU regulations for infrastructure, and given the important role of EU environmental regulation in the regime, then the UK's departure from the EU following the Brexit referendum in 2016 was bound to have some effects on the NSIP system. Any discussion of the likely effects of Brexit on the 2008 Act have been difficult to undertake, not least as there was no acknowledgement by government of this relationship from the outset (Morphet, 2013; 2017a). Also, for legal practitioners, EU law has been the basis for the many shared competences within the EU by the UK and they have little experience of pre-1973 conditions. Initially, between the Brexit referendum and its implementation in December 2020, there was an assumption that existing UK commitments and legislative frameworks within the EU would remain unchanged until specifically amended by UK judges. It was also assumed that the UK would maintain regulatory alignment with EU legislation in order to allow UK business to continue to trade with the EU. However, in the environment policy area, for example, it became clear that the UK would establish its own legal framework and depart from the EU legislative base. There are also issues when EU legislation changes, as there was no commitment to maintain these rules in the UK.

In respect of the application of the 2008 Act, as Latif-Aramesh (2022b) demonstrates, 2020 was a watershed for a change in the

operational practices of government departments at all stages of the NSIP process. At the pre-submission stage, between 2010 and 2020, there were seven refusals or withdrawals at the acceptance stage, while between 2020 and 2022 there have been five. At the post-examination stage, between 2010 until 2020, Examining Authorities recommended refusing only two out of 77 applications. Since then, they have recommended eight refusals, for Manston Airport, Wylfa, Drax, A303 Stonehenge, A303 Sparkford, A63 Castle Street, part of Wheelabrator Kemsley, Norfolk Boreas and Norfolk Vanguard. At the post-decision phase, between 2009 and 2020, 10 judicial reviews (none successful) have been made against DCOs while between 2020 and now, there have been four successful judicial reviews (Manston Airport, A38 Derby Junctions, A303 Stonehenge and Norfolk Vanguard). In terms of delay, there was one delayed decision in the first 56 DCOs to be decided, but since April 2020 the vast majority have been delayed.

These changes also include the effects of Judicial Reviews of NSIPs since 2020 that have had some effect in drawing the Planning Act 2008 closer to the operation of the ordinary Town and Country Planning Act regime in at least two associated ways. These relate to the principle of development and need for the proposal. The first concerns the principle of development, where the DCO process has not considered the alternatives to the development including a do-nothing option. This was not included in the practice of this regime pre-2020, when it might have been an issue in a number of projects. The second is in the associated calculation of need for whatever the outcome of the proposed project is to provide. This has been illustrated by Murphy (2022) in relation to two energy-from-waste projects where a main issue at the examination was whether there was sufficient need to support the additional waste capacity proposed. One project was within the NSIP threshold for consideration within the NPS EN1. The second was lower than this threshold and been subject to a ministerial direction to use the NSIP regime. The challenges related to the requirement to demonstrate need and what would occur if there was not sufficient waste to use the facility in the county as well as the applicability of the NPS where the size of the facility was smaller than the NSIP threshold. When the examining authority was considering these issues, the NPS was considered to have determined the issue of need on the first application and so that could not be contested but the second was refused as the case was not made. The Secretary of State overturned this recommendation and treated the applications as one. However, this decision was quashed by judicial review on the basis that this approach would extend the scope of the NPS without any Parliamentary approval,

confirming that the NPS cannot be questioned within the DCO process, nor can it be deviated from.

A second judicial review for the Drax power station was concerned with the demonstration of the issue of need in decision making as stated in the NPS. However, in the consultation draft of the revised NPS EN1 (BEIS, 2021), this statement on need has been removed. Here the court found that other matters such as energy security have to be considered as part of an assessment of need and there could be no overarching way of undertaking this. Finally on the judicial review of Stonehenge, the DCO was quashed because the Secretary of State had not expressly taken the alternatives into account in their decision making. We turn now to consider our findings about how the regime works in practice, before then speculating how the regime might change going forward.

The NSIPs regime in practice

Consent and delivery

In this book we have drawn heavily from our research projects looking at aspects of the NSIPs regime in practice in 2017 and 2019. In 2017 we found that most stakeholders involved in the regime, including public sector agencies, local authorities as well as scheme promoters and their agents were broadly happy with the system. The various certainties the regime promoted (White, 2013) were appreciated and although there were high costs involved in getting a consent and usually extreme workloads associated with the time-limited examination period, people seemed to feel the regime was a better way of planning and consenting major infrastructure than what had proceeded it and that it generally worked well as a system, albeit capable of some enhancement. White describes the 2008 Act as a 'genuine revolution in the way that planning applications for major energy and infrastructure projects are prepared, assessed, determined and implemented' (2013: 146) that has settled down after some initial teething troubles. In more than 10 years that the regime has been operating, more than 100 major infrastructure projects across England and Wales have been consented. The rapid development of the UK offshore wind industry (Broadbent and Nixon, 2019) has been facilitated. The system continues to operate with, as we write this conclusion, the announcement that the Sizewell C Nuclear Power Station NSIP has been granted development consent (Mettam, 2022).

Nevertheless, a major finding from our 2017 work (Clifford and Morphet, 2017; Morphet and Clifford, 2017) was that overall there was often more of a focus on achieving the DCO, that is, getting development consent, rather than thinking about completion of the NSIP, or construction/implementation of the major infrastructure project. This led to consideration of how the nature of these projects, involving funding constraints and uncertainties, long temporalities (Marshall, 2018) and technological changes, can mean a need for flexibility in the consent to aid constructability. This can be achieved through the use of envelope assessments (the Rochdale Envelope) and NEWT assessments, limits of deviation specified in orders, temporary use of land, different options specified within a DCO, the sorting out of detail post-consent under the requirements process, and the use of codes specified within the requirements to govern flexibility, detailed design and construction. There had, however, been differing levels of confidence in the use of routes to flexibility and clear difficulties from insufficient attention being given to delivery with a range of parties (including some consultants working for promoters) having been more incentivised on achieving the DCO than delivery of the NSIP. In some cases, this was exacerbated by the fact that in the energy sector some promoters were seeking to achieve DCOs they could then sell on to others to build, again providing more focus on consent than delivery while reflecting the evolving political economy of infrastructure.

The institutional effects of the focus on the DCO rather than the NSIP as a whole has therefore had consequences for project delivery. While the legal role of the DCO in the NSIP process remains dominant, the issues of project delivery have started to emerge. The sharp distinction between the approach to the DCO and the engineering/construction requirements have demonstrated a range of issues caused by this approach. In many DCOs, the requirements in delivery have not been adequate or too fixed and changes have had to be made. This has occurred in the energy sector where the DCOs have not allowed for changing technology and in other schemes where access or working areas have not been practical for delivery. In some cases, the DCO non-material amendment process has been used although this is not accompanied by an indicative timeframe. As we write the conclusion, the material amendment process has just been used for the first time (Latif-Aramesh, 2022f).

The issue of the relationship between consent and delivery was not a theme that had been much commented on in existing literature but just as a planning consent for housing is not the same as a home for someone to live in, development consent – important as it is – is not delivered major

infrastructure. Some of these delivery issues have arguably been related to the very design of the regime, which from the outset has to some extent supported infrastructure delivery when the certainties have applied but did not properly consider the likelihood of the need for post-consent amendments for projects of this scale and duration and did not put in arrangements that adequately supported changes to granted DCOs (hence the reliance in many cases on TCPA). The role of local authorities post-consent was also, arguably, not sufficiently considered from the outset, to which we now turn.

Post-consent issues and the role of local authorities

Another significant finding from our research, as reported in this book, was around post-consent issues in terms of understanding how the regime operates after the DCO is made. The DCOs vary considerably in terms of requirements and the different use of codes within them (Morphet and Clifford, 2019) but the post-consent phase often seems to have been paid insufficient attention given the focus already mentioned on getting the main DCO approved. Significant detailed design work can be undertaken post-consent, and the requirements are also usually what governs construction management that is so often a concern to local communities (indeed, in the case of the Thames Tideway NSIP, local concern was all about construction impacts since the finished infrastructure will be a buried super-sewer with positive rather than negative environmental impacts). The specific wording and sequencing of the requirements can be very important for project delivery, while the transparency around the commitments made throughout the DCO process and the process for discharging requirements is important for community confidence.

We found evidence of some DCOs where it was hard to keep track of commitments made, which might fall in an Environmental Statement, a Consultation Report, S106s, Statements of Common Ground, and the various documents being produced under the DCO requirements. In some cases, documents have been 'archived' and disappeared from the PINS website before the project has finished construction. This makes it harder for all stakeholders to monitor any project as it is being implemented. It also hints at the lack of attention to project delivery already mentioned, and of consideration as to how the discharge of requirements will work in practice. Delays can occur at this stage, particularly if there are interdependencies between requirements (for example 'no work can start until'). There is also an interesting point about speed here. As Marshall and Cowell (2016) have pointed out, narratives

of 'delay' have been behind a whole suite of changes to infrastructure planning (and indeed wider planning reform) but the evidence of such delay is often selective. They therefore conclude that although the time-limited examination and decision phases of the DCO process may be faster, overall it may not be a faster way to consent major infrastructure because of the considerable pre-submission requirements. To that might be added the often considerable post-consent requirements.

Local authorities have an increasingly important role in the NSIPs regime. Initially, the 2008 Act set out their responsibilities for certifying the adequacy of consultation and producing a Local Impact Report (although some may not have maximised leverage opportunity fully). However, less attention has been paid to their role in discharging conditions for DCOs, their environmental health responsibilities during construction, and being the first point of call for the community when there are problems with construction that affect them. These responsibilities can take more resource than is sometimes appreciated, hence resourcing issues for local authorities and statutory consultees to fully engage with the regime are important considerations, particularly under austerity, yet funding for a local authority through a PPA is not a required part of the regime. Even when the local authority is not discharging the conditions, as with the A14 NSIP, they still had duties such as environmental health regulatory obligations whereby they could influence these national projects. As the 2008 Act encompasses more projects, local authorities are becoming more active and assertive in the ways in which they are making their requirements for environmental management in the implementation of the project.

In addition to formal regulatory roles as projects are implemented, local authorities have also been able to have influence and a vital facilitator role as trusted guardians of place. Thus, as seen with the A14 NSIP, it is to the local authority that communities turn when they have complaints (in this case over construction impacts). In the case of Thames Tideway, it was felt that having a facilitator employed by a local authority would be more trusted than one employed directly by the promoters. Local authorities are also increasingly playing a role when local communities are experiencing the implementation of these projects including managing complaints about noise, dust and traffic and the use of mitigating community funding. We also found evidence that the delivery of NSIPs has become more reliant on the use of S106s and supplementary planning applications to the local authorities for consent to works under the Town and Country Planning Act regime (as in the cases of Progress Power and the Galloper Offshore Wind Farm, for example). The initial approach of excluding local authorities

from the DCO process after scheme acceptance into the regime by PINS has moved to one where local authorities have become essential to making consented projects deliverable.

Cotton has commented that 'the new spaces of planning governance in the UK have rescaled decisions on infrastructure projects to the nation state scale, rather than the regional, local or community scale' (2018: 250) but, on the basis of our evidence, we disagree in part. Prior to the 2008 Act, major infrastructure projects in England were consented through a range of means, many of which (such as the Transport and Works or Electricity Act processes) were administered by central government and its agencies. Planning permission was given through the Town and Country Planning Act process, which ordinarily involves local government consent but where central government Ministers could 'call in' projects for their own decision making, which would normally happen with major infrastructure projects. There was certainly a public inquiry and that has changed with the NSIPs regime, but the degree of rescaling has probably been overemphasised in some discussions of the regime. Further, as our own research has shown, a focus on the everyday practices of frontline officials in the local state (Clifford, 2022) reveals a different picture on the NSIP regime from that sometimes presented in the past whereby local government is still playing an important role in the delivery of NSIPs.

Nevertheless, whatever the extent of rescaling before and after the 2008 Act, there is a more general point that:

the social construction of a locally situated infrastructure project as nationally significant circumvents local environmental justice with a utilitarian principle of the 'greater good' by framing it at the nation scale. This framing of scale has been heavily criticised as exacerbating democratic deficits ... and hence the associated distributive, procedural and recognition injustices (Cotton, 2018: 250).

The exercise in what is defined as a nationally significant infrastructure project has not remained static over time, and there has been particular controversy around the proposal to move shale gas production – 'fracking' – to be consented through the NSIP rather than ordinary town and country planning regime (UK Parliament, 2018). There are important implications from what type and scale of development is considered to fall within the remit of the NSIP regime.

Community engagement

As well as questions of scale and governance, particularly the role of the local versus national state, another key theme in understanding the NSIPs regime is in relation to community engagement. It is around community engagement that most existing scholarly research has been focused, with concern around the closure of what is permitted for public discussion around infrastructure (Cowell and Devine-Wright, 2018) and a tendency to contain democratic activity within narrow formal participatory processes in the regime (Wright and Davis, 2017). This leads to a concern about how well the regime can recognise local views and knowledges (Rydin et al, 2018).

In our research we did find some cause for concern around community participation, particularly in some of the earlier schemes to be approved through the regime. There were some schemes where the community seemed to have been engaged in a quite traditional 'decide and defend' type of participation where promoters simply sought to inform them about the plans they had already made rather than there being meaningful engagement with opportunity to actually influence schemes. As Devine-Wright (2010) commented, the main focus for public participation in major infrastructure seems to be to secure public acceptance of developer-led projects with a consequent dominance of one-way communication. There have been NSIPs where little thought had apparently been given to engagement after obtaining a DCO even when detailed design was being undertaken post-consent. In such circumstances, ongoing engagement seems vital for public confidence. Further, given local communities must often live with the considerable impacts of construction and/or operation of NSIPs, it should be important to build trust and good relations with local communities throughout the life of an NSIP. We found that often communities and stakeholders can see the consenting stage as their only opportunity to truly influence projects, leading to greater pressure for detail and thus some of the deliverability issues already mentioned. Trust is not just about providing opportunities for meaningful consultation, but also for transparency around that. Many promoters already do a lot of work to engage communities and stakeholders, but it can be hard for people on the outside of project teams to understand quite what is being done.

As we reported in our research (Clifford and Morphet, 2019a, 2019b), when projects enter their delivery stage, it is clear that more can be done to support their implementation. With deliverability a key golden thread running throughout projects and all their documents, a careful and transparent approach to considering community and stakeholder

engagement throughout the lifetime of these large projects is vital. There are some positives in the case studies considered in this book. In the case of the A14, we see the value of dedicated liaison officers who have largely been consistent from pre- to post-consent, building effective relations with all. We also see how utilisation of a range of different communication channels (website, social media, roadshow mobile visitor centre, structured forums, personal attendance at parish council meetings) helps keep a wider range of people updated about the project (in this case, in particular, construction works and the impacts of road closures).

In the case of Progress Power, the value of allowing the community a real input into the post-consent detailed design of the substation is apparent. This had been a controversial element of the project pre-consent, but the Design Review process enabled – within the constraints of the DCO - consensus to be reached as to the most desired local design from a range of options of building appearance and colour. This appears to have helped rebuild local confidence. We also see here the value in a continuing series of community information events during the long gap between consent and construction on this project. In the case of Thames Tideway, we see the value of having an independent complaints and compensation process, and of having a robust approach to complaints handling that ensures a meaningful response and fully involves contractors as well as the promoter. A structured approach to community liaison groups, with documentation online, was also evident, and the promoter's funding a local authority liaison officer for the community around a particularly difficult work site appeared effective.

While sometimes having been dismissed from the NSIP process after the initial community consultation required in the pre-submission acceptance stage, communities are now playing a much greater role in the ways in which NSIPs are being implemented. Examples from case studies discussed here for Thames Tideway and the energy projects demonstrate how this has grown. Further, the winning projects in the NIPA annual awards have shown different ways in which communities have been involved in delivery. In the 2021 winning project, the Southampton to Heathrow Pipeline, the community engaged in the choice of specific sites for the project along its route. For Tilbury 2, the NIPA prize winner of 2020, the community engagement was undertaken across the council, residents and interested parties in ways that was considered and publicly available. However, issues remain. As this research has shown, some communities have difficulty understanding the concept of the Rochdale Envelope in setting the site for development. Other issues have also

emerged as more NSIPs have been approved and have started to be implemented. They include the cumulative impacts of DCOs that are in neighbouring locations. These include environmental impacts on birds, on the Green Belt or on carbon assessments.

The welcome emergence of more positive practices within projects is not to overlook some bigger issues. There are still questions about how well the infrastructure planning and consent regime can deal with democracy, deliberation and dissent (Marshall, 2014). The regime's key supporters seem to have been those involved in its operation, such as planners, consultants, lawyers and statutory consultees. For local communities, the system perhaps works effectively if there is broad support for an NSIP and the key issues are just about, for example, mitigation of environmental and construction impacts. It has been less effective where there are bigger questions such as around the principle of new road building in the first place. Looking between and across projects, the UK still lacks forums for productive, structured public debates on infrastructure policy options (Slade and Davies, 2017). This takes us on to some questions about how well the current regime can consider what we might term 'bigger issues', such as the wicked issues of climate change.

Bigger issues

Our research on the NSIPs regime was funded by NIPA and our reports to them made a number of recommendations around potential improvements to the relationship between consent and delivery, on post-consent procedures including their resourcing and on better community engagement. Our impression of the regime was that as a system for consenting individual pieces of major infrastructure, it has been working reasonably well within the context that it was set. There is a potential danger of looking at the preceding planning governance through rose-tinted spectacles when they were still heavily dominated by central government, where public inquiries could also be difficult for communities to engage with, and when ultimately the result of the Heathrow Terminal 5 public inquiry process (to give a high-profile example) was still that a central government Secretary of State consented the project.

Having said the regime has been working reasonably well for consenting individual projects on one level, this is not to say it is by any means perfect in our view. It has been less successful at supporting effective delivery of the consented infrastructure and co-ordination between infrastructure projects across the country, where decision making remains in silos. Nor is it connected to wider net zero objectives. The operating system for the 2008 Act projects has shown itself to be flexible in meeting some of the implementation changes it has faced but these still do not address these wider issues. Infrastructure, as a domain, is caught in a powerful and tense pull of forces (Marshall, 2011b) with links to issues such as regional inequalities, productivity, housing, Brexit and climate change (Davies et al, 2018). New electricity transmission lines are considered vital to increase low-carbon provision and help tackle climate change and issues of energy security, yet can quickly become mired in controversies and issues of governance, justice, questions about costs and benefit distribution and conflicts between deeply held values (Cotton and Devine-Wright, 2011; Lee et al, 2012). We can add to the context, of course, technological change with a recent announcement that there will be a nuclear fusion NPS exemplifying this (Latif-Aramesh, 2022c).

At the moment, the NSIPs regime is able to make decisions on individual projects without necessarily properly responding to some bigger issues in relation to these wicked problems. In the case of the A14, some opposition to the scheme from local community groups raised issues such as air pollution and public health, climate change and the question of whether we should be sending so much freight by road as opposed to rail (a key justification for the scheme being lorry traffic to and from the Port of Felixstowe) and to these they did not appear to receive a very satisfactory answer. Certainly, communities were able to have some influence over issues such as provision for non-motorised users at some points and noise mitigation but these addressed the very specific features of the scheme rather than the bigger questions for society about road use and road building.

Part of this links to the fact that the regime is far removed from integrated spatial planning. The individual NPSs are not usually even spatial documents within their own sectors (Marshall, 2014) let alone being integrated cross-sectorally. Interestingly, as NPSs are currently being reviewed, the Business, Energy and Industrial Strategy Select Committee within Parliament suggested a cross-sectoral NPS be produced (Walker, 2022d) but government seems to have firmly rejected this proposal (Latif-Aramesh, 2022d). There is no national spatial plan for England, unlike the devolved nations, and the relationship between infrastructure and wider planning issues such as new settlements and the big picture response to climate change is lacking at present. We think this is a glaring omission and that any coherent approach to infrastructure planning needs to take a more joined-up, cross-sectoral

and properly spatial planning approach. It will be interesting to watch the potential for further judicial reviews that may relate to some of the glaring disjunctures in current government strategy and commitments around a host of issues, but a reactive legal process is far less adequate than initial proactive governance. It is hard to disagree that there appears to continue to be poor decision making about infrastructure in England, with a lack of sufficient evidence or long-term approach (Slade and Davies, 2017).

At this moment, any discussion of 'bigger issues' cannot ignore the growing planetary crisis that is climate change. Many of the projects that go through the NSIP regime are intimately linked to climate change in their operational phases, for example on the plus side renewable energy projects help the UK on its journey towards net zero with reduced carbon emissions (while also potentially increasing energy security), while on the other side, there are important questions about the climate implications of further major road building and airport expansion. As well as the operational carbon associated with these schemes, there are also increasingly questions about the embodied carbon in all structures (Varriale, 2021), which would include those consented through DCOs. As already noted, climate commitments have already been cited in judicial reviews related to the NSIPs regime (Latif-Aramesh, 2022e). Given their scale and often high profile, there is a symbolism about nationally significant infrastructure projects and how well the regime deals with questions of climate justice over the coming years will be for many a source of further judgement about the adequacy of the system.

The final point of reflection would be as important as we think as good planning is, as vital as the governance of development consent can be for a host of issues from social justice to environmental protection to scheme implementation, equally planning is only one part of the infrastructure puzzle. Just as with talk of the 'housing crisis' and the role of the town and country planning regime in this, central government seems loath to talk about some bigger issues (such as housing as an investment product rather than a place to live, land ownership patterns and funding for truly affordable housing) and instead seems to concentrate on reforming the planning system as if this would somehow resolve these multifaceted issues. Similarly, with major infrastructure there seems to have been much greater focus on the NSIPs regime under the government's 'Project Speed' than considering other issues such as the financing of infrastructure. As we finish the book, there is a drought across England and an increasing focus on the fact that in the years since the privatisation of the water industry, not a single new reservoir has been built despite population growth of 10 million, and inadequate sewerage infrastructure is associated with increased pollution of our rivers. Decades of underinvestment in infrastructure link back to financing issues. These other issues have not been our focus in the book, but it is important to acknowledge the impact of privatisation and liberalisation and the move from a dirigiste to a more regulatory state on infrastructure (McFarlane and Rutherford, 2008; Cotton, 2018).

In our case study of Progress Power, the consent had effectively been sold from a promoter focused simply on getting a DCO to one more likely to actually build a power station, and yet scheme implementation had been repeatedly delayed by financing issues linked to the energy capacity auctions rather than planning issues. This context is significant. There is a question about to what extent the NSIPs regime operates differently across the sectors it covers: the refusals have all come from the energy sector, not the transport sector, for example, but there is also a significant difference between the energy and transport infrastructure projects in that the former are privately developed and the later still delivered directly by the state. The differences in who is promoting schemes, and how they are funding them, are perhaps more significant for the likelihood of implementation than the system for granting them development consent. Returning, however, to our main focus we now sum up how the NSIP regime has been evolving and its potential future.

How will the NSIP process evolve in the future?

Review of system

As we have already discussed, the NSIP regime has been evolving since it was first introduced in 2008, including the transfer to PINS from the IPC following the Localism Act 2011, changes in the types of project included in 2016, and the gradual emergence of ministerial practices that are not compliant within the timeframes originally set out. Brexit is likely to lead to a more significant disruption to the system. Without the legal underpinning of EU regulations, which will come to an end in 2025, the need to establish the principle of development returns. There will be new environmental regulations to work with too. In order to replace the EU regulations, the government has introduced two sets of reviews – one on the system as a whole and the other in the consideration of specific NPS.

For the consultation on the system as a whole, the government launched the National Infrastructure Planning Reform Programme in August 2021 (DLUHC, 2021b), foreshadowed in the Planning White Paper (MHCLG, 2020). In this, the proposed areas for consideration for change include some that have been previously identified in research commissioned by NIPA. These specifically include the disconnection between the processes involved in obtaining a DCO, the relationship between this and subsequent delivery of the proposed project, the interaction between the NSIP and other consent regimes and the capacity or capability of NSIP applicants and others included within the process. The digital improvements to the regime are closely associated with wider planning reform as set out in the 2020 White Paper. The issue related to aspects of the examination and decision process that might be enhanced relates to the UK's departure from the EU as are other areas of potential improvement in the process also identified in the NIPA research such as lack of tracking of consultation commitments and pressure for short-term decision making during the examination process that subsequently hampers the project's implementation. Despite the Welsh government now having its own regime, the consultation for these changes applies to England and Wales.

The National Infrastructure Planning Reform programme, launched in August 2021, is described by government as an 'end to end' review of the NSIP process and all its interactions, although Brexit is not mentioned as a stimulus to the review (DLUHC, 2021b). As part of the review, the government launched an online survey in August 2021 that sought responses to the key purposes of the review, which would enable changes to be made in the system to respond to the removal of the base EU regulations. These were as follows:

- what government, its arms-length bodies and other statutory bodies could do to accelerate NSIP applications
- aspects of the examination and decision process that might be enhanced
- impediments to physically implementing NSIP projects
- digital improvements to the regime
- cross-government co-ordination including government departments and arms-length bodies
- interactions with other consenting and regulatory processes and the wider context within which infrastructure projects operate
- potential limits in the capacity or capability of NSIP applicants, interested parties and other participants.

In addition to the survey, DLUHC has also undertaken a review process with 15 local authorities that have been involved with NSIPs and their delivery (Preece, 2022). This recognises a change in approach with local authority views being actively sought while local authorities have also represented the largest percentage of responses to the open questionnaire, with members of affected communities being the second highest percentage of respondents. The review of the system has a focus on the alignment between the system and the UK's international environmental commitments. However, it is the view of the government that most changes required in the NSIP system will not require primary legislation. although there is expected to be secondary legislation, advice and new guidance provided. The issues that are emerging to be considered as the number of NSIPs increase and the environmental and EU context changes will be the cumulative effects and overlapping site areas of individual applications. In some cases, this may require co-ordination between projects. In terms of delivery, there are emerging issues about the undertaking of early works and then mechanisms for changing DCOs and discharging requirements. The government's consultation on a new approach is expected later in 2022 with the system going live in September 2023. An initial policy statement published in August 2022 has concentrated on some minor issues (albeit ones that respond to some of the issues identified in our own research) such as building capacity for local authorities in relation to the NSIP regime, speeding up post-consent amendments to DCOs and allowing statutory consultees to charge promoters for their expert advice rather than more fundamental changes to the regime (DLUHC, 2022). This operational review is expected to follow the review of the NPS by responsible departments, but it appears unlikely that these fully revised NPS will be synchronised with the overall review.

The second part of the reform of the Planning Act 2008 system is this review of the National Policy Statements (DLUHC, 2021a), after a judicial review found that they were now out of date and not fit for purpose. This has started with reviews of the energy NPS. Before this review process commenced, the government set out a process within which these reviews should be undertaken. While the Planning Act 2008 sets out the process for these reviews, additional non-statutory guidance was considered to be necessary for the process that was initiated in 2021. The guidance establishes a series of stages when undertaking the reviews. The first is to determine the best time for a review to be undertaken that is based on any changes in circumstances – anticipated or otherwise – and as a default position, the relevant Secretaries of State responsible for the

NPS should make a statement about their review intentions every five years. The responsible Secretary of State has the power to suspend the existing NPS while the reviews are under way or the decision on any specific application for a DCO until a new NPS has been adopted. The second part of the general guidance on reviewing the NPS relates to the process to be used and this needs to result in an amended, withdrawn or replaced NPS. There also needs to be some transition process set out that will incorporate these issues.

This first NPS review is for energy (BEIS, 2021) and set within the Energy White Paper (BEIS, 2020). The selection of energy as the first NPS to review is related to the need to ensure that it reflects the government's targets for achieving net zero as set out in the white paper. The first paragraph of the consultation report states that the purpose of the NPS was to interpret rather than to provide fundamental decisions and the purpose of the review is to see whether the system is 'fit for purpose' for decision making (that is, whether they provide a suitable framework to support decision making for nationally significant energy infrastructure) (BEIS 2021: 9):

National Policy Statements (NPSs) are designated under the Planning Act 2008 (the 2008 Act) to provide guidance for decision-makers on the application of government policy when determining development consent for major infrastructure. Their function is to state clearly how existing policy applies to development consent, removing discussion of the merits of government policy from the examination process so that decisions can be made on the basis of planning considerations alone. NPSs apply to infrastructure that is defined as a 'Nationally Significant Infrastructure Project' in the 2008 Act (BEIS, 2021: 8).

The review also addresses the associated issues in the Appraisals of Sustainability and Habitats Regulations Assessments, both required within the 2008 Act and now also lost through the UK's departure from the EU. The review of the energy NPS also sits within the Treasury's review of infrastructure delivery and changes that it is expecting to make in the associated decision-making processes. It also related to the consequences of Brexit through the adoption of what the government have called 'Project Speed' for environmental regulation and procurement (HM Treasury, 2020: 81). The review of the energy NPS adopts the principles of reform outlined in Project Speed and seeks to implement them in its proposed revised approach.

As with other matters related to Brexit, there are legal arrangements in place until 30 June 2026 through the Trade and Cooperation Agreement (TCA), which could be extended to 2028. Under the TCA, there are specific groups considering energy issues such as connectors and pipelines. Before Brexit, projects of common interest within the TEN-E regulations were selected every two years and were able to apply for funding within the Connecting Europe Facility (CEF), which is intended to speed up delivery. In the last programme period 2014–20, 22 UK energy projects received €93.2 million in funding from the CEF (EC, 2019).

One mechanism for changing the NSIP regime would be to enhance the role of the NIC in some way. This could be to identify need, as a basis for infrastructure applications, networks and nodes for transport that again could be based on national requirements. While these would not be as strong as the EU regulations in identifying long term commitments to routes or corridors without defining the detail of precise siting, it would provide an intermediary statement such as those formerly used in Regional Planning Statements. However, a greater role for the NIC would not obviate the need to establish the principle of development. Further, the NIC is a government agency, sitting within the responsibilities of the Treasury and, ultimately, does not have an independent role in the same way as the Office of Budget Responsibility. While it has a statutory duty to report to parliament and government has a responsibility to respond, the government is not bound to accept any of the NIC's recommendations.

In addition to the NIC, the Chancellor of the Exchequer has established an Infrastructure Delivery Taskforce to deliver 'Project Speed', which is responsible to him. In this taskforce, the main focus is on reviewing infrastructure delivery processes to determine whether it can be made faster (HM Treasury, 2020: 78) including reviewing environmental regulations, reforming the planning system and streamlining decision-making processes. The focus of Project Speed is to build on the practices used to deliver the A14 road project (see Chapter 7). The government does not appear to recognise that the regulatory context for both procurement and environmental standards are set by the EU within a wider international context of the WTO and UN, to which the UK still retains membership with associated obligations (Morphet, 2021b).

In launching Project Speed, the government reinforced the legal regimes for delivering infrastructure used before the adoption of the Planning Act 2008 including hybrid bills, the Transport and Works Act 1992 and the Town and Country Planning Acts. The role of the Planning Act 2008 and NSIP regime is described as well-respected 'but is currently not being implemented as effectively as possible, leading to slower delivery times and more uncertainty' (HM Treasury, 2020: 82) – ironically charges that the system faced from the reviews of the system before the Planning Act was implemented and was designed to address. As part of progressing its objective to speed up decision making for infrastructure, the government also considered governance issues, making a case for reform with an approach that reinforces the need to streamline processes.

Demonstrating need

The issue of demonstrating need for the project is emerging following the decisions taken at recent judicial reviews and there is an understanding that this will have to be a focus in the earlier part of the process. This is also seen to be an issue where out-of-date NPSs will no longer provide the covering case for any project and there is no longer a set of EU regulations to rely on. The case of need is therefore emerging as a core element of new NSIPs in a way that was not the case before 2020. There is also an increasing practice of including this statement of need in the Local Impact Reports thus relating it to the wider principle of development and elevating the role of these reports in the process. The implication is that all NSIP applications will need to demonstrate need regardless of the NPSs. In particular, this demonstration of need should show that the benefits outweigh the harm of the development, that it is compliant with the NPS, the argument for the scheme is set out in order to win hearts and minds (Spencer, 2022) and that there are no other alternatives and/or that there is an abiding public interest. Spencer also argues that this case for need should be a golden thread throughout the whole of the NSIP process supported by a policy compliance tracker. While a planning statement is not required in the process, its inclusion has increasingly been used to supplement the case for the specific project and it is likely that the role of this approach in supporting need will continue and be enhanced.

Role of local authorities

As we have discussed, when the NSIP system was created through the Planning Act 2008, local authorities were largely envisaged to be distant from the process of examination and implementation. Their specific role was to undertake a local impact assessment and to approve the consultation undertaken with the community prior to the submission of the project into the examination system. Following this, their role was

minimised. However, as the system has matured, with NSIP projects coming to implementation, the role of local authorities has emerged as one of the most important to ensure that the project can be delivered smoothly. The future of the system, as a consequence of the government review, now appears to provide an increased role for local authorities. The emergence of the establishment of the principle of development including the local impact report and planning statement accompanied by a statement of need for the project are now merging this system closer to that of the Town and Country Planning system operated by local authorities. In the previous period, the lengthy planning inquiries were associated with these issues of choice of location and justifying need. This may be approached differently in future. Some local authorities have multiple NSIPs in their areas such as East Suffolk council and are increasingly using the PPA approach. The local authorities are also ensuring that a Deed of Obligation is included within the DCO that provides funding for community engagement. It is also the case, with the exception of Highways England in particular, that scheme promoters are understanding the critical role that local authorities have in successful delivery and the initial expectation of antagonistic relationships at the outset of the regime is being replaced.

Concluding thoughts

The NSIPs regime seemed to have emerged as a coincidence of a particular set of policies and opportunities at a particular time, allowing actors in central government to respond to a range of pressures and requirements. Since then, a powerful policy community has grown up around the regime. The system and ongoing reforms to it cannot be divorced from a hegemonic neoliberal political economy and given the rise of 'infrastructuralism' (Marshall, 2013) and the way that major infrastructure has become linked to notions of national competitiveness, further reform of the system seems likely.

Whatever the precise detail of the change, fundamental questions about the way we plan and consent major infrastructure will always remain. There will always be some degree of tension between national need and local impact, about the balance struck between environment, economy and society, about short- and long-term needs and impacts as well as issues of procedural justice about how decisions are made. There is the potential for a rebalancing and greater partnership around competing scales of engagement and interest between the local and the

national, for different spatial imaginaries and territorial futures. At the same time, however, some degree of compromise between higher ideals and the realities of delivery and life within the state under late capitalism will be inevitable, meaning least worse solutions will perhaps be the best we can hope for. The planning and consent of major infrastructure is interesting precisely because it is revealing about so much of our values and processes within society. In this book we have provided a detailed account of the emergence and operation of the particular approach taken in England over the last decade. No doubt the next decade will continue to provide for us living in 'interesting times'.

Appendix 1: DCOs submitted by October 2022

		Application	Accepted/		
Project	Promoter	made	rejected	Completed	Result
Rookery South Energy from Waste	Covanta Energy	05-Aug-10	26-Aug-10	28-Feb-13	Approved (Special
					Parliamentary
					Procedure)
Ipswich chord (rail)	Network Rail	29-Jun-11	21-Jul-11	05-Sep-12	Approved
North Doncaster chord (rail)	Network Rail	22-Jun-11	19-Jul-11	16-Oct-12	Approved
Kentish Flats wind farm	Vattenfall	14-Oct-11	10-Nov-11	19-Feb-13	Approved
Brechfa Forest wind farm	RWE Npower	04-Nov-11	30-Nov-11	12-Mar-13	Approved
Heysham to M6 link road	Lancashire	06-Dec-11	23-Dec-11	19-Mar-13	Approved
	County Council				
Hinkley Point C nuclear power station	EDF Energy	31-Oct-11	24-Nov-11	19-Mar-13	Approved
Galloper wind farm	SSE Renewables	21-Nov-11	19-Dec-11	24-May-13	Approved
Triton Knoll wind farm	RWE Npower	01-Feb-12	23-Feb-12	11-Jul-13	Approved
King's Cliffe hazardous waste site	Augean	14-Mar-12	11-Apr-12	11-Jul-13	Approved
Blyth biomass power station	RES	16-Mar-12	11-Apr-12	24-Jul-13	Approved
M1 J10a upgrade (road)	Luton Council	29-Jun-12	27-Jul-12	30-Oct-13	Approved
Redditch improvement (rail)	Network Rail	04-Sep-12	01-Oct-12	31-Oct-13	Approved
Able Marine Energy Park	Able UK Ltd	19-Dec-11	12-Jan-12	18-Dec-13	Approved
King's Lynn line (power line)	National Grid	27-Jul-12	21-Aug-12	18-Dec-13	Approved
Stafford chord (rail)	Network Rail	19-Dec-12	10-Jan-13	31-Mar-14	Approved
North London line (power line)	National Grid	30-Aug-12	27-Sep-12	16-Apr-14	Approved

East Anglia ONE wind farm	Scottish Power	21-Nov-12	14-Dec-12	17-Jun-14	Approved
DIRFT 3 Rail Freight Interchange	Rugby Radio	22-Feb-13	20-Mar-13	04-Jul-14	Approved
[second attempt]	Station				
Rampion wind farm [second attempt]	E.On	01-Mar-13	25-Mar-13	16-Jul-14	Approved
A556 upgrade (road)	Highways Agency	24-Apr-13	17-May-13	28-Aug-14	Approved
North Killingholme power station	C.Gen	25-Mar-13	19-Apr-13	11-Sep-14	Approved
Thames Tunnel (Tideway super sewer)	Thames Water	28-Feb-13	27-Mar-13	12-Sep-14	Approved
Clocaenog Forest wind farm	RWE Npower	28-Mar-13	23-Apr-13	12-Sep-14	Approved
Burbo Bank wind farm	Dong Energy	22-Mar-13	19-Apr-13	26-Sep-14	Approved
Woodside Link (road)	Central	14-May-13	11-Jun-13	30-Sep-14	Approved
	Bedfordshire				
	Council				
South Hook Combined heat and power	ExxonMobil,	31-May-13	27-Jun-13	23-Oct-14	Approved
station	Total, Qatar				
Walney wind farm	Dong Energy	28-Jun-13	22-Jul-13	07-Nov-14	Approved
Hornsea wind farm project one	Smart Wind	30-Jul-13	22-Aug-13	10-Dec-14	Approved
Willington C gas pipeline	RWE Npower	30-Jul-13	22-Aug-13	17-Dec-14	Approved
Morpeth Northern Bypass (road)	Northumberland	15-Jul-13	07-Aug-13	12-Jan-15	Approved
	County Council				
A160 upgrade (road)	Highways Agency	08-Jan-14	27-Jan-14	04-Feb-15	Approved
A30 Temple to Carblake (road)	Cornwall Council	15-Aug-13	09-Sep-13	05-Feb-15	Approved

		Application	Accepted/		
Project	Promoter	made	rejected	Completed	Result
Dogger Bank Creyke Beck wind farm	Forewind	29-Aug-13	25-Sep-13	17-Feb-15	Approved
Knottingley Power Project	Knottingley	04-Oct-13	01-Nov-13	10-Mar-15	Approved
	Power Limited				
Whitemoss Landfill	Whitemoss	20-Dec-13	17-Jan-14	20-May-15	Approved
	Landfill				
Norwich Northern Distributor Road	Norfolk County	07-Jan-14	04-Feb-14	02-Jun-15	Approved
	Council				
Swansea Tidal Lagoon	Tidal Lagoon	07-Feb-14	06-Mar-14	09-Jun-15	Approved
	Power				
Preesall gas storage	Halite Energy	01-Dec-11	23-Dec-11	10-Apr-13	Approved
					(Redetermination)
Hirwaun power station	Stag Energy	21-Mar-14	15-Apr-14	23-Jul-15	Approved
Progress power station	Stag Energy	31-Mar-14	25-Apr-14	23-Jul-15	Approved
Dogger Bank Teesside A and B wind farm	Forewind	28-Mar-14	23-Apr-14	05-Aug-15	Approved
Ferrybridge Multifuel project	Multifuel Energy	31-Jul-14	20-Aug-14	28-Oct-15	Approved
	LTA				
Internal enhancement Port Talbot Steelworks	Tata Steel	07-Aug-14	02-Sep-14	06-Dec-15	Approved

East Midlands Gateway Rail Freight Interchange	Roxhill (Kegworth) Ltd and Charles	29-Aug-14	19-Sep-14	12-Jan-16	Approved
Hinkley to Seabank line (power line)	Henry Curzo National Grid	28-May-14	19-Jun-14	19-Jan-16	Approved
A19/A1038 Coast Road	Highways Agency	14-Nov-14	03-Dec-14	28-Jan-16	Approved
Palm Paper CCGT power station	Palm Paper	23-Sep-14	20-Oct-14	11-Feb-16	Approved
Thorpe Marsh gas pipeline	Thorpe Marsh	20-Nov-14	12-Dec-14	03-Mar-16	Approved
	Power Ltd				
A14 improvement (road)	Highways Agency	31-Dec-14	27-Jan-15	11-May-16	Approved
Meaford Energy Centre	St Modwen/	31-Mar-15	24-Apr-15	19-Jul-16	Approved
	Glenfinnan				
York Potash Harbour Facilities	York Potash	27-Mar-15	21-Apr-15	20-Jul-16	Approved
	Limited				
North Wales Wind Farms Connection	SP MANWEB	20-Mar-15	17-Apr-15	28-Jul-16	Approved
Hornsea wind farm project two	SMart Wind	30-Jan-15	19-Feb-15	16-Aug-16	Approved
Humber gas pipeline	National Grid	15-Apr-15	12-May-15	25-Aug-16	Approved
M4 Junctions 3 to 12 (road)	Highways Agency	30-Mar-15	27-Apr-15	02-Sep-16	Approved
Triton Knoll Electrical Connection	Triton Knoll	24-Apr-15	21-May-15	06-Sep-16	Approved
	Offshore Wind				
	Farm				

		Application	Accepted/		
Project	Promoter	made	rejected	Completed	Result
Brechfa Forest electric line	Western Power Distribution	29-May-15	24-Jun-15	06-Oct-16	Approved
North London heat and power	North London Waste Authority	15-Oct-15	11-Nov-15	24-Feb-17	Approved
Glyn Rhonwy pumped storage	Snowdonia Pumped Hydro Ltd	21-0ct-15	17-Nov-15	08-Mar-17	Approved
Keuper Gas Storage	Ineos Enterprises	24-Nov-15	22-Dec-15	15-Mar-17	Approved
Wrexham Energy Centre	Wrexham Power Ltd	18-Mar-16	13-Apr-16	18-Jul-17	Approved
Richborough Connection (power line)	National Grid	14-Jan-16	11-Feb-16	03-Aug-17	Approved
East Anglia THREE wind farm	East Anglia THREE Ltd	18-Nov-15	15-Dec-15	07-Aug-17	Approved
M20 Junction 10A (road)	Highways Agency	19-Jul-16	11-Aug-16	01-Dec-17	Approved
Silvertown Tunnel (road tunnel)	Transport for London	03-May-16	31-May-16	10-May-18	Approved
A19 Testo's Junction (road)	Highways Agency	14-Jul-17	10-Aug-17	12-Sep-18	Approved
Eggborough CCGT power station	Eggborough Power Ltd	30-May-17	27-Jun-17	20-Sep-18	Approved
Tilbury 2 harbour	Port of Tilbury	31-Oct-17	21-Nov-17	20-Feb-19	Approved

Millbrook power station	Millbrook Power	23-Oct-17	20-Nov-17	13-Mar-19	Approved
Teesside combined cycle power plant	Sembcorp	22-Nov-17	20-Dec-17	05-Apr-19	Approved
Kemsley paper mill	DS Smith plc	06-Apr-18	26-Apr-18	05-Jul-19	Approved
Abergelli power station	Stag Energy	25-May-18	21-Jun-18	19-Sep-19	Approved
Drax Re-Power	Drax Power	29-May-18	26-Jun-18	04-Oct-19	Approved
Northampton Gateway Strategic Rail	Roxhill	21-May-18	15-Jun-18	09-Oct-19	Approved
Freight Interchange	(Kegworth) Ltd				
	and Charles Henry Curzo				
	offin) carry				
A30 Chiverton to Carland Cross (road)	Highways England	30-Aug-18	27-Sep-18	06-Feb-20	Approved
North Shopshire reinforcement (power line)	Scottish Power	12-Nov-18	10-Dec-18	20-Mar-20	Approved
A585 Windy Harbour (road)	Highways	29-Oct-18	26-Nov-18	09-Apr-20	Approved
	England				
Riverside Energy Park	Cory	16-Nov-18	14-Dec-18	09-Apr-20	Approved
	Environmental				
Lake Lothing Crossing (road bridge)	Suffolk County Council	13-Jul-18	09-Aug-18	30-Apr-20	Approved
West Midlands Interchange (rail freight	Four Ashes Ltd	03-Aug-18	24-Aug-18	04-May-20	Approved
intercinange)					
M42 J6 (road)	Highways England	02-Jan-19	30-Jan-19	21-May-20	Approved

		Application	Accepted/		
Project	Promoter	made	rejected	Completed	Result
A63 Castle Street (road)	Highways England	20-Sep-18	18-Oct-18	28-May-20	Approved
Cleve Hill Solar (power)	Cleve Hill Solar Park Ltd	16-Nov-18	14-Dec-18	28-May-20	Approved
A19 Downhill Lane (road)	Highways England	25-Jan-19	22-Feb-19	16-Jul-20	Approved
VPI Immingham power plant	VPI Immingham B	11-Apr-19	09-May-19	07-Aug-20	Approved
Great Yarmouth Third Crossing (road bridge)	Norfolk County Council	30-Apr-19	28-May-19	24-Sep-20	Approved
Southampton to London [fuel] pipeline	Esso	14-May-19	11-Jun-19	07-Oct-20	Approved
West Burton C power station	EDF Energy	30-Apr-19	23-May-19	21-Oct-20	Approved
Hornsea wind farm project three	Dong Energy	14-May-18	08-Jun-18	31-Dec-20	Approved
A1 Birtley (road)	Highways England	14-Aug-19	10-Sep-19	19-Jan-21	Approved
A303 Sparkford (road)	Highways England	27-Jul-18	23-Aug-18	29-Jan-21	Approved
Kemsley power upgrade	Wheelabrator	11-Sep-19	09-Oct-19	19-Feb-21	Approved
South Humber Bank energy	EP UK Ltd	09-Apr-20	04-May-20	10-Nov-21	Approved

Norfolk Vanguard wind farm Vattenfall 26-Jun-18 24-Jul-18 11-Feb-22 Approva Thurrock Flexible Generation power Statera Energy 27-May-20 24-Jun-20 16-Feb-22 Approva East Anglia TWO wind farm Scottish Power 25-Oct-19 22-Nov-19 31-Mar-22 Approva Little Crow solar (power) INRG Solar 04-Dec-20 23-Dec-20 05-Apr-22 Approva M54-M6/M6 Toll Road Highways 31-Jan-20 28-Feb-20 21-Apr-22 Approva M25 J10/A3 Wisley (road) Highways 19-Jun-19 17-Jul-19 12-May-22 Approva M25 J28 (road) Highways 27-May-20 24-Jun-20 16-May-22 Approva A47 Blofield (road) Highways 27-May-20 24-Jun-20 16-May-22 Approva Sizewell C nuclear power station England 27-Jan-21 22-Jun-22 Approva Able Marine Energy Park Material Change Able UK Ltd 25-Jun-21 20-Jul-22 Approva 2 (road) Highways 15-Mar-21 12-Apr-21 Approv	Norfolk Boreas wind farm	Vattenfall	11-Jun-19	04-Jul-19	10-Dec-21	Approved
Statera Energy 27-May-20 24-Jun-20 16-Feb-22 Scottish Power 25-Oct-19 22-Nov-19 31-Mar-22 Inorth wind farm Scottish Power 31-Jan-20 28-Feb-20 21-Apr-22 Ingland Highways 27-May-20 24-Jun-20 16-May-22 Ingland Highways 30-Dec-20 27-Jan-21 22-Jun-22 Ingland BDF Energy 27-May-20 24-Jun-20 20-Jul-22 Inorth wind farm BDF Energy 25-Jun-21 17-Apr-21 12-Apr-21 Inorth wind farm Inorth wind farm Inorth wind farm Inorth wind farm Inorth wind wind wind wind wind wind wind wind		Vattenfall	26-Jun-18	24-Jul-18	11-Feb-22	Approved (Redetermination)
O wind farm Scottish Power 25-Oct-19 22-Nov-19 31-Mar-22 E north wind farm Scottish Power 25-Oct-19 22-Nov-19 31-Mar-22 I (power) INRG Solar 04-Dec-20 23-Dec-20 05-Apr-22 II (power) Highways 31-Jan-20 28-Feb-20 21-Apr-22 I (power) Highways 19-Jun-19 17-Jul-19 12-May-22 I (power) Highways 27-May-20 24-Jun-20 16-May-22 I (power) Highways 27-May-20 27-Jan-21 22-Jun-22 I (power) Highways 27-May-20 27-Jan-21 22-Jun-22 I (power) England 27-May-20 27-Jan-21 22-Jun-22 I (power) England 25-Jun-21 27-Jun-20 20-Jul-22 I (power) England 25-Jun-21 27-Jun-20 20-Jul-22 I (power) England 25-Jun-21 27-Jun-20 20-Jul-22 I (power) England 25-Jun-21 27-Jun-22 20-Jul-22	Thurrock Flexible Generation power [second attempt]	Statera Energy	27-May-20	24-Jun-20	16-Feb-22	Approved
Incomposition Scottish Power 25-Oct-19 22-Nov-19 31-Mar-22 Incomposition Inghways 31-Jan-20 23-Dec-20 05-Apr-22 Inghways 31-Jan-20 28-Feb-20 21-Apr-22 Inghways 19-Jun-19 17-Jul-19 12-May-22 Inghways 27-May-20 24-Jun-20 16-May-22 Inghways 30-Dec-20 27-Jun-21 22-Jun-22 Inghways 30-Dec-20 27-Jun-21 22-Jun-22 Inghways 27-May-20 24-Jun-20 20-Jul-22 Inghways 27-May-20 24-Jun-20 20-Jul-22 Inghways 27-May-20 24-Jun-20 20-Jul-22 Inghways 27-May-20 24-Jun-20 16-Jul-22 Inghways 27-May-20 24-Jun-20 16-Jul-22 Inghways 16-Jul-22 16-Jul-22 Indhways 16-Jul-22 16-Jul-22	East Anglia TWO wind farm	Scottish Power	25-Oct-19	22-Nov-19	31-Mar-22	Approved
r (power) INRG Solar 04-Dec-20 23-Dec-20 05-Apr-22 oll Road Highways 31-Jan-20 28-Feb-20 21-Apr-22 sley (road) Highways 19-Jun-19 17-Jul-19 12-May-22 England 27-May-20 24-Jun-20 16-May-22 England 30-Dec-20 27-Jan-21 22-Jun-22 ear power station Highways 37-May-20 27-Jun-20 20-Jul-22 ergy Park Material Change Able UK Ltd 25-Jun-21 n/a 16-Jul-22 ergy Park Material Change Highways 15-Mar-21 12-Apr-21 12-Aug-22	East Anglia ONE north wind farm	Scottish Power	25-Oct-19	22-Nov-19	31-Mar-22	Approved
bil Road Highways 31-Jan-20 28-Feb-20 21-Apr-22 isley (road) Highways 19-Jun-19 17-Jul-19 12-May-22 England 27-May-20 24-Jun-20 16-May-22 ad) Highways 30-Dec-20 27-Jan-21 22-Jun-22 ear power station EDF Energy 27-May-20 24-Jun-20 20-Jul-22 ergy Park Material Change Able UK Ltd 25-Jun-21 n/a 16-Jul-22 lenham (road) Highways 15-Mar-21 12-Apr-21 12-Aug-22	Little Crow solar (power)	INRG Solar	04-Dec-20	23-Dec-20	05-Apr-22	Approved
sley (road) Highways 19-Jun-19 17-Jul-19 12-May-22 England 27-May-20 24-Jun-20 16-May-22 ad) Highways 30-Dec-20 27-Jan-21 22-Jun-22 erg power station EDF Energy 27-May-20 24-Jun-20 20-Jul-22 ergy Park Material Change Able UK Ltd 25-Jun-21 n/a 16-Jul-22 lenham (road) Highways 15-Mar-21 12-Apr-21 12-Aug-22	M54–M6/M6 Toll Road	Highways England	31-Jan-20	28-Feb-20	21-Apr-22	Approved
Highways 27-May-20 24-Jun-20 16-May-22 ad) Highways 30-Dec-20 27-Jan-21 22-Jun-22 erg power station EDF Energy 27-May-20 24-Jun-20 20-Jul-22 ergy Park Material Change Able UK Ltd 25-Jun-21 n/a 16-Jul-22 lenham (road) Highways 15-Mar-21 12-Apr-21 12-Aug-22	M25 J10/A3 Wisley (road)	Highways England	19-Jun-19	17-Jul-19	12-May-22	Approved
Highways 30-Dec-20 27-Jan-21 22-Jun-22 England 27-May-20 24-Jun-20 20-Jul-22 Able UK Ltd 25-Jun-21 n/a 16-Jul-22 Highways 15-Mar-21 12-Apr-21 12-Aug-22	M25 J28 (road)	Highways England	27-May-20	24-Jun-20	16-May-22	Approved
EDF Energy 27-May-20 24-Jun-20 20-Jul-22 Able UK Ltd 25-Jun-21 n/a 16-Jul-22 Highways 15-Mar-21 12-Apr-21 12-Aug-22	A47 Blofield (road)	Highways England	30-Dec-20	27-Jan-21	22-Jun-22	Approved
Able UK Ltd 25-Jun-21 n/a 16-Jul-22 Highways 15-Mar-21 12-Apr-21 12-Aug-22	Sizewell C nuclear power station	EDF Energy	27-May-20	24-Jun-20	20-Jul-22	Approved
(road) Highways 15-Mar-21 12-Apr-21 12-Aug-22	Able Marine Energy Park Material Change 2 (road)	Able UK Ltd	25-Jun-21	n/a	16-Jul-22	Approved
England		Highways England	15-Mar-21	12-Apr-21	12-Aug-22	Approved

		Application	Accepted/		
Project	Promoter	made	rejected	Completed	Result
Manston Airport	RiverOak Investment Corp	17-Jul-18	14-Aug-18	18-Aug-22	Approved
A428 Black Cat (road)	Highways England	26-Feb-21	23-Mar-21	18-Aug-22	Approved
A47/A11 Junction (road)	Highways England	31-Mar-21	28-Apr-21	14-Oct-22	Approved
Metrowest Phase 1 (rail)	North Somerset Council	15-Nov-19	12-Dec-19		In progress
A1 Morpeth to Ellingham (road)	Highways England	07-Jul-20	04-Aug-20		In progress
A38 Derby Junctions (road)	Highways England	23-Apr-19	21-May-19		In progress (Redetermination)
A303 Stonehenge (road tunnel)	Highways England	19-Oct-18	16-Nov-18		In progress (Redetermination)
Boston Alternative Energy [second attempt]	Alternative Use Boston Projects Ltd	23-Mar-21	20-Apr-21		In progress
A417 Missing Link (road)	Highways England	01-Jun-21	29-Jun-21		In progress

A57 link roads (road)	Highways England	28-Jun-21	26-Jul-21	In progress
Keadby Power Station	SSE	01-Jun-21	28-Jun-21	In progress
A47 Wansford (road)	Highways England	05-Jul-21	02-Aug-21	In progress
King's Cliffe hazardous waste extension [second attempt]	Augean	08-Sep-21	24-Sep-21	In progress
Hornsea Four wind farm	Orsted	29-Sep-21	26-Oct-21	In progress
Net Zero Teesside power [second attempt]	IDDO	19-Jul-21	16-Aug-21	In progress
Sunnica Energy Farm	Sunnica	18-Nov-21	16-Dec-21	In progress
Longfield solar (power)	Longfield Solar	28-Feb-22	28-Mar-22	In progress
North Lincolnshire green energy park	Solar 21	21-Mar-22	27-Jun-22	In progress
Drax Bioenergy with Carbon Capture and Storage	Drax Power	23-May-22	20-Jun-22	In progress
A66 Northern Trans-Pennine Project	National Highways	21-Jun-22	19-Jul-22	In progress
Medworth Energy from Waste	Medworth CHP	07-Jul-22	02-Aug-22	In progress
A12 Chelmsford to A120 widening scheme (road)	National Highways	15-Aug-22	12-Sep-22	In progress

		Application	Accepted/		
Project	Promoter	made	rejected	Completed	Result
Sheringham and Dudgeon extension (wind)	Equinor	5-Sep-22	03-Oct-22		In progress
Slough Multifuel Extension (energy)	SSE Slough Multifuel	30-Sep-22	26-Oct-22		In progress
HyNet Carbon Dioxide Pipeline	Liverpool Bay CCS	03-Oct-22	31-Oct-22		In progress
Yorkshire and Humber pipeline	National Grid	18-Jun-14	16-Jul-14	12-Jan-17	Refused
White Rose Carbon Capture and Storage	Capture Power	24-Nov-14	17-Dec-14	13-Apr-16	Refused
Mynydd y Gwynt wind farm	REH	31-Jul-14	20-Aug-14	20-Nov-15	Refused
Navitus Bay wind farm	Eneco	10-Apr-14	08-May-14	11-Sep-15	Refused
Thanet wind farm extension	Vattenfall	27-Jun-18	23-Jul-18	02-Jun-20	Refused
Aquind Interconnector (power cable)	Aquind Ltd	14-Nov-19	12-Dec-19	20-Jan-22	Refused
Brig y Cwm Energy from Waste (power station)	Covanta Energy	31-Dec-10	26-Jan-11		Withdrawn
Roosecote biomass (power station)	Centrica	03-Jul-12	31-Jul-12		Withdrawn
Atlantic Array wind farm	RWE Npower	14-Jun-13	12-Jul-13		Withdrawn
Fieldes Lock power station	Veolia	14-Aug-12	07-Sep-12		Withdrawn
North Wales Connection (power line)	National Grid	07-Sep-18	04-Oct-18		Withdrawn

Highways 29-Oct-20 Withdrawn England OGCI 21-May-21 16-Jun-21 Withdrawn Alternative Use 30-Nov-20 28-Dec-20 Withdrawn Boston Projects Ltd LRCH Ltd 04-Jan-21 28-Jan-21 Withdrawn Western Power 03-Aug-10 31-Aug-10 Rejected Distribution 30-Jul-21 27-Aug-21 Rejected
21-May-21 16-Jun-21 01-Jun-18 28-Jun-18 30-Nov-20 28-Dec-20 04-Jan-21 28-Jan-21 03-Aug-10 31-Aug-10 30-Jul-21 27-Aug-21
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Major Infrastructure Planning and Delivery introduces the system for planning and consenting Nationally Significant Infrastructure Projects (NSIPs) in England (which has also applied for some schemes in Wales). These are the major projects involving power stations and large renewable energy schemes, motorways, railways and a range of other high profile, high impact and sometimes controversial development schemes, including some closely linked to the UK's transition to net zero.

The book explains where this separate system for governing major infrastructure came from and how it operates in practice, with a particular focus on the relationship between planning, consent and delivery of these infrastructure projects. Detailed case studies of the A14 highway, Thames Tideway super sewer, Galloper offshore windfarm and Progress Power station, drawing on research by the authors, illustrate issues of the often overlooked continuing role of local government, the engagement of local communities and stakeholders, and the modification of schemes between consent and construction.

At a time of ongoing government planning reform, increased concern about climate change, and still unresolved consequences of Brexit, as well as timeless debates such as over national need versus local impact, this timely book offers rich detail on the particular approach to major infrastructure planning in England, but also speaks to wider issues around the governance of development and implementation of government policy under late capitalism.

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Wind turbine at sunset in winter

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